
**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 September 30, 2018

OR

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

Commission File Number 1-37816

ALCOA CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

201 Isabella Street, Suite 500,
Pittsburgh, Pennsylvania
(Address of principal executive offices)

81-1789115
(I.R.S. Employer
Identification No.)

15212-5858
(Zip Code)

412-315-2900

(Registrant's telephone number, including area code)

Not applicable

(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 (or for such shorter period that the registrant was required to file such reports), 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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

Large accelerated filer ☒

Accelerated filer ☐

Non-accelerated filer ☐

Smaller reporting company ☐

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. Yes ☐ No ☐

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 October 29, 2018, 186,494,049 shares of common stock, par value \$0.01 per share, of the registrant were outstanding.

TABLE OF CONTENTS

PART I – FINANCIAL INFORMATION

Item 1.	Financial Statements	1
Item 2.	Management’s Discussion and Analysis of Financial Condition and Results of Operations	40
Item 3.	Quantitative and Qualitative Disclosures about Market Risk	50
Item 4.	Controls and Procedures	51

PART II – OTHER INFORMATION

Item 4.	Mine Safety Disclosures	52
Item 6.	Exhibits	53
SIGNATURES		54

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 by Alcoa Corporation that reflect 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 bauxite, alumina, and aluminum, and supply/demand balances; statements, projections or forecasts of future financial results or operating performance; statements about strategies, outlook, and business and financial prospects; and statements about return of capital. These statements reflect beliefs and assumptions that are based on Alcoa Corporation’s perception of historical trends, current conditions, and expected future developments, as well as other factors that management believes are appropriate in the circumstances. Forward-looking statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and changes in circumstances that are difficult to predict. Although Alcoa Corporation believes that the expectations reflected in any forward-looking statements are based on reasonable assumptions, it can give no assurance that these expectations will be attained and it is possible that actual results may differ materially from those indicated by these forward-looking statements due to a variety of risks and uncertainties. Such risks and uncertainties include, but are not limited to: (a) 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 and other products, and fluctuations in indexed-based and spot prices for alumina; (b) deterioration in global economic and financial market conditions generally; (c) unfavorable changes in the markets served by Alcoa Corporation; (d) the impact of changes in foreign currency exchange rates on costs and results; (e) increases in energy costs; (f) declines in the discount rates used to measure pension liabilities or lower-than-expected investment returns on pension assets, or unfavorable changes in laws or regulations that govern pension plan funding; (g) the inability to achieve improvement in profitability and margins, cost savings, cash generation, revenue growth, fiscal discipline, or strengthening of competitiveness and operations anticipated from operational and productivity improvements, cash sustainability, technology advancements, and other initiatives; (h) the inability to realize expected benefits, in each case as planned and by targeted completion dates, from acquisitions, divestitures, facility closures, curtailments, restarts, expansions, or joint ventures; (i) political, economic, trade, and regulatory risks in the countries in which Alcoa Corporation operates or sells products; (j) labor disputes and work stoppages; (k) the outcome of contingencies, including legal proceedings, government or regulatory investigations, and environmental remediation; (l) the impact of cyberattacks and potential information technology or data security breaches; and (m) the other risk factors described in Part I Item 1A of Alcoa Corporation’s Form 10-K for the year ended December 31, 2017 and Part II Item 1A of Alcoa Corporation’s Form 10-Q for the quarter ended March 31, 2018, and in other reports filed by Alcoa Corporation with the U.S. Securities and Exchange Commission, including those described in this report. Alcoa Corporation disclaims any 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 described above and other risks in the market.

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

	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Sales (C & E)	\$ 3,390	\$ 2,964	\$10,059	\$8,478
Cost of goods sold (exclusive of expenses below)	2,534	2,340	7,547	6,652
Selling, general administrative, and other expenses	58	70	189	211
Research and development expenses	7	8	24	23
Provision for depreciation, depletion, and amortization	173	194	559	563
Restructuring and other charges (D)	177	(10)	389	12
Interest expense	33	26	91	77
Other expenses (income), net (O)	2	48	32	(3)
Total costs and expenses	2,984	2,676	8,831	7,535
Income before income taxes	406	288	1,228	943
Provision for income taxes	251	119	569	328
Net income	155	169	659	615
Less: Net income attributable to noncontrolling interest	196	56	475	202
NET (LOSS) INCOME ATTRIBUTABLE TO ALCOA CORPORATION	<u>\$ (41)</u>	<u>\$ 113</u>	<u>\$ 184</u>	<u>\$ 413</u>
EARNINGS PER SHARE ATTRIBUTABLE TO ALCOA CORPORATION COMMON SHAREHOLDERS (F):				
Basic	<u>\$ (0.22)</u>	<u>\$ 0.61</u>	<u>\$ 0.99</u>	<u>\$ 2.24</u>
Diluted	<u>\$ (0.22)</u>	<u>\$ 0.60</u>	<u>\$ 0.97</u>	<u>\$ 2.21</u>

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

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

	Alcoa Corporation		Noncontrolling interest		Total	
	Third quarter ended September 30,		Third quarter ended September 30,		Third quarter ended September 30,	
	2018	2017	2018	2017	2018	2017
Net (loss) income	\$ (41)	\$ 113	\$ 196	\$ 56	\$ 155	\$ 169
Other comprehensive income (loss), net of tax (G):						
Change in unrecognized net actuarial loss and prior service cost/benefit related to pension and other postretirement benefits	398	44	4	5	402	49
Foreign currency translation adjustments	(142)	141	(54)	44	(196)	185
Net change in unrecognized gains/losses on cash flow hedges	(29)	(415)	5	(5)	(24)	(420)
Total Other comprehensive income (loss), net of tax	227	(230)	(45)	44	182	(186)
Comprehensive income (loss)	<u>\$ 186</u>	<u>\$ (117)</u>	<u>\$ 151</u>	<u>\$ 100</u>	<u>\$ 337</u>	<u>\$ (17)</u>
	Nine months ended September 30,		Nine months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017	2018	2017
Net income	\$ 184	\$ 413	\$ 475	\$ 202	\$ 659	\$ 615
Other comprehensive income (loss), net of tax (G):						
Change in unrecognized net actuarial loss and prior service cost/benefit related to pension and other postretirement benefits	682	190	7	24	689	214
Foreign currency translation adjustments	(586)	281	(219)	121	(805)	402
Net change in unrecognized gains/losses on cash flow hedges	346	(729)	(25)	57	321	(672)
Total Other comprehensive income (loss), net of tax	442	(258)	(237)	202	205	(56)
Comprehensive income	<u>\$ 626</u>	<u>\$ 155</u>	<u>\$ 238</u>	<u>\$ 404</u>	<u>\$ 864</u>	<u>\$ 559</u>

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

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

	September 30, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents (L)	\$ 1,022	\$ 1,358
Receivables from customers	1,017	811
Other receivables	176	232
Inventories (I)	1,666	1,453
Fair value of derivative instruments (L)	57	113
Prepaid expenses and other current assets	255	271
Total current assets	4,193	4,238
Properties, plants, and equipment	21,839	23,046
Less: accumulated depreciation, depletion, and amortization	13,484	13,908
Properties, plants, and equipment, net	8,355	9,138
Investments (H & N)	1,381	1,410
Deferred income taxes	599	814
Fair value of derivative instruments (L)	42	128
Other noncurrent assets	1,615	1,719
Total assets	\$ 16,185	\$ 17,447
LIABILITIES		
Current liabilities:		
Accounts payable, trade	\$ 1,711	\$ 1,898
Accrued compensation and retirement costs	420	459
Taxes, including income taxes	417	282
Fair value of derivative instruments (L)	133	185
Other current liabilities	319	412
Long-term debt due within one year (L)	4	16
Total current liabilities	3,004	3,252
Long-term debt, less amount due within one year (J & L)	1,820	1,388
Accrued pension benefits (K)	1,210	2,341
Accrued other postretirement benefits (K)	926	1,100
Asset retirement obligations	528	617
Environmental remediation (N)	248	258
Fair value of derivative instruments (L)	630	1,105
Noncurrent income taxes	297	309
Other noncurrent liabilities and deferred credits	237	279
Total liabilities	8,900	10,649
CONTINGENCIES AND COMMITMENTS (N)		
EQUITY		
Alcoa Corporation shareholders' equity:		
Common stock	2	2
Additional capital	9,656	9,590
Retained earnings	298	113
Accumulated other comprehensive loss (G)	(4,740)	(5,182)
Total Alcoa Corporation shareholders' equity	5,216	4,523
Noncontrolling interest	2,069	2,275
Total equity	7,285	6,798
Total liabilities and equity	\$ 16,185	\$ 17,447

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

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

	Nine months ended September 30,	
	2018	2017
CASH FROM OPERATIONS		
Net income	\$ 659	\$ 615
Adjustments to reconcile net income to cash from operations:		
Depreciation, depletion, and amortization	559	564
Deferred income taxes	(16)	64
Equity earnings, net of dividends	(11)	1
Restructuring and other charges (D)	389	12
Net gain from investing activities – asset sales (O)	—	(115)
Net periodic pension benefit cost (K)	115	83
Stock-based compensation	29	21
Other	(64)	31
Changes in assets and liabilities, excluding effects of acquisitions, divestitures, and foreign currency translation adjustments:		
(Increase) in receivables	(209)	(112)
(Increase) in inventories	(279)	(102)
Decrease in prepaid expenses and other current assets	3	62
(Decrease) Increase in accounts payable, trade	(135)	109
(Decrease) in accrued expenses	(288)	(320)
Increase in taxes, including income taxes	248	15
Pension contributions (K)	(940)	(82)
(Increase) in noncurrent assets	(89)	(88)
(Decrease) Increase in noncurrent liabilities	(58)	11
CASH (USED FOR) PROVIDED FROM OPERATIONS	(87)	769
FINANCING ACTIVITIES		
Cash paid to former parent company related to separation	—	(247)
Net change in short-term borrowings (original maturities of three months or less)	—	2
Additions to debt (original maturities greater than three months) (J)	553	3
Payments on debt (original maturities greater than three months) (J)	(105)	(55)
Proceeds from the exercise of employee stock options	23	38
Contributions from noncontrolling interest	109	56
Distributions to noncontrolling interest	(566)	(244)
Other	(8)	(6)
CASH PROVIDED FROM (USED FOR) FINANCING ACTIVITIES	6	(453)
INVESTING ACTIVITIES		
Capital expenditures	(251)	(255)
Proceeds from the sale of assets and businesses	—	243
Additions to investments (H)	(6)	(44)
CASH USED FOR INVESTING ACTIVITIES	(257)	(56)
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS AND RESTRICTED CASH	(1)	8
Net change in cash and cash equivalents and restricted cash	(339)	268
Cash and cash equivalents and restricted cash at beginning of year (B)	1,365	859
CASH AND CASH EQUIVALENTS AND RESTRICTED CASH AT END OF PERIOD (B)	\$ 1,026	\$ 1,127

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

Alcoa Corporation and subsidiaries
Statement of Changes in Consolidated Equity (unaudited)
(in millions)

	Alcoa Corporation shareholders					
	Common stock	Additional capital	Retained earnings (deficit)	Accumulated other comprehensive loss	Non- controlling interest	Total equity
Balance at June 30, 2017	<u>\$ 2</u>	<u>\$ 9,559</u>	<u>\$ 196</u>	<u>\$ (3,803)</u>	<u>\$ 2,245</u>	<u>\$8,199</u>
Net income	—	—	113	—	56	169
Other comprehensive (loss) income (G)	—	—	—	(230)	44	(186)
Stock-based compensation	—	7	—	—	—	7
Common stock issued: compensation plans	—	20	—	—	—	20
Distributions	—	—	—	—	(89)	(89)
Other	—	(2)	—	—	—	(2)
Balance at September 30, 2017	<u>\$ 2</u>	<u>\$ 9,584</u>	<u>\$ 309</u>	<u>\$ (4,033)</u>	<u>\$ 2,256</u>	<u>\$8,118</u>
Balance at June 30, 2018	<u>\$ 2</u>	<u>\$ 9,650</u>	<u>\$ 339</u>	<u>\$ (4,967)</u>	<u>\$ 2,084</u>	<u>\$7,108</u>
Net (loss) income	—	—	(41)	—	196	155
Other comprehensive income (loss) (G)	—	—	—	227	(45)	182
Stock-based compensation	—	9	—	—	—	9
Common stock issued: compensation plans	—	1	—	—	—	1
Distributions	—	—	—	—	(181)	(181)
Other	—	(4)	—	—	15	11
Balance at September 30, 2018	<u>\$ 2</u>	<u>\$ 9,656</u>	<u>\$ 298</u>	<u>\$ (4,740)</u>	<u>\$ 2,069</u>	<u>\$7,285</u>
Balance at December 31, 2016	<u>\$ 2</u>	<u>\$ 9,531</u>	<u>\$ (104)</u>	<u>\$ (3,775)</u>	<u>\$ 2,043</u>	<u>\$7,697</u>
Net income	—	—	413	—	202	615
Other comprehensive (loss) income (G)	—	—	—	(258)	202	(56)
Stock-based compensation	—	21	—	—	—	21
Common stock issued: compensation plans	—	37	—	—	—	37
Contributions	—	—	—	—	56	56
Distributions	—	—	—	—	(244)	(244)
Other	—	(5)	—	—	(3)	(8)
Balance at September 30, 2017	<u>\$ 2</u>	<u>\$ 9,584</u>	<u>\$ 309</u>	<u>\$ (4,033)</u>	<u>\$ 2,256</u>	<u>\$8,118</u>
Balance at December 31, 2017	<u>\$ 2</u>	<u>\$ 9,590</u>	<u>\$ 113</u>	<u>\$ (5,182)</u>	<u>\$ 2,275</u>	<u>\$6,798</u>
Net income	—	—	184	—	475	659
Other comprehensive income (loss) (G)	—	—	—	442	(237)	205
Stock-based compensation	—	29	—	—	—	29
Common stock issued: compensation plans	—	23	—	—	—	23
Contributions	—	—	—	—	109	109
Distributions	—	—	—	—	(566)	(566)
Other	—	14	1	—	13	28
Balance at September 30, 2018	<u>\$ 2</u>	<u>\$ 9,656</u>	<u>\$ 298</u>	<u>\$ (4,740)</u>	<u>\$ 2,069</u>	<u>\$7,285</u>

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

Alcoa Corporation and subsidiaries

Notes to the Consolidated Financial Statements (unaudited)

(dollars in millions, except per-share amounts; metric tons in thousands (kmt))

A. Basis of Presentation – The interim Consolidated Financial Statements of Alcoa Corporation and its subsidiaries (“Alcoa Corporation” or the “Company”) are unaudited. These Consolidated Financial Statements include all adjustments, consisting only of 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 2017 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 the Company’s Annual Report on Form 10-K for the year ended December 31, 2017, 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).

References in these Notes to “ParentCo” refer to Alcoa Inc., a Pennsylvania corporation, and its consolidated subsidiaries (through October 31, 2016, at which time was renamed Arconic Inc. (Arconic)). On November 1, 2016 (the “Separation Date”), ParentCo separated into two standalone, publicly-traded companies, Alcoa Corporation and Arconic (the “Separation Transaction”). In connection with the Separation Transaction, as of October 31, 2016, the Company and Arconic entered into several agreements to effect the Separation Transaction, including a Separation and Distribution Agreement and a Tax Matters Agreement. See Note A to the Consolidated Financial Statements in Part II Item 8 of Alcoa Corporation’s Annual Report on Form 10-K for the year ended December 31, 2017 for additional information.

Principles of Consolidation. The Consolidated Financial Statements of Alcoa Corporation include the accounts of Alcoa Corporation and companies in which Alcoa Corporation has a controlling interest, including those that comprise the Alcoa World Alumina & Chemicals (AWAC) joint venture (see below). Intercompany transactions have been eliminated. The equity method of accounting is used for investments in affiliates and other joint ventures over which Alcoa Corporation has significant influence but does not have effective control. Investments in affiliates in which Alcoa Corporation cannot exercise significant influence are accounted for on the cost method.

AWAC is an unincorporated global joint venture between Alcoa Corporation and Alumina Limited and consists of several affiliated operating entities, which own, or have an interest in, or operate the bauxite mines and alumina refineries within Alcoa Corporation’s Bauxite and Alumina segments (except for the Poços de Caldas mine and refinery and a portion of the São Luís refinery, all in Brazil) and the Portland smelter in Australia. Alcoa Corporation owns 60% and Alumina Limited owns 40% of these individual entities, which are consolidated by the Company for financial reporting purposes and include Alcoa of Australia Limited, Alcoa World Alumina LLC (AWA), and Alcoa World Alumina Brasil Ltda. (AWAB). Alumina Limited’s interest in the equity of such entities is reflected as Noncontrolling interest on the accompanying Consolidated Balance Sheet.

B. Recently Adopted and Recently Issued Accounting Guidance

Adopted

On January 1, 2018, Alcoa Corporation adopted guidance issued by the Financial Accounting Standards Board (FASB) to the recognition of revenue from contracts with customers. This guidance created a comprehensive framework for all entities in all industries to apply in the determination of when to recognize revenue, and, therefore, supersedes 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 customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those 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. Management’s assessment of this guidance was applied only to those customer contracts that were open on the date of adoption under the modified retrospective method. Through a previously established project team, the Company completed a detailed review of the terms and provisions of its

customer contracts, as well as evaluated these contracts under the new guidance, throughout 2017 and concluded that Alcoa Corporation's revenue recognition practices were in compliance with this framework. That said, the Company did make some minor modifications to its internal accounting policies and internal control structure to ensure that any future customer contracts that may have different terms and conditions of those that the Company has today are properly evaluated under the new guidance. Other than providing additional disclosure (see Note C), the adoption of this guidance had no impact on the Consolidated Financial Statements.

On January 1, 2018, Alcoa Corporation adopted guidance issued by the FASB to the accounting and reporting of certain equity investments. This guidance requires 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. The adoption of this guidance had no impact on the Consolidated Financial Statements, as all of Alcoa Corporation's equity investments are accounted for under the equity method of accounting.

On January 1, 2018, Alcoa Corporation adopted guidance issued by the FASB to the presentation of several items in the statement of cash flows. Specifically, the guidance identifies nine cash flow items and the sections where they must be presented within the statement of cash flows, including distributions received from equity method investees, proceeds from the settlement of insurance claims, and restricted cash. Other than as it relates to restricted cash, the adoption of this guidance had no impact on the Consolidated Financial Statements. This guidance requires that restricted cash be aggregated with cash and cash equivalents in both the beginning-of-period and end-of-period line items at the bottom of the statement of cash flows. Previously, the change in restricted cash between the beginning-of-period and end-of period was reflected as either an investing, financing, operating, or non-cash activity based on the underlying nature of the transaction. Accordingly, for the accompanying Statement of Consolidated Cash Flows for the nine months ended September 30, 2018, the Cash and cash equivalents and restricted cash at beginning of year and Cash and cash equivalents and restricted cash at end of period line items include restricted cash of \$7 and \$4, respectively. Additionally, the Company's Statement of Consolidated Cash Flows for the nine months ended September 30, 2017 was recast to reflect this change in presentation. As a result, the Cash and cash equivalents and restricted cash at beginning of year and Cash and cash equivalents and restricted cash at end of period line items include restricted cash of \$6 and \$8 respectively. The change of \$2 for the nine months ended September 30, 2017 is reflected in the Effect of exchange rate changes on cash and cash equivalents and restricted cash line item. The following table provides a reconciliation of Cash and cash equivalents and Restricted cash reported in the accompanying Consolidated Balance Sheet that sum to the Cash and cash equivalents and restricted cash at both the beginning of year and end of period presented on the accompanying Statement of Consolidated Cash Flows for the nine months ended September 30, 2018:

	September 30, 2018	December 31, 2017
Cash and cash equivalents	\$ 1,022	\$ 1,358
Restricted cash*	4	7
	<u>\$ 1,026</u>	<u>\$ 1,365</u>

* These amounts are reported in Prepaid expenses and other current assets on the accompanying Consolidated Balance Sheet.

