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 1-3610

ARCONIC INC.

(Exact name of registrant as specified in its charter)

Pennsylvania	25-0317820
(State of incorporation)	(I.R.S. Employer Identification No.)

390 Park Avenue, New York, New York 10022-4608
(Address of principal executive offices) (Zip code)

Registrant's telephone numbers:

Investor Relations-------------— (212) 836-2758
Office of the Secretary-------—(212) 836-2732

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

Title of each class	Name of each exchange on which registered
Common Stock, par value $1.00 per share	New York Stock Exchange
Depositary Shares, each representing a 1/10th ownership interest in a share of 5.375% Class B Mandatory Convertible Preferred Stock, Series 1, par value $1.00 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 ✓.

The aggregate market value of the outstanding common stock, other than shares held by persons who may be deemed affiliates of the registrant, as of the last business day of the registrant's most recently completed second fiscal quarter was approximately $12 billion. As of February 23, 2017, there were 440,535,657 shares of common stock, par value $1.00 per share, of the registrant 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 Shareholders to be filed pursuant to Regulation 14A (Proxy Statement).

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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 the Proxy Statement. Unless otherwise provided herein, any reference in this report to disclosures in the Proxy Statement shall constitute incorporation by reference of only that specific disclosure into this Form 10-K.

PART I

Item 1. Business.

General

Formed in 1888, Arconic Inc. (formerly known as Alcoa Inc.) is a Pennsylvania corporation with its principal office in New York, New York. In this report, unless the context otherwise requires, “Arconic” or the “Company” means Arconic Inc. and all subsidiaries consolidated for the purposes of its financial statements.

The Company’s Internet address is http://www.arconic.com. Arconic 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.

Forward-Looking Statements

This report contains (and oral communications made by Arconic 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,” “guidance,” “intends,” “may,” “outlook,” “plans,” “projects,” “seeks,” “sees,” “should,” “targets,” “will,” “would,” or other words of similar meaning. All statements that reflect Arconic’s expectations, assumptions or projections about the future, other than statements of historical fact, are forward-looking statements, including, without limitation, forecasts relating to the growth of the aerospace, automotive, commercial transportation and other end markets; statements and guidance regarding future financial results or operating performance; statements about Arconic’s strategies, outlook, business and financial prospects; and statements regarding potential share gains. 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 Arconic 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 Arconic’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 Note L and the Derivatives Section of Note V to the Consolidated Financial Statements in Part II, Item 8. (Financial Statements and Supplementary Data). Market projections are subject to the risks discussed in this report and other risks in the market. Arconic disclaims any intention or obligation to update publicly any forward-looking statements, whether in response to new information, future events or otherwise, except as required by applicable law.

Overview

Arconic is a global leader in lightweight metals engineering and manufacturing. Arconic’s innovative, multi-material products, which include aluminum, titanium, and nickel, are used worldwide in aerospace, automotive, commercial transportation, packaging, building and construction, oil and gas, defense, consumer electronics, and industrial applications.

Arconic is a global company operating in 19 countries. Based upon the country where the point of sale occurred, the United States and Europe generated 63% and 26%, respectively, of Arconic's sales in 2016. In addition, Arconic has operating activities in Brazil, Canada, China, Japan, and Russia, among others. 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**.**

Arconic's operations consist of three worldwide reportable segments: Global Rolled Products, Engineered Products and Solutions, and Transportation and Construction Solutions.

Alcoa Corporation Separation Transaction

On November 1, 2016, Alcoa Inc. completed the separation of its business into two independent, publicly traded companies (the "Separation") – Alcoa Corporation and Arconic Inc. (the new name for Alcoa Inc.). Following the Separation, Alcoa Corporation holds the Alumina and Primary Metals segments, the rolling mill at the Warrick, Indiana, operations and the 25.1% stake in the Ma'aden Rolling Company in Saudi Arabia previously held by the Company. The Company retained the Global Rolled Products (other than the rolling mill at the Warrick, Indiana, operations and the 25.1% ownership stake in the Ma'aden Rolling Company), Engineered Products and Solutions and Transportation and Construction Solutions segments.

The Separation was effected by a pro rata distribution of 80.1% of the outstanding shares of Alcoa Corporation common stock to the Company's shareholders (the "Distribution"). The Company's shareholders of record as of the close of business on October 20, 2016 (the "Record Date") received one share of Alcoa Corporation common stock for every three shares of the Company's common stock held as of the Record Date. The Company did not issue fractional shares of Alcoa Corporation common stock in the Distribution. Instead, each shareholder otherwise entitled to receive a fractional share of Alcoa Corporation common stock received cash in lieu of fractional shares.

The Company distributed 146,159,428 shares of common stock of Alcoa Corporation in the Distribution and retained 36,311,767 shares, or approximately 19.9%, of the common stock of Alcoa Corporation immediately following the Distribution. As a result of the Distribution, Alcoa Corporation is now an independent public company trading under the symbol "AA" on the New York Stock Exchange, and the Company trades under the symbol "ARNC" on the New York Stock Exchange.

On October 31, 2016, in connection with the Separation and the Distribution, Arconic entered into several agreements with Alcoa Corporation or its subsidiaries that govern the relationship of the parties following the Distribution, including the following: Separation and Distribution Agreement, Transition Services Agreement, Tax Matters Agreement, Employee Matters Agreement, certain Patent, Know-How, Trade Secret License and Trademark License Agreements, Toll Processing and Services Agreement, Master Agreement for the Supply of Primary Aluminum, Massena Lease and Operations Agreement, Fusina Lease and Operations Agreement, and Stockholder and Registration Rights Agreement.

Description of the Business

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

Major Product Revenues

Products that contributed 10% or more to consolidated revenues for the years ended December 31, 2016, 2015 and 2014, were:

	For the Years Ended December 31,		
	2016	2015	2014
Flat-rolled aluminum	39%	42%	51%
Fastening systems	17%	18%	13%
Investment castings	15%	15%	14%
Other extruded and forged products	12%	11%	8%

See Note O to the Consolidated Financial Statements in Part II, Item 8. (Financial Statements and Supplementary Data) for operating results of the Company's reportable segments. Arconic has no customers that account for more than 10% of its consolidated revenues. However, certain of the Company's businesses are dependent upon a few significant customers. The loss of any such significant customer could have a material adverse effect on such businesses.

Global Rolled Products

Arconic's Global Rolled Products segment produces a range of aluminum sheet and plate products for the aerospace, automotive, commercial transportation, brazing and industrial markets. This segment comprises Aerospace and Automotive Products; Brazing, Commercial Transportation and Industrial Solutions; and Micromill™ Products and Services. As part of the Separation of Alcoa Corporation from the Company, the Global Rolled Products segment integrated its Bohai (China), Itapissuma (Brazil), and Samara (Russia) facilities into Brazing, Commercial Transportation and Industrial Solutions and its Tennessee (U.S.) facility into Aerospace and Automotive Products.

Aerospace and Automotive Products (AAP). AAP provides a wide range of products, including many highly-differentiated sheet and plate products, for the worldwide aerospace and North American automotive markets.

Brazing, Commercial Transportation and Industrial Solutions (BCI). BCI provides aluminum brazing sheet, brazing sheet product innovations, and proprietary multi-layer sheet solutions for multiple applications, including for commercial transportation and industrial customers.

Arconic Micromill™ Products and Services (MPS). MPS includes the Company's Micromill™ technology that produces an aluminum alloy that is 40 percent more formable and 30 percent stronger than incumbent automotive aluminum and twice as formable and at least 30 percent lighter than high-strength steel. Micromill also reduces a 20-day production process to 20 minutes, and allows the Company's customers to create lighter, more fuel-efficient vehicles.

For additional discussion of the Global Rolled Products segment's business, see "Results of Operations—Segment Information" in Part II, Item 7. (Management's Discussion and Analysis of Financial Condition and Results of Operations) and Note O to the Consolidated Financial Statements—Segment and Geographic Area Information in Part II, Item 8. (Financial Statements and Supplementary Data).

In November 2016, Arconic entered into a multi-year contract with Airbus valued at approximately $1 billion. The agreement puts Arconic sheet and plate on every Airbus platform and is the first to include material from Arconic's new state-of-the art "very thick plate stretcher" at its facility in Davenport, Iowa. Arconic expects the Davenport very thick plate stretcher to be commissioned by the second quarter of 2017 and to enable the Company to produce the largest high-strength monolithic wing ribs in the industry.

In June 2016, Arconic entered into a $470 million multi-year contract with Embraer under which Arconic will supply sheet and plate using proprietary alloys for Embraer's new E2s, the second generation of the E-Jets family of commercial aircraft.

In 2016, Arconic entered into multi-year contracts with Nissan North America to be the sole supplier of aluminum sheet for seven programs, including Altima, Murano, Maxima and Titan; and with Fiat Chrysler Automobiles, for the 2017 Chrysler Pacifica. Arconic's newly expanded facilities in Alcoa, Tennessee and Davenport, Iowa, and its Micromill facility in San Antonio, Texas, continue to support Ford Motor Company to supply its Ford F-150 and F-250 models.

Additionally, in 2016, Arconic's Micromill technology was recognized with a 2016 R&D 100 Award. The annual R&D 100 Awards is an international competition that recognizes the 100 most technologically significant products introduced in the marketplace over the past year, as selected by the editors of R&D Magazine.

Global Rolled Products Principal Facilities

Country	Location	Owners[1] (% Of Ownership)	Products
Brazil	Itapissuma	Arconic (100%)	Specialty Foil
China	Kunshan	Arconic (100%)	Sheet and Plate
	Qinhuangdao[2]	Arconic (100%)	Sheet and Plate
Hungary	Székesfehérvár	Arconic (100%)	Sheet and Plate/Slabs and Billets
Italy	Fusina[2]	Arconic (100%)	Sheet and Plate
Russia	Samara	Arconic (100%)	Sheet and Plate
United Kingdom	Birmingham	Arconic (100%)	Plate
United States	Davenport, IA	Arconic (100%)	Sheet and Plate
	Danville, IL[3]	Arconic (100%)	Sheet and Plate
	Hutchinson, KS[3]	Arconic (100%)	Sheet and Plate
	Lancaster, PA	Arconic (100%)	Sheet and Plate
	Alcoa, TN	Arconic (100%)	Sheet
	Texarkana, TX[4]	Arconic (100%)	Slabs
	San Antonio, TX	Arconic (100%)	Micromill

1 Facilities with ownership described as “Arconic (100%)” are either leased or owned directly or indirectly by the Company.

2 Leased property or partially leased property.

3 Properties are satellite locations of the Davenport, IA facility.

4 The Texarkana rolling mill facility had been idle since September 2009 due to a continued weak outlook in common alloy markets. In January 2016, the Company restarted its Texarkana cast house to meet demand for aluminum slab for the automotive industry. The aluminum slab that is cast at Texarkana is turned into aluminum sheets at Arconic’s expanded automotive facility in Davenport, Iowa and its rolling mill in Lancaster, Pennsylvania.

Engineered Products and Solutions

Arconic’s Engineered Products and Solutions segment develops and manufactures high performance products for the aerospace (commercial and defense), commercial transportation, and power generation end markets. Such products include fastening systems (titanium, steel, and nickel superalloys); seamless rolled rings (mostly nickel superalloys); investment castings (nickel superalloys, titanium, and aluminum), including airfoils and forged jet engine components (e.g., jet engine disks); and various forging and extrusion metal products for the oil and gas, industrial products, automotive, and land and sea defense end markets.

The Engineered Products and Solutions segment is comprised of four business units: Arconic Power and Propulsion; Arconic Fastening Systems and Rings; Arconic Forgings and Extrusions; and Arconic Titanium and Engineered Products.

Arconic Power and Propulsion (APP). APP produces investment cast airfoils for aero engine and industrial gas turbines and structural aero engine and airframe components. APP also provides additive manufacturing technologies, superalloy and titanium ingots, machining, performance coatings, and hot isostatic pressing for high performance parts.

Arconic Fastening Systems and Rings (AFSR). AFSR produces aerospace fastening systems and rings, as well as commercial transportation fasteners. The business’s rings and high-tech, multi-material fastening systems are found nose to tail on aircraft and aero engines. The business’s products are also critical components of industrial gas turbines, automobiles, commercial transportation vehicles, and construction and industrial equipment.

Arconic Forgings and Extrusions (AFE). AFE produces defense airframe forgings and extrusions, such as forged bulkheads, wing and landing gear components, and lightweight drive shafts for the aerospace and commercial transportation industries.

Arconic Titanium and Engineered Products (ATEP). ATEP produces titanium aero ingots and mill products, and provides multi-material airframe subassemblies and solutions related to advanced technologies and materials, such as 3D printing and titanium aluminides.

For additional discussion of the Engineered Products and Solutions segment's business, see "Results of Operations—Segment Information" in Part II, Item 7. (Management's Discussion and Analysis of Financial Condition and Results of Operations) and Note O to the Consolidated Financial Statements—Segment and Geographic Area Information in Part II, Item 8. (Financial Statements and Supplementary Data).

In April 2016, Arconic completed the sale of its Remmele Medical business to Lisi Medical for $102 million in cash ($99 million net of transaction costs). This business, which was acquired by the Company in July 2015 in conjunction with its acquisition of RTI International Metals, Inc., manufactures precision-machined metal products for customers in the minimally invasive surgical device and implantable device markets.

In June 2015, Arconic announced its investment of $22 million in Hot Isotopic Pressing (HIP) technology at its facility in Whitehall, Michigan. The investment is expected to enable Arconic to capture growing demand for advanced titanium, nickel and additive manufactured parts for the world's bestselling engines. Arconic completed installation of the HIP technology investment at its Whitehall facility in 2016 and expects that the new technology will be ready for product qualification by the end of the first quarter of 2017.

Arconic and VSMPO-AVISMA Corporation signed a cooperation agreement in October 2013 to form a new joint venture that will focus on manufacturing high-end titanium and aluminum aerospace products, such as landing gear and forged wing components, at Arconic's plant in Samara, Russia. The definitive Shareholders' Agreement was executed by the parties on July 16, 2014, and the deal closed in the third quarter of 2016. The facility is now operational.

Engineered Products and Solutions Principal Facilities[1]

Country	Facility	Owners[2] (% Of Ownership)	Products
Australia	Oakleigh	Arconic (100%)	Fasteners
Canada	Georgetown, Ontario[3]	Arconic (100%)	Aerospace Castings
	Laval, Québec	Arconic (100%)	Aerospace Castings and Machining
China	Nantong	Arconic (100%)	Aerospace Castings
	Suzhou[3]	Arconic (100%)	Fasteners and Rings
France	Dives-sur-Mer	Arconic (100%)	Aerospace and Industrial Gas Turbine Castings
	Evron	Arconic (100%)	Aerospace and Specialty Castings
	Gennevilliers	Arconic (100%)	Aerospace and Industrial Gas Turbine Castings
	Montbrison	Arconic (100%)	Fasteners
	St. Cosme-en-Vairais[3]	Arconic (100%)	Fasteners
	Toulouse	Arconic (100%)	Fasteners
	Us-par-Vigny	Arconic (100%)	Fasteners
Germany	Bestwig	Arconic (100%)	Aerospace Castings
	Erwitte	Arconic (100%)	Aerospace Castings
	Hannover[3]	Arconic (100%)	Extrusions
	Hildesheim-Bavenstedt[3]	Arconic (100%)	Fasteners
	Kelkheim[3]	Arconic (100%)	Fasteners

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Country	Facility	Owners[2] (% Of Ownership)	Products
Hungary	Eger	Arconic (100%)	Forgings
	Nemesvámos	Arconic (100%)	Fasteners
	Székesfehérvár	Arconic (100%)	Aerospace and Industrial Gas Turbine Castings and Forgings
Japan	Nomi	Arconic (100%)	Aerospace and Industrial Gas Turbine Castings
Mexico	Ciudad Acuña[3]	Arconic (100%)	Aerospace Castings/Fasteners
Morocco	Casablanca[3]	Arconic (100%)	Fasteners
Russia	Samara[4]	Arconic (100%)	Extrusions and Forgings
South Korea	Kyoungnam	Arconic (100%)	Extrusions
United Kingdom	Darley Dale	Arconic (100%)	Forgings
	Ecclesfield	Arconic (100%)	Ingot Castings
	Exeter[3]	Arconic (100%)	Aerospace and Industrial Gas Turbine Castings and Alloy
	Glossop	Arconic (100%)	Ingot Castings
	Ickles	Arconic (100%)	Ingot Castings
	Leicester[3]	Arconic (100%)	Fasteners
	Low Moor	Arconic (100%)	Extrusions
	Meadowhall	Arconic (100%)	Forgings
	Provincial Park	Arconic (100%)	Forgings
	Redditch[3]	Arconic (100%)	Fasteners
	River Don	Arconic (100%)	Forgings
	Telford	Arconic (100%)	Fasteners
	Welwyn Garden City	Arconic (100%)	Aerospace Formed Parts
United States	Chandler, AZ	Arconic (100%)	Extrusions
	Tucson, AZ[3]	Arconic (100%)	Fasteners
	Carson, CA[3]	Arconic (100%)	Fasteners
	City of Industry, CA[3]	Arconic (100%)	Fasteners
	Fontana, CA	Arconic (100%)	Rings
	Fullerton, CA[3]	Arconic (100%)	Fasteners
	Newbury Park, CA	Arconic (100%)	Fasteners
	Rancho Cucamonga, CA	Arconic (100%)	Rings
	Sylmar, CA	Arconic (100%)	Fasteners
	Torrance, CA	Arconic (100%)	Fasteners
	Tracy, CA	Arconic (100%)	Fasteners
	Branford, CT	Arconic (100%)	Aerospace Coatings
	Winsted, CT	Arconic (100%)	Aerospace Machining
	Savannah, GA	Arconic (100%)	Forgings
	Lafayette, IN	Arconic (100%)	Extrusions
	La Porte, IN	Arconic (100%)	Aerospace and Industrial Gas Turbine Castings
	Burlington, MA	Arconic (100%	Powdered Metal Parts
	Baltimore, MD[3]	Arconic (100%)	Extrusions

Country	Facility	Owners[2] (% Of Ownership)	Products
	Whitehall, MI	Arconic (100%)	Aerospace and Industrial Gas Turbine Castings and Coatings, Titanium Alloy and Specialty Products
	Sullivan, MO	Arconic (100%)	Titanium Mill Products
	Washington, MO	Arconic (100%)	Aerospace Formed Parts
	Big Lake, MN	Arconic (100%)	Aerospace Machining
	New Brighton, MN	Arconic (100%)	Aerospace Machining
	Roseville, MN[3]	Arconic (100%)	Aerospace Machining
	Dover, NJ	Arconic (100%)	Aerospace and Industrial Gas Turbine Castings and Alloy
	Verdi, NV	Arconic (100%)	Rings
	Kingston, NY[3]	Arconic (100%)	Fasteners
	Massena, NY	Arconic (100%)	Extrusions
	Rochester, NY	Arconic (100%)	Rings
	Canton, OH	Arconic (100%)	Ferro-Titanium Alloys and Titanium Mill Products
	Cleveland, OH	Arconic (100%)	Investment Casting Equipment, Aerospace Components, Castings, Forgings and Oil & Gas Drilling Products
	Niles, OH	Arconic (100%)	Titanium Mill Products
	New Kensington, PA	Arconic (100%)	Ingot Castings
	Morristown, TN[3]	Arconic (100%)	Aerospace and Industrial Gas Turbine Ceramic Products
	Austin, TX	Arconic (100%)	Additively Manufactured Parts
	Houston, TX	Arconic (100%)	Extrusions
	Spring, TX	Arconic (100%)	Deep Water Drilling Machining
	Waco, TX[3]	Arconic (100%)	Fasteners
	Wichita Falls, TX	Arconic (100%)	Aerospace and Industrial Gas Turbine Castings
	Hampton, VA[3]	Arconic (100%)	Aerospace and Industrial Gas Turbine Castings
	Martinsville, VA	Arconic (100%)	Titanium Mill Products

1 Principal facilities are listed, and do not include additional locations that serve as sales offices, distribution centers or warehouses.

2 Unless otherwise noted, facilities with ownership described as “Arconic (100%)” are owned by the Company.

3 Leased property or partially leased property.

4 The operating results of this facility are reported in the Global Rolled Products segment.

Transportation and Construction Solutions

Arconic’s Transportation and Construction Solutions segment produces products that are used mostly in the nonresidential building and construction and commercial transportation end markets. Such products include integrated aluminum structural systems, architectural extrusions, forged aluminum commercial vehicle wheels, and aluminum products for the industrial products end market.

The Transportation and Construction Solutions segment is comprised of three business units: Arconic Wheel and Transportation Products; Building and Construction Systems; and Latin American Extrusions.

Arconic Wheel and Transportation Products (AWTP). AWTP provides forged aluminum wheels and related products for heavy-duty trucks and the commercial transportation markets.

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Building and Construction Systems (BCS). BCS provides building and construction architectural framing products and aluminum curtain wall and front entry systems.

Latin American Extrusions (LAE). LAE serves both the building and construction and the industrial markets in Latin America, with products including aluminum architectural systems for doors, windows and curtain walls, and a wide range of extruded solutions for the automotive, defense and other industrial industries.

For additional discussion of the Transportation and Construction Solutions segment's business, see "Results of Operations—Segment Information" in Part II, Item 7. (Management's Discussion and Analysis of Financial Condition and Results of Operations) and Note O to the Consolidated Financial Statements—Segment and Geographic Area Information in Part II, Item 8. (Financial Statements and Supplementary Data).

In September 2016, Arconic announced the expansion of its wheels manufacturing plant in Hungary, increasing polishing capacity to produce the Company's patented LvL ONE® and Dura-Bright® EVO products and building a machining line to expand capacity for a variety of Alcoa® Wheel products.[1] Production is expected to begin in early 2017.

In 2016, Arconic signed more than $450 million in long term agreements with customers in North America, South America, Europe and Asia for its forged aluminum wheels. The largest is a long-term agreement with PACCAR, a global leader in the design, manufacture and customer support of high-quality light-, medium- and heavy-duty trucks. Arconic will supply forged aluminum Alcoa Wheels for PACCAR trucks under the Kenworth and Peterbilt nameplates.

[1] The "Alcoa" trademark is owned by Alcoa USA Corp. and used by Arconic under license from Alcoa USA Corp.

Transportation and Construction Solutions Principal Facilities[1]

Country	Facility	Owners[2] (% Of Ownership)	Products
Brazil	Itapissuma[3]	Arconic (100%)	Extrusions
	Tubarão	Arconic (100%)	Extrusions
	Utinga	Arconic (100%)	Extrusions
Canada	Lethbridge, Alberta	Arconic (100%)	Architectural Products
	Pointe Claire, Quebec	Arconic (100%)	Architectural Products
	Vaughan, Ontario	Arconic (100%)	Architectural Products
China	Suzhou[4]	Arconic (100%)	Forgings
France	Guerande	Arconic (100%)	Architectural Products
	Lézat-sur-Lèze [4]	Arconic (100%)	Architectural Products
	Merxheim[4]	Arconic (100%)	Architectural Products
	Vendarques	Arconic (100%)	Architectural Products
Germany	Iserlohn	Arconic (100%)	Architectural Products
Hungary	Székesfehérvár	Arconic (100%)	Forgings
Japan	Jōetsu City[4]	Arconic (100%)	Forgings
Mexico	Monterrey	Arconic (100%)	Forgings
Morocco	Casablanca[4]	Arconic (67%) Ahmed Hattabi (33%)	Architectural Products
Netherlands	Harderwijk	Arconic (100%)	Architectural Products
Spain	Irutzun	Arconic (100%)	Architectural Products
United Kingdom	Runcorn	Arconic (100%)	Architectural Products
United States	Springdale, AR	Arconic (100%)	Architectural Products

Country	Facility	Owners[2] (% Of Ownership)	Products
	Visalia, CA	Arconic (100%)	Architectural Products
	Eastman, GA	Arconic (100%)	Architectural Products
	Barberton, OH	Arconic (100%)	Forgings
	Chillicothe, OH	Arconic (100%)	Forgings
	Cleveland, OH	Arconic (100%)	Forgings
	Bloomsburg, PA	Arconic (100%)	Architectural Products
	Cranberry, PA	Arconic (100%)	Architectural Products
	Denton, TX[4]	Arconic (100%)	Forgings

1 Principal facilities are listed, and do not include additional locations that serve as sales offices, distribution centers or warehouses.

2 Facilities with ownership described as "Arconic (100%)" are owned by the Company.

3 This facility was permanently closed in December 2016 due to changes in production demand in the Brazilian market.

4 Leased property or partially leased property.

In addition to the facilities listed above, BCS has 10 U.S. service centers. These centers perform light manufacturing, such as assembly and fabrication of certain products.

Sources and Availability of Raw Materials

The major raw materials purchased in 2016 for each of the Company's reportable segments are listed below.

Global Rolled Products
Alloying materials
Aluminum scrap
Coatings
Electricity
Lube oil
Natural gas
Packaging materials
Primary aluminum (ingot, slab, billet, P1020, high purity)
Steam

Engineered Products and Solutions
Alloying materials
Electricity
Natural gas
Nickel alloys
Primary aluminum (ingot, billet, P1020, high purity)
Resin
Stainless steel
Steel
Titanium alloys
Titanium sponge

Transportation and Construction Solutions
Aluminum coil
Aluminum scrap
Electricity
Natural gas
Paint/Coating
Polyethylene
Primary aluminum
Resin

Generally, other 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.

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. The patents owned by Arconic generally concern particular products or manufacturing equipment or techniques. Arconic'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 the end of 2016, the Company's worldwide patent portfolio consists of approximately 1,458 granted patents and 697 pending patent applications.

The Company also has a significant number of trade secrets, mostly regarding manufacturing processes and material compositions that give many of its businesses important advantages in their markets. The Company continues to strive to improve those processes and generate new material compositions that provide additional benefits.

With respect to domestic and international registered trademarks, the Company has many that have significant recognition within the markets that are served. Examples include the name "Arconic" and the Arconic symbol for aluminum, nickel, and titanium products, Howmet® metal castings, Huck® fasteners, Kawneer® building panels and Dura-Bright® wheels with easy-clean surface treatments. A significant trademark filing campaign for the name "Arconic" was completed in 2016, in support of the corporate launch of Arconic Inc. As of the end of 2016, the Company's worldwide trademark portfolio consists of approximately 1,394 registered trademarks and 913 pending trademark applications. The Company's rights under its trademarks are important to the Company as a whole and, to varying degrees, important to each business segment.

Competitive Conditions

Global Rolled Products (GRP)

GRP is one of the leaders in many of the aluminum flat rolled products markets in which it participates, including aerospace, automotive, brazing sheet, commercial transportation, industrial markets and regional specialties. However, much like other Arconic businesses, GRP is subject to substantial and intense competition in all of its markets.

While GRP participates in markets where Arconic believes the Company has a significant competitive advantage due to customer intimacy, advanced manufacturing capability and/or differentiated products, in certain cases, the Company's competitors are capable of making products similar to Arconic's. The Company continuously works to maintain and enhance its competitive advantage through innovation: new alloys such as Arconic's new aerospace alloys, new products such as the Company's 5 layer brazing products and break-through processes such as Arconic Micromill™ technology.

GRP comprises AAP, BCI and MPS, each serving defined segments. Some of the markets are worldwide and some are more regionally focused. Participation in these segments by GRP's competitors varies. For example, Novelis is the largest flat rolled products producer but does not participate in the aerospace market. On the other hand, Constellium participates in all major market segments including aerospace, brazing, industrial, commercial transportation and packaging. Granges participates only in the brazing sheet market. Other GRP competitors include Aleris, AMAG, Kaiser, Kobe, Nanshan, and UACJ.

Additionally, there are a number of new competitors emerging, particularly in China and other developing economies. For example, in the brazing business, the number of viable competitors has doubled over a five-year period. Arconic expects that this competitive pressure will continue and increase in the future as customers seek to globalize their supply bases in order to reduce costs. The Company continually monitors and plans for these new emerging players.

Summary of Major Competitors for GRP (both AAP and BCI)

- Constellium (The Netherlands)
- Novelis
- UACJ (Japan)
- Aleris
- Hydro (Norway)
- Nanshan (China)
- Granges (Sweden)
- Kobe (Japan)

Engineered Products and Solutions (EPS)

EPS's business units—APP, AFSR, AFE and ATEP —are subject to substantial and intense competition in the markets they serve. Although Arconic believes its advanced technology, manufacturing processes and experience provide advantages to Arconic's customers, such as high quality and superior mechanical properties that meet the Company's customers' most stringent requirements, many of the products Arconic makes can be produced by competitors using similar types of manufacturing processes (e.g., closed die forgings) as well as alternative forms of manufacturing (e.g., machining out of plate). Despite intense competition, Arconic continues as a market leader in most of its principal markets. Several factors, including Arconic's legacy of technical innovation, state-of-the-art capabilities, engaged employees and long-standing customer relationships, enable the Company to maintain its competitive position.

In the investment castings business served by APP (Nickel, Titanium and Aluminum Investment Castings), Arconic's principal competitor is Precision Cast Parts Corp. (PCC). PCC produces superalloy, titanium and aluminum investment castings principally for the aerospace and industrial gas turbine markets. In addition, Doncasters Group Ltd. (UK) produces superalloy investment castings for engine applications, and Pacific Cast Technologies (a subsidiary of Allegheny Technologies, Inc. (ATI)) and Selmet both manufacture titanium investment castings for jet engine and airframe applications and Consolidated Precision Products (CPP) produces superalloy and aluminum investment castings principally for the aerospace and industrial gas turbine (IGT) markets. Several of Arconic's largest customers have captive superalloy furnaces for producing airfoil investment castings for their own use. Many other companies around the world also produce superalloy, titanium, and aluminum investment castings, and some of these companies currently compete with Arconic in the aerospace and other markets, while others are capable of competing with the Company should they choose to do so.

In the fasteners markets served by AFSR, the two principal competitors in the aerospace fastener business are PCC and Lisi Aerospace (France), with additional competition from Consolidated Aerospace Manufacturing-"CAM", and TriMas. These companies together offer a comprehensive array of products in a broad range of materials (including superalloys) that directly compete in AFSR's key segments including airframe, aero-engine, aerospace, and IGT. As aerospace original equipment manufacturers (OEMs) seek to balance product supply across large and small suppliers, they view smaller and emerging competition as essential in their efforts to manage sourcing costs.

In the rings products market served by AFSR, Arconic's principal competitor is PCC, especially through their Carlton facility. PCC produces superalloy, titanium and aluminum rings principally for the aerospace market. In addition, Forgital (France and Italy) produces rings in multiple materials, and Frisa (Mexico) manufactures rings in superalloys and titanium. Several smaller competitors around the world compete with Arconic in specific markets, depending on the equipment capability and metallurgical expertise.

In the forged products market served by AFE, Arconic's largest competitors are PCC, Weber Metals (a division of Otto Fuchs KG in Germany), Aubert & Duval (a group member of Eramet in France), VSMPO-AVISMA (Russia) and Ladish Co. (a subsidiary of ATI). In the extruded products market served by AFE, the Company faces increased competition from emerging international companies, such as Nanshan (China), as customers seek lower cost sources of production.

International competition in the investment casting**,** fastener, ring and forging markets may also increase in the future as a result of strategic alliances among engine OEMs, aero-structure prime contractors, and overseas companies, especially in developing markets, particularly where "offset" or "local content" requirements create purchase obligations with respect to products manufactured in or directed to a particular country.

In the titanium milled and engineered products market served by ATEP, Arconic's largest competitors are PCC (through its TiMet division), ATI, and VSMPO-AVISMA (Russia). ATEP also competes in the highly fragmented machining market with numerous small players throughout North America and Europe. In the highly competitive milled products space, cost and service are the differentiators, and there is continual effort to reduce prices for input raw material. For engineered products, such as the ATEP-supplied 787 seat tracks for Boeing, advanced capabilities as well as an efficient supply chain are the key differentiators.

Summary of Major Competitors:

APP: Superalloy, Titanium and Aluminum Investment Castings

- PCC
- Doncasters Group Ltd. (UK)
- Pacific Cast Technologies (a subsidiary of ATI)
- CPP
- Selmet

AFSR:

Fasteners

- Lisi Aerospace (France)
- PCC
- Consolidated Aerospace Manufacturing-"CAM"
- TriMas

Rings

- PCC
- Forgital (Italy, France)
- Frisa (Mexico)

AFE:

Nickel, Titanium, Steel and Aluminum Forged Products

- PCC
- Weber Metals (a subsidiary of Otto Fuchs KG in Germany).

- Aubert & Duval (a group member of Eramet in France)
- VSMPO-AVISMA (Russia)
- Ladish Co. (a subsidiary of ATI)

Aluminum Extruded Products

- Universal Alloys Corporation
- Kaiser Aluminum
- Constellium (The Netherlands)
- Nanshan (China)

ATEP:

- TiMet (a division of PCC)
- ATI
- VSMPO-AVISMA (Russia)

Transportation and Construction Solutions (TCS)

In the forged aluminum wheels business, AWTP competes in commercial transportation, under the product brand name Alcoa® Wheels, for the major regions that it serves (Americas, Europe, Japan, China, and Australia). AWTP competes against steel wheels, as well as aluminum. Its larger competitors are Accuride Corporation, Nippon Steel & Sumitomo Metal Corporation, Zhejiang Dicastal Hongxin Technology Co. Ltd, and Speedline (member of the Ronal Group). In recent years, AWTP has seen an increase in the number of aluminum wheel suppliers (both forged and cast aluminum wheels) from China, Taiwan, and South Korea attempting to penetrate the commercial transportation market.

