



*The Element of **Possibility***<sup>™</sup>

**Building on 128 Years**

ANNUAL REPORT 2016



## **WHO WE ARE**

Alcoa is a global industry leader in bauxite, alumina and aluminum products. Our Company is built on a foundation of strong values and operating excellence dating back nearly 130 years to the world-changing discovery that made aluminum an affordable and vital part of modern life. Since inventing the aluminum industry, and throughout our history, our talented Alcoans have carried on with breakthrough innovations and best practices that have led to efficiency, safety, sustainability and stronger communities wherever we operate.

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## **ALCOA'S STRONG BRAND. EVOLVED.**

As a newly launched Company with a notable name, we refreshed our logo and tagline in 2016. The Alcoa symbol was removed from its enclosure, characterizing our out-of-the-box thinking. The bold, geometric-shaped capital "A" with a sharp apex signifies our constant pursuit of stronger performance. The logo retains its original custom "Alcoa blue" color, representing our strong foundation. *The Element of Possibility™* communicates the Company's history as a pioneer in the aluminum industry and our promise to continue innovating.



## OUR VALUES

Act with Integrity

Operate with Excellence

Care for People

These three phrases articulate the refreshed Alcoa values that have always been part of our core. They are memorable and simple, yet broad enough to apply to the many opportunities and challenges we face. Values have long been a foundation for success at Alcoa and, by integrating them into our day-to-day work, we preserve this important legacy in our new Company.

## Chairman's Letter



On behalf of the Board of Directors, it gives me great pleasure to share with you this first Annual Report for the newly launched Alcoa Corporation.

As a prior independent Director on the board of directors of Alcoa Inc., from which Alcoa Corporation was separated on November 1, 2016, I have a deep history with, and a great affection for, the businesses that became part of Alcoa Corporation. Therefore, it is my

honor to now serve as Chairman of this values-based Company and pioneer of the aluminum industry.

To ensure continuity and retention of valuable information and experience, Alcoa Corporation's Board includes five members of the former Alcoa Inc. board of directors, who now serve alongside new directors. Our board members have substantial leadership and management experience, deep knowledge of business operations and strategy, and valuable financial, commodities, and investment expertise. Several of our board members have first-hand experience with the issues global companies face, bringing an international perspective and insight into matters related to governments, energy and the environment — all invaluable assets as Alcoa operates as a globally responsible company.

All of our board members are fully engaged and their diversity in experience brings richness to our Board deliberations. And importantly, each board member brings enthusiasm to their role. On behalf of the Alcoa Corporation Board of Directors, we are delighted to begin this journey with you, our stockholders, and the management team and employees, as an independent public company.

We are excited about the structure of this new company, which is incorporated in Delaware and features several governance best practices focused on the interests of our stockholders. For example, in addition to having an independent chairman and a separate chief executive officer, directors are elected annually and stockholders have proxy access to nominate director candidates.

The management team is passionate about the aluminum business, and the Board and I have full confidence in their ability to build upon the history of

operational excellence. They are highly experienced with substantial hands-on industry expertise and a long track record of performance and execution.

During his time at Alcoa Inc. since 2002, Chief Executive Officer Roy Harvey held a number of operational roles in Brazil, Spain and the United States; he also had responsibility for Human Resources and Environment, Health, Safety, and Sustainability before serving as President of the upstream business. Chief Financial Officer William Oplinger started working for Alcoa Inc. in 2000 and served as Chief Financial Officer and as Chief Operating Officer, responsible for the daily operations of the company's upstream assets worldwide, a role now held in Alcoa Corporation by Tómas Sigurdsson, who joined Alcoa Inc. in 2004. Collectively, the senior management team has more than 110 years of experience in the mining, commodities and aluminum industries.

The team leading Alcoa Corporation has successfully steered through some of the most difficult market environments in the aluminum industry's recent history. Over the past few years, they executed a comprehensive strategy to strengthen the portfolio and secure the Company's position as a low-cost industry leader across the aluminum value chain. Alcoa Corporation is now a cost-competitive, large-scale industry leader in bauxite, alumina and aluminum products with excellent prospects for the future. With a strong tradition of product and process innovation, the management team will build upon the progress that fortified its operations. The priorities are to reduce complexity, drive returns to create value for our stockholders, and strengthen the balance sheet.

As Alcoa Corporation continues its story as a new publicly-traded company with a deep history, the Board and I will provide oversight and support the management team with an eye on managing risk and rewarding performance. And, as board members who are also stockholders, know that our interests and aspirations for the future success of Alcoa Corporation are also aligned with yours as Company stockholders.

Thank you for your interest and investment in Alcoa Corporation. I now invite you to read Roy's letter and review Alcoa Corporation's inaugural 2016 Annual Report.

A handwritten signature in black ink, appearing to read "Michael G. Morris".

**Michael G. Morris**  
CHAIRMAN OF THE BOARD

## CEO's Letter



On November 1, 2016, Alcoa Corporation, a leader in bauxite, alumina and aluminum products, launched as a new, publicly-traded company. Yet Alcoa also has the benefit of a 128-year history dating back to its roots as the founder of the aluminum industry. Few management teams, if any, have ever had the privilege of leading a new company with such a rich heritage of innovation and operational excellence. That solid foundation, combined with

the collective effort of more than 14,000 employees, has enabled us to become a strong standalone company, well-positioned for an exciting and successful future.

Before we separated from our former parent company Alcoa Inc., our businesses faced significant market pressures. Alumina prices were at multi-year lows and aluminum prices remained weak. Confronted with these conditions, and realizing the importance of launching a resilient company that could succeed through market cycles, Alcoans across the globe delivered approximately \$290 million in after-tax, net performance improvements in 2016, significantly exceeding our annual goal. We expect to build upon those savings in 2017.

In 2016, in response to market conditions, we permanently closed our Warrick Operations smelter in Indiana and we curtailed our Point Comfort, Texas refinery. In Suriname, we permanently closed the Suralco refinery and bauxite mines, which had been fully curtailed since November of 2015. These decisions were not taken lightly, but were necessary to improve our portfolio.

During 2016, we also strengthened our company for the future. In bauxite, we grew our third-party exports to 6 million bone dry metric tons (bdmt) of bauxite shipped. In addition, our bauxite business secured its first major export contract out of Western Australia, whose government approved Alcoa's export of up to 2.5 million metric tons of bauxite per year for five years to third-party customers.

In the alumina and aluminum segments, we increased cost-efficiencies and improved our positions on the alumina and aluminum global cost curves. Now, our alumina refining and aluminum smelting portfolios are better-situated to both benefit from improving market conditions and withstand downturns.

Recognizing that we have more to achieve, we entered 2017 focused on three strategic priorities: reducing complexity, driving returns for stockholders, and strengthening the balance sheet.

To reduce complexity, we are simplifying our processes and structure to make Alcoa more agile and lower-cost. For example, we recently combined our aluminum smelting, casting, and rolling segments into one Aluminum business unit and integrated the majority of the energy segment assets into it.

To drive returns for our stockholders, we are investing modest capital in high growth projects with strong returns that will help strengthen the balance sheet. Since launching as an independent company, Alcoa has increased its cash position by \$198 million and closed 2016 with a cash balance of \$853 million. Further, we will maintain cash optionality, carefully weighing how best to deploy cash and allocate capital.

But both our past achievements and plans for the future would be meaningless if we succeeded without adhering to our strong values. Long an underpinning at Alcoa Inc., our values enable us to operate the right way. As we launched Alcoa Corporation, and in the spirit of reducing complexity, we distilled our values down to three simple principles: Act with Integrity, Operate with Excellence, and Care for People. These values resonate with our employees, guide the way we conduct business and interact with customers. They pay tribute to the culture of integrity, safety and respect that we inherited from our former parent company.

My leadership team and I are excited about the prospects for the future. We are passionate about our businesses and the markets we serve. We look forward to the challenges and opportunities that await us this year and beyond.

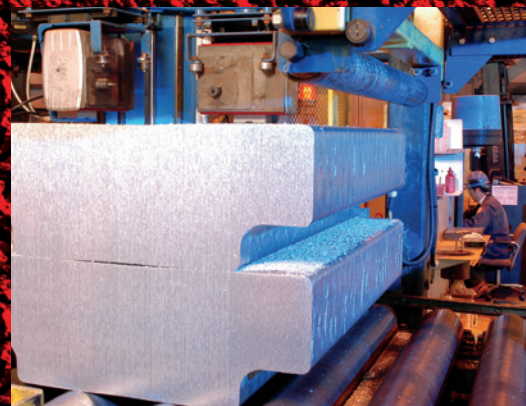
As an Alcoa Corporation Director and stockholder, I also share our Chairman's sentiment — that our interests, and those of our management team, are aligned with the interests of each of our stockholders for continued success.

It is an honor to lead and to carry such a rich heritage forward into a brand new company. I thank our employees, our Board of Directors and especially you, our stockholders, for your support.

**Roy C. Harvey**  
CHIEF EXECUTIVE OFFICER

## Alcoa is an industry leader in bauxite, alumina and aluminum products

On November 1, 2016, Alcoa Corporation completed the separation from its parent company, Alcoa Inc. (now named Arconic Inc.), and began operating as an independent, standalone, publicly-traded company listed on the New York Stock Exchange. Alcoa Corporation is a cost-competitive global industry leader in bauxite, alumina and aluminum products, with distinct advantages across the value chain.



## 2016 Financial Performance

In 2016, Alcoa Corporation reported revenue of \$9.3 billion. As a result of incurring costs to further streamline and strengthen its portfolio of assets, Alcoa Corporation reported a net loss of \$400 million in 2016. On an adjusted EBITDA basis, excluding special items, results were \$1.1 billion. The Company includes more than 25 manufacturing locations worldwide and approximately 14,000 employees, and it is well-positioned to succeed throughout the market cycle.

### FINANCIAL AND OPERATING HIGHLIGHTS

(\$ in millions, except per-share amounts)

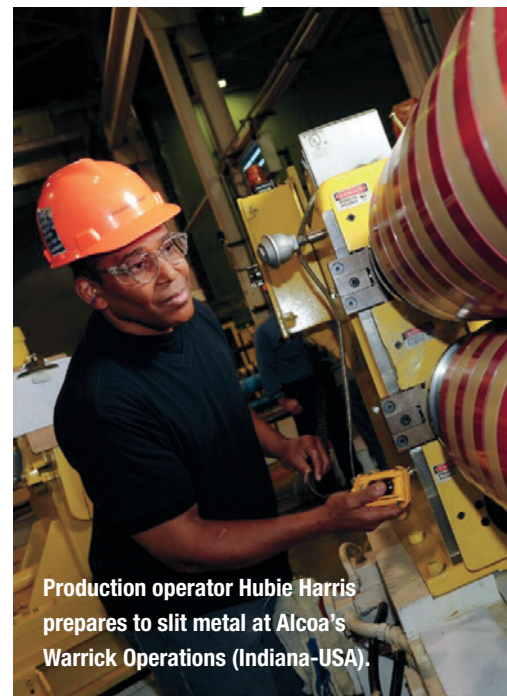
|                                      | 2016               | 2015     | 2014     |
|--------------------------------------|--------------------|----------|----------|
| Sales                                | <b>\$9,318</b>     | \$11,199 | \$13,147 |
| Net loss                             | <b>(400)</b>       | (863)    | (256)    |
| Per common share data:               |                    |          |          |
| Basic <sup>1</sup>                   | <b>(2.19)</b>      | (4.73)   | (1.40)   |
| Diluted <sup>1</sup>                 | <b>(2.19)</b>      | (4.73)   | (1.40)   |
| Dividends paid <sup>2</sup>          | —                  | *        | *        |
| Adjusted EBITDA <sup>3</sup>         | <b>1,028</b>       | 1,738    | 2,121    |
| Total assets                         | <b>16,741</b>      | 16,413   | 18,680   |
| Cash provided from operations        | <b>(311)</b>       | 875      | 842      |
| Capital expenditures                 | <b>404</b>         | 391      | 444      |
| Common stock outstanding—end of year | <b>182,930,995</b> | *        | *        |

<sup>1</sup> For 2015 and 2014, earnings per share was calculated based on the 182,471,195 shares of Alcoa Corporation common stock distributed on November 1, 2016 in conjunction with the completion of the Separation Transaction and is considered pro forma in nature.

<sup>2</sup> Dividends on common stock are subject to authorization by Alcoa Corporation's Board of Directors. Alcoa Corporation did not declare any dividends from November 1, 2016 through December 31, 2016.

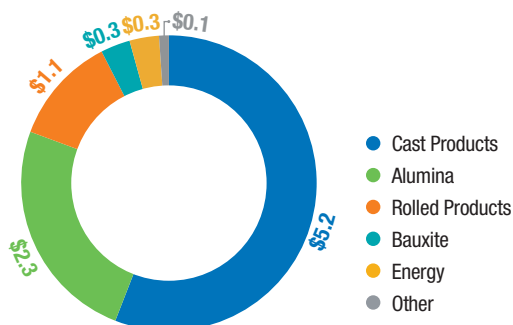
<sup>3</sup> Please see Calculations of Financial Measures at the end of this Annual Report for a description and reconciliation of Adjusted EBITDA.

\* Prior to November 1, 2016, Alcoa Corporation was not a standalone publicly-traded company with issued and outstanding common stock.

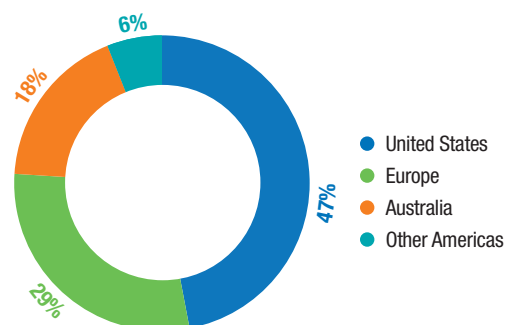


Production operator Hubie Harris prepares to slit metal at Alcoa's Warrick Operations (Indiana-USA).

### SALES BY SEGMENT



### SALES BY GEOGRAPHIC LOCATION



## WHAT WE DO



In 2016, Alcoa of Australia celebrated its first shipment of Western Australia (WA) bauxite as part of an export trial approved by the State Government the year before. Mal Briggs, V.P. of Mining Operations, looks on as the first WA bauxite is loaded for export to China.

### A global leader in bauxite

We are among the world's largest bauxite miners, enjoying a first quartile cost position. With 45 million bone dry metric tons (bdmt) of production in 2016, we have access to large bauxite deposits with mining rights that extend in most cases more than 20 years. Our global network is strategically located near key Atlantic and Pacific markets and includes the Huntly mine in Australia, the world's second largest bauxite mine.

In 2016, we achieved an important milestone in our drive to grow our third-party bauxite business. Just months after our first trial bauxite shipment from Western Australia (WA) to China, Alcoa of Australia secured the first major third-party contract to supply approximately 400,000 bdmt of bauxite from its Huntly mine. The WA contract was one of several bauxite contracts signed in 2016, increasing the total value of 2016 and 2017 third-party bauxite supply agreements to nearly \$665 million. The WA State Government also granted approval for Alcoa of Australia to export up to 2.5 million metric tons per annum of bauxite for five years to third-party customers.



**1st Quartile global bauxite cost curve position**

### CARE FOR PEOPLE

#### Alcoa Employees Train Future Business Leaders in Brazil

*We Care for People through trust and respect, by promoting health and safety, by being inclusive, developing talent and supporting our communities.*

In Pará, Brazil, students near Alcoa's Juruti mine are gaining valuable business knowledge, thanks to the work of Alcoa employees. In an annual, 15-week program with Junior Achievement and Instituto Alcoa, students learn to manage a small business. The students raise the necessary funding, establish the organizational structure, purchase raw materials and pay "wages," which are then donated to non-profit organizations.







We have steadily increased our system-wide alumina refining capacity over the past decade through a combination of operational improvements and incremental capacity projects.

PICTURED HERE:  
MA'ADEN-ALCOA JOINT VENTURE IN SAUDI ARABIA

## A leading alumina refiner

We are a leading producer of alumina with eight refineries on five continents, and our portfolio holds a first quartile cost position. In 2016, we continued to improve the competitiveness of our alumina business and exceeded our target of moving down the global alumina cost curve. In October 2016, the Company announced that it had moved to the 17th percentile on the global alumina cost curve, 4 points better than target, and a 13-point improvement from the 30th percentile in 2010.

In addition to supplying our own aluminum smelters, we annually ship more than 60 percent of our alumina to third-party customers. Our alumina margins also continue to benefit from the shift to the Alumina Price Index (API), based on alumina market fundamentals, and away from historical London Metal Exchange aluminum-based pricing. Approximately 85 percent of third-party smelter-grade shipments were sold on API/spot pricing in 2016, up from 5 percent in 2010.



**1st Quartile global alumina cost curve position**

### OPERATE WITH EXCELLENCE

#### Kwinana Refinery Innovates With New Technology

*Operate with Excellence means we continuously look to improve our business; we innovate, focus on customers, eliminate waste, protect the environment and operate sustainably, all to deliver stockholder value.*

At the Kwinana alumina refinery in Western Australia, an innovative system for processing bauxite residue reduces water and land usage. Traditional methods require drying residue and then, once dry, applying water to prevent dusting. New pressure filtration technology, which annually saves about 317 million gallons of water, forces residue through large filters, creating a high-density cake that limits dust. With the technology, the refinery can extend the life of residue storage areas.





## Aluminum products leader

In early 2017, we reduced complexity by consolidating our aluminum smelting, casting, and rolling businesses, along with the majority of the energy business, into one new business unit, Alcoa Aluminum.

In aluminum smelting, our portfolio is well-positioned to benefit from improved future market conditions. Approximately 50 percent of Alcoa’s smelting capacity is located at top-tier sites in Canada, Iceland and Norway. Our capacity also includes a 25.1 percent ownership in the world’s lowest-cost smelter in Saudi Arabia. Clean, sustainable, reliable energy are among the success factors for long-term competitiveness in smelting. At Alcoa, approximately 70 percent of the power used for smelting is derived from hydroelectricity, and 68 percent of the power used in smelting is secured through 2022.

In 2016, Alcoa further improved its portfolio of aluminum smelting assets, meeting its goal of moving to the 38th percentile on the global aluminum cost curve. This represented a 13-point improvement from the 51st percentile in 2010.



**Mid 2nd Quartile global aluminum cost curve position**

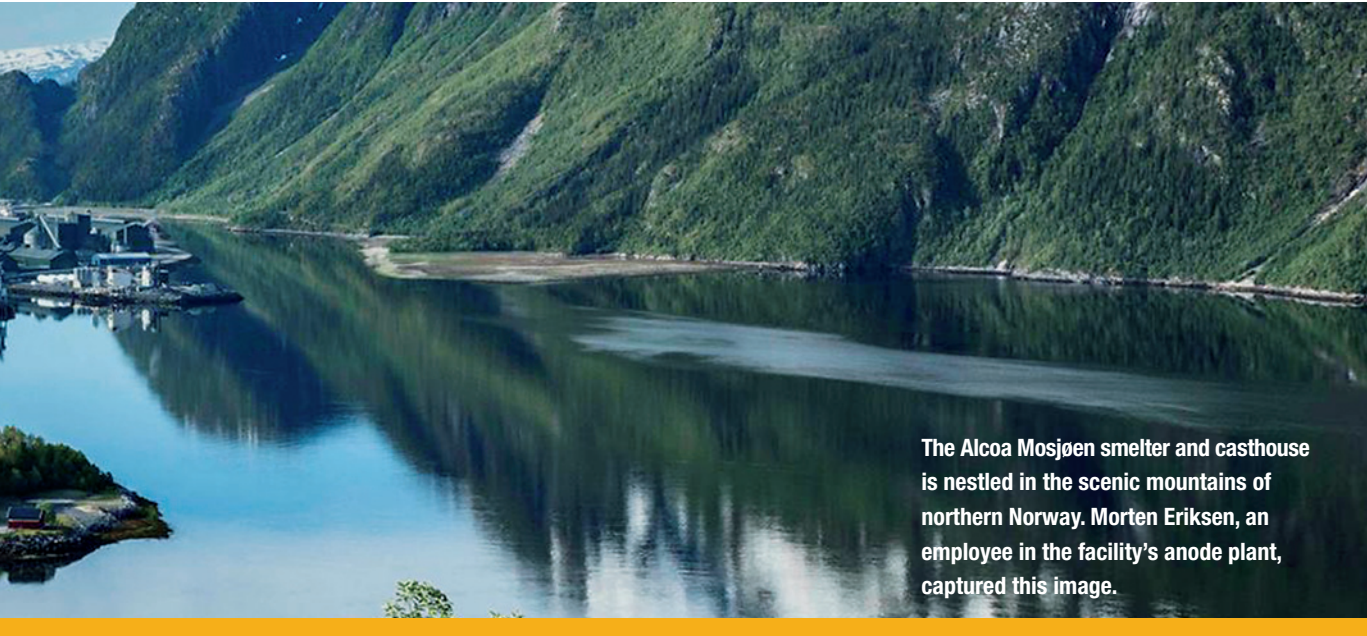
### ACT WITH INTEGRITY

#### Fjardaál Ensures Environmental System Lives Up to Promises

*Our Act with Integrity value ensures we are honest and accountable; that we are committed to operating with high environmental, health and safety standards, that we promote a speak-up culture and that we comply with the law.*

When a process to treat storm water did not function as initially planned, a team from Alcoa’s Fjardaál smelter in Iceland worked to make sure it met high sustainability standards. Alcoa’s Technical Center helped the site develop a new plan, and employees completely rehabilitated two engineered wetlands and reconfigured soil profiles. After a multi-year implementation plan, the system demonstrates best practices in storm water management. The site also includes native vegetation, cultivated from regional farms.





**The Alcoa Mosjøen smelter and casthouse is nestled in the scenic mountains of northern Norway. Morten Eriksen, an employee in the facility's anode plant, captured this image.**

In aluminum cast products, we demonstrate leading technology and innovation, holding strong market positions with an array of end-market customers. As a top producer of billet, foundry, rod and slab in North America and Europe, Alcoa's value-added aluminum cast products are alloyed and cast into specific shapes to meet customer demand in the automotive, building and construction, electrical, industrial and transportation markets. Our innovations include new lines of cast products that enable customers to take advantage of aluminum's attributes, reducing the weight of products and lowering their carbon footprint.

In rolled aluminum products, we serve the North American can sheet market with a two mill system. The Warrick rolling mill in the state of Indiana provides flat-rolled aluminum for beverage and food cans, including body, tab and end stock. In addition, it provides sheet for closures, aluminum bottles, industrial products and lithographic applications. The Ma'aden Rolling Company in Ras Al Khair, Saudi Arabia, part of the Ma'aden-Alcoa joint venture of which Alcoa owns 25.1 percent, includes a state-of-the-art mill, a coating line and a recycling facility for can sheet.



**Alcoa's SUSTANA™ line provides customers with aluminum products that help reduce their carbon footprint. Our ECOLUM™ products are produced at smelters powered by hydroelectricity, including Iceland, Norway and the Deschambault plant in Canada. ECODURA™ billet is produced from several global locations with a minimum of 50 percent recycled content.**

Our values mean that we place great emphasis on the well-being of our employees, conducting business ethically, protecting the environment and giving back to our communities.

## Ethics and Compliance

Alcoa Corporation has a comprehensive Ethics and Compliance Program that places an emphasis on best practices and benchmarking. We meet or exceed U.S. and international laws and regulations, including those on anti-corruption and trade compliance. In 2016, Alcoa enhanced its compliance program by adopting stand-alone conflicts of interest and anti-retaliation procedures. We updated our Code of Conduct and key compliance policies and procedures, and we strengthened the anti-corruption program by launching a series of executive-level reviews for all active high and medium risk intermediaries. We continued our Integrity Champion Network, comprised of high-potential employees and leaders who promote a speak-up culture and provide advice on ethics and compliance matters. All Alcoa employees received Code of Conduct training, reinforcing Alcoa's Values.

## Safety and Health

The safety of our employees and those who work at our facilities is paramount, so we consistently strive to understand how work is performed so we can eliminate or control risks. In 2016, we further integrated Human Performance, a system to help predict errors/mistakes that can cause injuries. We also integrated critical controls for high-hazard activities into our Human Performance process. In 2016, we saw a 26 percent reduction in the DART rate (Days Away, Restricted duty and job Transfer per 100 full-time employees), supported by a transparent reporting process. However, this was overshadowed by the February 2017 death of a contractor at one of our Brazilian operations. Preventing Fatal and Serious Injuries is the foundation of our safety process. In 2017, Alcoa will continue a strong focus on managing critical risks, verifying shop-floor controls and reinforcing the basics of safety management. For our efforts in health, the International SOS Foundation, which recognizes organizations that make a significant contribution in

protecting people traveling or working remotely, awarded Alcoa with a "Duty of Care Award" in 2016. The organization highlighted Alcoa's work in helping to prevent the spread of Ebola in Guinea.

## Sustainability

Our focus on sustainability drives us to minimize our impacts and maximize our value. In 2016, we reduced our absolute greenhouse gas emissions by 6 million metric tons, energy intensity by 1 percent, landfilled waste by 86,500 metric tons and water consumption by 19 million cubic meters compared to the prior year. We created sustainable value through Alcoa Foundation investments and community engagement. We continued to enhance the sustainability of our products with the introduction of our SUSTANA™ line of aluminum products, which are produced with low carbon emissions and recycled content. As a member of the Aluminum Stewardship Initiative, we also helped foster greater sustainability and transparency throughout the aluminum industry.

## Alcoa Foundation

Before Alcoa Inc.'s separation into two publicly-traded companies, the Legacy Alcoa Foundation contributed more than \$22 million in 2016 to Alcoa Inc. communities for programs in education and environmental sustainability. As a result of the separation, two new foundations were formed into which the assets of Legacy Alcoa Foundation were transferred, one of which is a new Alcoa Foundation that invests where Alcoa Corporation has a presence. The new Alcoa Foundation contributes to programs focused on environmental excellence around the world, particularly in areas of biodiversity conservation and climate change research. For example, Alcoa Foundation is supporting research of the World Wildlife Fund that will advance knowledge on how human responses to climate change impact biodiversity. With this information, conservation and outreach strategies will be developed, including educational materials.

**The new Alcoa Foundation will invest in programs that contribute to environmental excellence. In 2016, Legacy Alcoa Foundation partnered with NatureBridge to support 99 promising students from Alcoa communities around the globe for a 10-day environmental education immersion experience in three U.S. National Parks.**



**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549  
FORM 10-K**

[ x ] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF  
THE SECURITIES EXCHANGE ACT OF 1934  
**For The Fiscal Year Ended December 31, 2016**

**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 Charter)

Delaware  
(State of incorporation)

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

**390 Park Avenue, New York, New York 10022-4608**

(Address of principal executive offices) (Zip code)

**212-518-5400**

**(Registrant's telephone number, including area code)**

**Securities registered pursuant to Section 12(b) of the Act:**

| <u>Title of each class</u>               | <u>Name of each exchange on which registered</u> |
|--|--|
| Common Stock, par value \$0.01 per share | New York Stock Exchange                          |

**Securities registered pursuant to Section 12(g) of the Act: None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No .

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes  No .

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes  No .

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. []

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

Large accelerated filer [  ] Accelerated filer [  ] Non-accelerated filer [] Smaller reporting company [  ]

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

As of June 30, 2016, the registrant's common stock was not publicly traded.

As of March 10, 2017, there were 184,204,763 shares of the registrant's common stock, par value \$0.01 per share, outstanding.

**Documents incorporated by reference.**

Part III of this Form 10-K incorporates by reference certain information from the registrant's Definitive Proxy Statement for its 2017 Annual Meeting of Stockholders to be filed pursuant to Regulation 14A.

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### **Note on Incorporation by Reference**

In this Form 10-K, selected items of information and data are incorporated by reference to portions of Alcoa Corporation’s Definitive Proxy Statement for its 2017 Annual Meeting of Stockholders to be held on May 10, 2017 (the “Proxy Statement”), which will be filed with the Securities and Exchange Commission within 120 days of the end of Alcoa Corporation’s fiscal year ended December 31, 2016. Unless otherwise provided herein, any reference in this Form 10-K to disclosures in the Proxy Statement shall constitute incorporation by reference of only that specific disclosure into this Form 10-K.

### **Forward-Looking Statements**

*This report contains (and oral communications made by Alcoa may contain) 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; and statements about strategies, outlook, business and financial prospects. 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 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. For a discussion of some of the specific factors that may cause Alcoa’s actual results to differ materially from those projected in any forward-looking statements, see the following sections of this report: Part I, Item 1A. (Risk Factors), Part II, Item 7. (Management’s Discussion and Analysis of Financial Condition and Results of Operations), including the disclosures under Segment Information and Critical Accounting Policies and Estimates, and the Derivatives Section of Note O to the Consolidated Financial Statements in Part II, Item 8. (Financial Statements and Supplementary Data). 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 discussed above and other risks in the market.*

## PART I

### Item 1. Business.

#### General

Alcoa Corporation, a Delaware corporation, became an independent, publicly traded company on November 1, 2016, as explained below under “Separation Transaction.” Alcoa Corporation has its principal office in New York, New York. In this report, unless the context otherwise requires, “Alcoa” or the “Company,” “we,” “us,” and “our” means Alcoa Corporation and all subsidiaries consolidated for the purposes of its financial statements.

Alcoa is a global industry leader in the production of bauxite, alumina, and aluminum, with a strong portfolio of value-added cast and rolled products, as well as substantial energy assets. Alcoa is built on a foundation of strong values and operating excellence dating back nearly 130 years to the world-changing discovery that made aluminum an affordable and vital part of modern life. Since inventing the aluminum industry, and throughout our history, our talented Alcoans have followed on with breakthrough innovations and best practices that have led to efficiency, safety, sustainability, and stronger communities wherever we operate.

Aluminum is a commodity traded on the London Metal Exchange (“LME”) and priced daily. Additionally, alumina is subject to market pricing against the Alumina Price Index (“API”). As a result, the price of both aluminum and alumina is subject to significant volatility and, therefore, influences the operating results of Alcoa Corporation.

Alcoa is a global company with 43 operating locations across 10 countries. Alcoa’s operations consisted of six reportable segments for 2016: Bauxite, Alumina, Aluminum, Cast Products, Energy, and Rolled Products.

The Company’s Internet address is <http://www.alcoa.com>. Alcoa makes available free of charge on or through its website its annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable after the Company electronically files such material with, or furnishes it to, the Securities and Exchange Commission (“SEC”). The information on the Company’s Internet site is not a part of, or incorporated by reference in, this annual report on Form 10-K. The SEC maintains an Internet site that contains these reports at <http://www.sec.gov>.

#### Separation Transaction

On September 28, 2015, Alcoa Inc. (“ParentCo”) announced its intention to separate ParentCo into two standalone, publicly-traded companies (the “Separation Transaction”). Alcoa Corporation was formed to hold ParentCo’s Bauxite, Alumina, Aluminum, Cast Products and Energy businesses, as well as ParentCo’s rolling mill operations in Warrick, Indiana, and ParentCo’s 25.1% interest in the Ma’aden Rolling Company in Saudi Arabia (the “Alcoa Corporation Business”). Following the Separation Transaction, Alcoa Corporation holds the assets and liabilities of ParentCo relating to those businesses and the direct and indirect subsidiary entities that operated the Alcoa Corporation Business, subject to certain exceptions. Upon completion of the Separation Transaction, ParentCo was renamed Arconic Inc. (“Arconic”) and now holds ParentCo’s Engineered Products and Solutions, Global Rolled Products (other than the rolling mill operations in Warrick, Indiana, and the 25.1% interest in the Ma’aden Rolling Company in Saudi Arabia) and Transportation and Construction Solutions businesses (the “Arconic Business”), including those assets and liabilities of ParentCo and its direct and indirect subsidiary entities that operated the Arconic Business, subject to certain exceptions.

On September 29, 2016, the ParentCo Board of Directors approved the distribution of 80.1% of Alcoa Corporation’s issued and outstanding shares of common stock on the basis of one share of Alcoa Corporation common stock for every three shares of ParentCo common stock held as of the close of business on October 20, 2016, the record date for the distribution (the “Distribution”).

The Separation Transaction and the Distribution were subject to a number of conditions, including, but not limited to: final approval by ParentCo's Board of Directors (see below); the continuing validity of the private letter ruling from the Internal Revenue Service regarding certain U.S. federal income tax matters relating to the transaction; receipt of an opinion of legal counsel regarding the qualification of the Distribution, together with certain related transactions, as a transaction that is generally tax-free for U.S. federal income tax purposes; and the SEC declaring effective a Registration Statement on Form 10, as amended, filed with the SEC on October 11, 2016 (effectiveness was declared by the SEC on October 17, 2016).

On November 1, 2016, the Separation Transaction was completed and became effective at 12:01 a.m. Eastern Standard Time, at which time Alcoa Corporation became an independent, publicly traded company. To effect the Separation Transaction, ParentCo undertook a series of transactions to separate the net assets and certain legal entities of ParentCo, resulting in a cash payment of approximately \$1.1 billion to ParentCo by Alcoa Corporation using the net proceeds of a debt offering. Also at 12:01 a.m. Eastern Standard Time on November 1, 2016, the Distribution occurred. Immediately following the Distribution, Alcoa Corporation stockholders owned directly 80.1% of the outstanding shares of common stock of Alcoa Corporation, and Arconic retained 19.9% of the outstanding shares of common stock of Alcoa Corporation. 146,159,428 shares of Alcoa Corporation common stock were distributed to ParentCo stockholders, and Arconic retained 36,311,767 shares of Alcoa Corporation common stock representing its 19.9% retained interest (on February 14, 2017, Arconic sold 23,353,000 of these shares). ParentCo stockholders received cash in lieu of any fractional shares of Alcoa Corporation common stock that they would have received after application of the distribution ratio. Upon completion of the Separation Transaction and the Distribution, each ParentCo stockholder as of the record date continued to own shares of ParentCo (which, as a result of ParentCo's name change to Arconic, are Arconic shares) and owned a proportionate share of the outstanding common stock of Alcoa Corporation that was distributed. ParentCo stockholders were not required to make any payment, surrender or exchange their ParentCo common stock or take any other action to receive their shares of Alcoa Corporation common stock in the Distribution. "Regular-way" trading of Alcoa Corporation's common stock began with the opening of the New York Stock Exchange ("NYSE") on November 1, 2016 under the ticker symbol "AA." Alcoa Corporation's common stock has a par value of \$0.01 per share.

### **Formation of Alcoa Corporation**

Alcoa Upstream Corporation was formed in Delaware on March 10, 2016 for the purpose of holding ParentCo's Alcoa Corporation Business, and it was renamed Alcoa Corporation in connection with the Separation Transaction and the Distribution.

As part of the Separation Transaction, and prior to the Distribution, ParentCo and its subsidiaries completed an internal reorganization in order to transfer the Alcoa Corporation Business to Alcoa Corporation. Among other things and subject to limited exceptions, the internal reorganization resulted in Alcoa Corporation owning, directly or indirectly, the operations comprising, and the entities that conduct, the Alcoa Corporation Business. The internal reorganization included various restructuring transactions pursuant to which the operations, assets, liabilities and investments of ParentCo and its subsidiaries used to conduct the Alcoa Corporation Business were separated from the operations, assets, liabilities and investments of ParentCo and its subsidiaries used to conduct the Arconic Business. Such restructuring transactions took the form of asset transfers, dividends, contributions and similar transactions, and involved the formation of new subsidiaries in U.S. and non-U.S. jurisdictions to own and operate the Alcoa Corporation Business or the Arconic Business in such jurisdictions.

Following the completion of the internal reorganization and immediately prior to the Distribution, Alcoa Corporation became the parent company of the entities that conduct the Alcoa Corporation Business, and ParentCo (through subsidiaries other than Alcoa Corporation and its subsidiaries) remained the parent company of the entities that conduct the Arconic Business.

In connection with the Separation Transaction, as of October 31, 2016, Alcoa Corporation entered into certain agreements with Arconic to implement the legal and structural separation between the two companies, govern the



relationship between Alcoa Corporation and Arconic after the completion of the Separation Transaction, and allocate between Alcoa Corporation and Arconic various assets, liabilities and obligations, including, among other things, employee benefits, environmental liabilities, intellectual property, and tax-related assets and liabilities. These agreements included a Separation and Distribution Agreement, Tax Matters Agreement, Employee Matters Agreement, Transition Services Agreement, and certain Patent, Know-How, Trade Secret License and Trademark License Agreements.

## **Joint Ventures**

### **AWAC**

Alcoa World Alumina and Chemicals (“AWAC”) is an unincorporated global joint venture between Alcoa Corporation and Alumina Limited, a company incorporated under the laws of the Commonwealth of Australia and listed on the Australian Securities Exchange. AWAC consists of a number of affiliated entities that own, operate or have an interest in, bauxite mines and alumina refineries, as well as certain aluminum smelters, in seven countries. Alcoa Corporation owns 60% and Alumina Limited owns 40% of these entities, directly or indirectly, with such entities being consolidated by Alcoa Corporation for financial reporting purposes.

The scope of AWAC generally includes:

- *Bauxite and Alumina*: The mining of bauxite and other aluminous ores as well as the refining and other processing of these ores into alumina and other ancillary operations;
- *Non-Metallurgical Alumina*: The production and sale of non-metallurgical alumina and other alumina-based chemicals; and
- *Integrated Operations*: Ownership and operation of certain primary aluminum smelting and other ancillary facilities.

Alcoa is the industrial leader of AWAC and provides the operating management for all of the operating entities forming AWAC. The operating management is subject to direction provided by the Strategic Council of AWAC, which is the principal forum for Alcoa and Alumina Limited to provide direction and counsel to the AWAC companies regarding strategic and policy matters. The Strategic Council consists of five members, three of whom are appointed by Alcoa (of which one is the Chairman of the Strategic Council), and two of whom are appointed by Alumina Limited (of which one is the Deputy Chairman of the Strategic Council).

All matters before the Strategic Council are decided by a majority vote of the members, except for certain matters which require approval by at least 80% of the members, including changes to the scope of AWAC; changes in the dividend policy; equity calls in aggregate greater than \$1 billion in any year; sales of all or a majority of the AWAC assets; loans from AWAC companies to Alcoa or Alumina Limited; certain acquisitions, divestitures, expansions, curtailments or closures; certain related-party transactions; financial derivatives, hedges or swap transactions; a decision by AWAC companies to file for insolvency; and changes to pricing formula in certain offtake agreements which may be entered into between AWAC companies and Alcoa or Alumina Limited.

### *AWAC Operations*

AWAC entities’ assets include the following interests:

- 100% of the bauxite mining, alumina refining, and aluminium smelting operations of Alcoa’s affiliate, Alcoa of Australia (“AofA”);
- 100% of the refinery assets at Point Comfort, Texas, United States (“Point Comfort”);
- 100% interest in various mining and refining assets and the Hydro-electric facilities in Suriname;

- a 39% interest in the São Luis refinery in Brazil;
- a 9.62% interest in the bauxite mining operations of Mineração Rio Do Norte, an international mining consortium;
- 100% of the Juruti bauxite deposit and mine in Brazil;
- 100% of the refinery and alumina-based chemicals assets at San Ciprián, Spain;
- a 45% interest in Halco (Mining) Inc., a bauxite consortium that owns a 51% interest in Compagnie des Bauxites de Guinée, a bauxite mine in Guinea;
- 100% of Alcoa Steamship Company Inc.;
- a 25.1% interest in the mine and refinery in Saudi Arabia; and
- a 55% interest in the Portland smelter AWAC manages on behalf of the joint venture partners.

### *Exclusivity*

Under the terms of their joint venture agreements, Alcoa and Alumina Limited have agreed that, subject to certain exceptions, AWAC is their exclusive vehicle for their investments, operations or participation in the bauxite and alumina business, and they will not compete with AWAC in those businesses. In the event of a change of control of either Alcoa or Alumina Limited, this exclusivity and non-compete restriction will terminate, and the partners will then have opportunities to unilaterally pursue bauxite or alumina projects outside of or within AWAC, subject to certain conditions provided in the Amended and Restated Charter of the Strategic Council.

### *Equity Calls*

The cash flow of AWAC and borrowings are the preferred sources of funding for the needs of AWAC. Should the aggregate annual capital budget of AWAC require an equity contribution from Alcoa Corporation and Alumina Limited, an equity call can be made on 30 days' notice, subject to certain limitations.

### *Dividend Policy*

AWAC will generally be required to distribute at least 50% of the prior calendar quarter's net income of each AWAC company, and certain AWAC companies will also be required to pay a distribution every three months equal to the amount of available cash above specified thresholds and subject to the forecast cash needs of the company. Alcoa will obtain a limited amount of debt funding for the AWAC companies to fund growth projects, subject to certain restrictions.

### *Leveraging Policy*

Debt of AWAC is subject to a limit of 30% of total capital (defined as the sum of debt (net of cash) plus any minority interest plus shareholder equity). The AWAC joint venture will raise a limited amount of debt to fund growth projects within 12 months of it becoming permissible under Alcoa's revolving credit line, provided that the amount of debt does not trigger a credit rating downgrade for Alcoa.

### **Other**

In December 2009, we entered into a joint venture with Saudi Arabian Mining Company (Ma'aden), which was formed by the government of Saudi Arabia to develop its mineral resources and is listed on the Saudi Stock Exchange (Tadawul), to develop a fully integrated aluminum complex in the Kingdom of Saudi Arabia. This project is the most efficient aluminum production complex within the worldwide Alcoa system. In its initial phases, the complex includes a bauxite mine with an initial capacity of 4 million bone dry metric tons per year; an alumina refinery with an initial

capacity of 1.8 million metric tons per year (mtpy); an aluminum smelter with an initial capacity of ingot, slab and billet of 740,000 mtpy; and a rolling mill with initial capacity of 380,000 mtpy. The smelter, refinery and mine are fully operational. Ma'aden owns a 74.9% interest in the joint venture. Alcoa owns a 25.1% interest in the smelter and in the rolling mill; and AWAC holds a 25.1% interest in the mine and refinery.

The ABI smelter is a joint venture between Alcoa and Rio Tinto. Alcoa is the operating partner and owns 74.95% of the joint venture.

The Machadinho Hydro Power Plant (HPP): Machadinho HPP is a consortium between Alcoa AlumInio (25.8%), Votorantim Energia (33.1%), Tractebel (19.3%), Vale (8.3%) and other partners (CEEE, InterCement and DME Energetica) located in the Pelotas River, southern Brazil.

Barra Grande Hydro Power Plant (HPP): Barra Grande HPP is a joint venture between Alcoa AlumInio (42.2%), CPFL Energia (25%), Votorantim Energia (15%), InterCement (9%) and DME Energetica (8.8%) located in the Pelotas River, southern Brazil.

Estreito Hydro Power Plant (HPP): Estreito HPP is a consortium between Alcoa AlumInio (25.5%), Tractebel (40.1%), Vale (30%) and InterCement (4.4%) located in the Tocantins River, northern Brazil.

Serra do Facão Hydro Power Plant (HPP): Serra do Facão HPP is a consortium between Alcoa AlumInio (34.9%), Furnas (49.4%), Dme Energetica (10%) and Camargo Correa Energia (5.4%) located in the Sao Marcos river, central-Brazil.

Manicouagan Power Limited Partnership (Manicouagan) is a joint venture between Alcoa Corporation and Hydro Quebec. Manicouagan owns and operates the 335 megawatt McCormick hydroelectric project, which is located on the Manicouagan River in the Province of Quebec. Manicouagan supplies approximately 27% of the electricity requirements of Alcoa's Baie-Comeau, Quebec, smelter. Alcoa owns 40% of the joint venture.

The Strathcona calciner is a joint venture between Alcoa and Rio Tinto. The calciner purchases green coke from the petroleum industry and converts it into calcined coke. The calcined coke is then used as a raw material in an aluminum smelter. Alcoa Corporation owns 39% of the joint venture.

## **Description of the Business**

Information describing Alcoa's businesses can be found on the indicated pages of this report:

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Aluminum is one of the most abundant elements in the earth's crust. Aluminum metal is produced by smelting alumina using large amounts of electricity, and can be cast and rolled into many shapes and forms. Alumina is an intermediary product produced primarily from refining bauxite. The following tables and related discussion provide additional description of Alcoa's businesses all along this value chain. The Company's business segments in 2016 were Bauxite, Alumina, Aluminum, Cast Products, Energy and Rolled Products. The Bauxite and Alumina segments primarily consist of a series of affiliated operating entities collectively referred to as AWAC. Alcoa ultimately owns 60% and Alumina Limited, an unrelated third party, ultimately owns 40% of these individual entities.

## **Bauxite**

Bauxite is Alcoa Corporation's basic raw material input for its alumina refining process and is also sold into the third-party market. Bauxite contains various aluminum hydroxide minerals, the most important of which are gibbsite and boehmite. Alcoa Corporation processes most of the bauxite that it mines into alumina and sells the remainder to third parties. The Company obtains bauxite from its own resources and from those belonging to the AWAC enterprise, located in the countries listed in the table below, as well as pursuant to both long-term and short-term contracts and mining leases. Tons of bauxite are reported as bone dry metric tons ("bdmt") unless otherwise stated. See the glossary of bauxite mining-related terms at the end of this section.

During 2016, mines operated by Alcoa Corporation produced 37.7 million bdmt and separately mines operated by third parties (with Alcoa Corporation and AWAC equity interests) produced 7.3 million bdmt on a proportional equity basis for a total bauxite production of 45.0 million bdmt.

Based on the terms of its bauxite supply contracts, AWAC bauxite purchases from Mineração Rio do Norte S.A. ("MRN") and Compagnie des Bauxites de Guinée ("CBG") differ from its proportional equity in those mines. Therefore during 2016, including those purchases, AWAC had access to 47.5 million bdmt of production from its portfolio of bauxite interests.

During 2016, AWAC sold 6.4 million bdmt of bauxite to third parties and purchased 0.3 million bdmt from third parties. The bauxite delivered to Alcoa Corporation and AWAC refineries amounted to 41.4 million bdmt during 2016.

The Company is growing its third-party bauxite sales business. For example, in December 2016, Alcoa's affiliate, AofA, received permission from the Government of Western Australia to export up to 2.5 million bdmt per year of bauxite for five years to third-party customers.

The Company has access to large bauxite deposit areas with mining rights that extend in most cases more than 20 years from the date of this report. For purposes of evaluating the amount of bauxite that will be available to supply its refineries, the Company considers both estimates of bauxite resources as well as calculated bauxite reserves. Bauxite resources represent deposits for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence based on the amount of exploration sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. Bauxite reserves represent the economically mineable part of resource deposits, and include diluting materials and allowances for losses, which may occur when the material is mined. Appropriate assessments and studies have been carried out to define the reserves, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. Alcoa employs a conventional approach (including additional drilling with successive tightening of the drilling grid) with customized techniques to define and characterize its various bauxite deposit types allowing us to confidently establish the extent of its bauxite resources and their ultimate conversion to reserves.

The following table only includes the amount of proven and probable reserves controlled by the Company. While the level of reserves may appear low in relation to annual production levels, they are consistent with historical levels of reserves for the Company's mining locations and consistent with the Company reserves strategy. Given the Company's

extensive bauxite resources, the abundant supply of bauxite globally and the length of the Company's rights to bauxite, it is not cost-effective to invest the significant funds and efforts necessary to establish bauxite reserves that reflect the total size of the bauxite resources available to the Company. Rather, bauxite resources are upgraded annually to reserves as needed by the location. Detailed assessments are progressively undertaken within a proposed mining area and mine activity is then planned to achieve a uniform quality in the supply of blended feedstock to the relevant refinery. Alcoa Corporation believes its present sources of bauxite on a global basis are sufficient to meet the forecasted requirements of its alumina refining operations for the foreseeable future.

### **Bauxite Resource Development Guidelines**

Alcoa Corporation has adopted best practice guidelines for bauxite reserve and resource classification at its operating bauxite mines. Alcoa's reserves are declared in accordance with Alcoa Corporation's internal guidelines as administered by the Alcoa Ore Reserves Committee ("AORC"). The reported ore reserves set forth in the table below are those that we estimated could be extracted economically with current technology and in current market conditions. We do not use a price for bauxite, alumina or aluminum to determine our bauxite reserves. The primary criteria for determining bauxite reserves are the feed specifications required by the receiving alumina refinery. More specifically, reserves are set based on the chemical composition of the bauxite in order to minimize bauxite processing cost and maximize refinery economics for each individual refinery. The primary specifications that are important to this analysis are the "available alumina" and "reactive silica" content of the bauxite. Each alumina refinery will have a target specification for these parameters, but may receive bauxite within a range that allows blending in stockpiles to achieve the receiving refinery's target.

In addition to these chemical specifications, a number of other ore reserve design factors have been applied to differentiate bauxite reserves from other mineralized material. The contours of the bauxite reserves are designed using parameters such as available alumina content cutoff grade, reactive silica cutoff grade, ore density, overburden thickness, ore thickness and mine access considerations. These parameters are generally determined by using infill drilling or geological modeling.

Further, our mining locations utilize annual in-fill drilling or geological modeling programs designed to progressively upgrade the reserve and resource classification of their bauxite based on the above-described factors.

## Alcoa Corporation Bauxite Interests, Share of Reserves and Annual Production<sup>1</sup>

| Country                   | Project   | Owners' Mining Rights (% Entitlement)  | Expiration Date of Mining Rights | Probable Reserves <sup>2</sup> (million bdt) | Proven Reserves <sup>2</sup> (million bdt) | Available Alumina Content (%) AvAl <sub>2</sub> O <sub>3</sub>            | Reactive Silica Content (%) RxSiO <sub>2</sub>           | 2016 Annual Production (million bdt) | Ore Reserve Design Factors  |
|---------------------------|---|--|----------------------------------|--|--|---|--|--------------------------------------|---|
| Australia                 | Darling Range Mines ML1SA                           | Alcoa of Australia Limited (AofA) <sup>3</sup> (100%)  | 2024                             | 26.1   | 153.4                                      | 32.9<br>Range: 31.0-34.0  | 0.9<br>Max: 1.4  | 32.4                                 | <ul style="list-style-type: none"> <li>AvAl<sub>2</sub>O<sub>3</sub> ≥ 27.5%</li> <li>RxSiO<sub>2</sub> ≤ 3.5%</li> <li>Minimum mineable thickness 2m</li> <li>Minimum bench widths of 45m</li> </ul>   |
| Brazil                    | Poços de Caldas                                     | Alcoa Alumínio S.A. (Alumínio) <sup>4</sup> (100%)   | 2020 <sup>5</sup>                | 0.7  | 1.1  | 39.5<br>Range: 39.5-41.5  | 4.5<br>Range: 3.5-4.5                                    | 0.2                                  | <ul style="list-style-type: none"> <li>AvAl<sub>2</sub>O<sub>3</sub> ≥ 30%</li> <li>RxSiO<sub>2</sub> ≤ 7%</li> </ul>   |
|                           | Juruti <sup>5</sup> RN101, RN102, RN103, RN104, #34 | Alcoa World Alumina Brasil Ltda. (AWA Brasil) <sup>3</sup> (100%)  | 2100 <sup>5</sup>                | 8.7  | 21.1                                       | 47.4<br>Range: 46.5-48.5  | 4.2<br>Range: 3.3-4.3                                    | 5.2                                  | <ul style="list-style-type: none"> <li>AvAl<sub>2</sub>O<sub>3</sub> ≥ 35%</li> <li>RxSiO<sub>2</sub> ≤ 10%</li> <li>Wash Recovery: ≥ 30%</li> <li>Overburden/Ore (m/m) = 10/1</li> </ul>   |
| Suriname                  | Coermotibo and Onverdacht                           | Suriname Aluminum Company, L.L.C. (Suralco) <sup>3</sup> (55%)<br>N.V. Alcoa Minerals of Suriname (AMS) <sup>6</sup> (45%) | 2033 <sup>7</sup>                | 0.0  | 0.0  | N/A   | N/A  | —                                    | N/A   |
| <b>Equity Interests :</b> |   |  |                                  |  |  |   |  |                                      |   |
| Brazil                    | Trombetas   | Mineração Rio do Norte S.A. (MRN) <sup>8</sup> (18.2%)   | 2046 <sup>5</sup>                | 3.2  | 7.8  | 49.8<br>Range: 49.0-50.5  | 4.8<br>Range: 4.0-4.8                                    | 3.0                                  | <ul style="list-style-type: none"> <li>AvAl<sub>2</sub>O<sub>3</sub> ≥ 46%</li> <li>RxSiO<sub>2</sub> ≤ 7%</li> <li>Wash Recovery: ≥ 30%</li> </ul>   |
| Guinea                    | Boké  | Compagnie des Bauxites de Guinée (CBG) <sup>9</sup> (22.95%)   | 2038 <sup>10</sup>               | 36.2   | 40.7                                       | TAI <sub>2</sub> O <sub>3</sub> <sup>11</sup><br>48.9<br>Range: 48.5-52.4 | TSiO <sub>2</sub> <sup>11</sup><br>1.7<br>Range: 1.2-2.1 | 3.5                                  | <ul style="list-style-type: none"> <li>AvAl<sub>2</sub>O<sub>3</sub> ≥ 44%</li> <li>RxSiO<sub>2</sub> ≤ 10%</li> <li>Minimum mineable thickness 2m</li> <li>Smallest Mining Unit size (SMU) 50m x 50m</li> </ul>  |
| Kingdom of Saudi Arabia   | Al Ba'itha  | Ma'aden Bauxite & Alumina Company (25.1%) <sup>12</sup>  | 2037                             | 33.8   | 18.8                                       | TAA <sup>13</sup><br>49.5   | TSiO <sub>2</sub> <sup>13</sup><br>8.6                   | 0.9                                  | <ul style="list-style-type: none"> <li>AvAl<sub>2</sub>O<sub>3</sub> ≥ 40%</li> <li>Mining dilution modelled as a skin of 12.5cm around the ore</li> <li>Mining recovery applied as a skin loss of 7.5 cm on each side of the mineralisation</li> <li>Mineralisation less than 1m thick excluded</li> </ul> |

<sup>1</sup> This table shows only the AWAC and/or Alcoa Corporation share (proportion) of reserve and annual production tonnage.

<sup>2</sup> Reserves are in place for all mines other than Juruti and Trombetas, where the ore is beneficiated and a wash recovery factor is applied.

<sup>3</sup> This entity is part of the AWAC group of companies and is ultimately owned 60% by Alcoa Corporation and 40% by Alumina Limited.

<sup>4</sup> Alumínio is ultimately owned 100% by Alcoa Corporation.

<sup>5</sup> Brazilian mineral legislation does not establish the duration of mining concessions. The concession remains in force until the exhaustion of the deposit. The company estimates that (i) the concessions at Poços de Caldas will last at least until 2020, (ii) the concessions at Trombetas will last until 2046 and (iii) the concessions at Juruti will last until 2100. Depending, however, on actual and future needs, the rate at which the deposits are exploited and government approval is obtained, the concessions may be extended to (or expire at) a later (or an earlier) date.

- 6 Alcoa World Alumina LLC (“AWA LLC”) owns 100% of N.V. Alcoa Minerals of Suriname (“AMS”). Suralco and AMS are parts of the AWAC group of companies which are ultimately owned 60% by Alcoa Corporation and 40% by Alumina Limited.
- 7 At the end of 2016, AWAC’s bauxite mineral and mining rights remained valid until 2033. The AWAC mines in Suriname were curtailed in the fourth quarter of 2015 and in December 2016, the Company determined to close these mines. There are no plans for AWAC to restart these mines and there are no reserves to declare.
- 8 Alumínio holds an 8.58% total interest, AWA Brasil holds a 4.62% total interest and AWA LLC holds a 5% total interest in MRN. MRN is jointly owned with affiliates of Rio Tinto Alcan Inc., Companhia Brasileira de Alumínio, Companhia Vale do Rio Doce, BHP Billiton Plc (“BHP Billiton”) and Norsk Hydro. Alumínio, AWA Brasil, and AWA LLC purchase bauxite from MRN under long-term supply contracts.
- 9 AWA LLC owns a 45% interest in Halco (Mining), Inc. (“Halco”). Halco owns 100% of Boké Investment Company, a Delaware company, which owns 51% of CBG. The Guinean Government owns 49% of CBG, which has the exclusive right through 2038 to develop and mine bauxite in certain areas within an approximately 2939 square-kilometer concession in northwestern Guinea.
- 10 AWA LLC and Alúmina Española, S.A. have bauxite purchase contracts with CBG that expire in 2033. Before that expiration date, AWA LLC and Alúmina Española, S.A expect to negotiate extensions of their contracts as CBG will have concession rights until 2038. The CBG concession can be renewed beyond 2038 by agreement of the Government of Guinea and CBG should more time be required to commercialize the remaining economic bauxite within the concession.
- 11 Guinea—Boké: CBG prices bauxite and plans the mine based on the bauxite content of total alumina ( $TAl_2O_3$ ) and total silica ( $TSiO_2$ ).
- 12 Ma’aden Bauxite & Alumina Company is a joint venture owned by Saudi Arabian Mining Company (“Ma’aden”) (74.9%) and AWA Saudi Limited (25.1%). AWA Saudi Limited is part of the AWAC group of companies and is ultimately owned 60% by Alcoa Corporation and 40% by Alumina Limited.
- 13 Kingdom of Saudi Arabia—Al Ba’itha: Bauxite reserves and mine plans are based on the bauxite qualities of total available alumina (TAA) and total silica ( $TSiO_2$ ).

Qualifying statements relating to the table above:

**Australia—Darling Range Mines:** Huntly and Willowdale are the two active AWAC mines in the Darling Range of Western Australia. The mineral lease issued by the State of Western Australia to Alcoa Corporation’s majority owned subsidiary, AofA is known as ML1SA and encompasses a gross area of 712,881 hectares (including private land holdings, state forests, national parks and conservation areas) in the Darling Range and extends from east of Perth to east of Bunbury (the “ML1SA Area”). The ML1SA lease provides AofA with various rights, including certain exclusivity rights to explore for and mine bauxite, rights to deny third party mining tenements in limited circumstances, rights to mining leases for other minerals in the ML1SA Area, and the right to prevent certain governmental actions from interfering with or prejudicially affecting AofA’s rights. The ML1SA lease term extends to 2024, however it can be renewed for an additional 21 year period to 2045. The above-declared reserves are current as of December 31, 2016. The amount of reserves reflects the total AWAC share. Additional resources are routinely upgraded by additional exploration and development drilling to reserve status. The Huntly and Willowdale mines supply bauxite to three local AWAC alumina refineries.

**Brazil—Poços de Caldas:** The above-declared reserves are current as of December 31, 2016. Tonnage is total Alcoa share. Additional resources are being upgraded to reserves as needed.

**Brazil—Juruti RN101, RN102, RN103, RN104, #34:** The above-declared reserves are current as of December 31, 2016. All reserves are on Capiroanga Plateau. Declared reserves are total AWAC share. Declared reserve tonnages and the annual production tonnage are washed product tonnages. The Juruti mine’s operating license is periodically renewed.

**Suriname—Suralco:** The AWAC mines in Suriname were curtailed in the fourth quarter of 2015 and in December 2016, the Company determined to close these mines. AWAC has no plans to restart these mines and there are no reserves to declare.

**Brazil—Trombetas-MRN:** The above-declared reserves are as of December 31, 2016. The CP Report setting forth the December 31, 2016 reserves was issued on February 28, 2017. Declared and annual production tonnages reflect the total for Alumínio and AWAC shares (18.2%). Declared tonnages are washed product tonnages.

**Guinea—Boké-CBG:** The above-declared reserves are based on export quality bauxite reserves and are current as of December 31, 2016. The CP Report setting forth the December 31, 2016 reserves was issued on February 28, 2017. Declared tonnages reflect only the AWAC share of CBG's reserves. Annual production tonnage is reported based on AWAC's 22.95% share. Declared reserves quality is reported based on total alumina ( $\text{TAI}_2\text{O}_3$ ) and total silica ( $\text{TSiO}_2$ ) because CBG export bauxite is sold on this basis. Additional resources are being routinely drilled and modeled to upgrade to reserves as needed.

**Kingdom of Saudi Arabia—Al Ba'itha:** The Al Ba'itha Mine began production during 2014 and production was increased in 2016. Declared reserves are as of December 31, 2016. The CP Report setting forth the December 31, 2016 reserves was issued on February 28, 2017. The declared reserves are located in the South Zone of the Az Zabirah Bauxite Deposit. The reserve tonnage in this declaration is AWAC share only (25.1%).



The following table provides additional information regarding the Company’s bauxite mines:

| Mine & Location   | Means of Access   | Operator | Title, Lease or Options  | History   | Type of Mine Mineralization Style   | Power Source  | Facilities, Use & Condition   |
|---|---|----------|--|---|---|---|---|
| Australia—Darling Range; Huntly and Willowdale.   | Mine locations accessed by roads. Ore is transported to refineries by long distance conveyor and rail.  | Alcoa    | Mining lease from the Western Australia Government. ML1SA. Expires in 2024, with option to renew.  | Mining began in 1963.   | Open-cut mines. Bauxite is derived from the weathering of Archean granites and gneisses and Precambrian dolerite.   | Electrical energy from natural gas is supplied by the refinery.                                   | Infrastructure includes buildings for administration and services; workshops; power distribution; water supply; crushers; long distance conveyors. Mines and facilities are operating.  |
| Brazil—Poços de Caldas. Closest town is Poços de Caldas, MG, Brazil.                          | Mine locations are accessed by road. Ore transport to the refinery is by road.  | Alcoa    | Mining licenses from the Government of Brazil and Minas Gerais. Company claims and third-party leases. Expires in 2020.  | Mining began in 1965.   | Open-cut mines. Bauxite derived from the weathering of nepheline syenite and phonolite.   | Commercial grid power.  | Mining offices and services are located at the refinery. Numerous small deposits are mined by contract miners and the ore is trucked to either the refinery stockpile or intermediate stockpile area. Mines and facilities are operating. Mine production has been reduced to align with the reduced production of the Poços refinery which is now producing specialty alumina.   |
| Brazil—Juruti. Closest town is Juruti located on the Amazon River.                            | The mine’s port at Juruti is located on the Amazon River and accessed by ship. Ore is transported from the mine site to the port by company owned rail. | Alcoa    | Mining licenses from the Government of Brazil and Pará. Mining rights do not have a legal expiration date. See footnote 4 to the table above. Operating licenses for the mine, washing plant and exploration have been renewed with validity until 2018. Operating license for the port remains valid until the government agency formalizes the renewal.                                    | The Juruti deposit was systematically evaluated by Reynolds Metals Company beginning in 1974. ParentCo merged Reynolds into the Company in 2000. ParentCo then executed a due diligence program and expanded the exploration area. Mining began in 2009.                        | Open-cut mines. Bauxite derived from weathering during the Tertiary of Cretaceous fine to medium grained feldspathic sandstones. The deposits are covered by the Belterra clays.  | Electrical energy from fuel oil is generated at the mine site. Commercial grid power at the port. | At the mine site: Fixed plant facilities for crushing and washing the ore; mine services offices and workshops; power generation; water supply; stockpiles; rail sidings. At the port: Mine and rail administrative offices and services; port control facilities with stockpiles and ship loader. Mine and port facilities are operating.  |
| Suriname—Coermotibo and Onverdacht. Mines are located in the districts of Para and Marowijne. | The mines are accessed by road. Ore is delivered to the refinery by road from the Onverdacht area and by river barge from the Coermotibo area.          | Alcoa    | Brokopondo Concession from the Government of Suriname. Concessions formerly owned by a BHP Billiton (BHP) subsidiary that was a 45% joint venture partner in the Surinamese bauxite mining and alumina refining joint ventures. AWA LLC acquired that subsidiary in 2009. After the acquisition of the subsidiary, its name was changed to N.V. Alcoa Minerals of Suriname. Expires in 2033. | ParentCo became active in Suriname in 1916 with the founding of the Suriname Bauxite Company. Bauxite was first exported in 1922. The Brokopondo Agreement was signed in 1958. As noted, Suralco bought the bauxite and alumina interests of a BHP subsidiary from BHP in 2009. | Open-cut mines. At one of the mines, the overburden is dredged and mining progresses with conventional open-cut methods. The protoliths of the bauxite have been completely weathered. The bauxite deposits are mostly derived from the weathering of Tertiary Paleogene arkosic sediments. In some places, the bauxite overlies Precambrian granitic and gneissic rocks which have been deeply weathered to saprolite. Bauxitization likely occurred during the middle to late Eocene Epoch. | Commercial grid power.  | In the Onverdacht mining areas, the bauxite is mined and transported to the refinery by truck. In the Coermotibo mining areas, the bauxite is mined, stockpiled and then transported to the refinery by barge. Some of the ore is washed in a small beneficiation plant located in the Coermotibo area. The main mining administrative offices, services, workshops and laboratory are located at the refinery in Paranam. The ore is crushed at Paranam and fed into the refining process. The Suralco mines were curtailed in the fourth quarter of 2015 and in December 2016, the Company determined to close these mines. There are no plans for AWAC to restart these mines. |

| Mine & Location  | Means of Access  | Operator                          | Title, Lease or Options  | History   | Type of Mine Mineralization Style  | Power Source  | Facilities, Use & Condition  |
|--|--|-----------------------------------|--|---|--|---|--|
| Brazil—MRN<br>Closest town is Trombetas in the State of Pará, Brazil.  | The mine and port areas are connected by sealed road and company owned rail.<br><br>Washed ore is transported to Porto Trombetas by rail.<br><br>Trombetas is accessed by river and by air at the airport.                 | MRN                               | Mining rights and licenses from the Government of Brazil.<br><br>Concession rights expire in 2046.   | Mining began in 1979.<br><br>Major expansion in 2003.   | Open-cut mines.<br><br>Bauxite derived from weathering during the Tertiary of Cretaceous fine to medium grained feldspathic sandstones.<br><br>The deposits are covered by the Belterra clays.   | MRN generates its own electricity from fuel oil.                                      | Ore mined from several plateaus is crushed and transported to the washing plant by long-distance conveyors.<br><br>The washing plant is located in the mining zone.<br><br>Washed ore is transported to the port area by company-owned and operated rail.<br><br>At Porto Trombetas the ore is loaded onto customer ships berthed in the Trombetas River. Some ore is dried and the drying facilities are located in the port area.<br><br>Mine planning and services and mining equipment workshops are located in the mine zone.<br><br>The main administrative, rail and port control offices and various workshops are located in the port area.<br><br>MRN's main housing facilities, "the city", are located near the port.<br><br>The mines, port and all facilities are operating. |
| Guinea—CBG<br>Closest town to the mine is Sangaredi. Closest town to the port is Kamsar. The CBG Lease is located within the Boké, Telimele and Gaoual administrative regions. | The mine and port areas are connected by sealed road and company-operated rail. Ore is transported to the port at Kamsar by rail. There are air strips near both the mine and port. These are not operated by the company. | CBG                               | CBG Lease expires in 2038. The lease is renewable in 25-year increments. CBG's rights are specified within the Basic Agreement and Amendment 1 to the Basic Agreement with the Government of Guinea. | Construction began in 1969.<br><br>First export ore shipment was in 1973.   | Open-cut mines.<br><br>The bauxite deposits within the CBG lease are of two general types.<br><br>TYPE 1: In-situ laterization of Ordovician and Devonian plateau sediments locally intruded by dolerite dikes and sills.<br><br>TYPE 2: Sangaredi type deposits are derived from clastic deposition of material eroded from the Type 1 laterite deposits and possibly some of the proclitics from the TYPE 1 plateaus deposits. | The company generates its own electricity from fuel oil at both Kamsar and Sangaredi. | Mine offices, workshops, power generation and water supply for the mine and company mine city are located at Sangaredi.<br><br>The main administrative offices, port control, railroad control, workshops, power generation and water supply are located in Kamsar. Ore is crushed, dried and exported from Kamsar. CBG has company cities within both Kamsar and Sangaredi.<br><br>The mines, railroad, driers, port and other facilities are operating.  |
| Kingdom of Saudi Arabia—Al Ba'itha Mine. Qibah is the closest regional centre to the mine, located in the Qassim province.   | The mine and refinery are connected by road and rail. Ore is transported to the refinery at Ras Al Khair by rail.  | Ma'aden Bauxite & Alumina Company | The current mining lease will expire in 2037.  | The initial discovery and delineation of bauxite resources was carried out between 1979 and 1984.<br><br>The southern zone of the Az Zabirah deposit was granted to Ma'aden in 1999.<br><br>Mine construction was completed in the second quarter of 2015, and the mining operations continued at planned levels. | Open-cut mine.<br><br>Bauxite occurs as a paleolaterite profile developed at an angular unconformity between underlying late Triassic to early Cretaceous sediments (parent rock sequence Biyadh Formation) and the overlying late Cretaceous Wasia Formation (overburden sequence).   | The company generates electricity at the mine site from fuel oil.                     | The mine includes fixed plants for crushing and train loading; workshops and ancillary services; power plant; and water supply.<br><br>There is a company village with supporting facilities. Mining operations commenced in 2014.<br><br>Mine construction was completed in the second quarter of 2015 and the mining operations continued at planned levels.   |

*Kingdom of Saudi Arabia Joint Venture*

In December 2009, ParentCo and Saudi Arabian Mining Company (Ma'aden), which was formed by the government of Saudi Arabia to develop its mineral resources and is listed on the Saudi Stock Exchange (Tadawul), entered into a joint venture to develop a fully integrated aluminum complex in the Kingdom of Saudi Arabia. In its initial phases, the complex includes a bauxite mine with an initial capacity of 4 million bdmt per year; an alumina refinery with an initial capacity of 1.8 million mt per year (mtpy); an aluminum smelter with an initial ingot, slab and billet capacity of 740,000 mtpy; and a rolling mill with initial capacity of 380,000 mtpy. The smelter, refinery and mine are fully operational. Ma'aden owns a 74.9% interest in the joint venture. Alcoa Corporation owns a 25.1% interest in the smelter and in the rolling mill; and AWAC holds a 25.1% interest in the mine and refinery.

The refinery, smelter and rolling mill are located within the Ras Al Khair industrial zone on the east coast of the Kingdom of Saudi Arabia.

For additional information regarding the joint venture, see the Equity Investments section of Note H to the Consolidated Financial Statements in Part II, Item 8. (Financial Statements and Supplementary Data).

**Glossary of Bauxite Mining Related Terms**

| <b>Term</b>                            | <b>Abbreviation</b>              | <b>Definition</b>   |
|--|----------------------------------|---|
| Alcoa Ore Reserves Committee           | AORC                             | The group within Alcoa, which is comprised of geologists and engineers, that specifies the guidelines by which bauxite reserves and resources are classified. These guidelines are used by Alcoa-managed mines. |
| Alumina                                | Al <sub>2</sub> O <sub>3</sub>   | A compound of aluminum and oxygen. Alumina is extracted from bauxite using the Bayer Process. Alumina is a raw material for smelters to produce aluminum metal.   |
| AORC Guidelines                        |                                  | The guidelines used by Alcoa-managed mines to classify reserves and resources. These guidelines are issued by the Alcoa Ore Reserves Committee.   |
| Available alumina content              | AvAl <sub>2</sub> O <sub>3</sub> | The amount of alumina extractable from bauxite using the Bayer Process.   |
| Bauxite                                |                                  | The principal raw material (mineral) used to produce alumina. Bauxite is refined using the Bayer Process to extract alumina.  |
| Bayer Process                          |                                  | The principal industrial chemical process for refining bauxite to produce alumina.  |
| Bone dry metric ton                    | Bdmt                             | Tonnage reported on a zero moisture basis.  |
| Coermotibo                             |                                  | The mining area in Suriname containing the deposits of Bushman Hill, CBO Explo, Lost Hill and Remnant. These mines have been curtailed and will be closed.  |
| Competent Persons Report               | CP Report                        | Joint Ore Reserves Committee (JORC) Code compliant Reserves and Resources Report.   |
| Juruti RN101, RN102, RN103, RN104, #34 |                                  | Mineral claim areas in Brazil associated with the Juruti mine, within which Alcoa has mining operating licenses issued by the state.  |
| ML1SA                                  |                                  | The Mineral lease issued by the State of Western Australia to Alcoa's majority owned subsidiary, Alcoa of Australia (AofA). AofA mines located at Huntly and Willowdale operate within ML1SA.                   |

| Term                    | Abbreviation                    | Definition   |
|-------------------------|---------------------------------|--|
| Onverdacht              |                                 | The mining area in Suriname containing the deposits of Kaaimangrasi, Klaverblad, Lelydorp1 and Sumau 1. These mines have been curtailed and will be closed.  |
| Open-cut mine           |                                 | The type of mine in which an excavation is made at the surface to extract mineral ore (bauxite). The mine is not underground and the sky is viewable from the mine floor.  |
| Probable reserve        |                                 | That portion of a reserve, i.e. bauxite reserve, where the physical and chemical characteristics and limits are known with sufficient confidence for mining and to which various mining modifying factors have been applied. Probable reserves are at a lower confidence level than proven reserves. |
| Proven reserve          |                                 | That portion of a reserve, i. e. bauxite reserve, where the physical and chemical characteristics and limits are known with high confidence and to which various mining modifying factors have been applied.   |
| Reactive silica         | RxSiO <sub>2</sub>              | The amount of silica contained in the bauxite that is reactive within the Bayer Process.   |
| Reserve                 |                                 | That portion of mineralized material, i.e. bauxite, that Alcoa has determined to be economically feasible to mine and supply to an alumina refinery.   |
| Resources               |                                 | Bauxite occurrences and/or concentrations of economic interest that are in such form, quality and quantity that are reasonable prospects for economic extraction.  |
| Silica                  | SiO <sub>2</sub>                | A compound of silicon and oxygen.  |
| Total alumina content   | TAl <sub>2</sub> O <sub>3</sub> | The total amount of alumina in bauxite. Not all of this alumina is extractable or available in the Bayer Process.  |
| Total available alumina | TAA                             | The total amount of alumina extractable from bauxite by the Bayer Process. This term is commonly used when there is a hybrid or variant Bayer Process that will refine the bauxite.  |
| Total silica            | TSiO <sub>2</sub>               | The total amount of silica contained in the bauxite.   |

## Alumina

Alcoa Corporation was the world's leading producer of alumina in 2016. Alcoa Corporation's alumina refining facilities and its worldwide alumina capacity are shown in the following table:

| Country   | Facility          | Owners<br>(% of Ownership)  | Nameplate<br>Capacity <sup>1</sup><br>(000 MTPY) | Alcoa<br>Corporation<br>Consolidated<br>Capacity <sup>2</sup><br>(000 MTPY) |
|-----------|-------------------|---|--|---|
| Australia | Kwinana           | AofA <sup>3</sup> (100%)  | 2,190  | 2,190   |
|           | Pinjarra          | AofA (100%)   | 4,234  | 4,234   |
|           | Wagerup           | AofA (100%)   | 2,555  | 2,555   |
| Brazil    | Poços de Caldas   | Alumínio <sup>4</sup> (100%)  | 390 <sup>5</sup>                                 | 390   |
|           | São Luís (Alumar) | AWA Brasil <sup>3</sup> (39%)<br>Rio Tinto Alcan Inc. <sup>6</sup> (10%)<br>Alumínio (15%)<br>BHP Billiton <sup>6</sup> (36%) | 3,500  | 1,890   |

| Country       | Facility          | Owners<br>(% of Ownership)                 | Nameplate<br>Capacity <sup>1</sup><br>(000 MTPY) | Alcoa  |
|---------------|-------------------|--|--|--|
|               |                   |  |  | Corporation<br>Consolidated<br>Capacity <sup>2</sup><br>(000 MTPY) |
| Spain         | San Ciprián       | Alúmina Española, S.A. <sup>3</sup> (100%) | 1,500  | 1,500  |
| United States | Point Comfort, TX | AWA LLC <sup>3</sup> (100%)                | 2,305 <sup>7</sup>                               | 2,305  |
| TOTAL         |                   |  | 16,674   | 15,064   |

**Equity Interests:**

| Country                 | Facility     | Owners<br>(% of Ownership)                               | Nameplate                           |
|-------------------------|--------------|--|-------------------------------------|
|                         |              |  | Capacity <sup>1</sup><br>(000 MTPY) |
| Kingdom of Saudi Arabia | Ras Al Khair | Ma'aden Bauxite & Alumina<br>Company (100%) <sup>8</sup> | 1,800                               |

<sup>1</sup> Nameplate Capacity is an estimate based on design capacity and normal operating efficiencies and does not necessarily represent maximum possible production.

<sup>2</sup> The figures in this column reflect Alcoa's share of production from these facilities. For facilities wholly-owned by AWAC entities, Alcoa Corporation takes 100% of the production.

<sup>3</sup> This entity is part of the AWAC group of companies and is ultimately owned 60% by Alcoa Corporation and 40% by Alumina Limited.

<sup>4</sup> This entity is ultimately owned 100% by Alcoa Corporation.

<sup>5</sup> As a result of the decision to fully curtail the Poços de Caldas smelter, management initiated a reduction in alumina production at this refinery. The capacity that is operating at this refinery is producing at an approximately 45% output level.

<sup>6</sup> The named company or an affiliate holds this interest.

<sup>7</sup> The Point Comfort alumina refinery has been fully curtailed (see below).

<sup>8</sup> Ma'aden Bauxite & Alumina Company is a joint venture owned by Saudi Arabian Mining Company ("Ma'aden") (74.9%) and AWA Saudi Limited (25.1%). AWA Saudi Limited is part of the AWAC group of companies and is ultimately owned 60% by Alcoa Corporation and 40% by Alumina Limited.

As of December 31, 2016, Alcoa Corporation had approximately 2,305,000 mtpy of idle capacity relative to total Alcoa consolidated capacity of 15,064,000 mtpy. As noted above, Alcoa Corporation and Ma'aden developed an alumina refinery in the Kingdom of Saudi Arabia. Initial capacity of the refinery is 1,800,000 mtpy, and it produced approximately 1,425,000 mt in 2016. For additional information regarding the joint venture, see Note H to the Consolidated Financial Statements under the caption "Investments—Equity Investments."

In March 2015, the Company initiated a 12-month review of 2,800,000 mtpy in refining capacity for possible curtailment (partial or full), permanent closure or divestiture. This review was part of Alcoa Corporation's target to lower the position of the Company's refining operations on the global alumina cost curve to the 21st percentile by the end of 2016. The review resulted in the curtailment of the remaining capacity at the Suralco refinery (1,330,000 mtpy) in 2015 and the commencement of the curtailment of the remaining capacity of the Point Comfort, TX refinery (2,010,000 mtpy), which curtailment was completed in the first half of 2016. In the fourth quarter of 2016, Alcoa determined to close the Suralco alumina refinery and bauxite mines in Suriname, which have been fully curtailed since November 2015. For additional information regarding the curtailments, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Segment Information—Alumina."

## Aluminum

Alcoa Corporation's primary aluminum smelters and their respective capacities are shown in the following table:

| Country       | Facility               | Owners<br>(% Of Ownership)  | Nameplate<br>Capacity <sup>1</sup><br>(000 MTPY) | Alcoa<br>Corporation<br>Consolidated<br>Capacity <sup>2</sup><br>(000 MTPY) |
|---------------|------------------------|---|--|---|
| Australia     | Portland               | AofA (55%)<br>CITIC <sup>3</sup> (22.5%)<br>Marubeni <sup>3</sup> (22.5%) | 358  | 197 <sup>4,5</sup>  |
| Brazil        | São Luís (Alumar)      | Alumínio (60%)<br>BHP Billiton <sup>3</sup> (40%)                         | 447  | 268 <sup>6</sup>  |
| Canada        | Baie Comeau, Québec    | Alcoa Corporation (100%)  | 280  | 280   |
|               | Bécancour, Québec      | Alcoa Corporation (74.95%)<br>Rio Tinto Alcan Inc. <sup>7</sup> (25.05%)  | 413  | 310   |
|               | Deschambault, Québec   | Alcoa Corporation (100%)  | 260  | 260   |
| Iceland       | Fjarðaál               | Alcoa Corporation (100%)  | 344  | 344   |
| Norway        | Lista                  | Alcoa Corporation (100%)  | 94   | 94  |
|               | Mosjøen                | Alcoa Corporation (100%)  | 188  | 188   |
| Spain         | Avilés                 | Alcoa Corporation (100%)  | 93 <sup>8</sup>                                  | 93  |
|               | La Coruña              | Alcoa Corporation (100%)  | 87 <sup>8</sup>                                  | 87  |
|               | San Ciprián            | Alcoa Corporation (100%)  | 228  | 228   |
| United States | Massena West, NY       | Alcoa Corporation (100%)  | 130  | 130   |
|               | Rockdale, TX           | Alcoa Corporation (100%)  | 191 <sup>9</sup>                                 | 191   |
|               | Ferndale, WA (Intalco) | Alcoa Corporation (100%)  | 279 <sup>10</sup>                                | 279   |
|               | Wenatchee, WA          | Alcoa Corporation (100%)  | 184 <sup>11</sup>                                | 184   |
| <b>TOTAL</b>  |                        |   | <b>3,576</b>                                     | <b>3,133</b>  |

### Equity Interests:

| Country                 | Facility     | Owners<br>(% of Ownership) | Nameplate<br>Capacity <sup>1</sup><br>(000 MTPY) |
|-------------------------|--------------|----------------------------|--|
| Kingdom of Saudi Arabia | Ras Al Khair | Alcoa Corporation (25.1%)  | 740  |

<sup>1</sup> Nameplate Capacity is an estimate based on design capacity and normal operating efficiencies and does not necessarily represent maximum possible production.