On January 1, 2018, Alcoa Corporation adopted guidance issued by the FASB to the accounting for intra-entity transactions, other than inventory. The guidance requires the current and deferred income tax consequences of an intra-entity transfer to be recorded immediately when the transaction occurs; the exception to defer the tax consequences of inventory transactions is maintained. Prior to this guidance, no immediate tax impact was permitted to be recognized in an entity's financial statements as a result of intra-entity transfers of assets. An entity was precluded from reflecting a tax benefit or expense from an intra-entity asset transfer between entities that file separate tax returns, whether or not such entities are in different tax jurisdictions, until the asset had been sold to a third party or otherwise recovered. The buyer of such asset was prohibited from recognizing a deferred tax asset for the temporary difference arising from the excess of the buyer's tax basis over the cost to the seller. The adoption of this guidance had an immaterial impact on the Consolidated Financial Statements.

On January 1, 2018, Alcoa Corporation adopted guidance issued by the FASB to accounting for business combinations. This guidance clarifies the definition of a business for the purposes of evaluating whether a particular transaction should be accounted for as an acquisition or disposal of a business or an

asset. Generally, a business is an integrated set of assets and activities that contain inputs, processes, and outputs, although outputs are not required. This guidance provides a “screen” to determine whether an integrated set of assets and activities qualifies as a business. If substantially all of the fair value of the gross assets is concentrated in a single identifiable asset or a group of similar identifiable assets, the definition of a business has not been met and the transaction should be accounted for as an acquisition or disposal of an asset. Otherwise, an entity is required to evaluate whether the integrated set of assets and activities include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create output and are no longer to consider whether a market participant could replace any missing elements. This guidance also narrows the definition of an output. Previously, an output was defined as the ability to provide a return in the form of dividends, lower costs, or other economic benefits directly to investors, owners, members, or participants. An output is now defined as the ability to provide goods or services to customers, investment income, or other revenues. The adoption of this guidance had no immediate impact on the Consolidated Financial Statements; however, this guidance will need to be considered in the event Alcoa Corporation acquires or disposes of an integrated set of assets and activities.

On January 1, 2018, Alcoa Corporation early adopted guidance issued by the FASB to the assessment of goodwill for impairment as it relates to the quantitative test. Prior to this guidance, there were two steps when performing a quantitative impairment test. The first step required an entity to compare the current fair value of a reporting unit to its carrying value. In the event the reporting unit’s estimated fair value was less than its carrying value, an entity performed the second step, which was to compare the carrying amount of the reporting unit’s goodwill with the implied fair value of that goodwill. The implied fair value of goodwill is the excess of the fair value of the reporting unit over the fair value amounts assigned to all of the assets and liabilities of that unit as if the reporting unit was acquired in a business combination and the fair value of the reporting unit represented the purchase price. If the carrying value of goodwill exceeded its implied fair value, an impairment loss equal to such excess was recognized. This guidance eliminates the second step of the quantitative impairment test. Accordingly, an entity would recognize an impairment of goodwill for a reporting unit, if under what was previously referred to as the first step, the estimated fair value of the reporting unit is less than the carrying value. The impairment would be equal to the excess of the reporting unit’s carrying value over its fair value not to exceed the total amount of goodwill applicable to that reporting unit. The adoption of this guidance had no immediate impact on the Consolidated Financial Statements; however, this guidance will need to be considered each time the Company performs an assessment of goodwill for impairment under the quantitative test.

On January 1, 2018, Alcoa Corporation adopted guidance issued by the FASB to the presentation of net periodic benefit cost related to pension and other postretirement benefit plans. This guidance requires that an entity report the service cost component of net periodic benefit cost in the same line item(s) on its income statement as other compensation costs arising from services rendered by the pertinent employees during a reporting period. The other components of net periodic benefit cost (see Note K) are required to be reported separately from the service cost component. In other words, these other components may be aggregated and presented as a separate line item or they may be reported in existing line items on the income statement other than such line items that include the service cost component. Previously, Alcoa Corporation reported all components of net periodic benefit cost, except for certain settlements, curtailments, and special termination benefits, in Cost of goods sold (business employees) and Selling, general administrative, and other expenses (corporate employees) consistent with the location of other compensation costs related to the respective employees. The non-service cost components noted as exceptions are reported in Restructuring and other charges, as applicable. Additionally, this guidance only permits the service cost component to be capitalized as applicable (e.g., as a cost of internally manufactured inventory). Upon adoption of this guidance, management began reporting the non-service cost components of net periodic benefit cost, except for certain settlements, curtailments, and special termination benefits that will continue to be reported in Restructuring and other charges, in Other expenses (income), net on the accompanying Statement of Consolidated Operations (see Note K). For the third quarter and nine months ended September 30, 2018, the non-service cost components reported in Other expenses, net was \$32 and \$109, respectively. Additionally, the Statement of Consolidated Operations for the third quarter and nine months ended September 30, 2017 was recast to reflect the reclassification of the non-service cost components of net periodic benefit cost to Other expense (income), net from both Cost of goods sold and Selling, general administrative, and other expenses. As a result, for the third quarter and nine months ended September 30, 2017, Cost of goods sold decreased by \$21 and \$61, respectively, Selling, general administrative, and other expenses decreased by \$3 (nine-month period only), and Other expenses (income), net changed by \$21 and \$64, respectively, from previously reported amounts. Under the practical expedient option provided for in the guidance, the Company used previously disclosed amounts for non-service cost components to recast these line items for the third quarter and nine months ended September 30, 2017. Furthermore, Alcoa

Corporation no longer capitalizes any non-service cost components as part of the cost of inventory prospectively beginning January 1, 2018.

On January 1, 2018, Alcoa Corporation adopted guidance issued by the FASB to the accounting for stock-based compensation when there has been a modification to the terms or conditions of a share-based payment award. This guidance requires an entity to account for the modification only when there has been a substantive change to the terms or conditions of a share-based payment award. A substantive change occurs when the fair value, vesting conditions or balance sheet classification (liability or equity) of a share-based payment award is/are different immediately before and after the modification. Previously, an entity was required to account for any modification in the terms or conditions of a share-based payment award. The adoption of this guidance had no immediate impact on the Consolidated Financial Statements; however, this guidance will need to be considered if the Company initiates a modification that is determined to be a substantive change to an outstanding share-based award. Additionally, the Company will no longer account for any future non-substantive change to the terms or conditions of a share-based payment awards as a modification.

On April 1, 2018, Alcoa Corporation early adopted guidance issued by the FASB to the accounting for hedging activities retroactive to January 1, 2018. This guidance permits hedge accounting for risk components in hedging relationships involving nonfinancial risk and interest rate risk; reduces current limitations on the designation and measurement of a hedged item in a fair value hedge of interest rate risk; removes the requirement to separately measure and report hedge ineffectiveness; provides an election to systematically and rationally recognize in earnings the initial value of any amount excluded from the assessment of hedge effectiveness for all types of hedges; and eases the requirements of effectiveness testing. Additionally, modifications to existing disclosures, as well as additional disclosures, are required, as applicable, to reflect these changes regarding the measurement and recognition of hedging activities. This guidance is to be initially applied only to hedging instruments that exist as of the adoption date using the modified retrospective method. In other words, any financial statement impact from application of these changes to open hedging instruments as of the adoption date related to periods prior to the adoption year is to be recognized through a cumulative effect adjustment in beginning retained earnings of the adoption year. Accordingly, upon adoption of this guidance, Alcoa Corporation recognized an immaterial cumulative effect adjustment within equity effective January 1, 2018 related to open Level 1 hedging instruments as of the adoption date. The Company had no open Level 2 hedging instruments as of the adoption date and there was no financial statement impact from Alcoa Corporation's open Level 3 hedging instruments as of the adoption date. This guidance will also be applied prospectively upon the Company entering into any new hedging instruments. See the Derivatives section of Note L for additional information.

Issued

In January 2018, the FASB issued guidance regarding the assessment of land easements (or rights of way) under the pending lease accounting requirements to be adopted on January 1, 2019 (see below). This guidance provides an entity an option to not evaluate existing or expired land easements as leases in preparation for the adoption of the new lease accounting requirements, as long as such land easements were recorded as something other than leases under current accounting requirements. That said, any new land easement acquired or existing land easement modified on January 1, 2019 or later must be assessed for lease accounting under the new requirements. This guidance becomes effective for Alcoa Corporation on January 1, 2019. Management plans to elect the option to not evaluate existing or expired land easements that are currently accounted for as something other than leases under the new lease accounting requirements. The Company's land easements are currently accounted for as fixed assets and are immaterial to Alcoa Corporation's Consolidated Financial Statements. Accordingly, management has determined that the adoption of this guidance will not have an immediate impact on the Company's Consolidated Financial Statements. The new lease accounting requirements will need to be considered if the Company acquires a new land easement or modifies an existing land easement on January 1, 2019 or later.

In February 2018, the FASB issued guidance regarding the reclassification of certain income tax effects reported in accumulated comprehensive income (loss) in response to U.S. tax legislation enacted on December 22, 2017 known as the U.S. Tax Cuts and Jobs Act of 2017 (the "TCJA"). For corporations, one of the main provisions of the TCJA was the reduction in the corporate income tax rate to 21% from 35%. Under current income tax accounting requirements, an entity was required to remeasure applicable U.S. deferred tax assets and deferred tax liabilities at the 21% tax rate effective on the TCJA enactment date. This remeasurement was required to be recognized in an entity's income tax provision in its income statement. However, certain of these deferred tax assets and deferred tax liabilities relate to income tax effects initially recognized at the 35% tax rate through other comprehensive income (loss) on items reported within accumulated other comprehensive income (loss) on an entity's balance sheet.

Consequently, an entity's financial statements will reflect an inconsistency between the deferred tax assets and deferred tax liabilities measured at 21% and the related income tax effects in accumulated other comprehensive income (loss) recorded at 35%. Accordingly, this guidance provides a one-time option to remeasure the income tax effects within accumulated other comprehensive income (loss) at the 21% income tax rate. The impact from this remeasurement is to be recorded directly in retained earnings on an entity's balance sheet. This guidance becomes effective for Alcoa Corporation on January 1, 2019, with early adoption permitted. Management is currently evaluating whether to elect this option, as well as whether to early adopt the guidance. If management elects to apply this guidance, the impact on the Company's Consolidated Balance Sheet is estimated to be an increase of approximately \$350 to both Retained earnings and Accumulated other comprehensive loss.

In June 2018, the FASB issued guidance regarding the accounting for nonemployee share-based payment transactions. This guidance effectively changes the accounting for such transactions to be consistent with the accounting for employee share-based payment transactions. The nonemployee share-based payment transactions subject to this guidance are those in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards. This guidance is not to be applied to other nonemployee share-based payment transactions, such as those used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of a contract accounted for under revenue recognition principles. This guidance becomes effective for Alcoa Corporation on January 1, 2019, with early adoption permitted. The only nonemployees to receive share-based payments from Alcoa Corporation are the members of the Company's Board of Directors. Accordingly, management does not expect the adoption of this guidance to have a material impact on the Consolidated Financial Statements.

In August 2018, the FASB issued separate guidance regarding the respective disclosure requirements associated with fair value measurements and defined benefit plans. This guidance makes changes to the disclosures of fair value measurements and defined benefit plans through several removals, modifications, additions, and/or clarifications of the existing requirements. The following are the changes that will have an immediate disclosure impact for Alcoa Corporation upon adoption of the guidance for fair value measurements: (i) disclosure of the valuation processes for Level 3 fair value measurements is no longer required, (ii) changes in unrealized gains and losses for the reporting period included in other comprehensive income (loss) for recurring Level 3 fair value measurements held at the end of the reporting period is a new disclosure requirement, and (iii) the range and weighted average (or other reasonable and rational method) of significant unobservable inputs used to develop Level 3 fair value measurements is a new disclosure requirement. The following are the changes that will have an immediate disclosure impact for Alcoa Corporation upon adoption of the guidance for defined benefit plans: (i) disclosure of the amounts in accumulated other comprehensive income (loss) expected to be recognized as components of net periodic benefit cost over the next fiscal year is no longer required, (ii) disclosure of the effects of a one-percentage-point change in assumed health care cost trend rates on both the aggregate of the service and interest cost components of net periodic benefit costs and the benefit obligation for postretirement health care benefits is no longer required, and (iii) an explanation of the reasons for significant gains and losses related to changes in the benefit obligation for the reporting period is a new disclosure requirement. The guidance for fair value measurements and defined benefit plans becomes effective for Alcoa Corporation on January 1, 2020 and December 31, 2020, respectively, with early adoption permitted. Other than updating the applicable disclosures, the adoption of this guidance will not have an impact on the Company's Consolidated Financial Statements.

In August 2018, the FASB issued guidance regarding the accounting for implementation costs incurred in a cloud computing arrangement that is a service contract (in other words, does not contain a software license). This guidance aligns the accounting for cloud computing implementation costs with that of costs to develop or obtain internal-use software, meaning such costs that are part of the application development stage are capitalized as an asset and amortized over the term of the arrangement, otherwise, such costs are expensed as incurred. Additionally, this guidance requires applying existing impairment guidance for long-lived assets to the capitalized implementation costs. Furthermore, this guidance requires the following presentation in an entity's financial statements: (i) payments for the capitalized implementation costs should be classified on the cash flows statement in the same manner as payments for the service fees associated with the arrangement, (ii) the capitalized implementation costs should be presented in the same asset line item on the balance sheet as any prepayment for the service fees associated with the arrangement, and (iii) the amortization of the capitalized implementation costs should be reflected in the same expense line item on the income statement as the service fees associated with the arrangement. This guidance becomes effective for Alcoa Corporation on January 1, 2020, with early adoption permitted. Management is currently evaluating the potential impact of this guidance on the Consolidated Financial Statements.

In February 2016, the FASB issued guidance regarding the accounting for leases. This guidance requires lessees to recognize a right-of-use asset and lease liability on the balance sheet for leases

classified as operating leases. 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. A right-of-use asset represents an entity's right to use the underlying asset for the lease term, and a lease liability represents an entity's obligation to make lease payments. Currently, an asset and liability only are recorded for leases classified as capital leases (financing leases). The measurement, recognition, and presentation of expenses and cash flows arising from leases by a lessee remains the same. This guidance becomes effective for Alcoa Corporation on January 1, 2019. Through a previously established cross-functional project team, the Company has completed the accumulation of all leases into a lease management system and has validated the information for accuracy and completeness. This team is in the final stages of implementing the system, which will be the primary source for the Company's lease information and the related accounting. Upon adoption of the new lease guidance, management expects to record a right-of-use asset and lease liability on Alcoa Corporation's Consolidated Balance Sheet for several types of operating leases, including land and buildings, alumina refinery process control technology, plant equipment, vehicles, and computer equipment. The amount of the respective asset and liability is estimated to be less than 5% of both total assets and total liabilities, as reported on the accompanying Consolidated Balance Sheet as of September 30, 2018. Additionally, in July 2018, the FASB issued guidance to provide for an alternative transition method to the new lease guidance, whereby an entity can choose to not reflect the impact of the new lease guidance in the prior periods included in its financial statements. The Company intends to elect this alternative transition method on the January 1, 2019 adoption date.

C. Revenue – The Company recognizes revenue when it satisfies a performance obligation(s) in accordance with the provisions of a customer order or contract. This is achieved when control of the product has been transferred to the customer, which is generally determined when title, ownership, and risk of loss pass to the customer, all of which occurs upon shipment or delivery of the product. The shipping terms vary across all businesses and depend on the product, the country of origin, and the type of transportation (commercial delivery truck, train, or vessel). Accordingly, except for the sale of electricity, the sale of Alcoa Corporation's products to its customers represent single performance obligations for which revenue is recognized at a point in time. Based on the foregoing, no significant judgment is required to determine when control of a product has been transferred to a customer.

The Company measures revenue based on the consideration it expects to be entitled to receive in exchange for its products. The standard terms and conditions of customer orders and contracts include general rights of return and product warranty provisions related to nonconforming or "out-of-spec" product. Depending on the circumstances, the product is either replaced or a quality adjustment is issued. Historically, such returns and adjustments have not been material to Alcoa Corporation's Consolidated Financial Statements.

The Company considers shipping and handling activities as costs to fulfill the promise to transfer the related products. As a result, customer payments of shipping and handling costs are recorded as a component of revenue. Also, Alcoa Corporation may collect various taxes (e.g., sales, use, value-added, excise) from its customers related to the sale of its products and remit such amounts to governmental authorities. As such, amounts paid to the Company for these types of taxes are excluded from the transaction price used to determine the proper measurement of revenue.

Alcoa Corporation has five product divisions as follows:

Bauxite— Bauxite is a reddish clay rock that is mined from the surface of the earth's terrain. This ore is the basic raw material used to produce alumina and is the primary source of aluminum.

Alumina— Alumina is an oxide that is extracted from bauxite and is the basic raw material used to produce primary aluminum. This product can also be consumed for non-metallurgical purposes, such as industrial chemical products.

Primary aluminum— Primary aluminum is metal in the form of a common alloy ingot (e.g., t-bar, sow, standard ingot) or a value-add ingot (e.g., billet, rod, and slab). These products are sold primarily to customers that produce products for the transportation, building and construction, packaging, wire, and other industrial markets.

Flat-rolled aluminum— Flat-rolled aluminum is metal in the form of sheet, which is sold primarily to customers that produce beverage and food cans, including body, tab, and end stock.

Energy— Energy is the generation of electricity, which is sold in the wholesale market to traders, large industrial consumers, distribution companies, and other generation companies.

The following table represents the general commercial profile of the Company's Bauxite, Alumina, Primary aluminum, and Flat-rolled aluminum product divisions (see text below table for Energy):

Product division	Pricing components	Shipping terms ⁽⁴⁾	Payment terms ⁽⁵⁾
Bauxite	Negotiated	FOB/CIF	LC Sight
Alumina:			
Smelter-grade	API ⁽¹⁾ /spot	FOB	LC Sight/CAD/Net 30 days
Non-metallurgical	Negotiated	FOB/CIF	Net 30 days
Primary aluminum:			
Common alloy ingot	LME + Regional premium ⁽²⁾	DAP/CIF	Net 30 to 45 days
Value-add ingot	LME + Regional premium + Product premium ⁽²⁾	DAP/CIF	Net 30 to 45 days
Flat-rolled aluminum	Metal + Conversion ⁽³⁾	DAP	Negotiated

- (1) API (Alumina Price Index) is a pricing mechanism that is calculated by the Company based on the weighted average of a prior month's daily spot prices published by the following three indices: CRU Metallurgical Grade Alumina Price; Platts Metals Daily Alumina PAX Price; and Metal Bulletin Non-Ferrous Metals Alumina Index.
- (2) LME (London Metal Exchange) is a globally recognized exchange for commodity trading, including aluminum. The LME pricing component represents the underlying base metal component, based on quoted prices for aluminum on the exchange. The regional premium 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). The product premium represents the incremental price for receiving physical metal in a particular shape (e.g., billet, rod, slab, etc.) or alloy.
- (3) Metal represents the underlying base metal component plus a regional premium (see footnote 2). Conversion represents the incremental price over the metal price component that is associated with converting primary or scrap aluminum into sheet.
- (4) CIF (cost, insurance, and freight) means that the Company pays for these items until the product reaches the buyer's designated destination point related to transportation by vessel. DAP (delivered at place) means the same as CIF related to all methods of transportation. FOB (free on board) means that the Company pays for costs, insurance, and freight until the product reaches the seller's designated shipping point.
- (5) The net number of days means that the customer is required to remit payment to the Company for the invoice amount within the designated number of days. LC Sight is a letter of credit that is payable immediately (usually within five to ten business days) after a seller meets the requirements of the letter of credit (i.e. shipping documents that evidence the seller performed its obligations as agreed to with a buyer). CAD (cash against documents) is a payment arrangement in which a seller instructs a bank to provide shipping and title documents to the buyer at the time the buyer pays in full the accompanying bill of exchange.