BCS is a manufacturer and marketer of aluminum architectural systems and products in North America and with a growing presence in Europe, Asia and the Middle East. In North America, BCS primarily competes in the nonresidential building segment. In Europe, Asia and the Middle East, it competes in both the residential and the nonresidential building segments. BCS competes with regional and local players in the architectural systems and more global companies in the products markets. BCS's competitive advantage is the cornerstone to its strong brand, innovative products, customer intimacy and technical services. Over the past decade, the regional competitors, primarily in North America, have narrowed the product portfolio and technical services advantages. However, BCS has maintained its competitive advantage through innovative products like highly energy-efficient high-thermal products and differentiated services. BCS revenues are derived mainly from the retail, office, education and healthcare building segments.

BCS is organized into two business segments: architectural systems and architectural products. The primary product categories in architectural systems are storefront, framing and entrances (SEF), curtain walls, and windows. In the SEF and curtain wall businesses, BCS competes with competitors like Apogee, YKK, EFCO, Oldcastle, Schüco, Hydro/SAPA and Reynaers in their aluminum framing systems business. The architectural products business is more global and is primarily served by subsidiaries of larger companies like Alpolic (Mitsubishi Corporation), Alucobond (Schweiter Technologies) and Novelis (Aditya Birla Group). The competitive landscape in the architectural systems market has been relatively stable since the mid-2000s, with the major competitors in North America and Europe still operating in their markets, despite some industry consolidation in North America during the late 2000s.

LAE participates in two distinct segments: building and construction and industrial. In the building and construction market, LAE develops and markets aluminum architectural systems for both commercial and residential buildings. LAE's product portfolio provides extensive coverage of all types of buildings, from more complex projects requiring special engineering to multi-family residential buildings. In the industrial business market, LAE manufactures and sells soft alloy extruded profiles and solutions, mainly for the automotive, consumer goods, machinery and equipment segments. Overall, LAE holds a strong presence in Brazil, where competition is very fragmented, composed mainly of small local extruders and a few multinationals such as CBA (Votorantim Group) and SAPA.

Summary of Major Competitors:

AWTP:

- Accuride Corporation
- Nippon Steel & Sumitomo Metal Corporation (Japan)
- Zhejiang Dicastal Hongxin Technology Co. Ltd (China)
- Speedline (member of the Ronal Group in Switzerland)

BCS:

- North America Systems – Apogee, Oldcastle, YKK and EFCO
- North America Products – Alpolic, Alucobond and Alucoil
- Europe Systems - Schüco (Germany), Hydro/SAPA (Norway), Reynaers (Belgium) and Corialis (Belgium)
- Europe Products – Alucobond, Alucoil, Euramax and Novelis

LAE:

- Belmetal (Brazil)
- CBA (Brazil)
- SAPA (Norway)
- Aluk (Brazil)

Research and Development

Arconic, at its light metals research center, engages in research and development (R&D) programs that include process and product development, and basic and applied research. R&D expenditures were $132 million, $169 million and $123 million in 2016, 2015 and 2014, respectively.

Throughout 2016, the Company continued working on new developments in all business segments and leveraging new technologies. The Company has continued investing in additive manufacturing, with a focus on producing metal powder materials tailored for a range of additive process technologies, and furthering its development of advanced 3D printing design and manufacturing techniques—such as Arconic's Ampliforge™ process—to improve production speeds, reduce costs, and achieve geometries not possible through traditional methods. The Company's new powder production facility was completed at the Arconic Technology Center in 2016. This facility will continue its focus on material development in aluminum, nickel and titanium alloys.

Arconic's Micromill™ technology was awarded an R&D 100 Award, as one of the top innovations in 2016; the Company's second such award in three years. Notably, there are 13 OEMs that have signed Micromill nondisclosure agreements and 12 potential licensees engaged, including potential joint ventures.

The Company continued its differentiation in the commercial transportation market with Dura-Bright® EVO, UltraOne™ and European UltraOne™ wheel products.

The Company also continues to develop and deploy proprietary processing technologies in the manufacture of aerospace components, as well as a continued commitment and commercialization of a portfolio of proprietary aerospace fasteners. One such example is Ergo-Tech® blind fasteners.

Environmental Matters

Information relating to environmental matters is included in Note L to the Consolidated Financial Statements under the caption "Environmental Matters" on pages 96-97. Approved capital expenditures for new or expanded facilities for environmental control are approximately $11 million for 2017 and estimated expenditures for such purposes are $12.5 million for 2018.

Employees

Total worldwide employment at the end of 2016 was approximately 41,500 employees in 25 countries. About 24,600 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 United States, approximately 7,500 employees are represented by various labor unions. The largest collective bargaining agreement is the master collective bargaining agreement between Arconic and the United Steelworkers (USW). The USW master agreement covers approximately 3,400 employees at four U.S. locations; the current labor agreement expires on May 15, 2019. There are 17 other collective bargaining agreements in the United States with varying expiration dates.

On a regional basis, collective bargaining agreements with varying expiration dates cover approximately 9,300 employees in Europe and Russia, 13,100 employees in North America, 1,200 employees in Central and South America, and 1,000 employees in China.

Executive Officers of the Registrant

The names, ages, positions and areas of responsibility of the executive officers of the Company as of February 28, 2017 are listed below.

Ken Giacobbe, 50, Executive Vice President and Chief Financial Officer. Mr. Giacobbe was elected Executive Vice President and Chief Financial Officer of Arconic effective November 1, 2016. Mr. Giacobbe joined Arconic in 2004 as Vice President of Finance for Global Extruded Products, part of Alcoa Forgings and Extrusions. He then served as Vice President of Finance for the Company's Building and Construction Systems business from 2008 until 2011. In 2011, he assumed the role of Group Controller for the Engineered Products and Solutions business. From January 2013 until October 2016, Mr. Giacobbe served as Chief Financial Officer of the Engineered Products and Solutions business. Before joining Arconic, Mr. Giacobbe held senior finance roles at Avaya and Lucent Technologies.

Klaus Kleinfeld, 59, Director, Chairman of the Board and Chief Executive Officer. Mr. Kleinfeld was elected to Arconic's Board of Directors in November 2003 and became Chairman on April 23, 2010. He has been Chief Executive Officer of the Company since May 8, 2008. He was President and Chief Executive Officer from May 8, 2008 to April 23, 2010. He was President and Chief Operating Officer of Arconic from October 1, 2007 to May 8, 2008. Mr. Kleinfeld was President and Chief Executive Officer of Siemens AG, the global electronics and industrial conglomerate, from January 2005 to June 2007. He served as Deputy Chairman of the Managing Board and Executive Vice President of Siemens AG from 2004 to January 2005. He was President and Chief Executive Officer of Siemens Corporation, the U.S. arm of Siemens AG, from 2002 to 2004.

Christoph Kollatz, 56, Executive Vice President, Corporate Development, Strategy and New Ventures. Mr. Kollatz joined Arconic in May 2015 and was elected an Executive Vice President in September 2015. Before joining the Company, Mr. Kollatz was Chief Information and Process Officer at Lufthansa from 2012 to 2015, overseeing the information technology infrastructure, as well as IT applications, supporting financial and customer operations. Prior to

Lufthansa, from 2011 to 2012, Mr. Kollatz created and led a start-up business within SAP, introducing a new database technology to the market. Mr. Kollatz held a series of leadership, strategy and technology positions at Siemens from 1989 to 2011, including as CEO of Siemens IT Solutions and Services.

Kay H. Meggers, 52, Executive Vice President and Group President, Global Rolled Products. Mr. Meggers was elected an Executive Vice President in December 2011. He was named Group President, Global Rolled Products effective November 14, 2011. Before his most recent appointment, he led Arconic's Business Excellence and Corporate Strategy resource unit and was also responsible for overseeing Arconic's Asia-Pacific region. He joined Arconic in February 2010 as Vice President, Corporate Initiatives, a position responsible for planning and coordinating major strategic initiatives from enhancing technology and innovation as part of the Alcoa Technology Advantage program to spearheading growth strategies for China and Brazil. He was elected a Vice President of Arconic in June 2011. Before joining Arconic, Mr. Meggers was Senior Vice President at Siemens U.S. Building Technologies Division and served for three years as Business Unit Head of Building Automation. In 2006, he served for nine months as Division Head of Fire Safety, also part of Siemens U.S. Building Technologies Division. Between 2002 and 2005, he served as Vice President of Strategic Planning at Siemens U.S.

Timothy D. Myers, 51, Executive Vice President and Group President, Transportation and Construction Solutions. Mr. Myers was appointed Executive Vice President and Group President, Transportation and Construction Solutions in May 2016. Prior to being appointed to his current role, he was President of Alcoa Wheel and Transportation Products, from June 2009 to May 2016. Prior to that assignment, Mr. Myers was Vice President and General Manager, Commercial Vehicle Wheels for the Alcoa Wheel Products business from January 2006. Mr. Myers joined Arconic in 1991 as an automotive applications engineer in the Commercial Rolled Products Division, and held a series of engineering, marketing, sales and management positions with the Company since that time.

Paul Myron, 50, Vice President and Controller. Mr. Myron was elected Vice President and Controller of Arconic effective November 1, 2016. Mr. Myron joined Arconic as a systems analyst in Pittsburgh and in 1992 relocated to the Company's Davenport, Iowa facility as a product accountant. He served in numerous financial management positions from 1995 until 2000 when he was named Commercial Manager and Controller for the Atlantic division of the Alcoa World Alumina and Chemicals business. In 2002, Mr. Myron was appointed Vice President of Finance, Alcoa Primary Metals and later became Vice President of Finance, Alcoa World Alumina and Chemicals. In 2005 Mr. Myron was elected Director of Financial Planning and Analysis, accountable for Arconic's financial planning, analysis, and reporting worldwide. In February 2012, he became Director of Finance Initiatives for the Engineered Products and Solutions business, overseeing specific financial initiatives and projects within the group. From July 2012 until his most recent appointment, Mr. Myron served as Vice President, Finance and Business Excellence for the Arconic Power and Propulsion business.

Vas Nair, 51, Executive Vice President, Human Resources and Environment, Health, Safety and Sustainability. Ms. Nair was appointed Executive Vice President, Human Resources and Environment, Health, Safety and Sustainability in November 2015. Prior to being appointed to her current role, Ms. Nair was Arconic's Chief Talent and Diversity Officer, with global responsibility for diversity and inclusion from February 2015 to October 2015. Prior to joining Arconic, Ms. Nair was VP of Global Learning and Talent Development at Estee Lauder from November 2010 to January 2015. Ms. Nair was Vice President and Chief Learning Officer at Schering-Plough from November 2003 to October 2009.

Katherine H. Ramundo, 49, Executive Vice President, Chief Legal Officer and Secretary. Ms. Ramundo was elected to her current position effective November 1, 2016. Prior to joining Arconic, from January 2013 through August 2015, she was Executive Vice President, General Counsel and Secretary of ANN INC., the parent company of ANN TAYLOR and LOFT brands, based in New York. Prior to ANN INC., she served as Vice President, Deputy General Counsel and Assistant Secretary at Colgate-Palmolive, where she held various legal roles from November 1997 to January 2013. She began her career as a litigator in New York, practicing at major law firms, including Cravath, Swaine & Moore and Sidley & Austin.

Karl Tragl, 54, is Executive Vice President and Group President, Engineered Products and Solutions. Mr. Tragl was appointed to his current position effective May 1, 2016. Prior to his current role, Mr. Tragl served as Group President, Transportation and Construction Solutions (TCS) from February 2016 through April 2016. Previously, Mr. Tragl was the Chief Executive Officer of Bosch Rexroth AG, Bosch's $6 billion automation solutions company, based in Germany, from 2010 to 2016. Mr. Tragl served in a progression of roles at Bosch Rexroth, joining the company in 2000 as head of the Automations Services business, and then advancing through the Electric Drives and Controls Business to assume responsibility for Factory Automation and Global Sales for the entire company. Earlier in his career, he was managing director of the Siemens Standard Drives business and a partner in the Siemens in-house Management Consulting Group.

The Company's executive officers are elected or appointed to serve until the next annual meeting of the Board of Directors (held in conjunction with the annual meeting of shareholders) except in the case of earlier death, retirement, resignation or removal.

Item 1A. Risk Factors.

Arconic'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 Arconic'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 Arconic or that Arconic currently deems immaterial also may materially adversely affect the Company in future periods.

The markets for Arconic's products are highly cyclical and are influenced by a number of factors, including global economic conditions.

Arconic is subject to cyclical fluctuations in global economic conditions and lightweight metals end-use markets. Arconic sells many products to industries that are cyclical, such as the aerospace, automotive, and commercial construction and transportation industries, and the demand for its products is sensitive to, and quickly impacted by, demand for the finished goods manufactured by its customers in these industries, which may change as a result of changes in regional or worldwide economies, currency exchange rates, energy prices or other factors beyond its control.

In particular, Arconic derives a significant portion of its revenue from products sold to the aerospace industry, which can be highly cyclical and reflective of changes in the general economy. The commercial aerospace industry is historically driven by the demand from commercial airlines for new aircraft. The U.S. and international commercial aviation industries may face challenges arising from competitive pressures and fuel costs. Demand for commercial aircraft is influenced by airline industry profitability, trends in airline passenger traffic, the state of U.S., regional and world economies, the ability of aircraft purchasers to obtain required financing and numerous other factors including the effects of terrorism, health and safety concerns, environmental constraints imposed upon aircraft operators, the retirement of older aircraft, and technological improvements to new engines. The military aerospace cycle is highly dependent on U.S. and foreign government funding; however, it is also driven by the effects of terrorism, a changing global political environment, U.S. foreign policy, the retirement of older aircraft, and technological improvements to new engines.

Further, the demand for Arconic's automotive and ground transportation products is driven by the number of vehicles produced by automotive manufacturers and Arconic content per vehicle. The automotive industry is sensitive to general economic conditions, including credit markets and interest rates, and consumer spending and preferences regarding vehicle ownership and usage, vehicle size, configuration and features. Automotive sales and production can also be affected by other factors including the age of the vehicle fleet and related scrappage rates, labor relations issues, fuel prices, regulatory requirements, government initiatives, trade agreements and levels of competition.

While Arconic believes that the long-term prospects for its products are positive, the Company is unable to predict the future course of industry variables, the strength of the U.S., regional or global economies, or the effects of government intervention. Negative economic conditions, such as a major economic downturn, a prolonged recovery period, or disruptions in the financial markets, could have a material adverse effect on Arconic's business, financial condition or results of operations.

Arconic's business could be adversely affected by increases in the cost of aluminum.

Arconic derives a significant portion of its revenue from aluminum-based products. The price of primary aluminum has historically been subject to significant cyclical price fluctuations and the timing of changes in the market price of aluminum is largely unpredictable. Although the Company's pricing of products is generally intended to pass the risk of metal price fluctuations on to the Company's customers, Arconic may not be able to pass on the entire cost of increases to its customers and there can be a potential time lag on certain products between increases in costs for aluminum and the point when the Company can implement a corresponding increase in price to its customers. As a result, Arconic may be exposed to such price fluctuations during the time lag. If this occurs, it could have a material adverse effect on Arconic's financial position, results of operations and cash flows.

Arconic's customers may reduce their demand for aluminum products in favor of alternative materials.

Certain applications of Arconic's aluminum-based products compete with products made from other materials, such as steel, titanium and composites. The willingness of customers to pursue materials other than aluminum depends upon the desire to achieve specific attributes. For example, the commercial aerospace industry has used and continues to evaluate the further use of alternative materials to aluminum, such as titanium and composites, in order to reduce the weight and increase the fuel efficiency of aircraft. Additionally, the automotive industry, while motivated to reduce vehicle weight through the use of aluminum, may revert to steel or other materials for certain applications. Further, the decision to use aluminum may be impacted by aluminum prices. The willingness of customers to accept other materials in lieu of aluminum could adversely affect the demand for certain of Arconic's products, and thus adversely affect Arconic's financial position, results of operations and cash flows.

Arconic's profitability could be adversely affected by volatility in the availability or cost of raw materials.

Arconic's results of operations may be affected by changes in the availability or cost of raw materials, as well as freight costs associated with transportation of raw materials. The availability and costs of certain raw materials necessary for the production of Arconic's products may be influenced by private or government cartels, changes in world politics or regulatory requirements, labor relations between the producers and their work forces, unstable governments in exporting nations, export quotas, new or increased import duties, market forces of supply and demand, and inflation. In addition, from time to time, commodity prices may fall rapidly. When this happens, suppliers may withdraw capacity from the market until prices improve, which may cause periodic supply interruptions. Arconic may not be able to fully offset the effects of raw material shortages or higher costs through price increases, productivity improvements or cost reduction programs. Shortages or price fluctuations in raw materials could have a material adverse effect on Arconic's operating results.

Arconic could encounter manufacturing difficulties, which could affect Arconic's reputation, business and financial statements.

The manufacture of many of Arconic's products is a highly exacting and complex process. Problems may arise during manufacturing for a variety of reasons, including equipment malfunction, failure to follow specific protocols and procedures, problems with raw materials, supply chain interruptions, natural disasters, labor unrest and environmental factors. Such problems could have an adverse impact on the Company's ability to fulfill orders or on product performance. Product manufacturing issues could result in recalls, customer penalties, contract cancellation and product liability exposure. Because of approval and license requirements applicable to manufacturers and/or their suppliers, alternatives to mitigate manufacturing disruptions may not be readily available to the Company or its customers. Accordingly, manufacturing problems could result in significant costs to and liability for Arconic, as well as negative publicity and damage to the Company's reputation which could impact product demand.

Arconic's business depends, in part, on its ability to successfully meet increased program demand and mitigate the impact of program cancellations, reductions and delays.

The success of Arconic's aerospace business will depend, in part, on the success of commercial and military aircraft programs. Arconic is currently under contract to supply components for a number of new and existing commercial, general aviation and military aircraft programs. Many of these programs are scheduled for production increases over the next several years. Arconic's failure to successfully meet production levels could have a material adverse effect on the Company's business. Similarly, cancellations, reductions or delays could also have a material adverse effect on Arconic's business.

Arconic could be adversely affected by reductions in defense spending.

Arconic's products are used in a variety of military applications, including military aircraft and armored vehicles. Although many of the programs in which Arconic participates extend several years, they are subject to annual funding through congressional appropriations. Changes in military strategy and priorities, or reductions in defense spending, may affect current and future funding of these programs and could reduce the demand for Arconic's products, which could adversely affect Arconic's financial position, results of operations and cash flows.

Arconic's global operations expose the Company to risks that could adversely affect Arconic's business, financial condition, operating results or cash flows.

Arconic has operations or activities in numerous countries and regions outside the United States, including Europe, Brazil, Canada, China, Japan, and Russia. 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, and renegotiation or nullification of existing agreements;
- 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, or the Ebola virus), which could cause disruptions in Arconic's 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 Arconic's business, financial condition, operating results or cash flows. Existing insurance arrangements may not provide protection for the costs that may arise from such events.

Arconic may face challenges to its intellectual property rights which could adversely affect the Company's reputation, business and financial position.

Arconic owns important intellectual property, including patents, trademarks, copyrights and trade secrets. The Company's intellectual property plays an important role in maintaining Arconic's competitive position in a number of the markets that the Company serves. Arconic's competitors may develop technologies that are similar or superior to Arconic's proprietary technologies or design around the patents Arconic owns or licenses. Further, as the Company expands its operations in jurisdictions where the enforcement of intellectual property rights is less robust, the risk of others duplicating Arconic's proprietary technologies increases, despite efforts the Company undertakes to protect them. Developments or assertions by or against Arconic relating to intellectual property rights, and any inability to protect or enforce these rights, could adversely affect Arconic's business and competitive position.

Arconic is exposed to fluctuations in foreign currency exchange rates and interest rates, as well as inflation, and other economic factors in the countries in which it operates.

Economic factors, including inflation and fluctuations in foreign currency exchange rates and interest rates, competitive factors in the countries in which Arconic operates, and continued volatility or deterioration in the global economic and financial environment could affect Arconic's revenues, expenses and results of operations. Changes in the valuation of the U.S. dollar against other currencies, including the British pound, Chinese yuan (renminbi), Euro and Russian ruble, may affect Arconic's profitability as some important inputs are purchased in other currencies, while the Company's products are generally sold in U.S. dollars.

Arconic may not be able to realize the expected benefits from its strategy of growing its precision engineering and advanced manufacturing businesses.

Arconic is continuing to execute on its strategy of growing its precision engineering and advanced manufacturing business to capture profitable growth as a lightweight metals innovation leader. It is investing in its manufacturing and engineering businesses to capture growth opportunities in strong end markets like automotive and aerospace. Arconic is building out its businesses, including by introducing innovative new products and technology solutions, and investing in expansions of capacity. Arconic's recent organic growth projects include the automotive expansions in Davenport, Iowa and Alcoa, Tennessee; the aluminum lithium capacity expansion in Lafayette, Indiana, at the Arconic Technology Center in Pennsylvania and at the Kitts Green plant in the United Kingdom; and the expansion in aerospace capabilities in La Porte, Indiana, Hampton, Virginia and Davenport, Iowa. From time to time, Arconic also pursues growth opportunities that are strategically aligned with its objectives, such as the acquisition of the Firth Rixson business (completed in November 2014), the acquisition of TITAL (completed in March 2015) and the acquisition of RTI International Metals (completed in July 2015). In addition, Arconic is optimizing its rolling mill portfolio as part of its strategy for profitable growth.

Arconic has made, and may continue to plan and execute, acquisitions and divestitures and take other actions to grow or streamline its portfolio. Although management believes that its strategic actions are beneficial to Arconic, there is no assurance that anticipated benefits will be realized. Adverse factors may prevent Arconic from realizing the benefits of its growth projects, including unfavorable global economic conditions, currency fluctuations, or unexpected delays in target timelines. Acquisitions present significant challenges and risks, including the effective integration of the business into the Company, unanticipated costs and liabilities, and the ability to realize anticipated benefits, such as growth in market share, revenue or margins, at the levels or in the timeframe expected. The Company may be unable to manage acquisitions successfully.

With respect to portfolio optimization actions such as divestitures, curtailments and closures, Arconic may face barriers to exit from unprofitable businesses or operations, including high exit costs or objections from various stakeholders. In addition, Arconic may retain unforeseen liabilities for divested entities if a buyer fails to honor all commitments. Arconic's business operations are capital intensive, and curtailment or closure of operations or facilities may include significant charges, including employee separation costs, asset impairment charges and other measures.

There can be no assurance that acquisitions, growth investments, divestitures or closures will be undertaken or completed in their entirety as planned or that they will be beneficial to Arconic.

Arconic may not be able to successfully realize future targets or goals established for its business segments, at the levels or by the dates targeted.

From time to time, Arconic may announce future targets or goals for its business, which are based on the Company's then current expectations, estimates, forecasts and projections about the operating environment, economies and markets in which Arconic operates. Future targets and goals reflect the Company's beliefs and assumptions and its perception of historical trends, then current conditions and expected future developments, as well as other factors management believes are appropriate in the circumstances. As such, targets and goals are inherently subject to significant business, economic, competitive and other uncertainties and contingencies regarding future events, including the risks discussed in this report. The actual outcome may be materially different. There can be no assurance that any targets or goals established by the Company will be accomplished at the levels or by the dates targeted, if at all. Failure to achieve the targets or goals by the Company may have a material adverse effect on its business, financial condition, results of operations or the market price of its securities.

Arconic faces significant competition, which may have an adverse effect on profitability.

As discussed in Part I, Item 1. (Business—Competitive Conditions) of this report, the markets for Arconic's products are highly competitive. Arconic's competitors include a variety of both U.S. and non-U.S. companies in all major markets. New product offerings or new technologies in the marketplace may compete with or replace Arconic products. The willingness of customers to accept substitutes for the products sold by Arconic, the ability of large customers to exert leverage in the marketplace to affect the pricing for Arconic's products, and technological advancements or other developments by or affecting Arconic's competitors or customers could affect Arconic's results of operations. In addition, Arconic's competitive position depends, in part, on the Company's ability to leverage its innovation expertise across its businesses and key end markets.

A downgrade of Arconic's credit ratings could limit Arconic's ability to obtain future financing, increase its borrowing costs, increase the pricing of its credit facilities, adversely affect the market price of its securities, trigger letter of credit or other collateral postings, or otherwise impair its business, financial condition, and results of operations.

Arconic's credit ratings are important to the Company's cost of capital. The major rating agencies routinely evaluate Arconic's credit profile and assign debt ratings to the Company. This evaluation is based on a number of factors, which include financial strength, business and financial risk, as well as transparency with rating agencies and timeliness of financial reporting. Standard and Poor's Ratings Services (S&P) currently rates Arconic's long-term debt at BBB-, the lowest level of investment grade rating, with a stable ratings outlook, and its short-term debt at A-3 (ratings and outlook were affirmed on April 29, 2016 and September 19, 2016). On November 1, 2016, Moody's Investor Service (Moody's) downgraded Arconic's long-term debt rating from Ba1, which is below investment grade, to Ba2 and its short-term debt rating from Speculative Grade Liquidity Rating-1 to Speculative Grade Liquidity-2, based upon the completion of the Separation. Additionally, Moody's changed the outlook from negative to stable. On April 21, 2016, Fitch affirmed Arconic's long-term debt rating at BB+, which is below investment grade, and short-term debt at B. Additionally, Fitch changed the current outlook from positive to evolving. On July 7, 2016, Fitch changed the current outlook from evolving to stable based on the filing of a Form 10 registration statement related to the planned separation of Alcoa Corporation from Arconic.

There can be no assurance that one or more of these or other rating agencies will not take negative actions with respect to Arconic's ratings. Increased debt levels, macroeconomic conditions, a deterioration in the Company's debt protection metrics, a contraction in the Company's liquidity, or other factors could potentially trigger such actions. A rating agency may lower, suspend or withdraw entirely a rating or place it on negative outlook or watch if, in that rating agency's judgment, circumstances so warrant.

A downgrade of Arconic's credit ratings by one or more rating agencies could adversely impact the market price of Arconic's securities; adversely affect existing financing (for example, a downgrade by Standard and Poor's or a further downgrade by Moody's would subject Arconic to higher costs under Arconic's Five-Year Revolving Credit Agreement and certain of its other revolving credit facilities); limit access to the capital (including commercial paper) or credit markets or otherwise adversely affect the availability of other new financing on favorable terms, if at all; result in more restrictive covenants in agreements governing the terms of any future indebtedness that the Company incurs; increase the cost of borrowing or fees on undrawn credit facilities; result in vendors or counterparties seeking collateral or letters of credit from Arconic; or otherwise impair Arconic's business, financial condition and results of operations.

Joint ventures and other strategic alliances may not be successful.

Arconic may participate in joint ventures, strategic alliance and other similar arrangements from time to time. Although the Company has, in connection with its existing joint venture, sought to protect its interests, joint ventures and strategic alliances inherently involve special risks. Whether or not Arconic holds majority interests or maintains operational control in such arrangements, its 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 Arconic believes to be in its or the joint venture's or strategic alliance's best interests;
- take action contrary to Arconic's policies or objectives with respect to its 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 any Arconic joint venture or strategic alliance will be beneficial to the Company, whether due to the above-described risks, unfavorable global economic conditions, increases in construction costs, currency fluctuations, political risks, or other factors.

Arconic's business and growth prospects may be negatively impacted by limits in its capital expenditures.

Arconic requires substantial capital to invest in growth opportunities and to maintain and prolong the life and capacity of its existing facilities. Insufficient cash generation or capital project overruns may negatively impact Arconic's ability to fund as planned its sustaining and return-seeking capital projects. Over the long term, Arconic's ability to take advantage of improved market conditions or growth opportunities in its businesses may be constrained by earlier capital expenditure restrictions, which could adversely affect the long-term value of its business and the Company's position in relation to its competitors.

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

Arconic's results of operations may be negatively affected by the amount of expense Arconic records for its pension and other postretirement benefit plans, reductions in the fair value of plan assets and other factors. Arconic calculates income or expense for its 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 Arconic 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, Arconic is required to make an annual measurement of plan assets and liabilities, which may result in a significant charge to shareholders' equity. For a discussion regarding how Arconic's financial statements can be affected by pension and other postretirement benefits accounting policies, see "Critical Accounting Policies and Estimates—Pension and Other Postretirement Benefits" in Part II, Item 7. (Management's Discussion and Analysis of Financial Condition and Results of Operations) and Note U to the Consolidated Financial Statements—Pension and Other Postretirement Benefits in Part II, Item 8. (Financial Statements and Supplementary Data). 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 Arconic 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 Arconic 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 signed into law. BBA 2015 extends the relief period provided by HAFTA. Arconic believes 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 the Company’s cash flows. Adverse capital market conditions could result in reductions in the fair value of plan assets and increase the Company’s liabilities related to such plans, which could adversely affect Arconic’s liquidity and results of operations.

Unanticipated changes in Arconic’s tax provisions or exposure to additional tax liabilities could affect Arconic’s future profitability.

Arconic is subject to income taxes in both the United States and various non-U.S. jurisdictions. Its 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. Arconic’s 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 its deferred tax assets. The Company’s 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 its 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 Arconic’s effective tax rate, cash tax expenditures, and deferred tax assets and liabilities.

Union disputes and other employee relations issues could adversely affect Arconic’s financial results.

A significant portion of Arconic’s employees are represented by labor unions in a number of countries under various collective bargaining agreements with varying durations and expiration dates. For more information, see “Employees” in Part I, Item 1. (Business) of this report. While Arconic was previously successful in renegotiating its collective bargaining agreements with various unions, Arconic may not be able to satisfactorily renegotiate collective bargaining agreements in the United States and other countries when they expire. In addition, existing collective bargaining agreements may not prevent a strike or work stoppage at Arconic’s facilities in the future. Arconic may also be subject to general country strikes or work stoppages unrelated to its business or collective bargaining agreements. Any such work stoppages (or potential work stoppages) could have a material adverse effect on Arconic’s financial results.

Arconic could be adversely affected by changes in the business or financial condition or the loss of a significant customer or customers.

A significant downturn or deterioration in the business or financial condition or loss of a key customer or customers supplied by Arconic could affect Arconic’s results of operations in a particular period. Arconic’s 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. Arconic’s customers may also change their business strategies or modify their business relationships with Arconic, including to reduce the amount of Arconic’s products they purchase or to switch to alternative suppliers. If Arconic is not successful in replacing business lost from such customers, profitability may be adversely affected.

Arconic may not be able to successfully develop and implement technology initiatives.

Arconic is working on new developments for a number of strategic projects in all business segments, including additive manufacturing, alloy development, engineered finishes and product design, high speed continuous casting and rolling technology, and other advanced manufacturing technologies. For more information on Arconic's research and development programs, see "Research and Development" in Part I, Item 1. (Business) of this report. There can be no assurance that such developments or technologies will be commercially feasible or beneficial to Arconic.

Arconic's human resource talent pool may not be adequate to support the Company's growth.

Arconic's existing operations and development projects require highly skilled executives and staff with relevant industry and technical experience. The inability of the Company or the industry to attract and retain such people may adversely impact Arconic's ability to adequately meet project demands and fill roles in existing operations. Skills shortages in engineering, technical service, construction and maintenance contractors and other labor market inadequacies may also impact activities. These shortages may adversely impact the cost and schedule of development projects and the cost and efficiency of existing operations.

Arconic may not realize expected benefits from its productivity and cost-reduction initiatives.

Arconic has undertaken, and may continue to undertake, productivity and cost-reduction initiatives to improve performance and conserve cash, including deployment of company-wide business process models, such as Arconic's 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 Arconic or that estimated cost savings from such activities will be realized.

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

Arconic's 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 Arconic. The Company may experience a change in effective tax rates or 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. The Company is 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. Arconic could be subject to fines, penalties, damages (in certain cases, treble damages), or suspension or debarment from government contracts.

While Arconic believes it has adopted appropriate risk management and compliance programs to address and reduce these risks, the global and diverse nature of its 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 the Company's results of operations or cash flows in a particular period. For additional information regarding the legal proceedings involving the Company, see the discussion in Part I, Item 3. (Legal Proceedings) of this report and in Note L to the Consolidated Financial Statements in Part II, Item 8. (Financial Statements and Supplementary Data).

Arconic is subject to a broad range of health, safety and environmental laws and regulations in the jurisdictions in which it operates and may be exposed to substantial costs and liabilities associated with such laws and regulations.

Arconic's 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 Arconic may be liable may arise in the future at its present sites, where no problem is currently known, at previously owned sites, sites previously operated by the Company, sites owned by its predecessors or sites that it may acquire in the future. Compliance with environmental, health and safety legislation and regulatory requirements may prove to be more limiting and costly than the Company anticipates. Arconic's 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.

Arconic may be affected by global climate change or by legal, regulatory, or market responses to such change.