<sup>2</sup> The figures in this column reflect Alcoa Corporation's share of production from these facilities.

<sup>3</sup> The named company or an affiliate holds this interest.

<sup>4</sup> This figure includes the minority interest of Alumina Limited in the Portland facility, which is owned by AofA, an AWAC company. From this facility, AWAC takes 100% of the production allocated to AofA.

<sup>5</sup> The Portland smelter has approximately 30,000 mtpy of idle capacity.

<sup>6</sup> The Alumar smelter has been fully curtailed since April 2015 (see below).

<sup>7</sup> Owned through Rio Tinto Alcan Inc.'s interest in Pechiney Reynolds Québec, Inc., which is owned by Rio Tinto Alcan Inc. and Alcoa Corporation.

<sup>8</sup> The Avilés and La Coruña smelters have approximately 56,000 mtpy of idle capacity combined.

- <sup>9</sup> The Rockdale smelter has been fully curtailed since the end of 2008.
- <sup>10</sup> The Intalco smelter has had approximately 49,000 mtpy of idle capacity. In November 2015, ParentCo announced that it would idle the remaining 230,000 mtpy capacity by the end of the first quarter of 2016. In January 2016, ParentCo announced that it would delay this further curtailment of the smelter until the end of the second quarter of 2016. On May 2, 2016, ParentCo announced that it would not curtail the Intalco smelter at the end of the second quarter as previously announced, as a result of an agreement with the Bonneville Power Administration.
- <sup>11</sup> The curtailment of remaining capacity at Wenatchee was completed by the end of 2015.

As of December 31, 2016, Alcoa Corporation had approximately 778,000 mtpy of idle capacity relative to total Alcoa Corporation consolidated capacity of 3,132,000 mtpy. As noted above, Alcoa and Ma'aden have developed an aluminum smelter in the Kingdom of Saudi Arabia. The smelter has an initial nameplate capacity of 740,000 mtpy. Since mid-2014, the smelter has been operating at full capacity, and it produced 756,840 mt in 2016.

In March 2015, ParentCo initiated a 12-month review of 500,000 mtpy of smelting capacity for possible curtailment (partial or full), permanent closure or divestiture. This review was part of ParentCo's target to lower Alcoa Corporation's smelting operations on the global aluminum cost curve to the 38th percentile by 2016. As a result of this review, the decision was made to curtail the remaining capacity (74,000 mtpy) at the São Luís smelter in Brazil and the Wenatchee, WA smelter (143,000 mtpy); and undertake permanent closures of the capacity at the Warrick, IN smelter (269,000 mtpy) (includes the closure of a related coal mine) and the infrastructure of the Massena East, NY smelter (potlines were previously shut down in both 2013 and 2014). In March 2016, the Warrick smelter was permanently closed.

Separate from the smelting capacity review described above, in June 2015, ParentCo decided to permanently close the Poços de Caldas smelter (96,000 mtpy) in Brazil, which had been temporarily idle since May 2014 due to challenging global market conditions for primary aluminum and higher operating costs, which made the smelter uncompetitive. The decision to permanently close the Poços de Caldas smelter was based on the fact that these underlying conditions had not improved.

For additional information regarding the curtailments and closures, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations—2016 Actions."

### **Cast Products**

Alcoa's cast products business offers differentiated, value-added aluminum products that are cast into specific shapes to meet customer demand. Alcoa Corporation has 18 casthouses capable of providing value-added products to customers in growing markets, with 15 currently operating, as shown in the following table:

| <b>Country</b> | <b>Facility</b>                | <b>Owners<br/>(% Of Ownership)</b>  |
|----------------|--------------------------------|---|
| Australia      | Portland                       | AofA (55%)<br>CITIC <sup>1</sup> (22.5%)<br>Marubeni <sup>1</sup> (22.5%) |
| Brazil         | Poços de Caldas                | Alcoa Alumínio S.A.<br>(Alumínio) <sup>1</sup> (100%)                     |
|                | São Luís (Alumar) <sup>2</sup> | Alumínio (60%)<br>BHP Billiton <sup>1</sup> (40%)                         |
| Canada         | Baie Comeau, Québec            | Alcoa Corporation (100%)  |
|                | Bécancour, Québec              | Alcoa Corporation (74.95%)<br>Rio Tinto Alcan Inc. <sup>3</sup> (25.05%)  |
|                | Deschambault, Québec           | Alcoa Corporation (100%)  |

| <b>Country</b> | <b>Facility</b>            | <b>Owners<br/>(% Of Ownership)</b> |
|----------------|----------------------------|------------------------------------|
| Iceland        | Fjarðaál                   | Alcoa Corporation (100%)           |
| Norway         | Lista                      | Alcoa Corporation (100%)           |
|                | Mosjøen                    | Alcoa Corporation (100%)           |
| Spain          | Avilés                     | Alcoa Corporation (100%)           |
|                | La Coruña                  | Alcoa Corporation (100%)           |
|                | San Ciprián                | Alcoa Corporation (100%)           |
| United States  | Massena, NY                | Alcoa Corporation (100%)           |
|                | Ferndale, WA (Intalco)     | Alcoa Corporation (100%)           |
|                | Warrick, IN <sup>4</sup>   | Alcoa Corporation (100%)           |
|                | Rockdale, TX <sup>5</sup>  | Alcoa Corporation (100%)           |
|                | Wenatchee, WA <sup>6</sup> | Alcoa Corporation (100%)           |

#### **Equity Interests:**

| <b>Country</b>          | <b>Facility</b> | <b>Owners<br/>(% of Ownership)</b> |
|-------------------------|-----------------|------------------------------------|
| Kingdom of Saudi Arabia | Ras Al Khair    | Alcoa Corporation (25.1%)          |

<sup>1</sup> The named company or an affiliate holds this interest.

<sup>2</sup> The Alumar casthouse has been fully curtailed since April 2015.

<sup>3</sup> Owned through Rio Tinto Alcan Inc.'s interest in Pechiney Reynolds Québec, Inc., which is owned by Rio Tinto Alcan Inc. and Alcoa Corporation.

<sup>4</sup> The Warrick casthouse is operated by Alcoa's Rolled Products business and is dedicated to supplying rolling slab to the Warrick Rolling Mill.

<sup>5</sup> The Rockdale casthouse has been fully curtailed since the end of 2008.

<sup>6</sup> The Wenatchee casthouse has been fully idled since the end of December 2015.

#### **Energy**

Employing the Bayer Process, Alcoa refines alumina from bauxite ore. We then produce aluminum from the alumina by an electrolytic process requiring substantial amounts of electric power. Energy accounts for approximately 19% of the Company's total alumina refining production costs. Electric power accounts for approximately 24% of the Company's primary aluminum production costs. In 2016, Alcoa generated approximately 14% of the power used at its smelters worldwide and generally purchased the remainder under long-term arrangements. The sections below provide an overview of our energy facilities and summarize the sources of power and natural gas for our smelters and refineries.

#### ***Energy Facilities***

The following table sets forth the electricity generation capacity and 2016 generation of facilities in which Alcoa Corporation has an ownership interest:

| <b>Country</b> | <b>Facility</b> | <b>Alcoa Corporation Consolidated</b> |                              |
|----------------|-----------------|---------------------------------------|------------------------------|
|                |                 | <b>Capacity (MW)<sup>1</sup></b>      | <b>2016 Generation (MWh)</b> |
| Brazil         | Barra Grande    | 156                                   | 1,601,901                    |
|                | Estreito        | 157                                   | 867,033                      |



| Country       | Facility             | Alcoa Corporation Consolidated Capacity (MW) <sup>1</sup> | 2016 Generation (MWh) |
|---------------|----------------------|---|-----------------------|
|               | Machadinho           | 119   | 1,616,871             |
|               | Serra do Facão       | 60  | 129,979               |
| Canada        | Manicouagan          | 132   | 1,164,299             |
| Suriname      | Afobaka              | 189   | 781,874               |
| United States | Warrick <sup>2</sup> | 657   | 2,607,661             |
|               | Yadkin               | 215   | 746,953               |
| TOTAL         |                      | 1,685   | 9,516,571             |

<sup>1</sup> The consolidated capacity of the Brazilian energy facilities is the assured energy that is approximately 55% of hydropower plant nominal capacity.

<sup>2</sup> The Warrick smelter was permanently closed in March 2016.

Alumínio owns a 25.74% stake in Consórcio Machadinho, which is the owner of the Machadinho hydroelectric power plant located in southern Brazil. Alumínio also has a 42.18% interest in Energética Barra Grande S.A. (“BAESA”), which built the Barra Grande hydroelectric power plant in southern Brazil. In addition, Alumínio also has a 34.97% share in Serra do Facão Energia S.A., which built the Serra do Facão hydroelectric power plant in the southeast of Brazil. Alumínio is also participating in the Estreito hydropower project in northern Brazil, through Estreito Energia S.A. (an Alumínio wholly owned company) holding a 25.49% stake in Consórcio Estreito Energia, which is the owner of the hydroelectric power plant.

Since May 2015 (after curtailment of the Poços de Caldas and São Luís (Alumar) smelters), the excess generation capacity from the above Brazilian hydroelectric projects, of around 480MW, has been sold into the market.

Power generated from Afobaka is primarily sold to the Government of Suriname under a bilateral contract.

In 2016, Alcoa Corporation’s wholly-owned subsidiary, Alcoa Power Generating Inc. (“APGI”) owned and operated a 215-megawatt Yadkin Hydroelectric Project (“Yadkin”), consisting of four hydroelectric power developments (reservoirs, dams and powerhouses), known as High Rock, Tuckertown, Narrows and Falls, situated along a 38-mile stretch of the Yadkin River through the central part of North Carolina. In July 2016, APGI reached an agreement to sell Yadkin to Cube Hydro Partners LLC. The transaction closed in February 2017. Alcoa Corporation will pay to Arconic the net after-tax proceeds it receives in accordance with the separation and distribution agreement entered into by both companies in conjunction with the Separation Transaction. Prior to the sale, power generated from APGI’s Yadkin system was largely sold to an affiliate, Alcoa Power Marketing LLC, and then to the wholesale market. After the March 2016 closure of the Warrick smelter, approximately 36% of the capacity from the Warrick coal-fired power plant has been sold into the market under its current operating permits. APGI also owns certain FERC-regulated transmission assets in Indiana, Tennessee, New York, and Washington.

### *Energy Sources*

#### Electricity

##### *North America*

The Deschambault, Baie Comeau, and Bécancour smelters in Québec purchase all or a majority of their electricity under contracts with Hydro-Québec that expire on December 31, 2029. Upon expiration, Alcoa Corporation will have the option of extending the term of the Baie Comeau contract to February 23, 2036. The smelter located in Baie Comeau, Québec purchases approximately 73% of its power needs under the Hydro-Québec contract, and the remainder from a 40% owned hydroelectric generating company, Manicouagan Power Limited Partnership.

In the State of Washington, Alcoa Corporation's Wenatchee smelter is served by a contract with Chelan County Public Utility District No. 1 ("Chelan PUD") under which Alcoa Corporation receives 26% of the hydropower output of Chelan PUD's Rocky Reach and Rock Island dams. The Wenatchee smelter was curtailed in 2015.

Starting on January 1, 2013, the Intalco smelter began receiving physical power under a contract with the Bonneville Power Administration ("BPA"), pursuant to which the Company receives physical power at the Northwest Power Act mandated industrial firm power ("IP") rate through September 30, 2022. In May 2015, the contract was amended to reduce the amount of physical power received from BPA and allow for additional purchases of market power. In February and April 2016, the contract was amended again to reduce the contractual amount through February 2018.

Luminant Generation Company LLC (formerly TXU Generation Company LP) ("Luminant") supplies all of the Rockdale smelter's electricity requirements under a long-term power contract that does not expire until at least the end of 2038, with the parties having the right to terminate the contract after 2013 if there has been an unfavorable change in law or after 2025 if the cost of the electricity exceeds the market price. On April 29, 2014, Luminant Generation LLC, Luminant Mining Company LLC, Sandow Power Company LLC and their affiliated debtors filed petitions under Chapter 11 of the U.S. Bankruptcy Code. Subsequently, the Bankruptcy Court confirmed the debtors' amended plan of reorganization and entered an order approving the debtor's assumption of the Sandow Unit 4 agreement and certain other related agreements with Alcoa Corporation. In October 2016, Luminant emerged from bankruptcy.

In the Northeast, the Massena West smelter in New York receives physical power from the New York Power Authority ("NYPA") pursuant to a contract between Alcoa and NYPA that will expire in 2019.

#### *Australia*

The Portland smelter purchased electricity from the State Electricity Commission of Victoria ("SECV") under a contract with Alcoa Portland Aluminium Pty Ltd, a wholly-owned subsidiary of AofA, that extended to October 2016. Upon the expiration of this contract, the Portland smelter commenced to purchase power from the National Electricity Market ("NEM") variable spot market. In March 2010, AofA and Eastern Aluminium (Portland) Pty Ltd separately entered into fixed for floating swap contracts with Loy Yang (now AGL) in order to manage their exposure to the variable energy rates from the NEM. The fixed for floating swap contract with AGL for the Portland smelter commenced operating from the date of expiration of the contract with the SECV and was terminated in accordance with its terms, effective July 31, 2017. A new fixed for floating swap contract for the Portland smelter was entered into with AGL in January 2017 to commence August 1, 2017.

#### *Europe*

Alcoa Corporation's smelters at San Ciprián, La Coruña and Avilés, Spain purchase electricity under bilateral power contracts that expire December 31, 2017.

A competitive bidding mechanism to allocate interruptibility rights in Spain was settled during 2014 to be applied starting from January 1, 2015 and with several auctions to allocate annual rights taking place since then. The last auction process to allocate rights took place in November 2016, where Alcoa Corporation secured 610MW of interruptibility rights for the 2017 period for the three Spanish smelters and the San Ciprián refinery.

Alcoa Corporation owns two smelters in Norway, Lista and Mosjøen, which have long-term power arrangements in place that continue until the end of 2019. Financial compensation of the indirect carbon emissions costs passed through in the electricity bill is received in accordance with EU Commission Guidelines and Norwegian compensation regime.

#### *Iceland*

Landsvirkjun, the Icelandic national power company, supplies competitively priced electricity to Alcoa's Fjarðaál smelter in eastern Iceland under a 40-year power contract. As a result of the Separation Transaction, Landsvirkjun

agreed to assign the power contract to Alcoa, conditioned upon Alcoa Corporation and Arconic both continuing to guarantee the obligations under the power contract. Alcoa Corporation may request Landsvirkjun to review the appropriateness of the dual guarantee going forward.

### Natural Gas

#### *Spain*

To facilitate the full conversion of the San Ciprián, Spain alumina refinery from fuel oil to natural gas, in October 2013, Alumina Española SA (AE) and Gas Natural Transporte SDG SL (GN) signed a take or pay gas pipeline utilization agreement. Pursuant to that agreement, the ultimate shareholders of AE, ParentCo and Alumina Limited, agreed to guarantee the payment of AE's contracted gas pipeline utilization over the four years of the commitment period; in the event AE fails to do so, each shareholder is responsible for its respective proportionate share (i.e., 60/40). Such commitment came into force six months after the gas pipeline was put into operation by GN. The gas pipeline was completed in January 2015 and the refinery has switched to natural gas consumption for 100% of its needs. As a result of the separation, Alcoa Corporation agreed with GN to replace the ParentCo guarantee with an Alcoa Corporation guarantee.

Natural gas is supplied to the San Ciprián, Spain alumina refinery pursuant to two supply contracts with Endesa, expiring in June and December 2017, and one supply contract with Gas Natural Fenosa (GNF), expiring in December 2017. Pursuant to the Endesa agreements, Aluminio Español SL and Alumina Limited guarantee the payment of AE's obligations, with each shareholder being responsible for its respective proportionate share (i.e., 60/40). Pursuant to the GNF agreement, Alcoa Inespal SL and Alumina Limited guarantee the payment of AE's obligations, each shareholder being responsible for its respective proportionate share (i.e., 60/40).

#### *North America*

In order to supply its refinery and smelters in the U.S. and Canada, Alcoa generally procures natural gas on a competitive bid basis from a variety of sources including producers in the gas production areas and independent gas marketers. Pipeline transportation may be procured directly or via the local distribution companies. Contract pricing for gas is typically based on a published industry index such as the New York Mercantile Exchange ("NYMEX") price. The Company may choose to reduce its exposure to NYMEX pricing by hedging a portion of required natural gas consumption.

#### *Australia*

AofA uses gas to co-generate steam and electricity for its alumina refining processes at the Kwinana, Pinjarra and Wagerup refineries. More than 90% of AofA's gas requirements for the remainder of the decade are secured under long-term contracts. In 2015, AofA entered into a number of long-term gas supply agreements which secured a significant portion of AofA's gas supplies to 2032. AofA is actively involved with projects aimed at developing cost-based gas supply opportunities. In April 2016, Alcoa Energy Holdings Australia Pty Ltd (a wholly owned subsidiary of AofA) sold its 20% equity interest in the Dampier-to-Bunbury natural gas pipeline, which transports gas from the northwest gas fields to AofA's alumina refineries and other users in the Southwest of Western Australia, to DUET Investment Holdings Limited.

### **Rolled Products**

This segment represents Alcoa's rolling mill in Warrick, Indiana, which produces aluminum sheet primarily sold directly to customers in the packaging end market for the production of aluminum cans (beverage, food, and pet food). Seasonal increases in can sheet sales are generally experienced in the second and third quarters of the year. This segment also includes Alcoa Corporation's investment in a rolling mill in Saudi Arabia through its Ma'aden joint venture; for additional information, see the Equity Investments section of Note H to the Consolidated Financial Statements in Part II, Item 8. (Financial Statements and Supplementary Data).

The Warrick rolling mill supports our participation in several market segments, including beverage can sheet, food can sheet, lithographic sheet, aluminum bottle sheet, and industrial products. The term “RCS” or Rigid Container Sheet is commonly used for both beverage and food can sheet. This includes the material used to produce the body of beverage containers (bodystock), the lid of beverage containers (endstock and tabstock), the material to produce food can body and lids (food stock) and the material to produce aluminum bottles (bottlestock) and bottle closures (closure sheet). The U.S. aluminum can business comprises approximately 96% beverage can sheet and approximately 4% food can sheet. Alcoa Corporation is one of the largest food can sheet producers. The Warrick rolling mill is expected to be the sole domestic supplier of lithographic sheet, focusing on quality, reduced lead-times and delivery performance.

In 2016, our Warrick facility produced and sold 272 kMT of RCS and industrial products, of which over 90% was sold to customers in North America. The majority of its sales were coated RCS products (food stock, beverage end and tab stock). Following the Separation Transaction, both Warrick and Ma’aden supply body stock material, temporarily supplemented by Arconic’s Tennessee Operations under a transition supply agreement.

Can sheet demand is a function of consumer demand for beverages in aluminum packaging. Aluminum cans have a number of functional advantages for beverage companies, including product shelf life, carbonation retention, and logistics/distribution efficiency. Demand is mostly affected by overall demand for carbonated soft drinks (“CSDs”) and beer. CSDs and beer compose approximately 60% and 40%, respectively, of overall aluminum can demand. In recent years, CSDs sales have been declining 1% to 4% year over year. At the same time, the aluminum can’s share of the beer segment has grown, nearly offsetting the drop in CSDs sales. In 2016, the U.S./Canada aluminum can shipments reached 94.3 billion cans, a growth of 1.2% over 2015. Alcoholic can shipments reached 37.9 billion cans, growing 2.6% year over year, while non-alcoholic can shipments were 56.4 billion, flat year over year.

#### **Sources and Availability of Raw Materials**

Generally, materials are purchased from third-party suppliers under competitively priced supply contracts or bidding arrangements. The Company believes that the raw materials necessary to its business are and will continue to be available.

For each metric ton of alumina produced, Alcoa Corporation consumes the following amounts of the identified raw material inputs (approximate range across relevant facilities):

| <b>Raw Material</b>      | <b>Units</b> | <b>Consumption per MT of Alumina</b>         |
|--------------------------|--------------|--|
| Bauxite                  | mt           | 2.2 – 3.7                                    |
| Caustic soda             | kg           | 60 – 110                                     |
| Electricity              | kWh          | 200 – 260 total consumed (0 to 210 imported) |
| Fuel oil and natural gas | GJ           | 6.3 – 11.9                                   |
| Lime (CaO)               | kg           | 6 – 70                                       |

For each metric ton of aluminum produced, Alcoa Corporation consumes the following amounts of the identified raw material inputs (approximate range across relevant facilities):

| <b>Raw Material</b>     | <b>Units</b> | <b>Consumption per MT of Aluminum</b> |
|-------------------------|--------------|---------------------------------------|
| Alumina                 | mt           | 1.92 ± 0.02                           |
| Aluminum fluoride       | kg           | 16.5 ± 6.5                            |
| Calcined petroleum coke | mt           | 0.37 ± 0.02                           |
| Cathode blocks          | mt           | 0.006 ± 0.002                         |
| Electricity             | kWh          | 12900 – 17000                         |
| Liquid pitch            | mt           | 0.10 ± 0.03                           |
| Natural gas             | mcf          | 3.5 ± 1.5                             |

Certain aluminum we produce includes alloying materials. Because of the number of different types of elements that can be used to produce our various alloys, providing a range of such elements would not be meaningful. With the exception of a very small number of internally used products, Alcoa produces its alloys in adherence to an Aluminum Association standard. The Aluminum Association, of which Alcoa Corporation is an active member, uses a specific designation system to identify alloy types. In general, each alloy type has a major alloying element other than aluminum but will also have other constituents as well, but of lesser amounts.

## **Competition**

Alcoa is subject to highly competitive conditions in all aspects of the aluminum supply chain in which it competes. Competitors include a variety of both U.S. and non-U.S. companies in all major markets. Brand name recognition and loyalty also play a role. In addition Alcoa's competitive position depends, in part, on the Company's access to an economical power supply to sustain its operations in various countries.

### ***Bauxite:***

The third-party market for metallurgical grade bauxite is relatively new and growing quickly as global demand for bauxite increases—particularly in China. The majority of bauxite mined globally is converted to alumina for the production of aluminum metal. While Alcoa has historically mined bauxite for internal consumption in our alumina refineries, we are focused on building our third-party bauxite business to meet growing demand. We sold 6.4 million tons of bauxite to a diverse third-party customer base in 2016.

Competitors in the third-party bauxite market include Rio Tinto Alcan, Norsk Hydro and multiple suppliers from Guinea, Malaysia, India and other countries. We compete largely based on bauxite quality, price and proximity to end markets. Alcoa Corporation has a strong competitive position in this market for the following reasons:

- **Low Cost Production:** Alcoa is the world's largest bauxite miner, holding a strong first quartile global cost curve position, with best practices in efficient mining operations and sustainability.
- **Reliable, Long-Term Bauxite Resources:** Alcoa's strategic bauxite mine locations include Australia and Brazil as well as Guinea, which is home to the world's largest reserves of high-quality metallurgical grade bauxite. Alcoa Corporation has a long history of stable operations in these countries and has access to large bauxite deposits with mining rights that extend in most cases more than 20 years from the date of this report.
- **Access to Markets:** Alcoa's Australian bauxite mines are located in close proximity to the largest third-party customer base in China and our facilities are also accessible to a significant and growing alumina refining base in the Middle East.

Contracts for bauxite have generally been short-term contracts (two years or less in duration) with spot pricing and adjustments for quality and logistics, although we are currently pursuing long-term contracts with potential customers. The primary customer base for third-party bauxite is located in Asia—particularly China.

### ***Alumina:***

The alumina market is global and highly competitive, with many active suppliers including producers as well as commodity traders. Alcoa faces competition from a number of companies in all of the regions in which we operate, including Aluminum Corporation of China Limited, China Hongqiao Group Limited, Hindalco Industries Ltd., Hangzhou Jinjiang Group, National Aluminium Company Limited ("NALCO"), Noranda Aluminum Holding Corporation, Norsk Hydro ASA, Rio Tinto Inc., South32 Limited, State Power Investment Corporation, United Company RUSAL Plc, and Chiping Xinfu Alumina Product Co., Ltd. In recent years, there has been significant growth in alumina refining in China and India. The majority of our product is sold in the form of smelter grade alumina, with 5% to 10% of total global alumina production being produced for non-metallurgical applications.

Key factors influencing competition in the alumina market include: cost position, price, reliability of bauxite supply, quality and proximity to customers and end markets. While we face competition from many industry players, we have several competitive advantages:

- **Proximity to Bauxite:** Our refineries are strategically located next to low cost, upstream bauxite mines, and our alumina refineries are tuned to maximize efficiency with the exact bauxite qualities from these internal mines. In addition to refining efficiencies, vertical integration affords a stable and consistent long-term supply of bauxite to our refining portfolio.
- **Low Cost Production:** As the world's largest alumina producer, Alcoa has competitive, efficient assets across its refining portfolio, with a 2016 average cost position in the first quartile of global alumina production. Contributing to this cost position is our experienced workforce and sophistication in refining technology and process automation.
- **Access to Markets:** Alcoa is a global supplier of alumina with refining operations in the key markets of North America (curtailed), South America, Europe, the Middle East, and Australia, enabling us to meet customer demand in the Atlantic and Pacific basins, including China.

Contracts for smelter grade alumina are often multi-year, although contract structures have evolved from primarily long-term contracts with fixed or LME-based pricing to shorter-term contracts with more frequent pricing adjustment. A significant development occurred in the pricing structure for alumina beginning in 2010. Traditionally, most alumina outside of China had been sold to third party smelters with the price calculated as a percentage of the LME aluminum price.

In 2010, a number of key commodity information service providers began publishing daily and weekly alumina (spot) pricing assessments or indices. Since that time, Alcoa has been systematically moving its third-party alumina sales contracts away from LME aluminum-based pricing to published alumina spot or index pricing, thus de-linking the price for alumina from the aluminum price to better reflect alumina's distinct fundamentals. In 2016, approximately 85% of Alcoa Corporation's smelter grade alumina shipments to third parties were sold at published spot/index prices (compared to 54% in 2013 and 37% in 2012). We expect a similar percentage of our third-party alumina shipments to be based on API or spot pricing in 2017 as in 2016.

Alcoa's largest customer for smelter grade alumina is its own aluminum smelters, which in 2016 accounted for approximately 34% of its total alumina sales. Remaining sales are made to customers all over the world and are typically priced by reference to published spot market prices.

### ***Primary Aluminum / Cast Products***

The market for primary aluminum is global, and demand for aluminum varies widely from region to region. We compete with commodity traders and aluminum producers such as Aluminum Corporation of China Limited, China Hongqiao Group Limited, East Hope Group Co. Ltd., Emirates Global Aluminum, Norsk Hydro, Rio Tinto Alcan Inc., Shandong Xinfu Aluminum & Power Group, State Power Investment Co. ("SPIC"), United Company RUSAL Plc as well as with alternative materials such as steel, titanium, copper, carbon fiber, composites, plastic and glass, each of which may be substituted for aluminum in certain applications.

The aluminum industry itself is highly competitive; some of the most critical competitive factors in our industry are product quality, production costs (including source and cost of energy), price, proximity to customers and end markets, timeliness of delivery, customer service (including technical support), and product innovation and breadth of offerings. Where aluminum products compete with other materials, the diverse characteristics of aluminum are also a significant factor, particularly its light weight and recyclability.

In addition, in some end-use markets, competition is also affected by customer requirements that suppliers complete a qualification process to supply their plants. This process can be rigorous and may take many months to complete. However, the ability to obtain and maintain these qualifications can represent a competitive advantage.

In recent years, we have seen increasing trade flows between regions despite shipping costs, import duties and the lack of localized customer support. There is a growing trade in higher value-added products, with recent trade patterns seeing more flow toward the deficit regions. However, suppliers in emerging markets may export lower value-added or even commodity aluminum products to larger, more mature markets, as we have seen recently with China.

The strength of our position in the primary aluminum market is largely attributable to the following factors:

- **Value-Added Product Portfolio:** Alcoa Corporation has 15 casthouses supplying global customers with a diverse product portfolio, both in terms of shapes and alloys. We have steadily grown our cast products business by offering differentiated, value-added aluminum products that are cast into specific shapes to meet customer demand, with 65% of 2016 smelter shipments representing value-added products, compared to 57% in 2010.
- **Low Cost Production:** As the world's sixth largest aluminum producer in 2016, Alcoa leverages significant economies of scale in order to continuously reduce costs. As a result, Alcoa operates competitive, efficient assets across its aluminum smelting and casting portfolios, with its 2016 average smelting cost position in the second quartile of global aluminum smelters. This cost position is supported by long-term energy arrangements at many locations; Alcoa Corporation has secured approximately 68% of its smelter power needs through 2022.
- **Access to Markets:** Alcoa is a global supplier of aluminum with smelting and casting operations in the key markets of North America, Europe, the Middle East, and Australia, enabling us to access a broad customer base with competitive logistics costs.
- **Sustainability:** As of December 31, 2016, approximately 70% of our aluminum smelting portfolio runs on clean hydroelectric power, lessening our demand for fossil fuels and potentially mitigating the risk to the Company from future carbon tax legislation.

Contracts for primary aluminum vary widely in duration, from multi-year supply contracts to monthly or weekly spot purchases. Pricing for primary aluminum products is typically comprised of three components: (i) the published LME aluminum price for commodity grade P1020 aluminum, (ii) the published regional premium applicable to the delivery locale and (iii) a negotiated product premium which accounts for factors such as shape and alloy.

### ***Energy***

Unlike bauxite, alumina and aluminum, electricity markets are regional. They are limited in size by physical and regulatory constraints, including the physical inability to transport electricity efficiently over long distances, the design of the electric grid, including interconnections, and by the regulatory structure imposed by various federal and state entities. Alcoa owns generation and transmission assets that produce and sell electric energy and ancillary services in the United States and Brazilian wholesale energy markets. Our competitors include integrated electric utilities that may be owned by governments (either fully or partially), cooperatives or investors, independent power producers and energy brokers and traders.

Competition factors in open power markets include fuel supply, production costs, operational reliability, access to the power grid, and environmental attributes (e.g., green power and renewable energy credits). As electricity is difficult and cost prohibitive to store, there are no electricity inventories to cushion the impact of supply and demand factors and the resultant pricing in electricity markets may be volatile. Demand for power varies greatly both seasonally and by time of day. Supply may be impacted in the short term by unplanned generator outages or transmission congestion and longer term by planned generator outages, droughts, high precipitation levels and fuel pricing (coal and/or natural gas).

Electricity contracts may be very short term (real-time), short term (day ahead) or years in duration, and contracts can be executed for immediate delivery or years in advance. Pricing may be fixed, indexed to an underlying fuel source or other index such as LME, cost-based or based on regional market pricing. Pricing may be all inclusive on a per energy

unit delivered basis (e.g., dollars per megawatt hour) or the components may be separated and include a demand or capacity charge, an energy charge, an ancillary services charge and a transmission charge to make the delivered energy conform to customer requirements.

Alcoa's energy assets enjoy several competitive advantages, when compared to other power suppliers:

- **Reliability:** In the United States, we have operated our thermal energy assets for over 50 years and our hydro energy assets for over 95 years with a high degree of reliability and expect to continue this level of performance. In Brazil, our ownership provides for assured energy from hydroelectric operations through 2032 to 2037.
- **Access and proximity to markets:** Our U.S. assets are positioned to take advantage of sales into some of the more liquid power markets, including sales of both energy and capacity.
- **Sustainable (green) energy sources:** A majority of our generating assets use renewable (hydroelectric) sources of fuel for generation. In addition, our U.S. assets have been upgraded to allow for sales of renewable energy credits.

### ***Rolled Products***

Rolled Products participates in various market segments, including beverage can sheet, food can sheet, lithographic sheet, aluminum bottle sheet, and industrial products. The term "RCS" or Rigid Container Sheet is commonly used for both beverage and food can sheet. The Warrick rolling mill competes with other North American producers of RCS products, namely Novelis Corp, Tri-Arrows Aluminum, and Constellium NV. The Warrick rolling mill is expected to be the sole domestic supplier of lithographic sheet, focusing on quality, reduced lead-times and delivery performance.

Buyers of RCS products in North America are large and concentrated and have significant market power. There are essentially five buyers of all the U.S. can sheet sold in the beverage industry (three can makers and the two beverage companies). In 2016, we estimate the North American (Canada/U.S./Mexico) aluminum can sheet buyers and their share of the industry are: AB-Inbev (>39%), Coke (>21%), Ball (>18%), Crown (>15%), Ardagh (>5%) and others (2%). Buyers traditionally buy RCS in proportions that represent the full aluminum can (80% body stock, 20% end and tab stock). In addition, as the aluminum can sheet represents approximately 60% of their manufacturing costs, there is a heavy focus on cost.

In 2016, our Warrick facility produced and sold 272 kMT of RCS and industrial products, of which over 90% was sold to customers in North America. The majority of its sales were coated RCS products (food stock, beverage end and tab stock). Following the Separation Transaction, both Warrick and Ma'aden supply body stock material, temporarily supplemented by Arconic's Tennessee Operations under a transition supply agreement.

We also compete with competitive package types including PET bottles, glass bottles, steel tin plate and other materials. In the U.S., aluminum cans, PET bottles and glass bottles represent approximately 69%, 29% and 2%, respectively, of the CSDs segment. In the beer segment, aluminum cans, glass bottles, and aluminum bottles represent approximately 73-74%, 21-22% and 5%, respectively, of the business. In the food can segment, steel tin plate cans and aluminum food cans represent approximately 83% and 17%, respectively, with aluminum cans representing approximately 52% of the pet food segment.

We compete on cost, quality, and service. Alcoa Corporation intends to continue to improve our cost position by increasing recycled aluminum content in our metal feedstock as well as continuing to focus on capacity utilization. We believe our team of technical and operational resources provides distinctive quality and customer service.

### **Patents, Trade Secrets and Trademarks**

The Company believes that its domestic and international patent, trade secret and trademark assets provide it with a significant competitive advantage. The Company's rights under its patents, as well as the products made and sold under



them, are important to the Company as a whole and, to varying degrees, important to each business segment. Alcoa's business as a whole is not, however, materially dependent on any single patent, trade secret or trademark. As a result of product development and technological advancement, the Company continues to pursue patent protection in jurisdictions throughout the world. As of December 31, 2016, Alcoa's worldwide patent portfolio consisted of approximately 600 granted patents and 285 pending patent applications.

The Company also has a number of domestic and international registered trademarks that have significant recognition within the markets that are served, including the name "Alcoa" and the Alcoa symbol for aluminum products. Our rights under its trademarks are important to the Company as a whole and, to varying degrees, important to each business segment.

As part of the Separation Transaction, two Arconic businesses, Alcoa Wheels and Spectrochemical Standards, have ongoing rights to use the Alcoa name. See "Certain Relationships and Related Party Transactions, and Director Independence—Agreements with Arconic—Intellectual Property License Agreements."

### **Research and Development**

Expenditures for research and development activities ("R&D") were \$33 million in 2016, \$69 million in 2015, and \$95 million in 2014.

### **Environmental Matters**

Alcoa Corporation is subject to extensive federal, state and local environmental laws and regulations, including those relating to the release or discharge of materials into the air, water and soil, waste management, pollution prevention measures, the generation, storage, handling, use, transportation and disposal of hazardous materials, the exposure of persons to hazardous materials, greenhouse gas emissions, and the health and safety of our employees. We participate in environmental assessments and cleanups at approximately 60 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. Approved capital expenditures for new or expanded facilities for environmental control were approximately \$68 million for 2016 and are approximately \$119 million for 2017. Additional information relating to environmental matters is included in Note R to the Consolidated Financial Statements under the caption "Contingencies and Commitments—Environmental Matters."

### **Employees**

Alcoa's total worldwide employment at the end of 2016 was approximately 14,000 employees in 15 countries. Approximately 9,750 of these employees are represented by labor unions. The Company believes that relations with its employees and any applicable union representatives generally are good.

In the U.S., approximately 1,950 employees are represented by various labor unions. The largest collective bargaining agreement is the master collective bargaining agreement with the United Steelworkers ("USW"). The USW master agreement covers approximately 1,400 employees at six U.S. locations. There are three other collective bargaining agreements in the U.S. with varying expiration dates. On a regional basis, collective bargaining agreements with varying expiration dates cover approximately 2,100 employees in Europe, 2,000 employees in Canada, 850 employees in Central and South America, and 2,750 employees in Australia.

## Executive Officers of the Registrant

The names, ages, positions and areas of responsibility of the executive officers of the Company as of March 1, 2017 are listed below.

**Roy C. Harvey**, 43, is the Chief Executive Officer of Alcoa Corporation. Mr. Harvey served as Executive Vice President of ParentCo and President of ParentCo's Global Primary Products from October 2015 to November 2016. From June 2014 to October 2015, he was Executive Vice President, Human Resources and Environment, Health, Safety and Sustainability at ParentCo. Prior to that, Mr. Harvey was Chief Operating Officer for Global Primary Products at ParentCo from July 2013 to June 2014, and was Chief Financial Officer for Global Primary Products from December 2011 to July 2013. In addition to these roles, Mr. Harvey served as Director of Investor Relations at ParentCo from September 2010 to November 2011 and was Director of Corporate Treasury from January 2010 to September 2010. Mr. Harvey joined ParentCo in 2002 as a business analyst for Global Primary Products in Knoxville, Tennessee.

**William F. Oplinger**, 50, is Executive Vice President and Chief Financial Officer of Alcoa Corporation. Mr. Oplinger served as Executive Vice President and Chief Financial Officer of ParentCo from April 1, 2013 to November 2016. Mr. Oplinger joined ParentCo in 2000 and held key corporate positions in financial analysis and planning and as Director of Investor Relations. Mr. Oplinger also held key positions in the ParentCo's Global Primary Products business, including as Controller, Operational Excellence Director, Chief Financial Officer, and Chief Operating Officer.

**Tómas M. Sigurðsson**, 49, is Executive Vice President and Chief Operating Officer of Alcoa Corporation. Mr. Sigurðsson served as Chief Operating Officer of ParentCo's Global Primary Products business from 2014 to November 2016. Mr. Sigurðsson was President of ParentCo's European Region and Global Primary Products Europe from 2012 to 2014. From 2004 to 2011, Mr. Sigurðsson was Managing Director of Alcoa Iceland.

**Leigh Ann Fisher**, 50, is Executive Vice President and Chief Administrative Officer, overseeing Human Resources, Shared Services, Procurement and Information Technology of Alcoa Corporation. Ms. Fisher served as Chief Financial Officer of ParentCo's Global Primary Products business from July 2013 to November 2016. Ms. Fisher was Group Controller for Global Primary Products at ParentCo from 2011 to 2013. From 2008 to 2011, Ms. Fisher was Group Controller for ParentCo's Engineered Products and Solutions business.

**Jeffrey D. Heeter**, 51, is Executive Vice President, General Counsel and Secretary of Alcoa Corporation. Mr. Heeter served as Assistant General Counsel of ParentCo from 2014 to November 2016. Mr. Heeter was Group Counsel for Global Primary Products at ParentCo from 2010 to 2014. From 2008 to 2010, Mr. Heeter was General Counsel of Alcoa of Australia in Perth, Australia.

**Molly S. Beerman**, 53, has been Vice President and Controller of Alcoa Corporation since December 2016. Ms. Beerman previously served as the Director, Global Shared Services Strategy and Solutions for Alcoa Corporation, with responsibility for the strategy, planning and implementation of transformation activities for Alcoa Corporation's shared services organization beginning in November 2016. From January through October of 2016, prior to the Company's Separation Transaction from ParentCo, Ms. Beerman was a consultant to ParentCo's finance department and provided services in support of the Separation Transaction. From 2012 to 2015, she served as Vice President, Finance and Administration for a non-profit organization focused on community issues. Ms. Beerman first joined ParentCo in 2001, and was the director of ParentCo's global procurement center of excellence from 2008 to 2012.

### **Item 1A. Risk Factors.**

Alcoa's business, financial condition and results of operations may be impacted by a number of factors. In addition to the factors discussed elsewhere in this report, the following risks and uncertainties could materially harm its business, financial condition or results of operations, including causing Alcoa's actual results to differ materially from those

projected in any forward-looking statements. The following list of significant risk factors is not all-inclusive or necessarily in order of importance. Additional risks and uncertainties not presently known to Alcoa or that Alcoa currently deems immaterial also may materially adversely affect us in future periods.

## **Risks Related to Our Business**

***The aluminum industry and aluminum end-use markets are highly cyclical and are influenced by a number of factors, including global economic conditions.***

The aluminum industry generally is highly cyclical, and we are subject to cyclical fluctuations in global economic conditions and aluminum end-use markets. The demand for aluminum is sensitive to, and quickly impacted by, demand for the finished goods manufactured by our customers in industries that are cyclical, such as the commercial construction and transportation, automotive, and aerospace industries, which may change as a result of changes in the global economy, currency exchange rates, energy prices or other factors beyond our control. The demand for aluminum is highly correlated to economic growth. For example, the European sovereign debt crisis that began in late 2009 had an adverse effect on European demand for aluminum and aluminum products. The Chinese market is a significant source of global demand for, and supply of, commodities, including aluminum. A sustained slowdown in China's economic growth and aluminum demand, or a significant slowdown in other markets, that is not offset by decreases in supply of aluminum or increased aluminum demand in emerging economies, such as India, Brazil, and several South East Asian countries, could have an adverse effect on the global supply and demand for aluminum and aluminum prices.

While we believe the long-term prospects for aluminum and aluminum products are positive, we are unable to predict the future course of industry variables or the strength of the global economy and the effects of government intervention. Negative economic conditions, such as a major economic downturn, a prolonged recovery period, a downturn in the commodity sector, or disruptions in the financial markets, could have a material adverse effect on our business, financial condition or results of operations.

While the aluminum market is often the leading cause of changes in the alumina and bauxite markets, those markets also have industry-specific risks including, but not limited to, global freight markets, energy markets, and regional supply-demand imbalances. The aluminum industry specific risks can have a material effect on profitability for the alumina and bauxite markets.

***We could be materially adversely affected by declines in aluminum prices, including global, regional and product-specific prices.***

The overall price of primary aluminum consists of several components: (i) the underlying base metal component, which is typically based on quoted prices from the LME; (ii) the regional premium, which comprises 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 (iii) the product premium, which represents the incremental price for receiving physical metal in a particular shape (e.g., coil, billet, slab, rod, etc.) or alloy. Each of the above three components has its own drivers of variability. The LME price is typically driven by macroeconomic factors, global supply and demand of aluminum (including expectations for growth and contraction and the level of global inventories), and trading activity of financial investors. An imbalance in global supply and demand of aluminum, such as decreasing demand without corresponding supply declines, could have a negative impact on aluminum pricing. Speculative trading in aluminum and the influence of hedge funds and other financial institutions participating in commodity markets have also increased in recent years, contributing to higher levels of price volatility. In 2016, the cash LME price of aluminum reached a high of \$1,777 per metric ton and a low of \$1,453 per metric ton. High LME inventories, or the release of substantial inventories into the market, could lead to a reduction in the price of aluminum. Declines in the LME price have had a negative impact on our results of operations. Additionally, our results could be adversely affected by decreases in regional premiums that participants in the physical metal market pay for immediate delivery of aluminum. Regional premiums tend to vary based on the supply of and

demand for metal in a particular region and associated transportation costs. LME warehousing rules and surpluses have caused regional premiums to decrease, which would have a negative impact on our results of operations. Product premiums generally are a function of supply and demand for a given primary aluminum shape and alloy combination in a particular region. Periods of industry overcapacity may also result in a weak aluminum pricing environment. A sustained weak LME aluminum pricing environment, deterioration in LME aluminum prices, or a decrease in regional premiums or product premiums could have a material adverse effect on our business, financial condition, and results of operations or cash flow.

Most of our alumina contracts contain two pricing components: (1) the API price basis and (2) a negotiated adjustment basis that takes into account various factors, including freight, quality, customer location and market conditions. Because the API component can exhibit significant volatility due to market exposure, revenue associated with our alumina operations are exposed to market pricing. Our bauxite-related contracts are typically one to two-year contracts with very little, if any, market exposure; however, we intend to enter into long-term bauxite contracts and therefore, our revenue associated with our bauxite operations may become further exposed to market pricing.

***Changes to LME warehousing rules could cause aluminum prices to decrease.***

Since 2013, the LME has been engaged in a program aimed at reforming the rules under which registered warehouses in its global network operate. The initial rule changes took effect on February 1, 2015. Additional changes occurred throughout 2015 and 2016, culminating in an increased minimum daily load-out rate and caps on warehouse charges. These rule changes, and any subsequent changes the exchange chooses to make, could impact the supply/demand balance in the primary aluminum physical market and may impact regional delivery premiums and LME aluminum prices. Decreases in regional delivery premiums and/or decreases in LME aluminum prices could have a material adverse effect on our business, financial condition, and results of operations or cash flow.

***We may not be able to realize the expected benefits from our strategy of creating a lower cost, competitive commodity business by optimizing our portfolio.***

We are continuing to execute a strategy of creating a lower cost, competitive integrated aluminum production business by optimizing our portfolio. We are creating a competitive standalone business by taking decisive actions to lower the cost base of our upstream operations, including closing, selling or curtailing high-cost global smelting capacity, optimizing alumina refining capacity, and pursuing the sale of our interest in certain other operations.

We have made, and may continue to plan and execute, acquisitions and divestitures and take other actions to grow or streamline our portfolio. There is no assurance that anticipated benefits of our strategic actions will be realized. With respect to portfolio optimization actions such as divestitures, curtailments and closures, we may face barriers to exit from unprofitable businesses or operations, including high exit costs or objections from various stakeholders. In addition, we may incur unforeseen liabilities for divested entities if a buyer fails to honor all commitments. Our business operations are capital intensive, and curtailment or closure of operations or facilities may include significant charges, including employee Separation Transaction costs, asset impairment charges and other measures. There can be no assurance that divestitures or closures will be undertaken or completed in their entirety as planned at the anticipated cost, or that such actions will be beneficial to the Company.

***Market-driven balancing of global aluminum supply and demand may be disrupted by non-market forces or other impediments to production closures.***

In response to market-driven factors relating to the global supply and demand of aluminum and alumina, we have curtailed or closed portions of our aluminum and alumina production capacity. Certain other industry producers have independently undertaken to reduce production as well. Reductions in production may be delayed or impaired by the terms of long-term contracts to buy power or raw materials.

The existence of non-market forces on global aluminum industry capacity, such as political pressures in certain countries to keep jobs or to maintain or further develop industry self-sufficiency, may prevent or delay the closure or curtailment of certain producers' smelters, irrespective of their position on the industry cost curve. For example, Chinese excess capacity and increased exports from China of heavily subsidized aluminum products could materially disrupt world aluminum markets causing pricing deterioration. If industry overcapacity exists due to the disruption by such non-market forces on the market-driven balancing of the global supply and demand of aluminum, a resulting weak pricing environment and margin compression may adversely affect the operating results of the Company.

***Our operations consume substantial amounts of energy; profitability may decline if energy costs rise or if energy supplies are interrupted.***

Our operations consume substantial amounts of energy. Although we generally expect to meet the energy requirements for our alumina refineries and primary aluminum smelters from internal sources or from long-term contracts, certain conditions could negatively affect our results of operations, including the following:

- significant increases in electricity costs rendering smelter operations uneconomic;
- significant increases in fuel oil or natural gas prices;
- unavailability of electrical power or other energy sources due to droughts, hurricanes or other natural causes;
- unavailability of energy due to local or regional energy shortages resulting in insufficient supplies to serve consumers;
- interruptions in energy supply or unplanned outages due to equipment failure or other causes;
- curtailment of one or more refineries or smelters due to the inability to extend energy contracts upon expiration or to negotiate new arrangements on cost-effective terms or due to the unavailability of energy at competitive rates; or
- curtailment of one or more smelters due to discontinuation of power supply interruptibility rights granted to us under an interruptibility regime in place under the laws of the country in which the smelter is located, or due to a determination that such arrangements do not comply with applicable laws, thus rendering the smelter operations that had been relying on such country's interruptibility regime uneconomic.

If events such as those listed above were to occur, the resulting high energy costs or the disruption of an energy source or the requirement to repay all or a portion of the benefit we received under a power supply interruptibility regime could have a material adverse effect on our business and results of operations.

***Our global operations expose us to risks that could adversely affect our business, financial condition, operating results or cash flows.***

We have operations or activities in numerous countries and regions outside the United States, including Australia, Brazil, Canada, Europe, Guinea, and the Kingdom of Saudi Arabia. The Company's global operations are subject to a number of risks, including:

- economic and commercial instability risks, including those caused by sovereign and private debt default, corruption, and changes in local government laws, regulations and policies, such as those related to tariffs and trade barriers, taxation, exchange controls, employment regulations and repatriation of earnings;
- geopolitical risks, such as political instability, civil unrest, expropriation, nationalization of properties by a government, imposition of sanctions, changes to import or export regulations and fees, renegotiation or nullification of existing agreements, mining leases and permits;
- war or terrorist activities;
- major public health issues, such as an outbreak of a pandemic or epidemic (such as Sudden Acute Respiratory Syndrome, Avian Influenza, H7N9 virus, the Ebola virus or the Zika virus), which could cause disruptions in our operations or workforce;

- difficulties enforcing intellectual property and contractual rights in certain jurisdictions; and
- unexpected events, including fires or explosions at facilities, and natural disasters.

While the impact of any of the foregoing factors is difficult to predict, any one or more of them could adversely affect our business, financial condition, operating results or cash flows. Existing insurance arrangements may not provide protection for the costs that may arise from such events.

***Our global operations expose us to various legal and regulatory systems, and changes in conditions beyond our control in foreign countries.***

In addition to the business risks inherent in operating outside the United States, legal and regulatory systems may be less developed and predictable and the possibility of various types of adverse governmental action more pronounced. Unexpected or uncontrollable events or circumstances in any of these foreign markets, including actions by foreign governments such as changes in fiscal regimes, termination of our agreements with such foreign governments or increased government regulation could materially and adversely affect our business, financial condition, results of operations or cash flows.

***Substantial changes to fiscal, tax and trade policies and legislation could affect our business, financial condition, and results of operations.***

Executive and legislative actions, including changes in fiscal, tax and trade policies, may adversely affect our business. At this time it is unclear what the new U.S. administration and Congress may do with respect to these policies, regulations, and legislation. The new U.S. administration has called for substantial changes to U.S. trade policy and has raised the possibility of imposing significant increases in U.S. import tariffs. Changes in international trade agreements, regulations, restrictions, and tariffs may increase our operating costs and make it more difficult for us to compete in the U.S. and overseas markets, and our business, financial condition and results of operations could be adversely impacted.

***We face significant competition, which may have an adverse effect on profitability.***

We compete with a variety of both U.S. and non-U.S. aluminum industry competitors. Our metals also compete with other materials, such as steel, titanium, plastics, composites, ceramics, and glass, among others. Technological advancements or other developments by or affecting Alcoa's competitors or customers could affect our results of operations. In addition, our competitive position depends, in part, on its ability to leverage its innovation expertise across its businesses and key end markets and having access to an economical power supply to sustain its operations in various countries. See "Business—Competition."

***Our business is capital intensive, and if there are downturns in the industries that we serve, we may be forced to significantly curtail or suspend operations with respect to those industries, which could result in our recording asset impairment charges or taking other measures that may adversely affect our results of operations and profitability.***

Our business operations are capital intensive, and we devote a significant amount of capital to certain industries. If there are downturns in the industries that we serve, we may be forced to significantly curtail or suspend our operations with respect to those industries, including laying-off employees, recording asset impairment charges and other measures. In addition, we may not realize the benefits or expected returns from announced plans, programs, initiatives and capital investments. Any of these events could adversely affect our results of operations and profitability.

***Our business and growth prospects may be negatively impacted by limits in our capital expenditures.***

We require substantial capital to invest in growth opportunities and to maintain and prolong the life and capacity of our existing facilities. Insufficient cash generation or capital project overruns may negatively impact our ability to fund as planned our sustaining and return-seeking capital projects. We may also need to address commercial and political

issues in relation to reductions in capital expenditures in certain of the jurisdictions in which we operate. If our interest in our joint ventures is diluted or we lose key concessions, our growth could be constrained. Any of the foregoing could have a material adverse effect on our business, results of operations, financial condition and prospects.

***Our capital resources may not be adequate to provide for all of our cash requirements, and we are exposed to risks associated with financial, credit, capital and banking markets.***

In the ordinary course of business, we expect to seek to access competitive financial, credit, capital and/or banking markets. Currently, we believe we have adequate access to these markets to meet our reasonably anticipated business needs based on our historic financial performance, as well as our expected continued strong financial position. To the extent our access to competitive financial, credit, capital and/or banking markets was to be impaired, our operations, financial results and cash flows could be adversely impacted.

***Deterioration in our credit profile could increase our costs of borrowing money and limit our access to the capital markets and commercial credit.***

The major credit rating agencies evaluate our creditworthiness and give us specified credit ratings. These ratings are based on a number of factors, including our financial strength and financial policies as well as our strategies, operations and execution. These credit ratings are limited in scope, and do not address all material risks related to investment in us, but rather reflect only the view of each rating agency at the time the rating is issued. Nonetheless, the credit ratings we receive impact our borrowing costs as well as our access to sources of capital on terms that will be advantageous to our business. Failure to obtain sufficiently high credit ratings could adversely affect the interest rate in future financings, our liquidity or our competitive position and could also restrict our access to capital markets. In addition, our credit ratings could be lowered or withdrawn entirely by a rating agency if, in its judgment, the circumstances warrant. If a rating agency were to downgrade our rating, our borrowing costs would increase, and our funding sources could decrease. As a result of these factors, a downgrade of our credit ratings could have a materially adverse impact on our future operations and financial position.

***Our indebtedness restricts our current and future operations, which could adversely affect our ability to respond to changes in our business and manage our operations.***

On September 16, 2016, Alcoa and Alcoa Nederland Holding B.V. (“ANHBV”), a wholly-owned subsidiary of Alcoa, entered into a revolving credit agreement with a syndicate of lenders and issuers named therein, as amended, (the “Revolving Credit Agreement”). The terms of the Revolving Credit Agreement and the indenture governing our notes include a number of restrictive covenants that impose significant operating and financial restrictions on us, including restrictions on our ability to, among other things:

- make investments, loans, advances, guarantees and acquisitions;
- dispose of assets;
- incur or guarantee additional debt and issue certain disqualified equity interests and preferred stock;
- make certain restricted payments, including a limit on dividends on equity securities or payments to redeem, repurchase or retire equity securities or other indebtedness;
- engage in transactions with affiliates;
- materially alter the business we conduct;
- enter into certain restrictive agreements;
- create liens on assets to secure debt;
- consolidate, merge, sell or otherwise dispose of all or substantially all of Alcoa’s, ANHBV’s or a subsidiary guarantor’s assets; and

- take any actions that would reduce our ownership of AWAC entities below an agreed level.

In addition, the Revolving Credit Agreement requires us to comply with financial covenants. The Revolving Credit Agreement requires that we maintain a leverage ratio no greater than 2.25 to 1.00 and an interest expense coverage ratio no less than 5.00 to 1.00, in each case, for any period of four consecutive fiscal quarters of Alcoa.

For more information on the restrictive covenants in the Revolving Credit Agreement, see Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Financing Activities.”

Our ability to comply with these agreements may be affected by events beyond our control, including prevailing economic, financial and industry conditions. These covenants could have an adverse effect on our business by limiting our ability to take advantage of financing, merger and acquisition or other opportunities. The breach of any of these covenants or restrictions could result in a default under the Revolving Credit Agreement or the indenture governing our notes.

***Our failure to comply with the agreements relating to our outstanding indebtedness, including as a result of events beyond our control, could result in an event of default that could materially and adversely affect our business, financial condition, results of operations or cash flows.***

If there were an event of default under any of the agreements relating to our outstanding indebtedness, including the Revolving Credit Agreement and the indenture governing our notes, we may not be able to incur additional indebtedness under the Revolving Credit Agreement and the holders of the defaulted debt could cause all amounts outstanding with respect to that debt to be due and payable immediately. We cannot assure you that our assets or cash flow would be sufficient to fully repay borrowings under our outstanding debt instruments if accelerated upon an event of default, which could have a material adverse effect on our ability to continue to operate as a going concern. Further, if we are unable to repay, refinance or restructure our secured indebtedness, the holders of such indebtedness could proceed against the collateral securing that indebtedness. In addition, any event of default or declaration of acceleration under one debt instrument also could result in an event of default under one or more of our other debt instruments.

***We may not realize expected benefits from our productivity and cost-reduction initiatives.***

We have undertaken, and may continue to undertake, productivity and cost-reduction initiatives to improve performance and conserve cash, including procurement strategies for raw materials, labor productivity, improving operating performance, deployment of Company-wide business process models, such as our degrees of implementation process in which ideas are executed in a disciplined manner to generate savings, and overhead cost reductions. There is no assurance that these initiatives will be successful or beneficial to us or that estimated cost savings from such activities will be realized.

***Cyber attacks and security breaches may threaten the integrity of our intellectual property and other sensitive information, disrupt our business operations, and result in reputational harm and other negative consequences that could have a material adverse effect on our financial condition and results of operations.***

We face global cybersecurity threats, which may range from uncoordinated individual attempts to sophisticated and targeted measures, known as advanced persistent threats, directed at the Company. Cyber attacks and security breaches may include, but are not limited to, attempts to access information, computer viruses, denial of service and other electronic security breaches.

We believe that we face a heightened threat of cyber attacks due to the industries we serve and the locations of our operations. We have experienced cybersecurity attacks in the past, including breaches of our information technology systems in which information was taken, and may experience them in the future, potentially with more frequency or sophistication. Based on information known to date, past attacks have not had a material impact on our financial condition



or results of operations. However, due to the evolving nature of cybersecurity threats, the scope and impact of any future incident cannot be predicted. While the Company continually works to safeguard our systems and mitigate potential risks, there is no assurance that such actions will be sufficient to prevent cyber attacks or security breaches that manipulate or improperly use our systems or networks, compromise confidential or otherwise protected information, destroy or corrupt data, or otherwise disrupt our operations. The occurrence of such events could negatively impact our reputation and our competitive position and could result in litigation with third parties, regulatory action, loss of business, potential liability and increased remediation costs, any of which could have a material adverse effect on our financial condition and results of operations. In addition, such attacks or breaches could require significant management attention and resources, and result in the diminution of the value of our investment in research and development.

***Our profitability could be adversely affected by increases in the cost of raw materials, by significant lag effects of decreases in commodity or LME-linked costs or by large or sudden shifts in the global inventory of aluminum and the resulting market price impacts.***

Our results of operations are affected by changes in the cost of raw materials, including energy, carbon products, caustic soda and other key inputs, as well as freight costs associated with transportation of raw materials to refining and smelting locations. We may not be able to fully offset the effects of higher raw material costs or energy costs through price increases, productivity improvements or cost reduction programs. Similarly, our operating results are affected by significant lag effects of declines in key costs of production that are commodity or LME-linked. For example, declines in the costs of alumina and power during a particular period may not be adequate to offset sharp declines in metal price in that period. We could also be adversely affected by large or sudden shifts in the global inventory of aluminum and the resulting market price impacts. Increases in the cost of raw materials or decreases in input costs that are disproportionate to concurrent sharper decreases in the price of aluminum, or shifts in global inventory of aluminum that result in changes to market prices, could have a material adverse effect on our operating results.

***Joint ventures and other strategic alliances may not be successful.***

We participate in joint ventures and have formed strategic alliances and may enter into other similar arrangements in the future. For example, AWAC is an unincorporated global joint venture between Alcoa and Alumina Limited. AWAC consists of a number of affiliated entities, which own, operate or have an interest in, bauxite mines and alumina refineries, as well as an aluminum smelter, in seven countries. In addition, Alcoa Corporation is party to a joint venture with Ma'aden, the Saudi Arabian Mining Company, to develop a fully integrated aluminum complex (including a bauxite mine, alumina refinery, aluminum smelter and rolling mill) in the Kingdom of Saudi Arabia. Although the Company has, in connection with these and our other existing joint ventures and strategic alliances, sought to protect our interests, joint ventures and strategic alliances inherently involve special risks. Whether or not the Company holds majority interests or maintains operational control in such arrangements, our partners may:

- have economic or business interests or goals that are inconsistent with or opposed to those of the Company;
- exercise veto rights so as to block actions that we believe to be in our or the joint venture's or strategic alliance's best interests;
- take action contrary to our policies or objectives with respect to our investments; or
- as a result of financial or other difficulties, be unable or unwilling to fulfill their obligations under the joint venture, strategic alliance or other agreements, such as contributing capital to expansion or maintenance projects.

There can be no assurance that our joint ventures or strategic alliances will be beneficial to us, whether due to the above-described risks, unfavorable global economic conditions, increases in construction costs, currency fluctuations, political risks, or other factors.

***We could be adversely affected by changes in the business or financial condition of a significant customer or joint venture partner.***

A significant downturn or deterioration in the business or financial condition of a key customer or joint venture partner could affect our results of operations in a particular period. Our customers may experience delays in the launch of new products, labor strikes, diminished liquidity or credit unavailability, weak demand for their products or other difficulties in their businesses. If we are not successful in replacing business lost from such customers, profitability may be adversely affected. Our joint venture partners could be rendered unable to contribute their share of operating or capital costs, having an adverse impact on our business.

***Customer concentration and supplier capacity in the Rolled Products segment could adversely impact margins.***

Our Rolled Products segment primarily serves the North American aluminum food and beverage can and bottle markets. Four aluminum can and bottle manufacturers comprise over 90% of the aluminum beverage can and bottle market; Rolled Products competes with both domestic and foreign sheet rolling mills to supply these manufacturers. In this segment, customers tend to sign multiple year supply contracts for the vast majority of their requirements. Our customer mix reflects industry concentrations and norms; loss of existing customers or renegotiated pricing on new contracts could adversely affect both operating levels and profitability.

***An adverse decline in the liability discount rate, lower-than-expected investment return on pension assets and other factors could affect our results of operations or amount of pension funding contributions in future periods.***

Our results of operations may be negatively affected by the amount of expense we record for our pension and other post-retirement benefit plans, reductions in the fair value of plan assets and other factors. We calculate income or expense for our plans using actuarial valuations in accordance with accounting principles generally accepted in the United States of America (“GAAP”).

These valuations reflect assumptions about financial market and other economic conditions, which may change based on changes in key economic indicators. The most significant year-end assumptions used by the Company to estimate pension or other postretirement benefit income or expense for the following year are the discount rate applied to plan liabilities and the expected long-term rate of return on plan assets. In addition, the Company is required to make an annual measurement of plan assets and liabilities, which may result in a significant charge to stockholders’ equity. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Estimates—Pension and Other Postretirement Benefits” and Note N to the Consolidated Financial Statements under the caption “Pension and Other Postretirement Benefits.” Although GAAP expense and pension funding contributions are impacted by different regulations and requirements, the key economic factors that affect GAAP expense would also likely affect the amount of cash or securities we would contribute to the pension plans.

Potential pension contributions include both mandatory amounts required under federal law and discretionary contributions to improve the plans’ funded status. The Moving Ahead for Progress in the 21st Century Act (“MAP-21”), enacted in 2012, provided temporary relief for employers like the Company who sponsor defined benefit pension plans related to funding contributions under the Employee Retirement Income Security Act of 1974 by allowing the use of a 25-year average discount rate within an upper and lower range for purposes of determining minimum funding obligations. In 2014, the Highway and Transportation Funding Act (“HATFA”) was signed into law. HATFA extended the relief provided by MAP-21 and modified the interest rates that had been set by MAP-21. In 2015, the Bipartisan Budget Act of 2015 (“BBA 2015”) was enacted, which extends the relief period provided by HATFA. We believe that the relief provided by BBA 2015 will moderately reduce the cash flow sensitivity of the Company’s U.S. pension plans’ funded status to potential declines in discount rates over the next several years. However, higher than expected pension contributions due to a decline in the plans’ funded status as a result of declines in the discount rate or lower-than-expected investment returns on plan assets could have a material negative effect on our cash flows. Adverse capital market conditions could result in reductions in the fair value of plan assets and increase our liabilities related to such plans, adversely affecting our liquidity and results of operations.

***We are exposed to fluctuations in foreign currency exchange rates and interest rates, as well as inflation, and other economic factors in the countries in which we operate.***

Economic factors, including inflation and fluctuations in foreign currency exchange rates and interest rates, competitive factors in the countries in which we operate, and continued volatility or deterioration in the global economic and financial environment could affect our revenues, expenses and results of operations. Changes in the valuation of the U.S. dollar against other currencies, particularly the Australian dollar, Brazilian real, Canadian dollar, Euro and Norwegian kroner, may affect our profitability as some important inputs are purchased in other currencies, while our products are generally sold in U.S. dollars. In addition, although a strong U.S. dollar generally has a positive impact on our near-term profitability, over a longer term, a strong U.S. dollar may have an unfavorable impact on our position on the global aluminum cost curve due to the company's U.S. smelting portfolio. As the U.S. dollar strengthens, the cost curve shifts down for smelters outside the United States but costs for our U.S. smelting portfolio may not decline.

***Weakness in global economic conditions or in any of the industries or geographic regions in which we or our customers operate, as well as the cyclical nature of our customers' businesses generally or sustained uncertainty in financial markets, could adversely impact our revenues and profitability by reducing demand and margins.***

Our results of operations may be materially affected by the conditions in the global economy generally and in global capital markets. There has been extreme volatility in the capital markets and in the end markets and geographic regions in which we or our customers operate, which has negatively affected our revenues. Many of the markets in which our customers participate are also cyclical in nature and experience significant fluctuations in demand for our products based on economic conditions, consumer demand, raw material and energy costs, and government actions. Many of these factors are beyond our control.

A decline in consumer and business confidence and spending, together with severe reductions in the availability and cost of credit, as well as volatility in the capital and credit markets, could adversely affect the business and economic environment in which we operate and the profitability of our business. We are also exposed to risks associated with the creditworthiness of our suppliers and customers. If the availability of credit to fund or support the continuation and expansion of our customers' business operations is curtailed or if the cost of that credit is increased, the resulting inability of our customers or of their customers to either access credit or absorb the increased cost of that credit could adversely affect our business by reducing our sales or by increasing our exposure to losses from uncollectible customer accounts. These conditions and a disruption of the credit markets could also result in financial instability of some of our suppliers and customers. The consequences of such adverse effects could include the interruption of production at the facilities of our customers, the reduction, delay or cancellation of customer orders, delays or interruptions of the supply of raw materials we purchase, and bankruptcy of customers, suppliers or other creditors. Any of these events could adversely affect our profitability, cash flow and financial condition.

***Unanticipated changes in our tax provisions or exposure to additional tax liabilities could affect our future profitability.***

We are subject to income taxes in both the United States and various non-U.S. jurisdictions. Our domestic and international tax liabilities are dependent upon the distribution of income among these different jurisdictions. Changes in applicable domestic or foreign tax laws and regulations, or their interpretation and application, including the possibility of retroactive effect, could affect the company's tax expense and profitability. Our tax expense includes estimates of additional tax that may be incurred for tax exposures and reflects various estimates and assumptions. The assumptions include assessments of future earnings of the company that could impact the valuation of our deferred tax assets. Our future results of operations could be adversely affected by changes in the effective tax rate as a result of a change in the mix of earnings in countries with differing statutory tax rates, changes in the overall profitability of the company, changes in tax legislation and rates, changes in generally accepted accounting principles, changes in the valuation of deferred tax assets and liabilities, the results of tax audits and examinations of previously filed tax returns or related litigation and continuing assessments of our tax exposures. Corporate tax reform and tax law changes

continue to be analyzed in the United States and in many other jurisdictions. Significant changes to the U.S. corporate tax system in particular could have a substantial impact, positive or negative, on our effective tax rate, cash tax expenditures and deferred tax assets and liabilities.

***We may be exposed to significant legal proceedings, investigations or changes in U.S. federal, state or foreign law, regulation or policy.***

Our results of operations or liquidity in a particular period could be affected by new or increasingly stringent laws, regulatory requirements or interpretations, or outcomes of significant legal proceedings or investigations adverse to the Company. We may become subject to unexpected or rising costs associated with business operations or provision of health or welfare benefits to employees due to changes in laws, regulations or policies. We are also subject to a variety of legal compliance risks. These risks include, among other things, potential claims relating to product liability, health and safety, environmental matters, intellectual property rights, government contracts, taxes and compliance with U.S. and foreign export laws, anti-bribery laws, competition laws and sales and trading practices. We could be subject to fines, penalties, damages (in certain cases, treble damages), or suspension or debarment from government contracts. In addition, if we violate the terms of our agreements with governmental authorities, we may face additional monetary sanctions and such other remedies as a court deems appropriate.

While we believe we have adopted appropriate risk management and compliance programs to address and reduce these risks, the global and diverse nature of our operations means that these risks will continue to exist, and additional legal proceedings and contingencies may arise from time to time. In addition, various factors or developments can lead the Company to change current estimates of liabilities or make such estimates for matters previously not susceptible of reasonable estimates, such as a significant judicial ruling or judgment, a significant settlement, significant regulatory developments or changes in applicable law. A future adverse ruling or settlement or unfavorable changes in laws, regulations or policies, or other contingencies that the company cannot predict with certainty could have a material adverse effect on our results of operations or cash flows in a particular period. See “Item 3, Legal Proceedings” and Note R under the caption “Contingencies and Commitments—Contingencies—Litigation” to the Consolidated Financial Statements.

***We are subject to a broad range of health, safety and environmental laws and regulations in the jurisdictions in which we operate and may be exposed to substantial costs and liabilities associated with such laws and regulations.***

Our operations worldwide are subject to numerous complex and increasingly stringent health, safety and environmental laws and regulations. The costs of complying with such laws and regulations, including participation in assessments and cleanups of sites, as well as internal voluntary programs, are significant and will continue to be so for the foreseeable future. Environmental laws may impose cleanup liability on owners and occupiers of contaminated property, including past or divested properties, regardless of whether the owners and occupiers caused the contamination or whether the activity that caused the contamination was lawful at the time it was conducted. Environmental matters for which we may be liable may arise in the future at our present sites, where no problem is currently known, at previously owned sites, at sites previously operated by the Company, at sites owned by our predecessors or at sites that we may acquire in the future. Compliance with environmental, health and safety legislation and regulatory requirements may prove to be more limiting and costly than we anticipate. Our results of operations or liquidity in a particular period could be affected by certain health, safety or environmental matters, including remediation costs and damages related to certain sites. Additionally, evolving regulatory standards and expectations can result in increased litigation and/or increased costs, all of which can have a material and adverse effect on earnings and cash flows.

***Climate change, climate change legislation or regulations and greenhouse effects may adversely impact our operations and markets.***

Energy is a significant input in a number of our operations. There is growing recognition that consumption of energy derived from fossil fuels is a contributor to global warming.

A number of governments or governmental bodies in areas of the world where we operate have introduced or are contemplating legislative and regulatory change in response to the potential impacts of climate change. We will likely see changes in the margins of greenhouse gas-intensive assets and energy-intensive assets as a result of regulatory impacts in the countries in which we operate. These regulatory mechanisms may be either voluntary or legislated and may impact our operations directly or indirectly through customers or our supply chain. Inconsistency of regulations may also change the attractiveness of the locations of some of the Company's assets. Assessments of the potential impact of future climate change legislation, regulation and international treaties and accords are uncertain, given the wide scope of potential regulatory change in countries in which we operate. We may realize increased capital expenditures resulting from required compliance with revised or new legislation or regulations, costs to purchase or profits from sales of, allowances or credits under a "cap and trade" system, increased insurance premiums and deductibles as new actuarial tables are developed to reshape coverage, a change in competitive position relative to industry peers and changes to profit or loss arising from increased or decreased demand for goods produced by the Company and, indirectly, from changes in costs of goods sold.

The potential physical impacts of climate change on the Company's operations are highly uncertain, and will be particular to the geographic circumstances. These may include changes in rainfall patterns, shortages of water or other natural resources, changing sea levels, changing storm patterns and intensities, and changing temperature levels. These effects may adversely impact the cost, production and financial performance of our operations.

***Our operations may impact the environment or cause exposure to hazardous substances, and our properties may have environmental contamination, which could result in material liabilities to us.***

We may be subject to claims under federal and state statutes and/or common law doctrines for toxic torts and other damages as well as for natural resource damages and the investigation and clean-up of soil, surface water, groundwater, and other media under laws such as the federal Comprehensive Environmental Response, Compensation and Liabilities Act (CERCLA, commonly known as Superfund). Such claims may arise, for example, out of current or former conditions at sites that we own or operate currently, as well as at sites that we and companies we acquired owned or operated in the past, and at contaminated sites that have always been owned or operated by third parties. Liability may be without regard to fault and may be joint and several, so that we may be held responsible for more than our share of the contamination or other damages, or even for the entire share.

These and other similar unforeseen impacts that our operations may have on the environment, as well as exposures to hazardous substances or wastes associated with our operations, could result in costs and liabilities that could materially and adversely affect us.

***Loss of key personnel may adversely affect our business.***

Our success greatly depends on the performance of our executive management team. The loss of the services of any member of our executive management team or other key persons could have a material adverse effect on our business, results of operations and financial condition.

***Union disputes and other employee relations issues could adversely affect our financial results.***

A significant portion of our employees are represented by labor unions in a number of countries under various collective bargaining agreements with varying durations and expiration dates. See "Business—Employees." We may not be able to satisfactorily renegotiate collective bargaining agreements when they expire. In addition, existing collective bargaining agreements may not prevent a strike or work stoppage at our facilities in the future. We may also be subject to general country strikes or work stoppages unrelated to our business or collective bargaining agreements. Any such work stoppages (or potential work stoppages) could have a material adverse effect on our financial results.

## Risks Related to the Separation Transaction

***We have only operated as an independent company since November 1, 2016, and our historical financial information is not necessarily representative of the results that we would have achieved as a separate, publicly traded company during the time periods represented and may not be a reliable indicator of our future results.***

The historical information about Alcoa Corporation in this report refers to Alcoa Corporation's businesses as operated by and integrated with ParentCo prior to November 1, 2016. Our historical financial information included in this report is derived from the consolidated financial statements and accounting records of ParentCo. Accordingly, the historical financial information and fourth quarter and fiscal year financial information included in this report does not necessarily reflect the financial condition, results of operations or cash flows that we would have achieved as a separate, publicly traded company during the periods presented or those that we will achieve in the future primarily as a result of the factors described below:

- Generally, our working capital requirements and capital for our general corporate purposes, including capital expenditures and acquisitions, have historically been satisfied as part of the corporate-wide cash management policies of ParentCo. Following the completion of the Separation Transaction, our results of operations and cash flows are likely to be more volatile and we may need to obtain additional financing from banks, through public offerings or private placements of debt or equity securities, strategic relationships or other arrangements, which may or may not be available and may be more costly.
- Prior to the Separation Transaction, our business was operated by ParentCo as part of its broader corporate organization, rather than as an independent company. ParentCo or one of its affiliates performed various corporate functions for us, such as legal, treasury, accounting, auditing, human resources, investor relations, and finance. Our historical financial results reflect allocations of corporate expenses from ParentCo for such functions, which are likely to be less than the expenses we would have incurred had we operated as a separate publicly traded company.
- Historically, we shared economies of scope and scale in costs, employees, vendor relationships and customer relationships with the other businesses of ParentCo. While we have sought to separate these arrangements with minimal impact on Alcoa, there is no guarantee these arrangements will continue to capture these benefits in the future.
- Prior to the Separation Transaction, as a part of ParentCo, we took advantage of ParentCo's overall size and scope to procure more advantageous distribution arrangements, including shipping costs and arrangements. As now a standalone company, we may be unable to obtain similar arrangements to the same extent as ParentCo did, or on terms as favorable as those ParentCo obtained, prior to completion of the Separation Transaction.
- The cost of capital for our business may be higher than ParentCo's cost of capital prior to the Separation Transaction.

Other significant changes may occur in our cost structure, management, financing and business operations as a result of operating as a company separate from ParentCo. For additional information about the past financial performance of our business and the basis of presentation of the historical consolidated financial statements, see "Selected Financial Data of Alcoa Corporation," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the historical financial statements and accompanying notes included elsewhere in this report.

***We may not achieve some or all of the expected benefits of the Separation Transaction, and failure to realize such benefits in a timely manner may materially adversely affect our business.***

We may not be able to achieve the full strategic and financial benefits expected to result from the Separation Transaction, or such benefits may be delayed or not occur at all. The Separation Transaction was expected to provide various benefits, including enabling each company to more effectively pursue its own distinct operating priorities and

strategies, to focus on its core business, and to pursue distinct and targeted opportunities for long-term growth and profitability, including capital structures and capital allocation strategies. We may not achieve these and other anticipated benefits for a variety of reasons, including that we may be more susceptible to market fluctuations, including fluctuations in commodities prices than if we were still a part of ParentCo because our business is less diversified than ParentCo's business prior to the Separation Transaction, we may be unable to obtain certain goods, services and technologies at prices or on terms as favorable as those ParentCo obtained prior to the Separation Transaction, and the Separation Transaction required and may continue to require Alcoa to pay costs that could be substantial and material to our financial resources. If we fail to achieve some or all of the benefits expected to result from the Separation Transaction, or if such benefits are delayed, it could have a material adverse effect on our competitive position, business, financial condition, results of operations and cash flows.

***The costs incurred with respect to the Separation Transaction may not yield the expected benefits, which could disrupt or adversely affect our business.***

The process of completing the Separation Transaction was time-consuming and involved significant costs and expenses. For example, for the first ten months of 2016, ParentCo recorded nonrecurring Separation Transaction costs of \$152 million, of which \$68 million was allocated to the Company, which costs were primarily related to third-party consulting, contractor fees and other incremental costs directly associated with the Separation Transaction process. The Separation Transaction costs may not yield a discernible benefit if the expected benefits of the Separation Transaction are not realized. Executing the Separation Transaction also required significant amounts of management's time and effort, which diverted management's attention from operating and growing our business. Other challenges associated with effectively executing and implementing the Separation Transaction include attracting, retaining and motivating employees; addressing disruptions to our supply chain, manufacturing and other operations resulting from separating ParentCo into two large but independent companies; separating ParentCo's information systems; and establishing a new brand identity in the marketplace. We have incurred, as a result of the Separation Transaction, both one-time and ongoing costs and expenses. These increased costs and expenses arose and may continue to arise from various factors, including financial reporting, costs associated with complying with federal securities laws (including compliance with the Sarbanes-Oxley Act of 2002, as amended ("Sarbanes-Oxley"), tax administration, and legal and human resources related functions), and it is possible that these costs will be material to our business.

***Challenges in the commercial and credit environment may adversely affect our future access to capital.***

Our ability to issue debt or enter into other financing arrangements on acceptable terms could be adversely affected if there is a material decline in the demand for our products or in the solvency of our customers or suppliers or other significantly unfavorable changes in economic conditions. Volatility in the world financial markets could increase borrowing costs or affect our ability to access the capital markets. These conditions may adversely affect our ability to obtain and maintain investment grade credit ratings.

***Our accounting and other management systems and resources may not be adequately prepared to meet the financial reporting and other requirements to which we are and will be subject as a standalone publicly traded company.***

Our financial results previously were included within the consolidated results of ParentCo, and we believe that our reporting and control systems were appropriate for those of subsidiaries of a public company. However, we were not directly subject to the reporting and other requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). As a standalone, publicly traded company, we are directly subject to reporting and other obligations under the Exchange Act, and will be subject to the requirements of Section 404 of Sarbanes-Oxley, which will require annual management assessments of the effectiveness of our internal control over financial reporting and a report by our independent registered public accounting firm addressing these assessments, beginning with our Annual Report on Form 10-K for the year ended December 31, 2017. These reporting and other obligations will place significant demands on our management and administrative and operational resources, including accounting resources.