For the Company's Energy product division, sales of electricity are based on current market prices. Electricity is provided to customers on demand through a national or regional power grid; the customer simultaneously receives and consumes the electricity. Payment terms are generally within 10 days related to the previous 30 days of electricity consumption.

The following table details Alcoa Corporation's revenue by product division:

	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Primary aluminum	\$ 1,658	\$ 1,608	\$ 5,176	\$ 4,458
Alumina	1,098	710	3,079	2,187
Flat-rolled aluminum	472	410	1,417	1,286
Energy	115	157	261	340
Bauxite	63	104	179	254
Other*	(16)	(25)	(53)	(47)
	<u>\$ 3,390</u>	<u>\$ 2,964</u>	<u>\$ 10,059</u>	<u>\$ 8,478</u>

* Other includes realized gains and losses related to embedded derivative instruments designated as cash flow hedges of forward sales of aluminum (see Note L).

D. Restructuring and Other Charges – In the third quarter and nine-month period of 2018, Alcoa Corporation recorded Restructuring and other charges of \$177 and \$389, respectively, which were comprised of the following components: \$174 (net) and \$318 (net), respectively, related to settlements and/or curtailments of certain pension and other postretirement employee benefits (see Note K); \$2 and \$86, respectively, for additional costs related to the curtailed Wenatchee (Washington) smelter, including \$73 (nine-month period only) associated with recent management decisions (see below); a \$15 net benefit (nine-month period only) related to the Portovesme (Italy) smelter (see “Italy 148” in the Litigation section of Note N); and a \$1 net charge (third quarter only) for miscellaneous items.

In June 2018, management decided not to restart the fully curtailed Wenatchee smelter within the term provided in the related electricity supply agreement. Alcoa Corporation was therefore required to make a \$62 payment to the energy supplier under the provisions of the agreement. Additionally, management decided to permanently close one (38 kmt) of the four potlines at this smelter. This potline has not operated since 2001 and the investments needed to restart this line are cost prohibitive. The remaining three curtailed potlines have a capacity of 146 kmt. In connection with these decisions, the Company recognized a charge of \$73, composed of the \$62 payment, \$10 for asset impairments, and \$1 for asset retirement obligations triggered by the decision to decommission the potline.

In the third quarter and nine-month period of 2017, Alcoa Corporation recorded \$10 of income and \$12 of expense, respectively, in Restructuring and other charges, which were comprised of the following components: \$6 and \$24, respectively, for additional contract costs related to the curtailed Wenatchee and São Luís (Brazil) smelters; \$4 and \$17, respectively, for layoff costs, including the separation of approximately 10 and 120 (110 in the Aluminum segment) employees, respectively, and related pension costs of \$3 and \$6, respectively (see Note K); \$7 (both periods) for costs related to the relocation of the Company’s headquarters and principal executive office from New York, New York to Pittsburgh, Pennsylvania; a charge of \$2 (both periods) for miscellaneous items; and a reversal of \$29 and \$38, respectively, associated with several reserves related to prior periods (see below).

In July 2017, Alcoa Corporation announced plans to restart three (161 kmt of capacity) of the five potlines (269 kmt of capacity) at the Warrick (Indiana) smelter. This smelter was previously permanently closed in March 2016 by ParentCo. The capacity identified for restart will directly supply the existing rolling mill at the Warrick location to improve efficiency of the integrated site and provide an additional source of metal to help meet an anticipated increase in production volumes. As a result of the decision to reopen this smelter, in the 2017 third quarter, Alcoa Corporation reversed \$29 in remaining liabilities related to the original closure decision. These liabilities consisted of \$20 in asset retirement obligations and \$4 in environmental remediation obligations, which were necessary due to the previous decision to demolish the smelter, and \$5 in severance and contract termination costs. Additionally, the carrying value of the smelter and related assets was reduced to zero as the smelter ramped down between the permanent closure decision date (end of 2015) and the end of March 2016. Once these assets are placed back into service in conjunction with the restart, their carrying value will remain zero. As such, only newly acquired or constructed assets related to the Warrick smelter will be depreciated.

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

	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Bauxite	\$ 1	\$ 1	\$ 1	\$ 1
Alumina	1	3	3	2
Aluminum	2	7	86	34
Segment total	4	11	90	37
Corporate	173	(21)	299	(25)
Total restructuring and other charges	<u>\$ 177</u>	<u>\$ (10)</u>	<u>\$ 389</u>	<u>\$ 12</u>

As of September 30, 2018, approximately 130 of the 140 employees associated with 2017 restructuring programs were separated. The remaining separations for the 2017 restructuring programs are expected to be completed by the end of 2018.

In the 2018 third quarter and nine-month period, cash payments of \$1 and \$3, respectively, were made against layoff reserves related to 2017 restructuring programs.

Activity and reserve balances for restructuring charges were as follows:

	<u>Layoff costs</u>	<u>Other costs</u>	<u>Total</u>
Reserve balances at December 31, 2016	\$ 38	\$ 28	\$ 66
2017:			
Cash payments	(30)	(43)	(73)
Restructuring charges	23	67	90
Other*	(20)	(18)	(38)
Reserve balances at December 31, 2017	<u>11</u>	<u>34</u>	<u>45</u>
2018:			
Cash payments	(7)	(92)	(99)
Restructuring charges	1	102	103
Other*	(1)	(7)	(8)
Reserve balances at September 30, 2018	<u>\$ 4</u>	<u>\$ 37</u>	<u>\$ 41</u>

* Other includes reversals of previously recorded restructuring charges and the effects of foreign currency translation. In the 2018 nine-month period, Other for Other costs also included a reclassification of the following restructuring charges: \$1 in asset retirement and \$2 in environmental obligations, as these liabilities were included in Alcoa Corporation's separate reserves for asset retirement obligations and environmental remediation. In 2017, Other for Layoff costs also included a reclassification of \$8 in pension benefits costs, as these obligations were included in Alcoa Corporation's separate liability for pension benefits obligations. Additionally in 2017, Other for Other costs also included a reclassification of the following restructuring charges: \$10 in asset retirement and \$8 in environmental obligations, as these liabilities were included in Alcoa Corporation's separate reserves for asset retirement obligations and environmental remediation.

The remaining reserves are expected to be paid in cash during the fourth quarter of 2018, with the exception of \$29 that is expected to be paid between 2019 (\$20) and 2020 (\$9). This amount is comprised of \$15 related to the Portovesme smelter (see "Italy 148" in the Litigation section of Note N), \$8 associated with supplier contract-related costs at the Wenatchee smelter, \$3 related to the termination of an office lease contract, and \$3 for other items.

E. Segment Information – The operating results of Alcoa Corporation's reportable segments were as follows (differences between segment totals and consolidated amounts are in Corporate):

	<u>Bauxite</u>	<u>Alumina</u>	<u>Aluminum</u>	<u>Total</u>
Third quarter ended September 30, 2018				
Sales:				
Third-party sales	\$ 67	\$ 1,101	\$ 2,198	\$3,366
Intersegment sales	224	544	6	774
Total sales	<u>\$ 291</u>	<u>\$ 1,645</u>	<u>\$ 2,204</u>	<u>\$4,140</u>
Adjusted EBITDA	\$ 106	\$ 660	\$ 73	\$ 839
Supplemental information:				
Depreciation, depletion, and amortization	\$ 27	\$ 48	\$ 91	\$ 166
Equity income (loss)	—	10	(5)	5
Third quarter ended September 30, 2017				
Sales:				
Third-party sales	\$ 104	\$ 713	\$ 2,090	\$2,907
Intersegment sales	221	398	9	628
Total sales	<u>\$ 325</u>	<u>\$ 1,111</u>	<u>\$ 2,099</u>	<u>\$3,535</u>
Adjusted EBITDA	\$ 112	\$ 203	\$ 315	\$ 630
Supplemental information:				
Depreciation, depletion, and amortization	\$ 24	\$ 53	\$ 106	\$ 183
Equity loss	—	(5)	(7)	(12)

	<u>Bauxite</u>	<u>Alumina</u>	<u>Aluminum</u>	<u>Total</u>
Nine months ended September 30, 2018				
Sales:				
Third-party sales	\$ 191	\$ 3,083	\$ 6,722	\$ 9,996
Intersegment sales	699	1,534	14	2,247
Total sales	<u>\$ 890</u>	<u>\$ 4,617</u>	<u>\$ 6,736</u>	<u>\$12,243</u>
Adjusted EBITDA	\$ 316	\$ 1,690	\$ 457	\$ 2,463
Supplemental information:				
Depreciation, depletion, and amortization	\$ 83	\$ 150	\$ 305	\$ 538
Equity income (loss)	—	23	(13)	10
Nine months ended September 30, 2017				
Sales:				
Third-party sales	\$ 254	\$ 2,196	\$ 5,884	\$ 8,334
Intersegment sales	648	1,143	16	1,807
Total sales	<u>\$ 902</u>	<u>\$ 3,339</u>	<u>\$ 5,900</u>	<u>\$10,141</u>
Adjusted EBITDA	\$ 319	\$ 727	\$ 766	\$ 1,812
Supplemental information:				
Depreciation, depletion, and amortization	\$ 61	\$ 155	\$ 315	\$ 531
Equity loss	—	(10)	(11)	(21)

The following table reconciles total segment Adjusted EBITDA to consolidated net (loss) income attributable to Alcoa Corporation:

	<u>Third quarter ended September 30,</u>		<u>Nine months ended September 30,</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Total segment Adjusted EBITDA	\$ 839	\$ 630	\$2,463	\$1,812
Unallocated amounts:				
Transformation (1),(2)	1	(11)	(2)	(59)
Corporate inventory accounting (1),(3)	(17)	(9)	(18)	(12)
Corporate expenses (4)	(22)	(33)	(75)	(100)
Provision for depreciation, depletion, and amortization	(173)	(194)	(559)	(563)
Restructuring and other charges (D)	(177)	10	(389)	(12)
Interest expense	(33)	(26)	(91)	(77)
Other (expenses) income, net (O)	(2)	(48)	(32)	3
Other (1),(5)	(10)	(31)	(69)	(49)
Consolidated income before income taxes	406	288	1,228	943
Provision for income taxes	(251)	(119)	(569)	(328)
Net income attributable to noncontrolling interest	(196)	(56)	(475)	(202)
Consolidated net (loss) income attributable to Alcoa Corporation	<u>\$ (41)</u>	<u>\$ 113</u>	<u>\$ 184</u>	<u>\$ 413</u>

- (1) Effective in the first quarter of 2018, management elected to change the presentation of certain line items in the reconciliation of total segment Adjusted EBITDA to consolidated net (loss) income attributable to Alcoa Corporation to provide additional transparency to the nature of these reconciling items. Accordingly, Transformation (see footnote 2), which was previously reported within Other, is presented as a separate line item. Additionally, Impact of LIFO (last in, first out) and Metal price lag, which were previously reported as separate line items, are now combined and reported in a new line item labeled Corporate inventory accounting (see footnote 3). Also, the impact of intersegment profit eliminations, which was previously reported within Other, is reported in the new Corporate inventory accounting line item. The applicable information for all prior periods presented was recast to reflect these changes.
- (2) Transformation includes, among other items, the Adjusted EBITDA of previously closed operations.
- (3) Corporate inventory accounting is composed of the impacts of LIFO inventory accounting, metal price lag, and intersegment profit eliminations. Metal price lag describes the timing difference created when the average price of metal sold differs from the

average cost of the metal when purchased by Alcoa Corporation's rolled aluminum operations. In general, when the price of metal increases, metal price lag is favorable, and when the price of metal decreases, metal price lag is unfavorable.

- (4) Corporate expenses are composed of general administrative and other expenses of operating the corporate headquarters and other global administrative facilities, as well as research and development expenses of the corporate technical center.
- (5) Other includes certain items that impact Cost of goods sold and Selling, general administrative, and other expenses on Alcoa Corporation's Statement of Consolidated Operations that are not included in the Adjusted EBITDA of the reportable segments.

F. Earnings Per Share – Basic earnings per share (EPS) amounts are computed by dividing earnings 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 Corporation common shareholders was as follows (shares in millions):

	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Net (loss) income attributable to Alcoa Corporation	\$ (41)	\$ 113	\$ 184	\$ 413
Average shares outstanding – basic	186	185	186	184
Effect of dilutive securities:				
Stock options	—	1	1	1
Stock and performance awards	—	1	2	2
Average shares outstanding – diluted	186	187	189	187

In the third quarter of 2018, 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 Corporation generated a net loss. As a result, 4 million stock awards and stock options combined were not included in the computation of diluted EPS. Had Alcoa Corporation generated net income in the 2018 third quarter, 2 million potential shares of common stock related to stock awards and stock options combined would have been included in diluted average shares outstanding.

G. Accumulated Other Comprehensive Loss

The following table details the activity of the three components that comprise Accumulated other comprehensive loss for both Alcoa Corporation's shareholders and Noncontrolling interest:

	Alcoa Corporation		Noncontrolling interest	
	Third quarter ended		Third quarter ended	
	September 30,		September 30,	
	2018	2017	2018	2017
Pension and other postretirement benefits (K)				
Balance at beginning of period	\$ (2,502)	\$ (2,184)	\$ (44)	\$ (37)
Other comprehensive income:				
Unrecognized net actuarial loss and prior service cost/benefit	174	(6)	4	6
Tax (expense) benefit	(1)	2	(1)	(2)
Total Other comprehensive income (loss) before reclassifications, net of tax	173	(4)	3	4
Amortization of net actuarial loss and prior service cost/benefit (1)	227	50	1	1
Tax expense (2)	(2)	(2)	—	—
Total amount reclassified from Accumulated other comprehensive loss, net of tax (6)	225	48	1	1
Total Other comprehensive income	398	44	4	5
Balance at end of period	<u>\$ (2,104)</u>	<u>\$ (2,140)</u>	<u>\$ (40)</u>	<u>\$ (32)</u>
Foreign currency translation				
Balance at beginning of period	\$ (1,911)	\$ (1,515)	\$ (746)	\$ (600)
Other comprehensive (loss) income (3)	(142)	141	(54)	44
Balance at end of period	<u>\$ (2,053)</u>	<u>\$ (1,374)</u>	<u>\$ (800)</u>	<u>\$ (556)</u>
Cash flow hedges (L)				
Balance at beginning of period	\$ (554)	\$ (104)	\$ 21	\$ 63
Other comprehensive (loss) income:				
Net change from periodic revaluations	(60)	(545)	12	(2)
Tax benefit (expense)	10	109	(4)	1
Total Other comprehensive (loss) income before reclassifications, net of tax	(50)	(436)	8	(1)
Net amount reclassified to earnings:				
Aluminum contracts (4)	26	33	—	—
Financial contracts (5)	(6)	(8)	(4)	(5)
Foreign exchange contracts (4)	3	—	—	—
Sub-total	23	25	(4)	(5)
Tax (expense) benefit (2)	(2)	(4)	1	1
Total amount reclassified from Accumulated other comprehensive (loss) income, net of tax (6)	21	21	(3)	(4)
Total Other comprehensive (loss) income	<u>(29)</u>	<u>(415)</u>	<u>5</u>	<u>(5)</u>
Balance at end of period	<u>\$ (583)</u>	<u>\$ (519)</u>	<u>\$ 26</u>	<u>\$ 58</u>

	Alcoa Corporation		Noncontrolling interest	
	Nine months ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
Pension and other postretirement benefits (K)				
Balance at beginning of period	\$ (2,786)	\$ (2,330)	\$ (47)	\$ (56)
Other comprehensive income:				
Unrecognized net actuarial loss and prior service cost/benefit	250	42	7	24
Tax (expense) benefit	(3)	5	(2)	(2)
Total Other comprehensive income before reclassifications, net of tax	247	47	5	22
Amortization of net actuarial loss and prior service cost/benefit (1)	487	149	2	2
Tax expense (2)	(52)	(6)	—	—
Total amount reclassified from Accumulated other comprehensive loss, net of tax (6)	435	143	2	2
Total Other comprehensive income	682	190	7	24
Balance at end of period	\$ (2,104)	\$ (2,140)	\$ (40)	\$ (32)
Foreign currency translation				
Balance at beginning of period	\$ (1,467)	\$ (1,655)	\$ (581)	\$ (677)
Other comprehensive (loss) income (3)	(586)	281	(219)	121
Balance at end of period	\$ (2,053)	\$ (1,374)	\$ (800)	\$ (556)
Cash flow hedges (L)				
Balance at beginning of period	\$ (929)	\$ 210	\$ 51	\$ 1
Other comprehensive income (loss):				
Net change from periodic revaluations	344	(975)	(18)	88
Tax (expense) benefit	(58)	186	5	(26)
Total Other comprehensive income (loss) before reclassifications, net of tax	286	(789)	(13)	62
Net amount reclassified to earnings:				
Aluminum contracts (4)	87	82	—	—
Financial contracts (5)	(26)	(11)	(17)	(7)
Foreign exchange contracts (4)	2	—	—	—
Sub-total	63	71	(17)	(7)
Tax (expense) benefit (2)	(3)	(11)	5	2
Total amount reclassified from Accumulated other comprehensive (loss) income, net of tax (6)	60	60	(12)	(5)
Total Other comprehensive income (loss)	346	(729)	(25)	57
Balance at end of period	\$ (583)	\$ (519)	\$ 26	\$ 58

- (1) These amounts were included in the computation of net periodic benefit cost for pension and other postretirement benefits (see Note K). For the third quarter ended and nine months ended September 30, 2018, the amounts for Alcoa Corporation include \$175 (net) and \$319 (net), respectively, and for Noncontrolling interest include \$1 (both periods) related to settlements and/or curtailments of certain pension and other postretirement employee benefits (see Note K).
- (2) These amounts were reported 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) These amounts were reported in Sales on the accompanying Statement of Consolidated Operations.
- (5) These amounts were reported in Cost of goods sold on the accompanying Statement of Consolidated Operations.
- (6) 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 1 through 5.

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

	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Sales	\$ 1,343	\$ 979	\$3,963	\$2,853
Cost of goods sold	1,062	792	3,100	2,186
Net income	46	55	143	97

In June 2018, Alcoa Corporation, Rio Tinto plc, and the provincial government of Quebec, Canada launched a new joint venture, Elysis Limited Partnership (Elysis). The purpose of this partnership is to advance larger scale development and commercialization of the Company’s patent-protected technology that produces oxygen and eliminates all direct greenhouse gas emissions from the traditional aluminum smelting process. Alcoa Corporation and Rio Tinto plc, as general partners, each own a 48.235% stake in Elysis and the Quebec provincial government, as a limited partner, owns a 3.53% stake. The federal government of Canada and Apple Inc., as well as the Quebec provincial government, will provide initial financing to the partnership. The total planned combined investment (equity and debt) of the five participants in the joint venture is \$145 (C\$188). Alcoa Corporation and Rio Tinto plc will invest a combined \$44 (C\$55) over the next three years, as well as contribute and license certain intellectual property and patents to Elysis. Alcoa Corporation’s investment in Elysis is accounted for under the equity method. In the second quarter of 2018, the Company made an initial investment of \$5 (C\$6).