Increased concern over climate change has led to new and proposed legislative and regulatory initiatives, such as cap-and-trade systems and additional limits on emissions of greenhouse gases. New laws enacted could directly and indirectly affect Arconic's customers and suppliers (through an increase in the cost of production or their ability to produce satisfactory products) or business (through an impact on Arconic's inventory availability, cost of sales, operations or demand for Arconic products), which could result in an adverse effect on our financial condition, results of operations and cash flows. Compliance with any new or more stringent laws or regulations, or stricter interpretations of existing laws, could require additional expenditures by the Company or its customers or suppliers. Also, Arconic relies on natural gas, electricity, fuel oil and transport fuel to operate its facilities. Any increased costs of these energy sources because of new laws could be passed along to the Company and its customers and suppliers, which could also have a negative impact on Arconic's profitability.

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

Arconic faces 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.

The Company believes that it faces a heightened threat of cyber attacks due to the industries it serves, the locations of its operations and its technological innovations. The Company has experienced cybersecurity attacks in the past, including breaches of its 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 Arconic's 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 its 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 its systems or networks, compromise confidential or otherwise protected information, destroy or corrupt data, or otherwise disrupt its operations. The occurrence of such events could negatively impact Arconic's reputation and its 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 its 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 the Company's investment in research and development.

Anti-takeover provisions could prevent or delay a change in control of Arconic, including a takeover attempt by a third party and limit the power of Arconic's shareholders.

Arconic's Articles of Incorporation and By-laws contain, and Pennsylvania 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 Arconic's Board of Directors rather than to attempt a hostile takeover. For example, Arconic is subject to Subchapters E-J of Chapter 25 and Section 2538 of Subchapter D of Chapter 25 of the Pennsylvania Business Corporation Law, which could make it more difficult for another party to acquire Arconic. Additionally, the Company's Articles of Incorporation authorize Arconic's Board of Directors to issue preferred stock or adopt other anti-takeover measures without shareholder approval. These provisions may apply even if an offer may be considered beneficial by some shareholders and could delay or prevent an acquisition that Arconic's Board of Directors determines is not in the best interests of Arconic's shareholders. These provisions may also limit the price that investors might be willing to pay in the future for shares of Arconic common stock, or prevent or discourage attempts to remove and replace incumbent directors.

Dividends on Arconic common stock could be reduced or eliminated in the event of material future deterioration in business conditions or in other circumstances.

The existence, timing, declaration, amount and payment of future dividends to Arconic's shareholders falls within the discretion of Arconic's Board of Directors. The Arconic Board of Director's decisions regarding the payment of dividends will depend on many factors, such as Arconic's financial condition, earnings, capital requirements, debt service obligations, covenants associated with certain of the Company's debt service obligations, industry practice, legal requirements, regulatory constraints and other factors that Arconic's Board of Directors deems relevant. Arconic's Board of Directors may determine to reduce or eliminate Arconic's common stock dividend in the event of material future deteriorations in business conditions.

Arconic may not achieve some or all of the expected benefits of the Separation, and failure to realize such benefits in a timely manner may materially adversely affect Arconic's business.

Arconic may not be able to achieve the full strategic and financial benefits expected to result from the Separation, or such benefits may be delayed or not occur at all. The Separation is expected to provide the following benefits, among others: (i) enabling the management of each company to more effectively pursue its own distinct operating priorities and strategies, to focus on strengthening its core business and its unique needs, and to pursue distinct and targeted opportunities for long-term growth and profitability; (ii) permitting each company to allocate its financial resources to meet the unique needs of its own business, allowing each company to intensify its focus on its distinct strategic priorities and to more effectively pursue its own distinct capital structures and capital allocation strategies; (iii) allowing each company to more effectively articulate a clear investment thesis to attract a long-term investor base suited to its business and providing investors with two distinct and targeted investment opportunities; (iv) creating an independent equity currency tracking each company's underlying business, affording Arconic and Alcoa Corporation direct access to the capital markets and facilitating each company's ability to consummate future acquisitions or other restructuring transactions utilizing its common stock; (v) allowing each company more consistent application of incentive structures and targets, due to the common nature of the underlying businesses; and (vi) separating and simplifying the structures required to manage two distinct and differing underlying businesses.

Arconic may not achieve these and other anticipated benefits for a variety of reasons, including, among others: (i) Arconic may be more susceptible to market fluctuations and other adverse events than if Alcoa Corporation were still a part of the Company because Arconic's business is less diversified than it was prior to the completion of the Separation; and (ii) as a smaller, independent company, Arconic may be unable to obtain certain goods, services and technologies at prices or on terms as favorable as those it obtained prior to completion of the Separation. If Arconic fails to achieve some or all of the benefits expected to result from the Separation, or if such benefits are delayed, it could have a material adverse effect on Arconic's competitive position, business, financial condition, results of operations and cash flows.

Alcoa Corporation may fail to perform under various transaction agreements that were executed as part of the Separation.

In connection with the Separation, Arconic and Alcoa Corporation entered into a 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 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. 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 of the Company prior to the Separation was effected, determined the allocation of assets and liabilities between the companies following the Separation for those respective areas and included any necessary indemnifications related to liabilities and obligations. The Separation and Distribution Agreement also provides that Alcoa Corporation will pay over to Arconic the proceeds in respect of the sale of Alcoa Corporation'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. Arconic will rely on Alcoa Corporation to satisfy its performance and payment obligations under these agreements. If Alcoa Corporation is unable or unwilling to satisfy its obligations under these agreements, including its indemnification obligations, we could incur operational difficulties and/or losses.

In connection with the Separation, Alcoa Corporation has agreed to indemnify Arconic for certain liabilities and Arconic has agreed to indemnify Alcoa Corporation for certain liabilities. If Arconic is required to pay under these indemnities to Alcoa Corporation, Arconic's financial results could be negatively impacted. The Alcoa Corporation indemnity may not be sufficient to hold Arconic harmless from the full amount of liabilities for which Alcoa Corporation will be allocated responsibility, and Alcoa Corporation may not be able to satisfy its indemnification obligations in the future.

Pursuant to the Separation and Distribution Agreement and certain other agreements with Alcoa Corporation, Alcoa Corporation has agreed to indemnify Arconic for certain liabilities, and Arconic has agreed to indemnify Alcoa Corporation for certain liabilities, in each case for uncapped amounts. Indemnities that Arconic may be required to provide Alcoa Corporation are not subject to any cap, may be significant and could negatively impact Arconic's business. Third parties could also seek to hold Arconic responsible for any of the liabilities that Alcoa Corporation has agreed to retain. Any amounts Arconic is required to pay pursuant to these indemnification obligations and other liabilities could require Arconic to divert cash that would otherwise have been used in furtherance of the Company's operating business. Further, the indemnity from Alcoa Corporation may not be sufficient to protect Arconic against the full amount of such liabilities, and Alcoa Corporation may not be able to fully satisfy its indemnification obligations. Moreover, even if Arconic ultimately succeeds in recovering from Alcoa Corporation any amounts for which Arconic is held liable, Arconic may be temporarily required to bear such losses. Each of these risks could negatively affect Arconic's business, results of operations and financial condition.

The Separation could result in substantial tax liability.

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 and the Distribution received by Arconic remain valid and be satisfactory to Arconic's Board of Directors and (ii) Arconic receive an opinion of its outside counsel, satisfactory to the 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"). Both of these conditions were satisfied prior to the Distribution. However, the IRS private letter ruling and the opinion of counsel were based upon and relied on, among other things, various facts and assumptions, as well as certain representations, statements and undertakings of Arconic 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 Corporation breaches any of its representations or covenants contained in any of the Separation–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 Arconic's 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 represents the judgment of such counsel and is not 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 Arconic 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 shareholders 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 Corporation common stock in a taxable sale for its fair market value and Arconic shareholders who received Alcoa Corporation 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 current U.S. federal income tax law, even if the Distribution, together with certain related transactions, otherwise qualifies for tax-free treatment under Sections 355 and 368(a)(1)(D) of the Code, the Distribution may nevertheless be rendered taxable to Arconic and its shareholders as a result of certain post-Distribution transactions, including certain acquisitions of shares or assets of Arconic or Alcoa Corporation. The possibility of rendering the Distribution taxable as a result of such transactions may limit Arconic's ability to pursue certain equity issuances, strategic transactions or other transactions that would otherwise maximize the value of Arconic's business. Under the Tax Matters Agreement that Arconic entered into with Alcoa Corporation, Alcoa Corporation 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) issuing equity securities beyond certain thresholds, (iii) repurchasing shares of Alcoa Corporation stock other than in certain open-market transactions, (iv) ceasing to actively conduct certain of its businesses, (v) other actions or failures to act by Alcoa Corporation or (vi) any of Alcoa Corporation's representations, covenants or undertakings contained in any of the Separation-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. However, the indemnity from Alcoa Corporation may not be sufficient to protect Arconic against the full amount of such additional taxes or related liabilities, and Alcoa Corporation may not be able to fully satisfy its indemnification obligations. Moreover, even if Arconic ultimately succeeds in recovering from Alcoa Corporation any amounts for which Arconic is held liable, Arconic may be temporarily required to bear such losses. In addition, Arconic and Arconic's subsidiaries may incur certain tax costs in connection with the Separation, including tax costs resulting from separations in non-U.S. jurisdictions, which may be material. Each of these risks could negatively affect Arconic's business, results of operations and financial condition.

The value of Arconic's retained interest in Alcoa Corporation is subject to certain risks and uncertainties which could make it difficult to liquidate some or all of Arconic's retained interest at favorable market prices.

In the Separation, Arconic retained a passive ownership interest in approximately 19.9 percent of Alcoa Corporation common stock then outstanding. As of the date of this report, Arconic owned approximately 7.0 percent of Alcoa Corporation common stock then outstanding after giving effect to a retained shares transaction.

As with any investment in a publicly traded company, Arconic's investment in Alcoa Corporation shares is subject to risks and uncertainties relating to Alcoa Corporation's business and ownership of Alcoa Corporation stock, some of which are disclosed in Alcoa Corporation's filings with the SEC, as well as risks and uncertainties relating to fluctuations in the global economy and public equity markets generally.

Any such risk or uncertainty may cause the share price of Alcoa Corporation common stock to fall, which could impair Arconic's ability to sell its shares of Alcoa Corporation common stock in the future at a favorable market price or reduce the value of Arconic's retained interest in Alcoa Corporation.

Changes in the United Kingdom's economic and other relationships with the European Union could adversely affect Arconic.

In June 2016, a majority of voters in the United Kingdom elected to withdraw from the European Union in a national referendum (also referred to as "Brexit"). The ultimate effects of Brexit on Arconic are difficult to predict, but because the Company currently operates and conducts business in the United Kingdom and in Europe, the results of the referendum and any eventual withdrawal could cause disruptions and create uncertainty to Arconic's businesses, including affecting the business of and/or our relationships with Arconic's customers and suppliers, as well as altering the relationship among tariffs and currencies, including the value of the British pound and the Euro relative to the U.S. dollar. Such disruptions and uncertainties could adversely affect Arconic's financial condition, operating results and cash flows. In addition, Brexit could result in legal uncertainty and potentially divergent national laws and regulations as new legal relationships between the United Kingdom and the European Union are established. The ultimate effects of Brexit on Arconic will also depend on the terms of any agreements the United Kingdom and the European Union make to retain access to each other's respective markets either during a transitional period or more permanently.

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Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Arconic's principal office is located at 390 Park Avenue, New York, New York 10022-4608. Arconic's corporate center is located at 201 Isabella Street, Pittsburgh, Pennsylvania 15212-5858. The Arconic Technology Center for research and development is located at 100 Technical Drive, New Kensington, Pennsylvania 15069-0001.

Arconic 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.

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

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

GLOBAL ROLLED PRODUCTS

See the table and related text in the **Global Rolled Products Facilities** section on pages 3-5 of this report.

ENGINEERED PRODUCTS AND SOLUTIONS

See the table and related text in the **Engineered Products and Solutions Facilities** section on pages 5-8 of this report.

TRANSPORTATION AND CONSTRUCTION SOLUTIONS

See the table and related text in the **Transportation and Construction Solutions** section on pages 8-10 of this report.

Item 3. Legal Proceedings.

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

Environmental Matters

Arconic 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, including the remediation of the Grasse River in Massena, NY, are discussed in the Environmental Matters section of Note L to the Consolidated Financial Statements under the caption "Environmental Matters" on pages 96-97.

As previously reported, by an amended complaint filed April 21, 2005, Alcoa Global Fasteners, Inc. (now known as Arconic Global Fasteners & Rings, Inc.) was added as a defendant in Orange County Water District (OCWD) v. Northrop Corporation, et al., civil action 04cc00715 (Superior Court of California, County of Orange). OCWD alleges contamination or threatened contamination of a drinking water aquifer by Arconic, certain of the entities that preceded Arconic at the same locations as property owners and/or operators, and other current and former industrial and manufacturing businesses that operated in Orange County in past decades. OCWD seeks to recover the cost of aquifer remediation and attorney's fees. Trial on statutory, non-jury claims commenced on February 10, 2012. On October 29,
2013, the court issued its final Statement of Decision ("SOD") in favor of Arconic and the other Phase I trial defendants dismissing the statutory law liability claims. On June 20, 2014, following the full briefing by the parties, the trial court entered final judgment in favor of Arconic and the other trial defendants on the remaining tort claims. On

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August 18, 2014, the OCWD appealed the dismissal of the statutory law claims and common law claims (except for negligence). The appellate argument has not been scheduled, but is likely to occur by the first half of 2017 and could produce a decision during the second half of 2017.

Other Matters

As previously reported, Arconic Inc. and its subsidiaries and former subsidiaries are defendants in lawsuits filed on behalf of persons alleging injury as a result of occupational or other exposure to asbestos. Arconic, its subsidiaries and former subsidiaries have numerous insurance policies over many years that provide coverage for asbestos related claims. Arconic has significant insurance coverage and believes that Arconic's 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 the Company.

Tax

Pursuant to the Tax Matters Agreement, dated as of October 31, 2016, entered into between the Company and Alcoa Corporation in connection with the Separation, the Company shares responsibility with Alcoa Corporation for, and Alcoa Corporation has agreed to partially indemnify the Company with respect to, the following matter.

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

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

The combined assessments (remeasured for a tax rate change enacted in November 2014) total $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. It is not yet known if Spain's tax authorities will appeal this decision. Spain's National Court has not yet rendered a decision related to the assessment received in July 2013.

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

Matters Previously Reported – Alcoa Corporation

We have included the matters discussed below in which the Company remains party to proceedings relating to Alcoa Corporation in accordance with SEC regulations. The Separation and Distribution Agreement, dated October 31, 2016, entered into between the Company and Alcoa Corporation in connection with the Separation, provides for cross-indemnities between the Company and Alcoa Corporation for claims subject to indemnification. The Company does not expect any of such matters to result in a net claim against it.

Squaw Creek Mine Proceedings

As previously reported, 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, 41 plaintiffs sued Arconic Inc. and a 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 Musgrave, in January 2006, Arconic Inc. and a subsidiary were sued by an individual, on behalf of himself and all persons similarly situated, claiming harm from alleged exposure to waste that had been disposed in designated pits at the Squaw Creek Mine in the 1970s. In November 2007, Arconic and its subsidiary filed a motion to dismiss the Barnett cases. In October 2008, the Warrick County Circuit Court granted Arconic'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 Arconic'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. The Company is unable to reasonably predict an outcome or to estimate a range of reasonably possible loss because plaintiffs have merely alleged that their medical condition is attributable to exposure to materials at the Squaw Creek Mine but no further information is available due to the discovery stay.

St. Croix Proceedings

Abednego and Abraham cases. As previously reported, on January 14, 2010, Arconic 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 Arconic 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.

Also as previously reported, on March 1, 2012, Arconic 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.

Arconic 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 Arconic 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.

Other Contingencies

In addition to the matters discussed above, various other lawsuits, claims, and proceedings have been or may be instituted or asserted against Arconic, 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 currently 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.

Not applicable.

PART II

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

The Company's common stock is listed on the New York Stock Exchange. Prior to the Separation of Alcoa Corporation from the Company, the Company's common stock traded under the symbol "AA." In connection with the separation, on November 1, 2016, the Company changed its stock symbol and its common stock began trading under the symbol "ARNC."

On October 5, 2016, the Company's common shareholders approved a 1-for-3 reverse stock split of the Company's outstanding and authorized shares of common stock (the "Reverse Stock Split"). As a result of the Reverse Stock Split, every 3 shares of issued and outstanding common stock were combined into one issued and outstanding share of common stock, without any change in the par value per share. The Reverse Stock Split reduced the number of shares of common stock outstanding from approximately 1.3 billion shares to approximately 0.4 billion shares, and proportionately decreased the number of authorized shares of common stock from 1.8 billion to 0.6 billion shares. The Company's common stock began trading on a Reverse Stock Split-adjusted basis on October 6, 2016.

On November 1, 2016, the Company completed the Separation of its business into two independent, publicly traded companies: the Company and Alcoa Corporation. The Separation was effected by means of a pro rata distribution by the Company of 80.1% of the outstanding shares of Alcoa Corporation common stock to the Company's shareholders. The Company's shareholders of record as of the close of business on October 20, 2016 (the "Record Date") received one share of Alcoa Corporation common stock for every three shares of the Company's common stock held as of the Record Date. The Company retained 19.9% of the outstanding common stock of Alcoa Corporation immediately following the Separation.

The following table sets forth, for the periods indicated, the high and low sales prices and quarterly dividend amounts per share of the Company's common stock as reported on the New York Stock Exchange, adjusted to take into account the Reverse Stock Split effected on October 6, 2016. The prices listed below for the fourth quarter of 2016 do not reflect any adjustment for the impact of the separation of Alcoa Corporation from the Company on November 1, 2016, and therefore are not comparable to pre-separation prices from earlier periods.

	2016			2015		
Quarter	**High**	**Low**	**Dividend**	**High**	**Low**	**Dividend**
First	$30.66	$18.42	$ 0.09	$51.30	$37.95	$ 0.09
Second	34.50	26.34	0.09	42.87	33.45	0.09
Third	32.91	27.09	0.09	33.69	23.91	0.09
Fourth (Separation occurred on November 1, 2016)	32.10	16.75	0.09	33.54	23.43	0.09
Year	$34.50	$16.75	$ 0.36	$51.30	$23.43	$ 0.36

The number of holders of record of common stock was approximately 12,885 as of February 23, 2017.

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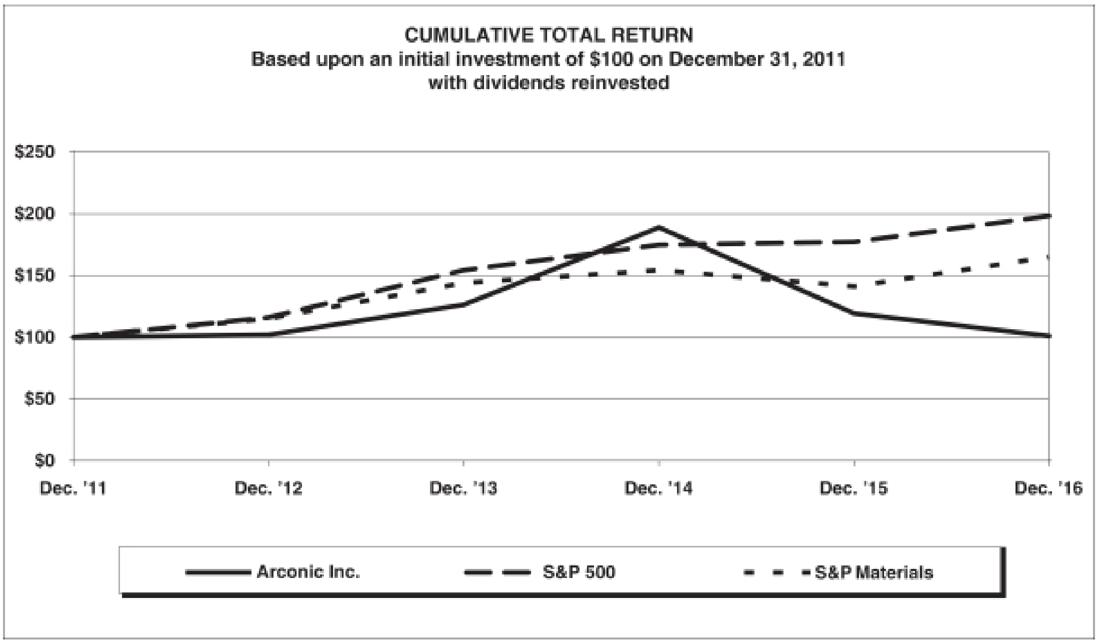
Stock Performance Graph

The following graph compares the most recent five-year performance of the Company's common stock with (1) the Standard & Poor's 500® Index and (2) the Standard & Poor's 500® Materials Index, a group of 27 companies categorized by Standard & Poor's as active in the "materials" market sector. The graph assumes, in each case, an initial investment of $100 on December 31, 2011, and the reinvestment of dividends. Historical prices prior to the separation of Alcoa Corporation from the Company on November 1, 2016, have been adjusted to reflect the value of the Separation transaction. The graph, table and related information shall not be deemed to be "filed" with the SEC, nor shall such information be incorporated by reference into future filings under the Securities Act of 1933 or Securities Exchange Act of 1934, each as amended, except to the extent that the Company specifically incorporates it by reference into such filing.



As of December 31,	2011	2012	2013	2014	2015	2016
Arconic Inc.	$ 100	$ 102	$ 126	$ 189	$ 119	$ 101
S&P 500® Index	100	$ 116	$ 154	$ 175	$ 177	$ 198
S&P 500® Materials Index	100	$ 115	$ 144	$ 154	$ 141	$ 165

Item 6. Selected Financial Data

The separation of Alcoa Inc. into two standalone, publicly-traded companies, Arconic Inc. (the new name for Alcoa Inc.) and Alcoa Corporation, became effective on November 1, 2016 (the “Separation Transaction”). The financial results of Alcoa Corporation for all periods prior to the Separation Transaction have been retrospectively reflected in the Statement of Consolidated Operations as discontinued operations and, as such, have been excluded from continuing operations and segment results for all periods presented. Additionally, the related assets and liabilities associated with Alcoa Corporation in the December 2015 Consolidated Balance Sheet are classified as assets and liabilities of discontinued operations. The cash flows related to Alcoa Corporation have not been segregated and are included in the Statement of Consolidated Cash Flows for all periods presented.

(dollars in millions, except per-share amounts)

For the year ended December 31,	2016	2015	2014	2013	2012
Sales	$12,394	$12,413	$12,542	$11,997	$10,640
Amounts attributable to Arconic:					
(Loss) income from continuing operations[1]	$ (1,062)	$ (157)	$ (61)	$ (63)	$ 410
Income (loss) from discontinued operations[2]	121	(165)	329	(2,222)	(219)
Net (loss) income	$ (941)	$ (322)	$ 268	$ (2,285)	$ 191
Earnings per share attributable to Arconic common shareholders:[3]					
Basic:					
(Loss) income from continuing operations	$ (2.58)	$ (0.54)	$ (0.21)	$ (0.18)	$ 1.15
Income (loss) from discontinued operations	0.27	(0.39)	0.85	(6.23)	(0.62)
Net (loss) income	$ (2.31)	$ (0.93)	$ 0.64	$ (6.41)	$ 0.53
Diluted:					
(Loss) income from continuing operations	$ (2.58)	$ (0.54)	$ (0.21)	$ (0.18)	$ 1.13
Income (loss) from discontinued operations	0.27	(0.39)	0.84	(6.23)	(0.60)
Net (loss) income	$ (2.31)	$ (0.93)	$ 0.63	$ (6.41)	$ 0.53
Cash dividends declared per common share[3]	$ 0.36	$ 0.36	$ 0.36	$ 0.36	$ 0.36
Total assets[4]	20,038	36,477	37,298	35,623	40,044
Total debt[4]	8,084	8,827	8,445	7,826	8,237
Cash provided from operations[5]	870	1,582	1,674	1,578	1,497
Capital expenditures:					
Capital expenditures—continuing operations	827	789	775	626	[6]
Capital expenditures—discontinued operations	298	391	444	567	[6]
Total capital expenditures	$ 1,125	$ 1,180	$ 1,219	$ 1,193	$ 1,261

(1) Calculated from the accompanying Statement of Consolidated Operations as (Loss) income from continuing operations after income taxes less Net income from continuing operations attributable to noncontrolling interests.

(2) Calculated from the accompanying Statement of Consolidated Operations as Income (loss) from discontinued operations after income taxes less Net income (loss) from discontinued operations attributable to noncontrolling interests.

(3) Per share data for all periods presented has been retroactively restated to reflect the 1-for-3 reverse stock split which became effective on October 6, 2016 (see Basis of Presentation section of Note A to the Consolidated Financial Statements in Part II Item 8 of this Form 10-K).

(4) In January 2016, Arconic adopted changes issued by the Financial Accounting Standards Board to the balance sheet classification of deferred financing costs (see the Recently Adopted Accounting Guidance section of Note A to the Consolidated Financial Statements in Part II Item 8 of this Form 10-K). Management has retroactively applied this change to all periods presented. As a result, $51, $65, $73, and $85 of debt issuance costs were reflected as deductions in Total debt and deductions in Total assets for 2015, 2014, 2013, and 2012, respectively, in the table above.

(5) Cash provided from operations has not been restated for discontinued operations presentation for any period presented (see Basis of Presentation section of Note A to the Consolidated Financial Statements in Part II Item 8 of this Form 10-K).

(6) Capital expenditures for 2012 have not been split between continuing operations and discontinued operations because it is impracticable to do so.

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 and aluminum prices; shipments in thousands of metric tons [kmt])

Overview

Our Business

Arconic (the "Company") is a global leader in lightweight metals engineering and manufacturing. Arconic's innovative, multi-material products, which include aluminum, titanium, and nickel, are used worldwide in aerospace, automotive, commercial transportation, packaging, building and construction, oil and gas, defense, consumer electronics, and industrial applications.

Arconic is a global company operating in 19 countries. Based upon the country where the point of sale occurred, the United States and Europe generated 63% and 26%, respectively, of Arconic's sales in 2016. In addition, Arconic has operating activities in Brazil, Canada, China, Japan, and Russia, among others. 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.

Management Review of 2016 and Outlook for the Future

Separation Transaction. On November 1, 2016, the Company completed the previously announced separation of its business into two standalone, publicly-traded companies, Arconic Inc. and Alcoa Corporation. Following the Separation Transaction, Arconic comprises the Global Rolled Products (other than the rolling mill in Warrick, Indiana, and the 25.1% equity ownership stake in the Ma'aden Rolling Company), the Engineered Products and Solutions, and the Transportation and Construction Solutions segments. Alcoa Corporation comprises the Alumina and Primary Metals segments, the rolling mill in Warrick, Indiana, and the 25.1% equity ownership stake in the Ma'aden Rolling Company in Saudi Arabia.

The Separation Transaction was effected by the distribution of 80.1% of the outstanding shares of Alcoa Corporation common stock to the Company's shareholders (the "Distribution"). The Company's shareholders of record as of the close of business on October 20, 2016 (the "Record Date") received one share of Alcoa Corporation common stock for every three shares of the Company's common stock held as of the Record Date. The Company distributed 146,159,428 shares of common stock of Alcoa Corporation in the Distribution and retained 36,311,767 shares, or approximately 19.9%, of the common stock of Alcoa Corporation immediately following the Distribution. As a result of the Distribution, Alcoa Corporation is now an independent public company trading under the symbol "AA" on the New York Stock Exchange, and the Company trades under the symbol "ARNC" on the New York Stock Exchange.

On October 31, 2016, Arconic entered into several agreements with Alcoa Corporation that govern the relationship of the parties following the completion of the Separation Transaction. These agreements include the following: Separation and Distribution Agreement, Transition Services Agreement, Tax Matters Agreement, Employee Matters Agreement, Alcoa Corporation to Arconic Inc. Patent, Know-How, and Trade Secret License Agreement, Arconic Inc. to Alcoa Corporation Patent, Know-How, and Trade Secret License Agreement, Alcoa Corporation to Arconic Inc. Trademark License Agreement, Toll Processing and Services Agreement, Master Agreement for the Supply of Primary Aluminum, Massena Lease and Operations Agreement, Fusina Lease and Operations Agreement, and Stockholder and Registration Rights Agreement.

Review of 2016 Operating Results and 2017 Outlook. In 2016, Arconic's revenues were stable compared to 2015 as volume growth in aerospace due to the RTI acquisition (see Engineered Products and Solutions in Segment Information under Results of Operations below) and volume growth in automotive markets were offset by lower demand in commercial transportation and packaging markets in addition to lower aluminum prices impacting Global Rolled Products. Despite stable revenues, after-tax operating income ("ATOI") was higher in each segment in 2016 versus 2015. Net productivity improvements across all operations exceeded cost headwinds and an unfavorable product mix as well as pricing pressures with various aerospace customers and in the global can sheet market.

Arconic's 2016 results were negatively impacted by costs associated with the Separation Transaction as well as significant tax valuation allowance charges related to an assessment of the realizability of certain deferred tax assets including Alcoa Corporation's net deferred tax assets and Arconic's foreign tax credits in the U.S. Additionally, significant restructuring charges (see Restructuring and Other Charges under Results of Operations below) caused unfavorable impacts in the 2016 results.

Management continued its focus on liquidity and cash flows as well as improving its operating performance through cost reductions, margin enhancement, and profitable revenue generation. Management has also intensified its focus on capital efficiency, with an owner's mindset. This focus and the related results enabled Arconic to end 2016 with a solid financial position.

The following financial information reflects certain key measures of Arconic's 2016 results:

- Sales of $12,394 and Loss from continuing operations of $1,062, or $2.58 per diluted share;
- Total segment after-tax operating income of $1,087, an increase of 10% from 2015;
- Cash from operations of $870 (includes Alcoa Corporation results of operations for the ten months ended October 31, 2016);
- Capital expenditures of $1,125 (includes Alcoa Corporation capital expenditures for the ten months ended October 31, 2016);
- Cash on hand at the end of the year of $1,863;
- Total Debt of $8,084, a decrease in total debt of $743 from 2015; and
- Depreciation and amortization of $535, an increase of 5% from 2015.

In 2017, management is projecting that sales will be stable to down 5% as the unfavorable impact from the North American packaging ramp-down (approximately $400 reduction in sales from $552 in 2016 to approximately $150 in 2017) will continue (see Restructuring and Other Charges under Results of Operations below). Each segment is anticipated to grow sales in 2017 excluding the impact of ramping down North American packaging in the Global Rolled Products segment. In aerospace, it is anticipated that the favorable impact of share gains on new platforms and engines will be somewhat offset by airframe destocking, supply chain risks, and engine ramp-up challenges that are expected to continue throughout 2017. Management also expects strong growth in automotive sheet as well as growth in the building and construction market. Finally, it is anticipated that the decline of North American heavy duty truck build rates will continue, although not quite at the same level as 2016; that the mining and oil and gas markets will not recover in 2017; and that pressures from market mix and competitive pricing will continue.

Looking ahead over the next year, management will continue to focus on improving operating performance through cost reductions, margin enhancement, and profitable revenue generation. Each of the segments are projected to achieve stable to improved operating margins through net productivity savings in 2017, including from procurement and overhead programs.

On a company-wide basis, management has established and is committed to achieving the following specific goals in 2017:

- Improving Adjusted EBITDA[(1)] margin[(2)] excluding costs associated with the Separation Transaction by approximately 130 basis points to 15%;
- Achieving return on net assets (RONA)[(2)] of approximately 9%, or 190 basis points better than 2016;
- Spending no more than $650 on capital expenditures;
- Reducing debt by $1,000; and
- Generating cash from operations that will exceed capital expenditures by a minimum of $350.

(1) Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) is calculated as net margin plus an add-back for depreciation 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 and amortization.

(2) Expectations for adjusted EBITDA margin and RONA on a forward-looking basis are being provided, however, a reconciliation of the differences between the non-GAAP expectations and the corresponding GAAP measures generally is not available without unreasonable effort.

Results of Operations

Earnings Summary

Loss from continuing operations after income taxes and noncontrolling interests was $1,062 for 2016, or $2.58 per diluted share, compared with a loss from continuing operations after income taxes and noncontrolling interests of $157 for 2015, or $0.54 per share. The decrease in results of $905 was primarily due to charges for tax valuation allowances and costs related to the Separation Transaction primarily offset by a full-year effect of 2015 acquisitions (see Engineered Products and Solutions in Segment Information below) and productivity improvements across all segments.

Loss from continuing operations after income taxes and noncontrolling interests was $157 for 2015, or $0.54 per diluted share, compared with a loss from continuing operations after income taxes and noncontrolling interests of $61 for 2014, or $0.21 per share. The decrease in results of $96 was mostly due to unfavorable price and product mix across all segments, net unfavorable foreign currency movements, and higher costs. These negative impacts were partially offset by net productivity improvements, higher volume across all segments, and lower charges and expenses related to a number of portfolio actions (e.g., divestitures and acquisitions).

Sales—Sales for 2016 were $12,394 compared with sales of $12,413 in 2015, a decline of $19, or less than 1%. The relatively flat performance was the result of a full-year effect of two 2015 acquisitions in the Engineered Products and Solutions segment and automotive volume increases in the Global Rolled Products segment, offset by the ramp-down of the Tennessee packaging business and the impact of metal prices in the Global Rolled Products segment and unfavorable price and product mix across all segments.