Implementing any appropriate changes to our internal controls may require specific compliance training for our directors, officers and employees, require the hiring of additional finance, accounting and other personnel, entail

substantial costs to modify our existing accounting systems, and take a significant period of time to complete. Such changes may not, however, be effective in maintaining the adequacy of our internal controls, and any failure to maintain that adequacy, or consequent inability to produce accurate financial statements on a timely basis, could increase our operating costs and could materially impair our ability to operate our business. Moreover, adequate internal controls are necessary for us to produce reliable financial reports and are important to help prevent fraud. As a result, our failure to satisfy the requirements of Section 404 on a timely basis could result in the loss of investor confidence in the reliability of our financial statements, which in turn could cause the market value of our common stock to decline.

***Arconic may fail to perform under various transaction agreements that were executed as part of the Separation Transaction or we may fail to have necessary systems and services in place when certain of the transaction agreements expire.***

In connection with the Separation Transaction, Alcoa Corporation and Arconic entered into the separation and distribution agreement and also entered into various other agreements, including a transition services agreement, a tax matters agreement, an employee matters agreement, a stockholder and registration rights agreement with respect to Arconic's continuing ownership of Alcoa common stock, intellectual property license agreements, a metal supply agreement, real estate and office leases, a spare parts loan agreement and an agreement relating to the North American packaging business. The separation and distribution agreement, the tax matters agreement and the employee matters agreement, together with the documents and agreements by which the internal reorganization was effected, determined the allocation of assets and liabilities between the companies following the Separation Transaction for those respective areas and included any necessary indemnifications related to liabilities and obligations. The separation and distribution agreement also provides that Alcoa will pay over to Arconic the proceeds in respect of the sale of Alcoa's Yadkin hydroelectric project. The transition services agreement provides for the performance of certain services by each company for the benefit of the other for a period of time after the Separation Transaction. Alcoa will rely on Arconic to satisfy its performance and payment obligations under these agreements. If Arconic is unable or unwilling to satisfy its obligations under these agreements, including its indemnification obligations, we could incur operational difficulties and/or losses. If we do not have in place our own systems and services, or if we do not have agreements with other providers of these services once certain transaction agreements expire, we may not be able to operate our business effectively and our profitability may decline. We are in the process of creating our own, or engaging third parties to provide, systems and services to replace many of the systems and services that ParentCo provided to us. However, we may not be successful in implementing these systems and services, we may incur additional costs in connection with, or following, the implementation of these systems and services, and we may not be successful in transitioning data from ParentCo's systems to ours.

***In connection with our Separation Transaction from ParentCo, Arconic has agreed to indemnify us for certain liabilities and we have agreed to indemnify Arconic for certain liabilities. If we are required to pay under these indemnities to Arconic, our financial results could be negatively impacted. The Arconic indemnity may not be sufficient to hold us harmless from the full amount of liabilities for which Arconic will be allocated responsibility, and Arconic may not be able to satisfy its indemnification obligations in the future.***

Pursuant to the separation and distribution agreement and certain other agreements with ParentCo, Arconic has agreed to indemnify us for certain liabilities, and we have agreed to indemnify Arconic for certain liabilities, in each case for uncapped amounts, as discussed further in "Certain Relationships and Related Party Transactions." Indemnities that we may be required to provide Arconic are not subject to any cap, may be significant and could negatively impact our business. Third parties could also seek to hold us responsible for any of the liabilities that Arconic has agreed to retain. Any amounts we are required to pay pursuant to these indemnification obligations and other liabilities could require us to divert cash that would otherwise have been used in furtherance of our operating business. Further, the indemnity from Arconic may not be sufficient to protect us against the full amount of such liabilities, and Arconic may not be able to fully satisfy its indemnification obligations. Moreover, even if we ultimately succeed in recovering from Arconic any amounts for which we are held liable, we may be temporarily required to bear these losses ourselves. Each of these risks could negatively affect our business, results of operations and financial condition.



***We may be held liable to Arconic if we fail to perform certain services under the transition services agreement, and the performance of such services may negatively impact our business and operations.***

Alcoa Corporation and Arconic entered into a transition services agreement in connection with the Separation Transaction pursuant to which Alcoa and Arconic provide each other, on an interim, transitional basis, various services, including, but not limited to, employee benefits administration, specialized technical and training services and access to certain industrial equipment, information technology services, regulatory services, continued industrial site remediation and closure services on discrete projects, project management services for certain equipment installation and decommissioning projects, general administrative services and other support services. If we do not satisfactorily perform our obligations under the agreement, we may be held liable for any resulting losses suffered by Arconic, subject to certain limits. In addition, during the transition services periods, our management and employees may be required to divert their attention away from our business in order to provide services to Arconic, which could adversely affect our business.

***We may not be able to engage in desirable capital-raising or strategic transactions following the Separation Transaction.***

Under current U.S. federal income tax law, a spin-off that otherwise qualifies for tax-free treatment can be rendered taxable to the parent corporation and its stockholders as a result of certain post-spin-off transactions, including certain acquisitions of shares or assets of the spun-off corporation. To preserve the tax-free treatment of the Separation Transaction and the Distribution, and in addition to Alcoa's indemnity obligation described above, the tax matters agreement restricts Alcoa Corporation, for the two-year period following the Distribution, except in specific circumstances, from: (i) entering into any transaction pursuant to which all or a portion of Alcoa stock would be acquired, whether by merger or otherwise, (ii) issuing equity securities beyond certain thresholds, (iii) repurchasing shares of Alcoa stock other than in certain open-market transactions, (iv) ceasing to actively conduct certain of its businesses or (v) taking or failing to take any other action that prevents the Distribution and certain related transactions from qualifying as a transaction that is generally tax-free, for U.S. federal income tax purposes, under Sections 355 and 368(a)(1)(D) of the Code. These restrictions may limit our ability to pursue certain equity issuances, strategic transactions or other transactions that may maximize the value of our business. For more information, see "Certain Relationships and Related Party Transactions, and Director Independence—Tax Matters Agreement."

***The terms we will receive in our agreements with Arconic could be less beneficial than the terms we may have otherwise received from unaffiliated third parties.***

The agreements we entered into with Arconic in connection with the Separation Transaction, including a separation and distribution agreement, a transition services agreement, a tax matters agreement, an employee matters agreement, a stockholder and registration rights agreement with respect to Arconic's continuing ownership of Alcoa common stock, intellectual property license agreements, a metal supply agreement, real estate and office leases, a spare parts loan agreement and an agreement relating to the North American packaging business were prepared in the context of the Separation Transaction while Alcoa Corporation was still a wholly owned subsidiary of ParentCo. Accordingly, during the period in which the terms of those agreements were prepared, we did not have an independent Board of Directors or a management team that was independent of ParentCo. As a result, the terms of those agreements may not reflect terms that would have resulted from arm's-length negotiations between unaffiliated third parties. See "Certain Relationships and Related Party Transactions."

***If the Distribution, together with certain related transactions, does not continue to qualify as a transaction that is generally tax-free for U.S. federal income tax purposes, Arconic, Alcoa Corporation, and Arconic stockholders could be subject to significant tax liabilities and, in certain circumstances, Alcoa Corporation could be required to indemnify Arconic for material taxes and other related amounts pursuant to indemnification obligations under the tax matters agreement.***

It was a condition to the Distribution that (i) the private letter ruling from the Internal Revenue Service (the "IRS") regarding certain U.S. federal income tax matters relating to the Separation Transaction and the Distribution received

by ParentCo remain valid and be satisfactory to the ParentCo Board of Directors and (ii) ParentCo receive an opinion of its outside counsel, satisfactory to the ParentCo Board of Directors, regarding the qualification of the distribution, together with certain related transactions, as a transaction that is generally tax-free, for U.S. federal income tax purposes, under Sections 355 and 368(a)(1)(D) of the Internal Revenue Code of 1986, as amended (the “Code”). The IRS private letter ruling and the opinion of counsel were based upon and rely on, among other things, various facts and assumptions, as well as certain representations, statements and undertakings of ParentCo and Alcoa Corporation, including those relating to the past and future conduct of Arconic and Alcoa Corporation. If any of these representations, statements or undertakings is, or becomes, inaccurate or incomplete, or if Arconic or Alcoa breaches any of its representations or covenants contained in any of the Separation Transaction–related agreements and documents or in any documents relating to the IRS private letter ruling and/or the opinion of counsel, the IRS private letter ruling and/or the opinion of counsel may be invalid and the conclusions reached therein could be jeopardized.

Notwithstanding receipt of the IRS private letter ruling and the opinion of counsel, the IRS could determine that the Distribution and/or certain related transactions should be treated as taxable transactions for U.S. federal income tax purposes if it determines that any of the representations, assumptions or undertakings upon which the IRS private letter ruling or the opinion of counsel was based are false or have been violated. In addition, the IRS private letter ruling does not address all of the issues that are relevant to determining whether the distribution, together with certain related transactions, qualifies as a transaction that is generally tax-free for U.S. federal income tax purposes, and the opinion of counsel will represent the judgment of such counsel and will not be binding on the IRS or any court and the IRS or a court may disagree with the conclusions in the opinion of counsel. Accordingly, notwithstanding receipt by ParentCo of the IRS private letter ruling and the opinion of counsel, there can be no assurance that the IRS will not assert that the distribution and/or certain related transactions do not qualify for tax-free treatment for U.S. federal income tax purposes or that a court would not sustain such a challenge. In the event the IRS were to prevail with such challenge, Arconic, Alcoa Corporation and Arconic stockholders could be subject to significant U.S. federal income tax liability.

If the Distribution, together with certain related transactions, fails to qualify as a transaction that is generally tax-free, for U.S. federal income tax purposes, under Sections 355 and 368(a)(1)(D) of the Code, in general, for U.S. federal income tax purposes, Arconic would recognize taxable gain as if it had sold the Alcoa common stock in a taxable sale for its fair market value and Arconic stockholders who receive Alcoa shares in the Distribution would be subject to tax as if they had received a taxable distribution equal to the fair market value of such shares.

Under the tax matters agreement that Arconic entered into with Alcoa, we may be required to indemnify Arconic against any additional taxes and related amounts resulting from (i) an acquisition of all or a portion of the equity securities or assets of Alcoa Corporation, whether by merger or otherwise (and regardless of whether Alcoa Corporation participated in or otherwise facilitated the acquisition), (ii) other actions or failures to act by Alcoa or (iii) any of Alcoa’s representations, covenants or undertakings contained in any of the Separation Transaction-related agreements and documents or in any documents relating to the IRS private letter ruling and/or the opinion of counsel being incorrect or violated. Any such indemnity obligations could be material. For a more detailed discussion, see “Certain Relationships and Related Party Transactions—Tax Matters Agreement.” In addition, Arconic, Alcoa, and their respective subsidiaries may incur certain tax costs in connection with the Separation Transaction, including non-U.S. tax costs resulting from Separation Transactions in non-U.S. jurisdictions, which may be material.

***Certain contingent liabilities allocated to Alcoa Corporation following the Separation Transaction may mature, resulting in material adverse impacts to our business.***

There are several significant areas where the liabilities of ParentCo may become our obligations. For example, under the Code and the related rules and regulations, each corporation that was a member of the ParentCo consolidated U.S. federal income tax return group during a taxable period or portion of a taxable period ending on or before the effective date of the Distribution is severally liable for the entire U.S. federal income tax liability of the ParentCo consolidated U.S. federal income tax return group for that taxable period. Consequently, if Arconic is unable to pay the consolidated U.S. federal income tax liability for a pre-Separation Transaction period, we could be required to pay the amount of such tax, which could be substantial and in excess of the amount allocated to us under the tax matters agreement. For a

discussion of the tax matters agreement, see “Certain Relationships and Related Party Transactions, and Director Independence—Tax Matters Agreement.” Other provisions of federal law establish similar liability for other matters, including laws governing tax-qualified pension plans, as well as other contingent liabilities.

***The transfer to us of certain contracts, permits and other assets and rights may still require the consents or approvals of, or provide other rights to, third parties and governmental authorities. If such consents or approvals are not obtained, we may not be entitled to the benefit of such contracts, permits and other assets and rights, which could increase our expenses or otherwise harm our business and financial performance.***

The separation and distribution agreement provided that certain contracts, permits and other assets and rights are to be transferred from Arconic or its subsidiaries to Alcoa or its subsidiaries in connection with the Separation Transaction. The transfer of certain of these contracts, permits and other assets and rights may still require consents or approvals of third parties or governmental authorities or provide other rights to third parties. In addition, in some circumstances, we and Arconic are joint beneficiaries of contracts, and we and Arconic may need the consents of third parties in order to split or bifurcate the existing contracts or the relevant portion of the existing contracts to us or Arconic. Some parties may use consent requirements or other rights to seek to terminate contracts or obtain more favorable contractual terms from us. The termination or modification of these contracts or permits or the failure to timely complete the transfer or bifurcation of these contracts or permits could negatively impact our business, financial condition, results of operations and cash flows.

### **Risks Related to Our Common Stock**

***Arconic owns 12,958,767 shares of our common stock. We have registered on a registration statement on Form S-1 such shares under the terms of a stockholder and registration rights agreement between us and Arconic. The sale of such shares in one or more offerings may cause our stock price to decline.***

Any sales of substantial amounts of our common stock in the public market or the perception that such sales might occur, in connection with an offering by Arconic or otherwise, may cause the market price of our common stock to decline. Upon completion of an offering by Arconic of its shares, we will continue to have an aggregate of approximately 184 million shares of our common stock issued and outstanding. Shares will generally be freely tradeable without restriction or further registration under the Securities Act of 1933, as amended (the “Securities Act”), except for shares owned by one of our “affiliates,” as that term is defined in Rule 405 under the Securities Act.

Following the Distribution, Arconic retained approximately 19.9% of outstanding shares of our common stock, and as of March 1, 2017, it owns approximately 7.0% of outstanding shares of our common stock. Pursuant to the IRS private letter ruling, Arconic is required to dispose of such shares of our common stock that it owns as soon as practicable and consistent with its reasons for retaining such shares, but in no event later than five years after the Distribution. See “Certain Relationships and Related Party Transactions, and Director Independence—Stockholder and Registration Rights Agreement.” We have registered on a registration statement on Form S-1 such shares under the terms of a stockholder and registration rights agreement between us and Arconic. Any disposition by Arconic, or any significant stockholder, of our common stock in the public market in one or more offerings, or the perception that such dispositions could occur, could adversely affect prevailing market prices for our common stock.

***Anti-takeover provisions could enable our management to resist a takeover attempt by a third party and limit the power of our stockholders, which could decrease the trading price of our common stock.***

Alcoa’s amended and restated certificate of incorporation and bylaws contain, and Delaware law contains, provisions that are intended to deter coercive takeover practices and inadequate takeover bids by making such practices or bids unacceptably expensive to the bidder and to encourage prospective acquirers to negotiate with Alcoa’s Board of Directors rather than to attempt a hostile takeover. These provisions include, among others:

- the inability of our stockholders to act by written consent unless such written consent is unanimous;
- the ability of our remaining directors to fill vacancies on our Board of Directors;

- limitations on stockholders' ability to call a special stockholder meeting;
- rules regarding how stockholders may present proposals or nominate directors for election at stockholder meetings; and
- the right of our Board of Directors to issue preferred stock without stockholder approval.

In addition, we are subject to Section 203 of the Delaware General Corporation Law ("DGCL"), which provides that, subject to limited exceptions, persons that acquire, or are affiliated with persons that acquire, more than 15% of the outstanding voting stock of a Delaware corporation may not engage in a business combination with that corporation, including by merger, consolidation or acquisitions of additional shares, for a three-year period following the date on which that person or any of its affiliates becomes the holder of more than 15% of the corporation's outstanding voting stock.

We believe these provisions protect our stockholders from coercive or otherwise unfair takeover tactics by requiring potential acquirers to negotiate with our Board of Directors and by providing our Board of Directors with more time to assess any acquisition proposal. These provisions are not intended to make Alcoa immune from takeovers; however, these provisions will apply even if the offer may be considered beneficial by some stockholders and could delay or prevent an acquisition that our Board of Directors determines is not in the best interests of Alcoa and our stockholders. These provisions may also prevent or discourage attempts to remove and replace incumbent directors. These provisions of our certificate of incorporation and bylaws, and Delaware law, that have the effect of delaying or deterring a change in control of the Company could limit the opportunity for our stockholders to receive a premium for their shares and could affect the price that some investors are willing to pay for Alcoa stock.

In addition, an acquisition or further issuance of our stock could trigger the application of Section 355(e) of the Code. Under the tax matters agreement, Alcoa is required to indemnify Arconic for the resulting tax, and this indemnity obligation might discourage, delay or prevent a change of control that our stockholders may consider favorable.

***Our amended and restated certificate of incorporation designates the state courts within the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could discourage lawsuits against Alcoa and our directors and officers.***

Our amended and restated certificate of incorporation provides that unless the Board of Directors otherwise determines, a state court located within the State of Delaware will be the sole and exclusive forum for any derivative action or proceeding brought on behalf of Alcoa, any action asserting a claim for or based on a breach of a fiduciary duty owed by any current or former director or officer of Alcoa to Alcoa or to Alcoa stockholders, any action asserting a claim against Alcoa or any current or former director or officer of Alcoa arising pursuant to any provision of the DGCL or our amended and restated certificate of incorporation or bylaws, any action asserting a claim relating to or involving Alcoa governed by the internal affairs doctrine, or any action asserting an "internal corporate claim" as that term is defined in Section 115 of the DGCL. However, if a Delaware state court dismisses any such action for lack of subject matter jurisdiction, the action may be brought in the federal court for the District of Delaware. This exclusive forum provision may limit the ability of our stockholders to bring a claim in a judicial forum that such stockholders find favorable for disputes with Alcoa or our directors or officers, which may discourage such lawsuits against Alcoa and our directors and officers. Alternatively, if a court were to find this exclusive forum provision inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings described above, we may incur additional costs associated with resolving such matters in other jurisdictions, which could negatively affect our business, results of operations and financial condition.

***Your percentage of ownership in Alcoa may be diluted in the future.***

In the future, your percentage ownership in Alcoa may be diluted because of equity issuances for acquisitions, capital market transactions or otherwise, including any equity awards that we will grant to our directors, officers and

employees. Our employees have stock-based awards that correspond to shares of our common stock as a result of conversion of their ParentCo stock-based awards. Our compensation committee has granted stock-based awards to our employees, and we anticipate that the committee will grant additional stock-based awards to our employees in the future. Such awards will have a dilutive effect on our earnings per share, which could adversely affect the market price of our common stock.

***We cannot guarantee the existence, timing, amount or payment of dividends on our common stock.***

The existence, timing, declaration, amount and payment of future dividends to our stockholders falls within the discretion of our Board of Directors. The Board of Directors' decisions regarding the payment of dividends will depend on many factors, such as our financial condition, earnings, capital requirements, debt service obligations, covenants associated with certain of our debt service obligations, industry practice, legal requirements, regulatory constraints and other factors that our Board of Directors deems relevant. For more information, see Item 5 "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities." Our ability to pay dividends will depend on our ongoing ability to generate cash from operations and on our access to the capital markets. We cannot guarantee that we will pay a dividend in the future or continue to pay any dividend if we commence paying dividends.

**Item 1B. Unresolved Staff Comments.**

None.

**Item 2. Properties.**

Alcoa Corporation's principal executive office is located at 390 Park Avenue, New York, New York 10022-4608. Alcoa Corporation's corporate center is located at 201 Isabella Street, Pittsburgh, Pennsylvania 15212-5858.

Alcoa leases some of its facilities; however, it is the opinion of management that the leases do not materially affect the continued use of the properties or the properties' values.

Alcoa believes that its facilities are suitable and adequate for its operations. Although no title examination of properties owned by Alcoa has been made for the purpose of this report, the Company knows of no material defects in title to any such properties. See Notes B and J to the financial statements for information on properties, plants and equipment.

Alcoa has active plants and holdings under the following segments and in the following geographic areas:

***Bauxite***—See the tables and related text in the **Bauxite** section on pages 6-14 of this report.

***Alumina***—See the table and related text in the **Alumina** section on pages 14-15 of this report.

***Aluminum***—See the table and related text in the **Aluminum** section on pages 16-17 of this report.

***Cast Products***—See the table and related text in the **Cast Products** section on pages 17-18 of this report.

***Energy***—See the table and related text in the **Energy** section on pages 18-21 of this report.

***Rolled Products***—See the text in the **Rolled Products** section on pages 21-22 of this report.

**Item 3. Legal Proceedings.**

In the ordinary course of its business, Alcoa is involved in a number of lawsuits and claims, both actual and potential.

## **Litigation**

### **Italian Energy Matter**

Before 2002, ParentCo purchased power in Italy in the regulated energy market and received a drawback of a portion of the price of power under a special tariff in an amount calculated in accordance with a published resolution of the Italian Energy Authority, Energy Authority Resolution n. 204/1999 (“204/1999”). In 2001, the Energy Authority published another resolution, which clarified that the drawback would be calculated in the same manner, and in the same amount, in either the regulated or unregulated market. At the beginning of 2002, ParentCo left the regulated energy market to purchase energy in the unregulated market. Subsequently, in 2004, the Energy Authority introduced regulation no. 148/2004 which set forth a different method for calculating the special tariff that would result in a different drawback for the regulated and unregulated markets. ParentCo challenged the new regulation in the Administrative Court of Milan and received a favorable judgment in 2006. Following this ruling, ParentCo continued to receive the power price drawback in accordance with the original calculation method, through 2009, when the European Commission declared all such special tariffs to be impermissible “state aid.” In 2010, the Energy Authority appealed the 2006 ruling to the Consiglio di Stato (final court of appeal). On December 2, 2011, the Consiglio di Stato ruled in favor of the Energy Authority and against ParentCo, thus presenting the opportunity for the energy regulators to seek reimbursement from ParentCo of an amount equal to the difference between the actual drawback amounts received over the relevant time period, and the drawback as it would have been calculated in accordance with regulation 148/2004. On February 23, 2012, ParentCo filed its appeal of the decision of the Consiglio di Stato (this appeal was subsequently withdrawn in March 2013). On March 26, 2012, ParentCo received a letter from the agency (Cassa Conguaglio per il Settore Elettrico (CCSE)) responsible for making and collecting payments on behalf of the Energy Authority demanding payment in the amount of approximately \$110 million (€85 million), including interest. By letter dated April 5, 2012, ParentCo informed CCSE that it disputes the payment demand of CCSE since (i) CCSE was not authorized by the Consiglio di Stato decisions to seek payment of any amount, (ii) the decision of the Consiglio di Stato has been appealed (see above), and (iii) in any event, no interest should be payable. On April 29, 2012, Law No. 44 of 2012 (“44/2012”) came into effect, changing the method to calculate the drawback. On February 21, 2013, ParentCo received a revised request letter from CCSE demanding ParentCo’s subsidiary, Alcoa Trasformazioni S.r.l. (Trasformazioni is now a subsidiary of Alcoa Corporation), make a payment in the amount of \$97 million (€76 million), including interest, which reflects a revised calculation methodology by CCSE and represents the high end of the range of reasonably possible loss associated with this matter of \$0 to \$97 million (€76 million). ParentCo rejected that demand and formally challenged it through an appeal before the Administrative Court on April 5, 2013. The Administrative Court scheduled a hearing for December 19, 2013, which was subsequently postponed until April 17, 2014, and further postponed until June 19, 2014. On this date, the Administrative Court heard ParentCo’s oral argument, and on September 2, 2014, rendered its decision. The Administrative Court declared the payment request of CCSE and the Energy Authority to ParentCo to be unsubstantiated based on the 148/2004 resolution with respect to the January 19, 2007 through November 19, 2009 timeframe. On December 18, 2014, the CCSE and the Energy Authority appealed the Administrative Court’s September 2, 2014 decision; however, a date for the hearing has not been scheduled. ParentCo’s management modified its outlook with respect to a portion of the pending legal proceedings related to this matter. As such a charge of \$37 million (€34 million) was recorded at the end of 2015 to establish a partial reserve for this matter. At this time, Alcoa Corporation is unable to reasonably predict the ultimate outcome for this matter.

### **Environmental Matters**

Alcoa is involved in proceedings under the Comprehensive Environmental Response, Compensation and Liability Act, also known as Superfund (CERCLA) or analogous state provisions regarding the usage, disposal, storage or treatment of hazardous substances at a number of sites in the U.S. The Company has committed to participate, or is engaged in negotiations with federal or state authorities relative to its alleged liability for participation, in clean-up efforts at several such sites. The most significant of these matters are discussed in Note R to the Consolidated Financial Statements under the caption “Contingencies and Commitments—Environmental Matters.”

The Separation and Distribution Agreement (see Note A) 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 will be 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 under the Separation and Distribution Agreement, Alcoa Corporation has agreed to indemnify Arconic in whole or in part for environmental liabilities arising from operations prior to the Separation Date. The following discussion provides details regarding the current status of certain matters 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.

In August 2005, Dany Lavoie, a resident of Baie Comeau in the Canadian Province of Québec, filed a Motion for Authorization to Institute a Class Action and for Designation of a Class Representative against Alcoa Canada Ltd., Alcoa Limitée, Societe Canadienne de Metaux Reynolds Limitée and Canadian British Aluminum in the Superior Court of Québec in the District of Baie Comeau. Plaintiff seeks to institute the class action on behalf of a putative class consisting of all past, present and future owners, tenants and residents of Baie Comeau's St. Georges neighborhood. He alleges that defendants, as the present and past owners and operators of an aluminum smelter in Baie Comeau, have negligently allowed the emission of certain contaminants from the smelter, specifically Polycyclic Aromatic Hydrocarbons or "PAHs," that have been deposited on the lands and houses of the St. Georges neighborhood and its environs causing damage to the property of the putative class and causing health concerns for those who inhabit that neighborhood. Plaintiff originally moved to certify a class action, sought to compel additional remediation to be conducted by the defendants beyond that already undertaken by them voluntarily, sought an injunction against further emissions in excess of a limit to be determined by the court in consultation with an independent expert, and sought money damages on behalf of all class members. In May 2007, the court authorized a class action suit to include only people who suffered property damage or personal injury damages caused by the emission of PAHs from the smelter. In September 2007, plaintiffs filed the claim against the original defendants, which the court had authorized in May. ParentCo filed its Statement of Defense and plaintiffs filed an Answer to that Statement. ParentCo also filed a Motion for Particulars with respect to certain paragraphs of plaintiffs' Answer and a Motion to Strike with respect to certain paragraphs of plaintiffs' Answer. In late 2010, the court denied these motions. The Soderberg smelting process that plaintiffs allege to be the source of emissions of concern has ceased operations and has been dismantled. Plaintiffs filed a motion seeking appointment of an expert to advise the court on matters of sampling of homes and standards for interior home remediation. ParentCo opposed the motion. After a March 25, 2016 hearing on the motion, the court granted, in a ruling dated April 8, 2016, the motion and directed the parties to confer on potential experts and protocols for sampling of residences. The court has identified a sampling expert. The parties are advising the expert on their respective views on the appropriate protocol for sampling. Further proceedings in the case will await the independent expert's report. At this stage of the proceeding, we are unable to reasonably predict an outcome or to estimate a range of reasonably possible loss.

In October 2006, in *Barnett, et al. v. Alcoa and Alcoa Fuels, Inc.*, Warrick Circuit Court, County of Warrick, Indiana; 87-C01-0601-PL-499, forty-one plaintiffs sued ParentCo and one of its subsidiary, asserting claims similar to those asserted in *Musgrave v. Alcoa, et al.*, Warrick Circuit Court, County of Warrick, Indiana; 87-C01-0601-CT-006. In November 2007, ParentCo and its subsidiary filed a motion to dismiss the Barnett cases. In October 2008, the Warrick County Circuit Court granted ParentCo's motions to dismiss, dismissing all claims arising out of alleged occupational exposure to wastes at the Squaw Creek Mine, but in November 2008, the trial court clarified its ruling, indicating that the order does not dispose of plaintiffs' personal injury claims based upon alleged "recreational" or non-occupational exposure. Plaintiffs also filed a "second amended complaint" in response to the court's orders granting ParentCo's motion to dismiss. On July 7, 2010, the court granted the parties' joint motions for a general continuance of trial settings. Discovery in this matter remains stayed. On January 24, 2017 the court set a hearing for March 23, 2017, under local rules concerning non-prosecution of cases. Since that time, the parties have agreed to file a motion to dismiss the remaining claims.

In 1996, ParentCo acquired the Fusina, Italy smelter and rolling operations and the Portovesme, Italy smelter (both of which are owned by Alcoa's subsidiary, Alcoa Trasformazioni S.r.l.) from Alumix, an entity owned by the Italian Government. ParentCo also acquired the extrusion plants located in Feltre and Bolzano, Italy. At the time of the acquisition, Alumix indemnified ParentCo for pre-existing environmental contamination at the sites. In 2004, the Italian Ministry of Environment (MOE) issued orders to Alcoa Trasformazioni S.r.l. and Alumix for the development of a clean-up plan related to soil contamination in excess of allowable limits under legislative decree and to institute emergency actions and pay natural resource damages. On April 5, 2006, Alcoa Trasformazioni S.r.l.'s Fusina site was also sued by the MOE and Minister of Public Works (MOPW) in the Civil Court of Venice for an alleged liability for environmental damages, in parallel with the orders already issued by the MOE. Alcoa Trasformazioni S.r.l. appealed the orders, defended the civil case for environmental damages and filed suit against Alumix, as discussed below. Similar issues also existed with respect to the Bolzano and Feltre plants, based on orders issued by local authorities in 2006. Most, if not all, of the underlying activities occurred during the ownership of Alumix, the governmental entity that sold the Italian plants to ParentCo.

As noted above, in response to the 2006 civil suit by the MOE and MOPW, Alcoa Trasformazioni S.r.l. filed suit against Alumix claiming indemnification under the original acquisition agreement, but brought that suit in the Court of Rome due to jurisdictional rules. In June 2008, the parties (ParentCo and subsequently Ligestra S.r.l. (Ligestra), the successor to Alumix) signed a preliminary agreement by which they have committed to pursue a settlement. The Court of Rome accepted the request, and postponed the Court's expert technical assessment, reserving its ability to fix the deadline depending on the development of negotiations. ParentCo and Ligestra agreed to a settlement in December 2008 with respect to the Feltre site. Ligestra paid the sum of 1.08 million Euros and ParentCo committed to clean up the site. Further postponements were granted by the Court of Rome, and the next hearing is fixed for December 20, 2016. In the meantime, Alcoa Trasformazioni S.r.l. and Ligestra reached a preliminary agreement for settlement of the liabilities related to Fusina, allocating 80% and 20% of the remediation costs to Ligestra and ParentCo, respectively. In January 2014, a final agreement with Ligestra was signed, and on February 5, 2014, ParentCo signed a final agreement with the MOE and MOPW settling all environmental issues at the Fusina site. As set out in the agreement between ParentCo and Ligestra, the parties will share the remediation costs and environmental damages claimed by the MOE and MOPW. The remediation project filed by ParentCo and Ligestra has been approved by the MOE. See Note R to the Consolidated Financial Statements under the caption "Fusina and Portovesme, Italy." To provide time for settlement with Ligestra, the MOE and ParentCo jointly requested and the Civil Court of Venice has granted a series of postponements of hearings in the Venice trial, assuming that the case will be closed. Following the settlement, the parties caused the Court to dismiss the proceedings. The proceedings were, however, restarted in April 2015 by the MOE and MOPW because the Ministers had not ratified the settlement of February 5, 2014. In April 2016, the settlement was ratified by the Ministers and the court case has been finally dismissed.

ParentCo and Ligestra have signed a similar agreement relating to the Portovesme site. However, that agreement is contingent upon final acceptance of the proposed soil remediation project for Portovesme that was rejected by the MOE in the fourth quarter of 2013. ParentCo submitted a revised proposal in May 2014 and a further revised proposal in February 2015, in agreement with Ligestra. The MOE issued a Ministerial Decree approving the final project in October 2015. Work on the soil remediation project will commence in 2016 and is expected to be completed in 2019. After further discussions with the MOE regarding the groundwater remediation project, Alcoa Corporation and Ligestra are now working to find a common remedial solution. While the issuance of the decree for the soil remediation project has provided reasonable certainty regarding liability for the soil remediation, with respect to the groundwater remediation project we are unable to reasonably predict an outcome or to estimate a range of reasonably possible loss beyond what is described in Note R to the Consolidated Financial Statements for several reasons. First, certain costs relating to the groundwater remediation are not yet fixed. In connection with any proposed groundwater remediation plan for Portovesme, we understand that the MOE has substantial discretion in defining what must be managed under Italian law, as well as the extent and duration of that remediation program. As a result, the scope and cost of the final groundwater remediation plan remain uncertain for Portovesme; we and Ligestra are still negotiating a final settlement for groundwater remediation at Portovesme, for an allocation of the cost based on the new remediation project approved by the MOE. In addition, once a groundwater remediation project is submitted, should a final settlement with Ligestra not be reached, we should be held responsible only for ParentCo's share of pollution.



However, the area is impacted by many sources of pollution, as well as historical pollution. Consequently, the allocation of liabilities would need a very complex technical evaluation by the authorities that has not yet been performed.

On November 30, 2010, Alcoa World Alumina Brasil Ltda. (“AWAB”) received notice of a lawsuit that had been filed by the public prosecutors of the State of Pará in Brazil in November 2009. The suit names AWAB, a subsidiary of Alcoa, and the State of Pará, which, through its Environmental Agency, had issued the operating license for ParentCo’s new bauxite mine in Juruti. The suit concerns the impact of the project on the region’s water system and alleges that certain conditions of the original installation license were not met by AWAB. In the lawsuit, plaintiffs requested a preliminary injunction suspending the operating license and ordering payment of compensation. On April 14, 2010, the court denied plaintiffs’ request. AWAB presented its defense in March 2011, on grounds that it was in compliance with the terms and conditions of its operating license, which included plans to mitigate the impact of the project on the region’s water system. In April 2011, the State of Pará defended itself in the case asserting that the operating license contains the necessary plans to mitigate such impact, that the State monitors the performance of AWAB’s obligations arising out of such license, that the licensing process is valid and legal, and that the suit is meritless. Our position is that any impact from the project had been fully repaired when the suit was filed. We believe that Jar Lake has not been affected by any project activity and any evidence of pollution from the project would be unreliable. Following the preliminary injunction request, the plaintiffs took no further action until October 2014, when in response to the court’s request and as required by statute, they restated the original allegations in the lawsuit. We are not certain whether or when the action will proceed. Given that this proceeding is in its preliminary stage and the current uncertainty in this case, we are unable to reasonably predict an outcome or to estimate a range of reasonably possible loss.

## **Other Matters**

### *St. Croix Proceedings*

*Abednego and Abraham cases.* On January 14, 2010, ParentCo was served with a multi-plaintiff action complaint involving several thousand individual persons claiming to be residents of St. Croix who are alleged to have suffered personal injury or property damage from Hurricane Georges or winds blowing material from the St. Croix Alumina, L.L.C. (“SCA”) facility on the island of St. Croix (U.S. Virgin Islands) since the time of the hurricane. This complaint, *Abednego, et al. v. Alcoa, et al.* was filed in the Superior Court of the Virgin Islands, St. Croix Division. Following an unsuccessful attempt by ParentCo and SCA to remove the case to federal court, the case has been lodged in the Superior Court. The complaint names as defendants the same entities that were sued in a February 1999 action arising out of the impact of Hurricane Georges on the island and added as a defendant the current owner of the alumina facility property.

On March 1, 2012, ParentCo was served with a separate multi-plaintiff action complaint involving approximately 200 individual persons alleging claims essentially identical to those set forth in the *Abednego v. Alcoa* complaint. This complaint, *Abraham, et al. v. Alcoa, et al.*, was filed on behalf of plaintiffs previously dismissed in the federal court proceeding involving the original litigation over Hurricane Georges impacts. The matter was originally filed in the Superior Court of the Virgin Islands, St. Croix Division, on March 30, 2011.

ParentCo and other defendants in the *Abraham* and *Abednego* cases filed or renewed motions to dismiss each case in March 2012 and August 2012 following service of the *Abraham* complaint on ParentCo and remand of the *Abednego* complaint to Superior Court, respectively. By order dated August 10, 2015, the Superior Court dismissed plaintiffs’ complaints without prejudice to re-file the complaints individually, rather than as a multi-plaintiff filing. The order also preserves the defendants’ grounds for dismissal if new, individual complaints are filed. As of June 10, 2016, approximately 100 separate complaints had been filed in Superior Court, which alleged claims by about 400 individuals. On June 1, 2016, counsel representing plaintiffs filed a motion seeking additional time to file new complaints. The court has not ruled on that request. No further proceedings have been scheduled, and we are unable to reasonably predict an outcome or to estimate a range of reasonably possible loss.

*Glencore Contractual Indemnity Claim.* On June 5, 2015, Alcoa World Alumina LLC (“AWA”) and St. Croix Alumina, L.L.C. (“SCA”) filed a complaint in Delaware Chancery Court for a declaratory judgment and injunctive relief to resolve a dispute between ParentCo and Glencore Ltd. (“Glencore”) with respect to claimed obligations under

a 1995 asset purchase agreement between ParentCo and Glencore. The dispute arose from Glencore's demand that ParentCo indemnify it for liabilities it may have to pay to Lockheed Martin ("Lockheed") related to the St. Croix alumina refinery. Lockheed had earlier filed suit against Glencore in federal court in New York seeking indemnity for liabilities it had incurred and would incur to the U.S. Virgin Islands to remediate certain properties at the refinery property and claimed that Glencore was required by an earlier, 1989 purchase agreement to indemnify it. Glencore had demanded that ParentCo indemnify and defend it in the Lockheed case and threatened to claim against ParentCo in the New York action despite exclusive jurisdiction for resolution of disputes under the 1995 purchase agreement being in Delaware. After Glencore conceded that it was not seeking to add ParentCo to the New York action, AWA and SCA dismissed their complaint in the Chancery Court case and on August 6, 2015 filed a complaint for declaratory judgment in Delaware Superior Court. AWA and SCA filed a motion for judgment on the pleadings on September 16, 2015. Glencore answered AWA's and SCA's complaint and asserted counterclaims on August 27, 2015, and on October 2, 2015 filed its own motion for judgment on the pleadings. Argument on the parties' motions was held by the court on December 7, 2015, and by order dated February 8, 2016, the court granted ParentCo's motion and denied Glencore's motion, resulting in ParentCo not being liable to indemnify Glencore for the Lockheed action. The decision also leaves for pretrial discovery and possible summary judgment or trial Glencore's claims for costs and fees it incurred in defending and settling an earlier Superfund action brought against Glencore by the Government of the Virgin Islands. On February 17, 2016, Glencore filed notice of its application for interlocutory appeal of the February 8 ruling. AWA and SCA filed an opposition to that application on February 29, 2016. On March 10, 2016, the court denied Glencore's motion for interlocutory appeal and on the same day entered judgment on claims other than Glencore's claims for costs and fees it incurred in defending and settling the earlier Superfund action brought against Glencore by the Government of the Virgin Islands. On March 29, 2016, Glencore filed a withdrawal of its notice of interlocutory appeal and on April 6, 2016, Glencore filed an appeal of the court's March 10, 2016 judgment to the Delaware Supreme Court, which set the appeal for argument for November 2, 2016. On November 4, 2016, the Delaware Supreme Court affirmed the judgment of the Delaware Superior Court granting our motion. Remaining in the case were Glencore's claims for costs and fees it incurred related to the previously described Superfund action. On March 7, 2017, Alcoa and Glencore agreed to settle these claims and expect to ask the court to dismiss the case prior to the court's March 21, 2017 scheduled conference. The amount of the settlement is not material.

Some of our subsidiaries as premises owners are defendants in active lawsuits filed on behalf of persons alleging injury as a result of occupational exposure to asbestos at various facilities. A former affiliate of a subsidiary has been named, along with a large common group of industrial companies, in a pattern complaint where our involvement is not evident. Since 1999, several thousand such complaints have been filed. To date, the former affiliate has been dismissed from almost every case that was actually placed in line for trial. Our subsidiaries and acquired companies, all have had numerous insurance policies over the years that provide coverage for asbestos based claims. Many of these policies provide layers of coverage for varying periods of time and for varying locations. We have significant insurance coverage and believes that its reserves are adequate for its known asbestos exposure related liabilities. The costs of defense and settlement have not been and are not expected to be material to the results of operations, cash flows, and financial position of Alcoa Corporation.

#### *Yadkin*

On August 2, 2013, the State of North Carolina, by and through its agency, the North Carolina Department of Administration, filed a lawsuit against Alcoa Power Generating Inc. ("APGI") in Superior Court, Wake County, North Carolina (Docket No. 13-CVS-10477). The lawsuit asserts ownership of certain submerged lands and hydropower generating structures situated at ParentCo's Yadkin Hydroelectric Project (the "Yadkin Project"), including the submerged riverbed of the Yadkin River throughout the Yadkin Project and a portion of the hydroelectric dams that APGI owns and operates pursuant to a license from the Federal Energy Regulatory Commission. The suit seeks declaratory relief regarding North Carolina's alleged ownership interests in the riverbed and the dams and further declaration that APGI has no right, license or permission from North Carolina to operate the Yadkin Project. By notice filed on September 3, 2013, APGI removed the matter to the U.S. District Court for the Eastern District of North Carolina (Docket No. Civil Action No. 5: 13-cv-633). By motion filed September 3, 2013, the Yadkin Riverkeeper sought permission to intervene in the case. On September 25, 2013, APGI filed its answer in the case and also filed its

opposition to the motion to intervene by the Yadkin Riverkeeper. The Court denied the State's Motion to Remand and initially permitted the Riverkeeper to intervene although the Riverkeeper has now voluntarily withdrawn as an intervening party and will participate as amicus.

On July 21, 2014, the parties each filed a motion for summary judgment. On November 20, 2014, the Court denied APGI's motion for summary judgment and denied in part and granted in part the State of North Carolina's motions for summary judgment. The Court held that under North Carolina law, the burden of proof as to title to property is shifted to a private party opposing a state claim of property ownership. The court conducted a trial on navigability on April 21-22, 2015, and, after ruling orally from the bench on April 22, 2015, on May 5, 2015, entered Findings of Fact and Conclusions of Law as to Navigability, ruling in APGI's favor that the state "failed to meet its burden to prove that the Relevant Segment, as stipulated by the parties, was navigable for commerce at statehood." Subsequently, APGI filed a motion for summary judgment as to title; the state filed opposition papers. On September 28, 2015, the Court granted summary judgment in APGI's favor and found that the evidence demonstrates that APGI holds title to the riverbed. The Court further directed judgment to be entered in APGI's favor and closed the case. The court heard argument on October 27, 2016, but has yet to render a decision. On February 2, 2017, APGI completed the sale of its Yadkin Project to a subsidiary of Cube Hydro. On February, 2, 2017, APGI asked the court to substitute the buyer as the real party in interest in the case as APGI had transferred all of its interest in the disputed property to the buyer as of that date. The State of North Carolina opposed that substitution on February 9, 2017. The court had not ruled on APGI's request.

On October 19, 2015, a subsidiary of Alcoa, Alúmina Española S.A., received a request by the Court of Vivero, Spain to provide the names of the "manager," as well as those of the "environmental managers," of the San Ciprián alumina refinery from 2009 to the present date. Upon reviewing the documents filed with the Court, ParentCo learned for the first time that the request is the result of a criminal proceeding that began in 2010 after the filing of a claim by two San Ciprián neighbors alleging that the plant's activities had adverse effects on vegetation, crops and human health. In 2011 and 2012, some neighbors claimed individually in the criminal court for caustic spill damages to vehicles, and the judge decided to administer all issues in the court proceeding (865/2011). Currently, that court proceeding is in its first phase (preliminary investigation phase) led by the judge. The purpose of that investigation is to determine whether there has been a criminal offense for actions against natural resources and the environment. The Spanish public prosecutor is also involved in the case, having requested technical reports. To date, only "Alcoa-Alúmina Española S.A." has been identified as a potential defendant and no Alcoa representative has yet been required to appear before the judge. Monetary sanctions for an offense in the form of a fine could range from 30 to 5,000 euros per day, for a maximum period of three years. The environmental experts appointed by the public prosecutor have submitted their report to the court, and while favorable to the Company, the court has not rendered a ruling in that respect.

### *Tax*

Between 2000 and 2002, Alcoa Alumínio ("Alumínio") sold approximately 2,000 metric tons of metal per month from its Poços de Caldas facility, located in the State of Minas Gerais (the "State"), to Alfio, a customer also located in the State. Sales in the State were exempted from value-added tax ("VAT") requirements. Alfio subsequently sold metal to customers outside of the State, but did not pay the required VAT on those transactions. In July 2002, Alumínio received an assessment from State auditors on the theory that Alumínio should be jointly and severally liable with Alfio for the unpaid VAT. In June 2003, the administrative tribunal found Alumínio liable, and Alumínio filed a judicial case in the State in February 2004 contesting the finding. In May 2005, the Court of First Instance found Alumínio solely liable, and a panel of a State appeals court confirmed this finding in April 2006. Alumínio filed a special appeal to the Superior Tribunal of Justice ("STJ") in Brasilia (the federal capital of Brazil) later in 2006. In 2011, the STJ (through one of its judges) reversed the judgment of the lower courts, finding that Alumínio should neither be solely nor jointly and severally liable with Alfio for the VAT, which ruling was then appealed by the State. In August 2012, the STJ agreed to have the case reheard before a five-judge panel. On February 21, 2017, the lead judge of the STJ issued a ruling confirming that Alumínio should be held liable in this matter. Alumínio is in the process of filing an appeal to have its case reheard before the five-judge panel as originally agreed to by the STJ in August 2012. At December 31, 2016, the assessment totaled \$43 million (R\$142 million), including penalties and interest. While Alcoa believes it has meritorious defenses, we are unable to reasonably predict the ultimate outcome for this matter.

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

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

At December 31, 2016, the combined assessments, including interest, total \$258 million (€246 million). On January 16, 2017, Spain's National Court issued a decision in favor of the Company related to the assessment received in September 2010. On March 6, 2017, the Company was notified that Spain's tax authorities did not file an appeal, for which the deadline has passed. As a result, the assessment related to the 2003 through 2005 tax years is null and void. Spain's National Court has not yet rendered a decision related to the assessment received in July 2013 for the 2006 through 2009 tax years. The amount of this assessment on a standalone basis, including interest, was \$136 million (€130 million) as of December 31, 2016.

The Company believes it has meritorious arguments to support its tax position and intends to vigorously litigate the remaining assessment through Spain's court system. However, in the event the Company is unsuccessful, a portion of the remaining assessment may be offset with existing net operating losses available to the Spanish consolidated tax group, which would be shared between the Company and Arconic as provided for in the Tax Matters Agreement related to the Separation Transaction. Additionally, it is possible that the Company may receive similar assessments for tax years subsequent to 2009. Despite the favorable decision received on the first assessment, at this time, the Company is unable to reasonably predict the ultimate outcome for this matter.

#### *Alumina Limited Litigation*

On May 27, 2016, ParentCo filed a complaint in the Delaware Court of Chancery seeking a declaratory judgment on an expedited basis to forestall what the complaint alleges are continuing threats by Alumina Limited and certain related parties to attempt to interfere with the Separation Transaction and distribution. Alumina Limited claimed that it has certain consent and other rights under certain agreements governing AWAC in connection with the Separation Transaction and distribution.

On September 1, 2016, ParentCo, Alumina Limited, Alcoa Corporation and certain of their respective subsidiaries entered into a settlement and release agreement (the "settlement agreement") providing for a full settlement and release by each party of claims arising from or relating to the Delaware litigation. The settlement agreement also provides for certain changes to the governance and financial policies of the AWAC joint venture effective upon the completion of the Separation Transaction, as well as certain additional changes to their AWAC agreements that become effective only in the event of a change in control of Alumina Limited or Alcoa Corporation. The settlement agreement is not expected to have a material effect, adverse or otherwise, on the future operating results of Alcoa Corporation.

#### **Other Contingencies**

In connection with ParentCo's sale in 2001 of Reynolds Metals Company's ("Reynolds," a subsidiary of Alcoa Corporation), alumina refinery in Gregory, Texas, Reynolds assigned an Energy Services Agreement ("ESA") with Gregory Power Partners ("Gregory Power") for purchase of steam and electricity by the refinery. On January 11, 2016, Sherwin Alumina Company, LLC ("Sherwin"), the current owner of the refinery, and one of its affiliate entities, filed bankruptcy petitions in Corpus Christi, Texas for reorganization under Chapter 11 of the Bankruptcy Code. 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. Sherwin informed the

bankruptcy court that it intends to cease operations because it is not able to continue its bauxite supply agreement, and, thereafter, Gregory Power filed a complaint in the bankruptcy case against Reynolds alleging breach of the ESA. This matter is neither estimable nor probable; therefore, at this time, we are unable to reasonably predict the ultimate outcome.

On October 4, 2016, the state of Texas filed suit against Sherwin in the bankruptcy proceeding seeking to hold Sherwin responsible for remediation of alleged environmental conditions at the facility. On October 11, 2016, Sherwin filed a similar suit against Reynolds in the case. On November 10, 2016, Reynolds filed motions to dismiss the Gregory Power complaint and to withdraw the case from bankruptcy court. 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 and on February 17, 2017 the court approved that plan. As provided in the plan, Sherwin, including certain affiliated companies, and Reynolds are negotiating a settlement to allocate among them ownership of and responsibility for certain areas of the refinery. A definitive agreement is anticipated prior to April 30, 2017 and would resolve outstanding claims made by Sherwin against Reynolds.

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, and tax matters. While the amounts claimed in these other matters may be substantial, the ultimate liability cannot now be determined because of the considerable uncertainties that exist. Therefore, it is possible that the Company's liquidity or results of operations in a particular period could be materially affected by one or more of these other matters. However, based on facts currently available, management believes that the disposition of these other matters that are pending or asserted will not have a material adverse effect, individually or in the aggregate, on the financial position of the Company.

#### **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 Regulation S-K (17 CFR 229.104) is included in Exhibit 95 of this report, which is incorporated herein by reference.

## PART II

### Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Shares of the Company’s common stock are listed on the NYSE and trade under the symbol “AA” in “regular-way” trading, which began on November 1, 2016 immediately following the Separation Transaction. The Company’s high and low trading stock prices for the reporting periods since that time are shown below.

|  | High    | Low     |
|--|---------|---------|
| <b>Fiscal year ended December 31, 2016</b>           |         |         |
| 4 <sup>th</sup> Quarter (beginning November 1, 2016) | \$32.35 | \$21.78 |
| <b>Fiscal year ended December 31, 2017</b>           |         |         |
| 1 <sup>st</sup> Quarter (up to March 1, 2017)        | \$39.78 | \$28.17 |

Alcoa Corporation did not pay dividends in 2016. Dividends on Alcoa Corporation common stock are subject to authorization by the Company’s Board of Directors. The payment and amount of dividends, if any, depends upon matters deemed relevant by the Company’s Board of Directors, such as our results of operations, financial condition, cash requirements, future prospects, any limitations imposed by law, credit agreements or senior securities, and other factors deemed relevant and appropriate. Our senior secured revolving credit facility and the indenture governing our senior unsecured notes restrict our ability to pay dividends in certain circumstances. For more information, see Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources – Financing Activities.”

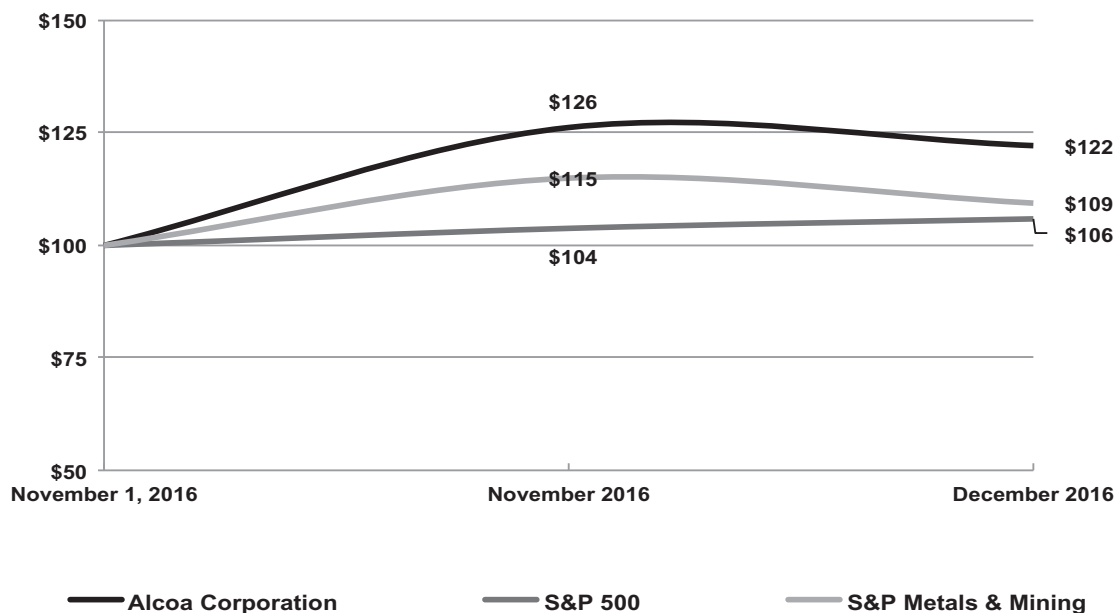
As of March 1, 2017, there were approximately 11,459 holders of record of shares of the Company’s common stock. Because many of Alcoa Corporation’s shares are held by brokers and other institutions on behalf of stockholders, the Company is unable to estimate the total number of stockholders represented by these recordholders.

#### Stock Performance Graph

The following graph compares Alcoa Corporation’s cumulative two-month total shareholder return with (1) the Standard & Poor’s 500<sup>®</sup> Index and (2) the Standard & Poor’s 500<sup>®</sup> Metals & Mining Index. Such information shall not be deemed to be “filed.”

## COMPARISON OF 2 MONTH CUMULATIVE TOTAL RETURN\*

Among Alcoa Corporation, the S&P 500 Index,  
and S&P Metals & Mining



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The graph above tracks the performance of an initial investment of \$100 in Alcoa Corporation's common stock and each of the Standard & Poor's 500® Index and the Standard & Poor's 500® Metals & Mining Index, including the reinvestment of any dividends, from November 1, 2016 (beginning of "regular way" trading) through December 31, 2016.

|   | November 1, 2016 | November 2016 | December 2016 |
|---|------------------|---------------|---------------|
| <b>Alcoa Corporation</b>                      | \$100            | \$126         | \$122         |
| <b>S&amp;P 500® Index</b>                     | 100              | 104           | 106           |
| <b>S&amp;P 500® Metals &amp; Mining Index</b> | 100              | 115           | 109           |

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Source: Research Data Group, Inc. ([www.researchdatagroup.com/S&P.htm](http://www.researchdatagroup.com/S&P.htm))

### Unregistered Sales of Equity Securities

On March 14, 2016, Alcoa Corporation issued 1,000 shares of its common stock to ParentCo pursuant to Section 4(a)(2) of the Securities Act of 1933, as amended. We did not register the issuance of the issued shares under the Securities Act of 1933, as amended because such issuance did not constitute a public offering.

## Item 6. Selected Financial Data.

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

| For the year ended December 31,   | 2016      | 2015      | 2014      | 2013 <sup>(1)</sup> | 2012      |
|---|-----------|-----------|-----------|---------------------|-----------|
| Sales   | \$ 9,318  | \$11,199  | \$13,147  | \$12,573            | \$13,060  |
| Restructuring and other charges   | 318       | 983       | 863       | 712                 | 105       |
| Net loss  | (346)     | (739)     | (347)     | (2,870)             | (250)     |
| Net loss attributable to Alcoa Corporation  | (400)     | (863)     | (256)     | (2,909)             | (219)     |
| Earnings per share attributable to Alcoa Corporation common shareholders <sup>(2)</sup> : |           |           |           |                     |           |
| Basic   | \$ (2.19) | \$ (4.73) | \$ (1.40) | \$ (15.94)          | \$ (1.20) |
| Diluted   | (2.19)    | (4.73)    | (1.40)    | (15.94)             | (1.20)    |
| Shipments of alumina (kmt)  | 9,071     | 10,755    | 10,652    | 9,966               | 9,295     |
| Shipments of aluminum products (kmt)  | 3,147     | 3,227     | 3,518     | 3,742               | 3,933     |
| Alcoa Corporation's average realized price per metric ton of primary aluminum             | \$ 1,862  | \$ 2,092  | \$ 2,396  | \$ 2,280            | \$ 2,353  |
| Cash dividends declared per common share <sup>(3)</sup>                                   | \$ -      | \$ *      | \$ *      | \$ *                | \$ *      |
| Total assets  | 16,741    | 16,413    | 18,680    | 21,126              | 24,777    |
| Total debt  | 1,445     | 225       | 342       | 420                 | 507       |
| Cash provided from operations   | (311)     | 875       | 842       | 452                 | **        |
| Capital expenditures  | (404)     | (391)     | (444)     | (567)               | **        |

<sup>(1)</sup> In 2013, Alcoa Corporation recognized an impairment of goodwill in the amount of \$1,731 (\$1,719 after noncontrolling interest) related to the annual impairment review of its former Primary Metals reporting unit (comprised of Aluminum, Cast Products, and the majority of Energy).

<sup>(2)</sup> For all periods presented prior to 2016, earnings per share was calculated based on the 182,471,195 shares of Alcoa Corporation common stock distributed on November 1, 2016 in conjunction with the completion of the Separation Transaction and is considered pro forma in nature.

<sup>(3)</sup> Dividends on common stock are subject to authorization by Alcoa Corporation's Board of Directors. Alcoa Corporation did not declare any dividends from November 1, 2016 through December 31, 2016.

\* Prior to November 1, 2016, Alcoa Corporation was not a standalone publicly-traded company with issued and outstanding common stock.

\*\* This information is not available and it is impracticable to obtain.

Prior to the Separation Date, Alcoa Corporation did not operate as a separate, standalone entity. Alcoa Corporation's operations were included in ParentCo's financial results. Accordingly, for all periods prior to the Separation Date, Alcoa Corporation's Consolidated Financial Statements were prepared from ParentCo's historical accounting records and were presented on a standalone basis as if Alcoa Corporation's operations had been conducted independently from ParentCo. Such Consolidated Financial Statements include the historical operations that were considered to comprise Alcoa Corporation's businesses, as well as certain assets and liabilities that were historically held at ParentCo's corporate level but were specifically identifiable or otherwise attributable to Alcoa Corporation.

The selected Statement of Consolidated Operations and Consolidated Balance Sheet information in the table above for all periods except 2012 was derived from Alcoa Corporation's audited Consolidated Financial Statements. The information for 2012 was derived from Alcoa Corporation's unaudited underlying financial records, which were derived from ParentCo's financial records.

The data presented in the Selected Financial Data table should be read in conjunction with the information provided in Management's Discussion and Analysis of Financial Condition and Results of Operations in Part II Item 7 and the Consolidated Financial Statements in Part II Item 8 of this Form 10-K.



## **Item 7. 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; bauxite production and shipments in millions of bone dry metric tons [mbdmt]; alumina and aluminum production and shipments in thousands of metric tons [kmt])**

### **Overview**

#### **Our Business**

Alcoa Corporation (or the “Company”) is a vertically integrated aluminum company comprised of bauxite mining, alumina refining, aluminum production (smelting, casting, and rolling), and energy generation. Aluminum is a commodity that is traded on the London Metal Exchange (LME) and priced daily. Additionally, alumina is subject to market pricing against the Alumina Price Index (API). As a result, the price of both aluminum and alumina is subject to significant volatility and, therefore, influences the operating results of Alcoa Corporation.

The Company has 43 operating locations in 10 countries around the world, primarily in Australia, Brazil, Canada, Europe, and the United States. Governmental policies, laws and regulations, and other economic factors, including inflation and fluctuations in foreign currency exchange rates and interest rates, affect the results of operations in these countries.

#### **Separation Transaction**

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 September 28, 2015, ParentCo’s Board of Directors preliminarily approved a plan to separate ParentCo into two standalone, publicly-traded companies (the “Separation Transaction”). One company, later named Alcoa Corporation, was to include the Alumina and Primary Metals segments, which comprised the bauxite mining, alumina refining, aluminum production, and energy operations of ParentCo, as well as the Warrick, Indiana rolling operations and the 25.1% equity interest in the rolling mill at the joint venture in Saudi Arabia, both of which were part of ParentCo’s Global Rolled Products segment. ParentCo, later changed its name to Arconic Inc., was to continue to own the Global Rolled Products (except for the aforementioned rolling operations that were to be included in Alcoa Corporation), Engineered Products and Solutions, and Transportation and Construction Solutions segments.

The Separation Transaction was subject to a number of conditions, including, but not limited to: final approval by ParentCo’s Board of Directors (see below); the continuing validity of the private letter ruling from the Internal Revenue Service regarding certain U.S. federal income tax matters relating to the transaction; receipt of an opinion of legal counsel regarding the qualification of the distribution, together with certain related transactions, as a transaction that is generally tax-free for U.S. federal income tax purposes; and the U.S. Securities and Exchange Commission (the “SEC”) declaring effective a Registration Statement on Form 10, as amended, filed with the SEC on October 11, 2016 (effectiveness was declared by the SEC on October 17, 2016).

On September 29, 2016, ParentCo’s Board of Directors approved the completion of the Separation Transaction by means of a pro rata distribution by ParentCo of 80.1% of the outstanding common stock of Alcoa Corporation to ParentCo shareholders of record as of the close of business on October 20, 2016 (the “Record Date”). Arconic was to retain the remaining 19.9% of Alcoa Corporation common stock. At the time of the Separation Transaction, ParentCo shareholders were to receive one share of Alcoa Corporation common stock for every three shares of ParentCo common stock held as of the close of business on the Record Date. ParentCo shareholders were to receive cash in lieu of fractional shares.

In connection with the Separation Transaction, as of October 31, 2016, Alcoa Corporation entered into certain agreements with Arconic to implement the legal and structural separation between the two companies, govern the relationship between Alcoa Corporation and Arconic after the completion of the Separation Transaction, and allocate between Alcoa Corporation and Arconic various assets, liabilities and obligations, including, among other things, employee benefits, environmental liabilities, intellectual property, and tax-related assets and liabilities. These agreements included a Separation and Distribution Agreement, Tax Matters Agreement, Employee Matters Agreement, Transition Services Agreement, and certain Patent, Know-How, Trade Secret License and Trademark License Agreements.

On November 1, 2016 (the “Separation Date”), the Separation Transaction was completed and became effective at 12:01 a.m. Eastern Standard Time. To effect the Separation Transaction, ParentCo undertook a series of transactions to separate the net assets and certain legal entities of ParentCo, resulting in a cash payment of \$1,072 to ParentCo by Alcoa Corporation with the net proceeds of a previous debt offering (see Financing Activities in Liquidity and Capital Resources below). In conjunction with the Separation Transaction, 146,159,428 shares of Alcoa Corporation common stock were distributed to ParentCo shareholders. Additionally, Arconic retained 36,311,767 shares of Alcoa Corporation common stock representing its 19.9% retained interest (on February 14, 2017, Arconic sold 23,353,000 of these shares). “Regular-way” trading of Alcoa Corporation’s common stock began with the opening of the New York Stock Exchange on November 1, 2016 under the ticker symbol “AA.” Alcoa Corporation’s common stock has a par value of \$0.01 per share.

ParentCo incurred costs to evaluate, plan, and execute the Separation Transaction, and Alcoa Corporation was allocated a pro rata portion of those costs based on segment revenue (see Cost Allocations below). ParentCo recognized \$152 from January 2016 through October 2016 and \$24 in 2015 for costs related to the Separation Transaction, of which \$68 and \$12, respectively, was allocated to Alcoa Corporation. The allocated amounts were included in Selling, general administrative, and other expenses on Alcoa Corporation’s Statement of Consolidated Operations.

**Basis of Presentation.** The Consolidated Financial Statements of Alcoa Corporation are prepared in conformity with accounting principles generally accepted in the United States of America (GAAP) and require management to make certain judgments, estimates, and assumptions. These may affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements. They also may affect the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates upon subsequent resolution of identified matters.

Prior to the Separation Date, Alcoa Corporation did not operate as a separate, standalone entity. Alcoa Corporation’s operations were included in ParentCo’s financial results. Accordingly, for all periods prior to the Separation Date, Alcoa Corporation’s Consolidated Financial Statements were prepared from ParentCo’s historical accounting records and were presented on a standalone basis as if Alcoa Corporation’s operations had been conducted independently from ParentCo. Such Consolidated Financial Statements include the historical operations that were considered to comprise Alcoa Corporation’s businesses, as well as certain assets and liabilities that were historically held at ParentCo’s corporate level but were specifically identifiable or otherwise attributable to Alcoa Corporation.

**Cost Allocations.** The description and information on cost allocations is applicable for all periods included in Alcoa Corporation’s Consolidated Financial Statements prior to the Separation Date.

The Consolidated Financial Statements of Alcoa Corporation include general corporate expenses of ParentCo that were not historically charged to Alcoa Corporation for certain support functions that were provided on a centralized basis, such as expenses related to finance, audit, legal, information technology, human resources, communications, compliance, facilities, employee benefits and compensation, and research and development activities. These general corporate expenses were included in Alcoa Corporation’s Statement of Consolidated Operations within Cost of goods sold, Selling, general administrative and other expenses, and Research and development expenses. These expenses were allocated to Alcoa Corporation on the basis of direct usage when identifiable, with the remainder allocated based on Alcoa Corporation’s segment revenue as a percentage of ParentCo’s total segment revenue for both Alcoa Corporation and Arconic.

All external debt not directly attributable to Alcoa Corporation was excluded from Alcoa Corporation's Consolidated Balance Sheet. Financing costs related to these debt obligations were allocated to Alcoa Corporation based on the ratio of capital invested in Alcoa Corporation to the total capital invested by ParentCo in both Alcoa Corporation and Arconic, and were included in the Alcoa Corporation's Statement of Consolidated Operations within Interest expense.

The following table reflects the allocations described above:

|  | 2016   | 2015  | 2014  |
|--|--------|-------|-------|
| Cost of goods sold <sup>(1)</sup>                                  | \$ 40  | \$ 93 | \$ 76 |
| Selling, general administrative, and other expenses <sup>(2)</sup> | 150    | 146   | 158   |
| Research and development expenses                                  | 2      | 17    | 21    |
| Provision for depreciation, depletion, and amortization            | 18     | 22    | 37    |
| Restructuring and other charges <sup>(3)</sup>                     | 1      | 32    | 23    |
| Interest expense   | 198    | 245   | 278   |
| Other (income) expenses, net                                       | \$ (7) | \$ 12 | \$ 5  |

<sup>(1)</sup> Allocation principally relates to expenses for ParentCo's retained pension and other postretirement benefits associated with closed and sold operations.

<sup>(2)</sup> Allocation includes costs incurred by ParentCo associated with the Separation Transaction (see above).

<sup>(3)</sup> Allocation primarily relates to layoff programs for ParentCo corporate employees.

Management believes the assumptions regarding the allocation of ParentCo's general corporate expenses and financing costs were reasonable.

Nevertheless, the Consolidated Financial Statements of Alcoa Corporation may not include all of the actual expenses that would have been incurred and may not reflect Alcoa Corporation's consolidated results of operations, financial position, and cash flows had it been a standalone company during the periods prior to the Separation Date. Actual costs that would have been incurred if Alcoa Corporation had been a standalone company would depend on multiple factors, including organizational structure, capital structure, and strategic decisions made in various areas, including information technology and infrastructure. Transactions between Alcoa Corporation and ParentCo, including sales to Arconic, were included as related party transactions in Alcoa Corporation's Consolidated Financial Statements and are considered to be effectively settled for cash at the time the transaction was recorded. The total net effect of the settlement of these transactions is reflected in Alcoa Corporation's Statement of Consolidated Cash Flows as a financing activity and in the Company's Consolidated Balance Sheet as Parent Company net investment.

## **Results of Operations**

### **Earnings Summary**

Net loss attributable to Alcoa Corporation for 2016 was \$400 compared with \$863 in 2015. The smaller loss of \$463 was mostly due to lower restructuring-related charges, net productivity improvements, a smaller income tax provision, gains on the sales of multiple assets, and decreases in ongoing overhead and research and development expenses. These positive impacts were partially offset by lower pricing in most operations and costs associated with the Separation Transaction.

Net loss attributable to Alcoa Corporation for 2015 was \$863 compared with \$256 in 2014. The increased loss of \$607 was primarily due to a lower average realized price for both aluminum and alumina, a charge for legal matters in Italy, a discrete income tax charge for valuation allowances on certain deferred tax assets and nondeductible items, lower energy sales, and higher costs. These negative impacts were partially offset by net favorable foreign currency movements, net productivity improvements, and lower charges and expenses related to a number of portfolio actions (such as capacity reductions and divestitures).

**Sales**—Sales for 2016 were \$9,318 compared with sales of \$11,199 in 2015, a decline of \$1,881, or 17%. The decrease was mainly the result of a lower average realized price for each of alumina, aluminum (primary and rolled), and

energy, lower volume for alumina, and the absence of sales related to capacity that was closed or curtailed (see Aluminum and Cast Products in Segment Information below). These negative impacts were slightly offset by higher bauxite sales.

Sales for 2015 were \$11,199 compared with sales of \$13,147 in 2014, a reduction of \$1,948, or 15%. The decrease was primarily due to the absence of sales related to capacity that was closed, sold or curtailed (see Primary Metals (Segments Prior to 2015) in Segment Information below), a lower average realized price for each of aluminum and alumina, and lower energy sales (as a result of lower pricing and unfavorable foreign currency movements). These negative impacts were partially offset by higher volumes of alumina and rolled products.

**Cost of Goods Sold**—COGS as a percentage of Sales was 84.8% in 2016 compared with 80.7% in 2015. The percentage was negatively impacted by a lower average realized price for each of alumina, aluminum (primary and rolled), and energy, and an unfavorable last in, first out (LIFO) adjustment (difference of \$117—see Reconciliation of ATOI to Consolidated Net Loss Attributable to Alcoa Corporation in Segment Information below). These negative impacts were partially offset by net productivity improvements across all segments and lower inventory write-downs related to the decisions to permanently close and/or curtail capacity (difference of \$85—see Restructuring and Other Charges below).

COGS as a percentage of Sales was 80.7% in 2015 compared with 80.2% in 2014. The percentage was negatively impacted by a lower average realized price for both aluminum and alumina, lower energy sales, higher inventory write-downs related to the decisions to permanently close and/or curtail capacity (difference of \$35—see Restructuring and Other Charges below), and higher costs. These negative impacts were mostly offset by net favorable foreign currency movements due to a stronger U.S. dollar, net productivity improvements, a favorable LIFO adjustment (difference of \$103—see Reconciliation of ATOI to Consolidated Net Loss Attributable to Alcoa Corporation (Segments Prior to 2015) in Segment Information below), and the absence of costs related to a new labor agreement that covers employees at seven locations in the United States (see below).

On June 6, 2014, the United Steelworkers ratified a new five-year labor agreement covering approximately 6,100 employees at 10 U.S. locations of ParentCo (of which seven are part of Alcoa Corporation); the previous labor agreement expired on May 15, 2014. In 2014, as a result of the preparation for and ratification of the new agreement, Alcoa Corporation recognized \$7 in COGS for, among other items, business contingency costs and a one-time signing bonus for employees.

**Selling, General Administrative, and Other Expenses**—SG&A expenses were \$359, or 3.9% of Sales, in 2016 compared with \$353, or 3.2% of Sales, in 2015. The increase of \$6 was largely related to higher costs associated with the Separation Transaction (difference of \$61), which includes a higher allocation of \$56 from ParentCo prior to the Separation Date, mostly offset by a decrease in corporate overhead expenses, the absence of SG&A related to closed and sold locations (\$17), and favorable foreign currency movements due to a stronger U.S. dollar.

SG&A expenses were \$353, or 3.2% of Sales, in 2015 compared with \$383, or 2.9% of Sales, in 2014. The decline of \$30 was principally the result of favorable foreign currency movements due to a stronger U.S. dollar and the absence of SG&A (\$15) related to closed and sold locations, partially offset by costs related to the Separation Transaction (\$12).

**Research and Development Expenses**—R&D expenses were \$33 in 2016 compared with \$69 in 2015 and \$95 in 2014. The respective decrease in 2016 as compared to 2015 and in 2015 as compared to 2014 was mainly driven by lower spending related to break-through smelting technology, which decreased each of the last two years as Alcoa Corporation worked towards completion of the R&D phase.

**Provision for Depreciation, Depletion, and Amortization**—The provision for DD&A was \$718 in 2016 compared with \$780 in 2015. The decline of \$62, or 8%, was principally caused by favorable foreign currency movements due to a stronger U.S. dollar, particularly against the Brazilian real and Australian dollar, and the absence of DD&A (\$23) related to capacity reductions at a refinery and smelter in South America that occurred at different points during 2015

(see Alumina in Segment Information below) and a smelter in the United States that occurred in March 2016 (see Aluminum in Segment Information below).

The provision for DD&A was \$780 in 2015 compared with \$954 in 2014. The decrease of \$174, or 18%, was mostly due to favorable foreign currency movements due to a stronger U.S. dollar, particularly against the Australian dollar and Brazilian real, and the absence of DD&A (\$55) related to the divestiture and/or permanent closure of five smelters, one refinery, and one rod mill (see Alumina and Primary Metals (Segments Prior to 2015) in Segment Information below), all of which occurred from March 2014 through June 2015.

**Restructuring and Other Charges**—Restructuring and other charges for each year in the three-year period ended December 31, 2016 were comprised of the following:

|  | 2016         | 2015         | 2014         |
|--|--------------|--------------|--------------|
| Asset impairments  | \$155        | \$311        | \$328        |
| Asset retirement obligations                                 | 97           | 76           | 87           |
| Layoff costs   | 32           | 199          | 157          |
| Environmental remediation                                    | 26           | 86           | 28           |
| Legal matters in Italy                                       | -            | 201          | -            |
| Net (gain) loss on divestitures of businesses                | (3)          | 25           | 214          |
| Other  | 47           | 92           | 66           |
| Reversals of previously recorded layoff and other exit costs | (36)         | (7)          | (17)         |
| <b>Restructuring and other charges</b>                       | <b>\$318</b> | <b>\$983</b> | <b>\$863</b> |

\* In 2016, 2015, and 2014, Other includes \$1, \$32, and \$23, respectively, related to the allocation of restructuring charges to Alcoa Corporation from ParentCo (see Cost Allocations under Separation Transaction above).

Layoff costs were recorded based on approved detailed action plans submitted by the operating locations that specified positions to be eliminated, benefits to be paid under existing severance plans, union contracts or statutory requirements, and the expected timetable for completion of the plans.

**2016 Actions.** In 2016, Alcoa Corporation recorded Restructuring and other charges of \$318, which were comprised of the following components: \$131 for exit costs related to a decision to permanently close and demolish a refinery (see below); \$87 for additional net costs related to decisions made in late 2015 to permanently close and demolish the Warrick (Indiana) smelter and to curtail the Wenatchee (Washington) smelter and Point Comfort (Texas) refinery (see 2015 Actions below); \$72 for the impairment of an interest in gas exploration assets in Western Australia (see below); \$32 for layoff costs related to cost reduction initiatives, including the separation of approximately 75 employees (60 in the Aluminum segment and 15 in the Bauxite segment) and related pension settlement costs; a net charge of \$8 for other miscellaneous items; and a reversal of \$12 associated with a number of small layoff reserves related to prior periods.

In December 2016, management approved the permanent closure of the Suralco refinery (capacity of 2,207 kmt-per-year) in Suriname. The Suralco refinery had been fully curtailed since November 2015 (see 2015 Actions below). Management of ParentCo decided to curtail the remaining operating capacity of the Suralco refinery during 2015 in an effort to improve the position of ParentCo's refining operations on the global alumina cost curve. Since that time, management of ParentCo (through October 31, 2016) and then separately management of Alcoa Corporation (from November 1, 2016 through the end of 2016) had been in discussions with the Government of the Republic of Suriname to determine the best long-term solution for Suralco due to limited bauxite reserves and the absence of a long-term energy alternative. The decision to permanently close the Suralco refinery was based on the ultimate conclusion of those discussions. Demolition and remediation activities related to this action will begin in mid-2017 and are expected to be completed by the end of 2021. The related bauxite mines in Suriname will also be permanently closed while the hydroelectric facility that supplied power to the Suralco refinery, known as Afobaka, will continue to operate and supply power to the Government of the Republic of Suriname.

In 2016, costs related to the closure and curtailment actions included accelerated depreciation of \$70 related to the Warrick smelter as it continued to operate through March 2016; asset impairments of \$16, representing the write-off of the remaining book value of various assets; a reversal of \$24 associated with severance costs initially recorded in late 2015; and \$156 in other costs. Additionally in 2016, remaining inventories, mostly operating supplies and raw materials, were written down to their net realizable value, resulting in a charge of \$5, which was recorded in COGS. The other exit costs of \$156 represent \$94 in asset retirement obligations and \$26 in environmental remediation, both of which were triggered by the decisions to permanently close and demolish the Suralco refinery (includes the rehabilitation of related bauxite mines) and the rehabilitation of a coal mine related to the Warrick smelter, \$32 for contraction terminations, and \$4 in other related costs.

Also in December 2016, management of Alcoa Corporation concluded that an interest in certain gas exploration assets in Western Australia has been impaired. Alcoa of Australia (AofA), a majority-owned subsidiary of Alcoa Corporation that is part of Alcoa World Alumina and Chemicals (see Noncontrolling Interest below), owns an interest in a gas exploration project that was initially entered into in 2007 as a potential source of low-cost gas to supply AofA's refineries in Western Australia. This interest, now at 43%, relates to four separate gas wells. In late 2016, AofA received the results of a technical analysis performed earlier in the year for two of the wells and an updated analysis for a third well that concluded that the cost of gas recovery would be significantly higher than the market price of gas. For the fourth well, the results of a technical analysis performed prior to 2016 indicated that the cost of gas recovery would be lower than the market price of gas and, therefore, would require additional investment to move to the next phase of commercial evaluation, which management previously supported. In late 2016, management re-evaluated its options related to the fourth well and decided it is not economical to make such a commitment for the foreseeable future. As a result, AofA fully impaired its \$72 interest.

As of December 31, 2016, approximately 55 of the 75 employees were separated. The remaining separations for 2016 restructuring programs are expected to be completed by the end of 2017. In 2016, cash payments of \$7 were made against layoff reserves related to 2016 restructuring programs.

**2015 Actions.** In 2015, Alcoa Corporation recorded Restructuring and other charges of \$983, which were comprised of the following components: \$418 for exit costs related to decisions to permanently close and demolish three smelters and a power station (see below); \$238 for the curtailment of two refineries and two smelters (see below); \$201 related to legal matters in Italy; a \$24 net loss primarily related to post-closing adjustments associated with two December 2014 divestitures (see Alumina and Primary Metals (Segments Prior to 2015) in Segment Information below); \$45 for layoff costs, including the separation of approximately 465 employees; \$33 for asset impairments related to prior capitalized costs for an expansion project at a refinery in Australia that is no longer being pursued; a net credit of \$1 for other miscellaneous items; a reversal of \$7 associated with a number of small layoff reserves related to prior periods; and \$32 related to Corporate restructuring allocated to Alcoa Corporation (see Cost Allocations under Separation Transaction above).

During 2015, management initiated various alumina refining and aluminum smelting capacity curtailments and/or closures. The curtailments were composed of the remaining capacity at all of the following: the São Luís smelter in Brazil (74 kmt-per-year); the Suriname refinery (1,330 kmt-per-year); the Point Comfort refinery (2,010 kmt-per-year); and the Wenatchee smelter (143 kmt-per-year). All of the curtailments were completed in 2015 except for 1,635 kmt-per-year at the Point Comfort refinery, which was completed by the end of June 2016. The permanent closures were composed of the capacity at the Warrick smelter (269 kmt-per-year) (includes the closure of a related coal mine) and the infrastructure of the Massena East (New York) smelter (potlines were previously shut down in both 2013 and 2014—see 2014 Actions below), as the modernization of this smelter is no longer being pursued. The closure of the Warrick smelter was completed by the end of March 2016.

The decisions on the above actions were part of a separate 12-month review in refining (2,800 kmt-per-year) and smelting (500 kmt-per-year) capacity initiated by management in March 2015 for possible curtailment (partial or full), permanent closure or divestiture. While many factors contributed to each decision, in general, these actions were initiated to maintain competitiveness amid prevailing market conditions for both alumina and aluminum.