I. Inventories

	September 30, 2018	December 31, 2017
Finished goods	\$ 339	\$ 296
Work-in-process	339	258
Bauxite and alumina	619	585
Purchased raw materials	550	473
Operating supplies	145	147
LIFO reserve	(326)	(306)
	<u>\$ 1,666</u>	<u>\$ 1,453</u>

At September 30, 2018 and December 31, 2017, the total amount of inventories valued on a LIFO basis was \$570, or 29%, and \$516, or 29%, respectively, of total inventories before LIFO adjustments. The inventory values, prior to the application of LIFO, are generally determined under the average cost method, which approximates current cost.

J. Debt

144A Debt— In May 2018, Alcoa Nederland Holding B.V. (ANHBV), a wholly-owned subsidiary of Alcoa Corporation, completed a Rule 144A (U.S. Securities Act of 1933, as amended) debt offering for \$500 of 6.125% Senior Notes due 2028 (the “2028 Notes”). ANHBV received \$492 in net proceeds from the debt offering reflecting a discount to the initial purchasers of the 2028 Notes. The net proceeds, along with available cash on hand, were used to make discretionary contributions to certain U.S. defined benefit pension plans (see Note K). The discount to the initial purchasers, as well as costs to complete the financing, was deferred and is being amortized to interest expense over the term of the 2028 Notes. Interest on the 2028 Notes will be paid semi-annually in November and May, commencing on November 15, 2018.

ANHBV has the option to redeem the 2028 Notes on at least 30 days, but not more than 60 days, prior notice to the holders of the 2028 Notes under multiple scenarios, including, in whole or in part, at any time or from time to time after May 2023 at a redemption price specified in the indenture (up to 103.063% of the principal amount plus any accrued and unpaid interest in each case). Also, the 2028 Notes are subject to repurchase upon the occurrence of a change in control repurchase event (as defined in the indenture) at a repurchase price in cash equal to 101% of the aggregate principal amount of the 2028 Notes repurchased, plus any accrued and unpaid interest on the 2028 Notes repurchased.

The 2028 Notes are senior unsecured obligations of ANHBV and do not entitle the holders to any registration rights pursuant to a registration rights agreement. ANHBV does not intend to file a registration statement with respect to resales of or an exchange offer for the 2028 Notes. The 2028 Notes are guaranteed on a senior unsecured basis by Alcoa Corporation and its subsidiaries that are guarantors under the Company’s Amended Revolving Credit Agreement (the “subsidiary guarantors” and, together with Alcoa Corporation, the “guarantors”) (see Note L to the Consolidated Financial Statements included in Part II Item 8 of the Company’s Annual Report on Form 10-K for the year ended December 31, 2017). Each of the subsidiary guarantors will be released from their 2028 Notes guarantees upon the occurrence of certain events, including the release of such guarantor from its obligations as a guarantor under the Revolving Credit Agreement.

The 2028 Notes indenture includes several customary affirmative covenants. Additionally, the 2028 Notes indenture contains several negative covenants, that, subject to certain exceptions, include limitations on liens, limitations on sale and leaseback transactions, and a prohibition on a reduction in the ownership of AWAC entities below an agreed level. The negative covenants in the 2028 Notes indenture are less extensive than those in the 2024 Notes and 2026 Notes (see Note L to the Consolidated Financial Statements included in Part II Item 8 of the Company’s Annual Report on Form 10-K for the year ended December 31, 2017) indenture and the Amended Revolving Credit Agreement. For example, the 2028 Notes indenture does not include a limitation on restricted payments, such as repurchases of common stock and shareholder dividends.

The 2028 Notes rank equally in right of payment with all of ANHBV’s existing and future senior indebtedness, including the 2024 Notes and 2026 Notes; rank senior in right of payment to any future subordinated obligations of ANHBV; and are effectively subordinated to ANHBV’s existing and future secured indebtedness, including under the Amended Revolving Credit Agreement, to the extent of the value of property and assets securing such indebtedness.

BNDES Loans— A wholly-owned subsidiary of Alcoa Alumínio, which is an indirect wholly-owned subsidiary of Alcoa Corporation, has an outstanding loan with Brazil’s National Bank for Economic and Social Development (BNDES). In the 2018 nine-month period, Alumínio’s subsidiary repaid \$104 (R\$426), including a \$94 (R\$390) prepayment in September, of outstanding borrowings. The prepayment was made without penalty under the approval of BNDES. As of September 30, 2018 and December 31, 2017, outstanding borrowings were \$10 (R\$39) and \$137 (R\$454), respectively, and deferred interest related to the BNDES loans were \$18 (R\$74) and \$25 (R\$82), respectively.

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

Pension benefits	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Service cost	\$ 13	\$ 18	\$ 41	\$ 53
Interest cost (1)	56	62	170	183
Expected return on plan assets (1)	(84)	(101)	(256)	(298)
Recognized net actuarial loss (1)	47	47	154	139
Amortization of prior service cost (1)	2	2	6	6
Settlements (2)	232	—	399	3
Curtailments (2)	—	—	5	—
Special termination benefits (2)	—	3	—	3
Net periodic benefit cost	\$ 266	\$ 31	\$ 519	\$ 89

- (1) These amounts were reported in Other expenses (income), net on the accompanying Statement of Consolidated Operations (see Notes B and O).
(2) These amounts were reported in Restructuring and other charges on the accompanying Statement of Consolidated Operations (see Note D).

Other postretirement benefits	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Service cost	\$ 2	\$ 2	\$ 4	\$ 4
Interest cost (1)	8	9	26	28
Recognized net actuarial loss (1)	3	3	10	10
Amortization of prior service benefit (1)	—	(1)	(1)	(4)
Settlements (2)	(56)	—	(56)	—
Curtailments (2)	—	—	(28)	—
Net periodic benefit cost	\$ (43)	\$ 13	\$ (45)	\$ 38

- (1) These amounts were reported in Other expenses (income), net on the accompanying Statement of Consolidated Operations (see Notes B and O).
(2) These amounts were reported in Restructuring and other charges on the accompanying Statement of Consolidated Operations (see Note D).

Alcoa Corporation sponsors several defined benefit pension and other postretirement employee benefit plans, primarily in the United States and Canada. As of January 1, 2018, the pension benefit plans and the other postretirement benefit plans cover an aggregate of approximately 54,000 and approximately 48,000 participants, respectively. In the 2018 nine-month period, management initiated several actions to certain of these plans as follows:

- **Action# 1**— In January 2018, Alcoa Corporation notified all U.S. and Canadian salaried employees, who are participants in three of the Company's defined benefit pension plans, that they will cease accruing retirement benefits for future service, effective January 1, 2021. This change will affect approximately 800 employees, who will be transitioned to country-specific defined contribution plans, in which the Company will contribute 3% of these participants' eligible earnings on an annual basis. Such contributions will be incremental to any employer savings match the employees may receive under existing defined contribution plans. Participants already collecting benefits under these defined benefit pension plans are not affected by these changes.
- **Action# 2**— In January 2018, the Company notified U.S. salaried employees and retirees that it will no longer contribute to pre-Medicare retiree medical coverage, effective January 1, 2021. This change affects approximately 700 participants in one plan.
- **Action# 3**— In April 2018, the Company signed group annuity contracts to transfer the obligation to pay the remaining retirement benefits of approximately 2,100 retirees from two Canadian defined benefit pension plans to three insurance companies. The transfer of \$560 in both plan obligations and plan assets, as well as a transaction fee of \$23, was completed on April 13, 2018. The Company contributed \$89 between the two plans to facilitate the transaction and maintain the funding level of the remaining plan obligations. Prior to these transactions, these two Canadian pension plans combined had approximately 3,500 participants.
- **Action# 4**— In August 2018, Alcoa Corporation signed a group annuity contract to transfer the obligation to pay the remaining retirement benefits of approximately 10,500 retirees from three

U.S. defined benefit pension plans to one insurance company. The transfer of \$287 in both plan obligations and plan assets, as well as a transaction fee of \$10, was completed on August 7, 2018. Additionally, approximately 1,000 plan participants elected to receive lump sum settlements, representing \$75 in both plan obligations and plan assets. Prior to these two transactions, these three U.S. pension plans combined had approximately 43,400 participants.

- **Action# 5**— In August 2018, Alcoa Corporation notified certain U.S. salaried retirees that life insurance will no longer be provided, effective September 1, 2018. This change affects approximately 5,500 participants in one plan. As part of this change, the Company made a one-time transition payment to the affected retirees totaling \$23 in the 2018 third quarter.

These actions resulted in the curtailment or settlement of benefits thereby requiring remeasurement, including an update to the discount rates used to determine benefit obligations, of the affected plans. The following table presents certain information and the financial impacts of these actions on the accompanying Consolidated Financial Statements:

Action#	Number of plans	Number of affected plan participants	Weighted average discount rate as of December 31, 2017	Plan remeasurement date	Weighted average discount rate as of plan remeasurement date	(Decrease) increase to accrued pension benefits liability (1)	Decrease to accrued other postretirement benefits liability (1)	Curtailment charge (gain) (2)	Settlement charge (2)
1	3	~800	3.65%	January 31, 2018	3.80%	\$ (57)	\$ —	\$ 5	\$ —
2	1	~700	3.29%	January 31, 2018	3.43%	—	(7)	(28)	—
3	2	~2,100	3.43%	March 31, 2018	3.60%	24	—	—	167
4	3	~11,500	3.70%	July 31, 2018	4.39%	(110)	—	—	230
5	1	~5,500	3.61%	July 31, 2018	4.35%	—	(63)	—	(56)
		<u>~20,600</u>				<u>\$ (143)</u>	<u>\$ (70)</u>	<u>\$ (23)</u>	<u>\$ 341</u>

- (1) A negative amount indicates a corresponding decrease to Accumulated other comprehensive loss and a positive amount indicates a corresponding increase to Accumulated other comprehensive loss.
- (2) These amounts represent the accelerated amortization of a portion of the existing prior service cost or benefit for curtailments and net actuarial loss for settlements and were reclassified from Accumulated other comprehensive loss to Restructuring and other charges (see Note D) on the accompanying Statement of Consolidated Operations.

The eight plans affected by the curtailment and settlement actions described above represented 65% of the combined net unfunded status of Alcoa Corporation's pension and other postretirement benefit plans as of December 31, 2017.

In the third quarter and nine-month period of 2018, Alcoa Corporation made a combined \$100 and a combined \$705, respectively, in unscheduled contributions to several defined benefit pension plans, including a combined \$600 to three of the Company's U.S. defined benefit pension plans and a combined \$105 to two of the Company's Canadian defined benefit pension plans (inclusive of \$89 for Action# 3 above). The additional payments to the U.S. plans were discretionary in nature and were funded with \$492 in net proceeds from a May 2018 debt issuance (see Note J) and \$108 of available cash on hand. The primary purpose for issuing debt to fund a portion of the discretionary contributions to the U.S. plans was to reduce near-term pension funding risk with a fixed-rate, 10-year maturity instrument.

L. 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 Corporation 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 Corporation's exposure to the risks of changing commodity prices and foreign currency exchange rates.

Alcoa Corporation's commodity and derivative activities are subject to the management, direction, and control of the Strategic Risk Management Committee (SRMC), which consists of at least three members, including the chief executive officer and the chief financial officer. The remaining member(s) are other officers and/or employees of the Company as the chief executive officer may designate from time to time. Currently, the only other member of the SRMC is Alcoa Corporation's treasurer. The SRMC meets on a periodic basis to review derivative positions and strategy and reports to the Audit Committee of Alcoa Corporation's Board of Directors on the scope of its activities.

Alcoa Corporation's aluminum, energy, 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 Corporation is not involved in trading activities for energy, weather derivatives, or other nonexchange commodity trading activities.

Several of Alcoa Corporation's aluminum, energy, and foreign exchange contracts are classified as Level 1 or Level 2 under the fair value hierarchy. The total fair value of these derivative contracts recorded as assets and liabilities was \$1 and \$65, respectively, at September 30, 2018 and \$44 and \$117, respectively, at December 31, 2017. In the 2017 third quarter and nine-month period, Alcoa Corporation recognized a gain of \$1 and a loss of \$23, respectively, in Other expenses (income), net on the accompanying Statement of Consolidated Operations related to these contracts. Certain of these contracts are designated as either fair value or cash flow hedging instruments. For the contracts designated as cash flow hedges, Alcoa Corporation recognized an unrealized loss of \$7 and an unrealized gain of \$6 in the 2018 third quarter and nine-month period, respectively, and an unrealized loss of \$39 and \$64 in the 2017 third quarter and nine-month period, respectively, in Other comprehensive (loss) income. Additionally, Alcoa Corporation reclassified a realized loss of \$3 and \$10 in the 2018 third quarter and nine-month period, respectively, and \$3 and \$8 in the 2017 third quarter and nine-month period, respectively, from Accumulated other comprehensive loss to Sales.

In addition to the Level 1 and 2 derivative instruments described above, Alcoa Corporation has several derivative instruments classified as Level 3 under the fair value hierarchy. These instruments are composed of (i) embedded aluminum derivatives and an embedded credit derivative related to energy supply contracts and (ii) freestanding financial contracts related to energy purchases made in the spot market, all of which are associated with nine smelters and three refineries. Certain of the embedded aluminum derivatives and financial contracts are designated as cash flow hedging instruments. All of these Level 3 derivative instruments are described below in detail and are enumerated as D1 through D11.

The following section describes the valuation methodologies used by Alcoa Corporation 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 Corporation 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 Corporation 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).

D1 through D5. Alcoa Corporation has two power contracts (D1 and D2), each of which contain an embedded derivative that indexes the price of power to the LME price of aluminum. Additionally, Alcoa Corporation has three power contracts (D3 through D5), 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 (one of the contracts no longer requires the use of prices beyond this curve). Additionally, for three of the contracts, management also estimates the Midwest premium, generally, for the next twelve months based on recent transactions and then holds constant the premium estimated in that twelfth month for the remaining duration of the contract. Significant increases or decreases in the actual LME price beyond 10 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) income on the accompanying Consolidated Balance Sheet while realized gains and losses were included in Sales on the accompanying Statement of Consolidated Operations.

D6. [Reserved]

D7. Alcoa Corporation 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.

D8. In 2016, Alcoa Corporation and the related counterparty elected to modify the pricing of an existing power contract for a smelter in the United States. This amendment contains an embedded derivative that indexes the price of power to the LME price of aluminum plus the Midwest premium. The embedded derivative is valued using the interrelationship of future metal prices (LME base plus Midwest premium) and the amount of megawatt hours of energy needed to produce the forecasted metric tons of aluminum at the smelter. Significant increases or decreases in the metal price would result in a higher or lower fair value measurement. An increase in actual metal price over the inputs used in the valuation model will result in a higher cost of power and a corresponding increase to the derivative liability. Management elected not to qualify the embedded derivative 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 liability was recognized, an equivalent amount was recognized as a deferred charge in Other noncurrent assets on the accompanying Consolidated Balance Sheet. The amortization of this deferred charge is recognized in Other expenses (income), net on the accompanying Statement of Consolidated Operations as power is received over the life of the contract.

D9. Alcoa Corporation has a power contract, which contains an embedded derivative that indexes the spread between the Company's estimated 30-year debt yield and the counterparty's 30-year debt yield. As Alcoa Corporation does not have outstanding 30-year debt, the Company's estimated 30-year debt yield is represented by the sum of (i) the excess of the yield on Alcoa's outstanding notes due 2026 over the yield on only the Ba/BB-rated company debt included in Barclays High Yield Index for intermediate (10-year) credits and (ii) the yield on only the Ba/BB-rated company debt included in Barclays High Yield Index for long (30-year) credits. In accordance with the terms of the power contract, this calculation may be changed in January of each calendar year. 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 Corporation 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.

D10 and D11. Alcoa Corporation had a financial contract (D10) to hedge the anticipated power requirements at one of its smelters that began in November 2016. At that time, the energy supply contract related to this smelter had expired and Alcoa Corporation began purchasing electricity directly from the spot market. Beyond the term where market information is available, management 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 of the financial contract. Lower prices in the power market would cause a decrease in the derivative asset. The financial contract had been designated as a cash flow hedge of future purchases of electricity (this designation ceased in December 2016 – see below). Through November 2016, unrealized gains and losses on this contract were recorded in Other comprehensive (loss) income on the Company's Consolidated Balance Sheet, while realized gains and losses were recorded in Cost of goods sold as electricity purchases were made from the spot market. In August 2016, Alcoa Corporation gave the required notice to terminate this financial contract one year from the date of notification. As a result, Alcoa Corporation decreased both the related derivative asset recorded in Other noncurrent assets and the unrealized gain recorded in Accumulated other comprehensive loss by \$84, which related to the August 2017 through 2036 timeframe, resulting in no impact to Alcoa Corporation's earnings. In December 2016, the smelter experienced an unplanned outage, resulting in a portion of the financial contract no longer qualifying for hedge accounting, at which point management elected to discontinue hedge accounting for all of the remainder of the contract (through August 2017). As a result, Alcoa Corporation reclassified an unrealized gain of \$7 from Accumulated other comprehensive loss to Other income, net related to the portion of the contract that no longer qualified for hedge accounting. The remaining \$6 unrealized gain in Accumulated other comprehensive loss related to the portion management elected to discontinue hedge accounting was reclassified to Cost of goods sold as electricity purchases were made from the spot market through the termination date of the financial contract. Additionally, from December 2016 through August 2017, unrealized gains and losses on this contract were recorded in Other expenses (income), net, and realized gains and losses were recorded in Other expenses (income), net as electricity purchases were made from the spot market.

In January 2017, Alcoa Corporation and the counterparty entered into a new financial contract (D11) to hedge the anticipated power requirements at this smelter for the period from August 2017 through July 2021 and amended the existing financial contract to both reduce the hedged amount of anticipated power requirements and to move up the effective termination date to July 31, 2017. The new financial contract has been designated as a cash flow hedge of future purchases of electricity. Unrealized gains and losses on the new financial contract were recorded in Other comprehensive (loss) income on the accompanying Consolidated Balance Sheet while realized gains and losses were recorded (began in August 2017) in Cost of goods sold as electricity purchases were made in the spot market.