Sales for 2015 were $12,413 compared with sales of $12,542 in 2014, a decline of $129, or 1%. The decrease was primarily due to the absence of sales related to capacity that was closed or sold in the Global Rolled Products segment (see Global Rolled Products in Segment Information below), a lower average realized price for aluminum in the Global Rolled Products segment and unfavorable foreign currency movements across all segments. These negative impacts were partially offset by the addition of sales from three acquired businesses (see Engineered Products and Solutions in Segment Information below), higher volume across all segments, and favorable product mix in the Global Rolled Products segment.

Cost of Goods Sold (COGS)—COGS as a percentage of Sales was 79.2% in 2016 compared with 81.4% in 2015. The primary drivers in the improvement in COGS as a percentage of sales were productivity gains across all segments and higher volume in the Engineered Products and Solutions segment due to the benefit of a full-year effect of two 2015 acquisitions. This benefit was somewhat offset by overall cost increases across all segments and unfavorable pricing and product mix impacts primarily in the Engineered Products and Solutions and Global Rolled Products segments.

COGS as a percentage of Sales was 81.4% in 2015 compared with 82.5% in 2014. The percentage was favorably impacted by net productivity improvements and higher volume across all segments and a favorable LIFO (last in, first out) adjustment due to lower prices for aluminum in the Global Rolled Products segment. These positive impacts were partially offset by unfavorable price and product mix across all segments and higher costs.

Selling, General Administrative, and Other Expenses (SG&A) — SG&A expenses were $942, or 7.6% of Sales, in 2016 compared with $765, or 6.2% of Sales, in 2015. The increase in SG&A was primarily due to costs related to the Separation Transaction of $193 in 2016, an increase of $169 from 2015 separation costs.

SG&A expenses were $765, or 6.2% of Sales, in 2015 compared with $770, or 6.1% of Sales, in 2014. The relatively flat expense was principally the result of favorable foreign currency movements due to a stronger U.S. dollar, the absence of SG&A related to closed and sold locations, and lower acquisition costs ($15), primarily offset by expenses for professional and consulting services related to the Separation Transaction ($24) and SG&A related to inorganic growth in the Engineered Products and Solutions segment.

Research and Development Expenses (R&D)—R&D expenses were $132 in 2016 compared with $169 in 2015 and $123 in 2014. The decrease in 2016 as compared to 2015 was driven by the decrease in spending for the Micromill™ in San Antonio, TX which was completed in 2015 and began production of automotive sheet, on a limited basis, for the Global Rolled Products segment. The increase in 2015 as compared to 2014 was mainly driven by additional spending related to the upgrade of the Micromill™.

Provision for Depreciation and Amortization (D&A)—The provision for D&A was $535 in 2016 compared with $508 in 2015. The increase of $27, or 5.3%, related to a full year of D&A related to two acquisitions which occurred during 2015 (see Engineered Products and Solutions in Segment Information below).

The provision for D&A was $508 in 2015 compared with $436 in 2014. The increase of $72, or 16.5%, related primarily to new D&A ($93) associated with three acquisitions that occurred from November 2014 through July 2015 (see Engineered Products and Solutions in Segment Information below). This increase was partially offset by the absence of D&A related to the divestiture and/or permanent closure of six rolling mills (see Global Rolled Products in Segment Information below).

Impairment of Goodwill—In 2015, Arconic recognized an impairment of goodwill in the amount of $25, related to the annual impairment review of the soft alloy extrusion business in Brazil (see Goodwill in Critical Accounting Policies and Estimates below).

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	$ 80	$ -	$ 65
Layoff costs	70	97	105
Net loss on divestitures of businesses	3	136	111
Other	27	(11)	43
Reversals of previously recorded layoff costs	(25)	(8)	(10)
Restructuring and other charges	$155	$214	$314

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, Arconic recorded Restructuring and other charges of $155 ($114 after-tax), which were comprised of the following components: $57 ($46 after-tax) for costs related to the exit of certain legacy Firth Rixson operations in the U.K.; $37 ($24 after-tax) for exit costs related to the decision to permanently shut down a can sheet facility; $20 ($14 after-tax) for costs related to the closures of five facilities, primarily in the Transportation and Construction Solutions segment and Engineered Products and Solutions segment, including the separation of approximately 280 employees; $53 ($33 after-tax) for other layoff costs, including the separation of approximately 1,315 employees (30 in TCS, 1,045 in EPS, 30 in GRP and 210 in Corporate); $11 ($8 after-tax) for other miscellaneous items, including $3 ($2 after-tax) for the sale of Remmele Medical, an RTI subsidiary; $2 ($1 after-tax) for a pension settlement; and $25 ($12 after-tax) for the reversal of a number of small layoff reserves related to prior periods.

In 2016, management made the decision to exit certain legacy Firth Rixson facilities in the U.K. Costs related to these actions included asset impairments and accelerated depreciation of $51; other exit costs of $4; and $2 for the separation of 60 employees.

Also in 2016, management approved the shutdown and demolition of the can sheet facility in Tennessee upon completion of the Toll Processing and Services Agreement with Alcoa Corporation (see Global Rolled Products in Segment Information below). Costs related to this action included $21 in asset impairments; $9 in other exit costs; and $7 for the separation of 145 employees. The other exit costs of $9 represent $4 in asset retirement obligations and $3 in environmental remediation, both of which were triggered by the decision to permanently shut down and demolish the can sheet facility in Tennessee, and $2 in other exit costs.

As of December 31, 2016, approximately 880 of the 1,800 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 $16 were made against layoff reserves related to 2016 restructuring programs.

2015 Actions. In 2015, Arconic recorded Restructuring and other charges of $214 ($192 after-tax), which were comprised of the following components: a $136 ($134 after-tax) net loss related to the March 2015 divestiture of a rolling mill in Russia and post-closing adjustments associated with the December 2014 divestitures of three rolling mills located in Spain and France; $97 ($70 after-tax) for layoff costs, including the separation of approximately 1,505 employees (425 in the Transportation and Construction Solutions segment, 590 in the Engineered Products and Solutions segment, 90 in the Global Rolled Products segment, and 400 in Corporate); an $18 ($13 after-tax) gain on the sale of land related to one of the rolling mills in Australia that was permanently closed in December 2014 (see 2014 Actions below); a net charge of $7 ($4 after-tax) for other miscellaneous items; and $8 ($3 after-tax) for the reversal of a number of small layoff reserves related to prior periods.

As of December 31, 2016, approximately 1,100 of the 1,240 (previously 1,505) 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 Arconic and natural attrition. The remaining separations for 2015 restructuring programs are expected to be completed by the end of 2017. In 2016 and 2015, cash payments of $55 and $18, respectively, were made against layoff reserves related to 2015 restructuring programs.

2014 Actions. In 2014, Arconic recorded Restructuring and other charges of $314 ($249 after-tax), which were comprised of the following components: $154 ($107 after-tax) for exit costs related to the decision to permanently shut down and demolish two rolling mills (see below); a $111 ($112 after-tax) net loss primarily for the divestitures of three rolling mills in Spain and France; $49 ($28 after-tax) for other layoff costs, including the separation of approximately 1,035 employees (470 in the Engineered Products and Solutions segment, 410 in the Transportation and Construction

Solutions segment, 45 in the Global Rolled Products segment, and 110 in Corporate); a net charge of $10 ($7 after-tax) for other miscellaneous items; and $10 ($5 after-tax) for the reversal of a number of layoff reserves related to prior periods.

In early 2014, management approved the permanent shutdown of Arconic’s two rolling mills in Australia, Point Henry and Yennora. This decision was made due to the significant impact of excess can sheet capacity in both Australia and Asia. The two rolling mills had a combined can sheet capacity of 200,000 metric-tons-per-year and were closed by the end of 2014. Costs related to the shutdown of the two rolling mills included $56 for the separation of approximately 470 employees; accelerated depreciation of $58 as the rolling mills continued to operate during 2014; asset impairments of $7 representing the write-off of the remaining book value of all related properties, plants, and equipment; and $33 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 $13 ($9 after-tax), which was recorded in Cost of goods sold on the accompanying Statement of Consolidated Operations. The other exit costs of $33 represent $18 in environmental remediation and $8 in asset retirement obligations, both of which were triggered by the decisions to permanently shut down and demolish the aforementioned structures in Australia, and $7 in other related costs, including supplier and customer contract-related costs. Demolition and remediation activities related to the two rolling mills began in mid-2015 and are expected to be completed by the end of 2018.

As of December 31, 2016, the separations associated with 2014 restructuring programs were essentially complete. In 2016, 2015, and 2014, cash payments of $3, $27, and $54, respectively, were made against layoff reserves related to 2014 restructuring programs.

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

	2016	2015	2014
Global Rolled Products	$ 40	$121	$267
Engineered Products and Solutions	78	46	13
Transportation and Construction Solutions	14	8	10
Segment total	132	175	290
Corporate	23	39	24
Total restructuring and other charges	$155	$214	$314

Interest Expense—Interest expense was $499 in 2016 compared with $473 in 2015. The increase of $26, or 5%, was primarily due to debt issuance costs of $9 that were expensed in connection with the Separation Transaction and costs associated with the early redemption of $750 of 5.55% Notes due February 2017, completed on December 30, 2016, which included a $3 purchase premium, and a full-year of interest related to RTI International Metals, Inc. (RTI) debt of $6.

Interest expense was $473 in 2015 compared with $442 in 2014. The increase of $31, or 7%, was primarily due to an 8% higher average debt level, somewhat offset by the absence of fees paid associated with the execution and termination of a 364-day senior unsecured bridge term loan facility related to the then-planned acquisition of Firth Rixson ($13—see Engineered Products and Solutions in Segment Information below). The higher average debt level was mostly attributable to higher outstanding long-term debt due to the September 2014 issuance of $1,250 in 5.125% Notes, the proceeds of which were used to pay a portion of the purchase price of the Firth Rixson acquisition.

Other Income, Net—Other income, net was $94 in 2016 compared with $28 in 2015. The increase of $66 was mainly the result of a favorable adjustment to the contingent earn-out liability and a post-closing adjustment, both of which related to the November 2014 acquisition of Firth Rixson ($76), and favorable foreign currency movements ($55). These items were partially offset by the absence of gains on the sales of land in the United States and equity investment in a China rolling mill ($38) in 2015.

Other income, net was $28 in 2015 compared with $5 in 2014. The increase of $23 was mainly the result of a gain on the sale of land around Arconic’s former Sherwin, TX refinery site ($19) and the remaining equity investment in a

China rolling mill ($19) and a favorable change in deferred compensation. These items were somewhat offset by the absence of a gain on a portion of an equity investment in a China rolling mill ($14) and an unfavorable change in the cash surrender value of company-owned life insurance.

Income Taxes—Arconic's effective tax rate was 356.5% (provision on income) in 2016 compared with the U.S. federal statutory rate of 35%. The effective tax rate differs from the U.S. federal statutory rate primarily due to a $1,267 discrete income tax charge for valuation allowances related to the Separation Transaction (see Income Taxes in Critical Accounting Policies and Estimates below), a $95 tax charge associated with the redemption of company-owned life insurance policies whose tax basis was less than the redemption amount resulting in a taxable gain, a $51 net charge for the remeasurement of certain deferred tax assets and liabilities due to tax rate and tax law changes, a $34 unfavorable tax impact related to certain separation costs which are nondeductible for income tax purposes, somewhat offset by a $39 discrete income tax benefit for the release of valuation allowances in Canada and Russia, a $38 tax benefit related to currency impacts of a distribution of previously taxed income, and a $26 favorable tax impact associated with non-taxable settlement proceeds and earn-out liability adjustments in connection with the Firth Rixson acquisition.

Arconic's effective tax rate was 185.2% (provision on income) in 2015 compared with the U.S. federal statutory rate of 35%. The effective tax rate differs from the U.S. federal statutory rate principally due to a $190 discrete income tax charge for valuation allowances on certain deferred tax assets in the U.S. and Iceland (see Income Taxes in Critical Accounting Policies and Estimates below), a $25 impairment of goodwill (see Impairment of Goodwill above) that is nondeductible for income tax purposes, a loss on the sale of a rolling mill in Russia (see Global Rolled Products in Segment Information below) for which no tax benefit was recognized, and a $34 net discrete income tax charge as described below.

In 2015, Alcoa World Alumina and Chemicals (AWAC), the former joint venture owned 60% by Arconic and 40% by Alumina Limited, recognized an $85 discrete income tax charge for a valuation allowance on certain deferred tax assets in Suriname (see Income Taxes in Critical Accounting Policies and Estimates below), which were related mostly to employee benefits and tax loss carryforwards. Arconic also had a $51 deferred tax liability related to its 60%-share of these deferred tax assets that was written off as a result of the valuation allowance recognized by AWAC.

Arconic's effective tax rate was 154.0% (provision on income) in 2014 compared with the U.S. federal statutory rate of 35%. The effective tax rate differs from the U.S. federal statutory rate mainly due to restructuring charges related to operations in Australia (benefit at a lower tax rate) (see Restructuring and Other Charges above), a $52 ($31 after noncontrolling interests) discrete income tax charge related to a tax rate change in Brazil (see below), a loss on the sale of three rolling mills in Europe (no tax benefit) (see Global Rolled Products in Segment Information below), and a $27 ($16 after noncontrolling interests) 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 and a $9 discrete income tax benefit for the release of a valuation allowance related to operations in Germany due to the initiation of a tax planning strategy.

In December 2011, one of Arconic's former 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 Arconic's former subsidiaries in Brazil. The deadline for the Brazilian government to deny the application was July 11, 2014. Since Arconic 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 subsidiaries 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 subsidiaries 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). This remeasurement resulted in a decrease to that subsidiary's net deferred tax assets and a noncash charge to earnings of $52 ($31 after noncontrolling interests).

Management anticipates that the effective tax rate in 2017 will be between 32% and 35%. However, business portfolio actions, changes in the current economic environment, tax legislation or rate changes, currency fluctuations, ability to realize deferred tax assets, movements in stock price impacting tax benefits or deficiencies on stock-based payment awards, and the results of operations in certain taxing jurisdictions may cause this estimated rate to fluctuate.

Segment Information

Arconic's operations consist of three worldwide reportable segments: Global Rolled Products, Engineered Products and Solutions, and Transportation and Construction Solutions (see below). Segment performance under Arconic'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 (the timing difference created when the average price of metal sold differs from the average cost of the metal when purchased by the respective segment —generally when the price of metal increases, metal lag is favorable and when the price of metal decreases, metal lag is unfavorable); interest expense; noncontrolling interests; corporate expense (general administrative and selling expenses of operating the corporate headquarters and other global administrative facilities, along with depreciation and amortization on corporate-owned assets); restructuring and other charges; and other items, including intersegment profit eliminations, differences between tax rates applicable to the segments and the consolidated effective tax rate, and other nonoperating items such as foreign currency transaction gains/losses and interest income are excluded from segment ATOI.

ATOI for all reportable segments totaled $1,087 in 2016, $986 in 2015, and $983 in 2014. The following information provides shipment, sales and ATOI data for each reportable segment, as well as certain realized price data, for each of the three years in the period ended December 31, 2016. See Note O to the Consolidated Financial Statements in Part II Item 8 of this Form 10-K for additional information.

Beginning in the first quarter of 2017, Arconic's segment reporting metric will change from ATOI to Adjusted EBITDA.

Global Rolled Products(1)

	2016	2015	2014
Third-party aluminum shipments (kmt)	1,339	1,375	1,598
Average realized price per metric ton of aluminum (2)	$3,633	$3,820	$3,970
Third-party sales	$4,864	$5,253	$6,344
Intersegment sales	118	125	185
Total sales	$4,982	$5,378	$6,529
ATOI	$ 269	$ 225	$ 224

(1) Excludes the Warrick, IN rolling operations and the equity interest in the rolling mill at the joint venture in Saudi Arabia, both of which were previously part of the Global Rolled Products segment but became part of Alcoa Corporation effective November 1, 2016.

(2) Generally, average realized price per metric ton of aluminum includes two elements: a) the price of metal (the underlying base metal component based on quoted prices from the LME, plus a regional premium which represents the incremental price over the base LME component that is associated with physical delivery of metal to a particular region), and b) the conversion price, which represents the incremental price over the metal price component that is associated with converting primary aluminum into sheet and plate. In this circumstance, the metal price component is a pass-through to this segment's customers with limited exception (e.g., fixed-priced contracts, certain regional premiums).

The Global Rolled Products segment produces aluminum sheet and plate for a variety of end markets. Sheet and plate is sold directly to customers and through distributors related to the aerospace, automotive, commercial transportation, packaging, building and construction, and industrial products (mainly used in the production of machinery and equipment and consumer durables) end markets. A small portion of this segment also produces aseptic foil for the packaging end market. While the customer base for flat-rolled products is large, a significant amount of sales of sheet and plate is to a relatively small number of customers. Generally, the sales and costs and expenses of this segment are transacted in the local currency of the respective operations, which are mostly the U.S. dollar, Chinese yuan, the euro, the Russian ruble, the Brazilian real, and the British pound.

In March 2015, Arconic completed the sale of a rolling mill located in Belaya Kalitva, Russia to a wholly-owned subsidiary of Stupino Titanium Company. While owned by Arconic, the operating results and assets and liabilities of the rolling mill were included in the Global Rolled Products segment. The rolling mill generated sales of approximately $130 in 2014 and, at the time of divestiture, had approximately 1,870 employees. See Restructuring and Other Charges in Results of Operations above.

In December 2014, Arconic completed the sale of three rolling mills located in Spain (Alicante and Amorebieta) and France (Castelsarrasin) to a subsidiary of Atlas Holdings LLC. While owned by Arconic, the operating results and assets and liabilities of the rolling mills were included in the Global Rolled Products segment. The rolling mills combined generated sales of approximately $500 in 2013 and, at the time of divestiture, had approximately 750 employees. See Restructuring and Other Charges in Results of Operations above.

In February 2014, management approved the permanent shutdown of Arconic’s two rolling mills in Australia, Point Henry and Yennora. This decision was made due to the significant impact of excess can sheet capacity in both Australia and Asia. The two rolling mills had a combined can sheet capacity of 200 kmt-per-year and were closed by the end of 2014. See Restructuring and Other Charges in Results of Operations above.

Third-party sales for the Global Rolled Products segment declined 7% in 2016 compared with 2015, primarily due to the ramp-down of Tennessee packaging ($251); lower aluminum prices; and lower demand in the industrial products, packaging, commercial aerospace, commercial transportation, and North American heavy duty truck markets. These decreases were partially offset by higher volume in the automotive market.

Third-party sales for this segment declined 17% in 2015 compared with 2014, primarily driven by the absence of sales ($1,052) from six rolling mills in Australia, Spain, Russia, and France (see above), unfavorable pricing, mostly due to a decrease in metal prices (both LME and regional premium components), and unfavorable foreign currency movements, mainly the result of a weaker euro, Russian ruble, and Brazilian real. These negative impacts were somewhat offset by increased demand of the remaining rolling portfolio and favorable product mix (automotive and aerospace versus industrial products). The volume improvement of the remaining portfolio was largely attributable to the automotive (North America) and can sheet packaging (China) end markets, slightly offset by lower demand in the industrial products end market.

ATOI for the Global Rolled Products segment increased $44, or 20%, in 2016 compared with 2015, primarily driven by strong productivity improvements, which significantly exceeded cost increases, partially offset by lower pricing, primarily due to overall pricing pressure in the global can sheet market, unfavorable product mix and lower volumes as detailed above.

ATOI for this segment increased $1 in 2015 compared with 2014, primarily attributable to net productivity improvements across most businesses and higher volumes principally driven by higher demand in the automotive end market, offset by unfavorable price and product mix, largely the result of overall pricing pressure in the global can sheet packaging end market, and higher costs related to growth projects, including research and development as Arconic develops and qualifies products from a new Micromill™ production process and the ramp-up of the Tennessee automotive expansion.

On November 1, 2016, Arconic entered into a Toll Processing and Services Agreement with Alcoa Corporation for the tolling of metal for the Warrick, IN rolling mill which became a part of Alcoa Corporation upon the completion of the Separation Transaction. As part of this arrangement, Arconic will provide a toll processing service to Alcoa Corporation to produce can sheet products at its facility in Tennessee through the expected end date of the contract, December 31, 2018. Alcoa Corporation will supply all required raw materials to Arconic and Arconic will process the raw materials into finished can sheet coils ready for shipment to the end customer. Tolling revenue for the two months ended December 31, 2016 was approximately $37 million.

In 2017, demand in the automotive end market is expected to continue to grow due to the growing demand for innovative products and aluminum-intensive vehicles. Demand from the commercial airframe end market is expected to be flat in 2017 as the ramp up of new programs is offset by customer destocking and lower build rates for aluminum intensive wide-body programs. Sales to the packaging market are expected to decline due to continuing pricing pressure within this market and the ramp-down of the North American packaging operations. Net productivity improvements are anticipated to continue.

Engineered Products and Solutions

	2016	2015	2014
Third-party sales	$5,728	$5,342	$4,217
ATOI	$ 642	$ 595	$ 579

The Engineered Products and Solutions segment produces products that are used primarily in the aerospace (commercial and defense), commercial transportation, and power generation end markets. Such products include fastening systems (titanium, steel, and nickel superalloys) and seamless rolled rings (mostly nickel superalloys); investment castings (nickel superalloys, titanium, and aluminum), including airfoils and forged jet engine components (e.g., jet engine disks), and extruded, machined and formed aircraft parts (titanium and aluminum), all of which are sold directly to customers and through distributors. More than 75% of the third-party sales in this segment are from the aerospace end market. A small part of this segment also produces various forged, extruded, and machined metal products (titanium, aluminum and steel) for the oil and gas, industrial products, automotive, and land and sea defense end markets. Seasonal decreases in sales are generally experienced in the third quarter of the year due to the European summer slowdown across all end markets. Generally, the sales and costs and expenses of this segment are transacted in the local currency of the respective operations, which are mostly the U.S. dollar, British pound and the euro.

In July 2015, Arconic completed the acquisition of RTI, a global supplier of titanium and specialty metal products and services for the commercial aerospace, defense, energy, and medical device end markets. The purpose of the acquisition was to expand Arconic's range of titanium offerings and add advanced technologies and materials, primarily related to the aerospace end market. In 2014, RTI generated net sales of $794 and had approximately 2,600 employees. The operating results and assets and liabilities of RTI have been included within the Engineered Products and Solutions segment since the date of acquisition.

In March 2015, Arconic completed the acquisition of TITAL, a privately held aerospace castings company with approximately 650 employees based in Germany. TITAL produces aluminum and titanium investment casting products for the aerospace and defense end markets. In 2014, TITAL generated sales of approximately $100. The purpose of the acquisition was to capture increasing demand for advanced jet engine components made of titanium, establish titanium-casting capabilities in Europe, and expand existing aluminum casting capacity. The operating results and assets and liabilities of TITAL have been included within the Engineered Products and Solutions segment since the date of acquisition.

In November 2014, Arconic completed the acquisition of Firth Rixson, a global leader in aerospace jet engine components. Firth Rixson manufactures rings, forgings, and metal products for the aerospace end market, as well as other markets requiring highly-engineered material applications. The purpose of the acquisition was to strengthen Arconic's aerospace business and position the Company to capture additional aerospace growth with a broader range of high-growth, value-add jet engine components. Firth Rixson generated sales of approximately $970 in 2014 and had 13 operating facilities in the United States, United Kingdom, Europe, and Asia employing approximately 2,400 people combined. The operating results and assets and liabilities of Firth Rixson have been included within the Engineered Products and Solutions segment since the date of acquisition.

Third-party sales for the Engineered Products and Solutions segment improved 7% in 2016 compared with 2015, primarily attributable to higher third-party sales of the two acquired businesses ($457), primarily related to the aerospace end market, and increased demand from the industrial gas turbine end market, partially offset by lower volumes in the oil and gas end market and commercial transportation end market as well as pricing pressures in aerospace.

Third-party sales for this segment improved 27% in 2015 compared with 2014, largely attributable to the third-party sales ($1,310) of the three acquired businesses (see above), and higher volumes in this segment's legacy businesses, both of which were primarily related to the aerospace end market. These positive impacts were slightly offset by unfavorable foreign currency movements, principally driven by a weaker euro.

ATOI for the Engineered Products and Solutions segment increased $47, or 8%, in 2016 compared with 2015, primarily related to net productivity improvements across all businesses as well as the volume increase from both the RTI acquisition and organic revenue growth, partially offset by a lower margin product mix and pricing pressures in the aerospace end market.

ATOI for this segment increased $16, or 3%, in 2015 compared with 2014, principally the result of net productivity improvements across most businesses, a positive contribution from acquisitions, and overall higher volumes in this segment's legacy businesses. These positive impacts were partially offset by unfavorable price and product mix, higher costs related to growth projects, and net unfavorable foreign currency movements, primarily related to a weaker euro.

In 2017, demand in the commercial aerospace end market is expected to remain strong, driven by the ramp up of new aerospace engine platforms, somewhat offset by continued customer destocking and engine ramp-up challenges. Demand in the defense end market is expected to grow due to the continuing ramp-up of certain aerospace programs. Additionally, net productivity improvements are anticipated while pricing pressure across all markets is likely to continue.

Transportation and Construction Solutions

	2016	2015	2014
Third-party sales	$1,802	$1,882	$2,021
ATOI	$ 176	$ 166	$ 180

The Transportation and Construction Solutions segment produces products that are used mostly in the nonresidential building and construction and commercial transportation end markets. Such products include integrated aluminum structural systems, architectural extrusions, and forged aluminum commercial vehicle wheels, which are sold both directly to customers and through distributors. A small part of this segment also produces aluminum products for the industrial products end market. Generally, the sales and costs and expenses of this segment are transacted in the local currency of the respective operations, which are primarily the U.S. dollar, the euro, and the Brazilian real.

Third-party sales for the Transportation and Construction Solutions segment decreased 4% in 2016 compared with 2015, primarily driven by lower demand from the North American commercial transportation end market, which was partially offset by rising demand from the building and construction end market.

Third-party sales for this segment decreased 7% in 2015 compared with 2014, primarily driven by unfavorable foreign currency movements, principally caused by a weaker euro and Brazilian real, and lower volume related to the building and construction end market, somewhat offset by higher volume related to the commercial transportation end market.

ATOI for the Transportation and Construction Solutions segment increased $10, or 6%, in 2016 compared with 2015, principally driven by net productivity improvements across all businesses and growth in the building and construction segment, partially offset by lower demand in the North American heavy duty truck and Brazilian markets.

ATOI for this segment declined $14, or 8%, in 2015 compared with 2014, mainly due to higher costs, net unfavorable foreign currency movements, primarily related to a weaker euro and Brazilian real, and unfavorable price and product mix. These negative impacts were mostly offset by net productivity improvements across all businesses.

In 2017, we expect continued growth in the North American and European non-residential building and construction end markets and continued demand for innovative products. It will be partially offset by the expected year-over-year decline in the North American build rates in the commercial transportation end market. Additionally, net productivity improvements are anticipated.

Reconciliation of ATOI to Consolidated Net (Loss) Income Attributable to Arconic

Items required to reconcile total segment ATOI to consolidated net (loss) income attributable to Arconic include: the impact of LIFO inventory accounting; metal price lag (the timing difference created when the average price of metal sold differs from the average cost of the metal when purchased by the respective segment – generally when the price of metal increases, metal lag is favorable and when the price of metal decreases, metal lag is unfavorable); interest expense; noncontrolling interests; corporate expense (general administrative and selling expenses of operating the corporate headquarters and other global administrative facilities, corporate research and development expenses, along with depreciation and amortization on corporate-owned assets); restructuring and other charges; and other items, including intersegment profit eliminations, differences between tax rates applicable to the segments and the consolidated effective tax rate, and other nonoperating items such as foreign currency transaction gains/losses and interest income.

The following table reconciles total segment ATOI to consolidated net (loss) income attributable to Arconic:

	2016	2015	2014
Total segment ATOI	$ 1,087	$ 986	$ 983
Unallocated amounts (net of tax):			
Impact of LIFO	(11)	66	(52)
Metal price lag	21	(115)	68
Interest expense	(324)	(307)	(287)
Noncontrolling interests	-	(1)	-
Corporate expense	(306)	(252)	(268)
Impairment of goodwill	-	(25)	-
Restructuring and other charges	(114)	(192)	(249)
Discontinued operations	121	(165)	329
Other	(1,415)	(317)	(256)
Consolidated net (loss) income attributable to Arconic	$ (941)	$(322)	$ 268

The significant changes in the reconciling items between total segment ATOI and Consolidated net (loss) income attributable to Arconic for 2016 compared with 2015 consisted of:

- a change in the impact of LIFO, mostly due to higher aluminum prices, driven by higher base metal prices (LME) (increase in price at December 31, 2016 indexed to December 31, 2015 compared to a decrease in price at December 31, 2015 indexed to December 31, 2014);
- a change in Metal price lag, the result of higher prices for aluminum;
- an increase in Interest expense, due to debt issuance costs expensed associated with the Separation Transaction, a full year of interest related to the RTI debt and costs associated with the early redemption of $750 of 5.55% Notes due February 2017, completed on December 30, 2016, which included a purchase premium;

- an increase in Corporate expense, largely attributable to an increase in costs related to the Separation Transaction ($134), partially offset by decreases in corporate research and development expenses and other various expenses;
- a decrease in Restructuring and other charges, due to fewer portfolio actions; and
- a decrease in Other, primarily due to a charge for tax valuation allowances related to the Separation Transaction ($1,267), slightly offset by a favorable adjustment to the contingent earn-out liability and a post-closing adjustment, both of which related to the November 2014 acquisition of Firth Rixson ($76).

The significant changes in the reconciling items between total segment ATOI and Consolidated net (loss) income attributable to Arconic for 2015 compared with 2014 consisted of:

- a change in the impact of LIFO, mostly due to lower prices for aluminum, driven by both lower base metal prices (LME) and regional premiums (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 lower prices for aluminum;
- an increase in Interest expense, principally caused by an 8% higher average debt level, which was largely attributable to higher outstanding long-term debt due to the September 2014 issuance of $1,250 in 5.125% Notes, somewhat offset by the absence of fees paid associated with the execution and termination of a 364-day senior unsecured bridge term loan facility related to the then-planned acquisition of Firth Rixson ($8);
- a decline in Corporate expense, largely attributable to decreases in various expenses, including lower acquisition costs ($13), partially offset by expenses related to the Separation Transaction ($24);
- a decrease in Restructuring and other charges, mostly the result of lower restructuring and other charges associated with a number of portfolio actions (e.g. divestitures); and
- a change in Other, primarily due to a discrete income tax charge for valuation allowances on certain deferred tax assets in the United States and Iceland ($190) partially offset by gains on various asset sales, a tax rate change in Brazil, and a net benefit for a number of small items.

Environmental Matters

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

Liquidity and Capital Resources

Arconic maintains a disciplined approach to cash management and strengthening of its balance sheet. In 2016, as has been the focus since 2008, management initiated actions to significantly improve Arconic's cost structure and liquidity, providing the Company with the ability to operate effectively. Such actions include procurement efficiencies and overhead rationalization to reduce costs, working capital initiatives to yield significant cash improvements, and maintaining a sustainable level of capital expenditures. In 2017, this approach is expected to continue with the ultimate goal of generating cash from operations that exceeds capital expenditures by more than $350 and debt pay down of approximately $1 billion.

Along with the foregoing actions, cash provided from operations and financing activities is expected to be adequate to cover Arconic'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 Arconic were $1,863, of which $640 was held outside the United States. Arconic has a number of commitments and obligations related to the Company's growth strategy in foreign jurisdictions, resulting in the need for cash outside the United States. As such, management does not have a current expectation of repatriating cash held in foreign jurisdictions.

The Statement of Consolidated Cash Flows has not been restated for discontinued operations, therefore the discussion below concerning Cash from Operations, Financing Activities, and Investing Activities includes the results of both Arconic and Alcoa Corporation up through the completion of the Separation Transaction on November 1, 2016.

Cash from Operations

Cash provided from operations in 2016 was $870 compared with $1,582 in 2015. The decrease of $712, or 45%, was primarily due to lower operating results (net loss plus net add-back for noncash transactions in earnings) of $985 and a negative change in working capital of $104 and noncurrent liabilities of $21, partially offset by a positive change associated with noncurrent assets of $218 and a decrease in pension contributions of $180.

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

- an unfavorable change of $450 in receivables;
- a positive change of $35 in inventories;
- an unfavorable change of $122 in prepaid expenses and other current assets;
- a positive change of $322 in accounts payable, trade, principally the result of the impact of purchasing metal from Alcoa Corporation and the timing of payments;
- a positive change of $43 in accrued expenses; and
- a favorable change of $68 in taxes, including income taxes.

Cash provided from operations in 2015 was $1,582 compared with $1,674 in 2014. The decrease of $92, or 5%, was due to a negative change in noncurrent assets of $328, lower operating results (net (loss) income plus net add-back for noncash transactions in earnings) and a negative change in noncurrent liabilities of $18, mostly offset by a positive change associated with working capital of $572 and lower pension contributions of $31.

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

- a favorable change of $524 in receivables, mostly driven by lower customer sales as a result of closed, divested, and curtailed locations and lower metal prices;
- a positive change of $291 in inventories, largely attributable to the absence of inventory build related to the ramp-up of automotive production at the Davenport, IA plant and customer requirements related to smelters (Alcoa Corporation) that have been curtailed or shut down;
- a favorable change of $71 in prepaid expenses and other current assets;
- a negative change of $346 in accounts payable, trade, principally the result of timing of payments;
- a positive change of $14 in accrued expenses, mainly caused by a smaller payment to the United States government due to the resolution of a legal matter (Alcoa Corporation); and
- a favorable change of $18 in taxes, including income taxes.