Separate from the actions initiated under the reviews described above, in mid-2015, management approved the permanent closure and demolition of the Poços de Caldas smelter (capacity of 96 kmt-per-year) in Brazil and the Anglesea power station (includes the closure of a related coal mine) in Australia. The entire capacity at Poços de Caldas had been temporarily idled since May 2014 and the Anglesea power station was shut down at the end of August 2015. Demolition and remediation activities related to the Poços de Caldas smelter and the Anglesea power station began in late 2015 and are expected to be completed by the end of 2026 and 2020, respectively.

The decision on the Poços de Caldas smelter was due to management's conclusion that the smelter was no longer competitive as a result of challenging global market conditions for primary aluminum, which led to the initial curtailment, that have not dissipated and higher costs. For the Anglesea power station, the decision was made because a sale process did not result in a sale and there would have been imminent operating costs and financial constraints related to this site in the remainder of 2015 and beyond, including significant costs to source coal from available resources, necessary maintenance costs, and a depressed outlook for forward electricity prices. The Anglesea power station previously supplied approximately 40 percent of the power needs for the Point Henry smelter, which was closed in August 2014 (see 2014 Actions below).

In 2015, costs related to the closure and curtailment actions included asset impairments of \$226, representing the write-off of the remaining book value of all related properties, plants, and equipment; \$154 for the layoff of approximately 3,100 employees (1,800 in the former Primary Metals segment and 1,300 in the former Alumina segment—see Segment Information below), including \$30 in pension costs; accelerated depreciation of \$85 related to certain facilities as they continued to operate during 2015; and \$222 in other exit costs. Additionally in 2015, remaining inventories, mostly operating supplies and raw materials, were written down to their net realizable value, resulting in a charge of \$90, which was recorded in COGS. The other exit costs of \$222 represent \$72 in asset retirement obligations and \$85 in environmental remediation, both of which were triggered by the decisions to permanently close and demolish the aforementioned structures in the United States, Brazil, and Australia (includes the rehabilitation of a related coal mine in each of Australia and the United States), and \$65 in supplier and customer contract-related costs.

As of December 31, 2016, approximately 3,200 of the 3,400 (previously 3,600) employees were separated. The total number of employees associated with 2015 restructuring programs was updated to reflect employees, who were initially identified for separation, accepting other positions within ParentCo and natural attrition. The remaining separations for 2015 restructuring programs are expected to be completed by mid-2017. In 2016 and 2015, cash payments of \$65 and \$26, respectively, were made against layoff reserves related to 2015 restructuring programs.

**2014 Actions.** In 2014, Alcoa Corporation recorded Restructuring and other charges of \$863, which were comprised of the following components: \$526 for exit costs related to decisions to permanently shut down and demolish three smelters (see below); a \$216 net loss for the divestitures of three operations (see Alumina and Primary Metals (Segments Prior to 2015) in Segment Information below); \$61 for the temporary curtailment of two smelters and a related production slowdown at one refinery (see below); \$33 for asset impairments related to prior capitalized costs for a modernization project at a smelter in Canada that is no longer being pursued; \$9 for layoff costs, including the separation of approximately 60 employees; a net charge of \$4 for an environmental charge at a previously shut down refinery; \$9 primarily for the reversal of a number of layoff reserves related to prior periods; and \$23 related to Corporate restructuring allocated to Alcoa Corporation (see Cost Allocations under Separation Transaction above).

In early 2014, management approved the permanent closure and demolition of the remaining capacity (84 kmt-per-year) at the Massena East smelter and the full capacity (190 kmt-per-year) at the Point Henry smelter in Australia. The capacity at Massena East was fully shut down by the end of March 2014 and the Point Henry smelter was fully shut down in August 2014. Demolition and remediation activities related to both the Massena East and Point Henry smelters began in late 2014 and are expected to be completed by the end of 2020 and 2018, respectively.

The decisions on the Massena East and Point Henry smelters were part of a 15-month review of 460,000 metric tons of smelting capacity initiated by management in May 2013 for possible curtailment. Through this review, management determined that the remaining capacity of the Massena East smelter was no longer competitive and the Point Henry smelter had no prospect of becoming financially viable.

Management also initiated the temporary curtailment of the remaining capacity (62 kmt-per-year) at the Poços de Caldas smelter and additional capacity (85 kmt-per-year) at the São Luís smelter. These curtailments were completed by the end of May 2014. As a result of these curtailments, 200 kmt-per-year of production at the Poços de Caldas refinery was reduced by the end of June 2014.

Additionally, in August 2014, management approved the permanent closure and demolition of the capacity (150 kmt-per-year) at the Portovesme smelter in Italy, which had been idle since November 2012. This decision was made because the fundamental reasons that made the Portovesme smelter uncompetitive remained unchanged, including the lack of a viable long-term power solution. Demolition and remediation activities related to the Portovesme smelter began in 2016 and are expected to be completed by the end of 2022 (delayed due to discussions with the Italian government and other stakeholders).

In 2014, costs related to the closure and curtailment actions included \$149 for the layoff of approximately 1,290 employees, including \$24 in pension costs; accelerated depreciation of \$146 related to the Point Henry smelter in Australia as they continued to operate during 2014; asset impairments of \$150 representing the write-off of the remaining book value of all related properties, plants, and equipment; and \$152 in other exit costs. Additionally in 2014, remaining inventories, mostly operating supplies and raw materials, were written down to their net realizable value, resulting in a charge of \$55, which was recorded in COGS. The other exit costs of \$152 represent \$87 in asset retirement obligations and \$24 in environmental remediation, both of which were triggered by the decisions to permanently close and demolish the aforementioned structures in Australia, Italy, and the United States, and \$41 in other related costs, including supplier and customer contract-related costs.

As of March 31, 2016, the separations associated with 2014 restructuring programs were essentially complete. In 2016 and 2015, cash payments of \$1 and \$34, respectively, were made against layoff reserves related to 2014 restructuring programs.

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:

|                                       | 2016  | 2015  | 2014  |
|---------------------------------------|-------|-------|-------|
| Bauxite                               | \$ 18 | \$ 16 | \$ -  |
| Alumina                               | 182   | 212   | 283   |
| Aluminum                              | 96    | 610   | 559   |
| Cast Products                         | (1)   | 2     | (2)   |
| Energy                                | 23    | 84    | -     |
| Rolled Products                       | -     | 9     | -     |
| Segment total                         | 318   | 933   | 840   |
| Corporate                             | -     | 50    | 23    |
| Total restructuring and other charges | \$318 | \$983 | \$863 |

**Interest Expense**—Interest expense was \$243 in 2016 compared with \$270 in 2015. The decline of \$27, or 10%, was primarily related to two less months of allocated interest (\$47) from ParentCo in 2016 as a result of the Separation Transaction, partially offset by interest expense associated with newly issued debt (\$22 – see Financing Activities in Liquidity and Capital Resources below).

Interest expense was \$270 in 2015 compared with \$309 in 2014. The decrease of \$39, or 13%, was largely due to a lower allocation to Alcoa Corporation of ParentCo's interest expense, which was primarily a function of the lower ratio



in 2015 (as compared to 2014) of capital invested by ParentCo in the operations related to the then-future Alcoa Corporation company to the total capital invested by ParentCo in the operations of both the then-future Alcoa Corporation and Arconic companies, partially offset by higher interest expense at ParentCo subject to allocation.

**Other (Income) Expenses, net**—Other income, net was \$89 in 2016 compared with Other expenses, net of \$42 in 2015. The change of \$131 was mostly attributable to gains on the sales of several assets as follows: wharf property near the Intalco, Washington smelter (\$118), an equity interest in a natural gas pipeline in Australia (\$27), and several parcels of land (\$19); a lower equity loss related to Alcoa Corporation's equity investments (\$19); a net favorable change in mark-to-market derivative contracts (\$17); and a benefit for an arbitration recovery related to a 2010 fire at the Iceland smelter (\$14). These items were somewhat offset by net unfavorable foreign currency movements (\$47) and the absence of a gain on the sale of land around the Lake Charles, Louisiana anode facility (\$29).

Other expenses, net was \$42 in 2015 compared with \$58 in 2014. The decrease of \$16 was mainly the result of a gain on the sale of land around the Lake Charles, Louisiana anode facility (\$29), net favorable foreign currency movements (\$23), and a lower equity loss related to Alcoa Corporation's equity investments (\$5), partially offset by the absence of a gain on the sale of a mining interest in Suriname (\$28) and an unfavorable change in mark-to-market derivative contracts (\$13).

**Income Taxes**—Alcoa Corporation's effective tax rate was 113.6% (provision on a loss) in 2016 compared with the U.S. federal statutory rate of 35%. The effective tax rate differs (by (148.6) percentage points) from the U.S. federal statutory rate primarily related to U.S. losses and tax credits with no tax benefit realizable in Alcoa Corporation.

Alcoa Corporation's effective tax rate was 119.3% (provision on a loss) in 2015 compared with the U.S. federal statutory rate of 35%. The effective tax rate differs (by (154.3) percentage points) from the U.S. federal statutory rate principally driven by U.S. losses and tax credits with no tax benefit realizable in Alcoa Corporation, a \$141 discrete income tax charge for valuation allowances on certain deferred tax assets in Suriname (\$85, \$51 after noncontrolling interest) and Iceland (\$56) (see Income Taxes in Critical Accounting Policies and Estimates below), a \$201 charge for legal matters in Italy (see Restructuring and Other Charges above) that is nondeductible for income tax purposes, and restructuring charges related to the curtailment of a refinery in Suriname (see Restructuring and Other Charges above), a portion for which no tax benefit was recognized.

Alcoa Corporation's effective tax rate was 450.8% (provision on a loss) in 2014 compared with the U.S. federal statutory rate of 35%. The effective tax rate differs (by (485.8) percentage points) from the U.S. federal statutory rate mainly due to U.S. losses and tax credits with no tax benefit realizable in Alcoa Corporation, restructuring charges related to operations in Italy (no tax benefit) and Australia (benefit at a lower tax rate) (see Restructuring and Other Charges above), a \$52 (\$31 after noncontrolling interest) discrete income tax charge related to a tax rate change in Brazil (see below), and a \$27 (\$16 after noncontrolling interest) discrete income tax charge for the remeasurement of certain deferred tax assets of a subsidiary in Spain due to a November 2014 enacted tax rate change (from 30% in 2014 to 28% in 2015 to 25% in 2016). These items were somewhat offset by foreign income taxed in lower-rate jurisdictions

In December 2011, one of ParentCo's subsidiaries in Brazil applied for a tax holiday related to its expanded mining and refining operations. During 2013, the application was amended and re-filed and, separately, a similar application was filed for another one of ParentCo's subsidiaries in Brazil that had significant operations related to Alcoa Corporation. The deadline for the Brazilian government to deny the application was July 11, 2014. Since ParentCo did not receive notice that its applications were denied, the tax holiday took effect automatically on July 12, 2014. As a result, the tax rate applicable to qualified holiday income for these entities decreased significantly (from 34% to 15.25%), resulting in future cash tax savings over the 10-year holiday period (retroactively effective as of January 1, 2013). Additionally, a portion of one of the entities net deferred tax asset that reverses within the holiday period was remeasured at the new tax rate (the net deferred tax asset of the other entity was not remeasured since it could still be utilized against the entity's future earnings not subject to the tax holiday). This remeasurement resulted in a decrease to that entity's net deferred tax asset and a noncash charge to earnings of \$52 (\$31 after noncontrolling interest).

Management anticipates that the effective tax rate in 2017 will be between 30% and 40%. However, business portfolio actions, changes in the current economic environment, tax legislation or rate changes, currency fluctuations,

ability to realize deferred tax assets, and the results of operations in certain taxing jurisdictions may cause this estimated rate to fluctuate.

**Noncontrolling Interest**—Net income attributable to noncontrolling interest was \$54 in 2016 compared with Net income attributable to noncontrolling interest of \$124 in 2015 and Net loss attributable to noncontrolling interest of \$91 in 2014. These amounts are entirely related to Alumina Limited of Australia's (Alumina Limited) 40% ownership interest in a number of 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. 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 (AWA), 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. These combined entities generated income in both 2016 and 2015 and a loss in 2014.

In 2016, these combined entities generated lower net income compared to 2015. The unfavorable change in earnings was primarily related to a decline in operating results (see below), restructuring charges related to the permanent closure of the Suralco refinery and related bauxite mines in Suriname (see Restructuring and Other Charges above), and the impairment of an interest in certain gas exploration assets in Western Australia (see Restructuring and Other Charges above). These negative impacts were partially offset by the absence of restructuring charges related to the curtailment of both the Suralco and Point Comfort, Texas refineries and the permanent closure of the Anglesea power station and coal mine in Australia (see Restructuring and Other Charges above), the absence of an \$85 (\$34 was noncontrolling interest's share) discrete income tax charge for a valuation allowance on certain deferred tax assets (see Income Taxes above), and a \$27 (\$8 was noncontrolling interest's share) gain on the sale of an equity interest in a natural gas pipeline in Australia. The decrease in these combined entities' operating results was mostly caused by a lower average realized alumina price, somewhat offset by net productivity improvements and an increase in third-party bauxite shipments (see Bauxite and Alumina in Segment Information below).

In 2015, these combined entities generated net income compared to a net loss in 2014. The favorable change in earnings was principally due to improved operating results (see below), the absence of restructuring and other charges related to both the permanent closure of the Point Henry smelter in Australia (see Restructuring and Other Charges above) and the divestiture of an ownership interest in a mining and refining joint venture in Jamaica (see Alumina (Segments Prior to 2015) in Segment Information below), and the absence of a combined \$79 (\$32 was noncontrolling interest's share) discrete income tax charge related to a respective tax rate change in both Brazil and Spain (see Income Taxes above). These positive impacts were somewhat offset by restructuring charges related to the curtailment of both the Suralco and Point Comfort refineries and the permanent closure of the Anglesea power station and coal mine (see Restructuring and Other Charges above), an \$85 (\$34 was noncontrolling interest's share) discrete income tax charge for a valuation allowance on certain deferred tax assets (see Income Taxes above), and the absence of a \$28 (\$11 was noncontrolling interest's share) gain on the sale of a mining interest in Suriname. The improvement in these combined entities' operating results was largely attributable to net favorable foreign currency movements, net productivity improvements, and lower input costs, slightly offset by a lower average realized alumina price (see Alumina (Segments Prior to 2015) in Segment Information below).

## **Segment Information**

Alcoa Corporation is a producer of bauxite, alumina, primary aluminum, and aluminum sheet and the Company's segments are organized by product on a worldwide basis. Segment performance under Alcoa Corporation's management reporting system is evaluated based on a number of factors; however, the primary measure of performance is the after-tax operating income (ATOI) of each segment. Certain items such as the impact of LIFO inventory accounting; metal price lag; interest expense; noncontrolling interest; corporate expense (general administrative and selling expenses of operating the corporate headquarters and other global administrative facilities,

along with depreciation and amortization on corporate-owned assets); restructuring and other charges; income taxes, including the impact of any discrete tax items, deferred tax valuation allowance adjustments, and other differences between tax rates applicable to the segments and the consolidated effective tax rate; and intersegment profit elimination and other nonoperating items such as foreign currency transaction gains/losses, gains/losses on certain asset sales, and interest income are excluded from segment ATOI.

Effective January 1, 2015, Alcoa Corporation redefined its segments concurrent with an internal reorganization for certain of its businesses. Following this reorganization, Alcoa Corporation's operations consist of six reportable segments: Bauxite, Alumina, Aluminum, Cast Products, Energy, and Rolled Products. Under the applicable reporting guidance, when a Company changes its organizational structure, it should generally prepare its segment information based on the new segments and provide comparative information for related periods. However, in certain instances, changes to the structure of an internal organization could change the composition of its reportable segments and it may not be practical to retrospectively revise prior periods. In connection with the January 1, 2015 reorganization, Alcoa Corporation fundamentally altered the commercial nature of how certain internal businesses transact with each other, moving from a cost-based transfer pricing model to one based on estimated market pricing. As a result, certain operations (e.g., bauxite mining, smelting and casting) that had previously been measured and evaluated primarily based on costs incurred were transformed into separate businesses with full profit and loss information. In addition, this reorganization involved converting regional-based management responsibility to global responsibility for each business, which had a further impact on overall cost structures of the segments.

As a result of the significant changes associated with the reorganization (including substantial information system modifications), which were implemented on a prospective basis only, Alcoa Corporation does not have all of the information that would be necessary to present certain segment data, specifically ATOI, income taxes and total assets, for periods prior to 2015. This information is not available to Alcoa Corporation management for its own internal use, and it is impracticable to obtain or generate this information, as underlying commercial transactions between the segments, which are necessary to determine these income-based and asset-based segment measures, did not take place prior to 2015.

The following discussion provides comparative information for 2016 and 2015 related to Alcoa Corporation's six reportable segments. In addition, comparative information for 2015 and 2014 is provided on a supplemental basis for the reportable segments that were in effect for periods prior to 2015: Alumina, Primary Metals, and Rolled Products.

ATOI for all reportable segments under the current segment structure totaled \$506 in 2016 and \$1,010 in 2015. The following information provides sales and ATOI data for each reportable segment, as well as certain production, shipments, realized price, and average cost data, for each of the two years in the period ended December 31, 2016. See Note E to the Consolidated Financial Statements in Part II Item 8 of this Form 10-K for additional information.

### Bauxite

|  | 2016    | 2015    |
|--|---------|---------|
| Bauxite production (mbdmt)                             | 45.0    | 45.3    |
| Third-party bauxite shipments (mbdmt)                  | 6.4     | 2.0     |
| Alcoa Corporation's average cost per mbdmt of bauxite* | \$ 16   | \$ 19   |
| Third-party sales                                      | \$ 315  | \$ 71   |
| Intersegment sales                                     | 751     | 1,160   |
| Total sales  | \$1,066 | \$1,231 |
| ATOI   | \$ 212  | \$ 258  |

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

This segment represents Alcoa Corporation's global portfolio of bauxite mining assets. Bauxite is mined and sold primarily to internal customers within the Alumina segment, who then process it into alumina. A portion of this segment's production is also sold to third parties. Bauxite is transferred to the Alumina segment at negotiated terms that are intended to approximate market prices; sales to third parties are conducted on a contract basis.

In 2016, bauxite production decreased by 0.3 mbdmt compared to 2015. The decline was mostly the result of the curtailment, and subsequent closure, of the mine and refinery in Suriname (see Alumina below), mostly offset by higher production across the remaining bauxite portfolio as this segment expands its third-party bauxite business.

Third-party sales for the Bauxite segment improved \$244 in 2016 compared with 2015, largely attributable to significantly higher volume as this segment expands its third-party bauxite business.

Intersegment sales for this segment declined 35% in 2016 compared with 2015, primarily driven by lower demand from the Alumina segment and a lower average realized price.

ATOI for the Bauxite segment decreased \$46 in 2016 compared with 2015, mainly caused by a lower average realized price for intersegment sales, partially offset by net productivity improvements and the previously mentioned higher third-party volume.

In 2017, total bauxite shipments are expected to be between 47.5 and 48.5 mbdmt, driven by incremental volumes from the Juruti (Brazil) and Huntly (Australia) mines. In December 2016, Alcoa secured its first major third-party contract to supply bauxite from its Huntly mine. The Western Australia State Government has also granted approval for Alcoa to export up to 2,500 kmt per annum of bauxite for five years to third-party customers.

## Alumina

|  | 2016     | 2015     |
|--|----------|----------|
| Alumina production (kmt)   | 13,251   | 15,720   |
| Third-party alumina shipments (kmt)                                  | 9,071    | 10,755   |
| Alcoa Corporation's average realized price per metric ton of alumina | \$ 254   | \$ 311   |
| Alcoa Corporation's average cost per metric ton of alumina*          | \$ 246   | \$ 266   |
| Third-party sales  | \$ 2,300 | \$ 3,343 |
| Intersegment sales   | 1,307    | 1,687    |
| Total sales  | \$ 3,607 | \$ 5,030 |
| ATOI   | \$ 102   | \$ 476   |

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

This segment represents Alcoa Corporation's worldwide refining system, which processes bauxite into alumina, which is mainly sold directly to internal and external smelter customers worldwide, or is sold to customers who process it into industrial chemical products. More than half of Alumina's production is sold under supply contracts to third parties worldwide, while the remainder is used internally by the Aluminum segment. Alumina produced by this segment and used internally is transferred to the Aluminum segment at prevailing market prices. A portion of this segment's third-party sales are completed through the use of agents, alumina traders, and distributors.

At December 31, 2016, Alcoa Corporation had 2,305 kmt of idle capacity on a base capacity of 15,064 kmt. In 2016, idle capacity decreased 572 kmt compared to 2015, due to the permanent closure of the Suralco refinery in Suriname (2,207 kmt-per-year), partially offset by the curtailment of 1,635 kmt at the Point Comfort, Texas refinery. Base capacity declined 2,207 kmt between December 31, 2016 and 2015 due to the previously mentioned permanent closure of the Suralco refinery.

In March 2015, management initiated a 12-month review of 2,800 kmt in refining capacity for possible curtailment (partial or full), permanent closure or divestiture. This review was part of management's target to lower Alcoa Corporation's refining operations on the global alumina cost curve to the 21st percentile (currently 17th) by the end of 2016. As part of this review, in 2015, management decided to curtail the remaining operating capacity at both the

Suralco (1,330 kmt-per-year) and Point Comfort (2,010 kmt-per-year) refineries. The curtailment of the capacity at Suralco and Point Comfort was completed by the end of November 2015 and June 2016 (375 kmt-per-year was completed by the end of December 2015), respectively. Point Comfort has nameplate capacity of 2,305 kmt-per-year, of which 295 kmt was curtailed prior to the review. While management has completed this specific review of Alcoa Corporation's refining capacity, analysis of portfolio optimization in light of changes in the marketplace that may occur at any given time is ongoing.

In December 2016, management approved the permanent closure of the Suralco refinery effective immediately. As previously mentioned, the Suralco refinery had been fully curtailed since November 2015. Since that time, management of ParentCo (through October 31, 2016) and then separately management of Alcoa Corporation (from November 1, 2016 through the end of 2016) had been in discussions with the Government of the Republic of Suriname to determine the best long-term solution for Suralco due to limited bauxite reserves and the absence of a long-term energy alternative. The decision to permanently close the Suralco refinery was based on the ultimate conclusion of those discussions. The related bauxite mines in Suriname will also be permanently closed while the hydroelectric facility that supplied power to the Suralco refinery, known as Afobaka, will continue to operate and supply power to the Government of the Republic of Suriname.

See Restructuring and Other Charges in Results of Operations above for a description of the associated charges related to all of the above actions in 2016 and 2015.

In 2016, alumina production declined by 2,469 kmt compared to 2015, mostly the result of lower production at the Point Comfort refinery and the absence of production at the Suralco refinery due to the actions described above.

Third-party sales for the Alumina segment decreased 31% in 2016 compared with 2015, largely attributable to an 18% drop in average realized price and a 16% decline in volume. The change in average realized price was mainly driven by a 23% lower average alumina index price and the decrease in volume was primarily due to lower demand.

Intersegment sales for this segment declined 23% in 2016 compared with 2015, principally caused by lower demand from the Aluminum segment, as a result of the closure or curtailment of three smelters (see Aluminum below) that occurred at different points in 2016 and 2015, and a lower average realized price.

ATOI for the Alumina segment decreased \$374 in 2016 compared with 2015, primarily due to the previously mentioned lower average realized alumina price and higher costs for caustic and other inputs, including labor, somewhat offset by net productivity improvements and lower cost for bauxite.

In 2017, alumina production will reflect the absence of approximately 200 kmt due to the curtailment of the Point Comfort refinery. Additionally, net productivity improvements are anticipated.

## Aluminum

|  | 2016    | 2015    |
|--|---------|---------|
| Aluminum production (kmt)                                    | 2,423   | 2,811   |
| Alcoa Corporation's average cost per metric ton of aluminum* | \$1,581 | \$1,828 |
| Third-party sales  | \$ 9    | \$ 14   |
| Intersegment sales   | 3,754   | 5,092   |
| Total sales  | \$3,763 | \$5,106 |
| ATOI   | \$ (19) | \$ 1    |

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

This segment represents Alcoa Corporation's worldwide smelter system. Aluminum receives alumina, mostly from the Alumina segment, and produces molten primary aluminum. Virtually all of Aluminum's production is sold internally to the Cast Products or Rolled Products segment, and is transferred at prevailing market prices.

At December 31, 2016, Alcoa Corporation had 778 kmt of idle capacity on a base capacity of 3,132 kmt. Idle capacity was unchanged compared to 2015. Base capacity declined 269 kmt between December 31, 2016 and 2015 due to the permanent closure of the Warrick, Indiana smelter.

In March 2015, management initiated a 12-month review of 500 kmt in smelting capacity for possible curtailment (partial or full), permanent closure or divestiture. This review was part of management's target to lower Alcoa Corporation's smelting operations on the global aluminum cost curve to the 38th percentile (currently 38th) by the end of 2016. In summary, under this review, management approved the curtailment of 447 kmt-per-year and the closure of 269 kmt-per-year. The following is a description of each action.

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

Additionally, in November 2015, management decided to curtail the remaining capacity at the Intalco (230 kmt-per-year) and Wenatchee (143 kmt-per-year) smelters, both in Washington. These two smelters previously had curtailed capacity of 90 kmt-per-year combined. The curtailment of the remaining capacity at Wenatchee was completed by the end of December 2015 and the curtailment of the remaining capacity at Intalco was expected to be completed by the end of June 2016; however, in May 2016, Alcoa Corporation reached agreement on a new power contract that will help improve the competitiveness of the smelter, resulting in the termination of the planned curtailment.

Furthermore, in December 2015, management approved the permanent closure of the Warrick smelter (269 kmt-per-year). This decision was made as this smelter was no longer competitive in light of prevailing market conditions for the price of aluminum at that time. The closure of the Warrick smelter was completed by the end of March 2016.

While management has completed this specific review of Alcoa Corporation's smelting capacity, analysis of portfolio optimization in light of changes in the marketplace that may occur at any given time is ongoing.

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

See Restructuring and Other Charges in Results of Operations above for a description of the associated charges related to all of the above actions in 2016 and 2015.

In 2016, aluminum production declined by 388 kmt compared to 2015, mostly the result of the absence of production at the combined three smelters (Warrick, Wenatchee, and São Luís) impacted by the 2015 capacity review described above.

Intersegment sales for the Primary Metals segment declined 26% in 2016 compared with 2015, mainly due to a decrease in average realized price, lower sales (approximately \$415) from the Warrick smelter that was closed in early 2016, and the absence of sales (approximately \$300) from the Wenatchee and São Luís smelters in 2015.

ATOI for the Primary Metals segment decreased \$20 in 2016 compared with 2015, primarily caused by the previously mentioned lower average realized aluminum price, mostly offset by all of the following: lower costs for all major inputs (alumina, energy, and carbon); net productivity improvements; and net favorable foreign currency movements due to a stronger U.S. dollar, especially against the Icelandic króna and Norwegian krone.

In 2017, aluminum production will reflect the absence of approximately 50 kmt due to the closure of the Warrick smelter. Additionally, net productivity improvements are anticipated. As described in the Segments Subsequent to 2016 section below, this segment will be combined with the Cast Products and Rolled Products segments, along with a majority of the Energy segment, into one operating segment for 2017.

## Cast Products

|  | 2016    | 2015    |
|--|---------|---------|
| Third-party aluminum shipments (kmt)                                   | 2,793   | 2,957   |
| Alcoa Corporation's average realized price per metric ton of aluminum* | \$1,862 | \$2,092 |
| Alcoa Corporation's average cost per metric ton of aluminum**          | \$1,735 | \$2,019 |
| Third-party sales  | \$5,201 | \$6,186 |
| Intersegment sales   | 316     | 46      |
| Total sales  | \$5,517 | \$6,232 |
| ATOI   | \$ 176  | \$ 110  |

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

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

This segment represents Alcoa Corporation's worldwide cast house system. Cast products are made from molten aluminum, purchased primarily from Alcoa Corporation's Aluminum segment, which is then formed into various value-add ingot products, including billet and slab, for use in fabrication operations in a variety of industries. Results from the sale of aluminum powder and scrap are also included in this segment. The majority of this segment's products are sold to third parties, including to Arconic's aluminum fabrication businesses; the remaining portion is sold to the Rolled Products segment at prevailing market prices.

Third-party sales for the Cast Products segment declined 16% in 2016 compared with 2015, primarily related to an 11% drop in average realized price and a 6% decrease in volume. The change in average realized price was mainly driven by lower regional premiums, which dropped by an average of 40% in the United States and Canada, 44% in Europe, and 53% in the Pacific region, and a 5% lower average LME price (on 15-day lag).

Intersegment sales for this segment increased \$270 in 2016 compared with 2015, largely attributable to higher demand from the Rolled Products segment, as the Warrick rolling mill converted from a hot metal plant to a cold metal plant (see Rolled Products below) due to the permanent closure of the Warrick smelter in March 2016 (see Aluminum above).

ATOI for the Cast Products segment improved \$66 in 2016 compared with 2015, principally the result of a decrease in the cost of molten aluminum, net productivity improvements, and a smaller equity loss related to the casthouse portion of the investment in Saudi Arabia, partially offset by the previously mentioned decrease in average realized aluminum price, including product premiums.

In 2017, third-party sales will reflect the impact of restarting capacity at the Portland aluminum smelter following the December 2016 power outage. Additionally, net productivity improvements are anticipated while the impact of long markets, despite strong demand, is expected to pressure value-added product pricing. As described in the Segments Subsequent to 2016 section below, this segment will be combined with the Aluminum and Rolled Products segments, along with a majority of the Energy segment, into one operating segment for 2017.

## Energy

|                         | 2016   | 2015   |
|-------------------------|--------|--------|
| Third-party sales (GWh) | 7,101  | 6,604  |
| Third-party sales       | \$ 280 | \$ 426 |
| Intersegment sales      | 168    | 297    |
| Total sales             | \$ 448 | \$ 723 |
| ATOI                    | \$ 76  | \$ 145 |

This segment represents Alcoa Corporation's portfolio of energy assets, with power production capacity of approximately 1,685 megawatts. This power is sold to both internal customers within the Aluminum segment and external customers, and provides operational flexibility to maximize operating results during market cyclicality.

In July 2016, Alcoa Corporation's wholly-owned subsidiary, Alcoa Power Generating Inc., reached an agreement to sell its 215-megawatt Yadkin Hydroelectric Project (Yadkin) to Cube Hydro Carolinas, LLC. Yadkin encompasses four hydroelectric power developments (reservoirs, dams and powerhouses), known as High Rock, Tuckertown, Narrows and Falls, situated along a 38-mile stretch of the Yadkin River through the central part of North Carolina. This transaction closed in February 2017. The power generated by Yadkin was primarily sold into the open market. Yadkin generated sales of \$29 in 2016 and had approximately 30 employees as of December 31, 2016.

Third-party sales for the Energy segment decreased 34% in 2016 compared with 2015, primarily driven by lower energy prices in Brazil. A significant portion of the sales in Brazil relate to energy previously consumed by Alcoa's two smelters in Brazil, São Luís (fully curtailed since early 2015) and Poços de Caldas (fully curtailed since mid-2014 and permanently closed in mid-2015).

Intersegment sales for this segment declined 43% in 2016 compared with 2015, principally the result of lower demand from the Aluminum and Alumina segments due to the permanent closure of the Warrick smelter in March 2016 and the full curtailment (portions of capacity were curtailed throughout 2015) of the Suralco refinery in November 2015, respectively.

ATOI for the Energy segment decreased \$69 in 2016 compared with 2015, mainly due to both the previously mentioned lower energy prices in Brazil and the lower demand from internal consumers.

In 2017, energy prices in Brazil are expected to remain depressed and third-party sales will reflect the absence of sales related to Yadkin. As described in the Segments Subsequent to 2016 section below, the majority of this segment will be combined with the Aluminum, Cast Products, and Rolled Products segments into one operating segment for 2017.

## **Rolled Products**

|  | 2016    | 2015    |
|--|---------|---------|
| Third-party aluminum shipments (kmt)                                   | 354     | 266     |
| Alcoa Corporation's average realized price per metric ton of aluminum* | \$3,022 | \$3,728 |
| Third-party sales  | \$1,069 | \$ 993  |
| ATOI   | \$ (41) | \$ 20   |

\* Generally, average realized price per metric ton of aluminum includes two elements: a) the price of metal (the underlying base metal component plus a regional premium – see the footnote to the table in Cast Products above for a description of these two components), and b) the conversion price, which represents the incremental price over the metal price component that is associated with converting primary aluminum into sheet and plate. The metal price component is a pass-through to this segment's customers.

This segment represents Alcoa Corporation's rolling mill in Warrick, Indiana, which produces aluminum sheet primarily sold directly to customers in the packaging end market for the production of aluminum cans (beverage, food, and pet food). Additionally, Alcoa Corporation has a tolling arrangement with Arconic whereby Arconic's rolling mill in Tennessee produces can sheet products for certain of this segment's customers. Alcoa Corporation supplies all of the raw materials to the Tennessee facility and pays Arconic for the tolling service. Depending on certain factors, this arrangement concludes at the end of 2018. Seasonal increases in can sheet sales are generally experienced in the second and third quarters of the year. This segment also includes Alcoa Corporation's investment in a rolling mill in Saudi Arabia.

Third-party sales for the Rolled Products segment increased 8% in 2016 compared with 2015, primarily driven by higher volume as a result of the tolling arrangement with Arconic, partially offset by lower pricing and an unfavorable product mix (i.e. higher ratio of body stock sold compared to end and tab stock).



ATOI for this segment declined \$61 in 2016 compared with 2015, primarily attributable to higher costs (\$53) from operating the Warrick rolling mill as a cold metal plant (previously was a hot metal plant), due to the permanent closure of the Warrick smelter in March 2016 (see Aluminum above), and the previously mentioned unfavorable product mix.

In 2017, third-party sales are expected to increase as a result of operating for a full year under the tolling arrangement with Arconic. Additionally, net productivity improvements are anticipated. As described in the Segments Subsequent to 2016 section below, this segment will be combined with the Aluminum and Cast Products segments, along with a majority of the Energy segment, into one operating segment for 2017.

### Reconciliation of ATOI to Consolidated Net Loss Attributable to Alcoa Corporation

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

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

|   | 2016    | 2015     |
|---|---------|----------|
| Total segment ATOI                                      | \$ 506  | \$1,010  |
| Unallocated amounts:                                    |         |          |
| Impact of LIFO  | (10)    | 107      |
| Metal price lag   | 9       | (30)     |
| Interest expense  | (243)   | (270)    |
| Noncontrolling interest (net of tax)                    | (54)    | (124)    |
| Corporate expense                                       | (182)   | (180)    |
| Restructuring and other charges                         | (318)   | (983)    |
| Income taxes  | (51)    | (41)     |
| Other   | (57)    | (352)    |
| Consolidated net loss attributable to Alcoa Corporation | \$(400) | \$ (863) |

See Restructuring and Other Charges, Interest Expense, and Noncontrolling Interest in Earnings Summary above for a description of the changes in the Restructuring and other charges, Interest expense, and Noncontrolling interest reconciling items, respectively, in the table above. The changes in the remaining reconciling items between total segment ATOI and consolidated net loss attributable to Alcoa Corporation for 2016 compared with 2015 consisted of:

- a change in the Impact of LIFO, mostly due to an increase in the price of alumina at December 31, 2016 indexed to December 31, 2015 compared to a decrease in the price of alumina at December 31, 2015 indexed to December 31, 2014 (overall, the price of alumina in 2016 was lower compared with 2015);
- a change in Metal price lag, the result of an increase in the price of aluminum (driven by higher base metal prices (LME), partially offset by lower regional premiums) at December 31, 2016 indexed to December 31, 2015 compared to a decrease in the price of aluminum (both lower base metal prices (LME) and regional premiums) at December 31, 2015 indexed to December 31, 2014 (overall, the price of aluminum in 2016 was lower compared with 2015) (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 Products segment. 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.);

- an increase in Corporate expense, largely attributable to higher costs associated with the Separation Transaction (\$61), which includes an allocation of \$56 from ParentCo prior to the Separation Date, mostly offset by a decrease in corporate overhead expenses;
- an increase in Income taxes, principally caused by U.S. losses and tax credits with no tax benefit realizable in Alcoa Corporation; and
- a change in Other, primarily related to a gain on the sale of wharf property near the Intalco, Washington smelter (\$118), lower inventory write-downs related to the decisions to permanently close and/or curtail capacity (difference of \$85—see Restructuring and Other Charges in Earnings Summary above), and a gain on the sale of an equity interest in a natural gas pipeline in Australia (\$27).

### *Segments Prior to 2015*

As described above, the following information regarding Alcoa Corporation's segments in effect prior to January 2015 (Alumina, Primary Metals, and Rolled Products) is being provided on a supplemental basis.

ATOI for all reportable segments under the current segment structure totaled \$902 in 2015 and \$1,018 in 2014. The following information provides sales and ATOI data for each reportable segment, as well as certain production, shipments, realized price, and average cost data, for each of the two years in the period ended December 31, 2015. See Note E to the Consolidated Financial Statements in Part II Item 8 of this Form 10-K for additional information.

### **Alumina**

|  | <b>2015</b> | <b>2014</b> |
|--|-------------|-------------|
| Alumina production (kmt)   | 15,720      | 16,606      |
| Third-party alumina shipments (kmt)                                  | 10,755      | 10,652      |
| Alcoa Corporation's average realized price per metric ton of alumina | \$ 317      | \$ 324      |
| Alcoa Corporation's average cost per metric ton of alumina*          | \$ 237      | \$ 282      |
| Third-party sales  | \$ 3,455    | \$ 3,509    |
| Intersegment sales   | 1,687       | 1,941       |
| Total sales  | \$ 5,142    | \$ 5,450    |
| ATOI   | \$ 746      | \$ 370      |

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

This segment represents a portion of Alcoa Corporation's upstream operations and consists of the Company's worldwide refining system. Alumina mines bauxite, from which alumina is produced and then sold directly to external smelter customers, as well as to the Primary Metals segment (see Primary Metals below), or to customers who process it into industrial chemical products. More than half of Alumina's production is sold under supply contracts to third parties worldwide, while the remainder is used internally by the Primary Metals segment. Alumina produced by this segment and used internally is transferred to the Primary Metals segment at prevailing market prices. A portion of this segment's third-party sales are completed through the use of agents, alumina traders, and distributors. Generally, the sales of this segment are transacted in U.S. dollars while costs and expenses of this segment are transacted in the local currency of the respective operations, which are the Australian dollar, the Brazilian real, the U.S. dollar, and the euro.

In December 2014, Alcoa Corporation's majority-owned subsidiary (60%), Alcoa Minerals of Jamaica, LLC (AMJ, part of AWAC), completed the sale of its 55% ownership stake in a bauxite mine and alumina refinery joint venture in Jamaica to Noble Group Ltd. While owned by AMJ, 55% of both the operating results and assets and liabilities of this joint venture were included in the former Alumina segment (see Note E). As it relates to AMJ's previous 55% ownership stake, the refinery (AMJ's share of the capacity was 779 kmt-per-year) generated sales (third-party and intersegment) of approximately \$200 in 2013, and the refinery and mine combined, at the time of divestiture, had approximately 500 employees. See Restructuring and Other Charges in Results of Operations above.

In 2015, alumina production decreased by 886 kmt compared to 2014. The decline was mostly the result of the absence of production at the Jamalco refinery (see above) and lower production at the Suralco (Suriname—see below) and Poços de Caldas (Brazil—see below) refineries, slightly offset by higher production at the San Ciprian (Spain) and Point Comfort (Texas) refineries.

In March 2015, management initiated a 12-month review of 2,800 kmt in refining capacity for possible curtailment (partial or full), permanent closure or divestiture. This review was part of management's target to lower Alcoa Corporation's refining operations on the global alumina cost curve to the 21st percentile by the end of 2016. As part of this review, in 2015, management decided to curtail the remaining operating capacity at both the Suralco (1,330 kmt-per-year) and Point Comfort (2,010 kmt-per-year) refineries. The curtailment of the capacity at Suralco and Point Comfort was completed by the end of November 2015 and June 2016 (375 kmt-per-year was completed by the end of December 2015), respectively. Point Comfort has nameplate capacity of 2,305 kmt-per-year, of which 295 kmt was curtailed prior to the review. See Restructuring and Other Charges in Results of Operations above for a description of the associated charges related to these actions. While management has completed this specific review of Alcoa Corporation's refining capacity, analysis of portfolio optimization in light of changes in the marketplace that may occur at any given time is ongoing.

Third-party sales for the Alumina segment decreased 2% in 2015 compared with 2014, largely attributable to a 2% decline in average realized price, somewhat offset by a 1% increase in volume. The change in average realized price was mostly driven by a decrease in both the average alumina index/spot price and average LME-based price, somewhat offset by a higher percentage (75% compared to 68%) of smelter-grade alumina shipments linked to an alumina index/spot price instead of an LME-based price.

Intersegment sales for this segment declined 13% in 2015 compared with 2014. The decrease was mostly the result of lower demand from the Primary Metals segment, as a result of the closure, curtailment or divestiture of a number of smelters (see Primary Metals below), and a lower average realized price.

ATOI for the Alumina segment increased \$376 in 2015 compared with 2014, mainly caused by net favorable foreign currency movements due to a stronger U.S. dollar, especially against the Australian dollar and Brazilian real; net productivity improvements; and lower input costs, including natural gas, fuel oil, and transportation, all of which were slightly offset by higher labor and maintenance costs. These positive impacts were slightly offset by the previously mentioned lower average realized price and the absence of a gain on the sale of a mining interest in Suriname (\$18).

## Primary Metals

|  | 2015    | 2014    |
|--|---------|---------|
| Aluminum production (kmt)  | 2,811   | 3,125   |
| Third-party aluminum shipments (kmt)                                   | 2,961   | 3,261   |
| Alcoa Corporation's average realized price per metric ton of aluminum* | \$2,092 | \$2,396 |
| Alcoa Corporation's average cost per metric ton of aluminum**          | \$2,064 | \$2,252 |
| Third-party sales  | \$6,737 | \$8,601 |
| Intersegment sales   | 532     | 614     |
| Total sales  | \$7,269 | \$9,215 |
| ATOI   | \$ 136  | \$ 627  |

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

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

This segment represents a portion of Alcoa Corporation's upstream operations and consists of its worldwide smelting system. Primary Metals purchases alumina, mostly from the Alumina segment (see Alumina above), from which primary aluminum is produced and then sold directly to external customers and traders, as well as to Arconic. Results from the sale of aluminum powder, scrap, and excess energy are also included in this segment. Primary aluminum produced by Alcoa Corporation and sold to Arconic is sold at prevailing market prices. The sale of primary aluminum represents approximately 90% of this segment's third-party sales. Generally, the sales of this segment are transacted in U.S. dollars while costs and expenses of this segment are transacted in the local currency of the respective operations, which are the U.S. dollar, the euro, the Norwegian kroner, Icelandic krona, the Canadian dollar, the Brazilian real, and the Australian dollar.

In November 2014, Alcoa Corporation completed the sale of an aluminum rod plant located in Bécancour, Québec, Canada to Sural Laminated Products. This facility takes molten aluminum and shapes it into the form of a rod, which is used by customers primarily for the transportation of electricity. While owned by Alcoa Corporation, the operating results and assets and liabilities of this plant were included in the Primary Metals segment. In conjunction with this transaction, Alcoa Corporation entered into a multi-year agreement with Sural Laminated Products to supply molten aluminum for the rod plant. The aluminum rod plant generated sales of approximately \$200 in 2013 and, at the time of divestiture, had approximately 60 employees. See Restructuring and Other Charges in Results of Operations above.

In December 2014, Alcoa Corporation completed the sale of its 50.33% ownership stake in the Mt. Holly smelter located in Goose Creek, South Carolina to Century Aluminum Company. While owned by Alcoa Corporation, 50.33% of both the operating results and assets and liabilities related to the smelter were included in the Primary Metals segment. As it relates to Alcoa Corporation's previous 50.33% ownership stake, the smelter (Alcoa Corporation's share of the capacity was 115 kmt-per-year) generated sales of approximately \$280 in 2013 and, at the time of divestiture, had approximately 250 employees. See Restructuring and Other Charges in Results of Operations above.

At December 31, 2015, Alcoa Corporation had 778 kmt of idle capacity on a base capacity of 3,401 kmt. In 2015, idle capacity increased 113 kmt compared to 2014, mostly due to the curtailment of 217 kmt combined at a smelter in each the United States and Brazil, partially offset by the permanent closure of the Poços de Caldas smelter in Brazil (96 kmt-per-year). Base capacity declined 96 kmt between December 31, 2015 and 2014 due to the previously mentioned permanent closure of the Poços de Caldas smelter. A detailed description of each of these actions follows below.

In March 2015, management initiated a 12-month review of 500 kmt in smelting capacity for possible curtailment (partial or full), permanent closure or divestiture. This review was part of management's target to lower Alcoa Corporation's smelting operations on the global aluminum cost curve to the 38th percentile by the end of 2016. In summary, under this review, management approved the curtailment of 447 kmt-per-year and the closure of 269 kmt-per-year. The following is a description of each action.

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

Additionally, in November 2015, management decided to curtail the remaining capacity at the Intalco (230 kmt-per-year) and Wenatchee (143 kmt-per-year) smelters, both in Washington. These two smelters previously had curtailed capacity of 90 kmt-per-year combined. The curtailment of the remaining capacity at Wenatchee was completed by the end of December 2015 and the curtailment of the remaining capacity at Intalco was expected to be completed by the end of June 2016; however, in May 2016, Alcoa Corporation reached agreement on a new power contract that will help improve the competitiveness of the smelter, resulting in the termination of the planned curtailment.

Furthermore, in December 2015, management approved the permanent closure of the Warrick, Indiana smelter (269 kmt-per-year). This decision was made as this smelter was no longer competitive in light of prevailing market conditions for the price of aluminum. The closure of the Warrick smelter was completed by the end of March 2016.

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

See Restructuring and Other Charges in Results of Operations above for a description of the associated charges related to all of the above actions in 2015 and 2014.

In 2015, aluminum production declined by 314 kmt, mainly the result of the absence of and/or lower production at the combined four smelters (Point Henry, São Luís, Massena East, and Poços de Caldas) impacted by the 2014 and 2015 capacity reviews and at the smelter divested in 2014 (Mt. Holly).

Third-party sales for the Primary Metals segment declined 22% in 2015 compared with 2014, primarily due to a 13% drop in average realized price; lower sales to Arconic locations (approximately \$700) following the divestiture or closure of several rolling mills in December 2014; the absence of sales (approximately \$585) from five smelters and a rod mill that were closed, curtailed or divested in 2014; and lower energy sales in Brazil, due to both a decrease in energy prices and a weaker Brazilian real. These negative impacts were slightly offset by higher volume in the remaining smelter portfolio. The change in average realized price was largely attributable to a 10% lower average LME price (on 15-day lag) and lower regional premiums, which dropped by an average of 39% in the United States and Canada and 44% in Europe.

ATOI for the Primary Metals segment decreased \$491 in 2015 compared with 2014, primarily caused by both the previously mentioned lower average realized aluminum price and lower energy sales, higher energy costs (mostly in Spain as the 2014 interruptibility rights were more favorable than the 2015 structure), and an unfavorable impact related to the curtailment of the São Luís smelter. These negative impacts were somewhat offset by net favorable foreign currency movements due to a stronger U.S. dollar against most major currencies, net productivity improvements, the absence of a write-off of inventory related to the permanent closure of the Portovesme, Point Henry, and Massena East smelters (\$44), and a lower equity loss related to the joint venture in Saudi Arabia, including the absence of restart costs for one of the potlines that was previously shut down due to a period of instability.

## **Rolled Products**

|  | <b>2015</b> | <b>2014</b> |
|--|-------------|-------------|
| Third-party aluminum shipments (kmt)                                   | 266         | 257         |
| Alcoa Corporation's average realized price per metric ton of aluminum* | \$3,728     | \$4,012     |
| Third-party sales  | \$ 993      | \$1,033     |
| ATOI   | \$ 20       | \$ 21       |

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

This segment represents Alcoa Corporation's rolling mill in Warrick, Indiana, which produces aluminum sheet primarily sold directly to customers in the packaging end market for the production of aluminum cans (beverage, food, and pet food). Seasonal increases in can sheet sales are generally experienced in the second and third quarters of the year. This segment also includes Alcoa Corporation's investment in a rolling mill in Saudi Arabia.

Third-party sales for the Rolled Products segment declined 4% in 2015 compared with 2014, primarily driven by unfavorable pricing, mostly due to a decrease in metal prices (both LME and regional premium components).

ATOI for this segment decreased \$1 in 2015 compared with 2014, primarily attributable to unfavorable price/product mix, largely the result of overall pricing pressure in the global can sheet packaging end market.

## Segments Subsequent to 2016

On March 2, 2017, Alcoa Corporation announced that it is consolidating certain of its business units to reduce complexity. The aluminum smelting, cast products, and rolled products businesses, along with the majority of the energy business, will be combined into a new Aluminum business unit. This new business unit will be managed as a single operating segment. As a result, beginning with the first quarter of 2017, the Company's operating and reportable segments will both be Bauxite, Alumina, and Aluminum. The segments will use Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) to measure and report segment profitability. Alcoa Corporation's definition of Adjusted EBITDA is net margin plus an add-back for depreciation, depletion, and amortization. Net margin is equivalent to Sales minus the following items: Cost of goods sold; Selling, general administrative, and other expenses; Research and development expenses; and Provision for depreciation, depletion, and amortization. Adjusted EBITDA may not be comparable to similarly titled measures of other companies.

### Reconciliation of ATOI to Consolidated Net Loss Attributable to Alcoa Corporation

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

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

|   | 2015    | 2014    |
|---|---------|---------|
| Total segment ATOI                                      | \$ 902  | \$1,018 |
| Unallocated amounts:                                    |         |         |
| Impact of LIFO  | 107     | 4       |
| Metal price lag   | (30)    | 15      |
| Interest expense  | (270)   | (309)   |
| Noncontrolling interest (net of tax)                    | (124)   | 91      |
| Corporate expense                                       | (180)   | (208)   |
| Restructuring and other charges                         | (983)   | (863)   |
| Income taxes  | (96)    | 110     |
| Other   | (189)   | (114)   |
| Consolidated net loss attributable to Alcoa Corporation | \$(863) | \$(256) |

See Restructuring and Other Charges, Interest Expense, and Noncontrolling Interest in Earnings Summary above for a description of the changes in the Restructuring and other charges, Interest expense, and Noncontrolling interest reconciling items, respectively, in the table above. The changes in the remaining reconciling items between total segment ATOI and consolidated net loss attributable to Alcoa Corporation for 2015 compared with 2014 consisted of:

- a change in the Impact of LIFO, mostly due to lower prices for both aluminum, driven by both lower base metal prices (LME) and regional premiums, and alumina (decrease in price at December 31, 2015 indexed to December 31, 2014 compared to an increase in price at December 31, 2014 indexed to December 31, 2013);
- a change in Metal price lag, the result of a decrease in the price of aluminum (driven by both lower base metal prices (LME) and regional premiums) at December 31, 2015 indexed to December 31, 2014 compared to an increase in the price of aluminum (both lower base metal prices (LME) and regional premiums) at December 31, 2014 indexed to December 31, 2013 (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 Products segment. 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.);

- a decline in Corporate expense, largely attributable to decreases in various expenses, partially offset by expenses related to the Separation Transaction (\$12);
- an increase in Income taxes, mostly the result of the reversal in 2015 of the income tax benefit on U.S. operating losses reflected in ATOI (as compared to the reversal in 2014 of the income tax cost on U.S. operating income reflected in ATOI) and higher discrete tax charges (\$62) as compared to 2014, primarily associated with valuation allowance adjustments on certain deferred tax assets in Suriname and Iceland that were higher than 2014's discrete tax charges associated with tax rate changes in Brazil and Spain; and
- a change in Other, primarily due to write-downs of inventories related to various shutdown and curtailment actions (\$90).

### **Environmental Matters**

See the Environmental Matters section of Note R to the Consolidated Financial Statements in Part II Item 8 of this Form 10-K.

### **Liquidity and Capital Resources**

Alcoa Corporation's primary future cash needs are centered on operating activities, including working capital, as well as recurring and strategic capital expenditures. The Company's ability to fund its cash needs depends on Alcoa Corporation's ongoing ability to generate and raise cash in the future. Although management believes that Alcoa Corporation's future cash from operations, together with the Company's access to capital markets, will provide adequate resources to fund Alcoa Corporation's operating and investing needs, the Company's access to, and the availability of, financing on acceptable terms in the future will be affected by many factors, including: (i) Alcoa Corporation's credit rating; (ii) the liquidity of the overall capital markets; and (iii) the current state of the economy and commodity markets. There can be no assurances that Alcoa Corporation will continue to have access to capital markets on terms acceptable to the Company.

For all periods prior to the Separation Date, ParentCo provided capital, cash management, and other treasury services to Alcoa Corporation. Only cash amounts specifically attributable to Alcoa Corporation were reflected in the Company's Consolidated Financial Statements. Transfers of cash, both to and from ParentCo's centralized cash management system, were reflected as a component of Parent Company net investment in Alcoa Corporation's Consolidated Financial Statements.

Cash provided from operations and financing activities is expected to be adequate to cover Alcoa Corporation's operational and business needs over the next 12 months. For an analysis of long-term liquidity, see Contractual Obligations and Off-Balance Sheet Arrangements below.

At December 31, 2016, cash and cash equivalents of Alcoa Corporation were \$853, of which \$818 was held outside the United States. Alcoa Corporation has a number of commitments and obligations related to the Company's operations in various foreign jurisdictions, resulting in the need for cash outside the United States. Alcoa Corporation is currently evaluating its local and global cash needs for future business operations and anticipated debt facilities, which may influence future repatriation decisions.

### **Cash from Operations**

Cash used for operations in 2016 was \$311 compared with cash provided from operations of \$875 in 2015. The decrease of \$1,186 was due to lower operating results (net loss plus net add-back for noncash transactions in earnings) and a negative change associated with working capital of \$648. These items were slightly offset by a positive change in

both noncurrent assets of \$172 and noncurrent liabilities of \$60, and lower pension contributions of \$3. The favorable change in noncurrent assets was mainly the result of a \$100 smaller prepayment made under a natural gas supply agreement in Australia (see below).

Cash provided from operations in 2015 was \$875 compared with \$842 in 2014. The increase of \$33 was due to a positive change associated with working capital of \$500, lower pension contributions of \$85, and a positive change in noncurrent liabilities of \$7, mostly offset by a negative change in noncurrent assets of \$324 and lower operating results (net loss plus net add-back for noncash transactions in earnings). The unfavorable change in noncurrent assets was mostly related to a \$300 prepayment made under a natural gas supply agreement in Australia (see below). The lower pension contributions were due to the absence of special termination benefits paid in 2014 for employees affected by the 2013 shutdown of capacity at a smelter in Canada.

On April 8, 2015, AofA secured a new 12-year gas supply agreement to power its three alumina refineries in Western Australia beginning in July 2020. This agreement was conditional on the completion of a third-party acquisition of the related energy assets from the then-current owner, which occurred in June 2015. The terms of the gas supply agreement required AofA to make a prepayment of \$500 in two installments. The first installment of \$300 was made at the time of the completion of the third-party acquisition in June 2015 and the second installment of \$200 was made in April 2016.

### **Financing Activities**

Cash used for financing activities was \$483 in 2016 compared with \$162 in 2015 and \$444 in 2014.

The use of cash in 2016 was principally the result of \$1,072 in cash provided to ParentCo in conjunction with the completion of the Separation Transaction, \$185 in net cash paid to Alumina Limited (see Noncontrolling Interest in Earnings Summary above), and \$34 in payments on debt. These items were partially offset by \$802 in net transfers from ParentCo prior to the Separation Date.

The use of cash in both 2015 and 2014 was due to net transfers to ParentCo of \$34 and \$332, respectively, net cash paid to Alumina Limited (see Noncontrolling Interest in Earnings Summary above) of \$104 and \$77, respectively, and payments on debt of \$24 and \$36, respectively.

**Credit Facility.** On September 16, 2016, Alcoa Corporation and Alcoa Nederland Holding B.V. (ANHBV), a wholly-owned subsidiary of Alcoa Corporation, entered into a revolving credit agreement with a syndicate of lenders and issuers named therein, as amended, (the “Revolving Credit Agreement”). The Revolving Credit Agreement provides a \$1,500 senior secured revolving credit facility (the “Revolving Credit Facility”), the proceeds of which may be used for transaction costs related to the Separation Transaction, to provide working capital, and/or for other general corporate purposes of Alcoa Corporation and its subsidiaries. Subject to the terms and conditions of the Revolving Credit Agreement, ANHBV may from time to time request the issuance of letters of credit up to \$750 under the Revolving Credit Facility, subject to a sublimit of \$400 for any letters of credit issued for the account of Alcoa Corporation or any of its domestic subsidiaries.

The Revolving Credit Facility is scheduled to mature on November 1, 2021, unless extended or earlier terminated in accordance with the provisions of the Revolving Credit Agreement. ANHBV may make extension requests during the term of the Revolving Credit Facility, subject to the lender consent requirements set forth in the Revolving Credit Agreement. Under the provisions of the Revolving Credit Agreement, ANHBV will pay a quarterly commitment fee ranging from 0.225% to 0.450% (based on Alcoa Corporation’s leverage ratio) on the unused portion of the Revolving Credit Facility.

A maximum of \$750 in outstanding borrowings under the Revolving Credit Facility may be denominated in euros. Loans will bear interest at a rate per annum equal to, at ANHBV’s option, either (a) an adjusted LIBOR rate or (b) a base rate determined by reference to the highest of (1) the prime rate of JPMorgan Chase Bank, N.A., (2) the greater of the federal funds effective rate and the overnight bank funding rate, plus 0.5%, and (3) the one month adjusted LIBOR rate plus 1% per annum, plus, in each case, an applicable margin. The applicable margin for all loans will vary based on Alcoa



Corporation's leverage ratio and will range from 1.75% to 2.50% for LIBOR loans and 0.75% to 1.50% for base rate loans. Outstanding borrowings may be prepaid without premium or penalty, subject to customary breakage costs.

All obligations of Alcoa Corporation or a domestic entity under the Revolving Credit Facility are secured by, subject to certain exceptions (including a limitation of pledges of equity interests in certain foreign subsidiaries to 65%, and certain thresholds with respect to real property), a first priority lien on substantially all assets of Alcoa Corporation and the material domestic wholly-owned subsidiaries of Alcoa Corporation and certain equity interests of specified non-U.S. subsidiaries. All other obligations under the Revolving Credit Facility are secured by, subject to certain exceptions (including certain thresholds with respect to real property), a first priority security interest in substantially all assets of Alcoa Corporation, ANHBV, the material domestic wholly-owned subsidiaries of Alcoa Corporation, and the material foreign wholly-owned subsidiaries of Alcoa Corporation located in Australia, Brazil, Canada, Luxembourg, the Netherlands, and Norway, including equity interests of certain subsidiaries that directly hold equity interests in AWAC entities. However, no AWAC entity is a guarantor of any obligation under the Revolving Credit Facility and no asset of any AWAC entity, or equity interests in any AWAC entity, will be pledged to secure the obligations under the Revolving Credit Facility.

The Revolving Credit Agreement includes a number of customary affirmative covenants. Additionally, the Revolving Credit Agreement contains a number of negative covenants (applicable to Alcoa Corporation and certain subsidiaries described as restricted), that, subject to certain exceptions, include limitations on (among other things): liens; fundamental changes; sales of assets; indebtedness; entering into restrictive agreements; restricted payments, including shareholder dividends and repurchases of common stock (see below); investments, loans, advances, guarantees, and acquisitions; transactions with affiliates; amendment of certain material documents; and a covenant prohibiting reductions in the ownership of AWAC entities, and certain other specified restricted subsidiaries of Alcoa Corporation, below an agreed level. The Revolving Credit Agreement also includes financial covenants requiring the maintenance of a specified interest expense coverage ratio of not less than 5.00 to 1.00, and a leverage ratio for any period of four consecutive fiscal quarters that is not greater than 2.25 to 1.00. As of December 31, 2016, Alcoa Corporation was in compliance with all such covenants.

In reference to the restricted payments covenant mentioned above, Alcoa Corporation may declare and make annual ordinary dividends in an aggregate amount not to exceed \$38 in each of the November 1, 2016 through December 31, 2017 time period and annual 2018, \$50 in each of annual 2019 and 2020, and \$75 in the January 1, 2021 through November 1, 2021 time period (see below), except that 50% of any unused amount of the base amount in any of the specified time periods may be used in the next succeeding period following the use of the base amount in said time period. Also, Alcoa Corporation may repurchase shares of its common stock pursuant to stock option exercises and benefit plans in an aggregate amount not to exceed \$25 during any fiscal year, except that 50% of any unused amount of the base amount in any fiscal year may be used in the next succeeding fiscal year following the use of the base amount in said fiscal year.

The Revolving Credit Agreement contains customary events of default, including with respect to a failure to make payments under the Revolving Credit Facility, cross-default and cross-judgment default, and certain bankruptcy and insolvency events.

There were no amounts outstanding at December 31, 2016 and no amounts were borrowed during 2016 (September 16<sup>th</sup> through December 31<sup>st</sup>) under the Revolving Credit Facility.

**144A Debt.** In September 2016, ANHBV completed a Rule 144A (U.S. Securities Act of 1933, as amended) debt offering for \$750 of 6.75% Senior Notes due 2024 (the "2024 Notes") and \$500 of 7.00% Senior Notes due 2026 (the "2026 Notes" and, collectively with the 2024 Notes, the "Notes"). ANHBV received \$1,228 in net proceeds (see below) from the debt offering reflecting a discount to the initial purchasers of the Notes. The net proceeds were used to make a payment to ParentCo to fund the transfer of certain assets from ParentCo to Alcoa Corporation in connection with the Separation Transaction, and the remaining net proceeds were used for general corporate purposes. 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 respective terms of the Notes. Interest on the Notes will be paid semi-annually in March and September, commencing March 31, 2017.

ANBHV has the option to redeem the Notes on at least 30 days, but not more than 60 days, prior notice to the holders of the Notes under multiple scenarios, including, in whole or in part, at any time or from time to time after September 2019, in the case of the 2024 Notes, or after September 2021, in the case of the 2026 Notes, at a redemption price specified in the indenture (up to 105.063% of the principal amount for the 2024 Notes and up to 103.500% of the principal amount of the 2026 Notes, plus any accrued and unpaid interest in each case). Also, the 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 Notes repurchased, plus any accrued and unpaid interest on the Notes repurchased.

The 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 Notes. The Notes are guaranteed on a senior unsecured basis by Alcoa Corporation and its subsidiaries that are guarantors under the Revolving Credit Agreement (the “subsidiary guarantors” and, together with Alcoa Corporation, the “guarantors”). Each of the subsidiary guarantors will be released from their 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 Notes indenture contains various restrictive covenants similar to those described above for the Revolving Credit Agreement, including a limitation on restricted payments, with, among other exceptions, capacity to pay annual dividends generally consistent with those provided for in the Revolving Credit Agreement, with annual capacity to pay \$75 in each year within the 2021 through 2024 timeframe.

In conjunction with this debt offering, the net proceeds of \$1,228, plus an additional \$81 of ParentCo cash on hand, were required to be placed in escrow contingent on completion of the Separation Transaction. The \$81 represented the necessary cash to fund the redemption of the Notes, pay all regularly scheduled interest on the Notes through a specified date as defined in the indenture, and a premium on the principal of the Notes if the Separation Transaction had not been completed by a certain time as defined in the indenture. As a result, the \$1,228 of escrowed cash was recorded as restricted cash. The issuance of the Notes and the increase in restricted cash both in the amount of \$1,228 were not reflected in Alcoa Corporation’s Statement of Consolidated Cash Flows as these represent noncash financing and investing activities, respectively. The subsequent release of the \$1,228 from escrow occurred on October 31, 2016 in preparation for the Separation Transaction. This decrease in restricted cash was reflected in Alcoa Corporation’s Statement of Consolidated Cash Flows as a cash inflow in the Net change in restricted cash line item.

**Ratings.** 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 September 20, 2016, Moody’s Investor Service (Moody’s) assigned the following ratings for Alcoa Corporation: long-term debt at Ba3 and short-term debt at Speculative Grade Liquidity Rating-2. Additionally, Moody’s assigned the current outlook as stable.

Also on September 20, 2016, Standard and Poor’s Global Ratings (S&P) assigned a BB- rating for Alcoa Corporation’s long-term debt. Additionally, S&P assigned the current outlook as stable.

### **Investing Activities**

Cash provided from investing activities was \$1,077 in 2016 compared with cash used for investing activities in both 2015 and 2014 of \$384 and \$338, respectively.

The source of cash in 2016 was primarily due to \$1,228 of net proceeds from newly issued debt (see Financing Activities above) released from escrow and \$265 in proceeds from the sale of an equity interest in a natural gas pipeline in Australia (\$145) and the sale of wharf property near the Intalco, Washington smelter (\$120). These items were somewhat offset by \$404 in capital expenditures (includes costs related to environmental control in new and expanded facilities of \$83).

The use of cash in 2015 was due to \$391 in capital expenditures (includes costs related to environmental control in new and expanded facilities of \$122) and \$63 in additions to investments, including equity contributions of \$29 related to the aluminum complex joint venture in Saudi Arabia. These items were slightly offset by \$70 in proceeds from the sale of assets and businesses, including the sale of land around the Lake Charles, Louisiana anode facility and post-closing adjustments related to both an ownership stake in a smelter and an ownership stake in a bauxite mine/alumina refinery divested in 2014.

The use of cash in 2014 was due to \$444 in capital expenditures (includes costs related to environmental control in new and expanded facilities of \$120) and \$145 in additions to investments, including equity contributions of \$120 related to the aluminum complex joint venture in Saudi Arabia. These items were somewhat offset by \$223 in proceeds from the sale of assets and businesses, largely attributable to the sale of an ownership stake in a bauxite mine and refinery in Jamaica (see Alumina (Segments Prior to 2015) in Segment Information above), an ownership stake in a smelter in the United States (see Primary Metals (Segments Prior to 2015) in Segment Information above), and a rod plant in Canada (see Primary Metals (Segments Prior to 2015) in Segment Information above); and \$28 in sales of investments related to the sale of a mining interest in Suriname.

### **Noncash Financing and Investing Activities**

In September 2016, ANHBV issued \$1,250 in new senior notes (see Financing Activities above) in preparation for the Separation Transaction. The net proceeds of \$1,228 from the debt issuance were required to be placed in escrow contingent on completion of the Separation Transaction. As a result, the \$1,228 of escrowed cash was recorded as restricted cash. The issuance of the new senior notes and the increase in restricted cash both in the amount of \$1,228 were not reflected in Alcoa Corporation's Statement of Consolidated Cash Flows as these represent noncash financing and investing activities, respectively. The subsequent release of the \$1,228 from escrow occurred on October 31, 2016. This decrease in restricted cash was reflected in Alcoa Corporation's Statement of Consolidated Cash Flows as a cash inflow in the Net change in restricted cash line item.

## Contractual Obligations and Off-Balance Sheet Arrangements

**Contractual Obligations.** Alcoa Corporation is required to make future payments under various contracts, including long-term purchase obligations, financing arrangements, and lease agreements. Alcoa Corporation also has commitments to fund its pension plans, provide payments for other postretirement benefit plans, and fund capital projects. As of December 31, 2016, a summary of Alcoa Corporation's outstanding contractual obligations is as follows (these contractual obligations are grouped in the same manner as they are classified in the Statement of Consolidated Cash Flows in order to provide a better understanding of the nature of the obligations and to provide a basis for comparison to historical information):

|   | Total    | 2017    | 2018-2019 | 2020-2021 | Thereafter |
|---|----------|---------|-----------|-----------|------------|
| Operating activities:                                 |          |         |           |           |            |
| Energy-related purchase obligations                   | \$15,298 | \$1,045 | \$2,271   | \$2,177   | \$ 9,805   |
| Raw material purchase obligations                     | 4,129    | 715     | 870       | 556       | 1,988      |
| Other purchase obligations                            | 1,493    | 343     | 401       | 295       | 454        |
| Operating leases                                      | 359      | 98      | 140       | 86        | 35         |
| Interest related to total debt                        | 873      | 104     | 202       | 197       | 370        |
| Estimated minimum required pension funding            | 1,190    | 115     | 550       | 525       | -          |
| Other postretirement benefit payments                 | 1,090    | 130     | 235       | 230       | 495        |
| Layoff and other restructuring payments               | 66       | 63      | 3         | -         | -          |
| Deferred revenue arrangements                         | 84       | 8       | 16        | 16        | 44         |
| Uncertain tax positions                               | 29       | -       | -         | -         | 29         |
| Liability related to the resolution of a legal matter | 148      | 74      | 74        | -         | -          |
| Financing activities:                                 |          |         |           |           |            |
| Total debt  | 1,480    | 21      | 37        | 37        | 1,385      |
| Dividends to shareholders                             | -        | -       | -         | -         | -          |
| Distributions to noncontrolling interest              | -        | -       | -         | -         | -          |
| Investing activities:                                 |          |         |           |           |            |
| Capital projects                                      | 385      | 205     | 38        | 58        | 84         |
| Equity contributions                                  | -        | -       | -         | -         | -          |
| Totals  | \$26,624 | \$2,921 | \$4,837   | \$4,177   | \$14,689   |

### **Obligations for Operating Activities**

Energy-related purchase obligations consist primarily of electricity and natural gas contracts with expiration dates ranging from 1 year to 31 years. Raw material obligations consist mostly of bauxite (relates to Alcoa Corporation's bauxite mine interests in Guinea and Brazil), caustic soda, alumina, aluminum fluoride, calcined petroleum coke, and cathode blocks with expiration dates ranging from less than 1 year to 16 years. Other purchase obligations consist principally of freight for bauxite and alumina with expiration dates ranging from 1 to 15 years. Many of these purchase obligations contain variable pricing components, and, as a result, actual cash payments may differ from the estimates provided in the preceding table. Operating leases represent multi-year obligations for certain land and buildings, alumina refinery process control technology, plant equipment, vehicles, and computer equipment.

Interest related to total debt is based on interest rates in effect as of December 31, 2016 and is calculated on debt with maturities that extend to 2029. As the contractual interest rates for certain debt are variable, actual cash payments may differ from the estimates provided in the preceding table.

Estimated minimum required pension funding and postretirement benefit payments are based on actuarial estimates using current assumptions for discount rates, long-term rate of return on plan assets, rate of compensation increases, and health care cost trend rates, among others. The minimum required contributions for pension funding are estimated to be \$115 for 2017, \$300 for 2018, \$250 for 2019, \$275 for 2020, and \$250 for 2021. The U.S. portion of these expected pension contributions reflect the impacts of the Pension Protection Act of 2006; the Worker, Retiree, and Employer Recovery Act of 2008; the Moving Ahead for Progress in the 21<sup>st</sup> Century Act of 2012; the Highway and

Transportation Funding Act of 2015; and the Bipartisan Budget Act of 2016. Other postretirement benefit payments are expected to approximate \$115 to \$130 annually for years 2017 through 2021 and \$99 annually for years 2022 through 2026. Such payments will be slightly offset by subsidy receipts related to Medicare Part D, which are estimated to be approximately \$10 annually for years 2017 through 2026. Alcoa Corporation has determined that it is not practicable to present pension funding and other postretirement benefit payments beyond 2021 and 2026, respectively.

Layoff and other restructuring payments expected to be paid within one year primarily relate to severance costs. Amounts scheduled to be paid beyond one year are related to contract termination and special layoff benefit payments.

Deferred revenue arrangements require Alcoa Corporation to deliver alumina to a certain customer over the specified contract period (through 2027). While this obligation is not expected to result in cash payments, it represents a contractual obligation for which the Company would be obligated if the specified product deliveries could not be made.

Uncertain tax positions taken or expected to be taken on an income tax return may result in additional payments to tax authorities. The amount in the preceding table includes interest and penalties accrued related to such positions as of December 31, 2016. The total amount of uncertain tax positions is included in the "Thereafter" column as the Company is not able to reasonably estimate the timing of potential future payments. If a tax authority agrees with the tax position taken or expected to be taken or the applicable statute of limitations expires, then additional payments will not be necessary.

In early 2014, ParentCo and one of Alcoa's Corporation's current subsidiaries, AWA, resolved violations of certain provisions of the Foreign Corrupt Practices Act of 1977 with the U.S. Department of Justice and U.S. Securities and Exchange Commission. Under the resolution, ParentCo and AWA agreed to pay a combined \$384 over a four-year timeframe. Prior to the Separation Transaction, ParentCo and AWA paid \$236 of the total amount. As part of the Separation and Distribution Agreement, Alcoa Corporation assumed ParentCo's portion of the \$148 remaining obligation. The \$148 is to be paid in equal installments of \$74 in each of January 2017 (paid on January 9<sup>th</sup>) and January 2018.

### **Obligations for Financing Activities**

Total debt amounts in the preceding table represent the principal amounts of all outstanding long-term debt, which have maturities for that extend to 2029.

As of December 31, 2016, Alcoa Corporation had 182,930,995 issued and outstanding shares of common stock. Dividends on common stock are subject to authorization by Alcoa Corporation's Board of Directors. Alcoa Corporation did not declare any dividends from November 1, 2016 through December 31, 2016.

Effective on November 1, 2016, certain documents that govern the AWAC joint venture relationship between Alcoa Corporation and Alumina Limited were revised. One of the provisions of the revised documents relates to required cash distributions from the entities that comprise the joint venture to the two partners. On a quarterly basis, each of certain identified entities that comprise the AWAC joint venture must distribute (i) 50% of the entity's net income, if any, based on the previous quarter's results, and (ii) the available cash, if any, of each entity, subject to certain thresholds that the entities must maintain a minimum cash on hand that ranges from \$5 to \$85 depending on the entity. Available cash is defined as an entity's cash and cash equivalents less any projected negative free cash flow of the entity for the upcoming quarter. Free cash flow is defined as cash flow from operating activities less sustaining capital expenditures. Estimates of the potential cash distributions to Alumina Limited have not been included in the preceding table since this would require Alcoa Corporation to provide proprietary information related to forecasted results of the entities that comprise the AWAC joint venture. In 2016, 2015, and 2014, Alumina Limited received distributions of \$233, \$106, and \$120, respectively, from the entities that comprise AWAC based on the prior agreements' provisions.

## **Obligations for Investing Activities**

Capital projects in the preceding table only include amounts approved by management as of December 31, 2016. Funding levels may vary in future years based on anticipated construction schedules of the projects. It is expected that significant expansion projects will be funded through various sources, including cash provided from operations. Total capital expenditures are anticipated to be approximately \$450 in 2017.

Equity contributions represent Alcoa Corporation's committed investment related to a joint venture in Saudi Arabia. Alcoa Corporation is a participant in a joint venture related to an integrated aluminum complex in Saudi Arabia, comprised of a bauxite mine, alumina refinery, aluminum smelter, and rolling mill, which requires the Company to contribute approximately \$1,100. As of December 31, 2016, Alcoa Corporation has made equity contributions of \$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. Alcoa Corporation does not anticipate making any additional equity contributions under the initial \$1,100 plan although a formal determination is yet to be made. As such, further contribution amounts have not been included in the preceding table.

**Off-Balance Sheet Arrangements.** At December 31, 2016, Alcoa Corporation has maximum potential future payments for guarantees issued on behalf of a third party of \$354. These guarantees expire at various times between 2017 and 2024 and relate to project financing for the aluminum complex in Saudi Arabia.

Alcoa Corporation has outstanding bank guarantees and letters of credit related to energy contracts, environmental obligations, legal and tax matters, outstanding debt, leasing obligations, workers compensation, and customs duties, among others. The total amount committed under these instruments, which automatically renew or expire at various dates between 2017 and 2021, was \$444 at December 31, 2016. Additionally, Arconic has outstanding bank guarantees and letters of credit related to Alcoa Corporation in the amount of \$115 at December 31, 2016. In the event Arconic would be required to perform under any of these instruments, Arconic would be indemnified by Alcoa Corporation in accordance with the Separation and Distribution Agreement. Likewise, Alcoa Corporation has outstanding bank guarantees and letters of credit related to Arconic in the amount of \$26 at December 31, 2016. In the event Alcoa Corporation would be required to perform under any of these instruments, Alcoa Corporation would be indemnified by Arconic in accordance with the Separation and Distribution Agreement.

Alcoa Corporation also has outstanding surety bonds primarily related to tax matters, contract performance, workers compensation, environmental-related matters, and customs duties. The total amount committed under these bonds, which automatically renew or expire at various dates, mostly in 2017, was \$159 at December 31, 2016. Additionally, Arconic has outstanding surety bonds related to Alcoa Corporation in the amount of \$22 at December 31, 2016. In the event Arconic would be required to perform under any of these instruments, Arconic would be indemnified by Alcoa Corporation in accordance with the Separation and Distribution Agreement.

## **Critical Accounting Policies and Estimates**

The preparation of the Consolidated Financial Statements in accordance with accounting principles generally accepted in the United States of America requires management to make certain judgments, estimates, and assumptions regarding uncertainties that affect the amounts reported in the Consolidated Financial Statements and disclosed in the Notes to the Consolidated Financial Statements. Areas that require significant judgments, estimates, and assumptions include the review of properties, plants, and equipment, equity investments, and goodwill for impairment, and accounting for each of the following: asset retirement obligations; environmental and litigation matters; stock-based compensation; pension plans and other postretirement benefits obligations; derivatives and hedging activities; and income taxes.

Management uses historical experience and all available information to make these judgments, estimates, and assumptions, and actual results may differ from those used to prepare the Company's Consolidated Financial Statements at any given time. Despite these inherent limitations, management believes that Management's Discussion and Analysis of Financial Condition and Results of Operations and the Consolidated Financial Statements, including the Notes to the Consolidated Financial Statements, provide a meaningful and fair perspective of the Company.

A summary of the Company's significant accounting policies is included in Note B to the Consolidated Financial Statements in Part II Item 8 of this Form 10-K. Management believes that the application of these policies on a consistent basis enables the Company to provide the users of the Consolidated Financial Statements with useful and reliable information about the Company's operating results and financial condition.

Prior to the Separation Date, Alcoa Corporation did not operate as a separate, standalone entity. Alcoa Corporation's operations were included in ParentCo's financial results. Accordingly, for all periods prior to the Separation Date, Alcoa Corporation's Consolidated Financial Statements were prepared from ParentCo's historical accounting records and were presented on a standalone basis as if Alcoa Corporation's operations had been conducted independently from ParentCo. Such Consolidated Financial Statements include the historical operations that were considered to comprise Alcoa Corporation's businesses, as well as certain assets and liabilities that were historically held at ParentCo's corporate level but were specifically identifiable or otherwise attributable to Alcoa Corporation. The Critical Accounting Policies described below reflect any incremental judgments, estimates, and assumptions made by management in the preparation of Alcoa's Consolidated Financial Statements prior to the Separation Date (see Separation Transaction in Overview above for additional information)

**Properties, Plants, and Equipment.** Properties, plants, and equipment are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets (asset group) may not be recoverable. Recoverability of assets is determined by comparing the estimated undiscounted net cash flows of the operations related to the assets (asset group) to their carrying amount. An impairment loss would be recognized when the carrying amount of the assets (asset group) exceeds the estimated undiscounted net cash flows. The amount of the impairment loss to be recorded is calculated as the excess of the carrying value of the assets (asset group) over their fair value, with fair value determined using the best information available, which generally is a discounted cash flow (DCF) model. The determination of what constitutes an asset group, the associated estimated undiscounted net cash flows, and the estimated useful lives of assets also require significant judgments.

**Equity Investments.** Alcoa Corporation invests in a number of privately-held companies, primarily through joint ventures and consortia, which are accounted for using the equity method. The equity method is applied in situations where Alcoa Corporation has the ability to exercise significant influence, but not control, over the investee. Management reviews equity investments for impairment whenever certain indicators are present suggesting that the carrying value of an investment is not recoverable. This analysis requires a significant amount of judgment from management to identify events or circumstances indicating that an equity investment is impaired. The following items are examples of impairment indicators: significant, sustained declines in an investee's revenue, earnings, and cash flow trends; adverse market conditions of the investee's industry or geographic area; the investee's ability to continue operations measured by several items, including liquidity; and other factors. Once an impairment indicator is identified, management uses considerable judgment to determine if the impairment is other than temporary, in which case the equity investment is written down to its estimated fair value. An impairment that is other than temporary could significantly and adversely impact reported results of operations.