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

	Fair value at September 30, 2018	Unobservable input	Range (\$ in full amounts)
Assets:			
Embedded aluminum derivative (D7)	\$ —	Interrelationship of future aluminum and oil prices	Aluminum: \$2,056 per metric ton in October 2018 Oil: \$83 per barrel in October 2018
Financial contract (D11)	98	Interrelationship of forward energy price and the Consumer Price Index and price of electricity beyond forward curve	Electricity: \$60.48 per megawatt hour in 2018 to \$44.56 per megawatt hour in 2021
Liabilities:			
Embedded aluminum derivative (D1)	302	Interrelationship of LME price to the amount of megawatt hours of energy needed to produce the forecasted metric tons of aluminum	Aluminum: \$2,056 per metric ton in 2018 to \$2,480 per metric ton in 2027 Electricity: rate of 4 million megawatt hours per year
Embedded aluminum derivatives (D3 through D5)	351	Price of aluminum beyond forward curve	Aluminum: \$2,544 per metric ton in 2029 to \$2,588 per metric ton in 2029 (two contracts) and \$2,883 per metric ton in 2036 (one contract) Midwest premium: \$0.2050 per pound in 2018 to \$0.1950 per pound in 2029 (two contracts) and 2036 (one contract)
Embedded aluminum derivative (D8)	14	Interrelationship of LME price to the amount of megawatt hours of energy needed to produce the forecasted metric tons of aluminum	Aluminum: \$2,056 per metric ton in 2018 to \$2,070 per metric ton in 2019 Midwest premium: \$0.2050 per pound in 2018 to \$0.2000 per pound in 2019 Electricity: rate of 2 million megawatt hours per year
Embedded aluminum derivative (D2)	13	Interrelationship of LME price to overall energy price	Aluminum: \$2,177 per metric ton in 2018 to \$2,111 per metric ton in 2019
Embedded credit derivative (D9)	18	Estimated spread between the respective 30-year debt yield of Alcoa Corporation and the counterparty	2.60% (30-year debt yields: Alcoa Corporation – 6.85% (estimated) and counterparty – 4.25%)

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

Asset Derivatives	September 30, 2018	December 31, 2017
Derivatives designated as hedging instruments:		
Fair value of derivative instruments – current:		
Financial contract	\$ 56	\$ 96
Fair value of derivative instruments – noncurrent:		
Financial contract	42	101
Total derivatives designated as hedging instruments	\$ 98	\$ 197
Total Asset Derivatives	\$ 98	\$ 197
Liability Derivatives		
Derivatives designated as hedging instruments:		
Fair value of derivative instruments – current:		
Embedded aluminum derivatives	\$ 93	\$ 120
Fair value of derivative instruments – noncurrent:		
Embedded aluminum derivatives	573	992
Total derivatives designated as hedging instruments	\$ 666	\$ 1,112
Derivatives not designated as hedging instruments:		
Fair value of derivative instruments – current:		
Embedded aluminum derivative	\$ 14	\$ 28
Embedded credit derivative	3	4
Fair value of derivative instruments – noncurrent:		
Embedded aluminum derivative	—	6
Embedded credit derivative	15	23
Total derivatives not designated as hedging instruments	\$ 32	\$ 61
Total Liability Derivatives	\$ 698	\$ 1,173

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

	Assets	Liabilities	
	Financial contracts	Embedded aluminum derivatives	Embedded credit derivative
Third quarter ended September 30, 2018			
Opening balance – July 1, 2018	\$ 83	\$ 644	\$ 20
Total gains or losses (realized and unrealized) included in:			
Sales	—	(25)	—
Cost of goods sold	(11)	—	(1)
Other expenses, net	—	(6)	(1)
Other comprehensive loss	30	70	—
Purchases, sales, issuances, and settlements*	—	—	—
Transfers into and/or out of Level 3*	—	—	—
Other	(4)	(3)	—
Closing balance – September 30, 2018	\$ 98	\$ 680	\$ 18
Change in unrealized gains or losses included in earnings for derivative instruments held at September 30, 2018:			
Sales	\$ —	\$ —	\$ —
Cost of goods sold	—	—	—
Other expenses, net	—	(6)	(1)

* In the 2018 third quarter, 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.

Nine months ended September 30, 2018	Assets	Liabilities	
	Financial contracts	Embedded aluminum derivatives	Embedded credit derivative
Opening balance – January 1, 2018	\$ 197	\$ 1,146	\$ 27
Total gains or losses (realized and unrealized) included in:			
Sales	—	(79)	—
Cost of goods sold	(45)	—	(3)
Other expenses, net	—	(12)	(6)
Other comprehensive income	(45)	(365)	—
Purchases, sales, issuances, and settlements*	—	—	—
Transfers into and/or out of Level 3*	—	—	—
Other	(9)	(10)	—
Closing balance – September 30, 2018	\$ 98	\$ 680	\$ 18
Change in unrealized gains or losses included in earnings for derivative instruments held at September 30, 2018:			
Sales	\$ —	\$ —	\$ —
Cost of goods sold	—	—	—
Other expenses, net	—	(12)	(6)

* In the 2018 nine-month period, 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, effective on January 1, 2018, the entire amount of unrealized gains or losses on the derivative is reported as a component of other comprehensive income. Prior to January 1, 2018, only the effective portion of unrealized gains or losses on the derivative is reported as a component of other comprehensive income while the ineffective portion of unrealized gains or losses is recognized directly in earnings immediately. On April 1, 2018, Alcoa Corporation adopted guidance issued by the FASB to the accounting for hedging activities (see Note B), which included the elimination of the concept of ineffectiveness. Accordingly, there is no longer a requirement to separately measure and report ineffectiveness. In all periods presented, realized gains or losses on the derivative are reclassified from other comprehensive income into earnings in the same period or periods during which the hedged transaction impacts earnings. Additionally, gains and losses on the derivative representing hedge components excluded from the assessment of effectiveness are recognized directly in earnings immediately.

Alcoa Corporation has five Level 3 embedded aluminum derivatives and one Level 3 financial contract (through November 2016 – see D10 above) that have been designated as cash flow hedges as described below. Additionally, in January 2017, Alcoa Corporation entered into a new financial contract (see D11 above), which was designated as a cash flow hedging instrument and was classified as Level 3 under the fair value hierarchy, that replaced the existing financial contract (see D10 above) in August 2017.

Embedded aluminum derivatives (D1 through D5). Alcoa Corporation 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 September 30, 2018 and December 31, 2017, these embedded aluminum derivatives hedge forecasted aluminum sales of 2,643 kmt and 2,859 kmt, respectively.

Alcoa Corporation recognized a net unrealized loss of \$70 and a net unrealized gain of \$365 in the 2018 third quarter and nine-month period, respectively, and a net unrealized loss of \$502 and \$1,043 in the 2017 third quarter and nine-month period, respectively, in Other comprehensive (loss) income related to these five derivative instruments. Additionally, Alcoa Corporation reclassified a realized loss of \$25 and \$79 in the 2018 third quarter and nine-month period, respectively, and \$29 and \$74 in the 2017 third quarter and nine-month period, respectively, from Accumulated other comprehensive loss to Sales. Assuming market rates remain constant with the rates at September 30, 2018, a realized loss of \$93 is expected to be recognized in Sales over the next 12 months.

There was no ineffectiveness related to these five derivative instruments in the 2017 third quarter and nine-month period.

Financial contracts (D10 and D11). Alcoa Corporation had a financial contract to hedge the anticipated power requirements at one of its smelters that became effective when the existing power contract expired in October 2016. In August 2016, Alcoa Corporation elected to terminate most of the remaining term of this financial contract (see D10 above). Additionally, in December 2016, management elected to discontinue hedge accounting for this contract (see D10 above). This financial contract hedged forecasted electricity purchases of 1,969,544 megawatt hours prior to December 2016. In the 2017 third quarter and nine-month period, Alcoa Corporation reclassified a realized gain of \$1 and \$6, respectively, from Accumulated other comprehensive loss to Cost of goods sold.

In addition, in January 2017, Alcoa Corporation entered into a new financial contract that hedges the anticipated power requirements at this smelter for the period from August 2017 through July 2021 (see D11 above). At September 30, 2018 and December 31, 2017, this financial contract hedges forecasted electricity purchases of 6,967,620 and 8,805,456, respectively, megawatt hours. Alcoa Corporation recognized an unrealized gain of \$30 and an unrealized loss of \$45 in the 2018 third and nine-month period, respectively, and an unrealized loss of \$7 and an unrealized gain of \$100 in the 2017 third quarter and nine-month period, respectively, in Other comprehensive (loss) income. Additionally, Alcoa Corporation reclassified a realized gain of \$11 and \$45 in the 2018 third quarter and nine-month period, respectively, and \$12 in both the 2017 third quarter and nine-month period from Accumulated other comprehensive loss to Cost of goods sold. Assuming market rates remain consistent with the rates at September 30, 2018, a realized gain of \$56 is expected to be recognized in Cost of goods sold over the next 12 months. The amount of hedge ineffectiveness related to this derivative instrument was not material in both the 2017 third quarter and nine-month period.

Derivatives Not Designated As Hedging Instruments

Alcoa Corporation has two Level 3 embedded aluminum derivatives (D7 and D8) and one Level 3 embedded credit derivative (D9) that do not qualify for hedge accounting treatment and one Level 3 financial contract for which management elected to discontinue hedge accounting treatment (see D10 above). As such, gains and losses related to the changes in fair value of these instruments are recorded directly in earnings. In the 2018 third quarter and nine-month period, Alcoa Corporation recognized a gain of \$7 and \$18, respectively, in Other expenses, net, of which a gain of \$6 and \$12, respectively, related to the embedded aluminum derivatives and a gain of \$1 and \$6, respectively, related to the embedded credit derivative. In the 2017 third quarter and nine-month period, Alcoa Corporation recognized a loss of \$15 and \$19, respectively, in Other expenses (income), net, of which a loss of \$7 and \$15, respectively, related to the embedded aluminum derivatives a gain of \$3 (both periods) related to the embedded credit derivative, and a loss of \$11 and \$7, respectively, related to the financial contract.

Material Limitations

The disclosures with respect to commodity prices and foreign currency exchange risk do not consider 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 several factors that are not under Alcoa Corporation's control and could vary significantly from those factors disclosed.

Alcoa Corporation 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. Alcoa Corporation 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 Corporation's other financial instruments were as follows:

	September 30, 2018		December 31, 2017	
	Carrying value	Fair value	Carrying value	Fair value
Cash and cash equivalents	\$ 1,022	\$1,022	\$ 1,358	\$1,358
Restricted cash	4	4	7	7
Long-term debt due within one year	4	4	16	16
Long-term debt, less amount due within one year	1,820	1,959	1,388	1,555

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

Cash and cash equivalents and Restricted cash. The carrying amounts approximate fair value because of the short maturity of the instruments. The fair value amounts for Cash and cash equivalents and Restricted cash were classified in Level 1 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 Corporation 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.

M. Income Taxes – On December 22, 2017, U.S. tax legislation known as the U.S. Tax Cuts and Jobs Act of 2017 (the “TCJA”) was enacted. For corporations, the TCJA amends the U.S. Internal Revenue Code by reducing the corporate income tax rate (to 21% from 35%) and modifying several business deduction and international tax provisions, including a tax on each of the following: (i) a mandatory one-time deemed repatriation of accumulated foreign earnings, (ii) a new category of income, referred to as global intangible low tax income, related to earnings taxed at a low rate of foreign entities without a significant fixed asset base; and (iii) base erosion payments (deductible cross-border payments to related parties) that exceed 3% of a company's deductible expenses.

Based on management's preliminary analysis of the TCJA, the Company recorded a \$22 discrete income tax charge in its Consolidated Financial Statements for the year ended December 31, 2017. This amount was provisional in nature in accordance with guidance issued by the U.S. Securities and Exchange Commission under Staff Accounting Bulletin No. 118, *Income Tax Accounting Implications of the Tax Cuts and Jobs Act*. In the 2018 nine-month period, management continued to gather information and perform additional analysis of the TCJA provisions. In the first quarter of 2018, the Company completed its analysis related to the reduced corporate income tax rate, resulting in no further impact to Alcoa Corporation's Consolidated Financial Statements. Additionally, in the third quarter of 2018, the Company completed its assessment of the other provisions of the TCJA, resulting in no further impact to Alcoa Corporation's Consolidated Financial Statements as of and for the year ended December 31, 2017.

See Note P to the Consolidated Financial Statements in Part II Item 8 of Alcoa Corporation's Annual Report on Form 10-K for the year ended December 31, 2017 for additional information.

In the third quarter of 2018, Alcoa Corporation recorded a charge of \$30 (€26) in Provision for income taxes on the accompanying Statement of Consolidated Operations to establish a liability for its 49% share of the estimated loss on an income tax matter in Spain. See “Spain” in the Tax section of Note N for additional information.

N. Contingencies and Commitments

Contingencies

Unless specifically described to the contrary, all matters within Note N are the full responsibility of Alcoa Corporation pursuant to the Separation and Distribution Agreement. Additionally, the Separation and Distribution Agreement provides for cross-indemnities between the Company and Arconic for claims subject to indemnification.

Litigation

Italy 148— Beginning in 2006, ParentCo and the Italian Energy Authority (Autorità di Regolazione per Energia Reti e Ambiente, formerly l’Autorità per l’Energia Elettrica, il Gas e il Sistema Idrico, the “Energy Authority”) had been in a dispute regarding the calculation of a drawback applied to a portion of the price of power under a special tariff received by Alcoa Trasformazioni S.r.l. (“Trasformazioni,” previously a subsidiary of ParentCo; now a subsidiary of Alcoa Corporation). This dispute arose as a result of a resolution (148/2004) issued in 2004 by the Energy Authority that changed the method for calculating the drawback. Through 2009, Trasformazioni continued to receive the power price drawback for its Portovesme and Fusina smelters in accordance with the original resolution (204/1999), at which time the European Commission declared all such special tariffs to be impermissible “state aid.” Between 2006 and 2014, several judicial hearings occurred related to continuous appeals filed by both ParentCo and the Energy Authority regarding the dispute on the calculation of the drawback; a hearing on the latest appeal was scheduled for May 2018 (see below). Additionally, between 2012 and 2013, Trasformazioni received multiple letters from the agency responsible for making and collecting payments on behalf of the Energy Authority demanding payment for the difference in the drawback calculation between the two resolutions. The latest such demand was for \$97 (€76), including interest, and allegedly included consideration of a third resolution (44/2012) issued in 2012 on the calculation of the drawback; Trasformazioni rejected this demand.

In the meantime, as a result of the conclusion of the European Commission Matter in January 2016 (see Note R to the Consolidated Financial Statements in Part II Item 8 of Alcoa Corporation’s Annual Report on Form 10-K for the year ended December 31, 2017), ParentCo’s management modified its outlook with respect to a portion of the then-pending legal proceedings related to the drawback dispute. As such, a charge of \$37 (€34) was recorded in Restructuring and other charges for the year ended December 31, 2015 to establish a partial reserve for this matter.

In December 2017, through an agreement with the Energy Authority, Alcoa Corporation settled this matter for \$18 (€15) (paid in January 2018). Accordingly, the Company recorded a reduction of \$22 (€19) (the U.S. dollar amount reflects the effects of foreign currency movements since 2015) to its previously established reserve in Restructuring and other charges on the Statement of Consolidated Operations for the year ended December 31, 2017. In January 2018, subsequent to making the previously referenced payment, Alcoa Corporation and the respective state attorney in Italy filed a joint request with the Regional Administrative Court for Lombardy to have this matter formally dismissed. On October 9, 2018, the court formally dismissed the case and this matter is now closed.

Also in December 2017, as part of a separate but related agreement to the above, the Company agreed to transfer ownership of the Portovesme smelter (permanently closed in 2014) to Invitalia, an Italian government agency responsible for managing economic development. Under the provisions of the agreement, the Company will retain the responsibility for environmental-related obligations associated with decommissioning the Portovesme smelter (see below). The agreement further provides that the Company may be relieved of such obligations upon Invitalia exercising an option to receive a cash payment of \$23 (€20) from the Company. Additionally, this agreement included a framework for the future settlement of a groundwater remediation project related to the Portovesme site (see Fusina and Portovesme, Italy in Environmental Matters below). In February 2018, the Company completed the transfer of ownership of the Portovesme smelter to Invitalia. The carrying value of the assets related to the Portovesme site were previously written down to zero as a direct result of ParentCo’s decision in 2014 to decommission the facility.

In the second quarter of 2018, Invitalia sold the Portovesme smelter to SiderAlloys International S.A., a Switzerland company, which intends to restart the facility. In June 2018, Invitalia gave notice to the Company that it was exercising its option under the December 2017 agreement to receive the cash payment thereby releasing the Company from responsibility of all environmental-related obligations associated with a future decommissioning of the Portovesme smelter. The cash payment will be made in three installments, one in each of 2018 (paid \$8 (€7) on June 18), 2019, and 2020. Accordingly, in the 2018 second quarter, Alcoa Corporation recognized a \$15 net benefit in Restructuring and other charges

(see Note D) on the Company's Statement of Consolidated Operations, comprised of (i) a \$38 reversal of previously accrued asset retirement obligations (\$36) and environmental reserves (\$2) related to the Company's former decommissioning plan for the Portovesme smelter, and (ii) a \$23 charge to establish a liability for the planned cash payment to Invitalia.

Environmental Matters

Alcoa Corporation participates in environmental assessments and cleanups at several 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, among others, the nature and extent of contamination, changes in remedial requirements, and technological changes.

Alcoa Corporation's remediation reserve balance was \$285 and \$294 at September 30, 2018 and December 31, 2017 (of which \$37 and \$36 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 2018 nine-month period, the remediation reserve was increased by \$15. The change to the remediation reserve was due to an increase of \$9 related to the former Sherwin location (see below), a reversal of \$2 (recorded in Restructuring and other charges) related to the Portovesme location (unrelated to the matter below – see Italy 148 in Litigation above), and a net charge of \$8 (\$6 and \$2 were recorded in Cost of goods sold and Restructuring and other charges, respectively) associated with several sites.

Payments related to remediation expenses applied against the reserve were \$5 and \$19 in the 2018 third quarter and nine-month period, respectively. These amounts include expenditures currently mandated, as well as those not required by any regulatory authority or third party. The reserve also reflects both a decrease of \$1 and \$6 in the 2018 third quarter and nine-month period, respectively, due to the effects of foreign currency translation and an increase of \$1 in the 2018 nine-month period for reclassifications made between this reserve and the Company's liability for asset retirement obligations.

The Separation and Distribution Agreement includes provisions for the assignment or allocation of environmental liabilities between Alcoa Corporation and Arconic, including certain remediation obligations associated with environmental matters. In general, the respective parties are responsible for the environmental matters associated with their operations, and with the properties and other assets assigned to each. Additionally, the Separation and Distribution Agreement lists environmental matters with a shared responsibility between the two companies with an allocation of responsibility and the lead party responsible for management of each matter. For matters assigned to Alcoa Corporation and Arconic under the Separation and Distribution Agreement, the companies have agreed to indemnify each other in whole or in part for environmental liabilities arising from operations prior to the Separation Date.

The following description provides details regarding the current status of certain significant reserves related to current or former Alcoa Corporation sites. With the exception of the Fusina, Italy matter, Alcoa Corporation assumed full responsibility of the matters described below.

General— The Company is in the process of decommissioning various plants in several countries. As a result, redeveloping these sites for reuse or returning the land to a natural state requires the performance of certain remediation activities. In aggregate, the majority of these activities will be completed at various times in the future with the latest expected to be in 2026, after which ongoing monitoring and other activities will be required. At September 30, 2018 and December 31, 2017, the reserve balance associated with these activities was \$132 and \$150, respectively.

Sherwin, TX— In connection with ParentCo's sale of the Sherwin alumina refinery, which was required to be divested as part of ParentCo's acquisition of Reynolds Metals Company in 2000, ParentCo 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). All ParentCo obligations regarding the Sherwin refinery and Copano facility were transferred from ParentCo to Alcoa Corporation as part of the Separation Transaction on November 1, 2016. Since October 2016, Reynolds Metals Company, a subsidiary of Alcoa Corporation, had been involved in a legal dispute with the owner of Sherwin related to the allocation of responsibility for the environmental obligations at this site. In April 2018, Reynolds Metals Company reached a settlement agreement with the owner of Sherwin, as well as a separate agreement with the Texas Commission on Environmental Quality, that revised the environmental responsibilities and obligations for each related to

the Sherwin refinery site and Copano facility. These agreements became effective on June 5, 2018. Accordingly, in the 2018 second quarter, the Company increased the reserve associated with this matter by \$9 to reflect certain incremental obligations under the agreements. At September 30, 2018 and December 31, 2017, the reserve balance associated with this matter was \$38 and \$29, respectively. In management's judgment, the Company's reserve as of September 30, 2018 is sufficient to satisfy the provisions of the settlement agreements. Upon changes in facts or circumstances, a change to the reserve may be required. See "Sherwin" in the Other section below for a complete description of this matter.

Baie Comeau, Quebec, Canada— Alcoa Corporation has a remediation project related to known polychlorinated biphenyls (PCBs) and polycyclic aromatic hydrocarbons (PAHs) contained in sediments of the Anse du Moulin bay, which is near the Company's Baie Comeau smelter. The project, which was approved by the Quebec Ministry of Sustainable Development, Environment, Wildlife and Parks through a final ministerial decree issued in July 2015, is aimed at dredging and capping of the contaminated sediments. The project work began in April 2017 and was virtually completed in December 2017. At the end of 2017, the Company decreased the reserve for Baie Comeau by \$4 to reflect the final cost estimate of the remaining work and the subsequent monitoring program, which is expected to last through 2023. At September 30, 2018 and December 31, 2017, the reserve balance associated with this matter was \$3 and \$5, respectively.