The unfavorable change in noncurrent assets was mostly related to a $300 prepayment made under a natural gas supply agreement in Australia (Alcoa Corporation).

Financing Activities

Cash used for financing activities was $754 in 2016 compared with cash used from financing of $441 in 2015 and cash provided from financing activities of $2,250 in 2014.

The use of cash of $754 in 2016 was principally the result of $2,734 in payments on debt, mostly related to the repayment of borrowings under certain revolving credit facilitates (see below) and the repayment in December 2016 of $750 of outstanding principal of 5.55% notes due February 2017; $228 in dividends to shareholders; and $175 in net cash paid to noncontrolling interests. These items were mostly offset by $1,962 in additions to debt, virtually all of which was the result of borrowing under certain revolving credit facilities and $421 in net cash transferred from Alcoa Corporation at the completion of the Separation Transaction.

The use of cash in 2015 was principally the result of $2,030 in payments on debt, mostly related to the repayment of borrowings under certain revolving credit facilities (see below) and the repayment of convertible notes assumed in conjunction with the acquisition of RTI (see below); $223 in dividends paid to shareholders; and $104 in net cash paid to a noncontrolling interest. These items were mostly offset by $1,901 in additions to debt, virtually all of which was the result of borrowings under certain revolving credit facilities (see below).

The source of cash in 2014 was mostly driven by $2,878 in additions to debt, driven by $1,238 in net proceeds from the issuance of new senior debt securities used for the acquisition of Firth Rixson (see below) and $1,640 in borrowings under certain revolving credit facilities (see below); net proceeds of $1,211 from the issuance of mandatory convertible preferred stock related to the aforementioned acquisition; and $150 in proceeds from employee exercises of 17.3 million stock options at a weighted average exercise price of $8.70 (not in millions). These items were somewhat offset by $1,723 in payments on debt, mostly related to $1,640 for the repayment of borrowings under certain revolving credit facilities (see below), and $161 in dividends paid to shareholders.

In July 2015, through the acquisition of RTI (see Engineered Products and Solutions in Segment Information above), Arconic assumed the obligation to repay two tranches of convertible debt; one tranche was due and settled in cash on December 1, 2015 (principal amount of $115) and the other tranche is due on October 15, 2019 (principal amount of $403), unless earlier converted or purchased by Arconic at the holder's option upon a fundamental change. Upon conversion of the 2019 convertible notes in accordance with their terms, holders will receive, at Arconic's election, cash, shares of common stock (approximately 14,156,000 shares currently), or a combination of cash and shares. On the maturity date, each holder of outstanding notes will be entitled to receive on such date $1,000 (not in millions) in cash for each $1,000 (not in millions) in principal amount of notes, together with accrued and unpaid interest to, but not including, the maturity date.

On July 25, 2014, Arconic entered into a Five-Year Revolving Credit Agreement (the "Credit Agreement") with a syndicate of lenders and issuers named therein which provides for a senior unsecured revolving credit facility (the "Credit Facility"). The proceeds are to be used to provide working capital or for other general corporate purposes of Arconic. In September 2016, Arconic entered into an amendment to the Credit Agreement to permit the Separation Transaction and to amend certain terms of the Credit Facility including the replacement of the existing financial covenant with a leverage ratio and reduction of total commitments available from $4,000 to $3,000. The amendment became effective on the separation date of November 1, 2016. The previous financial covenant, based upon Consolidated Net Worth (as defined in the Credit Agreement) was replaced. Arconic will be required to maintain a ratio of Indebtedness (as defined in the Credit Agreement), to Consolidated EBITDA (as defined in the Credit Agreement) of 5.50 to 1.00 for the period of the four fiscal quarters most recently ended, declining to 3.50 to 1.00 on December 31, 2019 and thereafter.

The Credit Agreement includes additional covenants, including, among others, (a) limitations on Arconic's ability to incur liens securing indebtedness for borrowed money, (b) limitations on Arconic's ability to consummate a merger, consolidation or sale of all or substantially all of its assets, and (c) limitations on Arconic's ability to change the nature of its business. As of December 31, 2016, Arconic was in compliance with all such covenants.

The Credit Agreement matures on July 25, 2020, unless extended or earlier terminated in accordance with the provisions of the Credit Agreement. Arconic may make one additional one-year extension request during the remaining term of the Credit Agreement, subject to the lender consent requirements set forth in the Credit Agreement. Under the provisions of the Credit Agreement, Arconic will pay a fee of 0.30% (based on Arconic's long-term debt ratings as of December 31, 2016) of the total commitment per annum to maintain the Credit Facility.

The Credit Facility is unsecured and amounts payable under it will rank *pari passu* with all other unsecured, unsubordinated indebtedness of Arconic. Borrowings under the Credit Facility may be denominated in U.S. dollars or euros. Loans will bear interest at a base rate or a rate equal to LIBOR, plus, in each case, an applicable margin based on the credit ratings of Arconic's outstanding senior unsecured long-term debt. The applicable margin on base rate loans and LIBOR loans will be 0.70% and 1.70% per annum, respectively, based on Arconic's long-term debt ratings as of December 31, 2016. Loans may be prepaid without premium or penalty, subject to customary breakage costs.

The obligation of Arconic to pay amounts outstanding under the Credit Facility may be accelerated upon the occurrence of an "Event of Default" as defined in the Credit Agreement. Such Events of Default include, among others, (a) Arconic's failure to pay the principal of, or interest on, borrowings under the Credit Facility, (b) any representation or warranty of Arconic in the Credit Agreement proving to be materially false or misleading, (c) Arconic's breach of any of its covenants contained in the Credit Agreement, and (d) the bankruptcy or insolvency of Arconic.

There were no amounts outstanding at December 31, 2016 and 2015 and no amounts were borrowed during 2016, 2015 or 2014 under the Credit Facility In addition to the Credit Facility above, Arconic has a number of other credit facilities that provide a combined borrowing capacity of $715 as of December 31, 2016, of which $465 is due to expire in 2017 and $250 is due to expire in 2018. The purpose of any borrowings under these credit arrangements is to provide for working capital requirements and for other general corporate purposes. The covenants contained in all these arrangements are the same as the Credit Agreement (see above).

In 2016, 2015 and 2014, Arconic borrowed and repaid $1,950, $1,890, and $1,640, respectively, under the respective credit arrangements. The weighted-average interest rate and weighted-average days outstanding of the respective borrowings during 2016, 2015, and 2014 were 1.88%, 1.61%, and 1.54%, respectively, and 49 days, 69 days, and 67 days, respectively.

In February 2014, Arconic's automatic shelf registration statement filed with the Securities and Exchange Commission expired. On July 11, 2014, Arconic filed a new shelf registration statement, which was amended on July 25, 2014 and became effective on July 30, 2014, for up to $5,000 of securities on an unallocated basis for future issuance. As of December 31, 2016, $2,500 in securities were issued under the new shelf registration statement.

In September 2014, Arconic completed two public securities offerings under its shelf registration statement for (i) $1,250 of 25 million depositary shares, each representing a 1/10th interest in a share of Arconic's 5.375% Class B Mandatory Convertible Preferred Stock, Series 1, par value $1 per share, liquidation preference $500 per share, and (ii) $1,250 of 5.125% Notes due 2024. The net proceeds of the offerings were used to finance the cash portion of the acquisition of Firth Rixson (see Engineered Products and Solutions in Segment Information above).

Arconic'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 Arconic's debt by the major credit rating agencies.

On March 31, 2016, Moody's Investor Service (Moody's) affirmed the following ratings for Arconic: long-term debt at Ba1 and short-term debt at Speculative Grade Liquidity Rating-1. Additionally, Moody's changed the current outlook from rating under review to negative. On June 30, 2016, Moody's maintained the current outlook as negative based on the filing of a Form 10 registration statement related to the planned separation of Arconic. On September 22, 2016, Moody's placed the long-term debt rating Ba1 as under review for possible downgrade. On November 1, 2016, Moody's downgraded Arconic's long-term debt to Ba2 and short-term debt to Speculative Grade Liquidity-2 based upon the completion of the Separation Transaction. Additionally, Moody's changed the current outlook to stable.

On April 21, 2016, Fitch affirmed the following ratings for Arconic: long-term debt at BB+ and short-term debt at B. Additionally, Fitch changed the current outlook from positive to evolving. On July 7, 2016, Fitch changed the current outlook from evolving to stable based on the filing of a Form 10 registration statement related to the planned separation of Arconic.

On April 29, 2016, Standard and Poor's Ratings Service (S&P) affirmed the following ratings for Arconic: long-term debt at BBB- and short-term debt at A-3. Additionally, S&P maintained the current outlook as stable. On September 19, 2016, S&P affirmed its ratings for Arconic: long-term debt at BBB- and short-term debt at A-3. Additionally, S&P maintained the current outlook as stable.

Investing Activities

Cash used for investing activities was $165 in 2016 compared with $1,060 in 2015 and $3,460 in 2014.

The use of cash in 2016 was mainly due to $1,125 in capital expenditures ($298 Alcoa Corporation), 29% of which related to growth projects, including the aerospace expansion (very thick plate stretcher) at the Davenport, IA plant and a titanium aluminide furnace at the Niles, Ohio facility. This use of cash was primarily offset by $692 in proceeds from the sale of assets and businesses, including $457 from the redemption of company-owned life insurance policies, $120 in proceeds related to the sale of the Intalco smelter wharf property (Alcoa Corporation), and $102 in proceeds ($99 net of transaction costs) from the sale of the Remmele Medical business, which was part of Arconic's acquisition of RTI in July 2015; and $280 in sales of investments, composed primarily of $145 for an equity interest in a natural pipeline in Australia (Alcoa Corporation) and $130 for fixed income and equity securities held by Arconic's captive insurance company.

The use of cash in 2015 was mainly due to $1,180 in capital expenditures ($391 Alcoa Corporation) (includes costs related to environmental control in new and expanded facilities of $141), 38% of which related to growth projects, including the aerospace expansion at the La Porte, IN plant, the automotive expansion at the Alcoa, TN plant, the aerospace expansion (very thick plate stretcher) at the Davenport, IA plant, the aerospace expansion (isothermal press) at the Savannah, GA plant (Firth Rixson), and the specialty foil expansion at the Itapissuma plant in Brazil; $205 (net of cash acquired) for the acquisition of TITAL (see Engineered Products and Solutions in Segment Information above); and $134 in additions to investments, including the purchase of $70 in equities and fixed income securities held by Arconic's captive insurance company and equity contributions of $29 related to the aluminum complex joint venture in Saudi Arabia (Alcoa Corporation). These items were somewhat offset by $302 in cash acquired from RTI (see Engineered Products and Solutions in Segment Information above); $112 in proceeds from the sale of assets and businesses, composed of three land sales in Australia and the United States combined and post-closing adjustments related to an ownership stake in a smelter (Alcoa Corporation), four rolling mills, and an ownership stake in a bauxite mine/alumina refinery (Alcoa Corporation) divested from December 2014 through March 2015; and $40 in sales of investments, related to the sale of $21 in equities and fixed income securities held by Arconic's captive insurance company and $19 in proceeds from the sale of the remaining portion of an equity investment in a China rolling mill.

The use of cash in 2014 was principally due to $2,385 (net of cash acquired) for the acquisition of Firth Rixson (see Engineered Products and Solutions in Segment Information above); $1,219 in capital expenditures ($444 for Alcoa Corporation) (includes costs related to environmental control in new and expanded facilities of $129), 40% of which related to growth projects, including the automotive expansions at the Alcoa, TN and Davenport, IA fabrication plants, the aerospace expansion at the La Porte, IN plant, the aluminum-lithium capacity expansion at the Lafayette, IN plant, and the specialty foil expansion at the Itapissuma plant in Brazil; and $195 in additions to investments, including equity contributions of $120 related to the aluminum complex joint venture in Saudi Arabia (Alcoa Corporation) and the purchase of $49 in equities and fixed income securities held by Arconic's captive insurance company. These items were slightly offset by $253 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 (Alcoa Corporation), an ownership stake in a smelter in the United States (Alcoa Corporation), three rolling mills in Spain and France combined (see Global Rolled Products in Segment Information above), and a rod plant in Canada (Alcoa Corporation); and $57 in sales of investments, mostly related to $42 in combined proceeds from the sale of a mining interest in Suriname (Alcoa Corporation) and a portion of an equity investment in a China rolling mill.

Noncash Financing and Investing Activities. On October 5, 2016, Arconic completed a 1-for-3 Reverse Stock Split (the "Reverse Stock Split"). The Reverse Stock Split reduced the number of shares of common stock outstanding from approximately 1.3 billion shares to approximately 0.4 billion shares. The par value of the common stock remained at $1.00 per share. Accordingly, Common stock and Additional capital in the Company's Consolidated Balance Sheet at December 31, 2016 reflect a decrease and increase of $877, respectively. This transaction was not reflected in the accompanying Statement of Consolidated Cash Flows for the year ended December 31, 2016 as it represents a noncash financing activity.

In August 2016, Arconic retired its outstanding treasury stock consisting of approximately 76 million shares. As a result, Common stock and Additional capital were decreased by $76 and $2,563, respectively, to reflect the retirement of the treasury shares. This transaction was not reflected in the accompanying Statement of Consolidated Cash Flows for the year ended December 31, 2016 as it represents a noncash financing activity.

In July 2015, Arconic purchased all outstanding shares of RTI common stock in a stock-for-stock transaction valued at $870. As a result, Arconic issued 29 million shares (87 million shares—pre-Reverse stock split) of its common stock to consummate this transaction, which was not reflected in the accompanying Statement of Consolidated Cash Flows as it represents a noncash financing activity.

In early 2014, holders of $575 principal amount of Arconic's 5.25% Convertible Notes due March 15, 2014 (the "2014 Notes") exercised their option to convert the 2014 Notes into 30 million shares (89 million shares—pre-Reverse Stock Split—see Note A) of Arconic common stock. This transaction was not reflected in the accompanying Statement of Consolidated Cash Flows as it represents a noncash financing activity.

In late 2014, Arconic paid $2,995 (net of cash acquired) to acquire Firth Rixson. A portion of this consideration was paid through the issuance of 12 million shares (37 million shares—pre-Reverse Stock Split) in Arconic common stock valued at $610. The issuance of common stock was not reflected in the accompanying Statement of Consolidated Cash Flows as it represents a noncash investing activity.

Contractual Obligations and Off-Balance Sheet Arrangements

Contractual Obligations. Arconic is required to make future payments under various contracts, including long-term purchase obligations, financing arrangements, and lease agreements. Arconic 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 Arconic'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	$ 42	$ 28	$ 13	$ 1	$ -
Raw material purchase obligations	563	379	126	58	-
Other purchase obligations	119	83	24	7	5
Operating leases	494	115	171	92	116
Interest related to total debt	3,197	445	804	577	1,371
Estimated minimum required pension funding	1,735	310	650	775	-
Other postretirement benefit payments	890	95	190	190	415
Layoff and other restructuring payments	59	59	-	-	-
Deferred revenue arrangements	84	20	27	37	-
Uncertain tax positions	29	-	-	-	29
Financing activities:					
Total debt	8,137	39	2,168	2,253	3,677
Dividends to shareholders	-	-	-	-	-
Investing activities:					
Capital projects	580	311	235	34	-
Payments related to acquisitions	90	-	23	67	-
Totals	$16,019	$1,884	$ 4,431	$ 4,091	$ 5,613

Obligations for Operating Activities

Energy-related purchase obligations consist primarily of electricity and natural gas contracts with expiration dates ranging from one year to six years. Raw material purchase obligations consist mostly of aluminum, titanium sponge, and various other metals with expiration dates ranging from less than one year to four 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, 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 2042. The effect of outstanding interest rate swaps, which are accounted for as fair value hedges, was included in interest related to total debt. As of December 31, 2016, these hedges effectively convert the interest rate from fixed to floating on $200 of debt through 2018. As the contractual interest rates for certain debt and interest rate swaps 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 $310 for 2017, $325 for 2018, $325 for 2019, $425 for 2020, and $350 for 2021. 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 21st Century Act of 2012; the Highway and Transportation Funding Act of 2014; and the Bipartisan Budget Act of 2015. Other postretirement benefit payments are expected to approximate $95 annually for years 2017 through 2021 and $83 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 $5 annually for years 2017 through 2026. Arconic 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 to be paid within one year primarily relate to severance costs, contract termination costs and special layoff benefit payments.

Deferred revenue arrangements require Arconic to deliver product to certain customers over the specified contract period (through 2020 for a sheet and plate contract and 2021 for certain aerospace parts contracts). While these obligations are not expected to result in cash payments, they represent contractual obligations 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.

Obligations for Financing Activities

Total debt amounts in the preceding table represent the principal amounts of all outstanding debt, including short-term borrowings and long-term debt. Maturities for long-term debt extend to 2042.

Arconic has historically paid quarterly dividends on its preferred and common stock. Including dividends on preferred stock, Arconic paid $228 in dividends to shareholders during 2016. This amount includes dividends related to a class of preferred stock issued in September 2014 (see Financing Activities in Liquidity and Capital Resources above). Because all dividends are subject to approval by Arconic's Board of Directors, amounts are not included in the preceding table unless such authorization has occurred. There were $17 of preferred stock dividends approved to be paid on January 1, 2017; however, Arconic paid the dividends on December 31, 2016. As of December 31, 2016, there were 438,519,780 shares of outstanding common stock and 546,024 and 2,500,000 shares of outstanding Class A and Class B preferred stock, respectively. The annual Class A and Class B preferred stock dividends are at the rate of $3.75 and $26.8750 per share, respectively, and the annual common stock dividend expected to be paid is $0.24 per share for 2017.

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 $650 in 2017.

Payments related to acquisitions are based on provisions in certain acquisition agreements that state additional funds are due to the seller from Arconic if the businesses acquired achieve stated financial and operational thresholds. Amounts are only presented in the preceding table if it has been determined that payment is more likely than not to occur. In connection with the acquisition of Firth Rixson (see Engineered Products and Solutions in Segment Information above), Arconic entered into an earn-out agreement, which states that Arconic will make earn-out payments up to an aggregate maximum amount of $150 through 2020. Based upon the evaluation of financial and operational forecasts, the expected estimated payment has been reduced. The amounts in the preceding table represent Arconic's best estimate of the amount and timing of payments.

Off-Balance Sheet Arrangements.

At December 31, 2016, Arconic has outstanding bank guarantees related to tax matters, outstanding debt, workers' compensation, environmental obligations, energy contracts, and customs duties, among others. The total amount committed under these guarantees, which expire at various dates between 2017 and 2026 was $51 at December 31, 2016.

As part of the Separation Transaction, Arconic was required to provide maximum potential future payment guarantees for Alcoa Corporation 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 Alcoa Corporation's aluminum complex in Saudi Arabia. Additionally, Arconic was required to provide guarantees up to an estimated present value amount of $1,600 related to two long-term supply agreements for energy for Alcoa Corporation facilities. Per the Separation and Distribution Agreement, Arconic is only liable for these guaranteed amounts in the event of an Alcoa Corporation payment default. In December 2016, Arconic entered into a one year claims purchase agreement with a bank covering claims up to $245 related to the Saudi Arabian joint venture and two long-term energy supply agreements. The majority of the premium related to this claims purchase agreement is being paid by Alcoa Corporation. At December 31, 2016, the combined fair value of the three required guarantees was $35 which was included in Other Noncurrent liabilities and deferred credits on the accompanying Consolidated Balance Sheet.

Arconic was also required to provide guarantees of $50 related to two Alcoa Corporation energy supply contracts. These guarantees expire in March 2017. Additionally, Arconic was required to provide guarantees of $53 related to certain Alcoa Corporation environmental liabilities. Notification of a change in guarantor has been made to the appropriate environmental agencies and Alcoa Corporation is required by the end of March 2017 to self-bond or provide collateral.

Arconic has outstanding letters of credit primarily related to workers' compensation, energy contracts and leasing obligations. The total amount committed under these letters of credit, which automatically renew or expire at various dates, mostly in 2017 was $212 at December 31, 2016.

As part of the Separation Transaction, Arconic was required to retain letters of credit of $62 that had previously been provided related to both Arconic and Alcoa Corporation workers' compensation claims which occurred prior to

November 1, 2016. Alcoa Corporation workers' compensation claims and letter of credit fees paid by Arconic are being billed to and are being fully reimbursed by Alcoa Corporation. Additionally, Arconic was required to provide letters of credit for certain Alcoa Corporation equipment leases and energy contracts and, as a result, Arconic has $103 of outstanding letters of credit relating to these liabilities. The entire $103 of outstanding letters of credit were canceled in 2017 when Alcoa Corporation issued its own letters of credit to cover these obligations.

Arconic 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 $120 at December 31, 2016.

As part of the Separation Transaction, Arconic was required to provide surety bonds related to Alcoa Corporation workers' compensation claims which occurred prior to November 1, 2016 and, as a result, Arconic has $22 in outstanding surety bonds relating to these liabilities. Alcoa Corporation workers' compensation claims and surety bond fees paid by Arconic are being billed to and are being fully reimbursed by Alcoa Corporation.

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 accompanying Notes. Areas that require significant judgments, estimates, and assumptions include accounting for environmental and litigation matters; the testing of goodwill, other intangible assets, and properties, plants, and equipment for impairment; estimating fair value of businesses acquired or divested; pension plans and other postretirement benefits obligations; stock-based compensation; 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 and accompanying Notes provide a meaningful and fair perspective of the Company.

A summary of the Company's significant accounting policies is included in Note A 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.

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 when probable and as agreements are reached with third parties. The estimates also include costs related to other potentially responsible parties to the extent that Arconic 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 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, among others. 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.

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. Arconic has eight reporting units, of which four are included in the Engineered Products and Solutions segment, three are included in the Transportation and Construction Solutions segment, and the remaining reporting unit is the Global Rolled Products segment. More than 70% of Arconic's total goodwill is allocated to two reporting units as follows: Arconic Fastening Systems and Rings (AFSR) ($2,200) and Arconic Power and Propulsion (APP) ($1,647) businesses, both of which are included in the Engineered Products and Solutions segment. These amounts include an allocation of Corporate's goodwill.

In November 2014, Arconic acquired Firth Rixson (see Engineered Products and Solutions in Segment Information under Results of Operations above), and, as a result recognized $1,801 in goodwill. This amount was allocated between the AFSR and Arconic Forgings and Extrusions (AFE) reporting units, both of which are part of the Engineered Products and Solutions segment. In March and July 2015, Arconic acquired TITAL and RTI, respectively, (see Engineered Products and Solutions in Segment Information under Results of Operations above) and recognized $117 and $298, respectively, in goodwill. The goodwill amount related to TITAL was allocated to the APP reporting unit and the amount related to RTI was allocated to Arconic Titanium and Engineered Products (ATEP), a new Arconic reporting unit that consists solely of the acquired RTI business and is part of the Engineered Products and Solutions segment.

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.

Arconic'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 up to four reporting units (based on facts and circumstances) during each annual review of goodwill. This policy will result in each of the seven reporting units with goodwill being subjected to the two-step quantitative impairment test at least once during every three-year period.

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 three reporting units, the Global Rolled Products segment, ATEP, and Building and Construction Systems (within the Transportation and Construction Solutions segment). Management concluded that it was not more likely than not that the estimated fair values of the three reporting units were less than their carrying values. 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. Arconic uses a discounted cash flow (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. Most of these assumptions 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, which could significantly and adversely impact reported results of operations and shareholders' equity.

During the 2016 annual review of goodwill, management proceeded directly to the two-step quantitative impairment test for four reporting units as follows: AFSR, APP, and AFE, which are all included in the EPS segment, and Arconic Wheel and Transportation Products which is included in the Transportation and Construction Solutions segment. The estimated fair value of each of the reporting units exceeded its respective carrying value, resulting in no impairment.

Goodwill impairment tests in prior years indicated that goodwill was not impaired for any of the Company's reporting units, except for the soft alloy extrusion business in Brazil (SAE) which is included in the Transportation and Construction Solutions segment, and there were no triggering events since that time that necessitated an impairment test.

In 2015, for SAE, the estimated fair value as determined by the DCF model was lower than the associated carrying value of the SAE reporting unit's goodwill. As a result, management performed the second step of the impairment analysis in order to determine the implied fair value of the SAE reporting unit's goodwill. The results of the second-step analysis showed that the implied fair value of the goodwill was zero. Therefore, in the fourth quarter of 2015, Arconic recorded a goodwill impairment of $25. The impairment of the SAE goodwill resulted from headwinds from the downturn in the Brazilian economy and the continued erosion of gross margin despite the execution of cost reduction strategies. As a result of the goodwill impairment, there is no goodwill remaining for the SAE reporting unit.

Properties, Plants, and Equipment and Other Intangible Assets. Properties, plants, and equipment and Other intangible assets 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 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.

Discontinued Operations and Assets Held For Sale. The fair values of all businesses to be divested are estimated using accepted valuation techniques such as a DCF model, valuations performed by third parties, earnings multiples, or indicative bids, when available. A number of significant estimates and assumptions are involved in the application of these techniques, including the forecasting of markets and market share, sales volumes and prices, costs and expenses, and multiple other factors. Management considers historical experience and all available information at the time the estimates are made; however, the fair value that is ultimately realized upon the divestiture of a business may differ from the estimated fair value reflected in the Consolidated Financial Statements.

Pension and Other Postretirement Benefits. 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, including finance and banking, consumer products, transportation, insurance, and pharmaceutical, among others. The yield curve model parallels the plans' projected cash flows, which have an average duration of 11 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. In 2016, 2015, and 2014, the discount rate used to determine benefit obligations for U.S. pension and other postretirement benefit plans was 4.20%, 4.29%, and 4.00%, respectively. The impact on the liabilities of a change in the discount rate of 1/4 of 1% would be approximately $210 and either a charge or credit of approximately $6 to after-tax earnings in the following year.

In conjunction with the annual measurement of the funded status of Arconic's pension and other postretirement benefit plans at December 31, 2015, management elected to change the manner in which the interest cost component of net periodic benefit cost will be determined in 2016 and beyond. Previously, the interest cost component was determined by multiplying the single equivalent rate described above and the aggregate discounted cash flows of the plans' projected benefit obligations. Under the new methodology, the interest cost component will be determined by aggregating the product of the discounted cash flows of the plans' projected benefit obligations for each year and an individual spot rate (referred to as the "spot rate" approach). This change resulted in a lower interest cost component of net periodic benefit cost under the new methodology compared to the previous methodology of $98 ($64 after-tax) in 2016. Management believes this new methodology, which represents a change in an accounting estimate, is a better measure of the interest cost as each year's cash flows are specifically linked to the interest rates of bond payments in the same respective 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 a combination of historical asset return information and forward-looking returns by asset class. As it relates to historical asset return information, management focuses on various historical moving averages when developing this assumption. While consideration is given to recent performance and historical returns, the assumption represents a long-term, prospective return. Management also 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 7.75%, 7.75%, and 8.00% as its 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. These rates fell within the respective range of the 20-year moving average of actual performance and the expected future return developed by asset class. In 2015, the decrease of 25 basis points in the expected long-term rate of return was due to a decrease in the 20-year moving average of actual performance. For 2017, management anticipates that 7.75% will be the expected long-term rate of return.

A change in the assumption for the expected long-term rate of return on plan assets of 1/4 of 1% would impact after-tax earnings by approximately $8 for 2017.

During 2014, an independent U.S. organization that publishes standard mortality rates based on statistical analysis and studies issued updated mortality tables. The rates within these standard tables are used by actuaries as one of the many assumptions when measuring a company's projected benefit obligation for pension and other postretirement benefit plans. The funded status of all of Arconic's pension and other postretirement benefit plans are measured as of December 31 each calendar year. During the measurement process at the end of 2014, Arconic, with the assistance of an external actuary, considered the rates in the new mortality tables, along with specific data related to Arconic's retiree population, to develop the mortality-related assumptions used to measure the benefit obligation of various U.S. benefit plans. As a result, Arconic recognized a charge of approximately $100 ($65 after-tax) in other comprehensive loss related to the updated mortality assumptions.

In 2016, a net benefit of $1,601 (after-tax and noncontrolling interest) was recorded in other comprehensive loss, primarily due to the transfer of $2,080 to Alcoa Corporation which was partially offset by a net charge of $479. The charge was due to the unfavorable performance of the plan assets and a 9 basis point decrease in the discount rate, which was partially offset by the amortization of actuarial losses. In 2015, a net charge of $10 (after-tax and noncontrolling interest) was recorded in other comprehensive loss, primarily due to the unfavorable performance of the plan assets, which was mostly offset by the amortization of actuarial losses and a 29 basis point increase in the discount rate. In 2014, a net charge of $69 (after-tax and noncontrolling interest) was recorded in other comprehensive loss, primarily due to an 80 basis point increase in the discount rate and a change in the mortality assumption (see above), which was mostly offset by the favorable performance of the plan assets and the amortization of actuarial losses.

Stock-based Compensation. Arconic recognizes compensation expense for employee equity grants 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, 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.

As part of Arconic'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. Compensation expense recorded in 2016, 2015, and 2014 was $76 ($51 after-tax), $77 ($51 after-tax), and $70 ($47 after-tax), respectively. Of these amounts, $19, $15, and $11 in 2016, 2015, and 2014, 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.

Income Taxes. The provision for income taxes is 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 Arconic's assets and liabilities and are adjusted for changes in tax rates and tax laws when enacted.

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not 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 Arconic'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.

In 2016, Arconic recognized a $1,267 discrete income tax charge for valuation allowances related to the Separation Transaction, including $925 with respect to Alcoa Corporation's net deferred tax assets in the United States, $302 with respect to Arconic's foreign tax credits in the United States, $42 with respect to certain deferred tax assets in Luxembourg, and $(2) related to the net impact of other smaller items. After weighing all positive and negative evidence, as described above, management determined that the net deferred tax assets of Alcoa Corporation were not more likely than not to be realized due to lack of historical and projected domestic source taxable income. As such, a valuation allowance was recorded immediately prior to separation.

Upon separation, Arconic retained foreign tax credits in the United States which have a 10-year carryforward period with expirations ranging from 2017 to 2026 (as of December 31, 2016). Arconic also retained suspended foreign tax credit carryforwards whose expiration period begins when the credits become unsuspended. A valuation allowance of $135 was initially established in 2013 on a portion of the foreign tax credit carryforwards, primarily due to insufficient foreign source income to allow for full utilization of the credits within the expiration period. An incremental valuation allowance of $134 was recognized in 2015. At the end of 2015 and 2016, $15 and $128 of foreign tax credits respectively expired resulting in a corresponding decrease to the valuation allowance. As a result of the Separation Transaction, management determined that it was no longer more likely than not that Arconic would realize the full tax benefit of its foreign tax credit carryforwards based on changes in the availability of foreign sourced taxable income. After consideration of all available evidence including potential tax planning strategies and earnings of foreign subsidiaries projected to be distributable as taxable foreign dividends, an incremental valuation allowance of $302 was recognized in 2016. At December 31, 2016, the cumulative amount of the valuation allowance was $427. The need for this valuation allowance will be reassessed on a continuous basis in future periods and, as a result, the allowance may increase or decrease based on changes in facts and circumstances.

In addition, Arconic recognized a $42 discrete income tax charge in 2016 for a valuation allowance on the full value of certain net deferred tax assets in Luxembourg. Sources of taxable income which previously supported the net deferred tax asset are no longer available as a result of the Separation Transaction. The need for this valuation allowance will be reassessed on a continuous basis in future periods and, as a result, the allowance may increase or decrease based on changes in facts and circumstances.

In 2016, Arconic also recognized discrete income tax benefits related to the release of valuation allowances on certain net deferred tax assets in Russia and Canada of $19 and $20 respectively. After weighing all available evidence, management determined that it was more likely than not that the net income tax benefits associated with the underlying deferred tax assets would be realizable based on historical cumulative income and projected taxable income.

Arconic also recorded additional valuation allowances in Australia of $93 related to the Separation Transaction, in Spain of $163 related to a tax law change and in Luxembourg of $280 related to the Separation Transaction as well as a tax law change. These valuation allowances fully offset current year changes in deferred tax asset balances of each respective jurisdiction, resulting in no net impact to tax expense. The need for a valuation allowance will be reassessed on a continuous basis in future periods by each jurisdiction and, as a result, the allowances may increase or decrease based on changes in facts and circumstances.

In 2015, Arconic 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 2016 to 2022 (as of December 31, 2015). 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 Arconic will realize the tax benefit of either of these deferred tax assets. This was mainly driven by a decline in the outlook of the Primary Metals business, combined with prior year cumulative losses and a short expiration period.

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 limitations 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

On October 31, 2016, Arconic entered into several agreements with Alcoa Corporation that govern the relationship of the parties following the completion of the Separation Transaction. These agreements include the following: Separation and Distribution Agreement, Transition Services Agreement, Tax Matters Agreement, Employee Matters Agreement, Alcoa Corporation to Arconic Inc. Patent, Know-How, and Trade Secret License Agreement, Arconic Inc. to Alcoa Corporation Patent, Know-How, and Trade Secret License Agreement, Alcoa Corporation to Arconic Inc. Trademark License Agreement, Toll Processing and Services Agreement, Master Agreement for the Supply of Primary Aluminum, Massena Lease and Operations Agreement, Fusina Lease and Operations Agreement, and Stockholder and Registration Rights Agreement.