**Goodwill.** Goodwill is not amortized; instead, it is reviewed for impairment annually (in the fourth quarter) or more frequently if indicators of impairment exist or if a decision is made to sell or exit a business. A significant amount of judgment is involved in determining if an indicator of impairment has occurred. Such indicators may include deterioration in general economic conditions, negative developments in equity and credit markets, adverse changes in the markets in which an entity operates, increases in input costs that have a negative effect on earnings and cash flows, or a trend of negative or declining cash flows over multiple periods, among others. The fair value that could be realized in an actual transaction may differ from that used to evaluate the impairment of goodwill.

Goodwill is allocated among and evaluated for impairment at the reporting unit level, which is defined as an operating segment or one level below an operating segment. Alcoa Corporation has six reporting units as follows: Bauxite, Alumina, Aluminum, Cast Products, Energy, and Rolled Products. Of these six reporting units, only Bauxite and Alumina contain goodwill. As of December 31, 2016, the carrying value of the goodwill for Bauxite and Alumina was \$52 and \$103, respectively. These amounts include an allocation of goodwill held at the corporate level.

In reviewing goodwill for impairment, an entity has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not (greater than 50%) that the estimated fair value of a reporting unit is less than its carrying amount. If an entity elects to perform a qualitative assessment and determines that an impairment is more likely than not, the entity is then required to perform the existing two-step quantitative impairment test (described below), otherwise no further analysis is required. An entity also may elect not to perform the qualitative assessment and, instead, proceed directly to the two-step quantitative impairment test. The ultimate outcome of the goodwill impairment review for a reporting unit should be the same whether an entity chooses to perform the qualitative assessment or proceeds directly to the two-step quantitative impairment test.

Alcoa Corporation's policy for its annual review of goodwill is to perform the qualitative assessment for all reporting units not subjected directly to the two-step quantitative impairment test. Generally, management will proceed directly to the two-step quantitative impairment test for each of its two reporting units that contain goodwill at least once during every three-year period, as part of its annual review of goodwill.

Under the qualitative assessment, various events and circumstances (or factors) that would affect the estimated fair value of a reporting unit are identified (similar to impairment indicators above). These factors are then classified by the type of impact they would have on the estimated fair value using positive, neutral, and adverse categories based on current business conditions. Additionally, an assessment of the level of impact that a particular factor would have on the estimated fair value is determined using high, medium, and low weighting. Furthermore, management considers the results of the most recent two-step quantitative impairment test completed for a reporting unit and compares the weighted average cost of capital (WACC) between the current and prior years for each reporting unit.

During the 2016 annual review of goodwill, management performed the qualitative assessment for the Bauxite reporting unit. Management concluded it was not more likely than not that the estimated fair value of this reporting unit was less than its carrying value. As such, no further analysis was required.

Under the two-step quantitative impairment test, the evaluation of impairment involves comparing the current fair value of each reporting unit to its carrying value, including goodwill. Alcoa Corporation uses a DCF model to estimate the current fair value of its reporting units when testing for impairment, as management believes forecasted cash flows are the best indicator of such fair value. A number of significant assumptions and estimates are involved in the application of the DCF model to forecast operating cash flows, including markets and market share, sales volumes and prices, production costs, tax rates, capital spending, discount rate, and working capital changes. Certain of these assumptions can vary significantly among the reporting units. Cash flow forecasts are generally based on approved business unit operating plans for the early years and historical relationships in later years. The betas used in calculating the individual reporting units' WACC rate are estimated for each business with the assistance of valuation experts.

In the event the estimated fair value of a reporting unit per the DCF model is less than the carrying value, additional analysis would be required. The additional analysis would compare the carrying amount of the reporting unit's goodwill with the implied fair value of that goodwill, which may involve the use of valuation experts. 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 exceeds its implied fair value, an impairment loss equal to such excess would be recognized.

During the 2016 annual review of goodwill, management proceeded directly to the two-step quantitative impairment test for the Alumina reporting unit. The estimated fair value of this reporting unit was substantially in excess of its carrying value, resulting in no impairment.

Goodwill impairment tests in all prior years presented indicated that goodwill was not impaired for any of Alcoa Corporation's reporting units, and there were no triggering events since that time that necessitated an impairment test.



**Asset Retirement Obligations.** Alcoa Corporation recognizes asset retirement obligations (AROs) related to legal obligations associated with the normal operation of bauxite mines, alumina refineries, and aluminum smelters. These AROs consist primarily of costs associated with mine reclamation, closure of bauxite residue areas, spent pot lining disposal, and landfill closure. Alcoa Corporation also recognizes AROs for any significant lease restoration obligation, if required by a lease agreement, and for the disposal of regulated waste materials related to the demolition of certain power facilities. The fair values of these AROs are recorded on a discounted basis, at the time the obligation is incurred, and accreted over time for the change in present value. Additionally, Alcoa Corporation capitalizes asset retirement costs by increasing the carrying amount of the related long-lived assets and depreciating these assets over their remaining useful life.

Certain conditional asset retirement obligations (CAROs) related to alumina refineries, aluminum smelters, rolling mills, and energy generation facilities have not been recorded in the Consolidated Financial Statements due to uncertainties surrounding the ultimate settlement date. A CARO is a legal obligation to perform an asset retirement activity in which the timing and/or method of settlement are conditional on a future event that may or may not be within Alcoa Corporation's control. Such uncertainties exist as a result of the perpetual nature of the structures, maintenance and upgrade programs, and other factors. At the date a reasonable estimate of the ultimate settlement date can be made (e.g., planned demolition), Alcoa Corporation would record an ARO for the removal, treatment, transportation, storage, and/or disposal of various regulated assets and hazardous materials such as asbestos, underground and aboveground storage tanks, polychlorinated biphenyls, various process residuals, solid wastes, electronic equipment waste, and various other materials. Such amounts may be material to the Consolidated Financial Statements in the period in which they are recorded. If Alcoa Corporation was required to demolish all such structures immediately, the estimated CARO as of December 31, 2016 ranges from \$3 to \$29 per structure (24 structures) in today's dollars.

**Environmental Matters.** Expenditures for current operations are expensed or capitalized, as appropriate. Expenditures relating to existing conditions caused by past operations, which will not contribute to future revenues, are expensed. Liabilities are recorded when remediation costs are probable and can be reasonably estimated. The liability may include costs such as site investigations, consultant fees, feasibility studies, outside contractors, and monitoring expenses. Estimates are generally not discounted or reduced by potential claims for recovery. Claims for recovery are recognized as agreements are reached with third parties. The estimates also include costs related to other potentially responsible parties to the extent that Alcoa Corporation has reason to believe such parties will not fully pay their proportionate share. The liability is continuously reviewed and adjusted to reflect current remediation progress, prospective estimates of required activity, and other factors that may be relevant, including changes in technology or regulations.

**Litigation Matters.** For asserted claims and assessments, liabilities are recorded when an unfavorable outcome of a matter is deemed to be probable and the loss is reasonably estimable. Management determines the likelihood of an unfavorable outcome based on many factors such as, among others, the nature of the matter, available defenses and case strategy, progress of the matter, views and opinions of legal counsel and other advisors, applicability and success of appeals processes, and the outcome of similar historical matters. Once an unfavorable outcome is deemed probable, management weighs the probability of estimated losses, and the most reasonable loss estimate is recorded. If an unfavorable outcome of a matter is deemed to be reasonably possible, then the matter is disclosed and no liability is recorded. With respect to unasserted claims or assessments, management must first determine that the probability that an assertion will be made is likely, then, a determination as to the likelihood of an unfavorable outcome and the ability to reasonably estimate the potential loss is made. Legal matters are reviewed on a continuous basis to determine if there has been a change in management's judgment regarding the likelihood of an unfavorable outcome or the estimate of a potential loss.

**Stock-based Compensation.** For all periods prior to the Separation Date, employees attributable to Alcoa Corporation operations participated in ParentCo's stock-based compensation plans. The compensation expense recorded by Alcoa Corporation included the expense associated with these employees, as well as the expense associated with the allocation of stock-based compensation expense for ParentCo's corporate employees. From the Separation Date

through December 31, 2016, Alcoa Corporation recorded stock-based compensation expense for all of the Company's employees. The following accounting policy describes how stock-based compensation expense is initially determined for both Alcoa Corporation and ParentCo.

Compensation expense for employee equity grants is recognized using the non-substantive vesting period approach, in which the expense (net of estimated forfeitures) is recognized ratably over the requisite service period based on the grant date fair value. The fair value of new stock options is estimated on the date of grant using a lattice-pricing model. Determining the fair value of stock options at the grant date requires judgment, including estimates for the average risk-free interest rate, dividend yield, volatility, annual forfeiture rate, and exercise behavior. These assumptions may differ significantly between grant dates because of changes in the actual results of these inputs that occur over time.

In 2016, 2015, and 2014, Alcoa Corporation recognized stock-based compensation expense of \$28, \$35, and \$39, respectively. Of these amounts, \$16, \$21, and \$21 relates to the allocation of expense for ParentCo's corporate employees in 2016, 2015, and 2014, respectively. As part of ParentCo's stock-based compensation plan design, individuals who are retirement-eligible have a six-month requisite service period in the year of grant. As a result, a larger portion of expense will be recognized in the first half of each year for these retirement-eligible employees. Of the total pretax stock-based compensation expense recognized in 2016, 2015, and 2014, \$7, \$6, and \$8, respectively, pertains to the acceleration of expense related to retirement-eligible employees.

Most plan participants can choose whether to receive their award in the form of stock options, stock awards, or a combination of both. This choice is made before the grant is issued and is irrevocable.

**Pension and Other Postretirement Benefits.** For all periods prior to August 1, 2016 (see below), certain employees attributable to Alcoa Corporation operations participated in defined benefit pension and other postretirement benefit plans (the "Shared Plans") sponsored by ParentCo, which also included participants attributable to non-Alcoa Corporation operations. Alcoa Corporation accounted for these Shared Plans as multiemployer benefit plans. Accordingly, Alcoa Corporation did not record an asset or liability to recognize the funded status of the Shared Plans. However, the related expense recorded by Alcoa Corporation was based primarily on pensionable compensation and estimated interest costs related to employees attributable to Alcoa Corporation operations.

Prior to the Separation Date, certain other plans that were entirely attributable to employees of Alcoa Corporation-related operations (the "Direct Plans") were accounted for as defined benefit pension and other postretirement benefit plans. Accordingly, the funded and unfunded position of each Direct Plan was recorded in the Consolidated Balance Sheet. Actuarial gains and losses that had not yet been recognized through earnings were recorded in accumulated other comprehensive income, net of taxes, until they were amortized as a component of net periodic benefit cost. The determination of benefit obligations and recognition of expenses related to Direct Plans is dependent on various assumptions (see below).

In preparation for the Separation Transaction, effective August 1, 2016, certain of the Shared Plans were separated into standalone plans for both Alcoa Corporation (the "New Direct Plans") and ParentCo. Additionally, certain of the other remaining Shared Plans were assumed by Alcoa Corporation (the "Additional New Direct Plans"). Accordingly, from August 1, 2016 through December 31, 2016, the standalone plans and assumed plans were accounted for as defined benefit pension and other postretirement plans. Additionally, the Direct Plans continued to be accounted for as defined benefit pension and other postretirement plans through December 31, 2016.

Liabilities and expenses for pension and other postretirement benefits are determined using actuarial methodologies and incorporate significant assumptions, including the interest rate used to discount the future estimated liability, the expected long-term rate of return on plan assets, and several assumptions relating to the employee workforce (salary increases, health care cost trend rates, retirement age, and mortality).

The interest rate used to discount future estimated liabilities is determined using a Company-specific yield curve model (above-median) developed with the assistance of an external actuary. The cash flows of the plans' projected benefit

obligations are discounted using a single equivalent rate derived from yields on high quality corporate bonds, which represent a broad diversification of issuers in various sectors. The yield curve model parallels the plans' projected cash flows, which have an average duration ranging from 11 to 15 years, and the underlying cash flows of the bonds included in the model exceed the cash flows needed to satisfy the Company's plans' obligations multiple times. If a deep market of high quality corporate bonds does not exist in a country, then the yield on government bonds plus a corporate bond yield spread is used. In 2016 and 2015, the weighted average discount rate used to determine benefit obligations for pension plans was 4.12% and 4.03%, respectively, and for other postretirement benefit plans was 3.93% and 4.07%, respectively. The impact on the combined pension and other postretirement liabilities of a change in the weighted average discount rate of 1/4 of 1% would be approximately \$200 and either a charge or credit of approximately \$5 to after-tax earnings in the following year.

The expected long-term rate of return on plan assets is generally applied to a five-year market-related value of plan assets (a four-year average or the fair value at the plan measurement date is used for certain non-U.S. plans). The process used by management to develop this assumption is one that relies on forward-looking returns by asset class. Management incorporates expected future returns on current and planned asset allocations using information from various external investment managers and consultants, as well as management's own judgment. For 2016, 2015, and 2014, management used 7.31%, 6.91%, and 6.91% as its weighted-average expected long-term rate of return, which was based on the prevailing and planned strategic asset allocations, as well as estimates of future returns by asset class. For 2017, management anticipates that 7.47% will be the weighted-average expected long-term rate of return. A change in the assumption for the weighted average expected long-term rate of return on plan assets of 1/4 of 1% would impact after-tax earnings by approximately \$8 for 2017.

At December 31, 2015, Alcoa Corporation had a net liability for the Direct Plans of \$407. As described above, on August 1, 2016, certain of the Shared Plans were either separated into standalone plans in preparation for the Separation Transaction or fully assumed by Alcoa Corporation. Accordingly, Alcoa Corporation began accounting for the New Direct Plans and Additional New Direct Plans as defined benefit plans and, therefore, recorded a net liability of \$2,528 at that time. In accordance with Alcoa Corporation's policy each of the Direct Plans, New Direct Plans, and Additional New Direct Plans were remeasured as of December 31, 2016. As a result of the remeasurement, which reflects updated assumptions as well as actual performance of the plan assets, Alcoa Corporation had a net liability of \$3,104 as of December 31, 2016. The increase in the net liability was largely the result of unfavorable performance of the plan assets.

**Derivatives and Hedging.** Derivatives are held for purposes other than trading and are part of a formally documented risk management program. For derivatives designated as fair value hedges, Alcoa Corporation measures hedge effectiveness by formally assessing, at inception and at least quarterly, the historical high correlation of changes in the fair value of the hedged item and the derivative hedging instrument. For derivatives designated as cash flow hedges, Alcoa Corporation measures hedge effectiveness by formally assessing, at inception and at least quarterly, the probable high correlation of the expected future cash flows of the hedged item and the derivative hedging instrument. The ineffective portions of both types of hedges are recorded in sales or other income or expense in the current period. If the hedging relationship ceases to be highly effective or it becomes probable that an expected transaction will no longer occur, future gains or losses on the derivative instrument are recorded in other income or expense.

Alcoa Corporation accounts for hedges of firm customer commitments for aluminum as fair value hedges. As a result, the fair values of the derivatives and changes in the fair values of the underlying hedged items are reported in other current and noncurrent assets and liabilities in the Consolidated Balance Sheet. Changes in the fair values of these derivatives and underlying hedged items generally offset and are recorded each period in sales, consistent with the underlying hedged item.

Alcoa Corporation accounts for hedges of foreign currency exposures and certain forecasted transactions as cash flow hedges. The fair values of the derivatives are recorded in other current and noncurrent assets and liabilities in the Consolidated Balance Sheet. The effective portions of the changes in the fair values of these derivatives are recorded in other comprehensive income and are reclassified to sales, cost of goods sold, or other income or expense in the period in which earnings are impacted by the hedged items or in the period that the transaction no longer qualifies as a cash

flow hedge. These contracts cover the same periods as known or expected exposures, generally not exceeding five years.

If no hedging relationship is designated, the derivative is marked to market through earnings.

Cash flows from derivatives are recognized in the Statement of Consolidated Cash Flows in a manner consistent with the underlying transactions.

**Income Taxes.** From the Separation Date through December 31, 2016, the provision for income taxes was determined using the asset and liability approach of accounting for income taxes. Under this approach, the provision for income taxes represents income taxes paid or payable (or received or receivable) for the current year plus the change in deferred taxes during the year. Deferred taxes represent the future tax consequences expected to occur when the reported amounts of assets and liabilities are recovered or paid, and result from differences between the financial and tax bases of Alcoa Corporation's assets and liabilities and are adjusted for changes in tax rates and tax laws when enacted.

In all periods prior to the Separation Date, Alcoa Corporation's operations were included in the income tax filings of ParentCo. The provision for income taxes in Alcoa Corporation's Statement of Consolidated Operations was determined in the same manner described above, but on a separate return methodology as if the Company was a standalone taxpayer filing hypothetical income tax returns where applicable. Any additional accrued tax liability or refund arising as a result of this approach was assumed to be immediately settled with ParentCo as a component of Parent Company net investment. Deferred tax assets were also determined in the same manner described above and were reflected in the Consolidated Balance Sheet for net operating losses, credits or other attributes to the extent that such attributes were expected to transfer to Alcoa Corporation upon the Separation Transaction. Any difference from attributes generated in a hypothetical return on a separate return basis was adjusted as a component of Parent Company net investment.

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not (greater than 50%) that a tax benefit will not be realized. In evaluating the need for a valuation allowance, management considers all potential sources of taxable income, including income available in carryback periods, future reversals of taxable temporary differences, projections of taxable income, and income from tax planning strategies, as well as all available positive and negative evidence. Positive evidence includes factors such as a history of profitable operations, projections of future profitability within the carryforward period, including from tax planning strategies, and Alcoa Corporation's experience with similar operations. Existing favorable contracts and the ability to sell products into established markets are additional positive evidence. Negative evidence includes items such as cumulative losses, projections of future losses, or carryforward periods that are not long enough to allow for the utilization of a deferred tax asset based on existing projections of income. In certain jurisdictions, deferred tax assets related to cumulative losses exist without a valuation allowance where in management's judgment the weight of the positive evidence more than offsets the negative evidence of the cumulative losses. Upon changes in facts and circumstances, management may conclude that deferred tax assets for which no valuation allowance is currently recorded may not be realized, resulting in a future charge to establish a valuation allowance. Existing valuation allowances are re-examined under the same standards of positive and negative evidence. If it is determined that it is more likely than not that a deferred tax asset will be realized, the appropriate amount of the valuation allowance, if any, is released. Deferred tax assets and liabilities are also re-measured to reflect changes in underlying tax rates due to law changes and the granting and lapse of tax holidays.

In 2013, Alcoa Corporation recognized a \$128 discrete income tax charge for a valuation allowance on the full value of the deferred tax assets related to a Spanish consolidated tax group. These deferred tax assets have an expiration period ranging from 2017 (for certain credits) to an unlimited life (for operating losses). After weighing all available positive and negative evidence, as described above, management determined that it was no longer more likely than not that Alcoa Corporation will realize the tax benefit of these deferred tax assets. This was mainly driven by a decline in the outlook of the former Primary Metals business (2013 realized prices were the lowest since 2009) combined with prior

year cumulative losses of the Spanish consolidated tax group. During 2014, the underlying value of the deferred tax assets decreased due to a remeasurement as a result of the enactment of new tax rates in Spain beginning in 2016 and a change in foreign currency exchange rates. As a result, the valuation allowance decreased by the same amount. At December 31, 2016 and 2015, the amount of the valuation allowance was \$76 and \$91, respectively. This valuation allowance was reevaluated as of December 31, 2016, and no change to the allowance was deemed necessary based on all available evidence. The need for this valuation allowance will be assessed on a continuous basis in future periods and, as a result, a portion or all of the allowance may be reversed based on changes in facts and circumstances.

In 2015, Alcoa Corporation recognized an additional \$141 discrete income tax charge for valuation allowances on certain deferred tax assets in Iceland and Suriname. Of this amount, an \$85 valuation allowance was established on the full value of the deferred tax assets in Suriname, which were related mostly to employee benefits and tax loss carryforwards. These deferred tax assets have an expiration period ranging from 2017 to 2022. The remaining \$56 charge relates to a valuation allowance established on a portion of the deferred tax assets recorded in Iceland. These deferred tax assets have an expiration period ranging from 2017 to 2023. After weighing all available positive and negative evidence, as described above, management determined that it was no longer more likely than not that Alcoa Corporation will realize the tax benefit of either of these deferred tax assets. This was mainly driven by a decline in the outlook of the former Primary Metals business, combined with prior year cumulative losses and a short expiration period. At December 31, 2016 and 2015, the amount of the combined valuation allowance remained \$141. This valuation allowance was reevaluated as of December 31, 2016, and no change to the allowance was deemed necessary based on all available evidence. The need for this valuation allowance will be assessed on a continuous basis in future periods and, as a result, a portion or all of the allowance may be reversed based on changes in facts and circumstances.

Tax benefits related to uncertain tax positions taken or expected to be taken on a tax return are recorded when such benefits meet a more likely than not threshold. Otherwise, these tax benefits are recorded when a tax position has been effectively settled, which means that the statute of limitation has expired or the appropriate taxing authority has completed their examination even though the statute of limitations remains open. Interest and penalties related to uncertain tax positions are recognized as part of the provision for income taxes and are accrued beginning in the period that such interest and penalties would be applicable under relevant tax law until such time that the related tax benefits are recognized.

### **Related Party Transactions**

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

Transactions between Alcoa Corporation and Arconic have been presented as related party transactions in the accompanying Consolidated Financial Statements. Sales to Arconic from Alcoa Corporation were \$958, \$1,078, and \$1,783 in 2016, 2015, and 2014, respectively. As of December 31, 2016, outstanding receivables from Arconic were not material to Alcoa Corporation's Consolidated Balance Sheet.

### **Recently Adopted Accounting Guidance**

See the Recently Adopted Accounting Guidance section of Note B to the Consolidated Financial Statements in Part II Item 8 of this Form 10-K.

### **Recently Issued Accounting Guidance**

See the Recently Issued Accounting Guidance section of Note B to the Consolidated Financial Statements in Part II Item 8 of this Form 10-K.

### **Item 7A. Quantitative and Qualitative Disclosures About Market Risk.**

See the Derivatives section of Note O to the Consolidated Financial Statements in Part II Item 8 of this Form 10-K.

**Item 8. Financial Statements and Supplementary Data.**

**Report of Independent Registered Public Accounting Firm**

To the Shareholders and Board of Directors of Alcoa Corporation:

In our opinion, the accompanying consolidated balance sheets and the related statements of consolidated operations, consolidated comprehensive (loss) income, changes in consolidated equity, and consolidated cash flows present fairly, in all material respects, the financial position of Alcoa Corporation and its subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

A handwritten signature in cursive script that reads "PricewaterhouseCoopers LLP".

PricewaterhouseCoopers LLP  
Pittsburgh, Pennsylvania  
March 15, 2017

**Alcoa Corporation and subsidiaries**  
**Statement of Consolidated Operations**  
(in millions, except per-share amounts)

| <b>For the year ended December 31,</b>   | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|--|-------------|-------------|-------------|
| Sales to unrelated parties   | \$8,360     | \$10,121    | \$11,364    |
| Sales to related parties   | 958         | 1,078       | 1,783       |
| Total sales (E)  | 9,318       | 11,199      | 13,147      |
| Cost of goods sold (exclusive of expenses below)                                     | 7,898       | 9,039       | 10,548      |
| Selling, general administrative, and other expenses                                  | 359         | 353         | 383         |
| Research and development expenses  | 33          | 69          | 95          |
| Provision for depreciation, depletion, and amortization                              | 718         | 780         | 954         |
| Restructuring and other charges (D)  | 318         | 983         | 863         |
| Interest expense (S)   | 243         | 270         | 309         |
| Other (income) expenses, net (S)   | (89)        | 42          | 58          |
| Total costs and expenses   | 9,480       | 11,536      | 13,210      |
| Loss before income taxes   | (162)       | (337)       | (63)        |
| Provision for income taxes (P)   | 184         | 402         | 284         |
| Net loss   | (346)       | (739)       | (347)       |
| Less: Net income (loss) attributable to noncontrolling interest                      | 54          | 124         | (91)        |
| <b>Net Loss Attributable to Alcoa Corporation</b>                                    | (400)       | \$ (863)    | \$ (256)    |
| <b>Earnings per Share Attributable to Alcoa Corporation Common Shareholders (F):</b> |             |             |             |
| Basic  | \$ (2.19)   | \$ (4.73)   | \$ (1.40)   |
| Diluted  | \$ (2.19)   | \$ (4.73)   | \$ (1.40)   |

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

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

| <b>For the year ended December 31,</b>  | <b>Alcoa Corporation</b> |                  |                | <b>Noncontrolling Interest</b> |                |                | <b>Total</b>   |                  |                  |
|---|--------------------------|------------------|----------------|--------------------------------|----------------|----------------|----------------|------------------|------------------|
|   | <b>2016</b>              | <b>2015</b>      | <b>2014</b>    | <b>2016</b>                    | <b>2015</b>    | <b>2014</b>    | <b>2016</b>    | <b>2015</b>      | <b>2014</b>      |
| Net (loss) income   | \$(400)                  | \$ (863)         | \$(256)        | \$ 54                          | \$ 124         | \$ (91)        | \$(346)        | \$ (739)         | \$ (347)         |
| Other comprehensive (loss) income, net of tax (G):  |                          |                  |                |                                |                |                |                |                  |                  |
| Change in unrecognized net actuarial loss and prior service cost/benefit related to pension and other postretirement benefits | (202)                    | 72               | (51)           | -                              | 8              | (13)           | (202)          | 80               | (64)             |
| Foreign currency translation adjustments  | 213                      | (1,183)          | (688)          | 102                            | (428)          | (236)          | 315            | (1,611)          | (924)            |
| Net change in unrecognized gains/losses on cash flow hedges   | (346)                    | 827              | 80             | 4                              | (1)            | -              | (342)          | 826              | 80               |
| Total Other comprehensive (loss) income, net of tax   | (335)                    | (284)            | (659)          | 106                            | (421)          | (249)          | (229)          | (705)            | (908)            |
| <b>Comprehensive (loss) income</b>  | <b>\$(735)</b>           | <b>\$(1,147)</b> | <b>\$(915)</b> | <b>\$160</b>                   | <b>\$(297)</b> | <b>\$(340)</b> | <b>\$(575)</b> | <b>\$(1,444)</b> | <b>\$(1,255)</b> |

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



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

| <b>December 31,</b>                                     | <b>2016</b>     | <b>2015</b>     |
|---|-----------------|-----------------|
| <b>Assets</b>   |                 |                 |
| Current assets:   |                 |                 |
| Cash and cash equivalents (O)                           | \$ 853          | \$ 557          |
| Receivables from customers                              | 668             | 380             |
| Other receivables                                       | 166             | 124             |
| Inventories (I)   | 1,160           | 1,172           |
| Prepaid expenses and other current assets               | 334             | 333             |
| Total current assets                                    | 3,181           | 2,566           |
| Properties, plants, and equipment, net (J)              | 9,325           | 9,390           |
| Investments (H)   | 1,358           | 1,472           |
| Deferred income taxes (P)                               | 741             | 589             |
| Fair value of derivative contracts (O)                  | 468             | 997             |
| Other noncurrent assets (S)                             | 1,668           | 1,399           |
| <b>Total Assets</b>                                     | <b>\$16,741</b> | <b>\$16,413</b> |
| <b>Liabilities</b>                                      |                 |                 |
| Current liabilities:                                    |                 |                 |
| Accounts payable, trade                                 | \$ 1,455        | \$ 1,379        |
| Accrued compensation and retirement costs               | 456             | 313             |
| Taxes, including income taxes                           | 147             | 136             |
| Other current liabilities                               | 742             | 558             |
| Long-term debt due within one year (L & O)              | 21              | 18              |
| Total current liabilities                               | 2,821           | 2,404           |
| Long-term debt, less amount due within one year (L & O) | 1,424           | 207             |
| Accrued pension benefits (N)                            | 1,851           | 359             |
| Accrued other postretirement benefits (N)               | 1,166           | 78              |
| Asset retirement obligations (Q)                        | 604             | 539             |
| Environmental remediation (R)                           | 264             | 207             |
| Noncurrent income taxes (P)                             | 310             | 508             |
| Other noncurrent liabilities and deferred credits (S)   | 604             | 598             |
| Total liabilities                                       | 9,044           | 4,900           |
| Contingencies and commitments (R)                       |                 |                 |
| <b>Equity</b>   |                 |                 |
| Alcoa Corporation shareholders' equity:                 |                 |                 |
| Parent Company net investment (A)                       | -               | 11,042          |
| Common stock (M)  | 2               | -               |
| Additional capital                                      | 9,531           | -               |
| Retained deficit  | (104)           | -               |
| Accumulated other comprehensive loss (G)                | (3,775)         | (1,600)         |
| Total Alcoa Corporation shareholders' equity            | 5,654           | 9,442           |
| Noncontrolling interest (A)                             | 2,043           | 2,071           |
| Total equity  | 7,697           | 11,513          |
| <b>Total Liabilities and Equity</b>                     | <b>\$16,741</b> | <b>\$16,413</b> |

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

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

| <b>For the year ended December 31,</b>  | <b>2016</b>   | <b>2015</b>   | <b>2014</b>   |
|---|---------------|---------------|---------------|
| <b>Cash from Operations</b>   |               |               |               |
| Net loss  | \$ (346)      | \$(739)       | \$(347)       |
| Adjustments to reconcile net loss to cash from operations:  |               |               |               |
| Depreciation, depletion, and amortization   | 718           | 780           | 954           |
| Deferred income taxes (P)   | (46)          | 86            | (50)          |
| Equity income, net of dividends (H)   | 48            | 158           | 97            |
| Restructuring and other charges (D)   | 318           | 983           | 863           |
| Net gain from investing activities—asset sales (S)  | (164)         | (32)          | (34)          |
| Net periodic pension benefit cost (N)   | 66            | 67            | 77            |
| Stock-based compensation (M)  | 28            | 35            | 39            |
| Other   | (16)          | 41            | 15            |
| Changes in assets and liabilities, excluding effects of acquisitions, divestitures, and foreign currency translation adjustments: |               |               |               |
| (Increase) Decrease in receivables  | (234)         | 130           | (91)          |
| Decrease (Increase) in inventories  | 1             | 212           | (126)         |
| (Increase) Decrease in prepaid expenses and other current assets  | (52)          | 58            | (21)          |
| Increase (Decrease) in accounts payable, trade  | 6             | (156)         | 110           |
| (Decrease) in accrued expenses  | (320)         | (311)         | (404)         |
| (Decrease) in taxes, including income taxes   | (148)         | (32)          | (67)          |
| Pension contributions (N)   | (66)          | (69)          | (154)         |
| (Increase) in noncurrent assets (R)   | (184)         | (356)         | (32)          |
| Increase in noncurrent liabilities  | 80            | 20            | 13            |
| <b>Cash (used for) provided from operations</b>   | <b>(311)</b>  | <b>875</b>    | <b>842</b>    |
| <b>Financing Activities</b>   |               |               |               |
| Net transfers from (to) Parent Company  | 802           | (34)          | (332)         |
| Cash provided at separation to Parent Company (A)   | (1,072)       | -             | -             |
| Net change in short-term borrowings (original maturities of three months or less)   | (4)           | -             | -             |
| Additions to debt (original maturities greater than three months)   | -             | -             | 1             |
| Payments on debt (original maturities greater than three months) (L)  | (34)          | (24)          | (36)          |
| Proceeds from exercise of employee stock options (M)  | 10            | -             | -             |
| Contributions from noncontrolling interest (A)  | 48            | 2             | 43            |
| Distributions to noncontrolling interest  | (233)         | (106)         | (120)         |
| <b>Cash used for financing activities</b>   | <b>(483)</b>  | <b>(162)</b>  | <b>(444)</b>  |
| <b>Investing Activities</b>   |               |               |               |
| Capital expenditures  | (404)         | (391)         | (444)         |
| Proceeds from the sale of assets and businesses (C)   | 112           | 70            | 223           |
| Additions to investments (H)  | (3)           | (63)          | (145)         |
| Sales of investments (H)  | 146           | -             | 28            |
| Net change in restricted cash (L)   | 1,226         | -             | -             |
| <b>Cash provided from (used for) investing activities</b>   | <b>1,077</b>  | <b>(384)</b>  | <b>(338)</b>  |
| <b>Effect of exchange rate changes on cash and cash equivalents</b>   | <b>13</b>     | <b>(38)</b>   | <b>(7)</b>    |
| Net change in cash and cash equivalents   | 296           | 291           | 53            |
| Cash and cash equivalents at beginning of year  | 557           | 266           | 213           |
| <b>Cash and cash equivalents at end of year</b>   | <b>\$ 853</b> | <b>\$ 557</b> | <b>\$ 266</b> |

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

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

|   | Alcoa Corporation Shareholders |              |                    |                  |                                      |         | Noncontrolling interest | Total equity |
|---|--------------------------------|--------------|--------------------|------------------|--------------------------------------|---------|-------------------------|--------------|
|   | Parent Company net investment  | Common stock | Additional capital | Retained deficit | Accumulated other comprehensive loss |         |                         |              |
| <b>Balance at December 31, 2013</b>                   | \$12,550                       | \$ -         | \$ -               | \$ -             | \$ (657)                             | \$2,896 | \$14,789                |              |
| Net loss  | (256)                          | -            | -                  | -                | -                                    | (91)    | (347)                   |              |
| Other comprehensive loss (G)                          | -                              | -            | -                  | -                | (659)                                | (249)   | (908)                   |              |
| Change in Parent Company net investment               | (379)                          | -            | -                  | -                | -                                    | -       | (379)                   |              |
| Distributions   | -                              | -            | -                  | -                | -                                    | (120)   | (120)                   |              |
| Contributions (A)                                     | -                              | -            | -                  | -                | -                                    | 43      | 43                      |              |
| Other   | -                              | -            | -                  | -                | -                                    | (5)     | (5)                     |              |
| <b>Balance at December 31, 2014</b>                   | 11,915                         | -            | -                  | -                | (1,316)                              | 2,474   | 13,073                  |              |
| Net (loss) income                                     | (863)                          | -            | -                  | -                | -                                    | 124     | (739)                   |              |
| Other comprehensive loss (G)                          | -                              | -            | -                  | -                | (284)                                | (421)   | (705)                   |              |
| Change in Parent Company net investment               | (10)                           | -            | -                  | -                | -                                    | -       | (10)                    |              |
| Distributions   | -                              | -            | -                  | -                | -                                    | (106)   | (106)                   |              |
| Contributions (A)                                     | -                              | -            | -                  | -                | -                                    | 2       | 2                       |              |
| Other   | -                              | -            | -                  | -                | -                                    | (2)     | (2)                     |              |
| <b>Balance at December 31, 2015</b>                   | 11,042                         | -            | -                  | -                | (1,600)                              | 2,071   | 11,513                  |              |
| Net (loss) income                                     | (296)                          | -            | -                  | (104)            | -                                    | 54      | (346)                   |              |
| Other comprehensive (loss) income (G)                 | -                              | -            | -                  | -                | (335)                                | 106     | (229)                   |              |
| Establishment of additional defined benefit plans (N) | 176                            | -            | -                  | -                | (2,704)                              | -       | (2,528)                 |              |
| Change in Parent Company net investment               | (603)                          | -            | -                  | -                | -                                    | -       | (603)                   |              |
| Cash provided at separation to Parent Company (A)     | (1,072)                        | -            | -                  | -                | -                                    | -       | (1,072)                 |              |
| Separation-related adjustments (A)                    | (9,247)                        | -            | 9,521              | -                | 864                                  | -       | 1,138                   |              |
| Issuance of common stock (M)                          | -                              | 2            | (2)                | -                | -                                    | -       | -                       |              |
| Stock-based compensation (M)                          | -                              | -            | 2                  | -                | -                                    | -       | 2                       |              |
| Common stock issued: compensation plans (M)           | -                              | -            | 10                 | -                | -                                    | -       | 10                      |              |
| Distributions   | -                              | -            | -                  | -                | -                                    | (233)   | (233)                   |              |
| Contributions (A)                                     | -                              | -            | -                  | -                | -                                    | 48      | 48                      |              |
| Other   | -                              | -            | -                  | -                | -                                    | (3)     | (3)                     |              |
| <b>Balance at December 31, 2016</b>                   | \$ -                           | \$2          | \$9,531            | \$(104)          | \$(3,775)                            | \$2,043 | \$ 7,697                |              |

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

**Alcoa Corporation and subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**(dollars in millions, except per-share amounts)**

**A. Basis of Presentation**

Alcoa Corporation (or the “Company”) is a vertically integrated aluminum company comprised of bauxite mining, alumina refining, aluminum production (smelting, casting, and rolling), and energy generation. The Company has 43 operating locations in 10 countries around the world, primarily in Australia, Brazil, Canada, Europe, and the United States.

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)).

**Separation Transaction.** On September 28, 2015, ParentCo’s Board of Directors preliminarily approved a plan to separate ParentCo into two standalone, publicly-traded companies (the “Separation Transaction”). One company, later named Alcoa Corporation, was to include the Alumina and Primary Metals segments, which comprised the bauxite mining, alumina refining, aluminum production, and energy operations of ParentCo, as well as the Warrick, Indiana rolling operations and the 25.1% equity interest in the rolling mill at the joint venture in Saudi Arabia, both of which were part of ParentCo’s Global Rolled Products segment. ParentCo, later changed its name to Arconic Inc., was to continue to own the Global Rolled Products (except for the aforementioned rolling operations that were to be included in Alcoa Corporation), Engineered Products and Solutions, and Transportation and Construction Solutions segments.

The Separation Transaction was subject to a number of conditions, including, but not limited to: final approval by ParentCo’s Board of Directors (see below); the continuing validity of the private letter ruling from the Internal Revenue Service regarding certain U.S. federal income tax matters relating to the transaction; receipt of an opinion of legal counsel regarding the qualification of the distribution, together with certain related transactions, as a transaction that is generally tax-free for U.S. federal income tax purposes; and the U.S. Securities and Exchange Commission (the “SEC”) declaring effective a Registration Statement on Form 10, as amended, filed with the SEC on October 11, 2016 (effectiveness was declared by the SEC on October 17, 2016).

On September 29, 2016, ParentCo’s Board of Directors approved the completion of the Separation Transaction by means of a pro rata distribution by ParentCo of 80.1% of the outstanding common stock of Alcoa Corporation to ParentCo shareholders of record as of the close of business on October 20, 2016 (the “Record Date”). Arconic was to retain the remaining 19.9% of Alcoa Corporation common stock. At the time of the Separation Transaction, ParentCo shareholders were to receive one share of Alcoa Corporation common stock for every three shares of ParentCo common stock held as of the close of business on the Record Date. ParentCo shareholders were to receive cash in lieu of fractional shares.

In connection with the Separation Transaction, as of October 31, 2016, Alcoa Corporation entered into certain agreements with Arconic to implement the legal and structural separation between the two companies, govern the relationship between Alcoa Corporation and Arconic after the completion of the Separation Transaction, and allocate between Alcoa Corporation and Arconic various assets, liabilities and obligations, including, among other things, employee benefits, environmental liabilities, intellectual property, and tax-related assets and liabilities. These agreements included a Separation and Distribution Agreement, Tax Matters Agreement, Employee Matters Agreement, Transition Services Agreement, and certain Patent, Know-How, Trade Secret License and Trademark License Agreements.

On November 1, 2016 (the “Separation Date”), the Separation Transaction was completed and became effective at 12:01 a.m. Eastern Standard Time. To effect the Separation Transaction, ParentCo undertook a series of transactions to separate the net assets and certain legal entities of ParentCo, resulting in a cash payment of \$1,072 to ParentCo by Alcoa Corporation with the net proceeds of a previous debt offering (see Note L). In conjunction with the Separation

Transaction, 146,159,428 shares of Alcoa Corporation common stock were distributed to ParentCo shareholders. Additionally, Arconic retained 36,311,767 shares of Alcoa Corporation common stock representing its 19.9% retained interest (on February 14, 2017, Arconic sold 23,353,000 of these shares). “Regular-way” trading of Alcoa Corporation’s common stock began with the opening of the New York Stock Exchange on November 1, 2016 under the ticker symbol “AA.” Alcoa Corporation’s common stock has a par value of \$0.01 per share.

ParentCo incurred costs to evaluate, plan, and execute the Separation Transaction, and Alcoa Corporation was allocated a pro rata portion of those costs based on segment revenue (see Cost Allocations below). ParentCo recognized \$152 from January 2016 through October 2016 and \$24 in 2015 for costs related to the Separation Transaction, of which \$68 and \$12, respectively, was allocated to Alcoa Corporation. The allocated amounts were included in Selling, general administrative, and other expenses on the accompanying Statement of Consolidated Operations.

**Basis of Presentation.** The Consolidated Financial Statements of Alcoa Corporation are prepared in conformity with accounting principles generally accepted in the United States of America (GAAP) and require management to make certain judgments, estimates, and assumptions. These may affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements. They also may affect the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates upon subsequent resolution of identified matters.

**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 of Australia (Alumina Limited) and consists of a number of 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 (AofA), 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. In 2016, 2015, and 2014, AWAC received \$48, \$2, and \$43, respectively, in contributions from Alumina Limited.

Management evaluates whether an Alcoa Corporation entity or interest is a variable interest entity and whether Alcoa Corporation is the primary beneficiary. Consolidation is required if both of these criteria are met. Alcoa Corporation does not have any variable interest entities requiring consolidation.

Prior to the Separation Date, Alcoa Corporation did not operate as a separate, standalone entity. Alcoa Corporation’s operations were included in ParentCo’s financial results. Accordingly, for all periods prior to the Separation Date, the accompanying Consolidated Financial Statements were prepared from ParentCo’s historical accounting records and were presented on a standalone basis as if Alcoa Corporation’s operations had been conducted independently from ParentCo. Such Consolidated Financial Statements include the historical operations that were considered to comprise Alcoa Corporation’s businesses, as well as certain assets and liabilities that were historically held at ParentCo’s corporate level but were specifically identifiable or otherwise attributable to Alcoa Corporation. ParentCo’s net investment in these operations is reflected as Parent Company net investment in the accompanying Consolidated Balance Sheet. All significant transactions and accounts within Alcoa Corporation have been eliminated. All significant intercompany transactions between ParentCo and Alcoa Corporation were included within Parent Company net investment in the accompanying Consolidated Financial Statements.

**Cost Allocations.** The description and information on cost allocations is applicable for all periods included in the Consolidated Financial Statements prior to the Separation Date.

The Consolidated Financial Statements of Alcoa Corporation include general corporate expenses of ParentCo that were not historically charged to Alcoa Corporation for certain support functions that were provided on a centralized basis, such as expenses related to finance, audit, legal, information technology, human resources, communications, compliance, facilities, employee benefits and compensation, and research and development activities. These general corporate expenses were included in the accompanying Statement of Consolidated Operations within Cost of goods sold, Selling, general administrative and other expenses, and Research and development expenses. These expenses were allocated to Alcoa Corporation on the basis of direct usage when identifiable, with the remainder allocated based on Alcoa Corporation's segment revenue as a percentage of ParentCo's total segment revenue for both Alcoa Corporation and Arconic.

All external debt not directly attributable to Alcoa Corporation was excluded from the accompanying Consolidated Balance Sheet of Alcoa Corporation. Financing costs related to these debt obligations were allocated to Alcoa Corporation based on the ratio of capital invested in Alcoa Corporation to the total capital invested by ParentCo in both Alcoa Corporation and Arconic, and were included in the accompanying Statement of Consolidated Operations within Interest expense.

The following table reflects the allocations described above:

|  | 2016   | 2015  | 2014  |
|--|--------|-------|-------|
| Cost of goods sold <sup>(1)</sup>                                  | \$ 40  | \$ 93 | \$ 76 |
| Selling, general administrative, and other expenses <sup>(2)</sup> | 150    | 146   | 158   |
| Research and development expenses                                  | 2      | 17    | 21    |
| Provision for depreciation, depletion, and amortization            | 18     | 22    | 37    |
| Restructuring and other charges <sup>(3)</sup>                     | 1      | 32    | 23    |
| Interest expense   | 198    | 245   | 278   |
| Other (income) expenses, net                                       | \$ (7) | \$ 12 | \$ 5  |

<sup>(1)</sup> Allocation principally relates to expenses for ParentCo's retained pension and other postretirement benefits associated with closed and sold operations.

<sup>(2)</sup> Allocation includes costs incurred by ParentCo associated with the Separation Transaction (see Separation Transaction above).

<sup>(3)</sup> Allocation primarily relates to layoff programs for ParentCo corporate employees.

Management believes the assumptions regarding the allocation of ParentCo's general corporate expenses and financing costs were reasonable.

Nevertheless, the Consolidated Financial Statements of Alcoa Corporation may not include all of the actual expenses that would have been incurred and may not reflect Alcoa Corporation's consolidated results of operations, financial position, and cash flows had it been a standalone company during the periods prior to the Separation Date. Actual costs that would have been incurred if Alcoa Corporation had been a standalone company would depend on multiple factors, including organizational structure, capital structure, and strategic decisions made in various areas, including information technology and infrastructure. Transactions between Alcoa Corporation and ParentCo, including sales to Arconic, were included as related party transactions in the Consolidated Financial Statements and are considered to be effectively settled for cash at the time the transaction was recorded. The total net effect of the settlement of these transactions is reflected in the accompanying Statement of Consolidated Cash Flows as a financing activity and in the accompanying Consolidated Balance Sheet as Parent Company net investment.

**Cash Management.** The description and information on cash management is applicable for all periods included in the Consolidated Financial Statements prior to the Separation Date.

Cash was managed centrally with certain net earnings reinvested locally and working capital requirements met from existing liquid funds. Accordingly, the cash and cash equivalents held by ParentCo at the corporate level were not attributed to Alcoa Corporation for any of the periods prior to the Separation Date. Only cash amounts specifically attributable to Alcoa Corporation were reflected in the accompanying Consolidated Balance Sheet. Transfers of cash, both to and from ParentCo's centralized cash management system, were reflected as a component of Parent Company net investment in the accompanying Consolidated Balance Sheet and as a financing activity on the accompanying Consolidated Statement of Cash Flows.

ParentCo had an arrangement with several financial institutions to sell certain customer receivables without recourse on a revolving basis. The sale of such receivables was completed through the use of a bankruptcy-remote special-purpose entity, which was a consolidated subsidiary of ParentCo. In connection with this arrangement, certain of Alcoa Corporation's customer receivables were sold on a revolving basis to this bankruptcy-remote subsidiary of ParentCo; these sales were reflected as a component of Parent Company net investment in the accompanying Consolidated Balance Sheet.

ParentCo participated in several accounts payable settlement arrangements with certain vendors and third-party intermediaries. These arrangements provided that, at the vendor's request, the third-party intermediary advance the amount of the scheduled payment to the vendor, less an appropriate discount, before the scheduled payment date and ParentCo made payment to the third-party intermediary on the date stipulated in accordance with the commercial terms negotiated with its vendors. In connection with these arrangements, certain of Alcoa Corporation's accounts payable were settled, at the vendor's request, before the scheduled payment date; these settlements were reflected as a component of Parent Company net investment in the accompanying Consolidated Balance Sheet.

**Related Party Transactions.** Alcoa Corporation buys products from and sells products to various related companies, consisting of entities in which Alcoa Corporation retains a 50% or less equity interest, at negotiated prices between the two parties. These transactions were not material to the financial position or results of operations of Alcoa Corporation for all periods presented.

Transactions between Alcoa Corporation and Arconic have been presented as related party transactions in the accompanying Consolidated Financial Statements. Sales to Arconic from Alcoa Corporation were \$958, \$1,078, and \$1,783 in 2016, 2015, and 2014, respectively. As of December 31, 2016, outstanding receivables from Arconic were not material to the accompanying Consolidated Balance Sheet.

## **B. Summary of Significant Accounting Policies**

**Cash Equivalents.** Cash equivalents are highly liquid investments purchased with an original maturity of three months or less.

**Inventory Valuation.** Inventories are carried at the lower of cost or market, with cost for a substantial portion of U.S. and Canadian inventories determined under the last-in, first-out (LIFO) method. The cost of other inventories is principally determined under the average-cost method.

**Properties, Plants, and Equipment.** Properties, plants, and equipment are recorded at cost. Depreciation is recorded principally on the straight-line method at rates based on the estimated useful lives of the assets. For greenfield assets, which refer to the construction of new assets on undeveloped land, the units of production method is used to record depreciation. These assets require a significant period (generally greater than one-year) to ramp-up to full production capacity. As a result, the units of production method is deemed a more systematic and rational method for recognizing depreciation on these assets. Depreciation is recorded on temporarily idled facilities until such time management approves a permanent closure. The following table details the weighted-average useful lives of structures and machinery and equipment by reporting segment (numbers in years):

| <b>Segment</b>  | <b>Structures</b> | <b>Machinery and equipment</b> |
|-----------------|-------------------|--------------------------------|
| Bauxite         | 35                | 17                             |
| Alumina         | 30                | 27                             |
| Aluminum        | 36                | 22                             |
| Cast Products   | 33                | 19                             |
| Energy          | 34                | 25                             |
| Rolled Products | 31                | 22                             |

Gains or losses from the sale of assets are generally recorded in other income or expenses. Repairs and maintenance are charged to expense as incurred. Interest related to the construction of qualifying assets is capitalized as part of the construction costs.

Properties, plants, and equipment are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets (asset group) may not be recoverable. Recoverability of assets is determined by comparing the estimated undiscounted net cash flows of the operations related to the assets (asset group) to their carrying amount. An impairment loss would be recognized when the carrying amount of the assets (asset group) exceeds the estimated undiscounted net cash flows. The amount of the impairment loss to be recorded is calculated as the excess of the carrying value of the assets (asset group) over their fair value, with fair value determined using the best information available, which generally is a discounted cash flow (DCF) model. The determination of what constitutes an asset group, the associated estimated undiscounted net cash flows, and the estimated useful lives of assets also require significant judgments.

**Equity Investments.** Alcoa Corporation invests in a number of privately-held companies, primarily through joint ventures and consortia, which are accounted for using the equity method. The equity method is applied in situations where Alcoa Corporation has the ability to exercise significant influence, but not control, over the investee. Management reviews equity investments for impairment whenever certain indicators are present suggesting that the carrying value of an investment is not recoverable. This analysis requires a significant amount of judgment from management to identify events or circumstances indicating that an equity investment is impaired. The following items are examples of impairment indicators: significant, sustained declines in an investee's revenue, earnings, and cash flow trends; adverse market conditions of the investee's industry or geographic area; the investee's ability to continue operations measured by several items, including liquidity; and other factors. Once an impairment indicator is identified, management uses considerable judgment to determine if the impairment is other than temporary, in which case the equity investment is written down to its estimated fair value. An impairment that is other than temporary could significantly and adversely impact reported results of operations.

**Deferred Mining Costs.** Alcoa Corporation recognizes deferred mining costs during the development stage of a mine life cycle. Such costs include the construction of access and haul roads, detailed drilling and geological analysis to further define the grade and quality of the known bauxite, and overburden removal costs. These costs relate to sections of the related mines where Alcoa Corporation is either currently extracting bauxite or is preparing for production in the near term. These sections are outlined and planned incrementally and generally are mined over periods ranging from one to five years, depending on mine specifics. The amount of geological drilling and testing necessary to determine the economic viability of the bauxite deposit being mined is such that the reserves are considered to be proven, and the



mining costs are amortized based on this level of reserves. Deferred mining costs are included in Other noncurrent assets on the accompanying Consolidated Balance Sheet.

**Goodwill and Other Intangible Assets.** Goodwill is not amortized; instead, it is reviewed for impairment annually (in the fourth quarter) or more frequently if indicators of impairment exist or if a decision is made to sell or exit a business. A significant amount of judgment is involved in determining if an indicator of impairment has occurred. Such indicators may include deterioration in general economic conditions, negative developments in equity and credit markets, adverse changes in the markets in which an entity operates, increases in input costs that have a negative effect on earnings and cash flows, or a trend of negative or declining cash flows over multiple periods, among others. The fair value that could be realized in an actual transaction may differ from that used to evaluate the impairment of goodwill.

Goodwill is allocated among and evaluated for impairment at the reporting unit level, which is defined as an operating segment or one level below an operating segment. Alcoa Corporation has six reporting units as follows: Bauxite, Alumina, Aluminum, Cast Products, Energy, and Rolled Products. Of these six reporting units, only Bauxite and Alumina contain goodwill. As of December 31, 2016, the carrying value of the goodwill for Bauxite and Alumina was \$52 and \$103, respectively. These amounts include an allocation of goodwill held at the corporate level (see Note K).

In reviewing goodwill for impairment, an entity has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not (greater than 50%) that the estimated fair value of a reporting unit is less than its carrying amount. If an entity elects to perform a qualitative assessment and determines that an impairment is more likely than not, the entity is then required to perform the existing two-step quantitative impairment test (described below), otherwise no further analysis is required. An entity also may elect not to perform the qualitative assessment and, instead, proceed directly to the two-step quantitative impairment test. The ultimate outcome of the goodwill impairment review for a reporting unit should be the same whether an entity chooses to perform the qualitative assessment or proceeds directly to the two-step quantitative impairment test.

Alcoa Corporation's policy for its annual review of goodwill is to perform the qualitative assessment for all reporting units not subjected directly to the two-step quantitative impairment test. Generally, management will proceed directly to the two-step quantitative impairment test for each of its two reporting units that contain goodwill at least once during every three-year period, as part of its annual review of goodwill.

Under the qualitative assessment, various events and circumstances (or factors) that would affect the estimated fair value of a reporting unit are identified (similar to impairment indicators above). These factors are then classified by the type of impact they would have on the estimated fair value using positive, neutral, and adverse categories based on current business conditions. Additionally, an assessment of the level of impact that a particular factor would have on the estimated fair value is determined using high, medium, and low weighting. Furthermore, management considers the results of the most recent two-step quantitative impairment test completed for a reporting unit and compares the weighted average cost of capital (WACC) between the current and prior years for each reporting unit.

During the 2016 annual review of goodwill, management performed the qualitative assessment for the Bauxite reporting unit. Management concluded it was not more likely than not that the estimated fair value of this reporting unit was less than its carrying value. As such, no further analysis was required.

Under the two-step quantitative impairment test, the evaluation of impairment involves comparing the current fair value of each reporting unit to its carrying value, including goodwill. Alcoa Corporation uses a DCF model to estimate the current fair value of its reporting units when testing for impairment, as management believes forecasted cash flows are the best indicator of such fair value. A number of significant assumptions and estimates are involved in the application of the DCF model to forecast operating cash flows, including markets and market share, sales volumes and prices, production costs, tax rates, capital spending, discount rate, and working capital changes. Certain of these assumptions can vary significantly among the reporting units. Cash flow forecasts are generally based on approved business unit operating plans for the early years and historical relationships in later years. The betas used in calculating the individual reporting units' WACC rate are estimated for each business with the assistance of valuation experts.

In the event the estimated fair value of a reporting unit per the DCF model is less than the carrying value, additional analysis would be required. The additional analysis would compare the carrying amount of the reporting unit's goodwill with the implied fair value of that goodwill, which may involve the use of valuation experts. 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 exceeds its implied fair value, an impairment loss equal to such excess would be recognized.

During the 2016 annual review of goodwill, management proceeded directly to the two-step quantitative impairment test for the Alumina reporting unit. The estimated fair value of this reporting unit was substantially in excess of its carrying value, resulting in no impairment.

Goodwill impairment tests in all prior years presented indicated that goodwill was not impaired for any of Alcoa Corporation's reporting units, and there were no triggering events since that time that necessitated an impairment test. Intangible assets with finite useful lives are amortized generally on a straight-line basis over the periods benefited. The following table details the weighted-average useful lives of software and other intangible assets by reporting segment (numbers in years):

| Segment         | Software | Other intangible assets |
|-----------------|----------|-------------------------|
| Bauxite         | 8        | 10                      |
| Alumina         | 7        | 19                      |
| Aluminum        | 6        | 38                      |
| Cast Products   | 3        | —                       |
| Energy          | 4        | 37                      |
| Rolled Products | 6        | 20                      |

**Asset Retirement Obligations.** Alcoa Corporation recognizes asset retirement obligations (AROs) related to legal obligations associated with the normal operation of bauxite mines, alumina refineries, and aluminum smelters. These AROs consist primarily of costs associated with mine reclamation, closure of bauxite residue areas, spent pot lining disposal, and landfill closure. Alcoa Corporation also recognizes AROs for any significant lease restoration obligation, if required by a lease agreement, and for the disposal of regulated waste materials related to the demolition of certain power facilities. The fair values of these AROs are recorded on a discounted basis, at the time the obligation is incurred, and accreted over time for the change in present value. Additionally, Alcoa Corporation capitalizes asset retirement costs by increasing the carrying amount of the related long-lived assets and depreciating these assets over their remaining useful life.

Certain conditional asset retirement obligations (CAROs) related to alumina refineries, aluminum smelters, rolling mills, and energy generation facilities have not been recorded in the Consolidated Financial Statements due to uncertainties surrounding the ultimate settlement date. A CARO is a legal obligation to perform an asset retirement activity in which the timing and/or method of settlement are conditional on a future event that may or may not be within Alcoa Corporation's control. Such uncertainties exist as a result of the perpetual nature of the structures, maintenance and upgrade programs, and other factors. At the date a reasonable estimate of the ultimate settlement date can be made (e.g., planned demolition), Alcoa Corporation would record an ARO for the removal, treatment, transportation, storage, and/or disposal of various regulated assets and hazardous materials such as asbestos, underground and aboveground storage tanks, polychlorinated biphenyls (PCBs), various process residuals, solid wastes, electronic equipment waste, and various other materials. Such amounts may be material to the Consolidated Financial Statements in the period in which they are recorded.

**Environmental Matters.** Expenditures for current operations are expensed or capitalized, as appropriate. Expenditures relating to existing conditions caused by past operations, which will not contribute to future revenues, are expensed. Liabilities are recorded when remediation costs are probable and can be reasonably estimated. The liability may include costs such as site investigations, consultant fees, feasibility studies, outside contractors, and monitoring

expenses. Estimates are generally not discounted or reduced by potential claims for recovery. Claims for recovery are recognized as agreements are reached with third parties. The estimates also include costs related to other potentially responsible parties to the extent that Alcoa Corporation has reason to believe such parties will not fully pay their proportionate share. The liability is continuously reviewed and adjusted to reflect current remediation progress, prospective estimates of required activity, and other factors that may be relevant, including changes in technology or regulations.

**Litigation Matters.** For asserted claims and assessments, liabilities are recorded when an unfavorable outcome of a matter is deemed to be probable and the loss is reasonably estimable. Management determines the likelihood of an unfavorable outcome based on many factors such as, among others, the nature of the matter, available defenses and case strategy, progress of the matter, views and opinions of legal counsel and other advisors, applicability and success of appeals processes, and the outcome of similar historical matters. Once an unfavorable outcome is deemed probable, management weighs the probability of estimated losses, and the most reasonable loss estimate is recorded. If an unfavorable outcome of a matter is deemed to be reasonably possible, then the matter is disclosed and no liability is recorded. With respect to unasserted claims or assessments, management must first determine that the probability that an assertion will be made is likely, then, a determination as to the likelihood of an unfavorable outcome and the ability to reasonably estimate the potential loss is made. Legal matters are reviewed on a continuous basis to determine if there has been a change in management's judgment regarding the likelihood of an unfavorable outcome or the estimate of a potential loss.

**Revenue Recognition.** Alcoa Corporation recognizes revenue when title, ownership, and risk of loss pass to the customer, all of which occurs upon shipment or delivery of the product and is based on the applicable shipping terms. The shipping terms vary across all businesses and depend on the product, the country of origin, and the type of transportation (truck, train, or vessel). Alcoa Corporation periodically enters into long-term supply contracts with alumina and aluminum customers and receives advance payments for product to be delivered in future periods. These advance payments are recorded as deferred revenue, and revenue is recognized as shipments are made and title, ownership, and risk of loss pass to the customer during the term of the contracts. Deferred revenue is included in Other current liabilities and Other noncurrent liabilities and deferred credits on the accompanying Consolidated Balance Sheet.

**Stock-Based Compensation.** For all periods prior to the Separation Date (see Note A), employees attributable to Alcoa Corporation operations participated in ParentCo's stock-based compensation plans. The compensation expense recorded by Alcoa Corporation included the expense associated with these employees, as well as the expense associated with the allocation of stock-based compensation expense for ParentCo's corporate employees. From the Separation Date through December 31, 2016, Alcoa Corporation recorded stock-based compensation expense for all of the Company's employees. The following accounting policy describes how stock-based compensation expense is initially determined for both Alcoa Corporation and ParentCo.

Compensation expense for employee equity grants is recognized using the non-substantive vesting period approach, in which the expense (net of estimated forfeitures) is recognized ratably over the requisite service period based on the grant date fair value. The fair value of new stock options is estimated on the date of grant using a lattice-pricing model. Determining the fair value of stock options at the grant date requires judgment, including estimates for the average risk-free interest rate, dividend yield, volatility, annual forfeiture rate, and exercise behavior. These assumptions may differ significantly between grant dates because of changes in the actual results of these inputs that occur over time.

Most plan participants can choose whether to receive their award in the form of stock options, stock awards, or a combination of both. This choice is made before the grant is issued and is irrevocable.

**Pension and Other Postretirement Benefit Plans.** For all periods prior to August 1, 2016 (see below), certain employees attributable to Alcoa Corporation operations participated in defined benefit pension and other postretirement benefit plans (the "Shared Plans") sponsored by ParentCo, which also included participants attributable to non-Alcoa Corporation operations. Alcoa Corporation accounted for these Shared Plans as multiemployer benefit

plans. Accordingly, Alcoa Corporation did not record an asset or liability to recognize the funded status of the Shared Plans. However, the related expense recorded by Alcoa Corporation was based primarily on pensionable compensation and estimated interest costs related to employees attributable to Alcoa Corporation operations.

Prior to the Separation Date (see Note A), certain other plans that were entirely attributable to employees of Alcoa Corporation-related operations (the "Direct Plans") were accounted for as defined benefit pension and other postretirement benefit plans. Accordingly, the funded and unfunded position of each Direct Plan was recorded in the Consolidated Balance Sheet. Actuarial gains and losses that had not yet been recognized through earnings were recorded in accumulated other comprehensive income, net of taxes, until they were amortized as a component of net periodic benefit cost. The determination of benefit obligations and recognition of expenses related to Direct Plans is dependent on various assumptions. The major assumptions primarily relate to discount rates, long-term expected rates of return on plan assets, and future compensation increases. ParentCo's management developed each assumption using relevant company experience in conjunction with market-related data for each individual location in which such plans exist.

In preparation for the Separation Transaction (see Note A), effective August 1, 2016, certain of the Shared Plans were separated into standalone plans for both Alcoa Corporation and ParentCo (see Note N). Additionally, certain of the other remaining Shared Plans were assumed by Alcoa Corporation (See Note N). Accordingly, from August 1, 2016 through December 31, 2016, the standalone plans and assumed plans were accounted for as defined benefit pension and other postretirement plans. Additionally, the Direct Plans continued to be accounted for as defined benefit pension and other postretirement plans through December 31, 2016.

**Derivatives and Hedging.** Derivatives are held for purposes other than trading and are part of a formally documented risk management program. For derivatives designated as fair value hedges, Alcoa Corporation measures hedge effectiveness by formally assessing, at inception and at least quarterly, the historical high correlation of changes in the fair value of the hedged item and the derivative hedging instrument. For derivatives designated as cash flow hedges, Alcoa Corporation measures hedge effectiveness by formally assessing, at inception and at least quarterly, the probable high correlation of the expected future cash flows of the hedged item and the derivative hedging instrument. The ineffective portions of both types of hedges are recorded in sales or other income or expense in the current period. If the hedging relationship ceases to be highly effective or it becomes probable that an expected transaction will no longer occur, future gains or losses on the derivative instrument are recorded in other income or expense.

Alcoa Corporation accounts for hedges of firm customer commitments for aluminum as fair value hedges. As a result, the fair values of the derivatives and changes in the fair values of the underlying hedged items are reported in other current and noncurrent assets and liabilities in the Consolidated Balance Sheet. Changes in the fair values of these derivatives and underlying hedged items generally offset and are recorded each period in sales, consistent with the underlying hedged item.

Alcoa Corporation accounts for hedges of foreign currency exposures and certain forecasted transactions as cash flow hedges. The fair values of the derivatives are recorded in other current and noncurrent assets and liabilities in the Consolidated Balance Sheet. The effective portions of the changes in the fair values of these derivatives are recorded in other comprehensive income and are reclassified to sales, cost of goods sold, or other income or expense in the period in which earnings are impacted by the hedged items or in the period that the transaction no longer qualifies as a cash flow hedge. These contracts cover the same periods as known or expected exposures, generally not exceeding five years.

If no hedging relationship is designated, the derivative is marked to market through earnings.

Cash flows from derivatives are recognized in the Statement of Consolidated Cash Flows in a manner consistent with the underlying transactions.

**Income Taxes.** From the Separation Date (see Note A) through December 31, 2016, the provision for income taxes was determined using the asset and liability approach of accounting for income taxes. Under this approach, the

provision for income taxes represents income taxes paid or payable (or received or receivable) for the current year plus the change in deferred taxes during the year. Deferred taxes represent the future tax consequences expected to occur when the reported amounts of assets and liabilities are recovered or paid, and result from differences between the financial and tax bases of Alcoa Corporation's assets and liabilities and are adjusted for changes in tax rates and tax laws when enacted.

In all periods prior to the Separation Date, Alcoa Corporation's operations were included in the income tax filings of ParentCo. The provision for income taxes in Alcoa Corporation's Statement of Consolidated Operations was determined in the same manner described above, but on a separate return methodology as if the Company was a standalone taxpayer filing hypothetical income tax returns where applicable. Any additional accrued tax liability or refund arising as a result of this approach was assumed to be immediately settled with ParentCo as a component of Parent Company net investment. Deferred tax assets were also determined in the same manner described above and were reflected in the Consolidated Balance Sheet for net operating losses, credits or other attributes to the extent that such attributes were expected to transfer to Alcoa Corporation upon the Separation Transaction (see Note A). Any difference from attributes generated in a hypothetical return on a separate return basis was adjusted as a component of Parent Company net investment.

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not (greater than 50%) that a tax benefit will not be realized. In evaluating the need for a valuation allowance, management considers all potential sources of taxable income, including income available in carryback periods, future reversals of taxable temporary differences, projections of taxable income, and income from tax planning strategies, as well as all available positive and negative evidence. Positive evidence includes factors such as a history of profitable operations, projections of future profitability within the carryforward period, including from tax planning strategies, and Alcoa Corporation's experience with similar operations. Existing favorable contracts and the ability to sell products into established markets are additional positive evidence. Negative evidence includes items such as cumulative losses, projections of future losses, or carryforward periods that are not long enough to allow for the utilization of a deferred tax asset based on existing projections of income. Deferred tax assets for which no valuation allowance is recorded may not be realized upon changes in facts and circumstances, resulting in a future charge to establish a valuation allowance. Existing valuation allowances are re-examined under the same standards of positive and negative evidence. If it is determined that it is more likely than not that a deferred tax asset will be realized, the appropriate amount of the valuation allowance, if any, is released. Deferred tax assets and liabilities are also re-measured to reflect changes in underlying tax rates due to law changes and the granting and lapse of tax holidays.

Tax benefits related to uncertain tax positions taken or expected to be taken on a tax return are recorded when such benefits meet a more likely than not threshold. Otherwise, these tax benefits are recorded when a tax position has been effectively settled, which means that the statute of limitation has expired or the appropriate taxing authority has completed their examination even though the statute of limitations remains open. Interest and penalties related to uncertain tax positions are recognized as part of the provision for income taxes and are accrued beginning in the period that such interest and penalties would be applicable under relevant tax law until such time that the related tax benefits are recognized.

**Foreign Currency.** The local currency is the functional currency for Alcoa Corporation's significant operations outside the United States, except for certain operations in Canada and Iceland, where the U.S. dollar is used as the functional currency. The determination of the functional currency for Alcoa Corporation's operations is made based on the appropriate economic and management indicators.

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

both unusual in nature and infrequent in occurrence in the notes to the financial statements. The adoption of these changes had no impact on the Consolidated Financial Statements.

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

On January 1, 2016, Alcoa Corporation adopted changes issued by the FASB to the presentation of debt issuance costs. Previously, such costs were required to be presented as a noncurrent asset in an entity's balance sheet and amortized into interest expense over the term of the related debt instrument. The changes require that debt issuance costs be presented in an entity's balance sheet as a direct deduction from the carrying value of the related debt liability. The amortization of debt issuance costs remains unchanged. The FASB issued an update to these changes based on an announcement of the staff of the SEC. This update provides an exception to the FASB changes allowing, but not requiring, debt issuance costs related to line-of-credit arrangements to continue to be presented as an asset regardless of whether there are any outstanding borrowings under such arrangement. This additional change also was adopted by Alcoa Corporation on January 1, 2016. The adoption of these changes had an immaterial impact on the Consolidated Financial Statements.

On January 1, 2016, Alcoa Corporation adopted changes issued by the FASB to the presentation in the fair value hierarchy of the fair value of certain investments. An entity is permitted to measure the fair value of certain investments using the net asset value per share as a practical expedient. Previously, such investments were categorized in the fair value hierarchy on the basis of whether the investment was redeemable with the investee at net asset value on the measurement date, never redeemable with the investee at net asset value, or redeemable with the investee at net asset value at a future date. However, the application of this criteria to determine the proper category in which these investments should be included in the fair value hierarchy differed from the criteria used to categorize other fair value measurements within the hierarchy. As a result, to remove this inconsistency, these changes eliminate the requirement to categorize such investments in the fair value hierarchy. Instead, an entity is required to present such investments outside the fair value hierarchy as a separate category of investments. In accordance with these changes, Alcoa Corporation removed a significant amount of investments related to its pension plans from the fair value hierarchy and presented them as a separate category (see Note N). Other than a change in the disclosure of such investments, the adoption of these changes had no impact on the Consolidated Financial Statements.

In 2016, Alcoa Corporation adopted changes issued by the FASB to the disclosure of uncertainties about an entity's ability to continue as a going concern. Under GAAP, continuation of a reporting entity as a going concern is presumed as the basis for preparing financial statements unless and until the entity's liquidation becomes imminent. Even if an entity's liquidation is not imminent, there may be conditions or events that raise substantial doubt about the entity's ability to continue as a going concern. Because there is no guidance in GAAP about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern or to provide related note disclosures, there is diversity in practice whether, when, and how an entity discloses the relevant conditions and events in its financial statements. As a result, these changes require an entity's management to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that financial statements are issued. Substantial doubt is defined as an indication that it is probable that an entity will be unable to meet its obligations as they become due within one year after the date that financial statements are issued. If management has concluded that substantial doubt exists, then the following disclosures should be made in the financial statements: (i) principal conditions or events that raised the substantial doubt, (ii) management's evaluation of the significance of those conditions or events in relation to the

entity's ability to meet its obligations, (iii) management's plans that alleviated the initial substantial doubt or, if substantial doubt was not alleviated, management's plans that are intended to at least mitigate the conditions or events that raise substantial doubt, and (iv) if the latter in (iii) is disclosed, an explicit statement that there is substantial doubt about the entity's ability to continue as a going concern. The adoption of these changes had no impact on the Consolidated Financial Statements. Going forward, this guidance will need to continue to be applied by management at the end of each annual period and interim period therein to determine what, if any, impact there may be on the Consolidated Financial Statements in a given reporting period.

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

In February 2016, the FASB issued changes to the accounting and presentation of leases. These changes require lessees to recognize a right of use asset and lease liability on the balance sheet for all leases with terms longer than 12 months. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize a right of use asset and lease liability. Additionally, when measuring assets and liabilities arising from a lease, optional payments should be included only if the lessee is reasonably certain to exercise an option to extend the lease, exercise a purchase option, or not exercise an option to terminate the lease. These changes become effective for Alcoa Corporation on January 1, 2019. Upon adoption of these changes, management does expect to record a right of use asset and lease liability on Alcoa Corporation's Consolidated Balance Sheet. While the precise amount of this asset and liability will not be known until closer to the adoption date, based on Alcoa Corporation's Consolidated Balance Sheet and lease portfolio as of December 31, 2016, the amount is expected to be less than 5% of both total assets and total liabilities.

In March 2016, the FASB issued changes to derivative instruments designated as hedging instruments. These changes clarify that a change in the counterparty to a derivative instrument that has been designated as a hedging instrument does not, in and of itself, require de-designation of that hedging relationship provided that all other hedge accounting criteria continue to be met. These changes become effective for Alcoa Corporation on January 1, 2017. Management has determined that the adoption of these changes will not have an immediate impact on the Consolidated Financial Statements. This guidance will need to be considered in the event the existing counterparty to any of Alcoa Corporation's derivative instruments changes to a new counterparty.

In March 2016, the FASB issued changes eliminating the requirement for an investor to adjust an equity method investment, results of operations, and retained earnings retroactively on a step-by-step basis as if the equity method had been in effect during all previous periods that the investment had been held as a result of an increase in the level of ownership interest or degree of influence. Additionally, an entity that has an available-for-sale equity security that becomes qualified for the equity method of accounting must recognize through earnings the unrealized holding gain or loss in accumulated other comprehensive income at the date the investment becomes qualified for use of the equity method. These changes become effective for Alcoa Corporation on January 1, 2017. Management has determined that the adoption of these changes will not have an immediate impact on the Consolidated Financial Statements. This guidance will need to be considered in the event any of Alcoa Corporation's investments undergo a change as previously described.

In March 2016, the FASB issued changes to employee share-based payment accounting. Currently, an entity must determine for each share-based payment award whether the difference between the deduction for tax purposes and the compensation cost recognized for financial reporting purposes results in either an excess tax benefit or a tax deficiency. Excess tax benefits are recognized in additional paid-in capital; tax deficiencies are recognized either as an offset to accumulated excess tax benefits, if any, or in the income statement. Excess tax benefits are not recognized until the deduction reduces taxes payable. The changes require all excess tax benefits and tax deficiencies related to share-based payment awards to be recognized as income tax expense or benefit in the income statement. The tax effects of exercised or vested awards should be treated as discrete items in the reporting period in which they occur. An entity also should recognize excess tax benefits regardless of whether the benefit reduces taxes payable in the current period. Additionally, the presentation of excess tax benefits related to share-based payment awards in the statement of cash flows is changed. Currently, excess tax benefits must be separated from other income tax cash flows and classified as a financing activity. The changes require excess tax benefits to be classified along with other income tax cash flows as an operating activity. Also, the changes require cash paid by an employer when directly withholding shares for tax-withholding purposes to be classified as a financing activity. Currently, there is no specific guidance on the classification in the statement of cash flows of cash paid by an employer to the tax authorities when directly withholding shares for tax-withholding purposes. Additionally, for a share-based award to qualify for equity classification it cannot partially settle in cash in excess of the employer's minimum statutory withholding requirements. The changes permit equity classification of share-based awards for withholdings up to the maximum statutory tax rates in applicable jurisdictions. These changes become effective for Alcoa Corporation on January 1, 2017. Management has determined that the adoption of these changes will not have a material impact on the Consolidated Financial Statements.

In June 2016, the FASB added a new impairment model (known as the current expected credit loss (CECL) model) that is based on expected losses rather than incurred losses. Under the new guidance, an entity recognizes as an allowance its estimate of expected credit losses. The CECL model applies to most debt instruments, trade receivables, lease receivables, financial guarantee contracts, and other loan commitments. The CECL model does not have a minimum threshold for recognition of impairment losses and entities will need to measure expected credit losses on assets that have a low risk of loss. These changes become effective for Alcoa Corporation on January 1, 2020. Management is currently evaluating the potential impact of these changes on the Consolidated Financial Statements.

In both August and October 2016, the FASB issued changes to the presentation of a number of items in the statement of cash flows. Specifically, the changes identify nine specific 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. These changes become effective for Alcoa Corporation on January 1, 2018. Management has determined that the adoption of these changes will not have a material impact on the Consolidated Financial Statements.

In October 2016, the FASB issued changes to the accounting for intra-entity transactions, other than inventory. Currently, no immediate tax impact is recognized in an entity's financial statements as a result of intra-entity transfers of assets. An entity is 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 has been sold to a third party or otherwise recovered. The buyer of such asset is 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 changes require the current and deferred income tax consequences of the intra-entity transfer to be recorded when the transaction occurs. The exception to defer the tax consequences of inventory transactions is maintained. These changes became effective for Alcoa Corporation on January 1, 2017. Management has determined that the adoption of these changes will not have a material impact on the Consolidated Financial Statements.

In October 2016, the FASB issued changes to consolidation accounting. Prior to these changes, an entity is required to consider indirect economic interests in a variable interest entity held through related parties under common control as direct interests in their entirety in the entity's assessment of whether it is the primary beneficiary of the variable interest entity. The changes result in an entity considering such indirect economic interests only on a proportionate basis as



indirect interests instead of as direct interests in their entirety. These changes became effective for Alcoa Corporation on January 1, 2017. Management has determined that the adoption of these changes will not have an impact on the Consolidated Financial Statements. This guidance will need to be considered in future assessments of whether Alcoa Corporation is the primary beneficiary of a variable interest entity.

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

In May 2014, the FASB issued changes to the recognition of revenue from contracts with customers. These changes created a comprehensive framework for all entities in all industries to apply in the determination of when to recognize revenue, and, therefore, supersede virtually all existing revenue recognition requirements and guidance. This framework is expected to result in less complex guidance in application while providing a consistent and comparable methodology for revenue recognition. The core principle of the guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to 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. In August 2015, the FASB deferred the effective date by one year, making these changes effective for Alcoa Corporation on January 1, 2018. Management has not yet finalized its assessment of the potential impact of these changes on the Consolidated Financial Statements, but does not currently expect the adoption of these changes to have a material impact on the Consolidated Financial Statements.

### **C. Acquisitions and Divestitures**

**2016 Divestitures.** In July 2016, Alcoa Corporation's wholly-owned subsidiary, Alcoa Power Generating Inc., reached an agreement to sell its 215-megawatt Yadkin Hydroelectric Project (Yadkin) to Cube Hydro Carolinas, LLC. Yadkin encompasses four hydroelectric power developments (reservoirs, dams and powerhouses), known as High Rock, Tuckertown, Narrows and Falls, situated along a 38-mile stretch of the Yadkin River through the central part of North Carolina. This transaction is expected to close in the first half of 2017, subject to customary federal and state regulatory approvals (see Note T). Upon completion of this transaction, Alcoa Corporation will pay to Arconic the after-tax proceeds it receives in accordance with the Separation and Distribution Agreement entered into by both companies in conjunction with the Separation Transaction (see Note A). As a result, Alcoa Corporation recorded a liability of \$243, which is reflected in Other current liabilities on the accompanying Consolidated Balance Sheet as of December 31, 2016, representing the estimated future payment to Arconic. The power generated by Yadkin is primarily sold into the open market. Yadkin generated sales of \$29 in 2016 and had approximately 30 employees as of December 31, 2016. The carrying value of the net assets to be sold was \$125 and \$127 as of December 31, 2016 and 2015, respectively, which consists mostly of properties, plants, and equipment.

**2015 Divestitures.** In 2015, Alcoa Corporation had post-closing adjustments, as provided for in the respective purchase agreements, related to two divestitures completed in December 2014 (see 2014 Divestitures below). The combined post-closing adjustments resulted in net cash received of \$41 and a net loss of \$24, which was recorded in Restructuring and other charges (see Note D) on the accompanying Statement of Consolidated Operations. These two divestitures are no longer subject to post-closing adjustments.

**2014 Divestitures.** In 2014, Alcoa Corporation completed the divestiture of three operations as described below. Combined, these transactions yielded net cash proceeds of \$223 and resulted in a net loss of \$216, which was recorded in Restructuring and other charges (see Note D) on the accompanying Statement of Consolidated Operations. Two of the three transactions were subject to certain post-closing adjustments as defined in the respective purchase agreements as of December 31, 2014 (see 2015 Divestitures above).

In November 2014, Alcoa Corporation completed the sale of an aluminum rod plant located in Bécancour, Québec, Canada to Sural Laminated Products. This facility takes molten aluminum and shapes it into the form of a rod, which is used by customers primarily for the transportation of electricity. While owned by Alcoa Corporation, the operating results and assets and liabilities of this plant were included in the former Primary Metals segment (see Note E). In conjunction with this transaction, Alcoa Corporation entered into a multi-year agreement with Sural Laminated Products to supply molten aluminum for the rod plant. The aluminum rod plant generated sales of approximately \$200 in 2013 and, at the time of divestiture, had approximately 60 employees.