Fusina and Portovesme, Italy— The following matters are in regards to an order issued in 2004 to Alcoa Trasformazioni S.r.l. ("Trasformazioni") (Trasformazioni is now a subsidiary of Alcoa Corporation and owns the Fusina smelter and Portovesme smelter (until February 2017 – see Italy 148 in Litigation above) sites, and Fusina Rolling S.r.l., a new ParentCo subsidiary, now owns the Fusina rolling operations) by the Italian Ministry of Environment and Protection of Land and Sea (MOE) for the development of a clean-up plan related to soil and groundwater contamination in excess of allowable limits under legislative decree and, for only the Fusina site, to institute emergency actions and pay natural resource damages.

For the Fusina site, Trasformazioni has a soil and groundwater remediation project, which was approved by the MOE through a final ministerial decree issued in August 2014. Additionally, under an administrative agreement reached in February 2014 with the MOE, Trasformazioni is required to make annual payments over a 10-year period for groundwater emergency containment and natural resource damages related to the Fusina site. Trasformazioni began work on the soil remediation project in October 2017 and expects to complete the project by the end of 2019. The MOE assumed the responsibility for the execution of the groundwater remediation/emergency containment in accordance with the February 2014 settlement agreement, as part of a regional effort by the MOE, and project work is slated to begin in 2019. At September 30, 2018 and December 31, 2017, the reserve balance associated with all of the foregoing Fusina-related matters (excluding a portion related to the rolling operations – see below) was \$6 and \$8, respectively.

Effective with the Separation Transaction, Arconic retained the portion of Trasformazioni's obligation related to the Fusina rolling operations. Specifically, under the Separation and Distribution Agreement, Trasformazioni, and with it the Fusina properties, were assigned to Alcoa Corporation. Fusina Rolling S.r.l., entered into a lease agreement for the portion of property that included the rolling operations. Pursuant to the Separation and Distribution Agreement, the liabilities at Fusina described above were allocated between Alcoa Corporation (Trasformazioni) and Arconic (Fusina Rolling S.r.l.).

For the Portovesme site, Trasformazioni has a soil remediation project, which was approved by the MOE through a final ministerial decree issued in October 2015. Project work on the soil remediation project commenced in mid-2016 and is expected to be completed in 2019. Additionally, Trasformazioni, along with four other entities that operated in the same industrial park, have submitted a groundwater remediation project, which was preliminarily approved in 2010 by the MOE. Since that time, the parties have performed additional studies and work to be incorporated into the final remedial design. In December 2017, a framework for the future settlement of the groundwater remediation project was included within an agreement to transfer the ownership of the Portovesme smelter to an Italian government agency (see Italy 148 in Litigation above). The MOE has confirmed its acceptance of the proposal set out in the framework; however, the total cost of the groundwater remediation project will not be determined until the final remedial design is completed in 2019. The ultimate outcome of this matter may result in a change to the existing reserve for Portovesme. At September 30, 2018 and December 31, 2017, the reserve balance associated with all of the foregoing Portovesme-related matters was \$13 and \$16, respectively.

Mosjøen, Norway— Alcoa Corporation has a remediation project related to known PAHs in the sediments located in the harbor and extending out into the fjord, which are near the Company's Mosjøen smelter. The project, which was approved by the Norwegian Environmental Agency through a final order issued in June 2015, is aimed at dredging and capping of the contaminated sediments. In order to allow for the sediment dredging in the harbor, the project also includes stabilization of the wharf. Project work

commenced in early 2016 and the main portion of such work was completed in the 2017 third quarter. At that time, the Company reexamined its cost estimate for the remaining project work, resulting in a reduction of the reserve associated with this matter by \$2. In the 2018 second quarter, the remaining project work was completed. At September 30, 2018, there is an immaterial reserve balance for required ongoing reporting and monitoring activities. At December 31, 2017, the reserve balance associated with this matter was \$2.

East St. Louis, IL— Alcoa Corporation has an ongoing remediation project related to an area used for the disposal of bauxite residue from ParentCo's former alumina refining operations. The project, which was selected by the U.S. Environmental Protection Agency (EPA) in a Record of Decision issued in July 2012 and approved in a consent decree entered as final in February 2014 by the U.S. Department of Justice, is aimed at implementing a soil cover over the affected area. As a result, ParentCo began the project work in March 2014; the fieldwork on a majority of this project was completed by the end of June 2016. A completion report was approved by the EPA in September 2016 and this matter, for the completed portion of the project, transitioned into a long-term (approximately 30 years) inspection, maintenance, and monitoring program. Fieldwork for the remaining portion of the project is expected to be completed in 2020, at which time it would also transition into a long-term inspection, maintenance, and monitoring program. This obligation was transferred from ParentCo to Alcoa Corporation as part of the Separation Transaction on November 1, 2016. At September 30, 2018 and December 31, 2017, the reserve balance associated with this matter was \$3 and \$4, respectively.

Tax

Spain— In July 2013, following a corporate income tax audit covering the 2006 through 2009 tax years, an assessment was received as a result of Spain's tax authorities disallowing certain interest deductions claimed by a former Spanish consolidated tax group previously owned by ParentCo. The following month, ParentCo filed an appeal of this assessment in Spain's Central Tax Administrative Court. In conjunction with this appeal, as required under Spanish tax law, ParentCo provided financial assurance in this matter in the form of both a bank guarantee (Arconic) and a lien secured with the San Ciprian smelter (Alcoa Corporation) to Spain's tax authorities. In January 2015, Spain's Central Tax Administrative Court denied ParentCo's appeal of this assessment. Two months later, ParentCo filed an appeal of the assessment in Spain's National Court (the "National Court"). The amount of this assessment, including interest, was \$152 (€131) as of June 30, 2018.

On July 6, 2018, the National Court denied ParentCo's appeal of the assessment; however, the decision includes a requirement that Spain's tax authorities issue a new assessment, which considers available net operating losses of the former Spanish consolidated tax group from prior tax years that can be utilized during the assessed tax years. Spain's tax authorities will not issue a new assessment until this matter is resolved; however, based on estimated calculations completed by Arconic and Alcoa Corporation (collectively, the "Companies"), the amount of the new assessment, including applicable interest, is expected to be in the range of \$25 to \$61 (€21 to €53) after consideration of available net operating losses and tax credits. Under the Tax Matters Agreement related to the Separation Transaction, Arconic and Alcoa Corporation are responsible for 51% and 49%, respectively, of the assessed amount in the event of an unfavorable outcome. On July 12, 2018, the Companies sent a letter to the National Court seeking clarification on one part of the decision. A response was received from the National Court on October 1, 2018, resulting in no change to its July 6, 2018 decision. The Companies are preparing a petition for appeal to Spain's Supreme Court, which must be filed no later than November 13, 2018.

Notwithstanding the petition for appeal, based on a review of the bases on which the National Court decided this matter, Alcoa Corporation management no longer believes that the Companies are more likely than not (greater than 50%) to prevail in this matter. Accordingly, in the 2018 third quarter, Alcoa Corporation recorded a charge of \$30 (€26) in Provision for income taxes on the accompanying Statement of Consolidated Operations to establish a liability for its 49% share of the estimated loss in this matter, representing management's best estimate at this time. As indicated above, at a future point in time, the Companies will receive an updated assessment from Spain's tax authorities, which may result in a change to management's estimate following further analysis.

In January 2017, the National Court issued a decision in favor of the former Spanish consolidated tax group related to a similar assessment for the 2003 through 2005 tax years, effectively making that assessment null and void. Additionally, in August 2017, in lieu of receiving a formal assessment, the Companies reached a settlement with Spain's tax authorities for the 2010 through 2013 tax years that had been under audit for a similar matter. Alcoa Corporation's share of this settlement was not material to the Company's Consolidated Financial Statements. The ultimate outcomes related to the 2003 through 2005 and the 2010 through 2013 tax years are not indicative of the potential ultimate outcome of the assessment for the 2006 through 2009 tax years due to procedural differences. Additionally, it is possible

that the Companies may receive similar assessments for tax years subsequent to 2013; however, management does not expect any such assessment, if received, to be material to Alcoa Corporation's Consolidated Financial Statements.

Brazil (AWAB)— In March 2013, 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 \$26 (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 \$29 (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, the Company is unable to reasonably predict an outcome for this matter.

Other

Reynolds— On January 11, 2016, Sherwin Alumina Company, LLC ("Sherwin"), the current owner of a refinery previously owned by ParentCo (see below), and one of its affiliate entities, filed bankruptcy petitions in Corpus Christi, Texas for reorganization under Chapter 11 of the U.S. Bankruptcy Code. Sherwin informed the bankruptcy court that it intends to cease operations because it is not able to continue its bauxite supply agreement. On November 23, 2016, the bankruptcy court approved Sherwin's plans for cessation of its operations. On February 16, 2017, Sherwin filed a bankruptcy Chapter 11 Plan (the "Plan") and, on February 17, 2017, the court approved that Plan.

In 2000, ParentCo acquired Reynolds Metals Company ("Reynolds," a subsidiary of Alcoa Corporation), which included an alumina refinery in Gregory, Texas. As a condition of the Reynolds acquisition, ParentCo was required to divest this alumina refinery. In accordance with the terms of the divestiture in 2000, ParentCo agreed to retain responsibility for certain environmental obligations (see Sherwin, TX in Environmental Matters above) and assigned to the buyer an Energy Services Agreement ("ESA") with Gregory Power Partners ("Gregory Power") for purchase of steam and electricity by the refinery.

Through the bankruptcy proceedings, the owner of Sherwin exercised its right under the U.S. Bankruptcy Code to reject the agreement from 2000 containing the previously mentioned retained responsibility, which had the effect of terminating all rights and responsibilities of the parties to the agreement.

As a result of Sherwin's initial bankruptcy filing, separate legal actions were initiated against Reynolds by Gregory Power and Sherwin as described below.

Gregory Power: On January 26, 2016, Gregory Power delivered notice to Reynolds that Sherwin's bankruptcy filing constitutes a breach of the ESA; on January 29, 2016, Reynolds responded that the filing does not constitute a breach. On September 16, 2016, Gregory Power filed a complaint in the bankruptcy case against Reynolds alleging breach of the ESA. In response to this complaint, on November 10, 2016, Reynolds filed both a motion to dismiss, including a jury demand, and a motion to withdraw the reference to the bankruptcy court based on the jury demand. On July 18, 2017, the district court ordered that any trial would be held to a jury in district court, but that the bankruptcy court would retain jurisdiction on all pre-trial matters. Since that time, Gregory Power filed an amended complaint to include Allied Alumina LLC ("Allied"), the successor to the original purchaser of the refinery from Reynolds. In September 2018, Reynolds and Allied filed their respective answers to the amended complaint, and Allied filed a cross complaint against Reynolds, which was answered by Reynolds on October 15, 2018. The court has yet to rule on several pending pretrial matters. At this time, Alcoa Corporation is unable to reasonably predict the ultimate outcome of this matter.

Sherwin: On October 4, 2016, the Texas Commission on Environmental Quality (TCEQ) filed suit against Sherwin in the bankruptcy proceeding seeking to hold Sherwin responsible for remediation of alleged environmental conditions at the Sherwin refinery site and related bauxite residue waste disposal areas (known as the Copano facility). On October 11, 2016, Sherwin filed a similar suit against Reynolds

in the case. As provided in the Plan, Sherwin, including certain affiliated companies, and Reynolds had been negotiating an allocation among them as to the ownership of and responsibility for certain areas of the refinery and the Copano facility. In March 2018, Reynolds and Sherwin reached a settlement agreement that assigns to Reynolds all environmental liabilities associated with the Copano facility and assigns to Sherwin all environmental liabilities associated with the Sherwin refinery site. Additionally, Reynolds and TCEQ reached an agreement that defines the operating and environmental steps required for the Copano facility, which Reynolds intends to operate for the purpose of managing materials other than bauxite residue waste, including third-party dredge material. The effectiveness and enforceability of each of these two agreements are pre-conditioned on the other being accepted by the bankruptcy court. A public notice and comment period on these agreements expired on April 26, 2018 without material affect to the documents. On June 5, 2018, the bankruptcy court accepted and entered the agreements into the judicial record as submitted. This date serves as the “effective date” for both agreements.

On June 5, 2018, the transaction between Sherwin and Reynolds was completed. Under the agreement with Sherwin, in exchange for assuming full responsibility for the environmental-related liabilities (see below related to the Company’s existing reserve) associated with the Copano facility, Reynolds assumed ownership of the land that comprises the Copano facility, as well as land that serves as a buffer around the Copano facility and other related assets. A third-party appraisal estimated the fair value of the land and other assets to be \$16. Under the agreement with TCEQ, a portion of the Copano facility must be closed within 10 years and the remaining portion must be closed within 30 years, both timeframes began on the effective date. Also, Reynolds is required to install upgrades to certain dust control systems and repair certain structures and drainage systems at the Copano facility, and prepare and submit to TCEQ a preliminary groundwater assessment report and a drinking water survey report related to the Copano facility within 180 days of the effective date. Accordingly, the Company recognized \$16 in properties, plants, and equipment, \$9 in environmental remediation liabilities, and \$7 in other related liabilities. Additionally, the Company paid \$12 into a trust managed by the state of Texas as financial assurance of the Company’s performance in completing the required obligations. This amount will be returned to the Company upon satisfactory completion of the future closure of the Copano facility in accordance with all applicable laws and regulations. On June 7, 2018, Sherwin filed a notice of dismissal in the suit against Reynolds; the dismissal was immediately effective as no court order was required.

At the time the agreements were signed by all parties, the Company had a reserve of \$29 for its proportionate share of environmental-related matters at both the Sherwin refinery site and the Copano facility based on the terms of the divestiture of the Sherwin refinery in 2000 (see Sherwin, TX in Environmental Matters above). While Reynolds no longer has any responsibility for environmental-related matters at the Sherwin refinery site, it assumed additional responsibility for environmental-related matters at the Copano facility (\$9 – see above). In management’s judgment, the \$38 reserve as of September 30, 2018 is sufficient to satisfy the Company’s revised responsibilities and obligations under the settlement agreements. Upon changes in facts or circumstances, a change to the reserve may be required.

Suralco— On December 16, 2016, Boskalis International B.V. (Boskalis) initiated a binding arbitration proceeding against Suriname Aluminum Company, LLC (Suralco), an AWAC company, seeking \$47 plus prejudgment interest and associated taxes in connection with a dispute arising under a contract for mining services in Suriname between Boskalis and Suralco. Boskalis asserted four separate claims under the contract.

In February 2018, the arbitration hearing was held before a three-person panel under the rules of the International Chamber of Commerce. The panel issued its decision on May 29, 2018, finding in favor of Boskalis on two claims and against Boskalis on two claims. For the two claims on which Boskalis prevailed, the panel awarded Boskalis \$29, including prejudgment interest of \$3. The award is final and cannot be appealed. Accordingly, in the 2018 second quarter, Alcoa Corporation recorded a charge of \$29 (\$17 after noncontrolling interest), including \$26 in Cost of goods sold and \$3 in Interest expense on the Company’s Statement of Consolidated Operations. On June 6, 2018, the Company made the \$29 cash payment to Boskalis closing this matter.

The claim that represented the majority of the arbitration award centered around a contract provision requiring Suralco to make a “true up” payment at the end of the contract in the event that Suralco was unable to receive delivery of the full contract quantity, thus allowing Boskalis to recover its fixed production costs and a suitable return on its investment. While Suralco argued that all required deliveries had been made during the amended contract term and that no “true up” payment was required because a “true up” would amount to a double payment for bauxite deliveries after the initial contract term, Boskalis argued that the deliveries were not made within the original contract term and thus, a “true up” payment was required. On the basis of its analysis of the facts and applicable law, management concluded that the likelihood of an unfavorable decision on Boskalis’ claims was remote (25% or less). Throughout the

course of the proceeding, and even after the conclusion of the hearing, management's judgment of the likelihood of an unfavorable outcome remained the same.

General

In addition to the matters discussed above, various other lawsuits, claims, and proceedings have been or may be instituted or asserted against Alcoa Corporation, including those pertaining to environmental, product liability, safety and health, contract dispute, and tax matters, and other actions and claims arising out of the normal course of business. While the amounts claimed in these other matters may be substantial, the ultimate liability is not readily determinable because of the considerable uncertainties that exist. Accordingly, 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 Corporation has an investment in a joint venture related to the 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 Corporation and consists of three separate companies as follows: one each for the mine and refinery, the smelter, and the rolling mill. Alcoa Corporation accounts for its investment in the joint venture under the equity method. As of September 30, 2018 and December 31, 2017, the carrying value of Alcoa Corporation's investment in this joint venture was \$892 and \$887, respectively.

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 obtained by the joint venture companies, which has been partially 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 Corporation's total equity contribution in the joint venture related to the capital investment in the project would be approximately \$1,100, of which Alcoa Corporation has contributed \$982. 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. Separate from the capital investment in the project, Alcoa Corporation contributed \$66 (Ma'aden contributed \$199) to the joint venture in 2017 for short-term funding purposes in accordance with the terms of the joint venture companies' financing arrangements. Both partners may be required to make such additional contributions in future periods.

The rolling mill company has project financing totaling \$1,179 (reflects principal repayments made through September 30, 2018), of which \$296 represents Alcoa Corporation's 25.1% interest in the rolling mill company. Alcoa Corporation has issued guarantees (see below) to the lenders in the event of default on the debt service requirements by the rolling mill company through 2018 and 2021 (Ma'aden issued similar guarantees related to its 74.9% interest). Alcoa Corporation's guarantees for the rolling mill cover total remaining debt service requirements of \$50 in principal and up to a maximum of approximately \$10 in interest per year (based on projected interest rates). Previously, Alcoa Corporation issued similar guarantees related to the project financing of both the smelting company and the mining and refining company. In December 2017 and July 2018, the smelting company and the mining and refining company, respectively, refinanced and/or amended all of their existing outstanding debt. The guarantees that were previously required of the Company related to both the smelting company and the mining and refining were effectively terminated. At September 30, 2018 and December 31, 2017, the combined fair value of the guarantees was \$1 and \$3, respectively, which was included in Other noncurrent liabilities and deferred credits on the accompanying Consolidated Balance Sheet.

As a result of the Separation Transaction, the various lenders to the joint venture companies required Arconic to maintain joint and several guarantees with Alcoa Corporation. In the event of default by any of the joint venture companies, the lenders would make a claim against both Alcoa Corporation and Arconic. Accordingly, Alcoa Corporation would perform under its guarantee; however, if the Company failed to perform, Arconic would be required to perform under its own guarantee. Arconic would then subsequently seek indemnification from Alcoa Corporation under the terms of the Separation and Distribution Agreement.

O. Other Expenses (Income), Net

	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Equity (income) loss	\$ (1)	\$ 13	\$ (2)	\$ 23
Foreign currency (gains) losses, net	(22)	1	(49)	6
Net loss (gain) from asset sales	3	1	—	(115)
Net (gain) loss on mark-to-market derivative instruments (L)	(8)	6	(19)	22
Non-service costs – Pension & OPEB (K)	32	21	109	64
Other	(2)	6	(7)	(3)
	<u>\$ 2</u>	<u>\$ 48</u>	<u>\$ 32</u>	<u>\$ (3)</u>

In the 2017 nine-month period, Net gain from asset sales included a \$120 gain related to the sale of certain energy operations in the United States.

P. Subsequent Events – Management evaluated all activity of Alcoa Corporation 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, except as described below.