Effective November 1, 2016, Arconic entered into a Toll Processing and Services Agreement with Alcoa Corporation for the tolling of metal for the Warrick, Indiana rolling mill which became a part of Alcoa Corporation upon the completion of the Separation Transaction. As part of this arrangement, Arconic will provide a toll processing service to Alcoa Corporation to produce can sheet products at its facility in Tennessee throughout the expected end date of the contract, December 31, 2018. Alcoa Corporation will supply all required raw materials to Arconic and Arconic will process the raw materials into finished can sheet coils ready for shipment to the end customer. Tolling revenues for the two month period ending December 31, 2016 and accounts receivable at December 31, 2016 were not material to the consolidated results of operations and financial position for the year ended December 31, 2016.

Additionally, Arconic buys products from and sells products to various related companies, including Alcoa Corporation, at negotiated prices between the two parties. These transactions, including accounts payable, were not material to the financial position or results of operations of Arconic for all periods presented.

Recently Adopted Accounting Guidance

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

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

Not material.

Item 8. Financial Statements and Supplementary Data.

Management's Reports to Arconic Shareholders

Management's Report on Financial Statements and Practices

The accompanying Consolidated Financial Statements of Arconic Inc. and its subsidiaries (the "Company") were prepared by management, which is responsible for their integrity and objectivity. The statements were prepared in accordance with accounting principles generally accepted in the United States of America and include amounts that are based on management's best judgments and estimates. The other financial information included in the annual report is consistent with that in the financial statements.

Management also recognizes its responsibility for conducting the Company's affairs according to the highest standards of personal and corporate conduct. This responsibility is characterized and reflected in key policy statements issued from time to time regarding, among other things, conduct of its business activities within the laws of the host countries in which the Company operates and potentially conflicting outside business interests of its employees. The Company maintains a systematic program to assess compliance with these policies.

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. In order to evaluate the effectiveness of internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act, management has conducted an assessment, including testing, using the criteria in *Internal Control—Integrated Framework (2013)*, issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's system of internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. The Company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Based on the assessment, management has concluded that the Company maintained effective internal control over financial reporting as of December 31, 2016, based on criteria in *Internal Control—Integrated Framework (2013)* issued by the COSO.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2016 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report, which is included herein.

/s/ Klaus Kleinfeld
Klaus Kleinfeld
Chairman and
Chief Executive Officer

/s/ Ken Giacobbe
Ken Giacobbe
Executive Vice President and
Chief Financial Officer

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Arconic Inc.

In our opinion, the accompanying consolidated balance sheets and the related statements of consolidated operations, consolidated comprehensive loss, changes in consolidated equity, and consolidated cash flows present fairly, in all material respects, the financial position of Arconic Inc. and its subsidiaries at 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. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included 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. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Pittsburgh, Pennsylvania
February 28, 2017

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

For the year ended December 31,	**2016**	**2015**	**2014**
Sales (O)	$12,394	$12,413	$12,542
Cost of goods sold (exclusive of expenses below)	9,811	10,104	10,349
Selling, general administrative, and other expenses (C)	942	765	770
Research and development expenses	132	169	123
Provision for depreciation and amortization	535	508	436
Impairment of goodwill (A and E)	-	25	-
Restructuring and other charges (D)	155	214	314
Interest expense (T)	499	473	442
Other income, net (M)	(94)	(28)	(5)
Total costs and expenses	11,980	12,230	12,429
Income from continuing operations before income taxes	414	183	113
Provision for income taxes (R)	1,476	339	174
Loss from continuing operations after income taxes	(1,062)	(156)	(61)
Income (loss) from discontinued operations after income taxes (C)	184	(41)	238
Net (loss) income	(878)	(197)	177
Less: Net income from continuing operations attributable to noncontrolling interests	-	1	-
Net income (loss) from discontinued operations attributable to noncontrolling interests (C)	63	124	(91)
Net (Loss) Income Attributable to Arconic	$ (941)	$ (322)	$ 268
Amounts Attributable to Arconic Common Shareholders (Q):			
Net (loss) income	$ (1,010)	$ (391)	$ 247
Earnings per share—basic:			
Continuing operations	$ (2.58)	$ (0.54)	$ (0.21)
Discontinued operations	$ 0.27	$ (0.39)	$ 0.85
Net (loss) income per share-basic	$ (2.31)	$ (0.93)	$ 0.64
Earnings per share—diluted			
Continuing operations	$ (2.58)	$ (0.54)	$ (0.21)
Discontinued operations	$ 0.27	$ (0.39)	$ 0.84
Net (loss) income per share-diluted	$ (2.31)	$ (0.93)	$ 0.63

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

Arconic and subsidiaries
Statement of Consolidated Comprehensive Loss
(in millions)

	Arconic			Noncontrolling Interests			Total		
For the year ended December 31,	**2016**	**2015**	**2014**	**2016**	**2015**	**2014**	**2016**	**2015**	**2014**
Net (loss) income	$ (941)	$ (322)	$ 268	$ 63	$ 125	$ (91)	$ (878)	$ (197)	$ 177
Other comprehensive loss, net of tax (B):									
Change in unrecognized net actuarial loss and prior service cost/benefit related to pension and other postretirement benefits	(479)	(10)	(69)	(3)	8	(13)	(482)	(2)	(82)
Foreign currency translation adjustments	268	(1,566)	(1,025)	182	(429)	(241)	450	(1,995)	(1,266)
Net change in unrealized gains on available-for-sale securities	137	(5)	(2)	-	-	-	137	(5)	(2)
Net change in unrecognized losses on cash flow hedges	(617)	827	78	5	(1)	-	(612)	826	78
Total Other comprehensive (loss) income, net of tax	(691)	(754)	(1,018)	184	(422)	(254)	(507)	(1,176)	(1,272)
Comprehensive (loss) income	$(1,632)	$(1,076)	$ (750)	$247	$(297)	$(345)	$(1,385)	$(1,373)	$(1,095)

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

Arconic and subsidiaries
Consolidated Balance Sheet
(in millions)

December 31,	**2016**	**2015**
Assets		
Current assets:		
Cash and cash equivalents (V)	$ 1,863	$ 1,362
Receivables from customers, less allowances of $13 in 2016 and $8 in 2015 (S)	974	960
Other receivables (C and S)	477	394
Inventories (G)	2,253	2,284
Prepaid expenses and other current assets	325	397
Current assets of discontinued operations (C)	-	2,556
Total current assets	5,892	7,953
Properties, plants, and equipment, net (H)	5,499	5,425
Goodwill (A and E)	5,148	5,249
Deferred income taxes (R)	1,234	1,308
Investment in common stock of Alcoa Corporation (C and V)	1,020	-
Other noncurrent assets (I)	1,245	1,944
Noncurrent assets of discontinued operations (C)	-	14,598
Total Assets	$20,038	$36,477
Liabilities		
Current liabilities:		
Short-term borrowings (J and V)	$ 36	$ 38
Accounts payable, trade	1,744	1,510
Accrued compensation and retirement costs	398	410
Taxes, including income taxes	85	103
Accrued interest payable	153	170
Other current liabilities	329	441
Long-term debt due within one year (J and V)	4	3
Current liabilities of discontinued operations (C)	-	2,536
Total current liabilities	2,749	5,211
Long-term debt, less amount due within one year (J and V)	8,044	8,786
Accrued pension benefits (U)	2,345	1,925
Accrued other postretirement benefits (U)	889	917
Other noncurrent liabilities and deferred credits (K)	870	828
Noncurrent liabilities of discontinued operations (C)	-	4,679
Total liabilities	14,897	22,346
Contingencies and commitments (L)		
Equity		
Arconic shareholders' equity:		
Preferred stock (P)	55	55
Mandatory convertible preferred stock (P)	3	3
Common stock (P)	438	1,391
Additional capital	8,214	10,019
Retained (deficit) earnings	(1,027)	8,834
Treasury stock, at cost (P)	-	(2,825)
Accumulated other comprehensive loss (B)	(2,568)	(5,431)
Total Arconic shareholders' equity	5,115	12,046
Noncontrolling interests	26	2,085
Total equity	5,141	14,131
Total Liabilities and Equity	$20,038	$36,477

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

Arconic and subsidiaries
Statement of Consolidated Cash Flows
(in millions)

For the year ended December 31,	2016	2015	2014
Cash from Operations			
Net (loss) income	$ (878)	$ (197)	$ 177
Adjustments to reconcile net (loss) income to cash from operations:			
Depreciation, depletion and amortization	1,132	1,280	1,372
Deferred income taxes	1,125	34	(35)
Equity income, net of dividends	42	158	104
Impairment of goodwill (A and E)	-	25	-
Restructuring and other charges	257	1,195	1,168
Net gain from investing activities—asset sales	(156)	(74)	(47)
Net periodic pension benefit cost	304	485	423
Stock-based compensation	86	92	87
Excess tax benefits from stock-based payment arrangements	-	(9)	(9)
Other	60	(32)	66
Changes in assets and liabilities, excluding effects of acquisitions, divestitures, and foreign currency translation adjustments:			
(Increase) decrease in receivables	(238)	212	(312)
(Increase) in inventories	(29)	(64)	(355)
(Increase) decrease in prepaid expenses and other current assets	(76)	46	(25)
Increase (decrease) in accounts payable, trade	232	(90)	256
(Decrease) in accrued expenses	(394)	(437)	(451)
Increase in taxes, including income taxes	93	25	7
Pension contributions	(290)	(470)	(501)
(Increase) in noncurrent assets	(152)	(370)	(42)
(Decrease) in noncurrent liabilities	(248)	(227)	(209)
Cash provided from operations	870	1,582	1,674
Financing Activities			
Net change in short-term borrowings (original maturities of three months or less)	(3)	(16)	(2)
Additions to debt (original maturities greater than three months)	1,962	1,901	2,878
Debt issuance costs	(1)	(3)	(17)
Payments on debt (original maturities greater than three months)	(2,734)	(2,030)	(1,723)
Proceeds from exercise of employee stock options	4	25	150
Excess tax benefits from stock-based payment arrangements	-	9	9
Issuance of mandatory convertible preferred stock (P)	-	-	1,211
Dividends paid to shareholders	(228)	(223)	(161)
Distributions to noncontrolling interests	(226)	(106)	(120)
Contributions from noncontrolling interests	51	2	53
Acquisitions of noncontrolling interests	-	-	(28)
Net cash transferred from Alcoa Corporation at separation	421	-	-
Cash (used for) provided from financing activities	(754)	(441)	2,250
Investing Activities			
Capital expenditures	(1,125)	(1,180)	(1,219)
Acquisitions, net of cash acquired (F and N)	10	97	(2,385)
Proceeds from the sale of assets and businesses	692	112	253
Additions to investments	(52)	(134)	(195)
Sales of investments	280	40	57
Net change in restricted cash	14	(20)	(2)
Other	16	25	31
Cash used for investing activities	(165)	(1,060)	(3,460)
Effect of exchange rate changes on cash and cash equivalents	(7)	(39)	(24)
Net change in cash and cash equivalents	(56)	42	440
Cash and cash equivalents at beginning of year	1,919	1,877	1,437
Cash and cash equivalents at end of year	$ 1,863	$ 1,919	$ 1,877

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

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

	Arconic Shareholders								
	Preferred stock	Mandatory convertible preferred stock	Common stock	Additional capital	Retained (deficit) earnings	Treasury stock	Accumulated Other Comprehensive Loss	Noncontrolling interests	Total equity
Balance at December 31, 2013	$ 55	$ -	$ 1,178	$ 7,509	$ 9,272	$ (3,762)	$ (3,659)	$ 2,929	$13,522
Net (loss) income	-	-	-	-	268	-	-	(91)	177
Other comprehensive loss (B)	-	-	-	-	-	-	(1,018)	(254)	(1,272)
Cash dividends declared:									
Preferred–Class A @ $3.75 per share	-	-	-	-	(2)	-	-	-	(2)
Preferred–Class B @ 7.53993 per share	-	-	-	-	(19)	-	-	-	(19)
Common @ $0.12 per share	-	-	-	-	(140)	-	-	-	(140)
Stock-based compensation (P)	-	-	-	87	-	-	-	-	87
Common stock issued: compensation plans (P)	-	-	-	(584)	-	720	-	-	136
Issuance of mandatory convertible preferred stock (P)	-	3	-	1,210	-	-	-	-	1,213
Issuance of common stock (F and P)	-	-	126	1,059	-	-	-	-	1,185
Distributions	-	-	-	-	-	-	-	(120)	(120)
Contributions	-	-	-	-	-	-	-	53	53
Purchase of equity from noncontrolling interest	-	-	-	3	-	-	-	(31)	(28)
Other	-	-	-	-	-	-	-	2	2
Balance at December 31, 2014	$ 55	$ 3	$ 1,304	$ 9,284	$ 9,379	$ (3,042)	$ (4,677)	$ 2,488	$14,794
Net (loss) income	-	-	-	-	(322)	-	-	125	(197)
Other comprehensive loss (B)	-	-	-	-	-	-	(754)	(422)	(1,176)
Cash dividends declared:									
Preferred–Class A @ $3.75 per share	-	-	-	-	(2)	-	-	-	(2)
Preferred–Class B @ $26.8750 per share	-	-	-	-	(67)	-	-	-	(67)
Common @ $0.12 per share	-	-	-	-	(154)	-	-	-	(154)
Equity option on convertible notes (F)	-	-	-	55	-	-	-	-	55
Stock-based compensation (P)	-	-	-	92	-	-	-	-	92
Common stock issued: compensation plans (P)	-	-	-	(195)	-	217	-	-	22
Issuance of common stock (F and P)	-	-	87	783	-	-	-	-	870
Distributions	-	-	-	-	-	-	-	(106)	(106)
Contributions	-	-	-	-	-	-	-	2	2
Other	-	-	-	-	-	-	-	(2)	(2)
Balance at December 31, 2015	$ 55	$ 3	$ 1,391	$ 10,019	$ 8,834	$ (2,825)	$ (5,431)	$ 2,085	$14,131
Net (loss) income	-	-	-	-	(941)	-	-	63	(878)
Other comprehensive loss (B)	-	-	-	-	-	-	(691)	184	(507)
Cash dividends declared:									
Preferred–Class A @ $3.75 per share	-	-	-	-	(2)	-	-	-	(2)
Preferred–Class B @ $26.8750 per share	-	-	-	-	(67)	-	-	-	(67)
Common @ $0.36 per share	-	-	-	-	(159)	-	-	-	(159)
Stock-based compensation (P)	-	-	-	86	-	-	-	-	86
Common stock issued: compensation plans (P)	-	-	-	(205)	-	186	-	-	(19)
Retirement of Treasury stock (P)	-	-	(76)	(2,563)	-	2,639	-	-	-
Reverse stock split (A and P)	-	-	(877)	877	-	-	-	-	-
Distribution of Alcoa Corporation	-	-	-	-	(8,692)	-	3,554	(2,133)	(7,271)
Distributions	-	-	-	-	-	-	-	(226)	(226)
Contributions	-	-	-	-	-	-	-	51	51
Other	-	-	-	-	-	-	-	2	2
Balance at December 31, 2016	$ 55	$ 3	$ 438	$ 8,214	$ (1,027)	$ -	$ (2,568)	$ 26	$ 5,141

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

Arconic and subsidiaries
Notes to the Consolidated Financial Statements
(dollars in millions, except per-share amounts)

A. Summary of Significant Accounting Policies

Basis of Presentation. The Consolidated Financial Statements of Arconic Inc. and subsidiaries (“Arconic” or the “Company”) 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 period. Actual results could differ from those estimates upon subsequent resolution of identified matters. Certain prior year amounts have been reclassified to conform to the current year presentation.

The separation of Alcoa Inc. into two standalone, publicly-traded companies, Arconic Inc. (the new name for Alcoa Inc.) and Alcoa Corporation, became effective on November 1, 2016 (the “Separation Transaction”). The financial results of Alcoa Corporation for all periods prior to the Separation Transaction have been retrospectively reflected in the Statement of Consolidated Operations as discontinued operations and, as such, have been excluded from continuing operations and segment results for all periods presented. Additionally, the related assets and liabilities associated with Alcoa Corporation in the December 2015 Consolidated Balance Sheet are classified as assets and liabilities of discontinued operations. The cash flows and comprehensive income related to Alcoa Corporation have not been segregated and are included in the Statement of Consolidated Cash Flows and Statement of Consolidated Comprehensive Loss, respectively, for all periods presented. See Note C for additional information related to the Separation Transaction and discontinued operations.

Pursuant to the authorization provided at a special meeting of Arconic common shareholders held on October 5, 2016, shareholders approved a 1-for-3 reverse stock split of Arconic’s outstanding and authorized shares of common stock (the “Reverse Stock Split”). As a result of the Reverse Stock Split, every 3 shares of issued and outstanding common stock were combined into one issued and outstanding share of common stock, without any change in the par value per share. The Reverse Stock Split reduced the number of shares of common stock outstanding from approximately 1.3 billion shares to approximately 0.4 billion shares. The Company’s common stock began trading on a reverse stock split-adjusted basis on the NYSE on October 6, 2016.

Principles of Consolidation. The Consolidated Financial Statements include the accounts of Arconic and companies in which Arconic has a controlling interest. Intercompany transactions have been eliminated. Investments in affiliates in which Arconic cannot exercise significant influence are accounted for on the cost method.

Management also evaluates whether an Arconic entity or interest is a variable interest entity and whether Arconic is the primary beneficiary. Consolidation is required if both of these criteria are met. Arconic does not have any variable interest entities requiring consolidation.

Related Party Transactions. Arconic buys products from and sells products to various related companies, including Alcoa Corporation, at negotiated prices between the two parties. These transactions, including accounts payable, were not material to the financial position or results of operations of Arconic for all periods presented (see Note W).

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 approximately half of U.S. inventories determined under the last-in, first-out (LIFO) method. The cost of other inventories is determined under a combination of the first-in, first-out (FIFO) and average-cost methods.

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. The following table details the weighted-average useful lives of structures and machinery and equipment by reporting segment (numbers in years):

Segment	Structures	Machinery and equipment
Global Rolled Products	31	21
Engineered Products and Solutions	29	17
Transportation and Construction Solutions	27	19

Gains or losses from the sale of assets are generally recorded in Other income, net (see policy below for assets classified as held for sale and discontinued operations). 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.

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. Arconic has eight reporting units, of which four are included in the Engineered Products and Solutions segment, three are included in the Transportation and Construction Solutions segment, and the remaining reporting unit is the Global Rolled Products segment. More than 70% of Arconic's total goodwill is allocated to two reporting units as follows: Arconic Fastening Systems and Rings (AFSR) ($2,200) and Arconic Power and Propulsion (APP) ($1,647) businesses, both of which are included in the Engineered Products and Solutions segment. These amounts include an allocation of Corporate's goodwill.

In November 2014, Arconic acquired Firth Rixson (see Note F), and, as a result recognized $1,801 in goodwill. This amount was allocated between the AFSR and Arconic Forgings and Extrusions (AFE) reporting units, which is part of the Engineered Products and Solutions segment. In March and July 2015, Arconic acquired TITAL and RTI, respectively, (see Note F) and recognized $117 and $298, respectively, in goodwill. The goodwill amount related to TITAL was allocated to the APP reporting unit and the amount related to RTI was allocated to Arconic Titanium and Engineered Products (ATEP), a new Arconic reporting unit that consists solely of the acquired RTI business and is part of the Engineered Products and Solutions segment.

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.

Arconic'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 up to four reporting units (based on facts and circumstances) during each annual review of goodwill. This policy will result in each of the seven reporting units with goodwill being subjected to the two-step quantitative impairment test at least once during every three-year period.

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 three reporting units, the Global Rolled Products segment, ATEP, and Building and Construction Systems (within the Transportation and Construction Solutions segment). Management concluded that it was not more likely than not that the estimated fair values of the three reporting units were less than their carrying values. 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. Arconic uses a discounted cash flow 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. Most of these assumptions 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, which could significantly and adversely impact reported results of operations and shareholders' equity.

During the 2016 annual review of goodwill, management proceeded directly to the two-step quantitative impairment test for four reporting units as follows: AFSR, APP, and AFE, which are all included in the Engineered Products and Solutions segment, and Arconic Wheel and Transportation Products which is included in the Transportation and Construction Solutions segment. The estimated fair value of each of the reporting units exceeded its respective carrying value, resulting in no impairment.

Goodwill impairment tests in prior years indicated that goodwill was not impaired for any of the Company's reporting units, except for the soft alloy extrusion business in Brazil (SAE) which is included in the Transportation and Construction Solutions segment, and there were no triggering events since that time that necessitated an impairment test.

In 2015, for SAE, the estimated fair value as determined by the DCF model was lower than the associated carrying value of the SAE reporting unit's goodwill. As a result, management performed the second step of the impairment analysis in order to determine the implied fair value of the SAE reporting unit's goodwill. The results of the second-step analysis showed that the implied fair value of the goodwill was zero. Therefore, in the fourth quarter of 2015, Arconic recorded a goodwill impairment of $25. The impairment of the SAE goodwill resulted from headwinds from the downturn in the Brazilian economy and the continued erosion of gross margin despite the execution of cost reduction strategies. As a result of the goodwill impairment, there is no goodwill remaining for the SAE reporting unit.

Intangible assets with indefinite useful lives are not amortized while 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
Global Rolled Products	8	9
Engineered Products and Solutions	7	34
Transportation and Construction Solutions	6	16

Revenue Recognition. Arconic recognizes revenues 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).

In certain circumstances, Arconic receives advanced payments from its customers for product to be delivered in future periods. These advanced payments are recorded as deferred revenue until the product is delivered and title and risk of loss have passed to the customer in accordance with the terms of the contract. Deferred revenue is included in Other current liabilities and Other noncurrent liabilities and deferred credits on the accompanying Consolidated Balance Sheet.

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 when probable and as agreements are reached with third parties. The estimates also include costs related to other potentially responsible parties to the extent that Arconic 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 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, among others. 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.

Income Taxes. The provision for income taxes is 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 Arconic’s assets and liabilities and are adjusted for changes in tax rates and tax laws when enacted.

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not 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 Arconic’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.

Stock-Based Compensation. Arconic recognizes compensation expense for employee equity grants 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, 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.

Foreign Currency. The local currency is the functional currency for Arconic’s significant operations outside the United States, except for certain operations in Canada and Russia, where the U.S. dollar is used as the functional currency. The determination of the functional currency for Arconic’s operations is made based on the appropriate economic and management indicators.

Acquisitions. Arconic’s business acquisitions are accounted for using the acquisition method. The purchase price is allocated to the assets acquired and liabilities assumed based on their estimated fair values. Any excess purchase price over the fair value of the net assets acquired is recorded as goodwill. For all acquisitions, operating results are included in the Statement of Consolidated Operations from the date of the acquisition.

Discontinued Operations and Assets Held For Sale. For those businesses where management has committed to a plan to divest, each business is valued at the lower of its carrying amount or estimated fair value less cost to sell. If the carrying amount of the business exceeds its estimated fair value, an impairment loss is recognized. Fair value is estimated using accepted valuation techniques such as a DCF model, valuations performed by third parties, earnings multiples, or indicative bids, when available. A number of significant estimates and assumptions are involved in the application of these techniques, including the forecasting of markets and market share, sales volumes and prices, costs and expenses, and multiple other factors. Management considers historical experience and all available information at the time the estimates are made; however, the fair value that is ultimately realized upon the divestiture of a business may differ from the estimated fair value reflected in the Consolidated Financial Statements. Depreciation and amortization expense is not recorded on assets of a business to be divested once they are classified as held for sale. Businesses to be divested are classified in the Consolidated Financial Statements as either discontinued operations or held for sale.

For businesses classified as discontinued operations, the balance sheet amounts and results of operations are reclassified from their historical presentation to assets and liabilities of discontinued operations on the Consolidated Balance Sheet and to discontinued operations on the Statement of Consolidated Operations, respectively, for all periods presented. The gains or losses associated with these divested businesses are recorded in discontinued operations on the Statement of Consolidated Operations. The Statement of Consolidated Cash Flows is not required to be reclassified for discontinued operations for any period. Segment information does not include the assets or operating results of businesses classified as discontinued operations for all periods presented. These businesses are expected to be disposed of within one year.

For businesses classified as held for sale that do not qualify for discontinued operations treatment, the balance sheet and cash flow amounts are reclassified from their historical presentation to assets and liabilities of operations held for sale for all periods presented. The results of operations continue to be reported in continuing operations. The gains or losses associated with these divested businesses are recorded in restructuring and other charges on the Statement of Consolidated Operations. The segment information includes the assets and operating results of businesses classified as held for sale for all periods presented.

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

For the 2016 annual period, Arconic adopted changes issued by the FASB related to the evaluation of an entity's ability to continue as a going concern. Previously, under GAAP, continuation of a reporting entity as a going concern was presumed as the basis for preparing financial statements unless and until the entity's liquidation becomes imminent. Even if an entity's liquidation was not imminent, there may have been conditions or events that raised substantial doubt about the entity's ability to continue as a going concern. Because there was no guidance in GAAP about management's responsibility to evaluate whether there was substantial doubt about an entity's ability to continue as a going concern or to provide related note disclosures, there was 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. This guidance will need to be applied by management at the end of each annual period and interim period therein to determine what, if any, impact there will be on the Consolidated Financial Statements in a given reporting period.

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

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 Arconic on January 1, 2019. Management is currently evaluating the potential impact of these changes on the Consolidated Financial Statements.

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 became effective for Arconic on January 1, 2017. Management has determined that the adoption of this guidance will not have a material effect on the Consolidated Financial Statements.

In March 2016, the FASB issued changes eliminating the requirement for an investor to adjust an equity method investment, results of operations, and retained earnings retroactively on a step-by-step basis as if the equity method had been in effect during all previous periods that the investment had been held as a result of an increase in the level of ownership interest or degree of influence. Additionally, an entity that has an available-for-sale equity security that becomes qualified for the equity method of accounting must recognize through earnings the unrealized holding gain or loss in accumulated other comprehensive income at the date the investment becomes qualified for use of the equity method. These changes became effective for Arconic on January 1, 2017. Management has determined that the adoption of this guidance will not have a material impact on the Consolidated Financial Statements.

In March 2016, the FASB issued changes to derivative instruments designated as hedging instruments. These changes clarify that a change in the counterparty to a derivative instrument that has been designated as a hedging instrument does not, in and of itself, require dedesignation of that hedging relationship provided that all other hedge accounting criteria continue to be met. These changes became effective for Arconic on January 1, 2017. Management has determined that the adoption of this guidance 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 Arconic on January 1, 2020. Management is currently evaluating the potential impact of these changes on the Consolidated Financial Statements.

In August 2016, the FASB issued changes to the classification of certain cash receipts and cash payments within the statement of cash flows. The guidance identifies eight specific cash flow items and the sections where they must be presented within the statement of cash flows. These changes become effective for Arconic on January 1, 2018. Management does not expect these changes to 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. Under current US GAAP, no immediate tax impact is recognized in the consolidated financial statements as a result of intra-entity transfers of assets. The current standard precludes an entity 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 current standard also prohibits recognition by the buyer of 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 Arconic on January 1, 2017. Management has determined that the adoption of this guidance will not have a material impact on the Consolidated Financial Statements.

In November 2016, the FASB issued changes to the classification of cash and cash equivalents within the cash flow statement. Restricted cash and restricted cash equivalents will be included within the cash and cash equivalents line on the cash flow statement and a reconciliation must be prepared to the statement of financial position. Transfers between restricted cash and restricted cash equivalents and cash and cash equivalents will no longer be presented as cash flow activities in the statement of cash flows and material balances of restricted cash and restricted cash equivalents must disclose information regarding the nature of the restrictions. These changes become effective for Arconic 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 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, Arconic applies the net realizable value market option to measure non-LIFO inventories at the lower of cost or market. These changes became effective for Arconic 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 Arconic on January 1, 2018. The Company has formed a project assessment and adoption team and is currently reviewing contract terms and assessing the impact of adopting the standard on the Consolidated Financial Statements.

B. Accumulated Other Comprehensive Loss

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

	Arconic			Noncontrolling Interests		
	2016	2015	2014	2016	2015	2014
Pension and other postretirement benefits (U)						
Balance at beginning of period	$(3,611)	$(3,601)	$(3,532)	$ (56)	$ (64)	$ (51)
Other comprehensive (loss) income:						
Unrecognized net actuarial loss and prior service cost/benefit	(1,112)	(478)	(492)	(9)	5	(22)
Tax benefit (expense)	380	170	167	3	(1)	7
Total Other comprehensive (loss) income before reclassifications, net of tax	(732)	(308)	(325)	(6)	4	(15)
Amortization of net actuarial loss and prior service cost/benefit[1]	389	458	394	4	6	3
Tax expense[2]	(136)	(160)	(138)	(1)	(2)	(1)
Total amount reclassified from Accumulated other comprehensive loss, net of tax[8]	253	298	256	3	4	2
Total Other comprehensive (loss) income	(479)	(10)	(69)	(3)	8	(13)
Transfer to Alcoa Corporation	2,080	-	-	59	-	-
Balance at end of period	$(2,010)	$(3,611)	$(3,601)	$ -	$ (56)	$ (64)
Foreign currency translation						
Balance at beginning of period	$(2,412)	$ (846)	$ 179	$ (780)	$ (351)	$ (110)
Other comprehensive income (loss)[3]	268	(1,566)	(1,025)	182	(429)	(241)
Transfer to Alcoa Corporation	1,455	-	-	596	-	-
Balance at end of period	$ (689)	$(2,412)	$ (846)	$ (2)	$ (780)	$ (351)
Available-for-sale securities						
Balance at beginning of period	$ (5)	$ -	$ 2	$ -	$ -	$ -
Other comprehensive income (loss)[4]	137	(5)	(2)	-	-	-
Transfer to Alcoa Corporation	-	-	-	-	-	-
Balance at end of period	$ 132	$ (5)	$ -	$ -	$ -	$ -
Cash flow hedges						
Balance at beginning of period	$ 597	$ (230)	$ (308)	$ (3)	$ (2)	$ (2)
Other comprehensive (loss) income:						
Net change from periodic revaluations	(843)	1,138	78	36	(1)	-
Tax benefit (expense)	252	(340)	(21)	(10)	-	-
Total Other comprehensive (loss) income before reclassifications, net of tax	(591)	798	57	26	(1)	-
Net amount reclassified to earnings:						
Aluminum contracts[5]	1	21	27	-	-	-
Energy contracts[6]	(49)	6	-	(34)	-	-
Foreign exchange contracts[5]	-	5	(3)	-	-	-
Interest rate contracts[7]	9	1	1	5	-	-
Nickel contracts[6]	1	2	-	-	-	-
Sub-total	(38)	35	25	(29)	-	-
Tax benefit (expense)[2]	12	(6)	(4)	8	-	-
Total amount reclassified from Accumulated other comprehensive loss, net of tax[8]	(26)	29	21	(21)	-	-
Total Other comprehensive (loss) income	(617)	827	78	5	(1)	-
Transfer to Alcoa Corporation	19	-	-	(2)	-	-
Balance at end of period	$ (1)	$ 597	$ (230)	$ -	$ (3)	$ (2)

(1) These amounts were included in the computation of net periodic benefit cost for pension and other postretirement benefits (see Note U).
(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) Realized gains and losses were included in Other income, net on the accompanying Statement of Consolidated Operations.
(5) These amounts were included in Sales on the accompanying Statement of Consolidated Operations.
(6) These amounts were included in Cost of goods sold on the accompanying Statement of Consolidated Operations.
(7) These amounts were included in Interest expense on the accompanying Statement of Consolidated Operations.
(8) A positive amount indicates a corresponding charge to earnings and a negative amount indicates a corresponding benefit to earnings. These amounts were reflected on the accompanying Statement of Consolidated Operations in the line items indicated in footnotes 1 through 7.

C. Separation Transaction and Discontinued Operations

On November 1, 2016, Arconic completed the Separation Transaction. Alcoa Inc., which was re-named Arconic Inc., continues to own the Global Rolled Products (except for the Warrick, IN rolling operations and the equity interest in the rolling mill at the joint venture in Saudi Arabia), Engineered Products and Solutions, and Transportation and Construction Solutions segments. Alcoa Corporation includes the Alumina and Primary Metals segments and the aforementioned Warrick, IN rolling operations and equity interest in the rolling mill at the joint venture in Saudi Arabia, both of which were formally part of the Global Rolled Products segment.

Arconic completed the Separation Transaction by distribution on November 1, 2016 of 80.1% of the outstanding common stock of Alcoa Corporation to the Company’s shareholders of record (the “Distribution”) as of the close of business on October 20, 2016 (the “Record Date”). Arconic retained 19.9% of the Alcoa Corporation common stock (36,311,767 shares). In the Distribution, each Company shareholder received one share of Alcoa Corporation common stock for every three shares of Arconic common stock held as of the close of business on the Record Date. Shareholders received cash in lieu of fractional shares of Alcoa Corporation common stock.