In December 2014, Alcoa Corporation's majority-owned subsidiary (60%), Alcoa Minerals of Jamaica, LLC (AMJ, part of AWAC), completed the sale of its 55% ownership stake in a bauxite mine and alumina refinery joint venture in Jamaica to Noble Group Ltd. While owned by AMJ, 55% of both the operating results and assets and liabilities of this joint venture were included in the former Alumina segment (see Note E). As it relates to AMJ's previous 55% ownership stake, the refinery (AMJ's share of the capacity was 779 kmt-per-year) generated sales (third-party and intersegment) of approximately \$200 in 2013, and the refinery and mine combined, at the time of divestiture, had approximately 500 employees.

Also in December 2014, Alcoa Corporation completed the sale of its 50.33% ownership stake in the Mt. Holly smelter located in Goose Creek, South Carolina to Century Aluminum Company. While owned by Alcoa Corporation, 50.33% of both the operating results and assets and liabilities related to the smelter were included in the former Primary Metals segment (see Note E). As it relates to Alcoa Corporation's previous 50.33% ownership stake, the smelter (Alcoa Corporation's share of the capacity was 115 kmt-per-year) generated sales of approximately \$280 in 2013 and, at the time of divestiture, had approximately 250 employees.

#### **D. Restructuring and Other Charges**

Restructuring and other charges for each year in the three-year period ended December 31, 2016 were comprised of the following:

|  | <b>2016</b>  | <b>2015</b>  | <b>2014</b>  |
|--|--------------|--------------|--------------|
| Asset impairments  | \$155        | \$311        | \$328        |
| Asset retirement obligations                                 | 97           | 76           | 87           |
| Layoff costs   | 32           | 199          | 157          |
| Environmental remediation                                    | 26           | 86           | 28           |
| Legal matters in Italy (R)                                   | -            | 201          | -            |
| Net (gain) loss on divestitures of businesses (C)            | (3)          | 25           | 214          |
| Other  | 47           | 92           | 66           |
| Reversals of previously recorded layoff and other exit costs | (36)         | (7)          | (17)         |
| <b>Restructuring and other charges</b>                       | <b>\$318</b> | <b>\$983</b> | <b>\$863</b> |

\* In 2016, 2015, and 2014, Other includes \$1, \$32, and \$23, respectively, related to the allocation of restructuring charges to Alcoa Corporation from ParentCo (see Note A).

Layoff costs were recorded based on approved detailed action plans submitted by the operating locations that specified positions to be eliminated, benefits to be paid under existing severance plans, union contracts or statutory requirements, and the expected timetable for completion of the plans.

**2016 Actions.** In 2016, Alcoa Corporation recorded Restructuring and other charges of \$318, which were comprised of the following components: \$131 for exit costs related to a decision to permanently close and demolish a refinery (see below); \$87 for additional net costs related to decisions made in late 2015 to permanently close and demolish the Warrick (Indiana) smelter and to curtail the Wenatchee (Washington) smelter and Point Comfort (Texas) refinery (see 2015 Actions below); \$72 for the impairment of an interest in gas exploration assets in Western Australia (see below); \$32 for layoff costs related to cost reduction initiatives, including the separation of approximately 75 employees (60 in the Aluminum segment and 15 in the Bauxite segment) and related pension settlement costs (see Note N); a net charge of \$8 for other miscellaneous items; and a reversal of \$12 associated with a number of small layoff reserves related to prior periods.

In December 2016, management approved the permanent closure of the Suralco refinery (capacity of 2,207 kmt-per-year) in Suriname. The Suralco refinery had been fully curtailed since November 2015 (see 2015 Actions below). Management of ParentCo decided to curtail the remaining operating capacity of the Suralco refinery during 2015 in an effort to improve the position of ParentCo's refining operations on the global alumina cost curve. Since that time, management of ParentCo (through October 31, 2016) and then separately management of Alcoa Corporation (from November 1, 2016 through the end of 2016) had been in discussions with the Government of the Republic of Suriname to determine the best long-term solution for Suralco due to limited bauxite reserves and the absence of a long-term energy alternative. The decision to permanently close the Suralco refinery was based on the ultimate conclusion of those discussions. Demolition and remediation activities related to this action will begin in mid-2017 and are expected to be completed by the end of 2021. The related bauxite mines in Suriname will also be permanently closed while the hydroelectric facility that supplied power to the Suralco refinery, known as Afobaka, will continue to operate and supply power to the Government of the Republic of Suriname.

In 2016, costs related to the closure and curtailment actions included accelerated depreciation of \$70 related to the Warrick smelter as it continued to operate through March 2016; asset impairments of \$16, representing the write-off of the remaining book value of various assets; a reversal of \$24 associated with severance costs initially recorded in late 2015; and \$156 in other costs. Additionally in 2016, remaining inventories, mostly operating supplies and raw materials, were written down to their net realizable value, resulting in a charge of \$5, which was recorded in Cost of goods sold on the accompanying Statement of Consolidated Operations. The other exit costs of \$156 represent \$94 in asset retirement obligations and \$26 in environmental remediation, both of which were triggered by the decisions to permanently close and demolish the Suralco refinery (includes the rehabilitation of related bauxite mines) and the rehabilitation of a coal mine related to the Warrick smelter, \$32 for contraction terminations, and \$4 in other related costs.

Also in December 2016, management of Alcoa Corporation concluded that an interest in certain gas exploration assets in Western Australia has been impaired. AofA owns an interest in a gas exploration project that was initially entered into in 2007 as a potential source of low-cost gas to supply AofA's refineries in Western Australia. This interest, now at 43%, relates to four separate gas wells. In late 2016, AofA received the results of a technical analysis performed earlier in the year for two of the wells and an updated analysis for a third well that concluded that the cost of gas recovery would be significantly higher than the market price of gas. For the fourth well, the results of a technical analysis performed prior to 2016 indicated that the cost of gas recovery would be lower than the market price of gas and, therefore, would require additional investment to move to the next phase of commercial evaluation, which management previously supported. In late 2016, management re-evaluated its options related to the fourth well and decided it is not economical to make such a commitment for the foreseeable future. As a result, AofA fully impaired its \$72 interest.

As of December 31, 2016, approximately 55 of the 75 employees were separated. The remaining separations for 2016 restructuring programs are expected to be completed by the end of 2017. In 2016, cash payments of \$7 were made against layoff reserves related to 2016 restructuring programs.

**2015 Actions.** In 2015, Alcoa Corporation recorded Restructuring and other charges of \$983, which were comprised of the following components: \$418 for exit costs related to decisions to permanently close and demolish three smelters

and a power station (see below); \$238 for the curtailment of two refineries and two smelters (see below); \$201 related to legal matters in Italy (see Note R); a \$24 net loss primarily related to post-closing adjustments associated with two December 2014 divestitures (see Note C); \$45 for layoff costs, including the separation of approximately 465 employees; \$33 for asset impairments related to prior capitalized costs for an expansion project at a refinery in Australia that is no longer being pursued; a net credit of \$1 for other miscellaneous items; a reversal of \$7 associated with a number of small layoff reserves related to prior periods; and \$32 related to Corporate restructuring allocated to Alcoa Corporation (see Note A).

During 2015, management initiated various alumina refining and aluminum smelting capacity curtailments and/or closures. The curtailments were composed of the remaining capacity at all of the following: the São Luís smelter in Brazil (74 kmt-per-year); the Suriname refinery (1,330 kmt-per-year); the Point Comfort refinery (2,010 kmt-per-year); and the Wenatchee smelter (143 kmt-per-year). All of the curtailments were completed in 2015 except for 1,635 kmt-per-year at the Point Comfort refinery, which was completed by the end of June 2016. The permanent closures were composed of the capacity at the Warrick smelter (269 kmt-per-year) (includes the closure of a related coal mine) and the infrastructure of the Massena East (New York) smelter (potlines were previously shut down in both 2013 and 2014—see 2014 Actions below), as the modernization of this smelter is no longer being pursued. The closure of the Warrick smelter was completed by the end of March 2016.

The decisions on the above actions were part of a separate 12-month review in refining (2,800 kmt-per-year) and smelting (500 kmt-per-year) capacity initiated by management in March 2015 for possible curtailment (partial or full), permanent closure or divestiture. While many factors contributed to each decision, in general, these actions were initiated to maintain competitiveness amid prevailing market conditions for both alumina and aluminum.

Separate from the actions initiated under the reviews described above, in mid-2015, management approved the permanent closure and demolition of the Poços de Caldas smelter (capacity of 96 kmt-per-year) in Brazil and the Anglesea power station (includes the closure of a related coal mine) in Australia. The entire capacity at Poços de Caldas had been temporarily idled since May 2014 and the Anglesea power station was shut down at the end of August 2015. Demolition and remediation activities related to the Poços de Caldas smelter and the Anglesea power station began in late 2015 and are expected to be completed by the end of 2026 and 2020, respectively.

The decision on the Poços de Caldas smelter was due to management's conclusion that the smelter was no longer competitive as a result of challenging global market conditions for primary aluminum, which led to the initial curtailment, that have not dissipated and higher costs. For the Anglesea power station, the decision was made because a sale process did not result in a sale and there would have been imminent operating costs and financial constraints related to this site in the remainder of 2015 and beyond, including significant costs to source coal from available resources, necessary maintenance costs, and a depressed outlook for forward electricity prices. The Anglesea power station previously supplied approximately 40 percent of the power needs for the Point Henry smelter, which was closed in August 2014 (see 2014 Actions below).

In 2015, costs related to the closure and curtailment actions included asset impairments of \$226, representing the write-off of the remaining book value of all related properties, plants, and equipment; \$154 for the layoff of approximately 3,100 employees (1,800 in the former Primary Metals segment and 1,300 in the former Alumina segment—see Note E), including \$30 in pension costs (see Note N); accelerated depreciation of \$85 related to certain facilities as they continued to operate during 2015; and \$222 in other exit costs. Additionally in 2015, remaining inventories, mostly operating supplies and raw materials, were written down to their net realizable value, resulting in a charge of \$90, which was recorded in Cost of goods sold on the accompanying Statement of Combined Operations. The other exit costs of \$222 represent \$72 in asset retirement obligations and \$85 in environmental remediation, both of which were triggered by the decisions to permanently close and demolish the aforementioned structures in the United States, Brazil, and Australia (includes the rehabilitation of a related coal mine in each of Australia and the United States), and \$65 in supplier and customer contract-related costs.

As of December 31, 2016, approximately 3,200 of the 3,400 (previously 3,600) employees were separated. The total number of employees associated with 2015 restructuring programs was updated to reflect employees, who were initially identified for separation, accepting other positions within ParentCo and natural attrition. The remaining separations for 2015 restructuring programs are expected to be completed by mid-2017. In 2016 and 2015, cash payments of \$65 and \$26, respectively, were made against layoff reserves related to 2015 restructuring programs.

**2014 Actions.** In 2014, Alcoa Corporation recorded Restructuring and other charges of \$863, which were comprised of the following components: \$526 for exit costs related to decisions to permanently shut down and demolish three smelters (see below); a \$216 net loss for the divestitures of three operations (see Note C); \$61 for the temporary curtailment of two smelters and a related production slowdown at one refinery (see below); \$33 for asset impairments related to prior capitalized costs for a modernization project at a smelter in Canada that is no longer being pursued; \$9 for layoff costs, including the separation of approximately 60 employees; a net charge of \$4 for an environmental charge at a previously shut down refinery; \$9 primarily for the reversal of a number of layoff reserves related to prior periods; and \$23 related to Corporate restructuring allocated to Alcoa Corporation (see Note A).

In early 2014, management approved the permanent closure and demolition of the remaining capacity (84 kmt-per-year) at the Massena East smelter and the full capacity (190 kmt-per-year) at the Point Henry smelter in Australia. The capacity at Massena East was fully shut down by the end of March 2014 and the Point Henry smelter was fully shut down in August 2014. Demolition and remediation activities related to both the Massena East and Point Henry smelters began in late 2014 and are expected to be completed by the end of 2020 and 2018, respectively.

The decisions on the Massena East and Point Henry smelters were part of a 15-month review of 460,000 metric tons of smelting capacity initiated by management in May 2013 for possible curtailment. Through this review, management determined that the remaining capacity of the Massena East smelter was no longer competitive and the Point Henry smelter had no prospect of becoming financially viable.

Management also initiated the temporary curtailment of the remaining capacity (62 kmt-per-year) at the Poços de Caldas smelter and additional capacity (85 kmt-per-year) at the São Luís smelter. These curtailments were completed by the end of May 2014. As a result of these curtailments, 200 kmt-per-year of production at the Poços de Caldas refinery was reduced by the end of June 2014.

Additionally, in August 2014, management approved the permanent closure and demolition of the capacity (150 kmt-per-year) at the Portovesme smelter in Italy, which had been idle since November 2012. This decision was made because the fundamental reasons that made the Portovesme smelter uncompetitive remained unchanged, including the lack of a viable long-term power solution. Demolition and remediation activities related to the Portovesme smelter began in 2016 and are expected to be completed by the end of 2022 (delayed due to discussions with the Italian government and other stakeholders).

In 2014, costs related to the closure and curtailment actions included \$149 for the layoff of approximately 1,290 employees, including \$24 in pension costs (see Note N); accelerated depreciation of \$146 related to the Point Henry smelter in Australia as they continued to operate during 2014; asset impairments of \$150 representing the write-off of the remaining book value of all related properties, plants, and equipment; and \$152 in other exit costs. Additionally in 2014, remaining inventories, mostly operating supplies and raw materials, were written down to their net realizable value, resulting in a charge of \$55, which was recorded in Cost of goods sold on the accompanying Statement of Combined Operations. The other exit costs of \$152 represent \$87 in asset retirement obligations and \$24 in environmental remediation, both of which were triggered by the decisions to permanently close and demolish the aforementioned structures in Australia, Italy, and the United States, and \$41 in other related costs, including supplier and customer contract-related costs.

As of March 31, 2016, the separations associated with 2014 restructuring programs were essentially complete. In 2016 and 2015, cash payments of \$1 and \$34, respectively, were made against layoff reserves related to 2014 restructuring programs.

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:

|  | 2016         | 2015         | 2014         |
|--|--------------|--------------|--------------|
| Bauxite                                      | \$ 18        | \$ 16        | \$ -         |
| Alumina                                      | 182          | 212          | 283          |
| Aluminum                                     | 96           | 610          | 559          |
| Cast Products                                | (1)          | 2            | (2)          |
| Energy                                       | 23           | 84           | -            |
| Rolled Products                              | -            | 9            | -            |
| Segment total                                | 318          | 933          | 840          |
| Corporate                                    | -            | 50           | 23           |
| <b>Total restructuring and other charges</b> | <b>\$318</b> | <b>\$983</b> | <b>\$863</b> |

Activity and reserve balances for restructuring charges were as follows:

|                                       | Layoff<br>costs | Other<br>exit costs | Total |
|---------------------------------------|-----------------|---------------------|-------|
| Reserve balances at December 31, 2013 | \$ 58           | \$ 14               | \$ 72 |
| <b>2014:</b>                          |                 |                     |       |
| Cash payments                         | (120)           | (7)                 | (127) |
| Restructuring charges                 | 138             | 158                 | 296   |
| Other*                                | (26)            | (152)               | (178) |
| Reserve balances at December 31, 2014 | 50              | 13                  | 63    |
| <b>2015:</b>                          |                 |                     |       |
| Cash payments                         | (65)            | (1)                 | (66)  |
| Restructuring charges                 | 199             | 423                 | 622   |
| Other*                                | (47)            | (420)               | (467) |
| Reserve balances at December 31, 2015 | 137             | 15                  | 152   |
| <b>2016:</b>                          |                 |                     |       |
| Cash payments                         | (74)            | (35)                | (109) |
| Restructuring charges                 | 32              | 168                 | 200   |
| Other*                                | (57)            | (120)               | (177) |
| Reserve balances at December 31, 2016 | \$ 38           | \$ 28               | \$ 66 |

\* Other includes reversals of previously recorded restructuring charges and the effects of foreign currency translation. In 2016, 2015, and 2014, Other for layoff costs also included a reclassification of \$16, \$35, and \$24, respectively, in pension and/or other postretirement benefits costs, as these obligations were included in Alcoa Corporation's separate liability for pension and other postretirement benefits obligations (see Note N). Additionally in 2016, 2015, and 2014, Other for other exit costs also included a reclassification of the following restructuring charges: \$97, \$76, and \$87, respectively, in asset retirement and \$26, \$86, and \$28, respectively, in environmental obligations, as these liabilities were included in Alcoa Corporation's separate reserves for asset retirement obligations (see Note Q) and environmental remediation (see Note R).

The remaining reserves are expected to be paid in cash during 2017, with the exception of approximately \$5, which is expected to be paid by no later than the end of 2019 for contract termination and special layoff benefit payments.

## E. Segment and Geographic Area Information

### Segment Information

Alcoa Corporation is a producer of bauxite, alumina, primary aluminum, and aluminum sheet and the Company's segments are organized by product on a worldwide basis. Segment performance under Alcoa Corporation's management reporting system is evaluated based on a number of factors; however, the primary measure of performance is the after-tax operating income (ATOI) of each segment. Certain items such as the impact of LIFO inventory accounting; metal price lag; interest expense; noncontrolling interest; corporate expense (general administrative and selling expenses of operating the corporate headquarters and other global administrative facilities, along with depreciation and amortization on corporate-owned assets); restructuring and other charges; income taxes, including the impact of any discrete tax items, deferred tax valuation allowance adjustments, and other differences between tax rates applicable to the segments and the consolidated effective tax rate; and intersegment profit elimination and other nonoperating items such as foreign currency transaction gains/losses, gains/losses on certain asset sales, and interest income are excluded from segment ATOI. Segment assets exclude, among others, cash and cash equivalents; LIFO reserves; corporate fixed assets; goodwill not allocated to businesses for segment reporting purposes; deferred income taxes; and certain derivative contracts.

The accounting policies of the segments are the same as those described in the Summary of Significant Accounting Policies (see Note B). Transactions among segments are established based on negotiation among the parties. Differences between segment totals and Alcoa Corporation's consolidated totals for line items not reconciled are in Corporate.

Effective January 1, 2015, Alcoa Corporation redefined its segments concurrent with an internal reorganization for certain of its businesses. Following this reorganization, Alcoa Corporation's operations consist of six reportable segments as follows:

**Bauxite.** This segment represents Alcoa Corporation's global portfolio of bauxite mining assets. Bauxite is mined and sold primarily to internal customers within the Alumina segment, who then process it into alumina. A portion of this segment's production is also sold to third parties. Bauxite is transferred to the Alumina segment at negotiated terms that are intended to approximate market prices; sales to third parties are conducted on a contract basis.

**Alumina.** This segment represents Alcoa Corporation's worldwide refining system, which processes bauxite into alumina, which is mainly sold directly to internal and external smelter customers worldwide, or is sold to customers who process it into industrial chemical products. More than half of Alumina's production is sold under supply contracts to third parties worldwide, while the remainder is used internally by the Aluminum segment. Alumina produced by this segment and used internally is transferred to the Aluminum segment at prevailing market prices. A portion of this segment's third-party sales are completed through the use of agents, alumina traders, and distributors.

**Aluminum.** This segment represents Alcoa Corporation's worldwide smelter system. Aluminum receives alumina, mostly from the Alumina segment, and produces molten primary aluminum. Virtually all of Aluminum's production is sold internally to the Cast Products or Rolled Products segment, and is transferred at prevailing market prices.

**Cast Products.** This segment represents Alcoa Corporation's worldwide cast house system. Cast products are made from molten aluminum, purchased primarily from Alcoa Corporation's Aluminum segment, which is then formed into various value-add ingot products, including billet and slab, for use in fabrication operations in a variety of industries. Results from the sale of aluminum powder and scrap are also included in this segment. The majority of this segment's products are sold to third parties, including to Arconic's aluminum fabrication businesses; the remaining portion is sold to the Rolled Products segment at prevailing market prices.

**Energy.** This segment represents Alcoa Corporation's portfolio of energy assets, with power production capacity of approximately 1,685 megawatts. This power is sold to both internal customers within the Aluminum segment and external customers, and provides operational flexibility to maximize operating results during market cyclicality.

**Rolled Products.** This segment represents Alcoa Corporation's rolling mill in Warrick, Indiana, which produces aluminum sheet primarily sold directly to customers in the packaging end market for the production of aluminum cans (beverage, food, and pet food). Additionally, Alcoa Corporation has a tolling arrangement with Arconic whereby Arconic's rolling mill in Tennessee produces can sheet products for certain of this segment's customers. Alcoa Corporation supplies all of the raw materials to the Tennessee facility and pays Arconic for the tolling service. Depending on certain factors, this arrangement concludes at the end of 2018. Seasonal increases in can sheet sales are generally experienced in the second and third quarters of the year. This segment also includes Alcoa Corporation's investment in a rolling mill in Saudi Arabia (see Note H).

Under the applicable reporting guidance, when a Company changes its organizational structure, it should generally prepare its segment information based on the new segments and provide comparative information for related periods. However, in certain instances, changes to the structure of an internal organization could change the composition of its reportable segments and it may not be practical to retrospectively revise prior periods. In connection with the January 1, 2015 reorganization, Alcoa Corporation fundamentally altered the commercial nature of how certain internal businesses transact with each other, moving from a cost-based transfer pricing model to one based on estimated market pricing. As a result, certain operations (e.g., bauxite mining, smelting and casting) that had previously been measured and evaluated primarily based on costs incurred were transformed into separate businesses with full profit and loss information. In addition, this reorganization involved converting regional-based management responsibility to global responsibility for each business, which had a further impact on overall cost structures of the segments.

As a result of the significant changes associated with the reorganization (including substantial information system modifications), which were implemented on a prospective basis only, Alcoa Corporation does not have all of the information that would be necessary to present certain segment data, specifically ATOI, income taxes and total assets, for periods prior to 2015. This information is not available to Alcoa Corporation management for its own internal use, and it is impracticable to obtain or generate this information, as underlying commercial transactions between the segments, which are necessary to determine these income-based and asset-based segment measures, did not take place prior to 2015.

The operating results and assets of Alcoa Corporation's reportable segments were as follows:

|   | Bauxite | Alumina | Aluminum | Cast Products | Energy | Rolled Products | Total    |
|---|---------|---------|----------|---------------|--------|-----------------|----------|
| <b>2016</b>                               |         |         |          |               |        |                 |          |
| Sales:                                    |         |         |          |               |        |                 |          |
| Third-party sales—unrelated party         | \$ 315  | \$2,300 | \$ 9     | \$4,244       | \$ 279 | \$1,069         | \$ 8,216 |
| Third-party sales—related party           | -       | -       | -        | 957           | 1      | -               | 958      |
| Intersegment sales                        | 751     | 1,307   | 3,754    | 316           | 168    | -               | 6,296    |
| Total sales                               | \$1,066 | \$3,607 | \$3,763  | \$5,517       | \$ 448 | \$1,069         | \$15,470 |
| Profit and loss:                          |         |         |          |               |        |                 |          |
| Equity (loss) income                      | \$ -    | \$ (40) | \$ 23    | \$ (7)        | \$ -   | \$ (40)         | \$ (64)  |
| Depreciation, depletion, and amortization | 77      | 186     | 295      | 42            | 57     | 23              | 680      |
| Income taxes                              | 87      | 37      | (60)     | 60            | 26     | (17)            | 133      |
| ATOI                                      | 212     | 102     | (19)     | 176           | 76     | (41)            | 506      |
| <b>2015</b>                               |         |         |          |               |        |                 |          |
| Sales:                                    |         |         |          |               |        |                 |          |
| Third-party sales—unrelated party         | \$ 71   | \$3,343 | \$ 13    | \$5,127       | \$ 416 | \$ 985          | \$ 9,955 |



|   | Bauxite | Alumina | Aluminum | Cast Products | Energy | Rolled Products | Total    |
|---|---------|---------|----------|---------------|--------|-----------------|----------|
| Third-party sales—related party           | -       | -       | 1        | 1,059         | 10     | 8               | 1,078    |
| Intersegment sales                        | 1,160   | 1,687   | 5,092    | 46            | 297    | -               | 8,282    |
| Total sales                               | \$1,231 | \$5,030 | \$5,106  | \$6,232       | \$ 723 | \$ 993          | \$19,315 |
| Profit and loss:                          |         |         |          |               |        |                 |          |
| Equity (loss) income                      | \$ -    | \$ (41) | \$ 25    | \$ (37)       | \$ -   | \$ (32)         | \$ (85)  |
| Depreciation, depletion, and amortization | 94      | 202     | 311      | 42            | 61     | 23              | 733      |
| Income taxes                              | 103     | 191     | (77)     | 49            | 69     | 26              | 361      |
| ATOI                                      | 258     | 476     | 1        | 110           | 145    | 20              | 1,010    |

## 2014

### Sales:

|  |         |         |         |         |         |         |          |
|--|---------|---------|---------|---------|---------|---------|----------|
| Third-party sales—unrelated party              | \$ 41   | \$3,413 | \$ 21   | \$6,069 | \$ 682  | \$1,008 | \$11,234 |
| Third-party sales—related party <sup>(1)</sup> | -       | -       | -       | 1,758   | -       | 25      | 1,783    |
| Intersegment sales <sup>(1)</sup>              | 1,106   | 1,941   | 6,221   | 262     | 663     | -       | 10,193   |
| Total sales                                    | \$1,147 | \$5,354 | \$6,242 | \$8,089 | \$1,345 | \$1,033 | \$23,210 |

### Profit and loss:

|   |      |         |         |      |      |         |         |
|---|------|---------|---------|------|------|---------|---------|
| Equity loss                               | \$ - | \$ (29) | \$ (34) | \$ - | \$ - | \$ (27) | \$ (90) |
| Depreciation, depletion, and amortization | 120  | 201     | 365     | 47   | 68   | 24      | 825     |
| Income taxes                              | *    | *       | *       | *    | *    | 27      | *       |
| ATOI                                      | *    | *       | *       | *    | *    | 21      | *       |

## 2016

### Assets:

|                      |       |        |        |       |       |       |        |
|----------------------|-------|--------|--------|-------|-------|-------|--------|
| Capital expenditures | \$ 29 | \$ 109 | \$ 125 | \$ 31 | \$ 6  | \$ 94 | \$ 394 |
| Equity investments   | 163   | 342    | 520    | -     | 164   | 175   | 1,364  |
| Goodwill             | 2     | 4      | -      | -     | -     | -     | 6      |
| Total assets         | 1,541 | 4,791  | 5,182  | 816   | 1,216 | 848   | 14,394 |

## 2015

### Assets:

|                      |       |        |        |       |       |       |        |
|----------------------|-------|--------|--------|-------|-------|-------|--------|
| Capital expenditures | \$ 30 | \$ 154 | \$ 108 | \$ 32 | \$ 16 | \$ 52 | \$ 392 |
| Equity investments   | 164   | 503    | 497    | -     | 137   | 217   | 1,518  |
| Goodwill             | 2     | 4      | -      | -     | -     | -     | 6      |
| Total assets         | 1,443 | 4,721  | 5,612  | 578   | 1,218 | 637   | 14,209 |

<sup>(1)</sup> Amounts were estimated by Alcoa Corporation's management in an effort to provide comparable revenue information for 2014.

\* This information is not available for periods prior to 2015 and is impracticable to obtain.

The following tables reconcile certain segment information to consolidated totals:

|                                   | 2016     | 2015      | 2014 <sup>(2)</sup> |
|-----------------------------------|----------|-----------|---------------------|
| Sales:                            |          |           |                     |
| Total segment sales               | \$15,470 | \$19,315  | \$ 23,210           |
| Elimination of intersegment sales | (6,296)  | (8,282)   | (10,193)            |
| Other                             | 144      | 166       | 130                 |
| Consolidated sales                | \$ 9,318 | \$ 11,199 | \$ 13,147           |

(2) Amounts were estimated by Alcoa Corporation's management in an effort to provide comparable revenue information for 2014.

|   | 2016     | 2015     |
|---|----------|----------|
| Net loss attributable to Alcoa Corporation:             |          |          |
| Total segment ATOI <sup>(3)</sup>                       | \$ 506   | \$1,010  |
| Unallocated amounts:                                    |          |          |
| Impact of LIFO  | (10)     | 107      |
| Metal price lag   | 9        | (30)     |
| Interest expense  | (243)    | (270)    |
| Noncontrolling interest (net of tax)                    | (54)     | (124)    |
| Corporate expense                                       | (182)    | (180)    |
| Restructuring and other charges                         | (318)    | (983)    |
| Income taxes  | (51)     | (41)     |
| Other   | (57)     | (352)    |
| Consolidated net loss attributable to Alcoa Corporation | \$ (400) | \$ (863) |

(3) Segment ATOI information is not available for periods prior to 2015 and it is impracticable to obtain.

| December 31,                            | 2016      | 2015      |
|---|-----------|-----------|
| Assets:                                 |           |           |
| Total segment assets                    | \$14,394  | \$14,209  |
| Elimination of intersegment receivables | (615)     | (709)     |
| Unallocated amounts:                    |           |           |
| Cash and cash equivalents               | 853       | 557       |
| LIFO reserve                            | (215)     | (172)     |
| Corporate fixed assets, net             | 585       | 454       |
| Corporate goodwill                      | 149       | 147       |
| Deferred income taxes                   | 741       | 589       |
| Fair value of derivative contracts      | 501       | 1,078     |
| Other                                   | 348       | 260       |
| Consolidated assets                     | \$ 16,741 | \$ 16,413 |

As a result of the impracticability of providing all of the required disclosures for Alcoa Corporation's current six segments, the following information regarding Alcoa Corporation's historical segments is provided on a supplemental basis. Prior to January 1, 2015, Alcoa Corporation's operations consisted of three reportable segments, as follows:

**Alumina.** This segment represented Alcoa Corporation's worldwide refining system, and primarily comprised the combined Bauxite and Alumina segments that were established on January 1, 2015, described above. This segment encompassed the mining of bauxite, from which alumina is produced and sold directly to external smelter customers, as well as to the previous Primary Metals segment (see below), or to customers who process it into industrial chemical products. More than half of Alumina's production was sold under supply contracts to third parties worldwide, while the remainder was used internally by the Primary Metals segment. Alumina produced by this segment and used internally was transferred to the Primary Metals segment at prevailing market prices. A portion of this segment's third-party sales was completed through the use of agents, alumina traders, and distributors.

**Primary Metals.** This segment represented Alcoa Corporation's worldwide smelting system and associated cast houses, and primarily comprised the Aluminum and Cast Products segments that were established on January 1, 2015, described above. The majority of the power generation assets in the Energy segment that was established on January 1, 2015 were also included in Primary Metals. The Primary Metals segment purchased alumina, mostly from the former Alumina segment, from which primary aluminum was produced and then sold directly to external customers and traders, as well as to the Rolled Products segment and ParentCo's aluminum fabrication businesses. Results from the sale of aluminum

powder, scrap, and excess energy were also included in this segment. Primary aluminum produced by this segment and used by the Rolled Products segment or by ParentCo's aluminum fabrication businesses was transferred at prevailing market prices. The sale of primary aluminum represented approximately 90% of this segments third-party sales.

**Rolled Products.** This segment represents Alcoa Corporation's rolling mill in Warrick, Indiana, which produces aluminum sheet primarily sold directly to customers in the packaging end market for the production of aluminum cans (beverage, food, and pet food). Seasonal increases in can sheet sales are generally experienced in the second and third quarters of the year. This segment also includes Alcoa Corporation's investment in a rolling mill in Saudi Arabia (see Note H).

The operating results and assets of Alcoa Corporation's reportable segments under the historical presentation format were as follows:

|   | Alumina | Primary<br>Metals | Rolled<br>Products | Total    |
|---|---------|-------------------|--------------------|----------|
| <b>2015</b>                               |         |                   |                    |          |
| Sales:                                    |         |                   |                    |          |
| Third-party sales—unrelated party         | \$3,455 | \$5,667           | \$ 985             | \$10,107 |
| Third-party sales—related party           | -       | 1,070             | 8                  | 1,078    |
| Intersegment sales                        | 1,687   | 532               | -                  | 2,219    |
| Total sales                               | \$5,142 | \$7,269           | \$ 993             | \$13,404 |
| Profit and loss:                          |         |                   |                    |          |
| Equity loss                               | \$ (41) | \$ (12)           | \$ (32)            | \$ (85)  |
| Depreciation, depletion, and amortization | 296     | 429               | 23                 | 748      |
| Income taxes                              | 300     | (20)              | 26                 | 306      |
| ATOI                                      | 746     | 136               | 20                 | 902      |
| <b>2014</b>                               |         |                   |                    |          |
| Sales:                                    |         |                   |                    |          |
| Third-party sales—unrelated party         | \$3,509 | \$6,843           | \$1,008            | \$11,360 |
| Third-party sales—related party           | -       | 1,758             | 25                 | 1,783    |
| Intersegment sales                        | 1,941   | 614               | -                  | 2,555    |
| Total sales                               | \$5,450 | \$9,215           | \$1,033            | \$15,698 |
| Profit and loss:                          |         |                   |                    |          |
| Equity loss                               | \$ (29) | \$ (34)           | \$ (27)            | \$ (90)  |
| Depreciation, depletion, and amortization | 387     | 494               | 24                 | 905      |
| Income taxes                              | 153     | 214               | 27                 | 394      |
| ATOI                                      | 370     | 627               | 21                 | 1,018    |
| <b>2015</b>                               |         |                   |                    |          |
| Assets:                                   |         |                   |                    |          |
| Capital expenditures                      | \$ 184  | \$ 156            | \$ 52              | \$ 392   |
| Equity investments                        | 667     | 634               | 217                | 1,518    |
| Goodwill                                  | 6       | -                 | -                  | 6        |
| Total assets                              | 6,165   | 7,134             | 637                | 13,936   |

The following tables reconcile certain segment information under the historical presentation format to consolidated totals:

|                                   | 2015     | 2014     |
|-----------------------------------|----------|----------|
| Sales:                            |          |          |
| Total segment sales               | \$13,404 | \$15,698 |
| Elimination of intersegment sales | (2,219)  | (2,555)  |
| Other                             | 14       | 4        |
| Consolidated sales                | \$11,199 | \$13,147 |

|   | 2015    | 2014     |
|---|---------|----------|
| Net loss attributable to Alcoa Corporation:             |         |          |
| Total segment ATOI                                      | \$ 902  | \$1,018  |
| Unallocated amounts:                                    |         |          |
| Impact of LIFO  | 107     | 4        |
| Metal price lag   | (30)    | 15       |
| Interest expense  | (270)   | (309)    |
| Noncontrolling interest (net of tax)                    | (124)   | 91       |
| Corporate expense                                       | (180)   | (208)    |
| Restructuring and other charges                         | (983)   | (863)    |
| Income taxes  | (96)    | 110      |
| Other   | (189)   | (114)    |
| Consolidated net loss attributable to Alcoa Corporation | \$(863) | \$ (256) |

#### **December 31,**

**2015**

|   |  |          |
|---|--|----------|
| Assets:                                 |  |          |
| Total segment assets                    |  | \$13,936 |
| Elimination of intersegment receivables |  | (306)    |
| Unallocated amounts:                    |  |          |
| Cash and cash equivalents               |  | 557      |
| Deferred income taxes                   |  | 589      |
| Corporate goodwill                      |  | 147      |
| Corporate fixed assets, net             |  | 454      |
| LIFO reserve                            |  | (172)    |
| Fair value of derivative contracts      |  | 1,078    |
| Other                                   |  | 130      |
| Consolidated assets                     |  | \$16,413 |

#### **Geographic Area Information**

Geographic information for sales was as follows (based upon the country where the point of sale occurred):

|                              | 2016    | 2015     | 2014     |
|------------------------------|---------|----------|----------|
| Sales:                       |         |          |          |
| United States <sup>(1)</sup> | \$4,365 | \$ 5,386 | \$ 6,096 |
| Spain <sup>(2)</sup>         | 2,663   | 2,852    | 3,198    |
| Australia                    | 1,644   | 2,147    | 2,656    |
| Brazil                       | 432     | 562      | 1,025    |
| Canada                       | 141     | 132      | 18       |
| Other                        | 73      | 120      | 154      |
|                              | \$9,318 | \$11,199 | \$13,147 |

- (1) Sales of a portion of the alumina from Alcoa Corporation's refineries in Suriname, Brazil, Australia, and Jamaica (prior to divestiture—see Note C) and most of the aluminum from Alcoa Corporation's smelters in Canada occurred in the United States.
- (2) In all periods presented, sales of the aluminum produced from Alcoa Corporation's smelters in Iceland and Norway, as well as Alcoa Corporation's off-take related to its interest in the Saudi Arabia joint venture (see Note H), occurred in Spain.

Geographic information for long-lived assets was as follows (based upon the physical location of the assets):

| <b>December 31,</b> | <b>2016</b>    | <b>2015</b>    |
|---------------------|----------------|----------------|
| Long-lived assets:  |                |                |
| Australia           | \$2,053        | \$2,158        |
| Brazil              | 2,228          | 1,922          |
| United States       | 1,816          | 1,963          |
| Iceland             | 1,341          | 1,397          |
| Canada              | 1,161          | 1,177          |
| Norway              | 438            | 463            |
| Spain               | 273            | 293            |
| Other               | 15             | 17             |
|                     | <b>\$9,325</b> | <b>\$9,390</b> |

## **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):

|  | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|--|-------------|-------------|-------------|
| Net loss attributable to Alcoa Corporation | \$(400)     | \$(863)     | \$(256)     |
| Average shares outstanding—basic           | 183         | 182         | 182         |
| Effect of dilutive securities:             |             |             |             |
| Stock options                              | -           | -           | -           |
| Stock and performance awards               | -           | -           | -           |
| Average shares outstanding—diluted         | 183         | 182         | 182         |

In 2016, basic average shares outstanding and diluted average shares outstanding were the same because the effect of potential shares of common stock was anti-dilutive since Alcoa Corporation generated a net loss. As a result, 1 million stock awards and stock options combined were not included in the computation of diluted EPS. Had Alcoa Corporation generated net income in 2016, 1 million potential shares of common stock related to stock awards and stock options combined would have been included in diluted average shares outstanding.

In 2015 and 2014, the EPS included on the accompanying Statement of Consolidated Operations was calculated based on the 182,471,195 shares of Alcoa Corporation common stock distributed on the Separation Date in conjunction with the completion of the Separation Transaction (see Note A) and is considered pro forma in nature. Prior to November 1, 2016, Alcoa Corporation did not have any issued and outstanding common stock.

Options to purchase 1 million shares of common stock at a weighted average exercise price of \$33.05 per share were outstanding as of December 31, 2016, but were not included in the computation of diluted EPS because they were anti-dilutive, as the exercise prices of the options were greater than the average market price of Alcoa Corporation's common stock.

## 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 |         |         |
|--|-------------------|-----------|----------|-------------------------|---------|---------|
|  | 2016              | 2015      | 2014     | 2016                    | 2015    | 2014    |
| <b>Pension and other postretirement benefits (N)</b>   |                   |           |          |                         |         |         |
| Balance at beginning of period   | \$ (352)          | \$ (424)  | \$ (373) | \$ (56)                 | \$ (64) | \$ (51) |
| Establishment of additional defined benefit plans  | (2,704)           | -         | -        | -                       | -       | -       |
| Separation-related adjustments (A)   | 928               | -         | -        | -                       | -       | -       |
| Other comprehensive (loss) income:   |                   |           |          |                         |         |         |
| Unrecognized net actuarial loss and prior service cost/<br>benefit                                   | (307)             | 73        | (109)    | 2                       | 5       | (22)    |
| Tax benefit (expense)  | 6                 | (18)      | 35       | (6)                     | (1)     | 7       |
| Total Other comprehensive (loss) income before<br>reclassifications, net of tax                      | (301)             | 55        | (74)     | (4)                     | 4       | (15)    |
| Amortization of net actuarial loss and prior service cost/<br>benefit <sup>(1)</sup>                 | 107               | 26        | 35       | 5                       | 6       | 3       |
| Tax expense <sup>(2)</sup>   | (8)               | (9)       | (12)     | (1)                     | (2)     | (1)     |
| Total amount reclassified from Accumulated other<br>comprehensive loss, net of tax <sup>(6)</sup>    | 99                | 17        | 23       | 4                       | 4       | 2       |
| Total Other comprehensive (loss) income  | (202)             | 72        | (51)     | -                       | 8       | (13)    |
| Balance at end of period   | \$(2,330)         | \$ (352)  | \$(424)  | \$ (56)                 | \$ (56) | \$ (64) |
| <b>Foreign currency translation</b>  |                   |           |          |                         |         |         |
| Balance at beginning of period   | \$(1,851)         | \$ (668)  | \$ 20    | \$(779)                 | \$(351) | \$(115) |
| Separation-related adjustments (A)   | (17)              | -         | -        | -                       | -       | -       |
| Other comprehensive income (loss) <sup>(3)</sup>   | 213               | (1,183)   | (688)    | 102                     | (428)   | (236)   |
| Balance at end of period   | \$(1,655)         | \$(1,851) | \$(668)  | \$(677)                 | \$(779) | \$(351) |
| <b>Cash flow hedges (O)</b>  |                   |           |          |                         |         |         |
| Balance at beginning of period   | \$ 603            | \$ (224)  | \$(304)  | \$ (3)                  | \$ (2)  | \$ (2)  |
| Separation-related adjustments (A)   | (47)              | -         | -        | -                       | -       | -       |
| Other comprehensive (loss) income:   |                   |           |          |                         |         |         |
| Net change from periodic revaluations  | (558)             | 1,155     | 78       | 38                      | (1)     | -       |
| Tax benefit (expense)  | 233               | (344)     | (20)     | (12)                    | -       | -       |
| Total Other comprehensive (loss) income before<br>reclassifications, net of tax                      | (325)             | 811       | 58       | 26                      | (1)     | -       |
| Net amount reclassified to earnings:   |                   |           |          |                         |         |         |
| Aluminum contracts <sup>(4)</sup>  | 7                 | 21        | 26       | -                       | -       | -       |
| Energy contracts <sup>(5)</sup>  | (54)              | -         | -        | (37)                    | -       | -       |
| Interest rate contracts <sup>(5)</sup>   | 7                 | -         | -        | 5                       | -       | -       |
| Sub-total  | (40)              | 21        | 26       | (32)                    | -       | -       |
| Tax benefit (expense) <sup>(2)</sup>   | 19                | (5)       | (4)      | 10                      | -       | -       |
| Total amount reclassified from<br>Accumulated other comprehensive loss,<br>net of tax <sup>(6)</sup> | (21)              | 16        | 22       | (22)                    | -       | -       |
| Total Other comprehensive (loss) income  | (346)             | 827       | 80       | 4                       | (1)     | -       |
| Balance at end of period   | \$ 210            | \$ 603    | \$(224)  | \$ 1                    | \$ (3)  | \$ (2)  |

<sup>(1)</sup> These amounts were included in the computation of net periodic benefit cost for pension and other postretirement benefits (see Note N).

- (2) These amounts were included in Provision for income taxes on the accompanying Statement of Consolidated Operations.
- (3) In all periods presented, there were no tax impacts related to rate changes and no amounts were reclassified to earnings.
- (4) These amounts were included in Sales on the accompanying Statement of Consolidated Operations.
- (5) These amounts were included in Other (income) expenses, net 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

| <b>December 31,</b> | <b>2016</b>    | <b>2015</b>    |
|---------------------|----------------|----------------|
| Equity investments  | \$1,348        | \$1,471        |
| Other investments   | 10             | 1              |
|                     | <u>\$1,358</u> | <u>\$1,472</u> |

**Equity Investments.** The following table summarizes information of the equity investments as of December 31, 2016 and 2015, except that the interest in the Dampier to Bunbury Natural Gas Pipeline (DBNGP) Trust was sold in April 2016 (see DBNGP Trust below):

| <b>Investee</b>                                    | <b>Country</b> | <b>Nature of investment<sup>(5)</sup></b> | <b>Ownership interest</b> |
|--|----------------|---|---------------------------|
| Ma'aden Smelting Company <sup>(1)</sup>            | Saudi Arabia   | Aluminum smelter                          | 25.1%                     |
| Ma'aden Bauxite and Alumina Company <sup>(1)</sup> | Saudi Arabia   | Bauxite mine and Alumina refinery         | 25.1% <sup>(6)</sup>      |
| Ma'aden Rolling Company <sup>(1)</sup>             | Saudi Arabia   | Rolling mill                              | 25.1%                     |
| Halco Mining, Inc. <sup>(2)</sup>                  | Guinea         | Bauxite mine                              | 45% <sup>(6)</sup>        |
| Energetica Barra Grande S.A.                       | Brazil         | Hydroelectric generation facility         | 42.18%                    |
| Mineração Rio do Norte S.A.                        | Brazil         | Bauxite mine                              | 18.2% <sup>(6)</sup>      |
| Pechiney Reynolds Quebec, Inc. <sup>(3)</sup>      | Canada         | Aluminum smelter                          | 50%                       |
| Consortio Serra do Facão                           | Brazil         | Hydroelectric generation facility         | 34.97%                    |
| Manicouagan Power Limited Partnership              | Canada         | Hydroelectric generation facility         | 40%                       |
| DBNGP Trust <sup>(4)</sup>                         | Australia      | Natural gas pipeline                      | 20% <sup>(6)</sup>        |

(1) See Saudi Arabia Joint Venture below for additional information.

(2) Halco Mining, Inc. owns 100% of Boké Investment Company, which owns 51% of Compagnie des Bauxites de Guinée.

(3) Pechiney Reynolds Quebec, Inc. owns a 50.1% interest in the Bécancour smelter in Quebec, Canada thereby entitling Alcoa Corporation to a 25.05% interest in the smelter. Through two wholly-owned Canadian subsidiaries, Alcoa Corporation also owns 49.9% of the Bécancour smelter.

(4) See DBNGP Trust below for additional information.

(5) Each of the investees either owns the facility listed or has an ownership interest in an entity that owns the facility listed.

(6) A portion or all of each of these ownership interests are held by wholly-owned subsidiaries that are part of AWAC.

In 2016, 2015, and 2014, Alcoa Corporation received \$74, \$152, and \$86, respectively, in dividends from these equity investments. Financial information for these equity investments is as follows (amounts represent 100% of the investee's financial information):

|   | Energetica<br>Barra<br>Grande<br>S.A. | Halco<br>Mining,<br>Inc. | Ma'aden<br>Rolling<br>Co. | Ma'aden<br>Smelting<br>Co. | Ma'aden<br>Bauxite<br>and<br>Alumina<br>Co. | Manicouagan<br>Power L.P. | Pechiney<br>Reynolds<br>Quebec,<br>Inc. | Other  | Total    |
|---|---------------------------------------|--------------------------|---------------------------|----------------------------|---|---------------------------|---|--------|----------|
| <b>Profit and loss data—year ended</b>  |                                       |                          |                           |                            |   |                           |   |        |          |
| <b>December 31, 2016</b>  |                                       |                          |                           |                            |   |                           |   |        |          |
| Sales   | \$ 60                                 | \$437                    | \$ 212                    | \$1,410                    | \$ 348                                      | \$104                     | \$309                                   | \$ 627 | \$ 3,507 |
| Cost of goods sold  | 35                                    | 242                      | 336                       | 1,238                      | 331   | 10                        | 272                                     | 380    | 2,844    |
| Income (loss) before income taxes   | 16                                    | 53                       | (169)                     | 53                         | (179)                                       | 94                        | 36                                      | 181    | 85       |
| Net income (loss)   | 15                                    | 50                       | (169)                     | 53                         | (179)                                       | 87                        | 16                                      | 148    | 21       |
| Equity in net income (loss) of affiliated companies, before reconciling adjustments | 6                                     | 23                       | (43)                      | 13                         | (45)  | 35                        | 8                                       | 28     | 25       |
| Other   | (1)                                   | 2                        | 4                         | 1                          | 2   | -                         | (4)                                     | (1)    | 3        |
| Alcoa Corporation's equity in net income (loss) of affiliated companies             | 5                                     | 25                       | (39)                      | 14                         | (43)  | 35                        | 4                                       | 27     | 28       |
| <b>Profit and loss data—year ended</b>  |                                       |                          |                           |                            |   |                           |   |        |          |
| <b>December 31, 2015</b>  |                                       |                          |                           |                            |   |                           |   |        |          |
| Sales   | \$130                                 | \$487                    | \$ 286                    | \$1,481                    | \$ 258                                      | \$106                     | \$486                                   | \$ 885 | \$ 4,119 |
| Cost of goods sold  | 98                                    | 236                      | 352                       | 1,317                      | 401   | 16                        | 288                                     | 501    | 3,209    |
| Income (loss) before income taxes   | 27                                    | 86                       | (125)                     | (52)                       | (185)                                       | 91                        | 113                                     | 170    | 125      |
| Net income (loss)   | 7                                     | 80                       | (125)                     | (56)                       | (185)                                       | 90                        | 104                                     | 128    | 43       |
| Equity in net income (loss) of affiliated companies, before reconciling adjustments | 3                                     | 36                       | (31)                      | (14)                       | (46)  | 36                        | 52                                      | 24     | 60       |
| Other   | (1)                                   | (2)                      | (1)                       | (1)                        | -   | -                         | 4                                       | (6)    | (7)      |
| Alcoa Corporation's equity in net income (loss) of affiliated companies             | 2                                     | 34                       | (32)                      | (15)                       | (46)  | 36                        | 56                                      | 18     | 53       |
| <b>Profit and loss data—year ended</b>  |                                       |                          |                           |                            |   |                           |   |        |          |
| <b>December 31, 2014</b>  |                                       |                          |                           |                            |   |                           |   |        |          |
| Sales   | \$170                                 | \$487                    | \$ 42                     | \$1,260                    | \$ 3  | \$120                     | \$318                                   | \$ 950 | \$ 3,350 |
| Cost of goods sold  | 118                                   | 260                      | 102                       | 1,073                      | 4   | 18                        | 280                                     | 648    | 2,503    |
| Income (loss) before income taxes   | 44                                    | 76                       | (109)                     | (149)                      | (135)                                       | 103                       | 39                                      | 55     | (76)     |
| Net income (loss)   | 19                                    | 72                       | (109)                     | (149)                      | (135)                                       | 102                       | 28                                      | 28     | (144)    |
| Equity in net income (loss) of affiliated companies, before reconciling adjustments | 8                                     | 32                       | (27)                      | (37)                       | (34)  | 41                        | 14                                      | 3      | -        |
| Other   | -                                     | (1)                      | -                         | -                          | -   | (1)                       | 4                                       | -      | 2        |
| Alcoa Corporation's equity in net income (loss) of affiliated companies             | 8                                     | 31                       | (27)                      | (37)                       | (34)  | 40                        | 18                                      | 3      | 2        |
| <b>Balance sheet data—as of</b>   |                                       |                          |                           |                            |   |                           |   |        |          |
| <b>December 31, 2016</b>  |                                       |                          |                           |                            |   |                           |   |        |          |
| Current assets  | \$ 17                                 | \$ 12                    | \$ 288                    | \$ 606                     | \$ 247                                      | \$ 24                     | \$ 91                                   | \$ 111 | \$ 1,396 |
| Noncurrent assets   | 302                                   | 189                      | 1,693                     | 4,739                      | 3,221                                       | 68                        | 147                                     | 1,095  | 11,454   |



|                                 | Energetica<br>Barra<br>Grande<br>S.A. | Halco<br>Mining,<br>Inc. | Ma'aden<br>Rolling<br>Co. | Ma'aden<br>Smelting<br>Co. | Ma'aden<br>Bauxite<br>and<br>Alumina<br>Co. | Manicouagan<br>Power L.P. | Pechiney<br>Reynolds<br>Quebec,<br>Inc. | Other  | Total    |
|---------------------------------|---------------------------------------|--------------------------|---------------------------|----------------------------|---|---------------------------|---|--------|----------|
| Current liabilities             | 31                                    | 4                        | 324                       | 862                        | 266   | 7                         | 62                                      | 211    | 1,767    |
| Noncurrent liabilities          | 23                                    | 14                       | 1,196                     | 2,868                      | 2,140                                       | -                         | -                                       | 536    | 6,777    |
| <b>Balance Sheet data—as of</b> |                                       |                          |                           |                            |   |                           |   |        |          |
| <b>December 31, 2015</b>        |                                       |                          |                           |                            |   |                           |   |        |          |
| Current assets                  | \$ 27                                 | \$ 40                    | \$ 389                    | \$ 469                     | \$ 305                                      | \$ 23                     | \$107                                   | \$ 195 | \$ 1,555 |
| Noncurrent assets               | 288                                   | 165                      | 1,659                     | 4,696                      | 3,005                                       | 62                        | 130                                     | 3,373  | 13,378   |
| Current liabilities             | 50                                    | 28                       | 254                       | 909                        | 122   | 6                         | 54                                      | 238    | 1,661    |
| Noncurrent liabilities          | 43                                    | 16                       | 1,329                     | 2,913                      | 2,206                                       | -                         | -                                       | 2,486  | 8,993    |

**Saudi Arabia Joint Venture**—Alcoa Corporation and Saudi Arabian Mining Company (known as “Ma’aden”) have a 30-year (from December 2009) joint venture shareholders’ agreement (automatic extension for an additional 20 years, unless the parties agree otherwise or unless earlier terminated) setting forth the terms for the development, construction, ownership, and operation of an integrated aluminum complex in Saudi Arabia. Specifically, the project developed by the joint venture consists of: (i) a bauxite mine for the extraction of approximately 4,000 kmt of bauxite from the Al Ba’itha bauxite deposit near Quiba in the northern part of Saudi Arabia; (ii) an alumina refinery with an initial capacity of 1,800 kmt; (iii) a primary aluminum smelter with an initial capacity of 740 kmt; and (iv) a rolling mill with an initial capacity of 380 kmt. The refinery, smelter, and rolling mill were constructed in an industrial area at Ras Al Khair on the east coast of Saudi Arabia. The facilities use critical infrastructure, including power generation derived from reserves of natural gas, as well as port and rail facilities, developed by the government of Saudi Arabia. First production from the smelter, rolling mill, and mine and refinery occurred in December of 2012, 2013, and 2014, respectively.

In 2012, Alcoa Corporation and Ma’aden agreed to expand the capabilities of the rolling mill to include a capacity of 100 kmt dedicated to supplying aluminum automotive, building and construction, and foil stock sheet. First production related to the expanded capacity occurred in 2014. This expansion did not result in additional equity investment (see below) due to significant savings from a change in the project execution strategy of the initial 380 kmt capacity of the rolling mill.

The joint venture is owned 74.9% by 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. The Alcoa Corporation affiliates that hold Alcoa Corporation’s interests in the smelting company and the rolling mill company are indirectly wholly owned by Alcoa Corporation, and the Alcoa Corporation affiliate that holds Alcoa Corporation’s interests in the mining and refining company is wholly owned by AWAC. Except in limited circumstances, Alcoa Corporation may not sell, transfer or otherwise dispose of or encumber or enter into any agreement in respect of the votes or other rights attached to its interests in the joint venture without Ma’aden’s prior written consent.

Ma’aden and Alcoa Corporation have put and call options, respectively, whereby Ma’aden can require Alcoa Corporation to purchase from Ma’aden, or Alcoa Corporation can require Ma’aden to sell to Alcoa Corporation, a 14.9% interest in the joint venture at the then fair market value. These options may only be exercised in a six-month window that opens five years after the Commercial Production Date (as defined in the joint venture shareholders’ agreement) and, if exercised, must be exercised for the full 14.9% interest. The Commercial Production Date was declared on September 1, 2014 for the smelting company and on October 1, 2016 for the mining and refining company. There has not been a similar declaration yet for the rolling mill company.

Ma’aden and Alcoa Corporation also may not sell, transfer, or otherwise dispose of, pledge, or encumber any interests in the joint venture until five years after the Commercial Production Date. Under the joint venture shareholders’ agreement, upon the occurrence of an unremedied event of default by Alcoa Corporation, Ma’aden may purchase, or, upon the occurrence of an unremedied event of default by Ma’aden, Alcoa Corporation may sell, its interest for consideration that varies depending on the time of the default.

A number of Alcoa Corporation employees perform various types of services for the smelting, rolling mill, and refining and mining companies as part of the operation of the fully-integrated aluminum complex. At December 31, 2016 and 2015, Alcoa Corporation had an outstanding receivable of \$11 and \$19, respectively, from the smelting, rolling mill, and refining and mining companies for labor and other employee-related expenses.

Capital investment in the project is expected to total approximately \$10,800 (SAR 40.5 billion) and has been funded through a combination of equity contributions by the joint venture partners and project financing by the joint venture, which has been guaranteed by both partners (see below). Both the equity contributions and the guarantees of the project financing are based on the joint venture's partners' ownership interests. Originally, it was estimated that Alcoa Corporation's total equity contribution in the joint venture would be approximately \$1,100, of which Alcoa Corporation has contributed \$982, including \$1 and \$29 in 2016 and 2015, respectively. Based on changes to both the project's capital investment and equity and debt structure from the initial plans, the estimated \$1,100 equity contribution may be reduced. As of December 31, 2016 and 2015, the carrying value of Alcoa Corporation's investment in this project was \$853 and \$928, respectively.

The smelting and rolling mill companies have project financing totaling \$4,133 (reflects principal payments made through December 31, 2016), of which \$1,037 represents Alcoa Corporation's share (the equivalent of Alcoa Corporation's 25.1% interest in the smelting and rolling mill companies). Alcoa Corporation has issued guarantees (see below) on behalf of the smelting and rolling mill companies to the lenders in the event that such companies default on their debt service requirements through 2017 and 2020 for the smelting company and 2018 and 2021 for the rolling mill company (Ma'aden issued similar guarantees for its 74.9% interest). Alcoa Corporation's guarantees for the smelting and rolling mill companies cover total debt service requirements of \$100 in principal and up to a maximum of approximately \$35 in interest per year (based on projected interest rates). At December 31, 2016 and 2015, the combined fair value of the guarantees was \$3 and \$7, respectively, which was included in Other noncurrent liabilities and deferred credits on the accompanying Consolidated Balance Sheet.

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

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.

In June 2013, all three joint venture companies entered into a 20-year gas supply agreement with Saudi Aramco. The gas supply agreement provides sufficient fuel to meet manufacturing process requirements as well as fuel to the adjacent combined water and power plant constructed by Saline Water Conversion Corporation, which is owned by the government of Saudi Arabia and is responsible for desalinating sea water and producing electricity for Saudi Arabia. The combined water and power plant converts the three joint venture companies' gas into electricity and water at cost, which is supplied to the refinery, smelter, and rolling mill. A \$60 letter of credit previously provided to the Ministry of Petroleum and Mineral Resources of Saudi Arabia by Ma'aden (Alcoa Corporation is responsible for its pro rata share) under the gas allocation was terminated in June 2015 due to the completion of certain auxiliary rolling facilities.

**DBNGP Trust**—In 2004, AofA acquired a 20% interest in a consortium, which subsequently purchased the DBNGP in Western Australia, in exchange for an initial cash investment of \$17 (A\$24). The investment in the DBNGP was made in order to secure a competitively priced long-term supply of natural gas to AofA’s refineries in Western Australia. AofA made additional contributions of \$141 (A\$176) for its share of the pipeline capacity expansion and other operational purposes of the consortium through September 2011. In late 2011, the consortium initiated a three-year equity call plan to improve its capitalization structure. This plan required AofA to contribute \$39 (A\$40), all of which was made through December 31, 2014. Following the completion of the three-year equity call plan in December 2014, the consortium initiated a new equity call plan to further improve its capitalization structure. This plan required AofA to contribute \$30 (A\$36) through mid-2016, of which \$20 (A\$27) was made through March 31, 2016, including \$3 (A\$5) and \$16 (A\$21) in 2016 and 2015, respectively.

In April 2016, AofA sold its 20% interest in the consortium, effectively terminating its remaining obligation to make contributions under the most recent equity call plan, to the only other member of the consortium, DUET Group. AofA received \$145 (A\$192) in cash, which was included in Sales of investments on the accompanying Statement of Consolidated Cash Flows, and recorded a gain of \$27 (A\$35) (\$11 (A\$15) after-tax and noncontrolling interest) in Other income, net on the accompanying Statement of Consolidated Operations. As part of the sale transaction, AofA will maintain its current access to approximately 30% of the DBNGP transmission capacity for gas supply to its three alumina refineries in Western Australia under an existing agreement to purchase gas transmission services from the DBNGP. At December 31, 2016 and 2015, AofA has an asset of \$270 (A\$375) and \$268 (A\$368), respectively, representing prepayments made under the agreement for future gas transmission services.

#### **I. Inventories**

| <b>December 31,</b>     | <b>2016</b>    | <b>2015</b>    |
|-------------------------|----------------|----------------|
| Finished goods          | \$ 226         | \$ 168         |
| Work-in-process         | 220            | 206            |
| Bauxite and alumina     | 429            | 445            |
| Purchased raw materials | 363            | 385            |
| Operating supplies      | 137            | 140            |
| LIFO reserve            | (215)          | (172)          |
|                         | <u>\$1,160</u> | <u>\$1,172</u> |

At December 31, 2016 and 2015, the total amount of inventories valued on a LIFO basis was \$393 and \$361, respectively, or 29% and 27%, 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. Properties, Plants, and Equipment, Net

| <b>December 31,</b>   | <b>2016</b> | <b>2015</b> |
|---|-------------|-------------|
| Land and land rights, including mines                       | \$ 346      | \$ 333      |
| Structures:   |             |             |
| Bauxite   | 1,194       | 986         |
| Alumina   | 2,500       | 2,405       |
| Aluminum  | 3,255       | 3,345       |
| Cast Products   | 289         | 260         |
| Energy  | 610         | 530         |
| Rolled Products   | 287         | 256         |
| Other   | 405         | 328         |
|   | <hr/>       | <hr/>       |
|   | 8,540       | 8,110       |
| Machinery and equipment:                                    |             |             |
| Bauxite   | 465         | 401         |
| Alumina   | 3,773       | 3,717       |
| Aluminum  | 6,143       | 6,480       |
| Cast Products   | 512         | 435         |
| Energy  | 1,080       | 980         |
| Rolled Products   | 884         | 872         |
| Other   | 309         | 306         |
|   | <hr/>       | <hr/>       |
|   | 13,166      | 13,191      |
|   | <hr/>       | <hr/>       |
|   | 22,052      | 21,634      |
| Less: accumulated depreciation, depletion, and amortization | 13,225      | 12,728      |
|   | <hr/>       | <hr/>       |
|   | 8,827       | 8,906       |
| Construction work-in-progress                               | 498         | 484         |
|   | <hr/>       | <hr/>       |
|   | \$ 9,325    | \$ 9,390    |

As of December 31, 2016 and 2015, the net carrying value of temporarily idled smelting assets was \$314 and \$324, respectively, representing 778 kmt of idle capacity in both periods. Also, as of December 31, 2016 and 2015, the net carrying value of temporarily idled refining assets was \$158 and \$53, representing 2,305 kmt and 2,801 kmt of idle capacity, respectively. At the end of 2016, Alcoa Corporation permanently closed 2,207 kmt of refining capacity, of which 2,131 kmt was included in the 2,801 kmt of idle capacity as of December 31, 2015.

## K. Goodwill and Other Intangible Assets

The following table details the changes in the carrying amount of goodwill:

|                               | Bauxite | Alumina | Corporate* | Total |
|-------------------------------|---------|---------|------------|-------|
| Balance at December 31, 2014: |         |         |            |       |
| Goodwill                      | \$ 3    | \$ 5    | \$152      | \$160 |
| Accumulated impairment losses | -       | -       | -          | -     |
|                               | 3       | 5       | 152        | 160   |
| Translation                   | (1)     | (1)     | (6)        | (8)   |
| Balance at December 31, 2015: |         |         |            |       |
| Goodwill                      | 2       | 4       | 146        | 152   |
| Accumulated impairment losses | -       | -       | -          | -     |
|                               | 2       | 4       | 146        | 152   |
| Translation                   | -       | -       | 3          | 3     |
| Balance at December 31, 2016: |         |         |            |       |
| Goodwill                      | 2       | 4       | 149        | 155   |
| Accumulated impairment losses | -       | -       | -          | -     |
|                               | \$ 2    | \$ 4    | \$149      | \$155 |

\* As of December 31, 2016, the \$149 of goodwill reflected in Corporate is allocated to two of Alcoa Corporation's six reportable segments (\$50 to Bauxite and \$99 to Alumina) included in the table above for purposes of impairment testing (see Note B). This goodwill is reflected in Corporate for segment reporting purposes because it is not included in management's assessment of performance by the two reportable segments. There is no goodwill associated with Alcoa Corporation's other four reportable segments.

Other intangible assets, which are included in Other noncurrent assets on the accompanying Consolidated Balance Sheet, were as follows:

| December 31,                  | 2016                  |                          | 2015                  |                          |
|-------------------------------|-----------------------|--------------------------|-----------------------|--------------------------|
|                               | Gross carrying amount | Accumulated amortization | Gross carrying amount | Accumulated amortization |
| Computer software*            | \$252                 | \$(196)                  | \$176                 | \$(158)                  |
| Patents and licenses**        | 70                    | (6)                      | 25                    | (5)                      |
| Other intangibles             | 21                    | (6)                      | 25                    | (10)                     |
| Total other intangible assets | \$343                 | \$(208)                  | \$226                 | \$(173)                  |

\* As of December 31, 2016, Computer software includes amounts related to the establishment of Alcoa Corporation's own enterprise business solution (EBS) separate from ParentCo.

\*\* As of December 31, 2016, Patents and licenses include amounts related to the capitalization of costs associated with the renewal of Alcoa Corporation's FERC (Federal Energy Regulatory Commission) license at its Yadkin Hydroelectric Project (see Note C).

Computer software consists primarily of software costs associated with an EBS within Alcoa Corporation to drive common systems among all businesses.

Amortization expense related to the intangible assets in the tables above for the years ended December 31, 2016, 2015, and 2014 was \$7, \$10, and \$13, respectively, and is expected to be approximately \$10 annually from 2017 to 2021.

## L. Debt

### Long-Term Debt.

| December 31,  | 2016    | 2015  |
|---|---------|-------|
| 6.75% Notes, due 2024   | \$ 750  | \$ -  |
| 7.00% Notes, due 2026   | 500     | -     |
| BNDES Loans, due 2017-2029 (see below for weighted average rates) | 192     | 174   |
| Chelan County Loan, due 2031 (5.85%)*                             | -       | 14    |
| Other   | 38      | 37    |
| Unamortized discounts and deferred financing costs                | (35)    | -     |
|   | 1,445   | 225   |
| Less: amount due within one year                                  | 21      | 18    |
|   | \$1,424 | \$207 |

\* This loan was repaid early by ParentCo in October 2016 without penalty.

The principal amount of long-term debt maturing in each of the next five years is \$21 in 2017, \$19 in 2018, and \$18 in each of 2019, 2020, and 2021.

**144A Debt**—In September 2016, 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 \$750 of 6.75% Senior Notes due 2024 (the “2024 Notes”) and \$500 of 7.00% Senior Notes due 2026 (the “2026 Notes” and, collectively with the 2024 Notes, the “Notes”). ANHBV received \$1,228 in net proceeds (see below) from the debt offering reflecting a discount to the initial purchasers of the Notes. The net proceeds were used to make a payment to ParentCo to fund the transfer of certain assets from ParentCo to Alcoa Corporation in connection with the Separation Transaction (see Note A), and the remaining net proceeds were used for general corporate purposes. 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 respective terms of the Notes. Interest on the Notes will be paid semi-annually in March and September, commencing March 31, 2017.

ANHBV has the option to redeem the Notes on at least 30 days, but not more than 60 days, prior notice to the holders of the Notes under multiple scenarios, including, in whole or in part, at any time or from time to time after September 2019, in the case of the 2024 Notes, or after September 2021, in the case of the 2026 Notes, at a redemption price specified in the indenture (up to 105.063% of the principal amount for the 2024 Notes and up to 103.500% of the principal amount of the 2026 Notes, plus any accrued and unpaid interest in each case). Also, the 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 Notes repurchased, plus any accrued and unpaid interest on the Notes repurchased.

The 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 Notes. The Notes are guaranteed on a senior unsecured basis by Alcoa Corporation and its subsidiaries that are guarantors under the Revolving Credit Agreement described below (the “subsidiary guarantors” and, together with Alcoa Corporation, the “guarantors”). Each of the subsidiary guarantors will be released from their 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 Notes indenture contains various restrictive covenants similar to those described below for the Revolving Credit Agreement, including a limitation on restricted payments, with, among other exceptions, capacity to pay annual dividends generally consistent with those provided for in the Revolving Credit Agreement, with annual capacity to pay \$75 in each year within the 2021 through 2024 timeframe.

In conjunction with this debt offering, the net proceeds of \$1,228, plus an additional \$81 of ParentCo cash on hand, were required to be placed in escrow contingent on completion of the Separation Transaction. The \$81 represented the necessary cash to fund the redemption of the Notes, pay all regularly scheduled interest on the Notes through a specified date as defined in the indenture, and a premium on the principal of the Notes if the Separation Transaction had not been completed by a certain time as defined in the indenture. As a result, the \$1,228 of escrowed cash was recorded as restricted cash. The issuance of the Notes and the increase in restricted cash both in the amount of \$1,228 were not reflected in the accompanying Statement of Consolidated Cash Flows as these represent noncash financing and investing activities, respectively. The subsequent release of the \$1,228 from escrow occurred on October 31, 2016 in preparation for the Separation Transaction. This decrease in restricted cash was reflected in the accompanying Statement of Consolidated Cash Flows as a cash inflow in the Net change in restricted cash line item.

**BNDES Loans**—Prior to July 5, 2016, Alcoa Alumínio (Alumínio), an indirect wholly-owned subsidiary of Alcoa Corporation, had a loan agreement with Brazil’s National Bank for Economic and Social Development (BNDES) that provided for a financing commitment of \$397 (R\$687), which was divided into three subloans and was used to pay for certain expenditures of the Estreito hydroelectric power project. On July 5, 2016, this loan agreement was amended to change the borrower from Alumínio to a wholly-owned subsidiary of Alumínio. Interest on the three subloans is a Brazil real rate of interest equal to BNDES’ long-term interest rate, 7.50% and 7.00% as of December 31, 2016 and 2015, respectively, plus a weighted-average margin of 2.67% and 1.48%, respectively. Principal and interest are payable monthly, which began in October 2011 and end in September 2029 for two of the subloans totaling R\$667 and began in July 2012 and end in June 2018 for the subloan of R\$20. This loan may be repaid early without penalty with the approval of BNDES.

As of December 31, 2016 and 2015, outstanding borrowings were \$150 (R\$490) and \$136 (R\$522), respectively, and the weighted-average interest rate was 10.22% and 8.49%, respectively. During 2016 and 2015, Alumínio’s subsidiary and/or Alumínio repaid \$14 (R\$48) and \$15 (R\$48), respectively, of outstanding borrowings. Additionally, Alumínio borrowed less than \$1 (R\$1) under the loan in 2015.

Alumínio has a loan agreement with BNDES that provides for a financing commitment of \$85 (R\$177), which also was used to pay for certain expenditures of the Estreito hydroelectric power project. Interest on the loan is a Brazil real rate of interest equal to BNDES’ long-term interest rate plus a margin of 1.55%. Principal and interest are payable monthly, which began in January 2013 and end in September 2029. This loan may be repaid early without penalty with the approval of BNDES. As of December 31, 2016 and 2015, Alumínio’s outstanding borrowings were \$42 (R\$137) and \$38 (R\$146), respectively, and the interest rate was 9.05% and 8.55%, respectively. During 2016 and 2015, Alumínio repaid \$3 (R\$11) and \$3 (R\$10), respectively, of outstanding borrowings.

**Credit Facility.** On September 16, 2016, Alcoa Corporation and ANHBV entered into a revolving credit agreement with a syndicate of lenders and issuers named therein, as amended, (the “Revolving Credit Agreement”). The Revolving Credit Agreement provides a \$1,500 senior secured revolving credit facility (the “Revolving Credit Facility”), the proceeds of which may be used for transaction costs related to the Separation Transaction (see Note A), to provide working capital, and/or for other general corporate purposes of Alcoa Corporation and its subsidiaries. Subject to the terms and conditions of the Revolving Credit Agreement, ANHBV may from time to time request the issuance of letters of credit up to \$750 under the Revolving Credit Facility, subject to a sublimit of \$400 for any letters of credit issued for the account of Alcoa Corporation or any of its domestic subsidiaries.

The Revolving Credit Facility is scheduled to mature on November 1, 2021, unless extended or earlier terminated in accordance with the provisions of the Revolving Credit Agreement. ANHBV may make extension requests during the term of the Revolving Credit Facility, subject to the lender consent requirements set forth in the Revolving Credit Agreement. Under the provisions of the Revolving Credit Agreement, ANHBV will pay a quarterly commitment fee ranging from 0.225% to 0.450% (based on Alcoa Corporation’s leverage ratio) on the unused portion of the Revolving Credit Facility.

A maximum of \$750 in outstanding borrowings under the Revolving Credit Facility may be denominated in euros. Loans will bear interest at a rate per annum equal to, at ANHBV's option, either (a) an adjusted LIBOR rate or (b) a base rate determined by reference to the highest of (1) the prime rate of JPMorgan Chase Bank, N.A., (2) the greater of the federal funds effective rate and the overnight bank funding rate, plus 0.5%, and (3) the one month adjusted LIBOR rate plus 1% per annum, plus, in each case, an applicable margin. The applicable margin for all loans will vary based on Alcoa Corporation's leverage ratio and will range from 1.75% to 2.50% for LIBOR loans and 0.75% to 1.50% for base rate loans. Outstanding borrowings may be prepaid without premium or penalty, subject to customary breakage costs.

All obligations of Alcoa Corporation or a domestic entity under the Revolving Credit Facility are secured by, subject to certain exceptions (including a limitation of pledges of equity interests in certain foreign subsidiaries to 65%, and certain thresholds with respect to real property), a first priority lien on substantially all assets of Alcoa Corporation and the material domestic wholly-owned subsidiaries of Alcoa Corporation and certain equity interests of specified non-U.S. subsidiaries. All other obligations under the Revolving Credit Facility are secured by, subject to certain exceptions (including certain thresholds with respect to real property), a first priority security interest in substantially all assets of Alcoa Corporation, ANHBV, the material domestic wholly-owned subsidiaries of Alcoa Corporation, and the material foreign wholly-owned subsidiaries of Alcoa Corporation located in Australia, Brazil, Canada, Luxembourg, the Netherlands, and Norway, including equity interests of certain subsidiaries that directly hold equity interests in AWAC entities. However, no AWAC entity is a guarantor of any obligation under the Revolving Credit Facility and no asset of any AWAC entity, or equity interests in any AWAC entity, will be pledged to secure the obligations under the Revolving Credit Facility.

The Revolving Credit Agreement includes a number of customary affirmative covenants. Additionally, the Revolving Credit Agreement contains a number of negative covenants (applicable to Alcoa Corporation and certain subsidiaries described as restricted), that, subject to certain exceptions, include limitations on (among other things): liens; fundamental changes; sales of assets; indebtedness; entering into restrictive agreements; restricted payments, including shareholder dividends and repurchases of common stock (see below); investments, loans, advances, guarantees, and acquisitions; transactions with affiliates; amendment of certain material documents; and a covenant prohibiting reductions in the ownership of AWAC entities, and certain other specified restricted subsidiaries of Alcoa Corporation, below an agreed level. The Revolving Credit Agreement also includes financial covenants requiring the maintenance of a specified interest expense coverage ratio of not less than 5.00 to 1.00, and a leverage ratio for any period of four consecutive fiscal quarters that is not greater than 2.25 to 1.00. As of December 31, 2016, Alcoa Corporation was in compliance with all such covenants.

In reference to the restricted payments covenant mentioned above, Alcoa Corporation may declare and make annual ordinary dividends in an aggregate amount not to exceed \$38 in each of the November 1, 2016 through December 31, 2017 time period and annual 2018, \$50 in each of annual 2019 and 2020, and \$75 in the January 1, 2021 through November 1, 2021 time period (see below), except that 50% of any unused amount of the base amount in any of the specified time periods may be used in the next succeeding period following the use of the base amount in said time period. Also, Alcoa Corporation may repurchase shares of its common stock pursuant to stock option exercises and benefit plans in an aggregate amount not to exceed \$25 during any fiscal year, except that 50% of any unused amount of the base amount in any fiscal year may be used in the next succeeding fiscal year following the use of the base amount in said fiscal year.

The Revolving Credit Agreement contains customary events of default, including with respect to a failure to make payments under the Revolving Credit Facility, cross-default and cross-judgment default, and certain bankruptcy and insolvency events.

There were no amounts outstanding at December 31, 2016 and no amounts were borrowed during 2016 (September 16<sup>th</sup> through December 31<sup>st</sup>) under the Revolving Credit Facility.



## **M. Preferred and Common Stock**

**Preferred Stock.** Alcoa Corporation is authorized to issue 100,000,000 shares of preferred stock at a par value of \$0.01 per share. At December 31, 2016, Alcoa Corporation had no issued preferred stock.

**Common Stock.** Alcoa Corporation is authorized to issue 750,000,000 shares of common stock at a par value of \$0.01 per share. On November 1, 2016, in conjunction with the Separation Transaction (see Note A), Alcoa Corporation distributed 182,471,195 shares of its common stock. Of this amount, 146,159,428 shares were distributed to ParentCo's shareholders and 36,311,767 shares were retained by ParentCo (on February 14, 2017, Arconic sold 23,353,000 of these shares). From November 1, 2016 through December 31, 2016, Alcoa Corporation issued 459,800 shares for employee stock-based compensation plans. As of December 31, 2016, Alcoa Corporation had 182,930,995 issued and outstanding shares of common stock. Dividends on common stock are subject to authorization by Alcoa Corporation's Board of Directors. Alcoa Corporation did not declare any dividends from November 1, 2016 through December 31, 2016.

As of December 31, 2016, 18,540,200 shares of common stock were available for issuance under Alcoa Corporation's employee stock-based compensation plan. Alcoa Corporation issues new shares to satisfy the exercise of stock options and the conversion of stock awards.

### **Stock-based Compensation**

For all periods prior to the Separation Date (see Note A), Alcoa Corporation's employees participated in ParentCo's stock-based compensation plan. The stock-based compensation expense recorded by Alcoa Corporation in the referenced periods includes expense associated with employees historically attributable to Alcoa Corporation's operations and an allocation of expense (see Note A) related to ParentCo's corporate employees. For the last two months of 2016, Alcoa Corporation employees participated in the Company's stock-based compensation plan.

Effective November 1, 2016, all outstanding stock options (vested and non-vested) and non-vested stock awards originally granted under ParentCo's stock-based compensation plan related to Alcoa Corporation employees were replaced with similar stock options and stock awards under Alcoa Corporation's stock-based compensation plan. In order to preserve the intrinsic value of the stock options and stock awards originally granted under ParentCo's stock-based compensation plan, the number of stock options and stock awards issued under Alcoa Corporation's stock-based compensation plan were increased by a ratio of 1.34 developed by dividing the October 31, 2016 closing market price of ParentCo's common stock (\$28.72) by the October 31, 2016 closing market price of Alcoa Corporation's "when issued" common stock (\$21.44). This resulted in a beginning balance of outstanding stock options and stock awards under Alcoa Corporation's stock-based compensation plan of 4,673,829 and 2,605,423, respectively, as of November 1, 2016.

The following description of Alcoa Corporation's stock-based compensation plan is not materially different from the description of ParentCo's stock-based compensation plan prior to the Separation Transaction (see Note A).

Alcoa Corporation has a stock-based compensation plan under which stock options and stock awards generally will be granted in February each year to eligible employees (Alcoa Corporation's Board of Directors also receive certain stock awards; however, these amounts are not material). Most plan participants can choose whether to receive their award in the form of stock options, stock awards, or a combination of both. This choice is made before the grant is issued and is irrevocable. Stock options will be granted at the closing market price of Alcoa Corporation's common stock on the date of grant and will vest over a three-year service period (1/3 each year) with a ten-year contractual term. Stock awards will vest over a three-year service period from the date of grant and certain of these awards also include performance conditions. In 2016, 2015, and 2014, the final number of performance stock awards earned will be based on Alcoa Corporation's achievement of sales and profitability targets over the respective three-year period. One-third of the award will be earned each year based on the performance against the pre-established targets for that year. The performance stock awards earned over the three-year period vest at the end of the third year.