On October 17, 2018, Alcoa Corporation announced that its Board of Directors authorized a common stock repurchase program under which the Company may purchase up to \$200 million of its outstanding common stock, depending on cash availability, market conditions, and other factors. Repurchases under the program may be made using a variety of methods, which may include open market purchases, privately negotiated transactions, or pursuant to a Rule 10b5-1 plan. This program does not have a predetermined expiration date. Alcoa Corporation intends to retire the repurchased shares of common stock. As of September 30, 2018, the Company had 186,490,966 issued and outstanding shares of common stock.

On October 31, 2018, Alcoa Corporation initiated a formal 30-day consultation process for the collective dismissal of all of the employees at two smelters in Spain, Avilés (317 employees) and La Coruña (369 employees), with the workers' representatives. This action was the result of an internal analysis that determined that organizational improvements could be achieved if the Company ceased aluminum production at these two smelters and reorganized production at Alcoa Corporation's San Ciprian plant in Spain, as the Avilés and La Coruña smelters are the least productive within the Company's global smelting system. The ultimate outcome of this process may result in the recognition of restructuring charges by Alcoa Corporation in a future period.

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Alcoa Corporation:

Results of Review of Financial Statements

We have reviewed the accompanying consolidated balance sheet of Alcoa Corporation and its subsidiaries (the “Company”) as of September 30, 2018, and the related statements of consolidated operations, consolidated comprehensive income (loss), and changes in consolidated equity for the three-month and nine-month periods ended September 30, 2018 and 2017 and the statement of consolidated cash flows for the nine-month periods ended September 30, 2018 and 2017, including the related notes (collectively referred to as the “interim financial statements”). Based on our reviews, we are not aware of any material modifications that should be made to the accompanying interim financial statements for them to be in conformity with accounting principles generally accepted in the United States of America.

We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of the Company as of December 31, 2017, and the related statements of consolidated operations, consolidated comprehensive (loss) income, changes in consolidated equity, and consolidated cash flows for the year then ended (not presented herein), and in our report dated February 23, 2018, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying consolidated balance sheet information as of December 31, 2017, is fairly stated, in all material respects, in relation to the consolidated balance sheet from which it has been derived.

Basis for Review Results

These interim financial statements are the responsibility of the Company’s management. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our review in accordance with the standards of the PCAOB. 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 PCAOB, 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.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Pittsburgh, Pennsylvania
November 2, 2018

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

(dollars in millions, except per-share amounts, average realized prices, and average cost amounts; dry metric tons in millions (mdmt); metric tons in thousands (kmt))

References in this Management's Discussion and Analysis of Financial Condition and Results of Operations to "ParentCo" refer to Alcoa Inc., a Pennsylvania corporation, and its consolidated subsidiaries (through October 31, 2016, at which time was renamed Arconic Inc. (Arconic)). On November 1, 2016 (the "Separation Date"), ParentCo separated into two standalone, publicly-traded companies, Alcoa Corporation and Arconic (the "Separation Transaction"). In connection with the Separation Transaction, as of October 31, 2016, the Company and Arconic entered into several agreements to effect the Separation Transaction, including a Separation and Distribution Agreement and a Tax Matters Agreement. See Overview in the Management's Discussion and Analysis of Financial Condition and Results of Operations in Part II Item 7 of Alcoa Corporation's Annual Report on Form 10-K for the year ended December 31, 2017 for additional information.

Results of Operations

Selected Financial Data :

	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Sales	\$ 3,390	\$ 2,964	\$10,059	\$8,478
Net (loss) income attributable to Alcoa Corporation	(41)	113	184	413
Diluted earnings per share attributable to Alcoa Corporation common shareholders	(0.22)	0.60	0.97	2.21
Shipments of alumina (kmt)	2,233	2,271	6,894	6,914
Shipments of aluminum products (kmt)	806	868	2,453	2,502
Average realized price per metric ton of alumina	\$ 493	\$ 314	\$ 447	\$ 318
Average realized price per metric ton of primary aluminum	2,465	2,237	2,526	2,175

Net loss attributable to Alcoa Corporation was \$41, or \$0.22 per diluted share, in the 2018 third quarter compared with Net income attributable to Alcoa Corporation of \$113, or \$0.60 per share, in the 2017 third quarter. Net income attributable to Alcoa Corporation was \$184, or \$0.97 per diluted share, in the 2018 nine-month period compared to \$413, or \$2.21 per share, in the 2017 nine-month period. In the 2018 third quarter and nine-month period, the decrease in results of \$154 and \$229, respectively, was principally related to increased input costs and other operational expenses, a net charge for several actions associated with employee retirement benefit plans, a higher income tax provision, and higher net income attributable to a noncontrolling interest partner in certain of Alcoa Corporation's operations. These negative impacts were partially offset in both periods by improved pricing for aluminum products and alumina. Additionally, the absence of a gain on the sale of certain energy operations and charges related to operational decisions on a U.S. smelter also contributed to the lower results in the 2018 nine-month period.

Sales— Sales improved \$426, or 14%, and \$1,581, or 19%, in the 2018 third quarter and nine-month period, respectively, compared to the same periods in 2017. In both periods, the increase was largely attributable to a higher average realized price for each of alumina, primary aluminum, and flat-rolled aluminum. This positive impact was somewhat offset in the 2018 third quarter and slightly offset in the 2018 nine-month period by decreased shipments for both aluminum products and bauxite and the absence of surplus energy sales (\$41-third quarter and \$105-nine months) related to the closed Rockdale (Texas) smelter due to the early termination of a power contract in October 2017.

Cost of goods sold— COGS as a percentage of Sales was 74.7% in the 2018 third quarter and 75.0% in the 2018 nine-month period compared with 78.9% in the 2017 third quarter and 78.5% in the 2017 nine-month period. The percentage in both periods was positively impacted by a higher average realized price for both alumina and aluminum products, somewhat offset by higher costs for carbon materials, caustic soda, and energy. In the 2018 third quarter, net favorable foreign currency movements due to a stronger U.S. dollar also contributed to the percentage improvement. In the 2018 nine-month period, increased maintenance and transportation expenses and net unfavorable foreign currency movements due to a weaker U.S. dollar also contributed to the referenced offset.

Provision for depreciation, depletion, amortization— The provision for DD&A decreased \$21, or 11%, and \$4, or 1%, in the 2018 third quarter and nine-month period, respectively, compared with the corresponding periods in 2017. In both periods, the decline was primarily due to net favorable foreign currency movements, due mostly to a stronger U.S. dollar against the Brazilian real, and a group of assets related to ParentCo's 1998 acquisition of Alumax reaching the end of their depreciable lives. These positive impacts were somewhat offset in the 2018 third quarter and mostly offset in the 2018 nine-month period by higher amortization of deferred mining costs (\$6-third quarter and \$18-nine months). Additionally, an increase in write-offs of costs for projects no longer being pursued (\$5) also contributed to the referenced offset in the 2018 nine-month period.

Restructuring and other charges— Restructuring and other charges in the 2018 third quarter and nine-month period were \$177 and \$389, respectively, which were comprised of the following components: \$174 (net) and \$318 (net), respectively, related to settlements and/or curtailments of certain pension and other postretirement employee benefits; \$2 and \$86, respectively, for additional costs related to the curtailed Wenatchee (Washington) smelter, including \$73 (nine-month period only) associated with recent management decisions (see below); a \$15 net benefit (nine-month period only) related to the Portovesme (Italy) smelter; and a \$1 net charge (third quarter only) for miscellaneous items.

In June 2018, management decided not to restart the fully curtailed Wenatchee smelter within the term provided in the related electricity supply agreement. Alcoa Corporation was therefore required to make a \$62 payment to the energy supplier under the provisions of the agreement. Additionally, management decided to permanently close one (38 kmt) of the four potlines at this smelter. This potline has not operated since 2001 and the investments needed to restart this line are cost prohibitive. The remaining three curtailed potlines have a capacity of 146 kmt. In connection with these decisions, the Company recognized a charge of \$73, composed of the \$62 payment, \$10 for asset impairments, and \$1 for asset retirement obligations triggered by the decision to decommission the potline.

Restructuring and other charges in the 2017 third quarter and nine-month period were \$10 of income and \$12 of expense, respectively, which were comprised of the following components: \$6 and \$24, respectively, for additional contract costs related to the curtailed Wenatchee and São Luís (Brazil) smelters; \$4 and \$17, respectively, for layoff costs, including the separation of approximately 10 and 120 (110 in the Aluminum segment) employees, respectively, and related pension costs of \$3 and \$6, respectively; \$7 (both periods) for costs related to the relocation of the Company's headquarters and principal executive office from New York, New York to Pittsburgh, Pennsylvania; a charge of \$2 (both periods) for miscellaneous items; and a reversal of \$29 and \$38, respectively, associated with several reserves related to prior periods (see below).

In July 2017, Alcoa Corporation announced plans to restart three (161 kmt of capacity) of the five potlines (269 kmt of capacity) at the Warrick (Indiana) smelter. This smelter was previously permanently closed in March 2016 by ParentCo. The capacity identified for restart will directly supply the existing rolling mill at the Warrick location to improve efficiency of the integrated site and provide an additional source of metal to help meet an anticipated increase in production volumes. As a result of the decision to reopen this smelter, in the 2017 third quarter, Alcoa Corporation reversed \$29 in remaining liabilities related to the original closure decision. These liabilities consisted of \$20 in asset retirement obligations and \$4 in environmental remediation obligations, which were necessary due to the previous decision to demolish the smelter, and \$5 in severance and contract termination costs. Additionally, the carrying value of the smelter and related assets was reduced to zero as the smelter ramped down between the permanent closure decision date (end of 2015) and the end of March 2016. Once these assets are placed back into service in conjunction with the restart, their carrying value will remain zero. As such, only newly acquired or constructed assets related to the Warrick smelter will be depreciated.

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

	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Bauxite	\$ 1	\$ 1	\$ 1	\$ 1
Alumina	1	3	3	2
Aluminum	2	7	86	34
Segment total	4	11	90	37
Corporate	173	(21)	299	(25)
Total restructuring and other charges	<u>\$ 177</u>	<u>\$ (10)</u>	<u>\$ 389</u>	<u>\$ 12</u>

As of September 30, 2018, approximately 130 of the 140 employees associated with 2017 restructuring programs were separated. The remaining separations for the 2017 restructuring programs are expected to be completed by the end of 2018.

In the 2018 third quarter and nine-month period, cash payments of \$1 and \$3, respectively, were made against layoff reserves related to 2017 restructuring programs.

Other expenses (income), net— Other expenses, net was \$2 in the 2018 third quarter compared with \$48 in the 2017 third quarter, and Other expenses, net was \$32 in the 2018 nine-month period compared to Other income, net of \$3 in the 2017 nine-month period.

The positive change of \$46 in the 2018 third quarter was principally the result of a net favorable change in each of the following: foreign currency movements (\$23), Alcoa Corporation's share of the earnings of the aluminum complex joint venture in Saudi Arabia (\$17), and mark-to-market derivative instruments (\$14). These items were slightly offset by higher non-service costs related to pension and other postretirement employee benefit plans (\$11).

In the 2018 nine-month period, the negative change of \$35 was largely attributable to the absence of a gain on the sale of certain energy operations in the United States (\$120) and higher non-service costs related to pension and other postretirement employee benefit plans (\$45). These items were partially offset by a net favorable change in each of the following: foreign currency movements (\$55), mark-to-market derivative instruments (\$41), and Alcoa Corporation's share of the earnings of the aluminum complex joint venture in Saudi Arabia (\$32).

Noncontrolling interest— Net income attributable to noncontrolling interest was \$196 in the 2018 third quarter and \$475 in the 2018 nine-month period compared with \$56 in the 2017 third quarter and \$202 in the 2017 nine-month period. These amounts are entirely related to Alumina Limited's 40% ownership interest in several affiliated operating entities, which own, have an interest in, or operate the bauxite mines and alumina refineries within Alcoa Corporation's Bauxite and Alumina segments (except for the Poços de Caldas mine and refinery and a portion of the São Luís refinery, all in Brazil) and the Portland smelter (Aluminum segment) in Australia. These individual entities comprise an unincorporated global joint venture between Alcoa Corporation and Alumina Limited known as Alcoa World Alumina and Chemicals (AWAC). Alcoa Corporation owns 60% of these individual entities, which are consolidated by the Company for financial reporting purposes and include Alcoa of Australia Limited (AofA), Alcoa World Alumina LLC, and Alcoa World Alumina Brasil Ltda. Alumina Limited's 40% interest in the earnings of such entities is reflected as Noncontrolling interest on Alcoa Corporation's Statement of Consolidated Operations.

In the 2018 third quarter and nine-month period, these combined entities generated higher net income compared to the same periods in 2017. The favorable change in earnings was mostly driven by an improvement in operating results (see Alumina in Segment Information below).

Segment Information

Bauxite

	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Production ⁽¹⁾ (mdmt)	11.5	11.6	34.0	33.7
Third-party shipments (mdmt)	1.4	2.1	4.1	5.1
Average cost per dry metric ton of bauxite ⁽²⁾	\$ 18	\$ 19	\$ 18	\$ 18
Third-party sales	\$ 67	\$ 104	\$ 191	\$ 254
Intersegment sales	224	221	699	648
Total sales	\$ 291	\$ 325	\$ 890	\$ 902
Adjusted EBITDA	\$ 106	\$ 112	\$ 316	\$ 319

- (1) The production amounts do not include additional bauxite (approximately 3 mdmt per annum) that AWAC is entitled to receive (i.e. an amount in excess of its equity ownership interest) from certain other partners at the mine in Guinea.
- (2) Includes all production-related costs, including conversion costs, such as labor, materials, and utilities; depreciation, depletion, and amortization; and plant administrative expenses.

In the 2018 third quarter, the Bauxite segment's two mines in Australia experienced a nearly eight-week strike by the unionized labor force. These two mines continued to operate during the strike with minimal disruption, resulting in an immaterial impact to this segment's production and financial results. The labor force has returned to work while negotiations between the Company and the union continue.

Bauxite production decreased 1% in the 2018 third quarter and increased 1% in the 2018 nine-month period compared with the corresponding periods in 2017.

In the 2018 third quarter, the decline was largely attributable to lower production at both the Trombetas (Brazil) and Boké (Guinea) mines, partially offset by higher production at four of this segment's seven mine operations, including Huntly (Australia), Al Ba'itha (Saudi Arabia), and Juruti (Brazil), each of which due to planned increases.

The improvement in the 2018 nine-month period was primarily due to higher production at five of this segment's seven mine operations, including Huntly, Al Ba'itha, and Juruti, each of which due to planned increases, partially offset by lower production at the Trombetas and Boké mines.

In both periods, lower production at the Trombetas mine was due to the consortium's decision to reduce production in response to a partial curtailment of a third-party alumina refinery in Brazil.

Third-party sales for the Bauxite segment declined 36% and 25% in the 2018 third quarter and nine-month period, respectively, compared to the same periods in 2017. The decrease in both periods was principally caused by a 33% (third quarter) and 20% (nine months) decline in volume.

Intersegment sales increased 1% in the 2018 third quarter and 8% in the 2018 nine-month period compared with the corresponding periods in 2017, mostly driven by a higher average realized price. In the 2018 third quarter, this positive impact was partially offset by a decrease in volume due to operational issues at certain of the refineries in the Alumina segment (see Alumina below).

Adjusted EBITDA for this segment decreased \$6 and \$3 in the 2018 third quarter and nine-month period, respectively, compared to the same periods in 2017.

The decline in the 2018 third quarter was mainly the result of higher costs for several items and the previously mentioned lower volume, mostly offset by net favorable foreign currency movements due to a stronger U.S. dollar against the Australian dollar and Brazilian real.

In the 2018 nine-month period, the decrease was largely attributable to higher maintenance and transportation expenses, mostly offset by the previously mentioned higher average realized price for intersegment sales and net favorable foreign currency movements due to a stronger U.S. dollar against the Brazilian real and Australian dollar.

In the 2018 fourth quarter (comparison with the 2017 fourth quarter), higher production at the Huntly and Juruti mines and increased total shipments are anticipated.

Alumina

	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Production (kmt)	3,160	3,305	9,560	9,765
Third-party shipments (kmt)	2,233	2,271	6,894	6,914
Average realized third-party price per metric ton of alumina	\$ 493	\$ 314	\$ 447	\$ 318
Average cost per metric ton of alumina*	\$ 292	\$ 261	\$ 287	\$ 253
Third-party sales	\$ 1,101	\$ 713	\$3,083	\$2,196
Intersegment sales	544	398	1,534	1,143
Total sales	\$ 1,645	\$ 1,111	\$4,617	\$3,339
Adjusted EBITDA	\$ 660	\$ 203	\$1,690	\$ 727

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

In the 2018 third quarter, the Alumina segment's three refineries in Australia experienced a nearly eight-week strike by the unionized labor force. These three plants continued to operate during the strike with minimal disruption, resulting in an immaterial impact to this segment's production and financial results. The labor force has returned to work while negotiations between the Company and the union continue.

At September 30, 2018, the Alumina segment had 2,519 kmt of curtailed refining capacity (idle assets and process slowdowns) on a base capacity of 15,064 kmt. Both curtailed capacity and base capacity were unchanged compared to June 30, 2018.

Alumina production decreased by 4% and 2% in the 2018 third quarter and nine-month period, respectively, compared with the corresponding periods in 2017, principally caused by equipment and process issues at the Pinjarra (Australia), Wagerup (Australia), and São Luís (Brazil) refineries.

Third-party sales for the Alumina segment improved 54% in the 2018 third quarter and 40% in the 2018 nine-month period compared to the same periods in 2017. The increase in both periods was mostly related to a 57% (third quarter) and 41% (nine months) rise in average realized price, principally driven by a 61% (third quarter) and 45% (nine months) higher average alumina index price (on 30-day lag). In both the 2018 third quarter and nine-month period, 95% of smelter-grade third-party shipments were based on the alumina index/spot price, compared with 85% and 86% in the 2017 third quarter and nine-month period, respectively.

Intersegment sales improved 37% and 34% in the 2018 third quarter and nine-month period, respectively, compared with the corresponding periods in 2017, primarily due to a higher average realized price.

Adjusted EBITDA for this segment climbed \$457 in the 2018 third quarter and \$963 in the 2018 nine-month period compared to the same periods in 2017. The improvement in both periods was largely attributable to the previously mentioned higher average realized prices. Other positive contributions to the increase in both periods were favorable mix and net favorable foreign currency movements due to a stronger U.S. dollar, particularly against the Australian dollar and Brazilian real. The positive impacts were slightly offset by higher costs for direct materials, including caustic soda, bauxite, and energy; lower total volume; and increased maintenance expenses, partly due to the previously mentioned operational issues. Additionally, higher transportation expenses also contributed to the referenced offset in the 2018 nine-month period.

In the 2018 fourth quarter (comparison with the 2017 fourth quarter), higher costs for both caustic soda and bauxite and an increase in maintenance expenses are expected.

Aluminum

	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Primary aluminum production (kmt)	567	596	1,686	1,730
Third-party aluminum shipments ⁽¹⁾ (kmt)	806	868	2,453	2,502
Average realized third-party price per metric ton of primary aluminum ⁽²⁾	\$ 2,465	\$ 2,237	\$ 2,526	\$ 2,175
Average cost per metric ton of primary aluminum ⁽³⁾	\$ 2,540	\$ 1,975	\$ 2,441	\$ 1,955
Third-party sales	\$ 2,198	\$ 2,090	\$ 6,722	\$ 5,884
Intersegment sales	6	9	14	16
Total sales	\$ 2,204	\$ 2,099	\$ 6,736	\$ 5,900
Adjusted EBITDA	\$ 73	\$ 315	\$ 457	\$ 766

- (1) Third-party aluminum shipments are composed of both primary aluminum and flat-rolled aluminum.
- (2) Average realized price per metric ton of primary 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, rod, slab, etc.) or alloy.
- (3) Includes all production-related costs, including raw materials consumed; conversion costs, such as labor, materials, and utilities; depreciation and amortization; and plant administrative expenses.