Arconic has recorded the 19.9% retained interest in Alcoa Corporation common stock as a cost method investment in Investment in common stock of Alcoa Corporation in the December 2016 Consolidated Balance Sheet. The fair value was based on the closing stock price of Alcoa Corporation as of December 31, 2016 multiplied by the number of shares of Alcoa Corporation common stock owned by the Company as of December 31, 2016. The changes in fair value since November 1, 2016 were recorded in Accumulated other comprehensive loss in the Consolidated Balance Sheet.

On October 31, 2016, Arconic entered into several agreements with Alcoa Corporation that govern the relationship of the parties following the completion of the Separation Transaction. These agreements include the following: Separation and Distribution Agreement, Transition Services Agreement, Tax Matters Agreement, Employee Matters Agreement, Alcoa Corporation to Arconic Inc. Patent, Know-How, and Trade Secret License Agreement, Arconic Inc. to Alcoa Corporation Patent, Know-How, and Trade Secret License Agreement, Alcoa Corporation to Arconic Inc. Trademark License Agreement, Toll Processing and Services Agreement, Master Agreement for the Supply of Primary Aluminum, Massena Lease and Operations Agreement, Fusina Lease and Operations Agreement, and Stockholder and Registration Rights Agreement.

Effective November 1, 2016, Arconic entered into a Toll Processing and Services Agreement with Alcoa Corporation for the tolling of metal for the Warrick, IN rolling mill which became a part of Alcoa Corporation upon completion of the Separation Transaction. As part of this arrangement, Arconic will provide a toll processing service to Alcoa Corporation to produce can sheet products at its facility in Tennessee through the expected end date of the contract, December 31, 2018. Alcoa Corporation will supply all required raw materials to Arconic and Arconic will process the raw materials into finished can sheet coils ready for shipment to the end customer. Tolling revenues for the two month period ending December 31, 2016 and accounts receivable were not material to the consolidated results of operations and financial position for the year ended December 31, 2016.

As part of the Separation Transaction, Arconic was required to provide maximum potential future payment guarantees for Alcoa Corporation issued on behalf of a third party, guarantees related to two Alcoa Corporation energy supply contracts and certain Alcoa Corporation environmental liabilities, letters of credit and surety bonds related to Alcoa Corporation workers' compensation claims which occurred prior to November 1, 2016, and letters of credit for certain Alcoa Corporation equipment leases and energy contracts (see Note L).

Additionally, under the Separation and Distribution Agreement, the Company has recorded a receivable of $243 due from Alcoa Corporation for a certain asset sale. This amount was included in Other receivables in the December 2016 Consolidated Balance Sheet.

The results of operations of Alcoa Corporation are presented as discontinued operations in the Statement of Consolidated Operations as summarized below:

	Ten months ended October 31,	Year ended December 31,	
	2016	2015	2014
Sales	$ 6,752	$ 10,121	$ 11,364
Cost of goods sold (exclusive of expenses below)	5,655	7,965	8,782
Selling, general administrative, and other expenses	164	214	231
Research and development	28	69	95
Provision for depreciation, depletion and amortization	593	772	935
Restructuring and other charges	102	981	854
Interest expense	28	25	31
Other (income) expenses, net	(75)	30	52
Income from discontinued operations before income taxes	257	65	384
Provision for income taxes	73	106	146
Income (loss) from discontinued operations after income taxes	184	(41)	238
Less: Net income (loss) from discontinued operations attributable to noncontrolling interests	63	124	(91)
Net income (loss) from discontinued operations	$ 121	$ (165)	$ 329

During 2016 and 2015, Arconic recognized $193 ($158 after-tax) and $24 ($24 after-tax), respectively, in Selling, general administrative, and other expenses on the accompanying Statement of Consolidated Operations for costs related to the Separation Transaction. In addition, Arconic also incurred capital expenditures and debt issuance costs of $110 during 2016 related to the Separation Transaction. None of the aforementioned costs and expenses related to the Separation Transaction were reclassified into discontinued operations.

On November 1, 2016, management evaluated the net assets of Alcoa Corporation for potential impairment and determined that no impairment charge was required.

The carrying amount of the major classes of assets and liabilities related to Alcoa Corporation classified as assets and liabilities of discontinued operations in the Consolidated Balance Sheet at December 31, 2015 consisted of the following:

Total assets of discontinued operations:	
Cash and cash equivalents	$ 557
Receivables from customers	380
Other receivables	128
Inventories	1,158
Prepaid expenses and other current assets	333
Current assets of discontinued operations	2,556
Properties, plants, and equipment, net	9,390
Goodwill	152
Investments	1,472
Deferred income taxes	1,360
Other noncurrent assets	2,224
Noncurrent assets of discontinued operations	14,598
Total assets of discontinued operations	$17,154
Total liabilities of discontinued operations:	
Accounts payable, trade	$ 1,379
Accrued compensation and retirement costs	440
Taxes, including income taxes	136
Other current liabilities	563
Long-term debt due within one year	18
Current liabilities of discontinued operations	$ 2,536
Long-term debt less amount due within one year	207
Accrued pension benefits	1,373
Accrued other postretirement benefits	1,189
Other noncurrent liabilities and deferred credits	1,910
Noncurrent liabilities of discontinued operations	4,679
Total liabilities of discontinued operations	$ 7,215

The cash flows related to Alcoa Corporation have not been segregated and are included in the Statement of Consolidated Cash Flows for all periods presented. The following table presents depreciation, depletion and amortization, restructuring and other charges, and purchases of property, plant and equipment of the discontinued operations related to Alcoa Corporation:

For the year ended December 31,	**2016**	**2015**	**2014**
Depreciation, depletion and amortization	$593	$772	$935
Restructuring and other charges	$102	$981	$854
Capital expenditures	$298	$391	$444

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:

	2016	2015	2014
Asset impairments	$ 80	$ -	$ 65
Layoff costs	70	97	105
Net loss on divestitures of businesses (F)	3	136	111
Other	27	(11)	43
Reversals of previously recorded layoff costs	(25)	(8)	(10)
Restructuring and other charges	$155	$214	$314

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, Arconic recorded Restructuring and other charges of $155 ($114 after-tax), which were comprised of the following components: $57 ($46 after-tax) for costs related to the exit of certain legacy Firth Rixson operations in the U.K.; $37 ($24 after-tax) for exit costs related to the decision to permanently shut down a can sheet facility; $20 ($14 after-tax) for costs related to the closures of five facilities, primarily in the Transportation and Construction Solutions segment and Engineered Products and Solutions segment, including the separation of approximately 280 employees; $53 ($33 after-tax) for other layoff costs, including the separation of approximately 1,315 employees (30 in TCS, 1,045 in EPS, 30 in GRP and 210 in Corporate); $11 ($8 after-tax) for other miscellaneous items, including $3 ($2 after-tax) for the sale of Remmele Medical, an RTI subsidiary; $2 ($1 after-tax) for a pension settlement; and $25 ($12 after-tax) for the reversal of a number of small layoff reserves related to prior periods.

In 2016, management made the decision to exit certain legacy Firth Rixson facilities in the U.K. Costs related to these actions included asset impairments and accelerated depreciation of $51; other exit costs of $4; and $2 for the separation of 60 employees.

Also in 2016, management approved the shutdown and demolition of the can sheet facility in Tennessee upon completion of the Toll Processing and Services Agreement with Alcoa Corporation. Costs related to this action included $21 in asset impairments; $9 in other exit costs; and $7 for the separation of 145 employees. The other exit costs of $9 represent $4 in asset retirement obligations and $3 in environmental remediation, both of which were triggered by the decision to permanently shut down and demolish the can sheet facility in Tennessee, and $2 in other exit costs.

As of December 31, 2016, approximately 880 of the 1,800 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 $16 were made against layoff reserves related to 2016 restructuring programs.

2015 Actions. In 2015, Arconic recorded Restructuring and other charges of $214 ($192 after-tax), which were comprised of the following components: a $136 ($134 after-tax) net loss related to the March 2015 divestiture of a rolling mill in Russia and post-closing adjustments associated with the December 2014 divestitures of three rolling mills located in Spain and France; $97 ($70 after-tax) for layoff costs, including the separation of approximately 1,505 employees (425 in the Transportation and Construction Solutions segment, 590 in the Engineered Products and Solutions segment, 90 in the Global Rolled Products segment, and 400 in Corporate); an $18 ($13 after-tax) gain on the sale of land related to one of the rolling mills in Australia that was permanently closed in December 2014 (see 2014 Actions below); a net charge of $7 ($4 after-tax) for other miscellaneous items; and $8 ($3 after-tax) for the reversal of a number of small layoff reserves related to prior periods.

As of December 31, 2016, approximately 1,100 of the 1,240 (previously 1,505) 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 Arconic and natural attrition. The remaining separations for 2015 restructuring programs are expected to be completed by the end of 2017. In 2016 and 2015, cash payments of $55 and $18, respectively, were made against layoff reserves related to 2015 restructuring programs.

2014 Actions. In 2014, Arconic recorded Restructuring and other charges of $314 ($249 after-tax), which were comprised of the following components: $154 ($107 after-tax) for exit costs related to the decision to permanently shut down and demolish two rolling mills (see below); a $111 ($112 after-tax) net loss primarily for the divestitures of three rolling mills in Spain and France (see Note F); $49 ($28 after-tax) for other layoff costs, including the separation of approximately 1,035 employees (470 in the Engineered Products and Solutions segment, 410 in the Transportation and Construction Solutions segment, 45 in the Global Rolled Products segment, and 110 in Corporate); a net charge of $10 ($7 after-tax) for other miscellaneous items; and $10 ($5 after-tax) for the reversal of a number of layoff reserves related to prior periods.

In early 2014, management approved the permanent shutdown of Arconic’s two rolling mills in Australia, Point Henry and Yennora. This decision was made due to the significant impact of excess can sheet capacity in both Australia and Asia. The two rolling mills had a combined can sheet capacity of 200,000 metric-tons-per-year and were closed by the end of 2014. Costs related to the shutdown of the two rolling mills included $56 for the separation of approximately 470 employees; accelerated depreciation of $58 as the rolling mills continued to operate during 2014; asset impairments of $7 representing the write-off of the remaining book value of all related properties, plants, and equipment; and $33 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 $13 ($9 after-tax), which was recorded in Cost of goods sold on the accompanying Statement of Consolidated Operations. The other exit costs of $33 represent $18 in environmental remediation and $8 in asset retirement obligations, both of which were triggered by the decisions to permanently shut down and demolish the aforementioned structures in Australia, and $7 in other related costs, including supplier and customer contract-related costs. Demolition and remediation activities related to the two rolling mills began in mid-2015 and are expected to be completed by the end of 2018.

As of December 31, 2016, the separations associated with 2014 restructuring programs were essentially complete. In 2016, 2015, and 2014, cash payments of $3, $27, and $54, respectively, were made against layoff reserves related to 2014 restructuring programs.

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

	2016	2015	2014
Global Rolled Products	$ 40	$121	$267
Engineered Products and Solutions	78	46	13
Transportation and Construction Solutions	14	8	10
Segment total	132	175	290
Corporate	23	39	24
Total restructuring and other charges	$155	$214	$314

Activity and reserve balances for restructuring charges were as follows:

	Layoff costs	Other exit costs	Total
Reserve balances at December 31, 2013	$ 37	$ 29	$ 66
2014:			
Cash payments	(75)	(16)	(91)
Restructuring charges	105	43	148
Other*	(19)	(36)	(55)
Reserve balances at December 31, 2014	48	20	68
2015:			
Cash payments	(45)	(12)	(57)
Restructuring charges	97	7	104
Other*	(16)	(6)	(22)
Reserve balances at December 31, 2015	84	9	93
2016:			
Cash payments	(73)	(13)	(86)
Restructuring charges	70	27	97
Other*	(31)	(14)	(45)
Reserve balances at December 31, 2016	$ 50	$ 9	59

* Other includes reversals of previously recorded restructuring charges and the effects of foreign currency translation. In 2016 and 2014, Other for other exit costs also included a reclassification of $8 and $8, respectively, in asset retirement and $2 and $18, respectively, in environmental obligations, as these liabilities were included in Arconic's separate reserves for asset retirement obligations and environmental remediation. In 2015, Other for other exit costs included a reclassification of $5 for certain obligations included in Arconic's separate reserves for warranties, lease terminations and tax indemnities. In 2016, Other for other exit costs also included a reclassification of $4 in legal obligations, as these liabilities were included in Arconic's separate reserves for legal costs.

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The remaining reserves are expected to be paid in cash during 2017.

E. Goodwill and Other Intangible Assets

The following table details the changes in the carrying amount of goodwill:

	Global Rolled Products	Engineered Products and Solutions	Transportation and Construction Solutions	Corporate*	Total
Balance at December 31, 2014:					
Goodwill	$ 210	$ 4,458	$ 114	$ 333	$ 5,115
Accumulated impairment losses	-	-	(28)	-	(28)
	210	4,458	86	333	5,087
Acquisitions and Divestitures (F)	(1)	261	-	-	260
Impairment (A)	-	-	(25)	-	(25)
Translation and other	(8)	(59)	(3)	(3)	(73)
Balance at December 31, 2015:					
Goodwill	201	4,660	111	330	5,302
Accumulated impairment losses	-	-	(53)	-	(53)
	201	4,660	58	330	5,249
Acquisitions and Divestitures (F)	-	47	-	-	47
Translation and other	(20)	(128)	(1)	1	(148)
Balance at December 31, 2016:					
Goodwill	181	4,579	110	331	5,201
Accumulated impairment losses	-	-	(53)	-	(53)
	181	4,579	57	331	5,148

* As of December 31, 2016, the amount reflected in Corporate is allocated to Arconic's three reportable segments ($60 to Global Rolled Products, $253 to Engineered Products and Solutions, and $18 to Transportation and Construction Solutions) for purposes of impairment testing (see Goodwill and Other Intangible Assets policy in Note A). This goodwill is reflected in Corporate for segment reporting purposes because it is not included in management's assessment of performance by the three reportable segments.

In 2015, Arconic recognized an impairment of goodwill in the amount of $25 related to the annual impairment review of the soft alloy extrusion business in Brazil, included in the Transportation and Construction Solutions segment (see Goodwill and Other Intangible Assets policy in Note A).

Other intangible assets, which are included in Other noncurrent assets on the accompanying Consolidated Balance Sheet, were as follows:

December 31, 2016	Gross carrying amount	Accumulated amortization
Computer software	$ 755	$ (623)
Patents and licenses	110	(102)
Other intangibles (F)	897	(81)
Total amortizable intangible assets	1,762	(806)
Indefinite-lived trade names and trademarks	32	-
Total other intangible assets	$ 1,794	$ (806)

December 31, 2015	Gross carrying amount	Accumulated amortization
Computer software	$ 793	$ (643)
Patents and licenses	110	(98)
Other intangibles (F)	961	(64)
Total amortizable intangible assets	1,864	(805)
Indefinite-lived trade names and trademarks	45	-
Total other intangible assets	$ 1,909	$ (805)

Computer software consists primarily of software costs associated with an enterprise business solution (EBS) within Arconic 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 $65, $67, and $55, respectively, and is expected to be in the range of approximately $56 to $64 annually from 2017 to 2021.

F. Acquisitions and Divestitures

Pro forma results of the Company, assuming all acquisitions described below were made at the beginning of the earliest prior period presented, would not have been materially different from the results reported.

2016 Divestitures. In April 2016, Arconic completed the sale of the Remmele Medical business to LISI MEDICAL for $102 in cash ($99 net of transaction costs), which was included in Proceeds from the sale of assets and businesses on the accompanying Statement of Consolidated Cash Flows. This business, which was part of the RTI International Metals Inc. (RTI) acquisition (see below), manufactures precision-machined metal products for customers in the minimally invasive surgical device and implantable device markets. Since this transaction occurred within a year of the completion of the RTI acquisition, no gain was recorded on this transaction as the excess of the proceeds over the carrying value of the net assets of this business was reflected as a purchase price adjustment (decrease to goodwill of $44) to the final allocation of the purchase price related to Arconic's acquisition of RTI. While owned by Arconic, the operating results and assets and liabilities of this business were included in the Engineered Products and Solutions segment. This business generated sales of approximately $20 from January 1, 2016 through the divestiture date, April 29, 2016, and, at the time of the divestiture, had approximately 330 employees. This transaction is no longer subject to post-closing adjustments.

2015 Acquisitions. In March 2015, Arconic completed the acquisition of an aerospace structural castings company, TITAL, for $204 (€188) in cash (an additional $1 (€1) was paid in September 2015 to settle working capital in accordance with the purchase agreement). TITAL, a privately held company with approximately 650 employees based in Germany, produces aluminum and titanium investment casting products for the aerospace and defense markets. The purpose of this acquisition is to capture increasing demand for advanced jet engine components made of titanium, establish titanium-casting capabilities in Europe, and expand existing aluminum casting capacity. The assets, including the associated goodwill, and liabilities of this business were included within Arconic's Engineered Products and Solutions segment since the date of acquisition. Based on the preliminary allocation of the purchase price, goodwill of $118 was recorded for this transaction. In the first quarter of 2016, the allocation of the purchase price was finalized, based, in part, on the completion of a third-party valuation of certain assets acquired, resulting in a $1 reduction of the initial goodwill amount. None of the $117 in goodwill is deductible for income tax purposes and no other intangible assets were identified. This transaction is no longer subject to post-closing adjustments.

In July 2015, Arconic completed the acquisition of RTI, a U.S. company that was publicly traded on the New York Stock Exchange under the ticker symbol "RTI." Arconic purchased all outstanding shares of RTI common stock in a stock-for-stock transaction valued at $870 (based on the $9.96 per share July 23, 2015 closing price of Arconic's common stock). Each issued and outstanding share of RTI common stock prior to the completion of the transaction was converted into the right to receive 2.8315 shares of Arconic common stock. In total, Arconic issued 29,132,471 shares (87,397,414 shares pre-reverse stock split – see Note A and Note P) of its common stock to consummate this transaction, which was not reflected in the accompanying Statement of Consolidated Cash Flows as it represents a noncash financing activity. The exchange ratio was the quotient of a $41 per RTI common share acquisition price and the $14.48 per share March 6, 2015 closing price of Arconic's common stock. In addition to the transaction price, Arconic also paid $25 ($19 after-tax) in professional fees and costs related to this acquisition. This amount was recorded in Selling, general administrative, and other expenses on the accompanying Statement of Consolidated Operations.

RTI is a global supplier of titanium and specialty metal products and services for the commercial aerospace, defense, energy, and medical device end markets. The purpose of this acquisition was to expand Arconic's range of titanium offerings and add advanced technologies and materials, primarily related to the aerospace end market. In 2014, RTI generated net sales of $794 and had approximately 2,600 employees. The operating results and assets and liabilities of RTI were included within Arconic's Engineered Products and Solutions segment since the date of acquisition. Third-party sales and after-tax operating income (Arconic's primary segment performance measure – see Note O) of RTI from the acquisition date through December 31, 2015 were $309 and less than $(1), respectively. During the third quarter of 2016, the final purchase price allocation was completed.

The following table represents the final allocation of the purchase price by major asset acquired and liability assumed, as well as the amount of goodwill recognized:

Assets:	
Cash	$ 303
Receivables from customers	94
Inventories	483
Prepaid expenses and other current assets	47
Properties, plants, and equipment	321
Goodwill	298
Other noncurrent assets	60
Total assets	$1,606
Liabilities:	
Accounts payable	$ 86
Other current liabilities	94
Long-term debt due within one year	115
Long-term debt, less amount due within one year	387
Other noncurrent liabilities	96
Total liabilities	$ 778
Equity:	
Additional capital	$ 60
Total equity	$ 60

As reflected in the table above, Arconic recognized goodwill of $298, which represents the earnings growth potential of RTI, Arconic's ability to expand its titanium capabilities in the aerospace market, and expected synergies from combining the operations of the two companies. This goodwill was allocated to a new Arconic reporting unit associated with the Engineered Products and Solutions segment, Arconic Titanium and Engineered Products, which consists solely of the acquired RTI business. None of this goodwill is deductible for income tax purposes.

The other noncurrent assets in the table above primarily represent intangible assets. These intangible assets consist mainly of customer relationships which are being amortized over a period of 20 years.

As part of this acquisition, Arconic assumed the obligation to repay two tranches of convertible debt; one tranche was due and settled in cash on December 1, 2015 (principal amount of $115) and the other tranche is due on October 15, 2019 (principal amount of $403). Upon conversion of the 2019 convertible notes in accordance with their terms, holders will receive, at Arconic's election, cash, shares of common stock (approximately 14,156,000 shares currently, which gives the effect to the Reverse Stock Split (See Note A) and the Distribution of Alcoa Corporation), or a combination of cash and shares. This cash conversion feature requires the convertible notes to be bifurcated into a liability component and an equity component. The fair value of the liability component was determined by calculating the net present value of the cash flows of the convertible notes using the interest rate of a similar instrument without a conversion feature. The fair value of the equity component is the difference between the fair value of the entire instrument on the date of acquisition and the fair value of the liability and is included as Additional capital on the accompanying Consolidated Balance Sheet.

2015 Divestitures. In 2015, Arconic completed the divestiture of an operation in Russia (see below) and had post-closing adjustments, as provided for in the respective purchase agreements, related to the divestiture completed in December 2014 (see 2014 Divestitures below). The divestiture and post-closing adjustments combined resulted in net cash paid of $11 and a net loss of $137, 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.

In March 2015, Arconic completed the sale of a rolling mill located in Belaya Kalitva, Russia to a wholly-owned subsidiary of Stupino Titanium Company. While owned by Arconic, the operating results and assets and liabilities of the rolling mill were included in the Global Rolled Products segment. The rolling mill generated sales of approximately $130 in 2014 and, at the time of divestiture, had approximately 1,870 employees.

2014 Acquisitions. In June 2014, Arconic signed a purchase agreement to acquire an aerospace jet engine components company, Firth Rixson, from Oak Hill Capital Partners for $2,850. The purchase price was composed of $2,350 in cash and $500 of Arconic common stock. The common stock component was equivalent to 12,174,337 shares (36,523,010 shares pre-reverse stock split – see Note A and Note P) at a per share price of $41.07 ($13.69 per share pre-reverse stock split), as determined in the agreement. In conjunction with the purchase agreement, Arconic also entered into an earn-out agreement, which states that Arconic will make earn-out payments up to an aggregate maximum amount of $150 through December 31, 2020 upon certain conditions (see below for additional information). On November 19, 2014, after satisfying all customary closing conditions and receiving the required regulatory approvals, Arconic completed the acquisition of Firth Rixson for $2,995. The purchase price was composed of $2,385 in cash (net of cash acquired) and $610 of Arconic common stock. The cash portion of the transaction price increased by $35 due to working capital and other adjustments based on the provisions of the purchase agreement. The common stock portion of the transaction price was based on the closing market price of $50.07 per share ($16.69 per share pre-reverse stock split) of Arconic's common stock on the acquisition date.

In addition to the transaction price, Arconic also paid $42 ($34 after-tax) in professional fees and costs related to this acquisition. This amount was recorded in Selling, general administrative, and other expenses on the accompanying Statement of Consolidated Operations. Additionally, Arconic recorded $13 ($8 after-tax) in Interest expense on the accompanying Statement of Consolidated Operations for costs associated with the execution (in June 2014) and termination (in September 2014) of a $2,500 364-day senior unsecured bridge term loan facility. This facility was entered into for the purpose of financing all or a portion of the cash consideration for this acquisition and to pay fees and expenses incurred in connection therewith. However, in September 2014, the facility was no longer necessary as Arconic completed the issuance of $2,500 in debt and equity (see Note P) instruments to finance the acquisition.

Firth Rixson manufactures rings, forgings, and metal products for the aerospace end market, as well as other markets requiring highly engineered material applications. At acquisition, this business had 13 operating facilities in the United States, United Kingdom, Europe, and Asia employing approximately 2,400 people combined. The purpose of this acquisition was to strengthen Arconic's aerospace business and position the Company to capture additional aerospace growth with a broader range of high-growth, value-add jet engine components. The operating results and assets and liabilities of Firth Rixson were included within the Engineered Products and Solutions segment since the date of acquisition. Third-party sales and after-tax operating income (Arconic's primary segment performance measure—see Note O) of Firth Rixson from the acquisition date through December 31, 2014 were $81 and $(12), respectively.

The following table represents the final allocation of the purchase price by major asset acquired and liability assumed, as well as the amount of goodwill recognized and the net present value of the potential earn-out:

Assets:	
Receivables from customers	$ 193
Inventories	227
Prepaid expenses and other current assets	22
Properties, plants, and equipment	493
Goodwill	1,801
Other noncurrent assets	758
Total assets	$3,494
Liabilities:	
Accounts payable	$ 162
Other current liabilities	100
Contingent consideration	130
Other noncurrent liabilities	107
Total liabilities	$ 499

As reflected in the table above, Arconic recognized goodwill of $1,801, which represents the earnings growth potential of Firth Rixson and expected synergies from combining the operations of the two companies. The goodwill was allocated to two of Arconic's reporting units associated with the Engineered Products and Solutions segment, Arconic Fastening Systems and Rings ($1,117) and Arconic Forgings and Extrusions ($684), on a relative fair value basis. None of the goodwill is deductible for income tax purposes.

The other noncurrent assets in the table above represent intangible assets, which were included in the other intangibles class (see Note E). These intangible assets consist primarily of customer relationships and contracts, backlog, qualifications, and technology, and have a weighted-average amortization period of 35 years.

The contingent consideration liability presented in the table above represents the net present value of the potential earn-out of $150 (Level 3 in the fair value hierarchy – see Note V). This earn-out is contingent on the Firth Rixson forging business in Savannah, Georgia achieving certain identified financial targets through December 31, 2020. During the fourth quarter of 2016, management determined that payment of the maximum amount was not probable based on the forecasted financial performance of this location. Therefore, the fair value of this liability was reduced by $56 with a corresponding credit to Other income, net on the accompanying Statement of Consolidated Operations. It is estimated that the earn-out will be paid in 2019 through 2020.

In August 2014, Arconic completed the acquisition of the 30% outstanding noncontrolling interest in the aluminum brazing sheet venture in Kunshan City, China from Shanxi Yuncheng Engraving Group for $28.

2014 Divestitures. In 2014, Arconic completed the sale of three rolling mills located in Spain (Alicante and Amorebieta) and France (Castelsarrasin) to a subsidiary of Atlas Holdings LLC. While owned by Arconic, the operating results and assets and liabilities of the rolling mills were included in the Global Rolled Products segment. The rolling mills combined generated sales of approximately $500 in 2013 and, at the time of divestiture, had approximately 750 employees. This transaction yielded net cash proceeds of $24 and resulted in a net loss of $116, which was recorded in Restructuring and other charges (see Note D) on the accompanying Statement of Consolidated Operations. This transaction was subject to certain post-closing adjustments as defined in the purchase agreement as of December 31, 2014 (see 2015 Divestitures above).

G. Inventories

December 31,	2016	2015
Finished goods	$ 625	$ 672
Work-in-process	1,144	1,115
Purchased raw materials	408	425
Operating supplies	76	72
	$2,253	$2,284

At December 31, 2016 and 2015, the total amount of inventories valued on a LIFO basis was $947 and $1,009, respectively. If valued on an average-cost basis, total inventories would have been $371 and $387 higher at December 31, 2016 and 2015, respectively. During 2016 and 2015, reductions in LIFO inventory quantities caused partial liquidations of the lower cost LIFO inventory base. These liquidations resulted in the recognition of immaterial income amounts in both 2016 and 2015, respectively.

H. Properties, Plants, and Equipment, Net

December 31,	2016	2015
Land and land rights	$ 135	$ 149
Structures:		
Global Rolled Products	1,061	1,042
Engineered Products and Solutions	733	658
Transportation and Construction Solutions	254	239
Other	248	290
	2,296	2,229
Machinery and equipment:		
Global Rolled Products	4,570	4,500
Engineered Products and Solutions	2,728	2,745
Transportation and Construction Solutions	723	682
Other	337	442
	8,358	8,369
	10,789	10,747
Less: accumulated depreciation and amortization	6,073	6,143
	4,716	4,604
Construction work-in-progress	783	821
	$ 5,499	$ 5,425

I. Other Noncurrent Assets

December 31,	2016	2015
Intangibles, net (E)	$ 988	$1,104
Investments	102	193
Cash surrender value of life insurance	14	492
Other	141	155
	$1,245	$1,944

Investments. As of December 31, 2016 and 2015, Investments were composed of exchange-traded fixed income and equity securities, which are classified as available-for-sale and are carried at fair value (see Note V) with unrealized gains and losses recognized in other comprehensive income. Unrealized and realized gains and losses related to these securities were immaterial in 2016, 2015, and 2014.

During 2016, Arconic sold various fixed income and equity securities held by its captive insurance company for $130, which is included in Sales of investments on the accompanying Statement of Consolidated Cash Flows, and recorded a loss of $3 ($2 after-tax) in Other income, net on the accompanying Statement of Consolidated Operations.

Cash surrender value of life insurance. In the first quarter of 2016, Arconic received $234 in proceeds from the redemption of certain company-owned life insurance policies. In the second quarter of 2016, Arconic liquidated additional company-owned life insurance policies for $223 in cash. Both of these amounts were included in Proceeds from the sale of assets and businesses on the accompanying Statement of Consolidated Cash Flows. As the cash received was equivalent to the cash surrender value of these policies, no gain or loss was recognized on the sales of these policies.

J. Debt

Long-Term Debt.

December 31,	2016	2015
5.55% Notes, due 2017	$ -	$ 750
6.50% Bonds, due 2018	250	250
6.75% Notes, due 2018	750	750
5.72% Notes, due 2019	750	750
1.63% Convertible Notes, due 2019*	403	403
6.150% Notes, due 2020	1,000	1,000
5.40% Notes, due 2021	1,250	1,250
5.87% Notes, due 2022	627	627
5.125% Notes, due 2024	1,250	1,250
5.90% Notes, due 2027	625	625
6.75% Bonds, due 2028	300	300
5.95% Notes due 2037	625	625
Iowa Finance Authority Loan, due 2042 (4.75%)	250	250
Other**	(32)	(41)
	8,048	8,789
Less: amount due within one year	4	3
	$8,044	$8,786

* Amount was assumed in conjunction with the acquisition of RTI (see Note F).

** Other includes various financing arrangements related to subsidiaries, unamortized debt discounts related to the outstanding notes and bonds listed in the table above, an equity option related to the convertible notes due in 2019 (see Note F), adjustments to the carrying value of long-term debt related to an interest swap contract accounted for as a fair value hedge, and unamortized debt issuance costs (see Note A).

The principal amount of long-term debt maturing in each of the next five years is $4 in 2017, $1,035 in 2018, $1,134 in 2019, $1,002 in 2020, and $1,251 in 2021.

Public Debt—In December 2016, Arconic elected to call for redemption the $750 in outstanding principal of its 5.55% Notes due February 2017 (the “2017 Notes”) under the provisions of the 2017 Notes. The total cash paid to the holders of the called 2017 Notes was $770, which includes $17 in accrued and unpaid interest from the last interest payment date up to, but not including, the settlement date, and a $3 purchase premium. The purchase premium was recorded in Interest expense on the accompanying Statement of Consolidated Operations. This transaction was completed on December 30, 2016.

Credit Facilities. On July 25, 2014, Arconic entered into a Five-Year Revolving Credit Agreement ("the Credit Agreement") with a syndicate of lenders and issuers named therein which provides for a senior unsecured revolving credit facility (the "Credit Facility"). The proceeds are to be used to provide working capital or for other general corporate purposes of Arconic. In September 2016, Arconic entered into an amendment to the Credit Agreement to permit the Separation Transaction and to amend certain terms of the Credit Agreement including the replacement of the existing financial covenant with a leverage ratio and reduction of total commitments available from $4,000 to $3,000. The amendment became effective on the separation date of November 1, 2016. The previous financial covenant, based upon Consolidated Net Worth (as defined in the Credit Agreement) was replaced. Arconic will be required to maintain a ratio of Indebtedness (as defined in the Credit Agreement), to Consolidated EBITDA (as defined in the Credit Agreement) of 5.50 to 1.00 for the period of the four fiscal quarters most recently ended, declining to 3.50 to 1.00 on December 31, 2019 and thereafter.

The Credit Agreement includes additional covenants, including, among others, (a) limitations on Arconic's ability to incur liens securing indebtedness for borrowed money, (b) limitations on Arconic's ability to consummate a merger, consolidation or sale of all or substantially all of its assets, and (c) limitations on Arconic's ability to change the nature of its business. As of December 31, 2016, Arconic was in compliance with all such covenants.

The Credit Facility matures on July 25, 2020, unless extended or earlier terminated in accordance with the provisions of the Credit Agreement. Arconic may make one additional one-year extension request during the remaining term of the Credit Facility, subject to the lender consent requirements set forth in the Credit Agreement. Under the provisions of the Credit Agreement, Arconic will pay a fee up to 0.30% (based on Arconic's long-term debt ratings as of December 31, 2016) of the total commitment per annum to maintain the Credit Facility.

The Credit Facility is unsecured and amounts payable under it will rank *pari passu* with all other unsecured, unsubordinated indebtedness of Arconic. Borrowings under the Credit Facility may be denominated in U.S. dollars or euros. Loans will bear interest at a base rate or a rate equal to LIBOR, plus, in each case, an applicable margin based on the credit ratings of Arconic's outstanding senior unsecured long-term debt. The applicable margin on base rate loans and LIBOR loans will be 0.70% and 1.70% per annum, respectively, based on Arconic's long-term debt ratings as of December 31, 2016. Loans may be prepaid without premium or penalty, subject to customary breakage costs.