In 2016, 2015, and 2014, Alcoa Corporation recognized stock-based compensation expense of \$28, \$35, and \$39, respectively, of which approximately 80% related to stock awards in each period (there was no stock-based compensation expense capitalized in 2016, 2015, or 2014). Of the total pretax stock-based compensation expense recognized in 2016, 2015, and 2014, \$16, \$21, and \$21, respectively, relates to the allocation of expense for ParentCo's corporate employees. As part of ParentCo's stock-based compensation plan design, individuals who are retirement-eligible have a six-month requisite service period in the year of grant. As a result, a larger portion of expense was recognized in the first half of each year for these retirement-eligible employees. Of the total pretax stock-based compensation expense recognized in 2016, 2015, and 2014, \$7, \$6, and \$8, respectively, pertains to the acceleration of expense related to retirement-eligible employees.

Stock-based compensation expense is based on the grant date fair value of the applicable equity grant. For stock awards, the fair value was equivalent to the closing market price of either ParentCo's or Alcoa Corporation's common stock on the date of grant. For stock options, the fair value was estimated on the date of grant using a lattice-pricing model, which generated a result of \$2.12, \$4.47, and \$2.84 per option in 2016, 2015, and 2014, respectively. The lattice-pricing model uses a number of assumptions to estimate the fair value of a stock option, including an average risk-free interest rate, dividend yield, volatility, annual forfeiture rate, exercise behavior, and contractual life. The following paragraph describes in detail the assumptions used by ParentCo (Alcoa Corporation did not grant any stock options from November 1, 2016 through December 31, 2016) to estimate the fair value of stock options granted in 2016 (the assumptions used to estimate the fair value of stock options granted in 2015 and 2014 were not materially different).

The risk-free interest rate (2.06%) was based on a yield curve of interest rates at the time of the grant based on the contractual life of the option. The dividend yield (1.1%) was based on a one-year average. Volatility (44.5%) was based on historical and implied volatilities over the term of the option. ParentCo utilized historical option forfeiture data to estimate annual pre- and post-vesting forfeitures (7%). Exercise behavior (60%) was based on a weighted average exercise ratio (exercise patterns for grants issued over the number of years in the contractual option term) of an option's intrinsic value resulting from historical employee exercise behavior. Based upon the other assumptions used in the determination of the fair value, the life of an option (5.7 years) was an output of the lattice-pricing model.

For stock options outstanding as of October 31, 2016 that were originally granted under ParentCo's stock-based compensation plan to Alcoa Corporation employees, the previously-mentioned fair values were adjusted to reflect both the impact of ParentCo's 1-for-3 reverse stock split that occurred on October 5, 2016 and to maintain the intrinsic value of the stock options as a result of the Separation Transaction (see Note A). As a result, the fair value of the stock options originally granted in 2016, 2015, and 2014 was adjusted to \$4.75, \$10.01, and \$6.36, respectively. Alcoa Corporation did not recognize any incremental stock-based compensation expense as a result of this adjustment.

The activity for stock options and stock awards during the November 1, 2016 through December 31, 2016 timeframe was as follows:

|                                | Stock options     |                                 | Stock awards     |                                |
|--------------------------------|-------------------|---------------------------------|------------------|--------------------------------|
|                                | Number of options | Weighted average exercise price | Number of awards | Weighted average FMV per award |
| Outstanding, November 1, 2016  | 4,673,829         | \$24.42                         | 2,605,423        | \$22.59                        |
| Granted                        | -                 | -                               | 22,858           | 28.88                          |
| Exercised                      | (458,925)         | 21.69                           | -                | -                              |
| Converted                      | -                 | -                               | (1,265)          | 22.31                          |
| Expired or forfeited           | (106,369)         | 25.73                           | (45,011)         | 22.75                          |
| Performance share adjustment   | -                 | -                               | (24,163)         | 21.88                          |
| Outstanding, December 31, 2016 | 4,108,535         | 24.69                           | 2,557,842        | 22.65                          |

As of December 31, 2016, the number of stock options outstanding had a weighted average remaining contractual life of 5.74 years and a total intrinsic value of \$21. Additionally, 2,786,416 of the stock options outstanding were fully vested and exercisable and had a weighted average remaining contractual life of 4.44 years, a weighted average exercise price of \$26.92, and a total intrinsic value of \$9 as of December 31, 2016. In 2016, cash received from stock option exercises was \$10 and the total intrinsic value of stock options exercised during 2016 was \$4.

At December 31, 2016, there was \$17 (pretax) of unrecognized compensation expense related to non-vested stock option grants and non-vested stock award grants. This expense is expected to be recognized over a weighted average period of 1.5 years.

#### **N. Pension and Other Postretirement Benefits**

Alcoa maintains pension plans covering most U.S. employees and certain employees in foreign locations. Pension benefits generally depend on length of service, job grade, and remuneration. Substantially all benefits are paid through pension trusts that are sufficiently funded to ensure that all plans can pay benefits to retirees as they become due. Most salaried and non-bargaining hourly U.S. employees hired after March 1, 2006 participate in a defined contribution plan instead of a defined benefit plan.

ParentCo also maintains health care and life insurance postretirement benefit plans covering eligible U.S. retired employees and certain retirees from foreign locations. Generally, the medical plans are unfunded and pay a percentage of medical expenses, reduced by deductibles and other coverage. Life benefits are generally provided by insurance contracts. ParentCo retains the right, subject to existing agreements, to change or eliminate these benefits. All salaried and certain non-bargaining hourly U.S. employees hired after January 1, 2002 and certain bargaining hourly U.S. employees hired after July 1, 2010 are not eligible for postretirement health care benefits. All salaried and certain hourly U.S. employees that retire on or after April 1, 2008 are not eligible for postretirement life insurance benefits.

For all periods prior to August 1, 2016 (see below), eligible employees attributable to Alcoa Corporation operations participated in the U.S. defined benefit pension and other postretirement benefit plans sponsored by ParentCo (the "Shared Plans"), which included Arconic and ParentCo corporate participants. Alcoa Corporation accounted for the Shared Plans as multiemployer benefit plans. Accordingly, Alcoa Corporation did not record an asset or liability to recognize the funded status of the Shared Plans. The multiemployer contribution expense attributable to employees of Alcoa Corporation-related operations was based primarily on pensionable compensation of such employees for the pension plans and estimated interest costs for the other postretirement benefit plans. Multiemployer contribution expenses attributable to Alcoa Corporation for the Shared Plans were \$28, \$64, and \$64 related to pension plans and \$12, \$32, and \$39 related to other postretirement benefit plans in 2016 (through July 31, 2016), 2015, and 2014, respectively.

Additionally, for all periods prior to August 1, 2016, Alcoa Corporation recorded an allocation of expenses for the Shared Plans attributable to ParentCo corporate participants as well as to closed and sold operations (see Cost Allocations in Note A). Including the multiemployer expenses described above, the total expenses associated with the Shared Plans reflected in the accompanying Consolidated Statement of Operations were \$73, \$191, and \$183 in 2016 (through July 31, 2016), 2015, and 2014, respectively.

Furthermore, certain of the ParentCo plans described above were specific to employees attributable to Alcoa Corporation operations (non-U.S.) in their entirety (the "Direct Plans"). Alcoa Corporation accounted for the Direct Plans as defined benefit pension and other postretirement benefit plans. Accordingly, the funded status of each of the Direct Plans is recorded in the accompanying Consolidated Balance Sheet. Actuarial gains and losses that have not yet been recognized in earnings are recorded in Accumulated other comprehensive loss until they are amortized as a component of net periodic benefit cost. The determination of benefit obligations and recognition of expenses related to Direct Plans are dependent on various assumptions. The major assumptions primarily relate to discount rates, long-term expected rates of return on plan assets, and future compensation increases. Management develops each assumption using relevant company experience in conjunction with market-related data for each of the plans.

In preparation for the Separation Transaction (see Note A), effective August 1, 2016, certain of the Shared Plans were separated into standalone plans for both Alcoa Corporation (the “New Direct Plans”) and Arconic. Accordingly, the New Direct Plans for Alcoa Corporation were measured as of August 1, 2016. One of the primary assumptions used to measure the New Direct Plans was a weighted average discount rate of 3.48%. This measurement yielded a combined net unfunded status of \$2,348, which was recognized in Alcoa Corporation’s Consolidated Balance Sheet at that time, consisting of a current liability of \$131 and a noncurrent liability of \$2,217. Additionally, Alcoa Corporation recognized \$2,498 in Accumulated other comprehensive loss.

Additionally, certain other Shared Plans were assumed by Alcoa Corporation (the “Additional New Direct Plans”) that did not require to be separated and/or to be remeasured. The Additional New Direct Plans had a combined net unfunded status of \$180, which was recognized in Alcoa Corporation’s Consolidated Balance Sheet, consisting of a current liability of \$5 and a noncurrent liability of \$175. Additionally, Alcoa Corporation recognized \$206 in Accumulated other comprehensive loss.

Net periodic benefit cost for the Direct Plans, New Direct Plans, and/or Additional New Direct Plans were \$83, \$106, and \$101 related to pensions plans and \$21, \$(12), and \$2 related to other postretirement benefit plans in the respective periods in 2016, 2015, and 2014, respectively. Including the total expenses associated with the Shared Plans described above, Alcoa Corporation recognized total expenses related to all pension and other postretirement benefits of \$177, \$285, and \$286 in 2016, 2015, and 2014, respectively.

The funded status of all of Alcoa Corporation’s Direct Plans, New Direct Plans, and Additional New Direct Plans are measured as of December 31 each calendar year. All of the information that follows for pension and other postretirement benefit plans is applicable to only the Direct Plans, New Direct Plans, and Additional New Direct Plans in the respective periods.

## Obligations and Funded Status

| December 31,   | Pension benefits |                 | Other postretirement benefits |               |
|--|------------------|-----------------|-------------------------------|---------------|
|  | 2016             | 2015            | 2016                          | 2015          |
| <b>Change in benefit obligation</b>  |                  |                 |                               |               |
| Benefit obligation at beginning of year  | \$ 2,246         | \$2,507         | \$ 82                         | \$ 98         |
| Benefit obligation assumed on August 1, 2016   | 5,316            | -               | 1,277                         | -             |
| Service cost   | 74               | 63              | 2                             | -             |
| Interest cost  | 142              | 95              | 16                            | 4             |
| Amendments   | 1                | 16              | -                             | -             |
| Actuarial (gains) losses   | (244)            | 27              | (33)                          | (7)           |
| Settlements  | (80)             | (65)            | -                             | -             |
| Curtailments   | -                | (13)            | -                             | (5)           |
| Benefits paid, net of participants' contributions  | (218)            | (65)            | (61)                          | (5)           |
| Medicare Part D subsidy receipts   | -                | -               | 3                             | -             |
| Foreign currency translation impact  | 32               | (319)           | -                             | (3)           |
| Benefit obligation at end of year*   | \$ 7,269         | \$2,246         | \$ 1,286                      | \$ 82         |
| <b>Change in plan assets</b>   |                  |                 |                               |               |
| Fair value of plan assets at beginning of year   | \$ 1,891         | \$2,090         | \$ -                          | \$ -          |
| Fair value of plan assets assumed on August 1, 2016  | 4,065            | -               | -                             | -             |
| Actual return on plan assets   | (332)            | 111             | -                             | -             |
| Employer contributions   | 72               | 76              | -                             | -             |
| Participant contributions  | 18               | 19              | -                             | -             |
| Benefits paid  | (224)            | (76)            | -                             | -             |
| Administrative expenses  | (11)             | (6)             | -                             | -             |
| Settlements  | (80)             | (65)            | -                             | -             |
| Foreign currency translation impact  | 22               | (258)           | -                             | -             |
| Fair value of plan assets at end of year*  | \$ 5,421         | \$1,891         | \$ -                          | \$ -          |
| <b>Funded status*</b>  | <b>\$(1,848)</b> | <b>\$ (355)</b> | <b>\$(1,286)</b>              | <b>\$(82)</b> |
| Less: Amounts attributed to joint venture partners   | (30)             | (30)            | -                             | -             |
| Net funded status  | \$(1,818)        | \$ (325)        | \$(1,286)                     | \$(82)        |
| <b>Amounts recognized in the Consolidated Balance Sheet consist of:</b>  |                  |                 |                               |               |
| Noncurrent assets  | \$ 43            | \$ 35           | \$ -                          | \$ -          |
| Current liabilities  | (10)             | (1)             | (120)                         | (4)           |
| Noncurrent liabilities   | (1,851)          | (359)           | (1,166)                       | (78)          |
| Net amount recognized  | \$(1,818)        | \$ (325)        | \$(1,286)                     | \$(82)        |
| <b>Amounts recognized in Accumulated Other Comprehensive Loss consist of:</b>                                  |                  |                 |                               |               |
| Net actuarial loss   | \$ 3,254         | \$ 625          | \$ 295                        | \$ 1          |
| Prior service cost (benefit)   | 42               | 35              | (36)                          | -             |
| Total, before tax effect   | 3,296            | 660             | 259                           | 1             |
| Less: Amounts attributed to joint venture partners   | 36               | 39              | -                             | -             |
| Net amount recognized, before tax effect   | \$ 3,260         | \$ 621          | \$ 259                        | \$ 1          |
| <b>Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Loss consist of:</b> |                  |                 |                               |               |
| Net actuarial loss (benefit)   | \$ 337           | \$ (61)         | \$ (33)                       | \$(12)        |
| Amortization of accumulated net actuarial loss   | (105)            | (45)            | (8)                           | 7             |
| Prior service cost (benefit)   | 2                | (17)            | (1)                           | 1             |
| Amortization of prior service (cost) benefit   | (7)              | (6)             | 5                             | 9             |
| Total, before tax effect   | 227              | (129)           | (37)                          | 5             |
| Less: Amounts attributed to joint venture partners   | (3)              | (5)             | -                             | -             |
| Net amount recognized, before tax effect   | \$ 230           | \$ (124)        | \$ (37)                       | \$ 5          |

\* At December 31, 2016, the benefit obligation, fair value of plan assets, and funded status for U.S. pension plans were \$4,977, \$3,504, and \$(1,473), respectively. At December 31, 2015, the benefit obligation, fair value of plan assets, and funded status were related only to non-U.S. pension plans.

### Pension Plan Benefit Obligations

|  | <u>Pension benefits</u> |         |
|--|-------------------------|---------|
|  | 2016                    | 2015    |
| The projected benefit obligation and accumulated benefit obligation for all defined benefit pension plans was as follows:  |                         |         |
| Projected benefit obligation   | \$7,269                 | \$2,246 |
| Accumulated benefit obligation   | 7,075                   | 2,049   |
| The aggregate projected benefit obligation and fair value of plan assets for pension plans with projected benefit obligations in excess of plan assets was as follows:     |                         |         |
| Projected benefit obligation   | 6,699                   | 2,175   |
| Fair value of plan assets  | 4,807                   | 1,789   |
| The aggregate accumulated benefit obligation and fair value of plan assets for pension plans with accumulated benefit obligations in excess of plan assets was as follows: |                         |         |
| Accumulated benefit obligation   | 6,531                   | 1,467   |
| Fair value of plan assets  | 4,807                   | 1,252   |

### Components of Net Periodic Benefit Cost

|  | <u>Pension benefits<sup>(1)</sup></u> |        |        | <u>Other postretirement benefits<sup>(2)</sup></u> |        |      |
|--|---------------------------------------|--------|--------|--|--------|------|
|  | 2016                                  | 2015   | 2014   | 2016   | 2015   | 2014 |
| Service cost                                 | \$ 61                                 | \$ 51  | \$ 55  | \$ 2   | \$ -   | \$ 1 |
| Interest cost                                | 138                                   | 89     | 114    | 16   | 4      | 5    |
| Expected return on plan assets               | (242)                                 | (121)  | (134)  | -  | -      | -    |
| Recognized net actuarial loss                | 102                                   | 42     | 34     | 8  | (3)    | (2)  |
| Amortization of prior service cost (benefit) | 7                                     | 6      | 8      | (5)  | (9)    | (2)  |
| Settlements <sup>(3)</sup>                   | 16                                    | 14     | 24     | -  | -      | -    |
| Curtailments <sup>(4)</sup>                  | -                                     | 9      | -      | -  | (4)    | -    |
| Special termination benefits <sup>(5)</sup>  | 1                                     | 16     | -      | -  | -      | -    |
| Net periodic benefit cost <sup>(6)</sup>     | \$ 83                                 | \$ 106 | \$ 101 | \$21   | \$(12) | \$ 2 |

(1) In 2016, net periodic benefit cost for U.S pension plans was \$21.

(2) In 2016, net periodic benefit cost for other postretirement benefits reflects a reduction of \$6 related to the recognition of the federal subsidy awarded under Medicare Part D.

(3) In 2016 and 2014, settlements were due to workforce reductions (see Note D). In 2015, settlements were due to workforce reductions (see Note D) and the payment of lump sum benefits.

(4) In 2015, curtailments were due to elimination of benefits or workforce reductions (see Note D).

(5) In 2016 and 2015, special termination benefits were due to workforce reductions (see Note D).

(6) Amounts attributed to joint venture partners are not included.

### Amounts Expected to be Recognized in Net Periodic Benefit Cost

|  | <u>Pension benefits</u> | <u>Other postretirement benefits</u> |
|--|-------------------------|--------------------------------------|
|  | 2017                    | 2017                                 |
| Net actuarial loss recognition           | \$186                   | \$16                                 |
| Prior service cost (benefit) recognition | 8                       | (6)                                  |

## Assumptions

Weighted average assumptions used to determine benefit obligations for pension and other postretirement benefit plans were as follows:

| <b>December 31,</b>                              | <b>2016</b> | <b>2015</b> |
|--|-------------|-------------|
| Discount rate—pension plans                      | 4.12%       | 4.03%       |
| Discount rate—other postretirement benefit plans | 3.93        | 4.07        |
| Rate of compensation increase—pension plans      | 3.61        | 3.65        |

The discount rate is determined using a Company-specific yield curve model (above-median) developed with the assistance of an external actuary. The cash flows of the plans' projected benefit obligations are discounted using a single equivalent rate derived from yields on high quality corporate bonds, which represent a broad diversification of issuers in various sectors. The yield curve model parallels the plans' projected cash flows, which have an average duration ranging from 11 to 15 years, and the underlying cash flows of the bonds included in the model exceed the cash flows needed to satisfy the Company's plans' obligations multiple times. If a deep market of high quality corporate bonds does not exist in a country, then the yield on government bonds plus a corporate bond yield spread is used.

The rate of compensation increase is based upon anticipated compensation increases and estimated inflation. For 2017, the rate of compensation increase will be 3.5%.

Weighted average assumptions used to determine net periodic benefit cost for pension and other postretirement benefit plans were as follows:

|  | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|--|-------------|-------------|-------------|
| Discount rate—pension plans*                                   | 3.45%       | 4.09%       | 5.14%       |
| Discount rate—other postretirement benefit plans*              | 2.90        | 4.15        | 4.88        |
| Expected long-term rate of return on plan assets—pension plans | 7.31        | 6.91        | 6.91        |
| Rate of compensation increase—pension plans                    | 3.65        | 3.74        | 3.79        |

\* In all periods presented, the respective discount rates were used to determine net periodic benefit cost for most plans for the full annual period. However, the discount rates for a limited number of plans were updated during 2016, 2015, and 2014 to reflect the remeasurement of these plans due to settlements and/or curtailments. The updated discount rates used were not significantly different from the discount rates presented.

The expected long-term rate of return on plan assets is generally applied to a five-year market-related value of plan assets (a four-year average or the fair value at the plan measurement date is used for certain non-U.S. plans). The process used by management to develop this assumption is one that relies on forward-looking investment returns by asset class. Management incorporates expected future investment returns on current and planned asset allocations using information from various external investment managers and consultants, as well as management's own judgment. For 2016, 2015, and 2014, the expected long-term rate of return used by management was based on the prevailing and planned strategic asset allocations, as well as estimates of future returns by asset class. For 2017, management anticipates that 7.47% will be the weighted-average expected long-term rate of return.

Assumed health care cost trend rates for U.S. other postretirement benefit plans were as follows (non-U.S. plans are not material):

|  | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|--|-------------|-------------|-------------|
| Health care cost trend rate assumed for next year                    | 5.5%        | 5.5%        | 5.5%        |
| Rate to which the cost trend rate gradually declines                 | 4.5%        | 4.5%        | 4.5%        |
| Year that the rate reaches the rate at which it is assumed to remain | 2020        | 2019        | 2018        |

The assumed health care cost trend rate is used to measure the expected cost of gross eligible charges covered by Alcoa Corporation's other postretirement benefit plans. For 2017, a 5.5% trend rate will be used, reflecting management's best estimate of the change in future health care costs covered by the plans. The plans' actual annual health care cost trend experience (based on ParentCo's plans that previously included the Alcoa Corporation participants) over the past three years has ranged from 3.6% to 9.6%. Management does not believe this three-year range is indicative of expected increases for future health care costs over the long-term.

Assumed health care cost trend rates have an effect on the amounts reported for a health care plan. A one-percentage point change in these assumed rates would have the following effects:

|   | 1%<br>increase | 1%<br>decrease |
|---|----------------|----------------|
| Effect on other postretirement benefit obligations      | \$80           | \$(72)         |
| Effect on total of service and interest cost components | 1              | (1)            |

### Plan Assets

Alcoa Corporation's pension plan investment policy and weighted average asset allocations at December 31, 2016 and 2015, by asset class, were as follows:

| Asset class       | Policy range | Plan assets<br>at<br>December 31, |      |
|-------------------|--------------|-----------------------------------|------|
|                   |              | 2016                              | 2015 |
| Equities          | 20–55%       | 37%                               | 40%  |
| Fixed income      | 25–55%       | 36                                | 37   |
| Other investments | 15–35%       | 27                                | 23   |
| Total             |              | 100%                              | 100% |

The principal objectives underlying the investment of the pension plans' assets are to ensure that Alcoa Corporation can properly fund benefit obligations as they become due under a broad range of potential economic and financial scenarios, maximize the long-term investment return with an acceptable level of risk based on such obligations, and broadly diversify investments across and within various asset classes to protect asset values against adverse movements. Specific objectives for long-term investment strategy include reducing the volatility of pension assets relative to pension liabilities and achieving risk factor diversification across the balance of the asset portfolio. A portion of the assets are matched to the interest rate profile of the benefit obligation through long duration fixed income investments and fixed income derivative instruments. Exposure to broad equity risk has been decreased and diversified through investments in discretionary and systematic macro hedge funds, long/short equity hedge funds, and global and emerging market equities. Investments are further diversified by strategy, asset class, geography, and sector to enhance returns and mitigate downside risk. A large number of external investment managers are used to gain broad exposure to the financial markets and to mitigate manager-concentration risk.

Investment practices comply with the requirements of applicable laws and regulations in the respective jurisdictions, including the Employee Retirement Income Security Act of 1974 (ERISA) in the United States. The use of derivative instruments by external investment managers is permitted where appropriate and necessary for achieving overall investment policy objectives and for mitigating interest rate and other asset class risks.

The following section describes the valuation methodologies used by the trustees to measure the fair value of pension plan assets, including, if applicable, an indication of the level in the fair value hierarchy in which each type of asset is generally classified (see Note O for the definition of fair value and a description of the fair value hierarchy). On January 1, 2016, Alcoa Corporation adopted changes issued by the FASB related to certain investments for which fair



value is measured at net asset value as a practical expedient (see Recently Adopted Accounting Guidance in Note B). The changes remove the requirement to categorize within the fair value hierarchy all such investments. Additionally, an entity is required to remove these investments from the fair value hierarchy in all prior periods presented. As such, the information in the table below has been updated to conform to these changes. All references below to net asset value means net asset value of shares (or its equivalent) held at December 31 as a practical expedient.

**Equities.** These securities consist of: (i) direct investments in the stock of publicly traded U.S. and non-U.S. companies and are valued based on the closing price reported in an active market on which the individual securities are traded (generally classified in Level 1); (ii) the plans' share of commingled funds that are invested in the stock of publicly traded companies and are valued at net asset value; and (iii) direct investments in long/short equity hedge funds and private equity (limited partnerships and venture capital partnerships) and are valued at net asset value.

**Fixed income.** These securities consist of: (i) U.S. government debt and are generally valued using quoted prices (included in Level 1); (ii) cash and cash equivalents invested in publicly-traded funds and are valued based on the closing price reported in an active market on which the individual securities are traded (generally classified in Level 1); (iii) publicly traded U.S. and non-U.S. fixed interest obligations (principally corporate bonds and debentures) and are valued through consultation and evaluation with brokers in the institutional market using quoted prices and other observable market data (included in Level 2); (iv) fixed income derivatives and are generally valued using industry standard models with market-based observable inputs (included in Level 2); and (v) cash and cash equivalents invested in institutional funds and are valued at net asset value.

**Other investments.** These investments include, among others: (i) exchange traded funds, such as real estate investment trusts and gold, and are valued based on the closing price reported in an active market on which the investments are traded (included in Level 1); (ii) the plans' share of commingled funds that are invested in real estate investment trusts and are valued at net asset value; (iii) direct investments of discretionary and systematic macro hedge funds and private real estate (includes limited partnerships) and are valued at net asset value; and (iv) absolute return hedge funds and are valued at net asset value.

The fair value methods described above may not be indicative of net realizable value or reflective of future fair values. Additionally, while Alcoa Corporation believes the valuation methods used by the plans' trustees are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The following table presents the fair value of pension plan assets classified under either the appropriate level of the fair value hierarchy or net asset value:

| <b>December 31, 2016</b>                         | <b>Level 1</b> | <b>Level 2</b> | <b>Level 3</b> | <b>Net Asset Value</b> | <b>Total</b>   |
|--|----------------|----------------|----------------|------------------------|----------------|
| <b>Equities:</b>                                 |                |                |                |                        |                |
| Equity securities                                | \$ 520         | \$ -           | \$-            | \$ 772                 | \$1,292        |
| Long/short equity hedge funds                    | -              | -              | -              | 449                    | 449            |
| Private equity                                   | -              | -              | -              | 246                    | 246            |
|  | \$ 520         | \$ -           | \$-            | \$1,467                | \$1,987        |
| <b>Fixed income:</b>                             |                |                |                |                        |                |
| Intermediate and long duration government/credit | \$ 78          | \$283          | \$-            | \$ 167                 | \$ 528         |
| Cash and cash equivalent funds                   | 897            | -              | -              | 468                    | 1,365          |
| Other  | -              | 61             | -              | -                      | 61             |
|  | \$ 975         | \$344          | \$-            | \$ 635                 | \$1,954        |
| <b>Other investments:</b>                        |                |                |                |                        |                |
| Real estate                                      | \$ 88          | \$ -           | \$-            | \$ 331                 | \$ 419         |
| Discretionary and systematic macro hedge funds   | -              | -              | -              | 866                    | 866            |
| Other  | 71             | -              | -              | 139                    | 210            |
|  | \$ 159         | \$ -           | \$-            | \$1,336                | \$1,495        |
| <b>Total*</b>                                    | <b>\$1,654</b> | <b>\$344</b>   | <b>\$-</b>     | <b>\$3,438</b>         | <b>\$5,436</b> |
| <b>December 31, 2015</b>                         | <b>Level 1</b> | <b>Level 2</b> | <b>Level 3</b> | <b>Net Asset Value</b> | <b>Total</b>   |
| <b>Equities:</b>                                 |                |                |                |                        |                |
| Equity securities                                | \$ 160         | \$ -           | \$-            | \$ 480                 | \$ 640         |
| Long/short equity hedge funds                    | -              | -              | -              | 26                     | 26             |
| Private equity                                   | -              | -              | -              | 101                    | 101            |
|  | \$ 160         | \$ -           | \$-            | \$ 607                 | \$ 767         |
| <b>Fixed income:</b>                             |                |                |                |                        |                |
| Intermediate and long duration government/credit | \$ 152         | \$226          | \$-            | \$ 157                 | \$ 535         |
| Other  | -              | 24             | -              | 139                    | 163            |
|  | \$ 152         | \$250          | \$-            | \$ 296                 | \$ 698         |
| <b>Other investments:</b>                        |                |                |                |                        |                |
| Real estate                                      | \$ 4           | \$ -           | \$-            | \$ 185                 | \$ 189         |
| Discretionary and systematic macro hedge funds   | -              | -              | -              | 46                     | 46             |
| Other  | 4              | -              | -              | 187                    | 191            |
|  | \$ 8           | \$ -           | \$-            | \$ 418                 | \$ 426         |
| <b>Total</b>                                     | <b>\$ 320</b>  | <b>\$250</b>   | <b>\$-</b>     | <b>\$1,321</b>         | <b>\$1,891</b> |

\* As of December 31, 2016, the total fair value of pension plan assets excludes a net payable of \$15, which represents the amount due to Arconic pension plans from Alcoa Corporation pension plans as a result of certain plans that were separated between the two companies.

### Funding and Cash Flows

It is Alcoa Corporation's policy to fund amounts for pension plans sufficient to meet the minimum requirements set forth in applicable country benefits laws and tax laws, including the Pension Protection Act of 2006; the Worker, Retiree, and Employer Recovery Act of 2008; the Moving Ahead for Progress in the 21<sup>st</sup> Century Act of 2012; the Highway and Transportation Funding Act of 2015; and the Bipartisan Budget Act of 2016 for U.S. plans. From time to

time, Alcoa Corporation contributes additional amounts as deemed appropriate. In 2016 and 2015, cash contributions to Alcoa Corporation's pension plans were \$66 and \$69. The minimum required contribution to pension plans in 2017 is estimated to be \$115, of which \$60 is for U.S. plans.

Benefit payments expected to be paid to pension and other postretirement benefit plan participants and expected Medicare Part D subsidy receipts are as follows:

| Year ended December 31, | Pension benefits | Gross Other postretirement benefits | Medicare Part D subsidy receipts | Net Other postretirement benefits |
|-------------------------|------------------|-------------------------------------|----------------------------------|-----------------------------------|
| 2017                    | \$ 475           | \$ 130                              | \$10                             | \$120                             |
| 2018                    | 475              | 120                                 | 10                               | 110                               |
| 2019                    | 475              | 115                                 | 10                               | 105                               |
| 2020                    | 480              | 115                                 | 10                               | 105                               |
| 2021                    | 480              | 115                                 | 10                               | 105                               |
| 2022 through 2026       | 2,375            | 495                                 | 45                               | 450                               |
|                         | \$4,760          | \$1,090                             | \$95                             | \$995                             |

### Defined Contribution Plans

Alcoa Corporation sponsors savings and investment plans in several countries, including the United States and Australia. Prior to the Separation Date (see Note A), employees attributable to Alcoa Corporation operations participated in ParentCo-sponsored plans. Alcoa Corporation's expenses related to all such plans were \$57 in 2016, \$59 in 2015, and \$68 in 2014. In the United States, employees may contribute a portion of their compensation to the plans, and Alcoa Corporation (ParentCo prior to Separation Date) matches a portion of these contributions in equivalent form of the investments elected by the employee.

### O. 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, interest rates, 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 is composed of the chief executive officer, the chief financial officer, and other officers and employees that the chief executive officer selects. The SRMC meets on a periodic basis to review derivative positions and strategy and reports to Alcoa Corporation's Board of Directors on the scope of its activities.

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

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

In addition to the Level 1 and 2 derivative instruments described above, Alcoa Corporation has nine (ten prior to October 2016) derivative instruments classified as Level 3 under the fair value hierarchy. These instruments are composed of seven (eight prior to October 2016) embedded aluminum derivatives, an energy contract, and an embedded credit derivative, all of which relate to energy supply contracts associated with nine smelters and three refineries. Five of the embedded aluminum derivatives and the energy contract (through November 2016 – see below) were designated as cash flow hedging instruments and two (three prior to October 2016) of the embedded aluminum derivatives, the embedded credit derivative, and the energy contract (in December 2016 – see below) were not designated as hedging instruments.

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).

Alcoa Corporation has two power contracts, 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, 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. 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 the premium estimated in that twelfth month constant 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 on the accompanying Consolidated Balance Sheet while realized gains and losses were included in Sales on the accompanying Statement of Consolidated Operations.

Also, Alcoa Corporation had a power contract (expired in September 2016 – see below) separate from above that contains an LME-linked embedded derivative. Prior to its expiration, the embedded derivative was valued using the probability and interrelationship of future LME prices, Australian dollar to U.S. dollar exchange rates, and the U.S. consumer price index. Significant increases or decreases in the LME price would result in a higher or lower fair value measurement. An increase in actual LME price over the inputs used in the valuation model will result in a higher cost of power and a corresponding decrease to the derivative asset. This embedded derivative did not qualify for hedge accounting treatment. Unrealized gains and losses from the embedded derivative were included in Other expenses (income), net on the accompanying Statement of Consolidated Operations while realized gains and losses were included in Cost of goods sold on the accompanying Statement of Consolidated Operations as electricity purchases were made under the contract. At the time this derivative asset was recognized, an equivalent amount was recognized as a deferred credit in Other noncurrent liabilities and deferred credits on the accompanying Consolidated Balance Sheet (see Note S). This deferred credit was recognized in Other expenses (income), net on the accompanying Statement of Consolidated Operations as power was received over the life of the contract.

Additionally, 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.

In mid-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 will be included in Other (income) expenses, net on the accompanying Statement of Consolidated Operations while realized gains and losses will be included in Cost of goods sold on the accompanying Statement of Consolidated Operations as electricity purchases are 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. This deferred charge will be recognized in Other (income) expenses, net on the accompanying Statement of Consolidated Operations as power is received over the life of the contract.

Furthermore, Alcoa Corporation has a power contract, which contains an embedded derivative that indexes the difference between the long-term debt ratings of Alcoa Corporation and the counterparty from any of the three major credit rating agencies. Management uses market prices, historical relationships, and forecast services to determine fair

value. Significant increases or decreases in any of these inputs would result in a lower or higher fair value measurement. A wider credit spread between Alcoa 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.

Finally, Alcoa Corporation has a derivative contract that hedges the anticipated power requirements at one of its smelters that began when the previous power contract expired in September 2016 (see above). 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. Lower prices in the power market would cause a decrease in the derivative asset. The derivative 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 on the accompanying Consolidated Balance Sheet, while realized gains and losses were recorded in Cost of goods sold as electricity purchases were made under the power contract. In August 2016, Alcoa Corporation gave the required notice to terminate this derivative 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, a portion of this contract no longer qualified for hedge accounting treatment due to an outage at the smelter, at which point management elected to discontinue hedge accounting for the entire contract. 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 unrealized gain in Accumulated other comprehensive loss will be reclassified to Other income, net as electricity purchases are made under the power contract through the termination date.

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

|                               | Fair value at<br>December 31, 2016 | Unobservable input  | Range<br>(\$ in full amounts)  |
|-------------------------------|------------------------------------|---|--|
| Assets:                       |                                    |   |  |
| Embedded aluminum derivatives | \$497                              | Price of aluminum beyond forward curve  | Aluminum: \$2,137 per metric ton in 2027 to \$2,265 per metric ton in 2029 (two contracts) and \$2,563 per metric ton in 2036 (one contract)<br>Midwest premium: \$0.835 per pound in 2017 to \$0.0900 per pound in 2029 (two contracts) and 2036 (one contract) |
| Embedded aluminum derivative  | -                                  | Interrelationship of future aluminum and oil prices   | Aluminum: \$1,694 per metric ton in 2017 to \$1,734 per metric ton in 2018<br>Oil: \$56 per barrel in 2017 to \$58 per barrel in 2018  |
| Energy contract               | 17                                 | Interrelationship of forward energy price and the Consumer Price Index  | Electricity: \$68 per megawatt hour through September 2017   |
| Liabilities:                  |                                    |   |  |
| Embedded aluminum derivative  | 202                                | Price of aluminum beyond forward curve  | Aluminum: \$2,137 per metric ton in 2027 to \$2,157 per metric ton in 2027   |
| Embedded aluminum derivative  | 28                                 | Interrelationship of LME price to the amount of megawatt hours of energy needed to produce the forecasted metric tons of aluminum | Aluminum: \$1,694 per metric ton in 2017 to \$1,748 per metric ton in 2019<br>Midwest premium: \$0.0835 per pound in 2017 to \$0.0900 per pound in 2019<br>Electricity: rate of 2 million megawatt hours per year  |
| Embedded aluminum derivative  | 2                                  | Interrelationship of LME price to overall energy price  | Aluminum: \$1,711 per metric ton in 2017 to \$1,758 per metric ton in 2019   |
| Embedded credit derivative    | 35                                 | Credit spread between Alcoa Corporation and counterparty  | 4.12% (Alcoa Corporation—5.12% and counterparty—1.00%)   |

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

|   | December 31,<br>2016 | December 31,<br>2015 |
|---|----------------------|----------------------|
| <b>Asset Derivatives</b>                                |                      |                      |
| Derivatives designated as hedging instruments:          |                      |                      |
| Prepaid expenses and other current assets:              |                      |                      |
| Embedded aluminum derivatives                           | \$ 29                | \$ 72                |
| Other noncurrent assets:                                |                      |                      |
| Embedded aluminum derivatives                           | 468                  | 994                  |
| Energy contract   | -                    | 2                    |
| Total derivatives designated as hedging instruments     | \$497                | \$1,068              |
| Derivatives not designated as hedging instruments:      |                      |                      |
| Prepaid expenses and other current assets:              |                      |                      |
| Embedded aluminum derivatives                           | \$ -                 | \$ 69                |
| Energy contract   | 17                   | -                    |
| Total derivatives not designated as hedging instruments | \$ 17                | \$ 69                |
| Total Asset Derivatives                                 | \$514                | \$1,137              |
| <b>Liability Derivatives</b>                            |                      |                      |
| Derivatives designated as hedging instruments:          |                      |                      |
| Other current liabilities:                              |                      |                      |
| Embedded aluminum derivatives                           | \$ 17                | \$ 9                 |
| Energy contract   | -                    | 4                    |
| Other noncurrent liabilities and deferred credits:      |                      |                      |
| Embedded aluminum derivatives                           | 187                  | 160                  |
| Total derivatives designated as hedging instruments     | \$204                | \$ 173               |
| Derivatives not designated as hedging instruments:      |                      |                      |
| Other current liabilities:                              |                      |                      |
| Embedded aluminum derivative                            | \$ 10                | \$ -                 |
| Embedded credit derivative                              | 5                    | 6                    |
| Other noncurrent liabilities and deferred credits:      |                      |                      |
| Embedded aluminum derivative                            | 18                   | -                    |
| Embedded credit derivative                              | 30                   | 29                   |
| Total derivatives not designated as hedging instruments | \$ 63                | \$ 35                |
| Total Liability Derivatives                             | \$267                | \$ 208               |

The following table shows the net fair values of the Level 3 derivative instruments at December 31, 2016 and the effect on these amounts of a hypothetical change (increase or decrease of 10%) in the market prices or rates that existed as of December 31, 2016:

|                               | Fair value<br>asset/(liability) | Index change<br>of +/-10% |
|-------------------------------|---------------------------------|---------------------------|
| Embedded aluminum derivatives | \$265                           | \$402                     |
| Embedded credit derivative    | (35)                            | 4                         |
| Energy contract               | 17                              | 9                         |



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

|   | Assets                        |                 | Liabilities                   |                            |                 |
|---|-------------------------------|-----------------|-------------------------------|----------------------------|-----------------|
|   | Embedded aluminum derivatives | Energy contract | Embedded aluminum derivatives | Embedded credit derivative | Energy contract |
| <b>2016</b>   |                               |                 |                               |                            |                 |
| Opening balance—January 1, 2016   | \$1,135                       | \$ 2            | \$169                         | \$35                       | \$ 4            |
| Total gains or losses (realized and unrealized) included in:  |                               |                 |                               |                            |                 |
| Sales   | (5)                           | -               | (12)                          | -                          | -               |
| Cost of goods sold  | (92)                          | -               | -                             | (5)                        | -               |
| Other expenses, net*  | (13)                          | (80)            | 2                             | 5                          | (2)             |
| Other comprehensive loss  | (568)                         | 95              | 47                            | -                          | (1)             |
| Purchases, sales, issuances, and settlements**  | -                             | -               | 32                            | -                          | -               |
| Transfers into and/or out of Level 3**  | -                             | -               | -                             | -                          | -               |
| Other   | 40                            | -               | (6)                           | -                          | (1)             |
| Closing balance—December 31, 2016   | \$ 497                        | \$ 17           | \$232                         | \$35                       | \$ -            |
| Change in unrealized gains or losses included in earnings for derivative contracts held at December 31, 2016: |                               |                 |                               |                            |                 |
| Sales   | \$ -                          | \$ -            | \$ -                          | \$ -                       | \$ -            |
| Cost of goods sold  | -                             | -               | -                             | -                          | -               |
| Other expenses, net*  | (13)                          | (80)            | 2                             | 5                          | (2)             |

\* In August 2016, Alcoa Corporation elected to terminate the energy contract in accordance with the provisions of the agreement (see above). As a result, Alcoa Corporation decreased the derivative asset and recorded a charge in Other income, net of \$84, which is reflected in the table above. Additionally, Alcoa Corporation also decreased the related unrealized gain included in Accumulated other comprehensive loss and recorded a benefit in Other income, net of \$84. As such, the termination of the specified term of this derivative contract described above did not have an impact on Alcoa Corporation's earnings.

\*\* In 2016, there was an issuance of a new embedded derivative contained in an amendment to an existing power contract (see above). There were no purchases, sales or settlements of Level 3 derivative instruments. Additionally, there were no transfers of derivative instruments into or out of Level 3.

|   | Assets                        |                 | Liabilities                   |                            |                 |
|---|-------------------------------|-----------------|-------------------------------|----------------------------|-----------------|
|   | Embedded aluminum derivatives | Energy contract | Embedded aluminum derivatives | Embedded credit derivative | Energy contract |
| <b>2015</b>   |                               |                 |                               |                            |                 |
| Opening balance—January 1, 2015   | \$ 266                        | \$ 2            | \$ 376                        | \$18                       | \$ -            |
| Total gains or losses (realized and unrealized) included in:  |                               |                 |                               |                            |                 |
| Sales   | 5                             | -               | (16)                          | -                          | -               |
| Cost of goods sold  | (99)                          | -               | -                             | -                          | -               |
| Other expenses, net   | (8)                           | (2)             | -                             | 17                         | 1               |
| Other comprehensive loss  | 964                           | 1               | (191)                         | -                          | 3               |
| Purchases, sales, issuances, and settlements*   | -                             | -               | -                             | -                          | -               |
| Transfers into and/or out of Level 3*   | -                             | -               | -                             | -                          | -               |
| Foreign currency translation  | 7                             | 1               | -                             | -                          | -               |
| Closing balance—December 31, 2015   | \$1,135                       | \$ 2            | \$ 169                        | \$35                       | \$4             |
| Change in unrealized gains or losses included in earnings for derivative contracts held at December 31, 2015: |                               |                 |                               |                            |                 |
| Sales   | \$ -                          | \$ -            | \$ -                          | \$ -                       | \$ -            |
| Cost of goods sold  | -                             | -               | -                             | -                          | -               |
| Other expenses, net   | (8)                           | (2)             | -                             | 17                         | 1               |

\* In 2015, there were no purchases, sales, issuances or settlements of Level 3 derivative instruments. Additionally, there were no transfers of derivative instruments into or out of Level 3.

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

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

Alcoa Corporation has five Level 3 embedded aluminum derivatives and one Level 3 energy contract (through November 2016 – see above) that have been designated as cash flow hedges as follows.

**Embedded aluminum derivatives.** 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, three of which were new derivatives contained in three power contracts that were renewed in late 2014. At December 31, 2016 and 2015, these embedded aluminum derivatives hedge forecasted aluminum sales of 3,127 kmt and 3,307 kmt, respectively.

In 2016, 2015, and 2014, Alcoa Corporation recognized an unrealized loss of \$615, an unrealized gain of \$1,155, and an unrealized gain of \$78, respectively, in Other comprehensive loss related to these five derivative instruments. Additionally, Alcoa Corporation reclassified a realized loss of \$7, \$21, and \$28 from Accumulated other comprehensive loss to Sales in 2016, 2015, and 2014, respectively. Assuming market rates remain constant with the rates at December 31, 2016, a realized gain of \$8 is expected to be recognized in Sales over the next 12 months.

There was no ineffectiveness related to these five derivative instruments in 2016, 2015, and 2014.

**Energy contract.** Alcoa Corporation has a derivative contract that hedges the anticipated power requirements at one of its smelters that became effective when the existing power contract expired in September 2016. In August 2016, Alcoa

Corporation elected to terminate most of the remaining term of this derivative contract (see above). Additionally, in December 2016, management elected to discontinue hedge accounting for this contract (see above). This energy contract hedged forecasted electricity purchases of 1,969,544 megawatt hours prior to December 2016 and 59,409,328 megawatt hours at December 31, 2015. In 2016, 2015, and 2014, Alcoa Corporation recognized an unrealized gain of \$96, an unrealized loss of \$2, and an unrealized loss of \$4, respectively, in Other comprehensive loss. Additionally, Alcoa Corporation recognized a gain of \$3 and a loss of \$3 in Other expenses, net related to hedge ineffectiveness in 2016 and 2015, respectively. There was no ineffectiveness related to this energy contract in 2014.

### Derivatives Not Designated As Hedging Instruments

Alcoa Corporation has two (three prior to October 2016) Level 3 embedded aluminum derivatives and one Level 3 embedded credit derivative that do not qualify for hedge accounting treatment and one Level 3 energy contract that management elected to discontinue hedge accounting treatment (see above). As such, gains and losses related to the changes in fair value of these instruments are recorded directly in earnings. In 2016, 2015, and 2014, Alcoa Corporation recognized a loss of \$17, \$25, and \$13, respectively, in Other expenses (income), net, of which a loss of \$15, \$8, and \$15, respectively, related to the embedded aluminum derivatives, a loss of \$5, a loss of \$17, and a gain of \$2, respectively, related to the embedded credit derivative, and, in 2016, a gain of \$3 related to the energy contract.

### Material Limitations

The disclosures with respect to commodity prices, interest rates, and foreign currency exchange risk do not take into account the underlying commitments or anticipated transactions. If the underlying items were included in the analysis, the gains or losses on the futures contracts may be offset. Actual results will be determined by a number of factors that are not under Alcoa 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. Although nonperformance is possible, 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:

| December 31,                                    | 2016           |            | 2015           |            |
|---|----------------|------------|----------------|------------|
|   | Carrying value | Fair value | Carrying value | Fair value |
| Cash and cash equivalents                       | \$ 853         | \$ 853     | \$557          | \$557      |
| Restricted cash                                 | 6              | 6          | -              | -          |
| Long-term debt due within one year              | 21             | 21         | 18             | 18         |
| Long-term debt, less amount due within one year | 1,424          | 1,573      | 207            | 207        |

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.

**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.

## P. Income Taxes

The components of loss before income taxes were as follows:

|               | 2016    | 2015      | 2014    |
|---------------|---------|-----------|---------|
| United States | \$(688) | \$(1,053) | \$(709) |
| Foreign       | 526     | 716       | 646     |
|               | \$(162) | \$(337)   | \$(63)  |

Provision for income taxes consisted of the following:

|                 | 2016  | 2015  | 2014  |
|-----------------|-------|-------|-------|
| Current:        |       |       |       |
| Federal*        | \$ 9  | \$ 3  | \$ 1  |
| Foreign         | 221   | 313   | 333   |
| State and local | -     | -     | -     |
|                 | 230   | 316   | 334   |
| Deferred:       |       |       |       |
| Federal*        | -     | (85)  | (5)   |
| Foreign         | (46)  | 171   | (45)  |
| State and local | -     | -     | -     |
|                 | (46)  | 86    | (50)  |
| Total           | \$184 | \$402 | \$284 |

\* Includes U.S. taxes related to foreign income

A reconciliation of the U.S. federal statutory rate to Alcoa Corporation's effective tax rate was as follows (the effective tax rate for all periods presented was a provision on a loss):

|  | 2016     | 2015     | 2014     |
|--|----------|----------|----------|
| U.S. federal statutory rate  | 35.0%    | 35.0%    | 35.0%    |
| Taxes on foreign operations  | 24.8     | (6.7)    | (67.5)   |
| Nondeductible costs related to the Separation Transaction                    | (9.6)    | -        | -        |
| Permanent differences on restructuring and other charges and asset disposals | -        | -        | (19.4)   |
| Equity income/loss   | (3.7)    | (2.6)    | (23.0)   |
| Noncontrolling interest <sup>(1)</sup>                                       | (7.3)    | (8.5)    | (53.5)   |
| Statutory tax rate and law changes <sup>(2)</sup>                            | (0.6)    | (0.3)    | (57.0)   |
| Tax holidays <sup>(3)</sup>  | 11.2     | 6.2      | (61.8)   |
| Changes in valuation allowances  | (1.9)    | (62.6)   | 3.4      |
| Losses and credits with no tax benefit <sup>(4)</sup>                        | (163.2)  | (82.0)   | (243.0)  |
| Impact of capitalization of intercompany debt                                | -        | 3.3      | 38.1     |
| Other  | 1.7      | (1.1)    | (2.1)    |
| Effective tax rate   | (113.6)% | (119.3)% | (450.8)% |

(1) In 2014, the noncontrolling interest's impact on Alcoa Corporation's effective tax rate was mostly due to the noncontrolling interest's share of a loss on the divestiture of an ownership interest in a mining and refining joint venture in Jamaica (see Note C).

(2) In November 2014, Spain enacted corporate tax reform that changed the corporate tax rate from 30% in 2014 to 28% in 2015 to 25% in 2016. As a result, Alcoa Corporation remeasured certain deferred tax assets related to Spanish operations.

(3) In 2014, a tax holiday for a Brazilian entity of Alcoa Corporation became effective (see below).

- (4) Hypothetical net operating losses and tax credits determined on a separate return basis for which it is more likely than not that a tax benefit will not be realized. The related deferred tax asset and offsetting valuation allowance have been adjusted to Parent Company net investment and, as such, are not reflected in subsequent deferred tax and valuation allowance tables.

The components of net deferred tax assets and liabilities were as follows:

| December 31,                       | 2016                |                          | 2015                |                          |
|------------------------------------|---------------------|--------------------------|---------------------|--------------------------|
|                                    | Deferred tax assets | Deferred tax liabilities | Deferred tax assets | Deferred tax liabilities |
| Depreciation                       | \$ 187              | \$499                    | \$ 264              | \$ 529                   |
| Employee benefits                  | 1,240               | -                        | 286                 | 39                       |
| Loss provisions                    | 313                 | -                        | 302                 | 7                        |
| Deferred income/expense            | 28                  | 136                      | 48                  | 312                      |
| Tax loss carryforwards             | 1,064               | -                        | 992                 | -                        |
| Tax credit carryforwards           | 23                  | -                        | 15                  | -                        |
| Derivatives and hedging activities | -                   | 124                      | -                   | 216                      |
| Other                              | 233                 | 125                      | 420                 | 412                      |
|                                    | 3,088               | 884                      | 2,327               | 1,515                    |
| Valuation allowance                | (1,755)             | -                        | (712)               | -                        |
|                                    | \$ 1,333            | \$884                    | \$1,615             | \$1,515                  |

The following table details the expiration periods of the deferred tax assets presented above:

| December 31, 2016        | Expires within 10 years | Expires within 11-20 years | No expiration* | Other*  | Total    |
|--------------------------|-------------------------|----------------------------|----------------|---------|----------|
| Tax loss carryforwards   | \$ 282                  | \$177                      | \$ 605         | \$ -    | \$ 1,064 |
| Tax credit carryforwards | 23                      | -                          | -              | -       | 23       |
| Other                    | -                       | -                          | 361            | 1,640   | 2,001    |
| Valuation allowance      | (272)                   | (88)                       | (265)          | (1,130) | (1,755)  |
|                          | \$ 33                   | \$ 89                      | \$ 701         | \$ 510  | \$ 1,333 |

\* Deferred tax assets with no expiration may still have annual limitations on utilization. Other represents deferred tax assets whose expiration is dependent upon the reversal of the underlying temporary difference.

The total deferred tax asset (net of valuation allowance) is supported by projections of future taxable income exclusive of reversing temporary differences and taxable temporary differences that reverse within the carryforward period.

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not (greater than 50%) that a tax benefit will not be realized. In evaluating the need for a valuation allowance, management considers all potential sources of taxable income, including income available in carryback periods, future reversals of taxable temporary differences, projections of taxable income, and income from tax planning strategies, as well as all available positive and negative evidence. Positive evidence includes factors such as a history of profitable operations, projections of future profitability within the carryforward period, including from tax planning strategies, and Alcoa Corporation's experience with similar operations. Existing favorable contracts and the ability to sell products into established markets are additional positive evidence. Negative evidence includes items such as cumulative losses, projections of future losses, or carryforward periods that are not long enough to allow for the utilization of a deferred tax asset based on existing projections of income. In certain jurisdictions, deferred tax assets related to cumulative losses exist without a valuation allowance where in management's judgment the weight of the positive evidence more than offsets the

negative evidence of the cumulative losses. Upon changes in facts and circumstances, management may conclude that deferred tax assets for which no valuation allowance is currently recorded may not be realized, resulting in a future charge to establish a valuation allowance. Existing valuation allowances are re-examined under the same standards of positive and negative evidence. If it is determined that it is more likely than not that a deferred tax asset will be realized, the appropriate amount of the valuation allowance, if any, is released. Deferred tax assets and liabilities are also re-measured to reflect changes in underlying tax rates due to law changes and the granting and lapse of tax holidays.

In 2013, Alcoa Corporation recognized a \$128 discrete income tax charge for a valuation allowance on the full value of the deferred tax assets related to a Spanish consolidated tax group. These deferred tax assets have an expiration period ranging from 2017 (for certain credits) to an unlimited life (for operating losses). After weighing all available positive and negative evidence, as described above, management determined that it was no longer more likely than not that Alcoa Corporation will realize the tax benefit of these deferred tax assets. This was mainly driven by a decline in the outlook of the former Primary Metals business (2013 realized prices were the lowest since 2009) combined with prior year cumulative losses of the Spanish consolidated tax group. During 2014, the underlying value of the deferred tax assets decreased due to a remeasurement as a result of the enactment of new tax rates in Spain beginning in 2016 and a change in foreign currency exchange rates. As a result, the valuation allowance decreased by the same amount. At December 31, 2016 and 2015, the amount of the valuation allowance was \$76 and \$91, respectively. This valuation allowance was reevaluated as of December 31, 2016, and no change to the allowance was deemed necessary based on all available evidence. The need for this valuation allowance will be assessed on a continuous basis in future periods and, as a result, a portion or all of the allowance may be reversed based on changes in facts and circumstances.

In 2015, Alcoa Corporation recognized an additional \$141 discrete income tax charge for valuation allowances on certain deferred tax assets in Iceland and Suriname. Of this amount, an \$85 valuation allowance was established on the full value of the deferred tax assets in Suriname, which were related mostly to employee benefits and tax loss carryforwards. These deferred tax assets have an expiration period ranging from 2017 to 2022. The remaining \$56 charge relates to a valuation allowance established on a portion of the deferred tax assets recorded in Iceland. These deferred tax assets have an expiration period ranging from 2017 to 2023. After weighing all available positive and negative evidence, as described above, management determined that it was no longer more likely than not that Alcoa Corporation will realize the tax benefit of either of these deferred tax assets. This was mainly driven by a decline in the outlook of the former Primary Metals business, combined with prior year cumulative losses and a short expiration period. At December 31, 2016 and 2015, the amount of the combined valuation allowance remained \$141. This valuation allowance was reevaluated as of December 31, 2016, and no change to the allowance was deemed necessary based on all available evidence. The need for this valuation allowance will be assessed on a continuous basis in future periods and, as a result, a portion or all of the allowance may be reversed based on changes in facts and circumstances.

In December 2011, one of Alcoa Corporation's subsidiaries in Brazil applied for a tax holiday related to its expanded mining and refining operations. During 2013, the application was amended and re-filed and, separately, a similar application was filed for one of the ParentCo's subsidiaries in Brazil that has significant operations related to Alcoa Corporation. The deadline for the Brazilian government to deny the application was July 11, 2014. Since Alcoa Corporation did not receive notice that its applications were denied, the tax holiday took effect automatically on July 12, 2014. As a result, the tax rate for these entities decreased significantly (from 34% to 15.25%), resulting in future cash tax savings over the 10-year holiday period (retroactively effective as of January 1, 2013). Additionally, a portion of the Alcoa Corporation subsidiary's net deferred tax asset that reverses within the holiday period was remeasured at the new tax rate (the net deferred tax asset of the other subsidiary was not remeasured since it could still be utilized against the subsidiary's future earnings not subject to the tax holiday). In 2014, this remeasurement resulted in a decrease to that entity's net deferred tax asset and a noncash charge to earnings of \$52 (\$31 after noncontrolling interest) in Alcoa Corporation's Statement of Consolidated Operations.

The following table details the changes in the valuation allowance:

| <b>December 31,</b>                               | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|---|-------------|-------------|-------------|
| Balance at beginning of year                      | \$ (712)    | \$(486)     | \$(517)     |
| Increase to allowance                             | (1,072)     | (289)       | (19)        |
| Release of allowance                              | 16          | -           | 7           |
| U.S. state tax apportionment and tax rate changes | -           | 30          | 15          |
| Foreign currency translation                      | 13          | 33          | 28          |
| Balance at end of year                            | \$(1,755)   | \$(712)     | \$(486)     |

The cumulative amount of Alcoa Corporation's foreign undistributed net earnings for which no deferred taxes have been provided was approximately \$790 at December 31, 2016. This amount only relates to foreign undistributed net earnings generated prior to the Separation Date. Alcoa Corporation has a number of commitments and obligations related to the Company's operations in various foreign jurisdictions. As such, management has no plans to distribute such earnings in the foreseeable future, and, therefore, has determined it is not practicable to determine the related deferred tax liability. Alcoa Corporation is currently evaluating its local and global cash needs for future business operations and anticipated debt facilities, which may influence future repatriation decisions.

A reconciliation of the beginning and ending amount of unrecognized tax benefits (excluding interest and penalties) was as follows:

| <b>December 31,</b>                             | <b>2016</b> | <b>2015</b> | <b>2014</b> |
|---|-------------|-------------|-------------|
| Balance at beginning of year                    | \$22        | \$25        | \$ 52       |
| Additions for tax positions of the current year | 3           | 2           | 2           |
| Additions for tax positions of prior years      | 1           | 1           | 1           |
| Reductions for tax positions of prior years     | (2)         | -           | (1)         |
| Settlements with tax authorities                | (2)         | (2)         | (28)        |
| Expiration of the statute of limitations        | -           | -           | -           |
| Foreign currency translation                    | 1           | (4)         | (1)         |
| Balance at end of year                          | \$23        | \$22        | \$ 25       |

For all periods presented, a portion of the balance at end of year pertains to state tax liabilities, which are presented before any offset for federal tax benefits. The effect of unrecognized tax benefits, if recorded, that would impact the annual effective tax rate for 2016, 2015, and 2014 would be 10%, 4%, and 17%, respectively, of pretax book loss. Alcoa Corporation does not anticipate that changes in its unrecognized tax benefits will have a material impact on the Statement of Consolidated Operations during 2017 (see Tax in Note R for a matter for which no reserve has been recognized).

It is Alcoa Corporation's policy to recognize interest and penalties related to income taxes as a component of the Provision for income taxes on the accompanying Statement of Consolidated Operations. In 2016, 2015, and 2014, Alcoa Corporation recognized \$1, \$7, and \$1, respectively, in interest and penalties. Due to the expiration of the statute of limitations, settlements with tax authorities, and refunded overpayments, Alcoa Corporation also recognized interest income of \$2, \$1, and \$5 in 2016, 2015, and 2014, respectively. As of December 31, 2016 and 2015, the amount accrued for the payment of interest and penalties was \$6 and \$7, respectively.

#### **Q. Asset Retirement Obligations**

Alcoa Corporation has recorded AROs related to legal obligations associated with the normal operation of bauxite mines, alumina refineries, and aluminum smelters. These AROs consist primarily of costs associated with mine reclamation, closure of bauxite residue areas, spent pot lining disposal, and landfill closure. Alcoa Corporation also

recognizes AROs for any significant lease restoration obligation, if required by a lease agreement, and for the disposal of regulated waste materials related to the demolition of certain power facilities.

In addition to AROs, certain CAROs related to alumina refineries, aluminum smelters, rolling mills, and energy generation facilities have not been recorded in the Consolidated Financial Statements due to uncertainties surrounding the ultimate settlement date. Such uncertainties exist as a result of the perpetual nature of the structures, maintenance and upgrade programs, and other factors. At the date a reasonable estimate of the ultimate settlement date can be made (e.g., planned demolition), Alcoa Corporation would record an ARO for the removal, treatment, transportation, storage, and/or disposal of various regulated assets and hazardous materials such as asbestos, underground and aboveground storage tanks, PCBs, various process residuals, solid wastes, electronic equipment waste, and various other materials. If Alcoa Corporation was required to demolish all such structures immediately, the estimated CARO as of December 31, 2016 ranges from \$3 to \$29 per structure (24 structures) in today's dollars.

The following table details the carrying value of recorded AROs by major category (of which \$104 and \$96 was classified as a current liability as of December 31, 2016 and 2015, respectively):

| <b>December 31,</b>              | <b>2016</b>  | <b>2015</b>  |
|----------------------------------|--------------|--------------|
| Mine reclamation                 | \$199        | \$191        |
| Closure of bauxite residue areas | 219          | 165          |
| Spent pot lining disposal        | 135          | 141          |
| Demolition*                      | 121          | 103          |
| Landfill closure                 | 30           | 29           |
| Other                            | 4            | 6            |
|                                  | <b>\$708</b> | <b>\$635</b> |

\* In 2016 and 2015, AROs were recorded as a result of management's decision to permanently close and demolish certain structures (see Note D).

The following table details the changes in the total carrying value of recorded AROs:

| <b>December 31,</b>                    | <b>2016</b>  | <b>2015</b>  |
|--|--------------|--------------|
| Balance at beginning of year           | \$635        | \$648        |
| Accretion expense                      | 19           | 18           |
| Payments                               | (47)         | (72)         |
| Liabilities incurred                   | 117          | 96           |
| Foreign currency translation and other | (16)         | (55)         |
| Balance at end of year                 | <b>\$708</b> | <b>\$635</b> |

## **R. Contingencies and Commitments**

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

### **Contingencies**

**Litigation.** On June 5, 2015, AWA and St. Croix Alumina, L.L.C. ("SCA") filed a complaint in Delaware Chancery Court for a declaratory judgment and injunctive relief to resolve a dispute between ParentCo and Glencore Ltd. ("Glencore") with respect to claimed obligations under a 1995 asset purchase agreement between ParentCo and Glencore. The dispute arose from Glencore's demand that ParentCo indemnify it for liabilities it may have to pay to Lockheed Martin ("Lockheed") related to the St. Croix alumina refinery. Lockheed had earlier filed suit against Glencore in federal court in New York seeking indemnity for liabilities it had incurred and would incur to the U.S.



Virgin Islands to remediate certain properties at the refinery property and claimed that Glencore was required by an earlier, 1989 purchase agreement to indemnify it. Glencore had demanded that ParentCo indemnify and defend it in the Lockheed case and threatened to claim against ParentCo in the New York action despite exclusive jurisdiction for resolution of disputes under the 1995 purchase agreement being in Delaware. After Glencore conceded that it was not seeking to add ParentCo to the New York action, AWA and SCA dismissed their complaint in the Chancery Court case and on August 6, 2015 filed a complaint for declaratory judgment in Delaware Superior Court. AWA and SCA filed a motion for judgment on the pleadings on September 16, 2015. Glencore answered AWA's and SCA's complaint and asserted counterclaims on August 27, 2015, and on October 2, 2015 filed its own motion for judgment on the pleadings. Argument on the parties' motions was held by the court on December 7, 2015, and by order dated February 8, 2016, the court granted ParentCo's motion and denied Glencore's motion, resulting in ParentCo not being liable to indemnify Glencore for the Lockheed action. The decision also leaves for pretrial discovery and possible summary judgment or trial Glencore's claims for costs and fees it incurred in defending and settling an earlier Superfund action brought against Glencore by the Government of the Virgin Islands. On February 17, 2016, Glencore filed notice of its application for interlocutory appeal of the February 8, 2016 ruling. AWA and SCA filed an opposition to that application on February 29, 2016. On March 10, 2016, the court denied Glencore's motion for interlocutory appeal and on the same day entered judgment on claims other than Glencore's claims for costs and fees it incurred in defending and settling the earlier Superfund action brought against Glencore by the Government of the Virgin Islands. On March 29, 2016, Glencore filed a withdrawal of its notice of interlocutory appeal, and on April 6, 2016, Glencore filed an appeal of the court's March 10, 2016 judgment to the Delaware Supreme Court, which set the appeal for argument for November 2, 2016. On November 4, 2016, the Delaware Supreme Court affirmed the judgment of the Delaware Superior Court granting ParentCo's motion. Remaining in the case were Glencore's claims for costs and fees it incurred related to the previously described Superfund action. On March 7, 2017, Alcoa Corporation and Glencore agreed in principle to settle these claims and expect to request the court to dismiss the case prior to the court's scheduled March 21, 2017 conference. The amount of the proposed settlement is not material.

Before 2002, ParentCo purchased power in Italy in the regulated energy market and received a drawback of a portion of the price of power under a special tariff in an amount calculated in accordance with a published resolution of the Italian Energy Authority, Energy Authority Resolution n. 204/1999 ("204/1999"). In 2001, the Energy Authority published another resolution, which clarified that the drawback would be calculated in the same manner, and in the same amount, in either the regulated or unregulated market. At the beginning of 2002, ParentCo left the regulated energy market to purchase energy in the unregulated market. Subsequently, in 2004, the Energy Authority introduced regulation no. 148/2004, which set forth a different method for calculating the special tariff that would result in a different drawback for the regulated and unregulated markets. ParentCo challenged the new regulation in the Administrative Court of Milan and received a favorable judgment in 2006. Following this ruling, ParentCo continued to receive the power price drawback in accordance with the original calculation method, through 2009, when the European Commission declared all such special tariffs to be impermissible "state aid." In 2010, the Energy Authority appealed the 2006 ruling to the Consiglio di Stato (final court of appeal). On December 2, 2011, the Consiglio di Stato ruled in favor of the Energy Authority and against ParentCo, thus presenting the opportunity for the energy regulators to seek reimbursement from ParentCo of an amount equal to the difference between the actual drawback amounts received over the relevant time period, and the drawback as it would have been calculated in accordance with regulation 148/2004. On February 23, 2012, ParentCo filed its appeal of the decision of the Consiglio di Stato (this appeal was subsequently withdrawn in March 2013). On March 26, 2012, ParentCo received a letter from the agency (Cassa Conguaglio per il Settore Elettrico (CCSE)) responsible for making and collecting payments on behalf of the Energy Authority demanding payment in the amount of approximately \$110 (€85), including interest. By letter dated April 5, 2012, ParentCo informed CCSE that it disputes the payment demand of CCSE since (i) CCSE was not authorized by the Consiglio di Stato decisions to seek payment of any amount, (ii) the decision of the Consiglio di Stato has been appealed (see above), and (iii) in any event, no interest should be payable. On April 29, 2012, Law No. 44 of 2012 ("44/2012") came into effect, changing the method to calculate the drawback. On February 21, 2013, ParentCo received a revised request letter from CCSE demanding ParentCo's former subsidiary, Alcoa Trasformazioni S.r.l. (Trasformazioni is now a subsidiary of Alcoa Corporation), make a payment in the amount of \$97 (€76), including interest, which reflects a revised calculation methodology by CCSE and represents the high end of the range of reasonably possible loss associated with this matter of \$0 to \$97 (€76). ParentCo rejected that demand and formally

challenged it through an appeal before the Administrative Court on April 5, 2013. The Administrative Court scheduled a hearing for December 19, 2013, which was subsequently postponed until April 17, 2014, and further postponed until June 19, 2014. On this date, the Administrative Court listened to ParentCo's oral argument, and on September 2, 2014, rendered its decision. The Administrative Court declared the payment request of CCSE and the Energy Authority to ParentCo to be unsubstantiated based on the 148/2004 resolution with respect to the January 19, 2007 through November 19, 2009 timeframe. On December 18, 2014, the CCSE and the Energy Authority appealed the Administrative Court's September 2, 2014 decision; however, a date for the hearing has not been scheduled. As a result of the conclusion of the European Commission Matter on January 26, 2016 (see below), ParentCo's management modified its outlook with respect to a portion of the pending legal proceedings related to this matter. As such, a charge of \$37 (€34) was recorded in Restructuring and other charges for the year ended December 31, 2015 on Alcoa Corporation's accompanying Statement of Consolidated Operations to establish a partial reserve for this matter. At this time, Alcoa Corporation is unable to reasonably predict the ultimate outcome for this matter.

**European Commission Matter.** In July 2006, the European Commission (EC) announced that it had opened an investigation to establish whether an extension of the regulated electricity tariff granted by Italy to some energy-intensive industries complied with European Union (EU) state aid rules. The Italian power tariff extended the tariff that was in force until December 31, 2005 through November 19, 2009 (ParentCo had been incurring higher power costs at its smelters in Italy subsequent to the tariff end date through the end of 2012). The extension was originally through 2010, but the date was changed by legislation adopted by the Italian Parliament effective on August 15, 2009. Prior to expiration of the tariff in 2005, ParentCo had been operating in Italy for more than 10 years under a power supply structure approved by the EC in 1996. That measure provided a competitive power supply to the primary aluminum industry and was not considered state aid from the Italian Government. The EC's announcement expressed concerns about whether Italy's extension of the tariff beyond 2005 was compatible with EU legislation and potentially distorted competition in the European market of primary aluminum, where energy is an important part of the production costs.

On November 19, 2009, the EC announced a decision in this matter stating that the extension of the tariff by Italy constituted unlawful state aid, in part, and, therefore, the Italian Government is to recover a portion of the benefit ParentCo received since January 2006 (including interest). The amount of this recovery was to be based on a calculation prepared by the Italian Government (see below). In late 2009, after discussions with legal counsel and reviewing the bases on which the EC decided, including the different considerations cited in the EC decision regarding ParentCo's two smelters in Italy, ParentCo recorded a charge of \$250 (€173), which included \$20 (€14) to write off a receivable from the Italian Government for amounts due under the now expired tariff structure and \$230 (€159) to establish a reserve. On April 19, 2010, ParentCo filed an appeal of this decision with the General Court of the EU (see below). Prior to 2012, ParentCo was involved in other legal proceedings related to this matter that separately sought the annulment of the EC's July 2006 decision to open an investigation alleging that such decision did not follow the applicable procedural rules and requested injunctive relief to suspend the effectiveness of the EC's November 19, 2009 decision. However, the decisions by the General Court, and subsequent appeals to the European Court of Justice, resulted in the denial of these remedies.

In June 2012, ParentCo received formal notification from the Italian Government with a calculated recovery amount of \$375 (€303); this amount was reduced by \$65 (€53) for amounts owed by the Italian Government to ParentCo, resulting in a net payment request of \$310 (€250). In a notice published in the Official Journal of the European Union on September 22, 2012, the EC announced that it had filed an action against the Italian Government on July 18, 2012 to compel it to collect the recovery amount (on October 17, 2013, the European Court of Justice ordered Italy to so collect). On September 27, 2012, ParentCo received a request for payment in full of the \$310 (€250) by October 31, 2012. Following discussions with the Italian Government regarding the timing of such payment, ParentCo paid the requested amount in five quarterly installments of \$69 (€50) beginning in October 2012 through December 2013.

On October 16, 2014, ParentCo received notice from the General Court of the EU that its April 19, 2010 appeal of the EC's November 19, 2009 decision was denied. On December 27, 2014, ParentCo filed an appeal of the General Court's October 16, 2014 ruling to the European Court of Justice (ECJ). Following submission of the EC's response to the appeal, on June 10, 2015, ParentCo filed a request for an oral hearing before the ECJ; no decision on that request was

received. On January 26, 2016, ParentCo was informed that the ECJ had dismissed ParentCo's December 27, 2014 appeal of the General Court's October 16, 2014 ruling. The dismissal of ParentCo's appeal represents the conclusion of the legal proceedings in this matter. Prior to this dismissal, ParentCo had a noncurrent asset of \$100 (€91) reflecting the excess of the total of the five payments made to the Italian Government over the reserve recorded in 2009. As a result, this noncurrent asset, along with the \$58 (€53) for amounts owed by the Italian Government to ParentCo mentioned above plus \$6 (€6) for interest previously paid, was written-off. A charge of \$164 (€150) was recorded in Restructuring and other charges for the year ended December 31, 2015 on Alcoa Corporation's accompanying Statement of Consolidated Operations (see Note D).

As a result of the EC's November 19, 2009 decision, ParentCo's management had contemplated ceasing operations at its Italian smelters due to uneconomical power costs. In February 2010, ParentCo's management agreed to continue to operate its smelters in Italy for up to six months while a long-term solution to address increased power costs could be negotiated. Over a portion of this time, a long-term solution was not able to be reached related to the Fusina smelter, therefore, in May 2010, ParentCo and the Italian Government agreed to a temporary idling of the Fusina smelter. As of September 30, 2010, the Fusina smelter was fully curtailed (44,000 metric-tons-per-year). For the Portovesme smelter, ParentCo executed a new power agreement effective September 1, 2010 through December 31, 2012, replacing the short-term, market-based power contract that was in effect since early 2010. This new agreement along with interruptibility rights (i.e. compensation for power interruptions when grids are overloaded) granted to ParentCo for the Portovesme smelter provided additional time to negotiate a long-term solution (the EC had previously determined that the interruptibility rights were not considered state aid).

At the end of 2011, as part of a restructuring of ParentCo's global smelting system, ParentCo's management decided to curtail operations at the Portovesme smelter during 2012 due to the uncertain prospects for viable, long-term power, along with rising raw materials costs and falling global aluminum prices (mid-2011 to late 2011). As of December 31, 2012, the Portovesme smelter was fully curtailed (150,000 metric-tons-per-year).

In June 2013 and August 2014, ParentCo decided to permanently shut down and demolish the Fusina and Portovesme smelters, respectively, due to persistent uneconomical conditions (see Note D).

**Environmental Matters.** Alcoa Corporation participates in environmental assessments and cleanups at a number of 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 \$324 and \$235 at December 31, 2016 and 2015 (of which \$60 and \$28 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 2016, the remediation reserve was increased by \$39 due to a charge of \$26 related to the planned demolition of the Suriname refinery and permanent closure of the related bauxite mines (see Note D) and a net charge of \$13 associated with a number of other sites. In 2015, the remediation reserve was increased by \$107 due to a charge of \$52 related to the planned demolition of the remaining structures at the Massena East smelter location (see Note D), a charge of \$29 related to the planned demolition of the Poços de Caldas smelter and the Anglesea power station (see Note D), a charge of \$12 related to the Mosjøen location (see below), a charge of \$7 related to the Portovesme location (see below), and a net charge of \$7 associated with a number of other sites. Of the changes to the remediation reserve in 2016 and 2015, \$26 and \$86, respectively, was recorded in Restructuring and other charges, while the remainder was recorded in Cost of goods sold on the accompanying Statement of Consolidated Operations.

Payments related to remediation expenses applied against the reserve were \$32 and \$24 in 2016 and 2015, respectively. These amounts include expenditures currently mandated, as well as those not required by any regulatory authority or third party. In 2016, the change in the reserve also reflects an increase for each of the following: \$60 of obligations transferred from ParentCo in connection with the Separation Transaction (see Note A) on November 1, 2016, including Sherwin and East St. Louis described below; \$17 for the reclassification of amounts included in other reserves within Other noncurrent liabilities and deferred credits on Alcoa Corporation's Consolidated Balance Sheet as of December 31, 2015; and \$5 due to the effects of foreign currency translation. In 2015, the change in the reserve also reflects a decrease of \$13 due to the effects of foreign currency translation.

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

The Separation and Distribution Agreement (see Note A) 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 will be 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 under the Separation and Distribution Agreement, Alcoa Corporation has agreed to indemnify Arconic in whole or in part for environmental liabilities arising from operations prior to the Separation Date. The following discussion 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.

**Sherwin, TX**—In connection with ParentCo's sale of the Sherwin alumina refinery, which was required to be divested as part of ParentCo's Reynolds merger 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). This obligation was transferred from ParentCo to Alcoa Corporation as part of the Separation Transaction (see Note A) on November 1, 2016. Alcoa Corporation's share of the closure costs is proportional to the total period of operation of the active waste disposal areas. At December 31, 2016, the reserve balance associated with Sherwin was \$30. Approximately half of the project funding is expected to be spent through 2019 with the balance dependent on the schedule to complete closure of the waste disposal areas.

**Baie Comeau, Quebec, Canada**—In August 2012, ParentCo presented an analysis of remediation alternatives to the Quebec Ministry of Sustainable Development, Environment, Wildlife and Parks (MDDEP), in response to a previous request, related to known polychlorinated biphenyls (PCBs) and polycyclic aromatic hydrocarbons (PAHs) contained in sediments of the Anse du Moulin bay. As such, ParentCo increased the reserve for Baie Comeau by \$25 in 2012 to reflect the estimated cost of ParentCo's recommended alternative, consisting of both dredging and capping of the contaminated sediments. In July 2013, ParentCo submitted the Environmental Impact Assessment for the project to the MDDEP. The MDDEP notified ParentCo that the project as it was submitted was approved and a final ministerial decree was issued in July 2015. As a result, no further adjustment to the reserve was required in 2015. The decree provided final approval for the project and ParentCo began work on the final project design with construction on the project expected to begin in April 2017. At December 31, 2016 and 2015, the reserve balance associated with this matter was \$24 and \$26, respectively.

**Fusina and Portovesme, Italy**—In 1996, ParentCo acquired the Fusina smelter and rolling operations and the Portovesme smelter, both of which were owned by ParentCo's former subsidiary Alcoa Trasformazioni S.r.l. ("Trasformazioni") (Trasformazioni is now a subsidiary of Alcoa Corporation and owns the Fusina smelter and Portovesme smelter sites, and Fusina Rolling S.r.l., a new ParentCo subsidiary, owns the Fusina rolling operations), from Alumix, an entity owned by the Italian Government. At the time of the acquisition, Alumix indemnified ParentCo for pre-existing environmental contamination at the sites. In 2004, the Italian Ministry of Environment and Protection of Land and Sea (MOE) issued orders to Trasformazioni and Alumix for the development of a clean-up plan related to

soil contamination in excess of allowable limits under legislative decree and to institute emergency actions and pay natural resource damages. Trasformazioni appealed the orders and filed suit against Alumix, among others, seeking indemnification for these liabilities under the provisions of the acquisition agreement. In 2009, Ligestra S.r.l. (“Ligestra”), Alumix’s successor, and Trasformazioni agreed to a stay of the court proceedings while investigations were conducted and negotiations advanced towards a possible settlement.

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

In January 2014, in anticipation of ParentCo reaching a final administrative agreement with the MOE, ParentCo and Ligestra entered into a final agreement related to Fusina for allocation of payments to the MOE for emergency action and natural resource damages and the costs for the approved soil remediation project. The agreement resulted in Ligestra assuming 50% to 80% of all payments and remediation costs. On February 27, 2014, ParentCo and the MOE reached a final administrative agreement for conduct of work. The agreement includes both a soil and groundwater remediation project estimated to cost \$33 (€24) and requires payments of \$25 (€18) to the MOE for emergency action and natural resource damages. Based on the final agreement with Ligestra, ParentCo’s share of all costs and payments was \$17 (€12), of which \$9 (€6) related to the damages will be paid annually over a 10-year period, which began in April 2014, and was previously fully reserved. The soil remediation project will begin once authorization to dispose of excavated waste into a third-party landfill is received from the MOE, which is expected at some point in the remainder of 2017. The responsibility for the execution of groundwater remediation project/emergency containment has been transferred to the MOE in accordance with the February 2014 settlement agreement and remediation is slated to begin in late 2017 or in 2018.

Effective with the Separation Transaction (see Note A), Arconic retained the portion of this 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 operation. 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.). Arconic will pay \$7 (€7) for the portion of remediation expenses associated with the section of property that includes the rolling operation.

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

In October 2014, the MOE required a further revised project be submitted to reflect the removal of a larger volume of contaminated soil than what had been proposed, as well as design changes for the cap related to the remaining contaminated soil left in place and the expansion of an emergency containment groundwater pump and treatment system that was previously installed. Trasformazioni and Ligestra submitted the further revised soil remediation project in February 2015. As a result, ParentCo increased the reserve by \$7 in March 2015 to reflect the increase in the estimated costs of the project. In October 2015, ParentCo received a final ministerial decree approving the February 2015 revised soil remediation project. Work on the soil remediation project commenced in mid-2016 and is expected to

be completed in 2019. After further discussions with the MOE regarding the groundwater remediation project, Alcoa Corporation and Ligestra are working to find a common remediation solution. The ultimate outcome of this matter may result in a change to the existing reserve for Portovesme.