In January 2018, a lockout of the bargained hourly employees commenced at the Bécancour (Canada) smelter, as labor negotiations reached an impasse. Accordingly, management initiated a curtailment of two (207 kmt) of the three potlines at the smelter.

In the 2018 second quarter, Alcoa Corporation completed the restart of two (108 kmt) of the three potlines included in the partial restart plan (announced in July 2017) for the Warrick (Indiana) smelter. In May 2018, the third line (53 kmt) scheduled for restart was shut down due to pot instability, which caused a temporary power outage. The Company now expects to complete the restart of the third potline by the end of 2018; costs to restart this line are not expected to be material.

In June 2018, management approved the permanent closure of one (38 kmt) of the four potlines at the Wenatchee (Washington) smelter. This potline has not operated since 2001, and the investments needed to restart that line are cost prohibitive. The other three potlines (146 kmt) at this smelter remain curtailed. See Restructuring and other charges in Results of Operations above for a description of charges associated with this closure.

At September 30, 2018, the Aluminum segment had 917 kmt of idle smelting capacity on a base smelting capacity of 3,173 kmt. Both idle capacity and base capacity were unchanged compared to June 30, 2018.

Primary aluminum production decreased 5% and 3% in the 2018 third quarter and nine-month period, respectively, compared with the corresponding periods in 2017. The decline in both periods was principally due to lower production at the Bécancour smelter as a result of the previously mentioned curtailment, partially offset by new production at the Warrick smelter due to the previously mentioned partial restart of capacity. Additionally, higher production at the Portland (Australia) smelter due to the completed restart in mid-2017 of capacity that was curtailed in December 2016 as a result of an unexpected power outage caused by a fault in the Victorian transmission network also contributed to the referenced offset in the 2018 nine-month period.

Third-party sales for the Aluminum segment improved 5% in the 2018 third quarter and 14% in the 2018 nine-month period compared to the same periods in 2017. In both periods, the increase was largely attributable to a 10% (third quarter) and 16% (nine months) rise in average realized price of primary aluminum and higher pricing for flat-rolled aluminum. These positive impacts were slightly offset in the 2018 third quarter and partially offset in the 2018 nine-month period by a 7% and 2%, respectively, decrease in overall aluminum volume.

The change in average realized price of primary aluminum was mainly driven by a 6% (third quarter) and 15% (nine months) higher average LME price (on 15-day lag) and increased regional premiums, particularly the Midwest premium (United States and Canada), which rose by an average of 162% (third quarter) and 113% (nine months). Since the first quarter of 2018, the Midwest premium has significantly increased as a result of the imposition of a 10% tariff on aluminum imports under the U.S. government's Section 232 action.

The lower overall aluminum volume in both periods was primarily the result of a decline in flat-rolled aluminum shipments in accordance with the targeted volumes defined in the tolling arrangement with Arconic. Additionally, decreased primary aluminum shipments also contributed to the lower volume in the 2018 third quarter.

Adjusted EBITDA for this segment decreased \$242 and \$309 in the 2018 third quarter and nine-month period, respectively, compared with the corresponding periods in 2017. In both periods, the decline was largely related to higher costs for alumina, carbon materials, and energy; costs for tariffs on imports from this segment's foreign operations, primarily from Canada, which was subjected to U.S. Section 232 tariffs effective June 1, 2018; and realized losses from embedded derivatives in energy supply contracts due to the rise in LME aluminum prices. Additionally, increased maintenance and transportation expenses and net unfavorable foreign currency movements due to a weaker U.S. dollar, particularly against the euro, also contributed to the decrease in the 2018 nine-month period. These negative impacts were somewhat offset in the 2018 third quarter and mostly offset in the 2018 nine-month period by the previously mentioned higher pricing for both primary aluminum and flat-rolled aluminum.

In the 2018 fourth quarter (comparison with the 2017 fourth quarter), higher costs for both alumina and carbon materials are expected. Also, direct costs related to the payment of Section 232 tariffs on U.S. aluminum imports will impact results as these did not exist in the 2017 fourth quarter.

Reconciliation of Total Segment Adjusted EBITDA to Consolidated Net (Loss) Income Attributable to Alcoa Corporation

	Third quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Total segment Adjusted EBITDA	\$ 839	\$ 630	\$ 2,463	\$ 1,812
Unallocated amounts:				
Transformation (1),(2)	1	(11)	(2)	(59)
Corporate inventory accounting (1),(3)	(17)	(9)	(18)	(12)
Corporate expenses (4)	(22)	(33)	(75)	(100)
Provision for depreciation, depletion, and amortization (6)	(173)	(194)	(559)	(563)
Restructuring and other charges (6)	(177)	10	(389)	(12)
Interest expense (6)	(33)	(26)	(91)	(77)
Other (expenses) income, net (6)	(2)	(48)	(32)	3
Other (1),(5)	(10)	(31)	(69)	(49)
Consolidated income before income taxes	406	288	1,228	943
Provision for income taxes (6)	(251)	(119)	(569)	(328)
Net income attributable to noncontrolling interest (6)	(196)	(56)	(475)	(202)
Consolidated net (loss) income attributable to Alcoa Corporation	\$ (41)	\$ 113	\$ 184	\$ 413

- (1) Effective in the first quarter of 2018, management elected to change the presentation of certain line items in the reconciliation of total segment Adjusted EBITDA to consolidated net (loss) income attributable to Alcoa Corporation to provide additional transparency to the nature of these reconciling items. Accordingly, Transformation (see footnote 2), which was previously reported within Other, is presented as a separate line item. Additionally, Impact of LIFO (last in, first out) and Metal price lag, which were previously reported as separate line items, are now combined and reported in a new line item labeled Corporate inventory accounting (see footnote 3). Also, the impact of intersegment profit eliminations, which was previously reported within Other, is reported in the new Corporate inventory accounting line item. The applicable information for all prior periods presented was recast to reflect these changes.
- (2) Transformation includes, among other items, the Adjusted EBITDA of previously closed operations.
- (3) Corporate inventory accounting is composed of the impacts of LIFO inventory accounting, metal price lag, and intersegment profit eliminations. Metal price lag describes the timing difference created when the average price of metal sold differs from the average cost of the metal when purchased by Alcoa Corporation's rolled aluminum operations. In general, when the price of metal increases, metal price lag is favorable, and when the price of metal decreases, metal price lag is unfavorable.
- (4) Corporate expenses are composed of general administrative and other expenses of operating the corporate headquarters and other global administrative facilities, as well as research and development expenses of the corporate technical center.
- (5) Other includes certain items that impact Cost of goods sold and Selling, general administrative, and other expenses on Alcoa Corporation's Statement of Consolidated Operations that are not included in the Adjusted EBITDA of the reportable segments.
- (6) Notable changes in these reconciling items are described in Results of Operations above.

The notable changes in the reconciling items other than those described in Results of Operations above (see footnote 6 in the table directly above) for the 2018 third quarter and nine-month period compared with the corresponding periods in 2017 (unless otherwise noted) consisted of:

- a change in Transformation, largely attributable to the absence of (i) a loss on a power contract (terminated in October 2017) associated with the closed Rockdale (Texas) smelter (i.e. the cost of power under the contract exceeded the price of the surplus electricity sold into the energy market) and (ii) holding costs related to the Warrick smelter prior to the July 2017 decision to partially restart the facility; and
- a decline in Corporate expenses, primarily due to decreases across several corporate overhead costs.

Environmental Matters

See the Environmental Matters section of Note N 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 \$87 in the 2018 nine-month period compared with cash provided from operations of \$769 in the same period of 2017, resulting in an increase in cash used of \$856.

In the 2018 nine-month period, the use of cash was due to pension contributions of \$940, an unfavorable change in working capital of \$660, and a combined negative change in noncurrent assets and noncurrent liabilities of \$147, mostly offset by a positive add-back for non-cash transactions in earnings of \$1,001 and net income of \$659.

The pension contributions reflect \$705 of unscheduled payments made in the 2018 nine-month period, including a combined \$600 to three of the Company's U.S. defined benefit pension plans and a combined \$105 to two of the Company's Canadian defined benefit pension plans. The additional payments to the U.S. plans were discretionary in nature and were funded with \$492 in net proceeds from a May 2018 debt issuance (see Financing Activities below) and \$108 of available cash on hand. The primary purpose for issuing debt to fund a portion of the discretionary contributions to the U.S. plans was to reduce near-term pension funding risk with a fixed-rate, 10-year maturity instrument. Of the additional payments to the Canadian plans, \$89 was made in April 2018 to facilitate the annuitization of a portion of the future obligations under these plans and maintain the funding level of the remaining plan obligations.

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

- a negative change of \$209 in receivables, primarily due to higher pricing for alumina and aluminum product shipments;
- an unfavorable change of \$279 in inventories, mainly caused by increased costs for raw materials;
- a positive change of \$3 in prepaid expenses and other current assets;
- a negative change of \$135 in accounts payable, trade, largely attributable to the timing of payments;
- an unfavorable change of \$288 in accrued expenses, principally driven by payments for the following: \$107 under other postretirement employee benefit plans, \$99 for restructuring-related actions (includes \$62 under the provisions of an electricity supply agreement for the Wenatchee smelter – see Restructuring and other charges in Results of Operations above), \$86 for interest related to the Company's outstanding notes due in 2024 and 2026, \$74 (final payment) related to a legacy legal matter with the U.S. government assumed by the Company in the Separation Transaction, \$74 related to asset retirement obligations and environmental remediation, and \$18 for the settlement of a legal matter in Italy; and
- a favorable change of \$248 in taxes, including income taxes, mostly related to an increase in the income tax provision for operations in Australia.

The source of cash in the 2017 nine-month period was due to a positive add-back for non-cash transactions in earnings of \$661 and net income of \$615, somewhat offset by an unfavorable change in working capital of \$348, pension contributions of \$82, and a net negative change in noncurrent assets and noncurrent liabilities of \$77. The components of the unfavorable change in working capital were as follows:

- a negative change of \$112 in receivables, mostly related to higher sales;
- an unfavorable change of \$102 in inventories, primarily due to increased costs for raw materials;
- a positive change of \$62 in prepaid expenses and other current assets, principally driven by a decline in prepayments for aluminum inventory from the joint venture in Saudi Arabia;
- a favorable change of \$109 in accounts payable, trade, mainly the result of increased costs for raw materials and timing of payments;
- a negative change of \$320 in accrued expenses, largely attributable to payments for the following: \$86 for interest related to the Company's outstanding notes due in 2024 and 2026, \$83 under other postretirement employee benefit plans, \$74 related to a legacy legal matter with the U.S. government assumed by the Company in the Separation Transaction, \$76 related to asset retirement obligations and environmental remediation, and \$58 for restructuring-related actions; and
- a positive change of \$15 in taxes, including income taxes.

Financing Activities

Cash provided from financing activities was \$6 in the 2018 nine-month period, an increase of \$459 compared with cash used for financing activities of \$453 in the corresponding period of 2017.

The source of cash in the 2018 nine-month period was primarily the result of \$553 in additions to debt, virtually all of which was related to \$492 in net proceeds from the issuance of new senior debt securities (see below) and \$60 in borrowings under an existing term loan by AofA, and \$23 in proceeds from employee exercises of 0.9 million legacy stock options at a weighted average exercise price of \$25.06 per share. These items were largely offset by \$457 in net cash paid to Alumina Limited (see Noncontrolling interest in Results of Operations above) and \$105 in payments on debt, mostly related to the early repayment (\$94) of a majority of the remaining outstanding loans from Brazil's National Bank for Economic and Social Development associated with the construction of the Estreito hydroelectric power project.

In the 2017 nine-month period, the use of cash was principally driven by a cash payment of \$247 to Arconic, largely representing the net proceeds from the sale of certain energy operations in the United States (see Investing Activities below), in accordance with the Separation and Distribution Agreement; \$188 in net cash paid to Alumina Limited (see Noncontrolling interest in Results of Operations above); and \$55 in payments on debt, mostly related to the early repayment of the remaining outstanding balance (\$41) of a loan from Brazil's National Bank for Economic and Social Development associated with the construction of the Estreito hydroelectric power project. These items were slightly offset by \$38 in proceeds from employee exercises of 1.5 million legacy stock options at a weighted average exercise price of \$25.79 per share.

In May 2018, Alcoa Nederland Holding B.V. (ANHBV), a wholly-owned subsidiary of Alcoa Corporation, completed a Rule 144A (U.S. Securities Act of 1933, as amended) debt offering for \$500 of 6.125% Senior Notes due 2028 (the "2028 Notes"). ANHBV received \$492 in net proceeds from the debt offering reflecting a discount to the initial purchasers of the 2028 Notes. The net proceeds, along with available cash on hand, were used to make discretionary contributions to certain U.S. defined benefit pension plans (see Cash from Operations above). The discount to the initial purchasers, as well as costs to complete the financing, was deferred and is being amortized to interest expense over the term of the 2028 Notes. Interest on the 2028 Notes will be paid semi-annually in November and May, commencing on November 15, 2018.

ANHBV has the option to redeem the 2028 Notes on at least 30 days, but not more than 60 days, prior notice to the holders of the 2028 Notes under multiple scenarios, including, in whole or in part, at any time or from time to time after May 2023 at a redemption price specified in the indenture (up to 103.063% of the principal amount plus any accrued and unpaid interest in each case). Also, the 2028 Notes are subject to repurchase upon the occurrence of a change in control repurchase event (as defined in the indenture) at a repurchase price in cash equal to 101% of the aggregate principal amount of the 2028 Notes repurchased, plus any accrued and unpaid interest on the 2028 Notes repurchased.

The 2028 Notes are senior unsecured obligations of ANHBV and do not entitle the holders to any registration rights pursuant to a registration rights agreement. ANHBV does not intend to file a registration statement with respect to resales of or an exchange offer for the 2028 Notes. The 2028 Notes are guaranteed on a senior unsecured basis by Alcoa Corporation and its subsidiaries that are guarantors under the Company's Amended Revolving Credit Agreement (the "subsidiary guarantors" and, together with Alcoa Corporation, the "guarantors") (see Financing Activities in Liquidity and Capital Resources included in Part II Item 7 of the Company's Annual Report on Form 10-K for the year ended December 31, 2017). Each of the subsidiary guarantors will be released from their 2028 Notes guarantees upon the occurrence of certain events, including the release of such guarantor from its obligations as a guarantor under the Revolving Credit Agreement.

The 2028 Notes indenture includes several customary affirmative covenants. Additionally, the 2028 Notes indenture contains several negative covenants, that, subject to certain exceptions, include limitations on liens, limitations on sale and leaseback transactions, and a prohibition on a reduction in the ownership of AWAC entities below an agreed level. The negative covenants in the 2028 Notes indenture are less extensive than those in the 2024 Notes and 2026 Notes (see Financing Activities in Liquidity and Capital Resources included in Part II Item 7 of the Company's Annual Report on Form 10-K for the year ended December 31, 2017) indenture and the Amended Revolving Credit Agreement. For example, the 2028 Notes indenture does not include a limitation on restricted payments, such as repurchases of common stock and shareholder dividends.

The 2028 Notes rank equally in right of payment with all of ANHBV's existing and future senior indebtedness, including the 2024 Notes and 2026 Notes; rank senior in right of payment to any future subordinated obligations of ANHBV; and are effectively subordinated to ANHBV's existing and future secured indebtedness, including under the Amended Revolving Credit Agreement, to the extent of the value of property and assets securing such indebtedness.

Alcoa Corporation'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 Corporation's debt by the major credit rating agencies.

On May 2, 2018, Fitch Ratings (Fitch) affirmed a BB+ rating for Alcoa Corporation's long-term debt. Additionally, Fitch raised the current outlook to positive from stable.

On May 14, 2018, Moody's Investor Service (Moody's) upgraded its rating for Alcoa Corporation's long-term debt to Ba1 from Ba2. Additionally, Moody's affirmed the current outlook as stable.

On May 14, 2018, Standard and Poor's Global Ratings (S&P) upgraded its rating for Alcoa Corporation's long-term debt to BB+ from BB. Additionally, S&P assigned the current outlook as stable.

Investing Activities

Cash used for investing activities was \$257 in the 2018 nine-month period compared with \$56 in the 2017 nine-month period, resulting in an increase in cash used of \$201.

In the 2018 nine-month period, the use of cash was largely attributable to \$251 in capital expenditures, composed of \$200 in sustaining and \$51 in return-seeking.

The use of cash in the 2017 nine-month period was due to \$255 in capital expenditures (\$172 in sustaining and \$83 in return-seeking) and \$44 in equity contributions related to the aluminum complex joint venture in Saudi Arabia, mostly offset by \$243 in net proceeds received (see Financing Activities above) from the sale of certain energy operations in the United States.

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.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

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

Item 4. Controls and Procedures.

(a) Evaluation of Disclosure Controls and Procedures

Alcoa Corporation'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 U.S. Securities Exchange Act of 1934, as amended, as of the end of the period covered by this report, and they have concluded that these controls and procedures are effective as of September 30, 2018.

(b) Changes in Internal Control over Financial Reporting

There have been no changes in internal control over financial reporting during the third quarter of 2018, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II – OTHER INFORMATION

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 U.S. 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.

Item 6. Exhibits.

- 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.

November 2, 2018	Alcoa Corporation
Date	By /s/ WILLIAM F. OPLINGER
	William F. Oplinger
	Executive Vice President and
	Chief Financial Officer
	(Principal Financial Officer)
November 2, 2018	By /s/ MOLLY S. BEERMAN
Date	Molly S. Beerman
	Vice President and Controller
	(Principal Accounting Officer)

November 2, 2018

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

RE: Alcoa Corporation

Commissioners:

We are aware that our report dated November 2, 2018 on our review of interim financial information of Alcoa Corporation and its subsidiaries (Alcoa Corporation), which appears in this Quarterly Report on Form 10-Q, is incorporated by reference in the Registration Statements on Form S-8 (Nos. 333-214420, 333-214423, and 333-218038) of Alcoa Corporation.

Very truly yours,

/s/ PricewaterhouseCoopers LLP
PricewaterhouseCoopers LLP
Pittsburgh, Pennsylvania

Certifications

I, Roy C. Harvey, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Alcoa Corporation;
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: November 2, 2018

/s/ ROY C. HARVEY

Name: Roy C. Harvey

Title: President and Chief Executive Officer

I, William F. Oplinger, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Alcoa Corporation;
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: November 2, 2018

/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 Corporation, a Delaware corporation, (the “Company”) does hereby certify that:

The Quarterly Report on Form 10-Q for the quarter ended September 30, 2018 (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: November 2, 2018

/s/ ROY C. HARVEY

Name: Roy C. Harvey
Title: President and
Chief Executive Officer

Date: November 2, 2018

/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 Corporation, 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 Corporation operates because it is fundamentally the right thing to do. Despite uncertainties and economic challenges, Alcoa Corporation remains committed to living its values and managing risks accordingly.

Alcoa Corporation'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 Corporation'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 Corporation'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 the Company'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 September 30, 2018, as reflected in the MSHA system on September 30, 2018, 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)	—	—	—	—	—	\$ —	—	no	no	1	—	—

- (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 Corporation 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 Corporation'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 section 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 September 30, 2018, Alcoa Corporation 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 September 30, 2018, Alcoa Corporation had one matter pending before the Commission concerning a retaliation complaint filed by an employee in 2015. On December 17, 2017, this matter was dismissed by an Administrative Law Judge after a trial on the merits; however, the employee appealed this decision to the Commission, where the matter is pending.