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

In April 2015, the NEA notified ParentCo that the revised project was approved and required submission of the final project design before issuing a final order. ParentCo completed and submitted the final project design, which identified a need to stabilize the related wharf structure to allow for the sediment dredging in the harbor. As a result, ParentCo increased the reserve for Mosjøen by \$11 in June 2015 to reflect the estimated cost of the wharf stabilization. Also in June 2015, the NEA issued a final order approving the project as well as the final project design. In September 2015, ParentCo increased the reserve by \$1 to reflect the potential need (based on prior experience with similar projects) to perform additional dredging if the results of sampling, which is required by the order, don’t achieve the required cleanup levels. Project construction commenced in early 2016 and is expected to be completed by the end of 2017. At December 31, 2016 and 2015, the reserve balance associated with this matter was \$8 and \$20, respectively.

**East St. Louis, IL**—ParentCo had an ongoing remediation project related to an area used for the disposal of bauxite residue from former alumina refining operations. The project, which was selected by the EPA in a Record of Decision (ROD) issued in July 2012, is aimed at implementing a soil cover over the affected area. On November 1, 2013, the U.S. Department of Justice lodged a consent decree on behalf of the U.S. Environmental Protection Agency (EPA) for ParentCo to conduct the work outlined in the ROD. This consent decree was entered as final in February 2014 by the U.S. Department of Justice. As a result, ParentCo began construction in March 2014; the fieldwork on this project was completed by the end of June 2016. The completion report was approved by the EPA in September 2016 and this matter has now transitioned into a long-term (approximately 30 years) inspection, maintenance, and monitoring program. This obligation was transferred from ParentCo to Alcoa Corporation as part of the Separation Transaction (see Note A) on November 1, 2016. At December 31, 2016, the reserve balance associated with this matter was \$4.

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

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

At December 31, 2016, the combined assessments, including interest, total \$258 (€246). On January 16, 2017, Spain’s National Court issued a decision in favor of the Company related to the assessment received in September 2010. On March 6, 2017, the Company was notified that Spain’s tax authorities did not file an appeal, for which the deadline has passed. As a result, the assessment related to the 2003 through 2005 tax years is null and void. Spain’s National Court has not yet rendered a decision related to the assessment received in July 2013 for the 2006 through 2009 tax years. The amount of this assessment on a standalone basis, including interest, was \$136 (€130) as of December 31, 2016.

The Company believes it has meritorious arguments to support its tax position and intends to vigorously litigate the remaining assessment through Spain's court system. However, in the event the Company is unsuccessful, a portion of the remaining assessment may be offset with existing net operating losses available to the Spanish consolidated tax group, which would be shared between the Company and Arconic as provided for in the Tax Matters Agreement related to the Separation Transaction. Additionally, it is possible that the Company may receive similar assessments for tax years subsequent to 2009. Despite the favorable decision received on the first assessment, at this time, the Company is unable to reasonably predict the ultimate outcome for this matter.

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 the 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 \$32 (R\$103), whereby the maximum end of this 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 \$36 (R\$117), which would increase the net carrying value of AWAB's fixed assets if ultimately disallowed. It is Alcoa Corporation's management's opinion that the allegations have no basis; however, at this time, management is unable to reasonably predict the ultimate outcome for this matter.

Between 2000 and 2002, Alumínio sold approximately 2,000 metric tons of metal per month from its Poços de Caldas facility, located in the State of Minas Gerais (the "State"), to Alfio, a customer also located in the State. Sales in the State were exempted from value-added tax (VAT) requirements. Alfio subsequently sold metal to customers outside of the State, but did not pay the required VAT on those transactions. In July 2002, Alumínio received an assessment from State auditors on the theory that Alumínio should be jointly and severally liable with Alfio for the unpaid VAT. In June 2003, the administrative tribunal found Alumínio liable, and Alumínio filed a judicial case in the State in February 2004 contesting the finding. In May 2005, the Court of First Instance found Alumínio solely liable, and a panel of a State appeals court confirmed this finding in April 2006. Alumínio filed a special appeal to the Superior Tribunal of Justice (STJ) in Brasilia (the federal capital of Brazil) later in 2006. In 2011, the STJ (through one of its judges) reversed the judgment of the lower courts, finding that Alumínio should neither be solely nor jointly and severally liable with Alfio for the VAT, which ruling was then appealed by the State. In August 2012, the STJ agreed to have the case reheard before a five-judge panel. On February 21, 2017, the lead judge of the STJ issued a ruling confirming that Alumínio should be held liable in this matter. Alumínio is in the process of filing an appeal to have its case reheard before the five-judge panel as originally agreed to by the STJ in August 2012. At December 31, 2016, the assessment totaled \$43 (R\$142), including penalties and interest. While Alcoa Corporation believes it has meritorious defenses, the Company is unable to reasonably predict the ultimate outcome for this matter.

**Other.** In connection with ParentCo's sale in 2001 of Reynolds Metals Company's ("Reynolds," a subsidiary of Alcoa Corporation), alumina refinery in Gregory, Texas, Reynolds assigned an Energy Services Agreement ("ESA") with Gregory Power Partners ("Gregory Power") for purchase of steam and electricity by the refinery. On January 11, 2016, Sherwin Alumina Company, LLC ("Sherwin"), the current owner of the refinery, and one of its affiliate entities, filed bankruptcy petitions in Corpus Christi, Texas for reorganization under Chapter 11 of the Bankruptcy Code. 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. Sherwin informed the bankruptcy court that it intends to cease operations because it is not able to continue its bauxite supply agreement, and, thereafter, Gregory Power filed a complaint in the bankruptcy case against Reynolds alleging breach of the ESA. This matter is neither estimable nor probable; therefore, at this time, Alcoa Corporation is unable to reasonably predict the ultimate outcome.

On October 4, 2016, the state of Texas filed suit against Sherwin in the bankruptcy proceeding seeking to hold Sherwin responsible for remediation of alleged environmental conditions at the facility. On October 11, 2016, Sherwin filed a similar suit against Reynolds in the case. On November 10, 2016, Reynolds filed motions to dismiss the Gregory Power complaint and to withdraw the case from bankruptcy court. 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 and on February 17, 2017 the court approved that Plan. As provided in the Plan, Sherwin, including certain affiliated companies, and Reynolds are negotiating a settlement to allocate among them ownership of and responsibility for certain areas of the refinery. A definitive agreement is anticipated prior to April 30, 2017 and would resolve outstanding claims made by Sherwin against Reynolds.

**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, and tax matters. While the amounts claimed in these other matters may be substantial, the ultimate liability cannot now be determined because of the considerable uncertainties that exist. Therefore, it is possible that the Company's liquidity or results of operations in a particular period could be materially affected by one or more of these other matters. However, based on facts currently available, management believes that the disposition of these other matters that are pending or asserted will not have a material adverse effect, individually or in the aggregate, on the financial position of the Company.

### **Commitments**

**Purchase Obligations.** Alcoa Corporation is party to unconditional purchase obligations for energy that expire between 2028 and 2037. Commitments related to these contracts total \$169 in 2017, \$223 in 2018, \$231 in 2019, \$237 in 2020, \$245 in 2021, and \$3,286 thereafter. Expenditures under these contracts totaled \$181 in 2016, \$125 in 2015, and \$172 in 2014. Additionally, Alcoa Corporation has entered into other purchase commitments for energy, raw materials, and other goods and services, which total \$1,934 in 2017, \$1,560 in 2018, \$1,528 in 2019, \$1,309 in 2020, \$1,237 in 2021, and \$8,961 thereafter.

On April 8, 2015, AofA secured a new 12-year gas supply agreement to power its three alumina refineries in Western Australia beginning in July 2020. This agreement was conditional on the completion of a third-party acquisition of the related energy assets from the then-current owner, which occurred in June 2015. The terms of the gas supply agreement required AofA to make a prepayment of \$500 in two installments. The first installment of \$300 was made at the time of the completion of the third-party acquisition in June 2015 and the second installment of \$200 was made in April 2016. Both of these amounts were included in (Increase) in noncurrent assets on the accompanying Statement of Consolidated Cash Flows in the respective periods. At December 31, 2016 and 2015, Alcoa Corporation has an asset of \$471 (A\$654) and \$288 (A\$395), respectively, representing the respective prepayments made under this agreement, which was included in Other noncurrent assets (see Note S) on the accompanying Consolidated Balance Sheet.

**Operating Leases.** Certain land and buildings, alumina refinery process control technology, plant equipment, vehicles, and computer equipment are under operating lease agreements. Total expense for all leases was \$90 in 2016, \$98 in 2015, and \$115 in 2014. Under long-term operating leases, minimum annual rentals are \$98 in 2017, \$78 in 2018, \$62 in 2019, \$47 in 2020, \$39 in 2021, and \$35 thereafter.

**Guarantees of Third Parties.** At December 31, 2016, Alcoa Corporation has maximum potential future payments for guarantees issued on behalf of a third party of \$354. These guarantees expire at various times between 2017 and 2024 and relate to project financing for the aluminum complex in Saudi Arabia (see Note H).

**Bank Guarantees and Letters of Credit.** Alcoa Corporation has outstanding bank guarantees and letters of credit related to energy contracts, environmental obligations, legal and tax matters, outstanding debt, leasing obligations, workers compensation, and customs duties, among others. The total amount committed under these instruments, which automatically renew or expire at various dates between 2017 and 2021, was \$444 at December 31, 2016. Additionally,



Arconic has outstanding bank guarantees and letters of credit related to Alcoa Corporation in the amount of \$115 at December 31, 2016. In the event Arconic would be required to perform under any of these instruments, Arconic would be indemnified by Alcoa Corporation in accordance with the Separation and Distribution Agreement. Likewise, Alcoa Corporation has outstanding bank guarantees and letters of credit related to Arconic in the amount of \$26 at December 31, 2016. In the event Alcoa Corporation would be required to perform under any of these instruments, Alcoa Corporation would be indemnified by Arconic in accordance with the Separation and Distribution Agreement.

**Surety Bonds.** Alcoa Corporation has outstanding surety bonds primarily related to tax matters, contract performance, workers compensation, environmental-related matters, and customs duties. The total amount committed under these bonds, which automatically renew or expire at various dates, mostly in 2017, was \$159 at December 31, 2016. Additionally, Arconic has outstanding surety bonds related to Alcoa Corporation in the amount of \$22 at December 31, 2016. In the event Arconic would be required to perform under any of these instruments, Arconic would be indemnified by Alcoa Corporation in accordance with the Separation and Distribution Agreement.

## S. Other Financial Information

### Interest Cost Components

|                           | 2016  | 2015  | 2014  |
|---------------------------|-------|-------|-------|
| Amount charged to expense | \$243 | \$270 | \$309 |
| Amount capitalized        | 23    | 30    | 34    |
|                           | \$266 | \$300 | \$343 |

### Other (Income) Expenses, Net

|   | 2016    | 2015  | 2014  |
|---|---------|-------|-------|
| Equity loss   | \$ 70   | \$ 89 | \$ 94 |
| Foreign currency losses (gains), net                | 8       | (39)  | (16)  |
| Net gain from asset sales                           | (164)   | (32)  | (34)  |
| Net loss on mark-to-market derivative contracts (O) | 9       | 26    | 13    |
| Other, net  | (12)    | (2)   | 1     |
|   | \$ (89) | \$ 42 | \$ 58 |

In 2016, Net gain from asset sales included a \$118 gain related to the sale of wharf property near the Intalco, Washington smelter and a \$27 gain related to the sale of an equity interest in a natural gas pipeline in Australia (see Note H). In 2015, Net gain from asset sales included a \$29 gain related to the sale of land around the Lake Charles, Louisiana anode facility. In 2014, Net gain from asset sales included a \$28 gain related to the sale of a mining interest in Suriname.

### Other Noncurrent Assets

| December 31,                          | 2016    | 2015    |
|---------------------------------------|---------|---------|
| Gas supply prepayment (R)             | \$ 471  | \$ 288  |
| Value-added tax receivable            | 287     | 233     |
| Prepaid gas transmission contract (H) | 270     | 268     |
| Goodwill (K)                          | 155     | 152     |
| Intangibles, net (K)                  | 135     | 53      |
| Deferred mining costs, net*           | 127     | 203     |
| Prepaid pension benefit (N)           | 43      | 35      |
| Other                                 | 180     | 167     |
|                                       | \$1,668 | \$1,399 |

\* As of December 31, 2016, this amount reflects an asset impairment of \$72 (see Note D).

## Other Noncurrent Liabilities and Deferred Credits

| <u>December 31,</u>                                   | <u>2016</u>  | <u>2015</u>  |
|---|--------------|--------------|
| Fair value of derivative contracts (O)                | \$234        | \$189        |
| Accrued compensation and retirement costs             | 122          | 92           |
| Deferred alumina sales revenue                        | 76           | 84           |
| Liability related to the resolution of a legal matter | 74           | 148          |
| Other   | 98           | 85           |
|   | <u>\$604</u> | <u>\$598</u> |

\* In early 2014, ParentCo and one of Alcoa's Corporation's current subsidiaries, AWA, resolved violations of certain provisions of the Foreign Corrupt Practices Act of 1977 with the U.S. Department of Justice and U.S. Securities and Exchange Commission. Under the resolution, ParentCo and AWA agreed to pay a combined \$384 over a four-year timeframe. Prior to the Separation Transaction, ParentCo and AWA paid \$236 of the total amount. As part of the Separation and Distribution Agreement, Alcoa Corporation assumed ParentCo's portion of the \$148 remaining obligation. The \$148 is to be paid in equal installments of \$74 in each of January 2017 (paid on January 9<sup>th</sup>) and January 2018.

## Cash Flow Information

Cash paid for interest and income taxes was as follows:

|                                      | <u>2016</u> | <u>2015</u> | <u>2014</u> |
|--------------------------------------|-------------|-------------|-------------|
| Interest, net of amount capitalized  | \$226       | \$270       | \$309       |
| Income taxes, net of amount refunded | \$265       | 265         | 184         |

**Noncash Financing and Investing Activities.** In September 2016, ANHBV issued \$1,250 in new senior notes (see Note L) in preparation for the Separation Transaction (see Note A). The net proceeds of \$1,228 from the debt issuance were required to be placed in escrow contingent on completion of the Separation Transaction. As a result, the \$1,228 of escrowed cash was recorded as restricted cash. The issuance of the new senior notes and the increase in restricted cash both in the amount of \$1,228 were not reflected in the accompanying Statement of Consolidated Cash Flows as these represent noncash financing and investing activities, respectively. The subsequent release of the \$1,228 from escrow occurred on October 31, 2016. This decrease in restricted cash was reflected in the accompanying Statement of Consolidated Cash Flows as a cash inflow in the Net change in restricted cash line item.

## **T. 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 February 1, 2017, the sale of Yadkin closed (see Note C) and Alcoa Corporation received \$241 in net proceeds, of which \$238 was remitted to Arconic (an additional \$5 is expected to be received from the buyer and remitted to Arconic at a later date as a post-closing adjustment) as part of the Separation and Distribution Agreement (see Note A). In the first quarter of 2017, Alcoa Corporation will recognize a pretax gain of approximately \$120.

**Supplemental Financial Information (unaudited)**

**Quarterly Data  
(in millions, except per-share amounts)**

|   | <b>First<sup>(1)</sup></b> | <b>Second<sup>(1)</sup></b> | <b>Third<sup>(1)</sup></b> | <b>Fourth<sup>(2)</sup></b> | <b>Year</b> |
|---|----------------------------|-----------------------------|----------------------------|-----------------------------|-------------|
| <b>2016</b>   |                            |                             |                            |                             |             |
| Sales   | \$2,129                    | \$2,323                     | \$2,329                    | \$2,537                     | \$ 9,318    |
| Net (loss) income   | \$ (215)                   | \$ (12)                     | \$ 10                      | \$ (129)                    | \$ (346)    |
| Net loss attributable to Alcoa Corporation  | \$ (210)                   | \$ (55)                     | \$ (10)                    | \$ (125)                    | \$ (400)    |
| Earnings per share attributable to Alcoa Corporation common shareholders <sup>(3)</sup> : |                            |                             |                            |                             |             |
| Basic   | \$ (1.16)                  | \$ (0.29)                   | \$ (0.06)                  | \$ (0.68)                   | \$ (2.19)   |
| Diluted   | \$ (1.16)                  | \$ (0.29)                   | \$ (0.06)                  | \$ (0.68)                   | \$ (2.19)   |
| <b>2015</b>   |                            |                             |                            |                             |             |
| Sales   | \$3,105                    | \$2,964                     | \$2,679                    | \$2,451                     | \$11,199    |
| Net income (loss)   | \$ 226                     | \$ (12)                     | \$ (63)                    | \$ (890)                    | \$ (739)    |
| Net income (loss) attributable to Alcoa Corporation                                       | \$ 166                     | \$ (79)                     | \$ (124)                   | \$ (826)                    | \$ (863)    |
| Earnings per share attributable to Alcoa Corporation common shareholders <sup>(3)</sup> : |                            |                             |                            |                             |             |
| Basic   | \$ 0.91                    | \$ (0.43)                   | \$ (0.68)                  | \$ (4.52)                   | \$ (4.73)   |
| Diluted   | \$ 0.91                    | \$ (0.43)                   | \$ (0.68)                  | \$ (4.52)                   | \$ (4.73)   |

<sup>(1)</sup> In preparing the Combined Financial Statements for the nine months ended September 30, 2016 and 2015, management discovered that the amounts for Research and development expenses previously reported for the six months ended June 30, 2016 and 2015 included an immaterial error due to an over-allocation of such expenses of \$10 and \$18, respectively. The amounts for Research and development expenses in the accompanying Statement of Consolidated Operations for the years ended December 31, 2016 and 2015 are correctly stated.

Additionally, in preparing the Consolidated Financial Statements for the year ended December 31, 2016, management discovered that the amounts for Cost of goods sold previously reported for the three months ended March 31, 2016, six months ended June 30, 2016, and nine months ended September 30, 2016 included an immaterial error due to an under-allocation of LIFO expense of \$7, \$10, and \$14, respectively. The amount for Cost of goods sold in the accompanying Statement of Consolidated Operations for the year ended December 31, 2016 is correctly stated.

The Quarterly Data above has been revised to correct the periods impacted by these two immaterial errors. Additionally, financial information for the referenced prior periods not presented herein will be revised, as applicable, in future filings.

<sup>(2)</sup> In the fourth quarter of 2016, Alcoa Corporation recorded restructuring and other charges of \$209 (pretax), which were primarily related to the closure of the Suriname refinery and related bauxite mines and the impairment of an interest in a gas exploration field in Australia (see Note D). In the fourth quarter of 2015, Alcoa Corporation recorded restructuring and other charges of \$686 (pretax), which were primarily related to closures and/or curtailments of a number of smelters and refineries (see Note D) and a charge for legal matters in Italy (see Note R).

<sup>(3)</sup> Per share amounts are calculated independently for each period presented; therefore, the sum of the quarterly per share amounts may not equal the per share amounts for the year.

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.**

None.

**Item 9A. 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 Securities Exchange Act of 1934, as of the end of the period covered by this report, and they have concluded that these controls and procedures are effective.

(b) Management's Annual Report on Internal Control over Financial Reporting, and

(c) Attestation Report of the Registered Public Accounting Firm

This annual report does not include a report of management's assessment regarding internal control over financial reporting or an attestation report of the Company's registered public accounting firm due to a transition period established by rules of the Securities and Exchange Commission for newly public companies.

(d) Changes in Internal Control over Financial Reporting

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

**Item 9B. Other Information.**

None.

## PART III

### **Item 10. Directors, Executive Officers and Corporate Governance.**

The information required by Item 401 of Regulation S-K regarding executive officers is set forth in Part I, Item 1 of this report under “Executive Officers of the Registrant.” The information required by Item 401 of Regulation S-K regarding directors is contained under the caption “Item 1 Election of Directors” of Alcoa Corporation’s Definitive Proxy Statement for the 2017 Annual Meeting of Stockholders to be held on May 10, 2017 (the “Proxy Statement”), which will be filed with the Securities and Exchange Commission within 120 days of the end of Alcoa Corporation’s fiscal year ended December 31, 2016 and is incorporated herein by reference.

The information required by Item 405 of Regulation S-K is contained under the caption “Section 16(a) Beneficial Ownership Reporting Compliance” of the Proxy Statement and is incorporated herein by reference.

The Company’s Code of Ethics for the CEO, CFO and Other Financial Professionals is publicly available on the Company’s Internet website at <http://www.alcoa.com> under the section “Investors—Corporate Governance—Governance Documents.” The remaining information required by Item 406 of Regulation S-K is contained under the captions “Corporate Governance” and “Corporate Governance—Business Conduct Policies and Code of Ethics” of the Proxy Statement and is incorporated herein by reference.

The information required by Items 407(c)(3), (d)(4) and (d)(5) of Regulation S-K is included under the captions “Item 1 Election of Directors—Nominating Board Candidates—Procedures and Director Qualifications” and “Corporate Governance—Board Meetings and Attendance” and “—Committees of the Board—Audit Committee”, respectively, of the Proxy Statement and is incorporated herein by reference.

### **Item 11. Executive Compensation.**

The information required by Item 402 of Regulation S-K is contained under the captions “Non-Employee Director Compensation Program,” “Executive Compensation” (excluding the information under the caption “—Compensation Committee Report”), and “Corporate Governance—The Board’s Role in Risk Oversight” of the Proxy Statement. Such information is incorporated herein by reference.

The information required by Items 407(e)(4) and (e)(5) of Regulation S-K is contained under the captions “Corporate Governance—Compensation Committee Interlocks and Insider Participation” and “Executive Compensation—Compensation Committee Report”, respectively, of the Proxy Statement. Such information (other than the Compensation Committee Report, which shall not be deemed to be “filed”) is incorporated herein by reference.

### **Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.**

The information required by Item 201(d) of Regulation S-K relating to securities authorized for issuance under equity compensation plans is contained under the caption “Equity Compensation Plan Information” of the Proxy Statement and is incorporated herein by reference.

The information required by Item 403 of Regulation S-K is contained under the captions “Beneficial Ownership—Stock Ownership of Certain Beneficial Owners” and “—Stock Ownership of Directors and Executive Officers” of the Proxy Statement and is incorporated herein by reference.

## **Item 13. Certain Relationships and Related Transactions, and Director Independence.**

### **Certain Relationships and Related Party Transactions**

#### **Agreements with Arconic**

Since the Separation Transaction and the Distribution, Alcoa Corporation and Arconic operate separately, each as an independent public company. In connection with the Separation Transaction, Alcoa Corporation entered into a separation and distribution agreement with ParentCo, and also entered into various other agreements to effect the Separation Transaction and provide a framework for its relationship with Arconic after the separation, including a transition services agreement, a tax matters agreement, an employee matters agreement, a stockholder and registration rights agreement with respect to ParentCo's continuing ownership of Alcoa Corporation common stock, intellectual property license agreements, a metal supply agreement, real estate and office leases, a spare parts loan agreement and an agreement relating to the North American packaging business. These agreements, together with the documents and agreements by which the internal reorganization was effected, provide for the allocation between Alcoa Corporation and Arconic of ParentCo's assets, employees, liabilities and obligations (including investments, property and employee benefits, and tax-related assets and liabilities) attributable to periods prior to, at and after Alcoa Corporation's separation from ParentCo and govern certain relationships between Alcoa Corporation and Arconic after the separation.

The summaries of each of these agreements set forth below are qualified in their entirety by reference to the full text of the applicable agreements, which are incorporated by reference into this report.

#### **Separation and Distribution Agreement**

##### ***Transfer of Assets and Assumption of Liabilities***

The separation and distribution agreement identifies the assets transferred, the liabilities assumed and the contracts transferred to each of Alcoa Corporation and Arconic as part of the Separation Transaction of ParentCo into two companies, and provides for when and how these transfers and assumptions occurred. In particular, the separation and distribution agreement provides that, among other things, subject to the terms and conditions contained therein:

- certain assets related to ParentCo's Alcoa Corporation Business, which we refer to as the "Alcoa Corporation Assets," were transferred to Alcoa Corporation or one of its subsidiaries, including:
  - equity interests in certain ParentCo subsidiaries that hold assets relating to the Alcoa Corporation Business;
  - the Alcoa brand, certain other trade names and trademarks, and certain other intellectual property (including, patents, know-how and trade secrets), software, information and technology used in the Alcoa Corporation Business or related to the Alcoa Corporation Assets, the Alcoa Corporation Liabilities or Alcoa Corporation's business;
  - facilities related to the Alcoa Corporation Business;
  - contracts (or portions thereof) that relate to the Alcoa Corporation Business;
  - rights and assets expressly allocated to Alcoa Corporation pursuant to the terms of the separation and distribution agreement or certain other agreements entered into in connection with the separation;
  - permits that primarily relate to the Alcoa Corporation Business;
- certain liabilities related to the Alcoa Corporation Business or the Alcoa Corporation Assets, which we refer to as the "Alcoa Corporation Liabilities," were retained by or transferred to Alcoa Corporation, including certain liabilities associated with previously consummated divestitures of assets primarily related to the Alcoa Corporation Business. Subject to limited exceptions, liabilities that relate primarily to the Alcoa Corporation Business, including liabilities of various legal entities that are now subsidiaries of Alcoa Corporation following the separation, are now Alcoa Corporation Liabilities;

- all of the assets and liabilities (including whether accrued, contingent or otherwise) other than the Alcoa Corporation Assets and Alcoa Corporation Liabilities (such assets and liabilities, other than the Alcoa Corporation Assets and the Alcoa Corporation Liabilities, we refer to as the “Arconic Assets” and “Arconic Liabilities,” respectively) were retained by or transferred to Arconic; and
- Alcoa Corporation will pay to Arconic the net after-tax proceeds it receives in respect of the sales of certain assets, including the Yadkin hydroelectric project.

Except as expressly set forth in the separation and distribution agreement or any ancillary agreement, neither Alcoa Corporation nor ParentCo made any representation or warranty as to the assets, business or liabilities transferred or assumed as part of the separation, as to any approvals or notifications required in connection with the transfers, as to the value of or the freedom from any security interests of any of the assets transferred, as to the absence or presence of any defenses or right of setoff or freedom from counterclaim with respect to any claim or other asset of either Alcoa Corporation or ParentCo, or as to the legal sufficiency of any document or instrument delivered to convey title to any asset or thing of value transferred in connection with the separation. All assets were transferred on an “as is,” “where is” basis, and the respective transferees bore and will continue to bear the economic and legal risks that any conveyance will prove to be insufficient to vest in the transferee good and marketable title, free and clear of all security interests, that any necessary consents or governmental approvals are not obtained, or that any requirements of law, agreements, security interests or judgments are not complied with.

The separation and distribution agreement provides that in the event that the transfer of certain assets and liabilities to Alcoa Corporation or Arconic, as applicable, did not occur prior to the separation, then until such assets or liabilities are able to be transferred, Alcoa Corporation or Arconic, as applicable, will hold such assets on behalf and for the benefit of the other party and will pay, perform and discharge such liabilities, for which the other party will reimburse Alcoa Corporation or Arconic, as applicable, for all commercially reasonable payments made in connection with the performance and discharge of such liabilities.

### ***Non-Compete***

Arconic and Alcoa Corporation have agreed for four years not to compete with respect to certain rolled metal products. Arconic has agreed not to produce certain products for the North American packaging business at its Tennessee operations (except for the benefit of Alcoa Corporation) for four years following the separation. Similarly, Alcoa Corporation has agreed not to produce certain rolled metal products for automotive applications at Warrick for four years following the Distribution.

### ***Claims***

In general, each party to the separation and distribution agreement assumed liability for all pending, threatened and unasserted legal matters related to its own business or its assumed or retained liabilities and will indemnify the other party for any liability to the extent arising out of or resulting from such assumed or retained legal matters.

### ***Releases***

The separation and distribution agreement provides that Alcoa Corporation and its affiliates release and discharge Arconic and its affiliates from all liabilities assumed by Alcoa Corporation as part of the separation, from all acts and events occurring or failing to occur, and all conditions existing, on or before the distribution date relating to Alcoa Corporation’s business, and from all liabilities existing or arising in connection with the implementation of the separation, except as expressly set forth in the separation and distribution agreement. Arconic and its affiliates release and discharge Alcoa Corporation and its affiliates from all liabilities retained by Arconic and its affiliates as part of the separation, from all acts and events occurring or failing to occur, and all conditions existing, on or before the distribution date relating to Arconic’s business, and from all liabilities existing or arising in connection with the implementation of the separation, except as expressly set forth in the separation and distribution agreement.

These releases do not extend to obligations or liabilities under any agreements between the parties that remain in effect following the separation, which agreements include the separation and distribution agreement and the other agreements described under “Certain Relationships and Related Party Transactions.”

### ***Indemnification***

In the separation and distribution agreement, Alcoa Corporation agreed to indemnify, defend and hold harmless Arconic, each of Arconic’s affiliates and each of Arconic and its affiliates’ respective directors, officers and employees, from and against all liabilities relating to, arising out of or resulting from:

- the Alcoa Corporation Liabilities;
- Alcoa Corporation’s failure or the failure of any other person to pay, perform or otherwise promptly discharge any of the Alcoa Corporation Liabilities, in accordance with their respective terms, whether prior to, at or after the Distribution;
- except to the extent relating to a Arconic Liability, any guarantee, indemnification or contribution obligation for the benefit of Alcoa Corporation by Arconic that survives the Distribution;
- any breach by Alcoa Corporation of the separation and distribution agreement or any of the ancillary agreements; and
- any untrue statement or alleged untrue statement or omission or alleged omission of material fact in the Form 10 or in the information statement of Alcoa Corporation (as amended or supplemented), except for any such statements or omissions made explicitly in Arconic’s name.

Arconic agreed to indemnify, defend and hold harmless Alcoa Corporation, each of Alcoa Corporation’s affiliates and each of Alcoa Corporation and Alcoa Corporation’s affiliates’ respective directors, officers and employees from and against all liabilities relating to, arising out of or resulting from:

- the Arconic Liabilities;
- the failure of Arconic or any other person to pay, perform or otherwise promptly discharge any of the Arconic Liabilities, in accordance with their respective terms whether prior to, at or after the Distribution;
- except to the extent relating to an Alcoa Corporation Liability, any guarantee, indemnification or contribution obligation for the benefit of Arconic by Alcoa Corporation that survives the Distribution;
- any breach by Arconic of the separation and distribution agreement or any of the ancillary agreements; and
- any untrue statement or alleged untrue statement or omission or alleged omission of a material fact made explicitly in Arconic’s name in the Form 10 or in the information statement of Alcoa Corporation (as amended or supplemented).

The separation and distribution agreement also establishes procedures with respect to claims subject to indemnification and related matters.

### ***Insurance***

The separation and distribution agreement provides for the allocation between the parties of rights and obligations under existing insurance policies with respect to occurrences prior to the Distribution and set forth procedures for the administration of insured claims and related matters.

### ***Further Assurances***

In addition to the actions specifically provided for in the separation and distribution agreement, except as otherwise set forth therein or in any ancillary agreement, both Alcoa Corporation and Arconic agreed in the separation and



distribution agreement to use reasonable best efforts, prior to, on and after the distribution date, to take, or cause to be taken, all actions, and to do, or cause to be done, all things necessary, proper or advisable under applicable laws, regulations and agreements to consummate and make effective the transactions contemplated by the separation and distribution agreement and the ancillary agreements.

### ***Dispute Resolution***

The separation and distribution agreement contains provisions that govern, except as otherwise provided in any ancillary agreement, the resolution of disputes, controversies or claims that may arise between Alcoa Corporation and Arconic related to the Separation Transaction and that are unable to be resolved through good faith discussions between Alcoa Corporation and Arconic. These provisions contemplate that efforts will be made to resolve disputes, controversies and claims by escalation of the matter to executives of Alcoa Corporation and Arconic, and that, if such efforts are not successful, either Alcoa Corporation or Arconic may submit the dispute, controversy or claim to nonbinding mediation or, if such nonbinding mediation is not successful, binding alternative dispute resolution, subject to the provisions of the separation and distribution agreement.

### ***Expenses***

Except as expressly set forth in the separation and distribution agreement or in any ancillary agreement, Arconic is responsible for all costs and expenses incurred in connection with the Separation Transaction incurred prior to the distribution date, including costs and expenses relating to legal and tax counsel, financial advisors and accounting advisory work related to the separation. Except as expressly set forth in the separation and distribution agreement or in any ancillary agreement, or as otherwise agreed in writing by Arconic and Alcoa Corporation, all costs and expenses incurred in connection with the Separation Transaction after the Distribution will be paid by the party incurring such cost and expense.

### ***Other Matters***

Other matters governed by the separation and distribution agreement include Arconic's right to continue to use the "Alcoa" name and related trademark for limited purposes for a limited period following the Distribution, access to financial and other information, confidentiality, access to and provision of records and treatment of outstanding guarantees and similar credit support.

### ***Termination***

The separation and distribution agreement provides that it may not be terminated after the distribution date except by an agreement in writing signed by both Arconic and Alcoa Corporation.

### ***Transition Services Agreement***

Alcoa Corporation and Arconic entered into a transition services agreement in connection with the Separation Transaction pursuant to which Alcoa Corporation and Arconic and their respective affiliates provide each other, on an interim, transitional basis, various services, including, but not limited to, employee benefits administration, specialized technical and training services and access to certain industrial equipment, information technology services, regulatory services, continued industrial site remediation and closure services on discrete projects, project management services for certain equipment installation and decommissioning projects, general administrative services and other support services. The agreed-upon charges for such services are generally intended to allow the servicing party to charge a price comprised of out-of-pocket costs and expenses and a predetermined profit in the form of a mark-up of such out-of-pocket expenses. The party receiving each transition service will be provided with reasonable information that supports the charges for such transition service by the party providing the service.

The services generally commenced on the distribution date and will terminate no later than two years following the distribution date. The receiving party may terminate any services by giving prior written notice to the provider of such services and paying any applicable wind-down charges.

Subject to certain exceptions, the liabilities of each party providing services under the transition services agreement are generally limited to the aggregate charges actually paid to such party by the other party pursuant to the transition services agreement.

### **Tax Matters Agreement**

In connection with the separation, Alcoa Corporation and Arconic entered into a tax matters agreement that governs the parties' respective rights, responsibilities and obligations with respect to taxes (including taxes arising in the ordinary course of business and taxes, if any, incurred as a result of any failure of the Distribution and certain related transactions to qualify as tax-free for U.S. federal income tax purposes), tax attributes, the preparation and filing of tax returns, the control of audits and other tax proceedings, and assistance and cooperation in respect of tax matters.

In addition, the tax matters agreement imposes certain restrictions on us and our subsidiaries (including restrictions on share issuances, business combinations, sales of assets and similar transactions) that are designed to preserve the tax-free status of the Distribution and certain related transactions. The tax sharing agreement provides special rules that allocate tax liabilities in the event the Distribution, together with certain related transactions, is not tax-free. In general, under the tax matters agreement, each party is responsible for any taxes imposed on Arconic or Alcoa Corporation that arise from the failure of the Distribution, together with certain related transactions, to qualify as a transaction that is generally tax-free, for U.S. federal income tax purposes, under Sections 355 and 368(a)(1)(D) and certain other relevant provisions of the Code, to the extent that the failure to so qualify is attributable to actions, events or transactions relating to such party's respective stock, assets or business, or a breach of the relevant representations or covenants made by that party in the tax matters agreement.

### **Employee Matters Agreement**

Alcoa Corporation and Arconic entered into an employee matters agreement in connection with the separation to allocate liabilities and responsibilities relating to employment matters, employee compensation and benefits plans and programs, and other related matters. The employee matters agreement governs certain compensation and employee benefit obligations with respect to the current and former employees and non-employee directors of each company.

The employee matters agreement provides that, unless otherwise specified, Arconic is responsible for liabilities associated with current and former employees of Arconic and its subsidiaries and certain other former employees classified as former employees of Arconic for purposes of post-separation compensation and benefits matters, and Alcoa Corporation is responsible for liabilities associated with current and former employees of Alcoa Corporation and its subsidiaries and certain other former employees classified as former employees of Alcoa Corporation for purposes of post-separation compensation and benefits matters.

The employee matters agreement also governs the treatment of equity-based awards granted by ParentCo prior to the separation, as discussed in the "Executive Compensation" section of the Proxy Statement.

### **Stockholder and Registration Rights Agreement**

Alcoa Corporation entered into a stockholder and registration rights agreement with Arconic pursuant to which we agreed that, following the 60-day period commencing immediately after the effective time of the Distribution, upon the request of Arconic, we will use commercially reasonable efforts to effect the registration under applicable federal and state securities laws of any shares of our common stock retained by Arconic. In addition, Arconic has agreed to vote any shares of our common stock that it retains immediately after the separation in proportion to the votes cast by our other stockholders. In connection with such agreement, Arconic will grant us a proxy to vote its shares of our common stock in such proportion. This proxy, however, will be automatically revoked as to any particular share upon any sale or transfer of such share from Arconic to a person other than Arconic, and neither the voting agreement nor proxy will limit or prohibit any such sale or transfer.

## **Intellectual Property License Agreements**

In connection with the separation, Alcoa Corporation and Arconic entered into an Alcoa Corporation to Arconic Inc. Patent, Know-How, and Trade Secret License Agreement, an Arconic Inc. to Alcoa Corporation Patent, Know-How, and Trade Secret License Agreement, and an Alcoa Corporation to Arconic Inc. Trademark License Agreement, which we refer to, collectively, as the “intellectual property license agreements.”

Under the intellectual property license agreements, two Arconic businesses, Alcoa Wheels and Spectrochemical Standards, have ongoing rights to use the “Alcoa” name following the separation. Alcoa Wheels received a 25 year, evergreen renewable, royalty-free license to use the “Alcoa” name for commercial transportation wheels and hubs. The Spectrochemical Standards business received a royalty-free license to use the “Alcoa” name for five years on existing inventory, with the possibility of one five-year extension. Under the intellectual property license agreements, subject to limited exceptions, Alcoa Corporation is not permitted to use or license others to use the “Alcoa” name for a period of 20 years on Arconic-type products, such as aerospace and automotive parts.

The intellectual property license agreements also governs patents that were developed jointly and will continued to be used by both Arconic and Alcoa Corporation, as well as shared know-how. The intellectual property license agreements provides for a license of these patents and know-how from Arconic or Alcoa Corporation, as applicable, to the other on a perpetual, royalty-free, non-exclusive basis, subject to certain exceptions. Namely, Alcoa Corporation will exclusively license to Arconic (i) Advanced Ceramics for non-smelting uses (subject to Alcoa Corporation retaining some non-smelting rights) and (ii) the EVERCAST foundry alloy for commercial truck wheel applications, subject to a threshold sales target being met by December 31, 2020.

Either party may terminate the license with respect to any trademark under the intellectual property license agreements upon an uncured material breach of Arconic with respect to such trademark that remains uncured after at least 60 days.

## **Metal Supply Agreement**

In connection with the separation, Alcoa Corporation and Arconic entered into a master agreement for the supply of primary aluminum (“metal supply agreement”) pursuant to which Alcoa Corporation will supply Arconic with aluminum for use in its businesses. The metal supply agreement consists of a master agreement setting forth the general terms and conditions of the overall supply arrangement, with an initial term of three years, as well as individual sub-agreements that set forth terms and conditions with respect to the supply of a particular metal item. The master agreement is based on the form of agreement currently used by the Alcoa Corporation Business with its third party customers for metal supply arrangements. Each of the sub-agreements were negotiated individually and contain the main economic terms of the particular supply arrangement, including quantity and pricing. The term of each sub-agreement is typically one year, but if longer than one year, quantity and pricing will be redetermined and renegotiated on an annual basis in accordance with industry practices. Notwithstanding the metal supply agreement, Arconic has the right to purchase metal from other suppliers.

## **Real Estate Arrangements**

Alcoa Corporation and Arconic entered into a lease agreement pursuant to which Arconic leased to Alcoa Corporation the land on which Arconic’s smelter, cast house and associated facilities located in Massena, New York are located for a term of 20 years with three automatic 10-year extensions, except that if Alcoa Corporation determines to close the smelter, the lease will terminate three years after such closure. If Alcoa Corporation ceases active production by the smelter, the facility will be considered closed five years after such cessation continues uninterrupted, and Alcoa Corporation will then be required to dismantle the smelter, remediate the land and otherwise restore it to industrial standard within three years before the lease is deemed terminated. The rent under the Massena lease agreement is set at a market rate and fixed for 10 years, after which it will increase annually based on the Consumer Price Index. In connection with the Massena lease agreement, Alcoa Corporation will provide certain power transmission services and process water to Arconic’s fabricating facility at the Massena, New York location.

In addition, subsidiaries of Alcoa Corporation and Arconic entered into a lease agreement pursuant to which a subsidiary of Alcoa Corporation, which will own the land and smelter assets at Arconic's Fusina, Italy location, leased the land underlying Arconic's rolling mill facilities to a subsidiary of Arconic for a term of 20 years with three automatic 10-year extensions. The rent under the Fusina lease agreement is set at a market rate and fixed for 10 years, after which it will increase annually based on the Consumer Price Index.

Alcoa Corporation and Arconic entered into a lease agreement pursuant to which Arconic leased to Alcoa Corporation a portion of one research and development building in which Arconic's research and development facilities also are located, on Arconic's research and development campus in New Kensington, Pennsylvania (the "ATC Lease Agreement"). The ATC Lease Agreement is for a term of 3 years with no automatic extensions and the rent will be set at a market rate and fixed for the term. In connection with the ATC Lease Agreement, Arconic will also provide certain building utilities to Alcoa Corporation's research and development facilities via metered rates.

### **North American Packaging Business Agreement**

ParentCo's operations in Tennessee, which remained with Arconic following the separation, currently produce wide can body sheet for the North American packaging market. Arconic plans to shift the production of the wide can body sheet for packaging applications from Tennessee to Alcoa Corporation's Ma'aden rolling mill. Before the Ma'aden rolling mill can begin production of the wide can body sheet, product from the facilities must be qualified by existing customers as an acceptable source of supply. While it is anticipated that these approvals will be obtained, the process is expected to take approximately 18 months. Alcoa Corporation and Arconic entered into a toll processing and services agreement (the "North American packaging business agreement") pursuant to which Arconic will continue producing the wide can body sheet at Tennessee and provide it to Alcoa Corporation to permit Alcoa Corporation to continue supplying its customers without interruption during this period.

In addition, pursuant to the North American packaging business agreement, Arconic will process used beverage containers ("UBCs") owned by Alcoa Corporation. Under the North American packaging business agreement, Arconic will cut, clean and melt the UBCs into ingot suitable for use by Alcoa Corporation as a raw material for use in Alcoa Corporation's North American packaging business. The terms of the agreement will be based on the form of agreement used by ParentCo with its third party customers. The pricing terms of the agreement will be negotiated by Alcoa Corporation and Arconic. In addition to the pricing determination, the other terms and conditions of the agreement will be in line with industry practice. After the term of the North American packaging business agreement, Arconic and Alcoa Corporation may continue this commercial relationship subject to successful renegotiation at that time.

### **Spare Parts Loan Agreement**

In connection with the separation, Alcoa Corporation and Arconic entered into a spare parts loan agreement pursuant to which each of Alcoa Corporation and Arconic and their respective affiliates will provide the other party with a loan of a spare equipment in its inventory while the other party has an order in process with its supplier. Upon fulfillment of the equipment order (or, if earlier, the need for the equipment by the loaning party or one year from the loan), the loaned spare equipment will be returned to the loaning party. Transportation costs will be borne by the borrowing party. Terms and conditions of the agreement will be in line with similar agreements to which ParentCo was a party with third parties.

### **Other Related Party Transactions**

From January through October of 2016, prior to the Company's separation from ParentCo, our Vice President and Controller, Molly Beerman, was a consultant to the finance department of ParentCo and provided services in support of the separation transaction. Ms. Beerman received approximately \$300,000 in compensation in connection with her services as a consultant to ParentCo.

## Procedures for Approval of Related Party Transactions

Alcoa Corporation adopted a written Related Person Transaction Approval Policy regarding the review, approval and ratification of transactions between the Company and related persons. The policy applies to any transaction in which the Company or a Company subsidiary is a participant, the amount involved exceeds \$120,000 and a related person has a direct or indirect material interest. A related person means any director or executive officer of the Company, any nominee for director, any stockholder known to the Company to be the beneficial owner of more than 5% of any class of the Company's voting securities, and any immediate family member of any such person.

Under this policy, reviews will be conducted by management to determine which transactions or relationships should be referred to the Governance and Nominating Committee for consideration. The Governance and Nominating Committee will then review the material facts and circumstances regarding a transaction and determine whether to approve, ratify, revise or reject a related person transaction, or to refer it to the full Board of Directors or another committee of the Board of Directors for consideration. The Company's Related Person Transaction Approval Policy operates in conjunction with other aspects of the Company's compliance program, including its Business Conduct Policies, which require that all directors, officers and employees have a duty to be free from the influence of any conflict of interest when they represent the Company in negotiations or make recommendations with respect to dealings with third parties, or otherwise carry out their duties with respect to the Company.

The Board of Directors is expected to consider the following types of potential related person transactions and pre-approve them under the Company's Related Person Transaction Approval Policy as not presenting material conflicts of interest:

- employment of executive officers (except employment of an executive officer that is an immediate family member of another executive officer, director, or nominee for director) as long as the Compensation and Benefits Committee has approved the executive officers' compensation;
- director compensation that the Board of Directors has approved;
- any transaction with another entity in which the aggregate amount involved does not exceed the greater of \$1 million or 2% of the other entity's total annual revenues, if a related person's interest arises only from:
  - such person's position as an employee or executive officer of the other entity; or
  - such person's position as a director of the other entity; or
  - the ownership by such person, together with his or her immediate family members, of less than a 10% equity interest in the aggregate in the other entity (other than a partnership); or
  - both such position as a director and ownership as described in the foregoing two bullets; or
  - such person's position as a limited partner in a partnership in which the person, together with his or her immediate family members, have an interest of less than 10%;
- charitable contributions in which a related person's only relationship is as an employee (other than an executive officer), or a director or trustee, if the aggregate amount involved does not exceed the greater of \$250,000 or 2% of the charitable organization's total annual receipts;
- transactions, such as the receipt of dividends, in which all stockholders receive proportional benefits;
- transactions involving competitive bids;
- transactions involving the rendering of services as a common or contract carrier, or public utility, at rates or charges fixed in conformity with law or governmental authority; and
- transactions with a related person involving services as a bank depository of funds, transfer agent, registrar, trustee under a trust indenture, or similar services.

## **Director Independence**

The information required by Item 407(a) of Regulation S-K regarding director independence is contained under the captions “Item 1 Election of Directors” and “Corporate Governance” of the Proxy Statement and is incorporated herein by reference.

## **Item 14. Principal Accounting Fees and Services.**

The information required by Item 9(e) of Schedule 14A is contained under the captions “Item 2 Ratification of the Appointment of the Independent Registered Public Accounting Firm—Audit Committee Pre-Approval Policy” and “— Audit and Non-Audit Fees” of the Proxy Statement and is incorporated herein by reference.

## PART IV

### Item 15. Exhibits, Financial Statement Schedules.

(a) The consolidated financial statements and exhibits listed below are filed as part of this report.

(1) The Company's consolidated financial statements, the notes thereto and the report of the Independent Registered Public Accounting Firm are on pages 96 through 172 of this report.

(2) Financial statement schedules have been omitted because they are not applicable, not required, or the required information is included in the consolidated financial statements or notes thereto.

(3) Exhibits.

| <u>Exhibit No.</u> | <u>Description of Exhibit</u>  |
|--------------------|--|
| 2.1                | Separation and Distribution Agreement, dated as of October 31, 2016, by and between Arconic Inc. and Alcoa Corporation (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K dated November 4, 2016)   |
| 2.2                | Transition Services Agreement, dated as of October 31, 2016, by and between Arconic Inc. and Alcoa Corporation (incorporated by reference to Exhibit 2.2 to the Company's Current Report on Form 8-K dated November 4, 2016)   |
| 2.3                | Tax Matters Agreement, dated as of October 31, 2016, by and between Arconic Inc. and Alcoa Corporation (incorporated by reference to Exhibit 2.3 to the Company's Current Report on Form 8-K dated November 4, 2016)   |
| 2.4                | Employee Matters Agreement, dated as of October 31, 2016, by and between Arconic Inc. and Alcoa Corporation (incorporated by reference to Exhibit 2.4 to the Company's Current Report on Form 8-K dated November 4, 2016)  |
| 2.5                | Amendment No. 1 to Employee Matters Agreement, dated as of December 13, 2016, by and between Arconic Inc. and Alcoa Corporation (incorporated by reference to Exhibit 2.5 to the Company's Registration Statement on Form S-1 (Commission file number 333-215606) filed on January 18, 2017)** |
| 2.6                | Alcoa Corporation to Arconic Inc. Patent, Know-How, and Trade Secret License Agreement, dated as of October 31, 2016, by and between Alcoa USA Corp. and Arconic Inc. (incorporated by reference to Exhibit 2.5 to the Company's Current Report on Form 8-K dated November 4, 2016)            |
| 2.7                | Arconic Inc. to Alcoa Corporation Patent, Know-How, and Trade Secret License Agreement, dated as of October 31, 2016, by and between Arconic Inc. and Alcoa USA Corp. (incorporated by reference to Exhibit 2.6 to the Company's Current Report on Form 8-K dated November 4, 2016)            |
| 2.8                | Alcoa Corporation to Arconic Inc. Trademark License Agreement, dated as of October 31, 2016, by and between Alcoa USA Corp. and Arconic Inc. (incorporated by reference to Exhibit 2.7 to the Company's Current Report on Form 8-K dated November 4, 2016)                                     |
| 2.9                | Toll Processing and Services Agreement, dated as of October 31, 2016, by and between Arconic Inc. and Alcoa Warrick LLC (incorporated by reference to Exhibit 2.8 to the Company's Current Report on Form 8-K dated November 4, 2016)  |
| 2.10               | Master Agreement for the Supply of Primary Aluminum, dated as of October 31, 2016, by and between Alcoa Corporation and its affiliates and Arconic Inc. (incorporated by reference to Exhibit 2.9 to the Company's Current Report on Form 8-K dated November 4, 2016)                          |
| 2.11               | Massena Land Lease Agreement, dated as of October 31, 2016, by and between Arconic Inc. and Alcoa USA Corp. (incorporated by reference to Exhibit 2.10 to the Company's Current Report on Form 8-K dated November 4, 2016)   |

| <b>Exhibit<br/>No.</b> | <b>Description of Exhibit</b>   |
|------------------------|---|
| 2.12                   | English Translation of Fusina Lease and Operations Agreement by and between Alcoa Servizi S.r.l. and Fusina Rolling S.r.l., dated as of August 4, 2016 (incorporated by reference to Exhibit 2.11 to Amendment No. 1 to the Company's Registration Statement on Form 10 (Commission file number 1-37816) filed on August 12, 2016)  |
| 3.1                    | Amended and Restated Certificate of Incorporation of Alcoa Corporation (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated November 3, 2016)  |
| 3.2                    | Amended and Restated Bylaws of Alcoa Corporation (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K dated November 3, 2016)  |
| 4.1                    | Stockholder and Registration Rights Agreement, dated as of October 31, 2016, by and between Arconic Inc. and Alcoa Corporation (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K dated November 4, 2016)  |
| 4.2                    | Indenture, dated September 27, 2016, among Alcoa Nederland Holding B.V., Alcoa Upstream Corporation and The Bank of New York Mellon Trust Company, N.A. (incorporated by reference to Exhibit 10.19 to Amendment No. 4 to the Company's Registration Statement on Form 10 (Commission file number 1-37816) filed on September 29, 2016)   |
| 4.3                    | Supplemental Indenture, dated as of November 1, 2016, among the entities listed in Annex A thereto, subsidiaries of Alcoa Corporation, Alcoa Corporation, Alcoa Nederland Holding B.V. and The Bank Of New York Mellon Trust Company, N.A. (incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K dated November 4, 2016)  |
| 10.1                   | Revolving Credit Agreement dated as of September 16, 2016, among Alcoa Upstream Corporation, as Holdings, Alcoa Nederland Holding B.V., as the Borrower, a syndicate of lenders and issuers named therein and JPMorgan Chase Bank, N.A., as administrative agent (incorporated by reference to Exhibit 99.1 to Alcoa Inc.'s Current Report on Form 8-K dated September 19, 2016)  |
| 10.2                   | Amendment No. 1, dated October 26, 2016, to the Revolving Credit Agreement, dated as of September 16, 2016, among Alcoa Upstream Corporation, Alcoa Nederland Holding B.V., the lenders and issuers from time to time party thereto, and JPMorgan Chase Bank, N.A. as administrative agent for the lenders and issuers (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated October 31, 2016) |
| 10.3                   | Amended and Restated Charter of the Strategic Council for the AWAC Joint Venture (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated November 4, 2016)   |
| 10.4                   | Third Amended and Restated Limited Liability Company Agreement of Alcoa World Alumina LLC, dated as of November 1, 2016, by and among Alcoa USA Corp., ASC Alumina, Alumina International Holdings Pty Ltd, Alumina (USA) Inc., Reynolds Metals Company, LLC and Reynolds Metals Exploration, Inc. (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K dated November 4, 2016)                     |
| 10.5                   | Side Letter of November 1, 2016, between Alcoa Corporation and Alumina Limited clarifying transfer restrictions (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K dated November 4, 2016)  |
| 10.6                   | Enterprise Funding Agreement (Restated), dated November 1, 2016, between Alcoa Corporation, Alumina Limited, Alcoa Australian Holdings Pty Ltd, Alcoa of Australia Limited and Enterprise Funding Partnership (as defined therein) (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K dated November 4, 2016)   |
| 10.7                   | Alcoa Corporation 2016 Stock Incentive Plan (incorporated by reference to Exhibit 4.3 to the Company's Registration Statement on Form S-8 (Commission file number 333-214420), filed on November 3, 2016)   |



| <b>Exhibit No.</b> | <b>Description of Exhibit</b>  |
|--------------------|--|
| 10.8               | Alcoa USA Corp. Deferred Compensation Plan (incorporated by reference to Exhibit 10.2 to Amendment No. 1 to the Company's Registration Statement on Form 10 (Commission file number 1-37816) filed on August 12, 2016)   |
| 10.9               | Alcoa USA Corp. Nonqualified Supplemental Retirement Plan C (incorporated by reference to Exhibit 10.3 to Amendment No. 1 to the Company's Registration Statement on Form 10 (Commission file number 1-37816) filed on August 12, 2016)  |
| 10.10              | Form of Indemnification Agreement by and between Alcoa Corporation and individual directors or officers (incorporated by reference to Exhibit 10.4 to Amendment No. 3 to the Company's Registration Statement on Form 10 (Commission file number 1-37816) filed on September 13, 2016)   |
| 10.11              | Aluminum Project Framework Shareholders' Agreement, dated December 20, 2009, between Alcoa Inc. and Saudi Arabian Mining Company (Ma'aden) (incorporated by reference to Exhibit 10(i) to Alcoa Inc.'s Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2009, filed on February 18, 2010)  |
| 10.12              | First Supplemental Agreement, dated March 30, 2010, to the Aluminium Project Framework Shareholders Agreement, dated December 20, 2009, between Saudi Arabian Mining Company (Ma'aden) and Alcoa Inc. (incorporated by reference to Exhibit 10(c) to Alcoa Inc.'s Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended March 31, 2010, filed on April 22, 2010) |
| 10.13              | Kwinana State Agreement of 1961 (incorporated by reference to Exhibit 10.7 to Amendment No. 2 to the Company's Registration Statement on Form 10 (Commission file number 1-37816) filed on September 1, 2016)  |
| 10.14              | Pinjarra State Agreement of 1969 (incorporated by reference to Exhibit 10.8 to Amendment No. 2 to the Company's Registration Statement on Form 10 (Commission file number 1-37816) filed on September 1, 2016)   |
| 10.15              | Wagerup State Agreement of 1978 (incorporated by reference to Exhibit 10.9 to Amendment No. 2 to the Company's Registration Statement on Form 10 (Commission file number 1-37816) filed on September 1, 2016)  |
| 10.16              | Alumina Refinery Agreement of 1987 (incorporated by reference to Exhibit 10.10 to Amendment No. 2 to the Company's Registration Statement on Form 10 (Commission file number 1-37816) filed on September 1, 2016)  |
| 10.17              | Amended and Restated Limited Liability Company Agreement of Alcoa Alumina & Chemicals, L.L.C. dated as of December 31, 1994 (incorporated by reference to Exhibit 99.4 to Alcoa Inc.'s Current Report on Form 8-K (Commission file number 1-3610), filed on November 28, 2001)   |
| 10.18              | Shareholders' Agreement between Alcoa of Australia Limited, Alcoa Australian Pty Ltd and Alumina Limited, originally dated as of May 10, 1996 (incorporated by reference to Exhibit 10.13 to Amendment No. 2 to the Company's Registration Statement on Form 10 (Commission file number 1-37816) filed on September 1, 2016)   |
| 10.19              | Side Letter of November 1, 2016, between Alcoa Corporation and Alumina Limited clarifying transfer restrictions (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K dated November 4, 2016)   |
| 10.20              | Enterprise Funding Agreement (Restated), dated November 1, 2016, between Alcoa Corporation, Alumina Limited, Alcoa Australian Holdings Pty Ltd, Alcoa of Australia Limited and Enterprise Funding Partnership (as defined therein) (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K dated November 4, 2016)  |

| <b>Exhibit<br/>No.</b> | <b>Description of Exhibit</b>   |
|------------------------|---|
| 10.21                  | Amendments to Enterprise Funding Agreement, effective January 25, 2008, between Alcoa Inc., certain of its affiliates and Alumina Limited (incorporated by reference to Exhibit 10(f)(1) to Alcoa Inc.'s Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2007, filed on February 15, 2008) |
| 10.22                  | Plea Agreement dated January 8, 2014, between the United States of America and Alcoa World Alumina LLC (incorporated by reference to Exhibit 10(l) to Alcoa Inc.'s Annual Report on Form 10-K for the year ended December 31, 2013, filed on February 13, 2014)   |
| 10.23                  | Alcoa Corporation Change in Control Severance Plan, dated as of December 1, 2016 (incorporated by reference to Exhibit 10.23 to the Company's Registration Statement on Form S-1 (Commission file number 333-215606) filed on January 18, 2017)**   |
| 10.24                  | Incentive Compensation Plan of Alcoa Corporation (incorporated by reference to Exhibit 10.8 to the Company's Current Report on Form 8-K dated November 4, 2016)**   |
| 10.25                  | Alcoa Corporation Internal Revenue Code 162(m) Compliant Annual Cash Incentive Compensation Plan (incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K dated November 4, 2016)**   |
| 10.26                  | Form of Alcoa Corporation 2016 Deferred Fee Plan for Directors (incorporated by reference to Exhibit 10.24 to Amendment No. 4 to the Company's Registration Statement on Form 10 (Commission file number 1-37816) filed on September 29, 2016)**  |
| 10.27                  | Form of Alcoa Corporation Corporate Officer Severance Agreement, effective December 1, 2016 (incorporated by reference to Exhibit 10.27 to the Company's Registration Statement on Form S-1 (Commission file number 333-215606) filed on January 18, 2017)**  |
| 10.28                  | Form of Alcoa Corporation Chief Executive Officer and Chief Financial Officer Severance Agreement, effective December 1, 2016 (incorporated by reference to Exhibit 10.28 to the Company's Registration Statement on Form S-1 (Commission file number 333-215606) filed on January 18, 2017)**  |
| 10.29                  | Terms and Conditions for Employee Restricted Share Units (incorporated by reference to Exhibit 10.29 to the Company's Registration Statement on Form S-1 (Commission file number 333-215606) filed on January 18, 2017)**   |
| 10.30                  | Terms and Conditions for Employee Stock Option Awards (incorporated by reference to Exhibit 10.30 to the Company's Registration Statement on Form S-1 (Commission file number 333-215606) filed on January 18, 2017)**  |
| 10.31                  | Terms and Conditions for Employee Special Retention Awards (incorporated by reference to Exhibit 10.31 to the Company's Registration Statement on Form S-1 (Commission file number 333-215606) filed on January 18, 2017)**   |
| 10.32                  | Alcoa Corporation Non-Employee Director Compensation Policy, effective November 1, 2016 (incorporated by reference to Exhibit 10.32 to the Company's Registration Statement on Form S-1 (Commission file number 333-215606) filed on January 18, 2017)**  |
| 10.33                  | Appendix C to the Alcoa Corporation Deferred Fee Plan for Directors, effective December 1, 2016 (incorporated by reference to Exhibit 10.33 to the Company's Registration Statement on Form S-1 (Commission file number 333-215606) filed on January 18, 2017)**  |
| 10.34                  | Terms and Conditions for Deferred Fee Restricted Share Units Director Awards, effective December 1, 2016 (incorporated by reference to Exhibit 10.34 to the Company's Registration Statement on Form S-1 (Commission file number 333-215606) filed on January 18, 2017)**   |

| <b>Exhibit<br/>No.</b> | <b>Description of Exhibit</b>   |
|------------------------|---|
| 10.35                  | Terms and Conditions for Restricted Share Units Annual Director Awards, effective December 1, 2016 (incorporated by reference to Exhibit 10.35 to the Company's Registration Statement on Form S-1 (Commission file number 333-215606) filed on January 18, 2017)** |
| 21.1                   | List of Subsidiaries (filed herewith)   |
| 23.1                   | Consent of PricewaterhouseCoopers LLP (filed herewith)  |
| 24.1                   | Power of Attorney (filed herewith)  |
| 31.1                   | Certification of Chief Executive Officer required by Securities and Exchange Commission Rule 13a-14(a) or 15d-14(a) (filed herewith).   |
| 31.2                   | Certification of Principal Financial Officer required by Securities and Exchange Commission Rule 13a-14(a) or 15d-14(a) (filed herewith).   |
| 32.1                   | Certification pursuant to 18 U.S.C. Section 1350 (filed herewith).  |
| 95                     | Mine Safety Disclosure (filed herewith)   |
| 101.INS                | XBRL Instance Document (filed herewith)   |
| 101.SCH                | XBRL Taxonomy Extension Schema Document (filed herewith)  |
| 101.CAL                | XBRL Taxonomy Extension Calculation Linkbase Document (filed herewith)  |
| 101.DEF                | XBRL Taxonomy Extension Definition Linkbase Document (filed herewith)   |
| 101.LAB                | XBRL Taxonomy Extension Label Linkbase Document (filed herewith)  |
| 101.PRE                | XBRL Taxonomy Extension Presentation Linkbase Document (filed herewith)   |

\*\* Exhibit Nos. 10.7 through 10.9 and 10.23 through 10.35 are management contracts or compensatory plans required to be filed as Exhibits to this Form 10-K.

Amendments and modifications to other Exhibits previously filed have been omitted when in the opinion of the registrant such Exhibits as amended or modified are no longer material or, in certain instances, are no longer required to be filed as Exhibits.

No other instruments defining the rights of holders of long-term debt of the registrant or its subsidiaries have been filed as Exhibits because no such instruments met the threshold materiality requirements under Regulation S-K. The registrant agrees, however, to furnish a copy of any such instruments to the Commission upon request.

**Item 16. Form 10-K Summary.**

Not applicable.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

### ALCOA CORPORATION





March 15, 2017

By \_\_\_\_\_

Molly S. Beerman  
Vice President and Controller  
(Also signing as Principal Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

| <u>Signature</u>   | <u>Title</u>   | <u>Date</u>    |
|--|--|----------------|
| <br>_____<br>Roy C. Harvey        | Chief Executive Officer and Director<br>(Principal Executive Officer and Director)       | March 15, 2017 |
| <br>_____<br>William F. Oplinger | Executive Vice President and Chief<br>Financial Officer (Principal Financial<br>Officer) | March 15, 2017 |

Mary Anne Citrino, Timothy P. Flynn, Kathryn S. Fuller, James A. Hughes, Michael G. Morris, James E. Nevels, James W. Owens, Carol L. Roberts, Suzanne Sitherwood, Steven W. Williams, and Ernesto Zedillo, each as a Director, on March 15, 2017, by Molly S. Beerman, their Attorney-in-Fact.\*



\*By \_\_\_\_\_

Molly S. Beerman  
Attorney-in-Fact

## SUBSIDIARIES OF THE REGISTRANT

| <u>Name</u>   | <u>State or<br/>Country of<br/>Organization</u> |
|---|---|
| A.F.P. Pty Ltd <sup>1</sup>                             | Australia                                       |
| AAC Holdings Company <sup>1</sup>                       | Delaware  |
| ACAP Australia Pty Ltd <sup>1</sup>                     | Australia                                       |
| Alcoa (Barbados) Holding Srl                            | Barbados  |
| Alcoa (Beijing) Trading Company Ltd.                    | China   |
| Alcoa - Aluminerie De Deschambault L.P.                 | Canada  |
| Alcoa a Islandi ehf                                     | Iceland   |
| Alcoa Allowance Management Inc.                         | Delaware  |
| Alcoa Aluminio S.A.                                     | Brazil  |
| Alcoa Asia Limited                                      | Delaware  |
| Alcoa Australian Holdings Pty Ltd                       | Australia                                       |
| Alcoa Business Park LLC                                 | Delaware  |
| Alcoa Canada Co.  | Canada  |
| Alcoa Canada Energy Investment Co.                      | Canada  |
| Alcoa Canada Holding Co.                                | Canada  |
| Alcoa Canada IK Services Ltd.                           | Canada  |
| Alcoa Canada - Foreign Investment Company               | Canada  |
| Alcoa Caribbean Alumina Holdings, L.L.C.                | Delaware  |
| Alcoa Deschambault Ltd.                                 | Canada  |
| Alcoa DiMarc Inc.                                       | Delaware  |
| Alcoa Do Brasil - Industria E Comercio Limitada         | Brazil  |
| Alcoa Energy Holdings Australia Pty Ltd <sup>1</sup>    | Australia                                       |
| Alcoa Energy Management Australia Pty Ltd <sup>1</sup>  | Australia                                       |
| Alcoa Energy Services, Inc.                             | Delaware  |
| Alcoa European Financing LLC                            | Delaware  |
| Alcoa Fjardaal sf                                       | Iceland   |
| Alcoa Fuels, Inc.                                       | Indiana   |
| Alcoa Guinea, S.A. Avec A.G. <sup>1</sup>               | Guinea  |
| Alcoa Holland B.V.                                      | Netherlands                                     |
| Alcoa IK Services Inc.                                  | Delaware  |
| Alcoa Inespal Aviles, SL                                | Spain   |
| Alcoa Inespal Coruna, SL                                | Spain   |
| Alcoa Inespal, SL                                       | Spain   |
| Alcoa International Management Services Company Limited | Ireland   |
| Alcoa Materials Management, Inc.                        | Delaware  |
| Alcoa Nederland Holding B.V.                            | Netherlands                                     |
| Alcoa Norway ANS  | Norway  |
| Alcoa of Australia Limited <sup>1</sup>                 | Australia                                       |
| Alcoa Portland Aluminium Pty Ltd <sup>1</sup>           | Australia                                       |
| Alcoa Power Generating Inc. <sup>2</sup>                | Tennessee                                       |
| Alcoa Power Marketing LLC                               | Delaware  |
| Alcoa Recycling Company, Inc.                           | Delaware  |
| Alcoa Remediation Management LLC                        | Delaware  |
| Alcoa Saudi Limited <sup>1</sup>                        | Hong Kong                                       |
| Alcoa Saudi Rolling Inversiones S.L.                    | Spain   |
| Alcoa Saudi Smelting Inversiones S.L.                   | Spain   |

| Name  | State or<br>Country of<br>Organization |
|---|--|
| Alcoa Servizi S.r.l.                              | Italy                                  |
| Alcoa Shared Services Hungary Kft.                | Hungary                                |
| Alcoa Singapore Trading Pte. Ltd.                 | Singapore                              |
| Alcoa South Carolina, Inc.                        | Delaware                               |
| Alcoa Steamship Company, Inc. <sup>1</sup>        | New York                               |
| Alcoa Technical Center LLC                        | Delaware                               |
| Alcoa Trasformazioni S.r.l.                       | Italy                                  |
| Alcoa Treasury S.a.r.l.                           | Luxembourg                             |
| Alcoa Trinidad Unlimited                          | Trinidad and Tobago                    |
| Alcoa USA Corp.                                   | Delaware                               |
| Alcoa USA Holding Company                         | Delaware                               |
| Alcoa Warrick LLC                                 | Delaware                               |
| Alcoa Warrick M&E, G.P.                           | Indiana                                |
| Alcoa Wenatchee LLC                               | Delaware                               |
| Alcoa Wolinbec Company                            | Canada                                 |
| Alcoa World Alumina LLC <sup>1,3</sup>            | Delaware                               |
| Alcoa World Alumina Brasil Ltda. <sup>1</sup>     | Brazil                                 |
| AWA Saudi Limited <sup>1</sup>                    | Hong Kong                              |
| Alcoa-Lauralco Management Company                 | Canada                                 |
| Alumina Espanola, S.A. <sup>1</sup>               | Spain                                  |
| Aluminerie Lauralco S.a.r.l.                      | Luxembourg                             |
| Aluminio Espanol, S.L.U.                          | Spain                                  |
| Aluminum Company of America                       | Delaware                               |
| Alusud Uruguay S.r.l.                             | Uruguay                                |
| ASC Alumina, Inc.                                 | Delaware                               |
| Badin Business Park LLC                           | Delaware                               |
| Companhia Geral De Minas                          | Brazil                                 |
| Discovery Aluminas, Inc. <sup>1</sup>             | Louisiana                              |
| Eastalco Aluminum Company                         | Delaware                               |
| Eastern Aluminium (Portland) Pty Ltd <sup>1</sup> | Australia                              |
| Eastern Aluminium Pty Ltd <sup>1</sup>            | Australia                              |
| Enterprise Partnership <sup>1</sup>               | Australia                              |
| Estreito Energia S.A.                             | Brazil                                 |
| Gevoy S.A.  | Uruguay                                |
| Grupiara Participacoes S.A.                       | Brazil                                 |
| Hedges Gold Pty Ltd <sup>1</sup>                  | Australia                              |
| Info - Kind Limited                               | Hong Kong                              |
| Intalco Aluminum Co.                              | Canada                                 |
| Intalco Aluminum LLC                              | Delaware                               |
| Laqmar Quebec Company                             | Canada                                 |
| Laqmar Quebec G.P./Laqmar Quebec S.E.N.C.         | Canada                                 |
| Lib-Ore Steamship Company, Inc. <sup>1</sup>      | Liberia                                |
| Luxcoa S.a.r.l.                                   | Luxembourg                             |
| Matapu Sociedade De Mineracao Ltda. <sup>1</sup>  | Brazil                                 |
| Mineracao Sao Jorge Ltda. <sup>1</sup>            | Brazil                                 |
| Murdstone Pty Ltd                                 | Australia                              |
| New Eastwick Corporation                          | Pennsylvania                           |
| Norsk Alcoa AS                                    | Norway                                 |
| Norsk Alcoa Holding AS                            | Norway                                 |
| Norsk Alcoa Smelting AS                           | Norway                                 |
| Northwest Alloys, Inc.                            | Delaware                               |

| <u>Name</u>                                      | <u>State or<br/>Country of<br/>Organization</u> |
|--|---|
| Novo Horizonte Desenvolvimento Imobiliario Ltda. | Brazil  |
| N.V. Alcoa Minerals of Suriname <sup>1</sup>     | Netherlands                                     |
| Point Comfort Water Company <sup>1</sup>         | Texas   |
| Presidential Development Corporation             | New York  |
| RB Sales Company, Limited                        | Delaware  |
| Reydaral ehf                                     | Iceland   |
| Reynolds Becancour, Inc.                         | Delaware  |
| Reynolds Foreign Sales, Inc.                     | Panama  |
| Reynolds Metals Company, LLC                     | Delaware  |
| Reynolds Metals Development Company              | Delaware  |
| Reynolds Metals Exploration, Inc.                | Delaware  |
| Reynolds Overseas Corporation                    | Panama  |
| RMC Delaware, LLC                                | Delaware  |
| RMC Properties LLC                               | Delaware  |
| Saint George Insurance Company                   | Vermont   |
| St. Croix Alumina, L.L.C. <sup>1</sup>           | Delaware  |
| Suriname Aluminum Company, L.L.C. <sup>1</sup>   | Delaware  |
| Wollaw Pty Ltd                                   | Australia                                       |

1 Owned directly or indirectly 60% by Alcoa Corporation and 40% by Alumina Limited.

2 Registered to do business in Tennessee under the name APG Trading and the name Tapoco and in Washington under the name of Colockum.

3 Registered to do business in Pennsylvania and Texas under the name of Alcoa World Chemicals.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (Nos. 333-214420 and 333-214423) of Alcoa Corporation and its subsidiaries of our report dated March 15, 2017 relating to the consolidated financial statements, which appears in this Form 10-K.

*PricewaterhouseCoopers LLP*

PricewaterhouseCoopers LLP  
Pittsburgh, Pennsylvania  
March 15, 2017



## CERTIFICATIONS

I, Roy C. Harvey, certify that:

1. I have reviewed this annual report on Form 10-K 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)) 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) 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
  - (c) 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: March 15, 2017



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Name: Roy C. Harvey  
Title: Chief Executive Officer

## CERTIFICATIONS

I, William F. Oplinger, certify that:

1. I have reviewed this annual report on Form 10-K 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)) 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) 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
  - (c) 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: March 15, 2017



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

CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Alcoa Corporation (the "Company") on Form 10-K for the period ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned, in the capacities and on the dates indicated below, hereby certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to his knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 15, 2017



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Roy C. Harvey  
Chief Executive Officer

Date: March 15, 2017



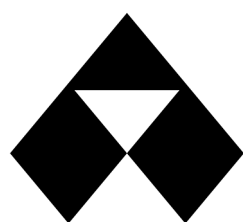
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William F. Oplinger  
Executive Vice President and  
Chief Financial Officer

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 solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of this report.





**Alcoa**



**Alcoa Corporation**  
**Calculation of Financial Measures (unaudited)**  
**(in millions)**

**Reconciliation of Adjusted EBITDA**

|   | <b>Year ended<br/>December 31,</b> |             |             |
|---|------------------------------------|-------------|-------------|
|   | <b>2016</b>                        | <b>2015</b> | <b>2014</b> |
| Net loss attributable to Alcoa Corporation                | \$ (400)                           | \$ (863)    | \$ (256)    |
| Add:  |                                    |             |             |
| Net income (loss) attributable to noncontrolling interest | 54                                 | 124         | (91)        |
| Provision for income taxes                                | 184                                | 402         | 284         |
| Other (income) expenses, net                              | (89)                               | 42          | 58          |
| Interest expense  | 243                                | 270         | 309         |
| Restructuring and other charges                           | 318                                | 983         | 863         |
| Provision for depreciation, depletion, and amortization   | 718                                | 780         | 954         |
| Adjusted EBITDA   | \$ 1,028                           | \$ 1,738    | \$ 2,121    |

Alcoa Corporation's definition of Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) is net margin plus an add-back for depreciation, depletion, and amortization. Net margin is equivalent to Sales minus the following items: Cost of goods sold; Selling, general administrative, and other expenses; Research and development expenses; and Provision for depreciation, depletion, and amortization. Adjusted EBITDA is a non-GAAP financial measure. Management believes that this measure is meaningful to investors because Adjusted EBITDA provides additional information with respect to Alcoa Corporation's operating performance and the Company's ability to meet its financial obligations. The Adjusted EBITDA presented may not be comparable to similarly titled measures of other companies.

# ALCOA CORPORATION DIRECTORS AND OFFICERS AS OF MARCH 15, 2017

## Directors

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**Michael G. Morris  
(Chairman)**  
*Former Chairman, President  
and Chief Executive Officer,  
American Electric Power  
Company, Inc.*

**Mary Anne Citrino**  
*Senior Advisor,  
The Blackstone Group L.P.*

**Timothy P. Flynn**  
*Former Chairman,  
KPMG International*

**Kathryn S. Fuller**  
*Vice Chair,  
Smithsonian  
National Museum of  
Natural History*

**Roy C. Harvey**  
*Chief Executive Officer,  
Alcoa Corporation*

**James A. Hughes**  
*Former Director and  
Chief Executive Officer,  
First Solar, Inc.*

**James E. Nevels**  
*Founder and Chairman,  
The Swarthmore Group*

**James W. Owens**  
*Former Chairman and  
Chief Executive Officer,  
Caterpillar Inc.*

**Carol L. Roberts**  
*Senior Vice President and  
Chief Financial Officer,  
International Paper  
Company*

**Suzanne Sitherwood**  
*President and Chief  
Executive Officer,  
Spire Inc.*

**Steven W. Williams**  
*President and Chief  
Executive Officer,  
Suncor Energy Inc.*

**Ernesto Zedillo**  
*Director,  
Yale Center for the  
Study of Globalization*

## Officers

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**Renato De C.A. Bacchi**  
*Vice President and  
Treasurer*

**Ronald E. Barin**  
*Vice President  
Chief Investment Officer,  
Pension Plan Investments*

**Molly S. Beerman**  
*Vice President and  
Controller*

**Leigh Ann C. Fisher**  
*Executive Vice President  
and Chief Administrative  
Officer*

**Catherine L. Garfinkel**  
*Vice President  
Chief Ethics and  
Compliance Officer*

**John Kenna**  
*Vice President  
Tax*

**Roy C. Harvey**  
*Chief Executive Officer*

**Jeffrey D. Heeter**  
*Executive Vice President,  
General Counsel and  
Secretary*

**William F. Oplinger**  
*Executive Vice President  
and Chief Financial Officer*

**Tómas Már Sigurdsson**  
*Executive Vice President  
and Chief Operating  
Officer*





# Stockholder Information

## ANNUAL MEETING

The annual meeting of stockholders will be at 10:00 a.m. on Wednesday, May 10, 2017 at the David L. Lawrence Convention Center, Room 405, 1000 Fort Duquesne Boulevard, Pittsburgh, Pennsylvania.

## COMPANY NEWS

Visit [www.alcoa.com](http://www.alcoa.com) for Securities and Exchange Commission filings, quarterly earnings reports, and other Company news.

Copies of the annual report and Forms 10-K and 10-Q may be requested at no cost at <http://investors.alcoa.com> or by writing to Corporate Communications at the corporate center address located on the back cover of this report.

## INVESTOR INFORMATION

Securities analysts and investors may write to Investor Relations, Alcoa, 390 Park Avenue, New York, NY 10022-4608; call 1.212.518.5450; or e-mail [investor.relations@alcoa.com](mailto:investor.relations@alcoa.com).

## OTHER PUBLICATIONS

For more information on Alcoa Foundation and Alcoa community investments, visit [www.alcoa.com](http://www.alcoa.com) under “community” or [www.alcoa.com/foundation](http://www.alcoa.com/foundation).

For Alcoa’s Sustainability Report, visit [www.alcoa.com/sustainability](http://www.alcoa.com/sustainability); write to Sustainability at the corporate center address located on the back of this report; or e-mail [sustainability@alcoa.com](mailto:sustainability@alcoa.com).

## STOCKHOLDER SERVICES

Stockholders with questions on account balances, address changes, or other account matters may contact Alcoa’s stock transfer agent, registrar, and distribution agent, Computershare.

### By Telephone

1.888.522.6645 (in the United States and Canada)  
1.201.680.6578 (all other calls)  
1.800.231.5469 (Telecommunications Device for the Deaf: TDD)

### By Internet

[www.computershare.com](http://www.computershare.com)

### By Regular Mail

Computershare  
P.O. Box 30170  
College Station, TX 77842-3170

### By Overnight Correspondence

Computershare  
211 Quality Circle, Suite 210  
College Station, TX 77845

For stockholder questions on other matters related to Alcoa, write to Corporate Secretary, Alcoa, 390 Park Avenue, New York, NY 10022-4608; call 1.212.518.5400; or email [Corporate\\_Secretary@alcoa.com](mailto:Corporate_Secretary@alcoa.com).

## STOCK LISTING

Common Stock

New York Stock Exchange | Ticker symbol: AA



ALCOA CORPORATE CENTER  
201 Isabella Street  
Suite 500  
Pittsburgh, PA 15212-5858  
Tel 1.412.315.2900  
[www.alcoa.com](http://www.alcoa.com)

Alcoa Corporation is incorporated in Delaware