The obligation of Arconic to pay amounts outstanding under the Credit Facility may be accelerated upon the occurrence of an "Event of Default" as defined in the Credit Agreement. Such Events of Default include, among others, (a) Arconic's failure to pay the principal of, or interest on, borrowings under the Credit Facility, (b) any representation or warranty of Arconic in the Credit Agreement proving to be materially false or misleading, (c) Arconic's breach of any of its covenants contained in the Credit Agreement, and (d) the bankruptcy or insolvency of Arconic.

There were no amounts outstanding at December 31, 2016 and 2015 and no amounts were borrowed during 2016, 2015 or 2014 under the Credit Facility. In addition to the Credit Facility above, Arconic has a number of other credit facilities that provide a combined borrowing capacity of $715 as of December 31, 2016, of which $465 is due to expire in 2017 and $250 is due to expire in 2018. The purpose of any borrowings under these credit arrangements is to provide for working capital requirements and for other general corporate purposes. The covenants contained in all these arrangements are the same as the Credit Agreement (see above).

In 2016, 2015 and 2014, Arconic borrowed and repaid $1,950, $1,890, and $1,640, respectively, under the respective credit arrangements. The weighted-average interest rate and weighted-average days outstanding of the respective borrowings during 2016, 2015, and 2014 were 1.88%, 1.61%, and 1.54%, respectively, and 49 days, 69 days, and 67 days, respectively.

Short-Term Borrowings. At December 31, 2016 and 2015, Short-term borrowings were $36 and $38, respectively. These amounts included $31 and $32 at December 31, 2016 and 2015, respectively, related to accounts payable settlement arrangements with certain vendors and third-party intermediaries. These arrangements provide that, at the vendor's request, the third-party intermediary advances the amount of the scheduled payment to the vendor, less an appropriate discount, before the scheduled payment date and Arconic makes payment to the third-party intermediary on the date stipulated in accordance with the commercial terms negotiated with its vendors. Arconic records imputed interest related to these arrangements in Interest expense on the accompanying Statement of Consolidated Operations.

Commercial Paper. Arconic had no outstanding commercial paper at December 31, 2016 and 2015. In 2016 and 2015, the average outstanding commercial paper was $127 and $198, respectively. Commercial paper matures at various times within one year and had an annual weighted average interest rate of 1.05%, 0.6%, and 0.6% during 2016, 2015, and 2014, respectively.

K. Other Noncurrent Liabilities and Deferred Credits

December 31,	2016	2015
Environmental remediation (L)	$260	$288
Income taxes (R)	154	13
Accrued compensation and retirement costs	216	237
Contingent payment related to an acquisition (F)	78	130
Other	162	160
	$870	$828

L. Contingencies and Commitments

Contingencies

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

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

Arconic's remediation reserve balance was $308 and $306 at December 31, 2016 and December 31, 2015 (of which $48 and $18 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 $14 due to a net charge associated with a number of sites and was recorded in Cost of goods sold on the accompanying Statement of Consolidated Operations. The change in the reserve also reflects a decrease of $2 due to the effects of foreign currency translation and an increase of $3 related to the acquisition of RTI (see Note F). Payments related to remediation expenses applied against the reserve were $13 in 2016 and include expenditures currently mandated, as well as those not required by any regulatory authority or third party.

Included in annual operating expenses are the recurring costs of managing hazardous substances and environmental programs. These costs are estimated to be approximately 1% or less of cost of goods sold.

The Separation and Distribution Agreement includes provisions for the assignment or allocation of environmental liabilities between Arconic and Alcoa Corporation 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. The only material and reportable matter assigned to Arconic concerns the Grasse River at Arconic's Massena West location, the status of which is as follows:

Massena West, NY—Arconic has an ongoing remediation project related to Grasse River, which is adjacent to Arconic's Massena plant site. Many years ago, it was determined that sediments and fish in the river contain varying levels of polychlorinated biphenyls (PCBs). The project, which was selected by the U.S. Environmental Protection Agency (EPA) in a Record of Decision (ROD) issued in April 2013, is aimed at capping PCB contaminated sediments with concentration in excess of one part per million in the main channel of the river and dredging PCB contaminated sediments in the near-shore areas where total PCBs exceed one part per million. At December 31, 2016 and December 31, 2015, the reserve balance associated with this matter was $228 and $234, respectively. Arconic is in the planning and design phase, which is expected to be completed in 2017. Following that, the actual remediation fieldwork is expected to commence and take approximately four years. The majority of the project funding is expected to be spent between 2017 and 2021.

Additionally, the Separation and Distribution Agreement lists environmental matters and sites where both parties, Arconic and Alcoa Corporation, share the liability. The Separation and Distribution Agreement provides for the allocation of responsibility between the two companies as well as identifies the lead party responsible for overall management of the matter. One such site previously reported on was Fusina, Italy. The share for this site allocated to Arconic is not material, and therefore, Arconic will no longer report on this matter unless and until some event in the future causes this to become material and reportable.

Lastly, Arconic previously reported on other environmental matters associated with East St. Louis, IL, Sherwin, TX, Baie Comeau, Quebec, Canada and Mosjoen, Norway. Under the Separation and Distribution Agreement, the legal entities named as parties to these matters are now affiliated with Alcoa Corporation and/or Alcoa Corporation has agreed to take full responsibility for these locations and has agreed to indemnify Arconic for any future liability associated with these locations, including the need for any future environmental remediation. Therefore, Arconic will also no longer report on these matters unless and until some event in the future causes any of them to become material and reportable.

Tax. Pursuant to the Tax Matters Agreement (see Note C) entered into between Arconic and Alcoa Corporation in connection with the Separation Transaction, Arconic shares responsibility with Alcoa Corporation, and Alcoa Corporation has agreed to partially indemnify Arconic with respect to the following matter.

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

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

The combined assessments (remeasured for a tax rate change enacted in November 2014) total $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. It is not yet known if Spain's tax authorities will appeal this decision. Spain's National Court has not yet rendered a decision related to the assessment received in July 2013.

The Company believes it has meritorious arguments to support its tax position and intends to vigorously litigate the assessments through Spain's court system. However, in the event the Company is unsuccessful, a portion of the assessments may be offset with existing net operating losses available to the Spanish consolidated tax group, which would be shared between Arconic and Alcoa Corporation 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. At this time, the Company is unable to reasonably predict an ultimate outcome for this matter.

Other. In addition to the matters discussed above, various other lawsuits, claims, and proceedings have been or may be instituted or asserted against Arconic, 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. Arconic has entered into purchase commitments for raw materials, energy and other goods and services, which total $490 in 2017, $90 in 2018, $73 in 2019, $64 in 2020, $2 in 2021, and $5 thereafter.

Operating Leases. Certain land and buildings, plant equipment, vehicles, and computer equipment are under operating lease agreements. Total expense for all leases was $110 in 2016, $112 in 2015, and $112 in 2014. Under long-term operating leases, minimum annual rentals are $115 in 2017, $96 in 2018, $75 in 2019, $54 in 2020, $38 in 2021, and $116 thereafter.

Guarantees. At December 31, 2016, Arconic has outstanding bank guarantees related to tax matters, outstanding debt, workers' compensation, environmental obligations, energy contracts, and customs duties, among others. The total amount committed under these guarantees, which expire at various dates between 2017 and 2026 was $51 at December 31, 2016.

Pursuant to the Separation and Distribution Agreement, Arconic was required to provide maximum potential future payment guarantees for Alcoa Corporation 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 Alcoa Corporation's aluminum complex in Saudi Arabia. Additionally, Arconic was required to provide guarantees up to an estimated present value amount of $1,600 related to two long-term supply agreements for energy for Alcoa Corporation facilities. Per the Separation and Distribution Agreement, Arconic is only liable for these guaranteed amounts in the event of an Alcoa Corporation payment default. In December 2016, Arconic entered into a one year claims purchase agreement with a bank covering claims up to $245 related to the Saudi Arabian joint venture and two long-term energy supply agreements. The majority of the premium related to this claims purchase agreement is being paid by Alcoa Corporation. At December 31, 2016, the combined fair value of the three required guarantees was $35 which was included in Other Noncurrent liabilities and deferred credits on the accompanying Consolidated Balance Sheet.

Arconic was also required to provide guarantees of $50 related to two Alcoa Corporation energy supply contracts. These guarantees expire in March 2017. Additionally, Arconic was required to provide guarantees of $53 related to certain Alcoa Corporation environmental liabilities. Notification of a change in guarantor has been made to the appropriate environmental agencies and Alcoa Corporation is required by the end of March 2017 to self-bond or provide collateral.

Letters of Credit. Arconic has outstanding letters of credit primarily related to workers' compensation, energy contracts and leasing obligations. The total amount committed under these letters of credit, which automatically renew or expire at various dates, mostly in 2017 was $212 at December 31, 2016.

Pursuant to the Separation and Distribution Agreement, Arconic was required to retain letters of credit of $62 that had previously been provided related to both Arconic and Alcoa Corporation workers' compensation claims which occurred prior to November 1, 2016. Alcoa Corporation workers' compensation claims and letter of credit fees paid by

Arconic are being billed to and are being fully reimbursed by Alcoa Corporation. Additionally, Arconic was required to provide letters of credit for certain Alcoa Corporation equipment leases and energy contracts and, as a result, Arconic has $103 of outstanding letters of credit relating to these liabilities. The entire $103 of outstanding letters of credit were canceled in 2017 when Alcoa Corporation issued its own letters of credit to cover these obligations.

Surety Bonds. Arconic 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 $120 at December 31, 2016.

Pursuant to the Separation and Distribution Agreement, Arconic was required to provide surety bonds related to Alcoa Corporation workers' compensation claims which occurred prior to November 1, 2016 and, as a result, Arconic has $22 in outstanding surety bonds relating to these liabilities. Alcoa Corporation workers' compensation claims and surety bond fees paid by Arconic are being billed to and are being fully reimbursed by Alcoa Corporation.

M. Other Income, Net

	2016	2015	2014
Equity income	$ (7)	$ -	$ (2)
Interest income	(16)	(16)	(19)
Foreign currency (gains) losses, net	(4)	51	23
Net loss (gain) from asset sales	11	(42)	(13)
Net loss (gain) on mark-to-market derivative contracts	1	(3)	2
Other, net	(79)	(18)	4
	$ (94)	$ (28)	$ (5)

In 2016, Other, net includes an adjustment of the contingent earn-out liability ($56) and a post-closing adjustment ($20) both related to the November 2014 acquisition of Firth Rixson. In 2015, Net gain from asset sales included a $19 gain related to the sale of land around Arconic's former Sherwin, TX site and a $19 gain related to the sale of the remaining equity investment in a China rolling mill. In 2014, Net gain from asset sales included a $14 gain related to the sale of an equity investment in a China rolling mill.

N. Cash Flow Information

Cash paid for interest and income taxes was as follows:

	2016	2015	2014
Interest, net of amount capitalized	$524	$487	$441
Income taxes, net of amount refunded	$324	$345	$301

The details related to cash paid for acquisitions (including of a noncontrolling interest in 2014) were as follows:

	2016	2015	2014
Assets acquired	$ -	$2,003	$3,515
Liabilities assumed	-	(868)	(345)
Contingent consideration liability	-	-	(130)
Equity issued	-	(870)	(610)
Noncontrolling interest acquired	-	-	31
Working capital adjustment	(10)	-	-
Increase in Arconic's shareholders' equity	-	(60)	(3)
Cash paid	(10)	205	2,458
Less: cash acquired	-	302	45
Net cash paid	$ (10)	$ (97)	$2,413

Noncash Financing and Investing Activities. On October 5, 2016, Arconic completed a 1-for-3 Reverse Stock Split (see Note A). The Reverse Stock Split reduced the number of shares of common stock outstanding from approximately 1.3 billion shares to approximately 0.4 billion shares. The par value of the common stock remained at $1.00 per share. Accordingly, Common stock and Additional capital in the Company's Consolidated Balance Sheet at December 31, 2016 reflect a decrease and increase of $877, respectively. This transaction was not reflected on the Statement of Consolidated Cash Flows for the year ended December 31, 2016 as it represents a noncash financing activity.

In August 2016, Arconic retired its outstanding treasury stock consisting of approximately 76 million shares (see Note P). As a result, Common stock and Additional capital were decreased by $76 and $2,563, respectively, to reflect the retirement of the treasury shares. This transaction was not reflected on the Statement of Consolidated Cash Flows for the year ended December 31, 2016 as it represents a noncash financing activity.

In July 2015, Arconic purchased all outstanding shares of RTI common stock in a stock-for-stock transaction valued at $870 (see Note F). As a result, Arconic issued 29 million shares (87 million shares—pre-Reverse Stock Split—see Note A and Note P) of its common stock to consummate this transaction, which was not reflected in the accompanying Statement of Consolidated Cash Flows as it represents a noncash financing activity.

In early 2014, holders of $575 principal amount of Arconic's 5.25% Convertible Notes due March 15, 2014 (the "2014 Notes") exercised their option to convert the 2014 Notes into 30 million shares (89 million shares—pre-Reverse Stock Split—see Note A and Note P) of Arconic common stock. This transaction was not reflected in the accompanying Statement of Consolidated Cash Flows as it represents a noncash financing activity.

In late 2014, Arconic paid $2,995 (net of cash acquired) to acquire Firth Rixson (see Note F). A portion of this consideration was paid through the issuance of 12 million shares (37 million shares—pre-Reverse Stock Split—see Note A and Note P) in Arconic common stock valued at $610. The issuance of common stock was not reflected in the accompanying Statement of Consolidated Cash Flows as it represents a noncash investing activity.

O. Segment and Geographic Area Information

Arconic is a producer of products including precision castings and aerospace and industrial fasteners. Arconic's products are used worldwide in transportation (including aerospace, automotive, truck, trailer, rail, and shipping), packaging, building and construction, oil and gas, defense, and industrial applications. Arconic's segments are organized by product on a worldwide basis. Segment performance under Arconic'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 (the timing difference created when the average price of metal sold differs from the average cost of the metal when purchased by the respective segment—generally when the price of metal increases, metal lag is favorable and when the price of metal decreases, metal lag is unfavorable); interest expense; noncontrolling interests; corporate expense (general administrative and selling expenses of operating the corporate headquarters and other global administrative facilities, corporate research and development expenses, along with depreciation and amortization on corporate-owned assets); restructuring and other charges; and other items, including intersegment profit eliminations, differences between tax rates applicable to the segments and the consolidated effective tax rate, and other nonoperating items such as foreign currency transaction gains/losses and interest income are excluded from segment ATOI. Segment assets exclude, among others, cash and cash equivalents; deferred income taxes; goodwill not allocated to businesses for segment reporting purposes; corporate fixed assets; and LIFO reserves.

The accounting policies of the segments are the same as those described in the Summary of Significant Accounting Policies (see Note A). Transactions among segments are established based on negotiation among the parties. Differences between segment totals and Arconic's consolidated totals for line items not reconciled are in Corporate.

Arconic's operations consist of three worldwide reportable segments as follows:

Global Rolled Products. This segment produces aluminum sheet and plate for a variety of end markets. This segment includes sheet and plate sold directly to customers and through distributors related to the aerospace, automotive, commercial transportation, packaging, building and construction, and industrial products (mainly used in the production of machinery and equipment and consumer durables) end markets. A small portion of this segment also produces aseptic foil for the packaging end market. While the customer base for flat-rolled products is large, a significant amount of sales of sheet and plate is to a relatively small number of customers.

Engineered Products and Solutions. This segment produces products that are used mostly in the aerospace (commercial and defense), commercial transportation, and power generation end markets. Such products include fastening systems (titanium, steel, and nickel superalloys) and seamless rolled rings (mostly nickel superalloys); investment castings (nickel superalloys, titanium, and aluminum), including airfoils and forged jet engine components (e.g., jet engine disks); and extruded, machined and formed aircraft parts (titanium and aluminum), all of which are sold directly to customers and through distributors. More than 75% of the third-party sales in this segment are from the aerospace end market. A small part of this segment also produces various forged, extruded, and machined metal products (titanium, aluminum and steel) for the oil and gas, industrial products, automotive, and land and sea defense end markets. Seasonal decreases in sales are generally experienced in the third quarter of the year due to the European summer slowdown across all end markets.

Transportation and Construction Solutions. This segment produces products that are used mostly in the nonresidential building and construction and commercial transportation end markets. Such products include integrated aluminum structural systems, architectural extrusions, and forged aluminum commercial vehicle wheels, which are sold directly to customers and through distributors. A small part of this segment also produces aluminum products for the industrial products end market.

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The operating results and assets of Arconic's reportable segments were as follows:

	Global Rolled Products	Engineered Products and Solutions	Transportation and Construction Solutions	Total
2016				
Sales:				
Third-party sales	$ 4,864	$ 5,728	$ 1,802	$12,394
Intersegment sales	118	-	-	118
Total sales	$ 4,982	$ 5,728	$ 1,802	$12,512
Profit and loss:				
Depreciation and amortization	201	255	48	504
Income taxes	107	298	67	472
ATOI	269	642	176	1,087
2015				
Sales:				
Third-party sales	$ 5,253	$ 5,342	$ 1,882	$12,477
Intersegment sales	125	-	-	125
Total sales	$ 5,378	$ 5,342	$ 1,882	$12,602
Profit and loss:				
Depreciation and amortization	203	233	43	479
Income taxes	85	282	63	430
ATOI	225	595	166	986
2014				
Sales:				
Third-party sales	$ 6,344	$ 4,217	$ 2,021	$12,582
Intersegment sales	185	-	-	185
Total sales	$ 6,529	$ 4,217	$ 2,021	$12,767
Profit and loss:				
Depreciation and amortization	211	137	42	390
Income taxes	67	298	69	434
ATOI	224	579	180	983
2016				
Assets:				
Capital expenditures	$ 293	$ 333	$ 63	$ 689
Goodwill	181	4,579	57	4,817
Total assets	3,891	10,542	982	15,415
2015				
Assets:				
Capital expenditures	$ 256	$ 383	$ 77	$ 716
Goodwill	201	4,660	58	4,919
Total assets	3,861	10,732	947	15,540

The following tables reconcile certain segment information to consolidated totals:

	2016	2015	2014
Sales:			
Total segment sales	$12,512	$12,602	$12,767
Elimination of intersegment sales	(118)	(125)	(185)
Corporate	-	(64)	(40)
Consolidated sales	$12,394	$12,413	$12,542

	2016	2015	2014
Net (loss) income attributable to Arconic:			
Total segment ATOI	$ 1,087	$ 986	$ 983
Unallocated amounts (net of tax):			
Impact of LIFO	(11)	66	(52)
Metal price lag	21	(115)	68
Interest expense	(324)	(307)	(287)
Noncontrolling interests	-	(1)	-
Corporate expense	(306)	(252)	(268)
Impairment of goodwill	-	(25)	-
Restructuring and other charges	(114)	(192)	(249)
Discontinued operations	121	(165)	329
Other [(1)]	(1,415)	(317)	(256)
Consolidated net (loss) income attributable to Arconic	$ (941)	$(322)	$ 268

(1) Other for 2016, includes a charge for valuation allowances related to the Separation Transaction ($1,267), slightly offset by a favorable adjustment to the contingent earn-out liability and a post-closing adjustment both of which related to the November 2014 acquisition of Firth Rixson ($76).

December 31,	2016	2015
Assets:		
Total segment assets	$15,415	$15,540
Unallocated amounts:		
Cash and cash equivalents	1,863	1,362
Deferred income taxes	1,234	1,308
Corporate goodwill	331	330
Corporate fixed assets, net	308	279
LIFO reserve	(371)	(387)
Fair value of derivative contracts	24	-
Investment in common stock of Alcoa Corporation	1,020	-
Assets of discontinued operations	-	17,154
Other	214	891
Consolidated assets	$20,038	$36,477

Sales by major product grouping were as follows:

	2016	2015	2014
Sales:			
Flat-rolled aluminum	4,864	5,253	6,344
Fastening systems	2,060	2,168	1,647
Investment castings	1,870	1,812	1,784
Other extruded and forged products	1,495	1,332	1,019
Architectural aluminum systems	1,010	951	1,002
Aluminum wheels	689	790	786
Other	406	107	(40)
	$12,394	$12,413	$12,542

Geographic information for sales was as follows (based upon the country where the point of sale occurred):

	2016	2015	2014
Sales:			
United States	$ 7,823	$ 8,044	$ 7,205
France	930	802	915
United Kingdom	711	698	464
Hungary	619	622	630
China	582	565	415
Russia	433	455	642
Germany	284	264	229
Canada	262	180	125
Brazil	250	297	417
Japan	145	138	157
Italy	127	139	150
Australia	53	49	523
Spain	4	2	460
Other	171	158	210
	$12,394	$12,413	$12,542

Geographic information for long-lived assets was as follows (based upon the physical location of the assets):

December 31,	2016	2015
Long-lived assets:		
United States	$3,966	$3,833
China	336	352
Russia	295	303
United Kingdom	232	312
Hungary	194	190
France	118	107
Other	358	328
	$5,499	$5,425

P. Preferred and Common Stock

Preferred Stock. Arconic has two classes of preferred stock: Class A Preferred Stock and Class B Serial Preferred Stock. Class A Preferred Stock has 660,000 shares authorized at a par value of $100 per share with an annual $3.75

cumulative dividend preference per share. There were 546,024 of such shares outstanding at December 31, 2016 and 2015. Class B Serial Preferred Stock has 10 million shares authorized at a par value of $1 per share. There were 2.5 million of such shares outstanding at December 31, 2016 and 2015 (see below).

In September 2014, Arconic completed a public offering under its shelf registration statement for $1,250 of 25 million depositary shares, each of which represents a 1/10th interest in a share of Arconic's 5.375% Class B Mandatory Convertible Preferred Stock, Series 1, par value $1 per share, liquidation preference $500 per share (the "Mandatory Convertible Preferred Stock"). The 25 million depositary shares are equivalent to 2.5 million shares of Mandatory Convertible Preferred Stock. Each depositary share entitles the holder, through the depositary, to a proportional fractional interest in the rights and preferences of a share of Mandatory Convertible Preferred Stock, including conversion, dividend, liquidation, and voting rights, subject to terms of the deposit agreement. Arconic received $1,213 in net proceeds from the public offering reflecting an underwriting discount. The net proceeds were used, together with the net proceeds of issued debt, to finance the cash portion of the acquisition of Firth Rixson. The underwriting discount was recorded as a decrease to Additional capital. The Mandatory Convertible Preferred Stock constitutes a series of Arconic's Class B Serial Preferred Stock, which ranks senior to Arconic's common stock and junior to Arconic's Class A Preferred Stock and existing and future indebtedness. Dividends on the Mandatory Convertible Preferred Stock are cumulative in nature and are paid at the rate of $26.8750 per annum per share, which commenced January 1, 2015 (paid on December 30, 2014). Holders of the Mandatory Convertible Preferred Stock generally have no voting rights.

On the mandatory conversion date, October 1, 2017, all outstanding shares of Mandatory Convertible Preferred Stock will automatically convert into shares of Arconic's common stock. As a result of the Separation Transaction and the 1-for-3 Reverse Stock Split (see Note A), as defined in the terms of the Mandatory Convertible Preferred Stock, the conversion rate was adjusted and each share of Mandatory Convertible Preferred Stock is now convertible into not more than 15.6981 shares of common stock and not less than 13.0817 shares of common stock, subject to certain anti-dilution and other adjustments as described in the terms of the Mandatory Convertible Preferred Stock. At any time prior to October 1, 2017, a holder may elect to convert shares of Mandatory Convertible Preferred Stock, in whole or in part (but in no event less than one share of Mandatory Convertible Preferred Stock), at the minimum conversion rate of 13.0817 shares of common stock, subject to certain anti-dilution and other adjustments as described in the terms of the Mandatory Convertible Preferred Stock. Arconic does not have the right to redeem the Mandatory Convertible Preferred Stock.

If Arconic undergoes a fundamental change, as defined in the terms of the Mandatory Convertible Preferred Stock, holders may elect to convert their Mandatory Convertible Preferred Stock, in whole or in part (but in no event less than one share of Mandatory Convertible Preferred Stock), into shares of Arconic's common stock. Holders who elect to convert will also receive any accumulated and unpaid dividends and a Fundamental Change Dividend Make-whole Amount (as defined in the terms of the Mandatory Convertible Preferred Stock) equal to the present value of all remaining dividend payments on the Mandatory Convertible Preferred Stock.

Common Stock. As discussed in Note A, Arconic completed a 1-for-3 Reverse Stock Split on October 5, 2016. The Reverse Stock Split reduced the number of shares of common stock outstanding from approximately 1.3 billion shares to 0.4 billion shares. The par value of the common stock remained at $1.00 per share. Accordingly, Common stock and Additional capital in the accompanying Consolidated Balance Sheet at December 31, 2016 reflect a decrease and increase of $877, respectively. The number of authorized shares of common stock was also decreased from 1.8 billion shares to 0.6 billion shares.

In August 2016, Arconic retired its outstanding treasury stock consisting of approximately 25 million shares (76 million shares pre-reverse stock split). As a result, Common stock and Additional capital in the accompanying 2016 Consolidated Balance Sheet were decreased by $76 and $2,563, respectively, to reflect the retirement of the treasury shares.

At December 31, 2016, 438,519,780 shares were issued and outstanding. Dividends paid in each of 2016, 2015 and 2014 were $0.36 per annum or $0.09 per quarter. The current dividend yield as authorized by Arconic's Board of Directors is $0.24 per annum or $0.06 per quarter.

In July 2015, Arconic issued 29 million shares (87 million shares—pre-Reverse Stock Split) of common stock as consideration paid to acquire RTI (see Note F).

In early 2014, Arconic issued 30 million shares (89 million shares—pre-Reverse Stock Split) of common stock under the terms of Arconic's 5.25% Convertible Notes due March 15, 2014. Also, in November 2014, Arconic issued 12 million shares (37 million shares—pre-Reverse Stock Split) of common stock as part of the consideration paid to acquire Firth Rixson (see Note F).

As of December 31, 2016, 45 million shares of common stock were reserved for issuance under Arconic's stock-based compensation plans. Arconic buys shares in the open market to satisfy the exercise of stock options and the conversion of stock awards.

Share Activity (number of shares)

	Common stock	
	Treasury	**Outstanding**
Balance at end of 2013	106,895,705	1,071,011,162
Conversion of convertible notes	-	89,383,953
Private placement	-	36,523,010
Issued for stock-based compensation plans	(19,745,536)	19,745,536
Balance at end of 2014	87,150,169	1,216,663,661
Acquisition of RTI	-	87,397,414
Issued for stock-based compensation plans	(6,099,066)	6,099,066
Balance at end of 2015	81,051,103	1,310,160,141
Treasury stock retirement	(75,831,443)	-
Reverse Stock Split (A)	-	(876,942,489)
Issued for stock-based compensation plans	(5,219,660)	5,302,128
Balance at end of 2016	-	438,519,780

Stock-based Compensation

Arconic has a stock-based compensation plan under which stock options and stock awards are granted in January each year to eligible employees. Most plan participants can choose whether to receive their award in the form of stock options, restricted stock unit awards, or a combination of both. This choice is made before the grant is issued and is irrevocable. Stock options are granted at the closing market price of Arconic's common stock on the date of grant and vest over a three-year service period (1/3 each year) with a ten-year contractual term. Restricted stock unit awards also vest over a three-year service period from the date of grant and certain of these awards also include performance conditions. For the majority of performance stock awards issued in 2016, 2015, and 2014, the final number of shares earned will be based on Arconic's achievement of sales and profitability targets over the respective three-year performance periods. 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, Arconic recognized stock-based compensation expense of $76 ($51 after-tax), $77 ($51 after-tax), and $70 ($47 after-tax), respectively. For each of 2016, 2015, and 2014, approximately 80% of the stock-based compensation expense recognized related to restricted stock unit awards and no stock-based compensation expense was capitalized in any of those years. At December 31, 2016, there was $45 (pretax) of unrecognized compensation expense related to non-vested stock option grants and non-vested restricted stock unit award grants. This expense is expected to be recognized over a weighted average period of 1.5 years. As part of Arconic'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 compensation expense recognized in 2016, 2015, and 2014, $19, $15, and $11, 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 restricted stock unit awards, the fair value was equivalent to the closing market price of Arconic'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 $4.78, $10.07, and $6.40 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 a risk-free interest rate, dividend yield, volatility, exercise behavior, and contractual life. The following paragraph describes in detail the assumptions used 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, except as noted below).

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% for 2016, 36.5% for 2015, and 35.0% in 2014) was based on historical and implied volatilities over the term of the option. Arconic 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. The activity for stock options and stock awards during 2016 was as follows (options and awards in millions):

	Stock options(A)(D)		**Stock awards**(A)(D)	
	Number of options	**Weighted average exercise price**	**Number of awards**	**Weighted average FMV per award**
Outstanding, January 1, 2016	11	$ 35.72	7	$ 34.13
Granted	3	$ 20.22	4	$ 20.64
Exercised	-	$ 26.89	-	$ -
Converted	-	$ -	(3)	$ 26.72
Expired or forfeited	-	$ 36.75	-	$ 31.90
Cancelled due to Separation Transaction(B)	(4)	$ 32.70	(2)	$ 30.46
Adjustment due to Separation Transaction(C)(D)	3	$ 24.14	2	$ 22.20
Performance share adjustment	-	$ -	-	$ 20.87
Outstanding, December 31, 2016	13	$ 24.14	8	$ 22.26

(A) The number of stock options, stock awards and the weighted average exercise price has been adjusted to reflect the Reverse Stock Split (see Note A).

(B) As a result of the Separation Transaction, all stock options and stock awards relating to Alcoa Corporation employees were canceled.

(C) As a result of the Separation Transaction, all stock options and stock awards relating to Arconic employees were adjusted to reflect the Separation Transaction.

(D) Both the effect of the Reverse Stock Split and the effect of the Separation Transaction were considered modifications of the original stock options and awards and the modifications were designed such that the intrinsic values of the stock option or stock award were the same both previous to and after the adjustments.

As of December 31, 2016, the number of stock options outstanding had a weighted average remaining contractual life of 5.99 years and a total intrinsic value of $10. Additionally, 8.9 million of the stock options outstanding were fully vested and exercisable and had a weighted average remaining contractual life of 4.75 years, a weighted average exercise price of $26.23, and a total intrinsic value of $0.2 as of December 31, 2016. In 2016, 2015, and 2014, the cash received from stock option exercises was $4, $25, and $150 and the total tax benefit realized from these exercises was $0, $6, and $28, respectively. The total intrinsic value of stock options exercised during 2016, 2015, and 2014 was $1, $19, and $84, respectively.

Q. Earnings Per Share

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

The number of shares and per share amounts for all periods presented below have been updated to reflect the Reverse Stock Split (see Note A). The information used to compute basic and diluted EPS attributable to Arconic common shareholders was as follows (shares in millions):

	2016	2015	2014
Net loss from continuing operations attributable to Arconic	$(1,062)	$(156)	$ (61)
Net income from continuing operations attributable to noncontrolling interests	-	(1)	-
Less: preferred stock dividends declared	69	69	21
Loss from continuing operations available to Arconic common shareholders	(1,131)	(226)	(82)
Income (loss) from discontinued operations after income taxes and noncontrolling interests[1]	121	165	(329)
Net (loss) income available to Arconic common shareholders—basic	(1,010)	(391)	247
Add: interest expense related to convertible notes	-	-	-
Add: dividends related to mandatory convertible preferred stock	-	-	-
Net (loss) income available to Arconic common shareholders—diluted	$(1,010)	$(391)	$ 247
Average shares outstanding—basic	438	420	387
Effect of dilutive securities:			
Stock options	-	-	2
Stock and performance awards	-	-	4
Mandatory convertible preferred stock	-	-	-
Convertible notes	-	-	-
Average shares outstanding—diluted	438	420	393

[1] Calculated from the Statement of Consolidated Operations as Income (loss) from discontinued operations after income taxes less Net income (loss) from discontinued operations attributable to noncontrolling interests.

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 as Arconic generated a net loss. As a result, 39 million share equivalents related to the mandatory convertible preferred stock, 14 million share equivalents related to convertible notes, 13 million stock options, and 8 million stock awards were not included in the computation of diluted EPS. Had Arconic generated sufficient net income in 2016, 28 million, 10 million, 4 million, and 1 million potential shares of common stock related to the mandatory convertible preferred stock, convertible notes, stock awards, and stock options, respectively, would have been included in diluted average shares outstanding.

In 2015, basic average shares outstanding and diluted average shares outstanding were the same because the effect of potential shares of common stock was anti-dilutive as Arconic generated a net loss. As a result, 26 million share equivalents related to mandatory convertible preferred stock, 7 million stock awards, 11 million stock options, and 5 million (weighted-average) share equivalents related to convertible debt (acquired from RTI – see Note F) were not included in the computation of diluted EPS. Had Arconic generated sufficient net income in 2015, 26 million, 5 million, 4 million, and 1 million potential shares of common stock related to the mandatory convertible preferred stock, convertible notes, stock awards, and stock options, respectively, would have been included in diluted average shares outstanding.

In 2014, 6 million and 7 million share equivalents related to convertible notes and mandatory convertible preferred stock, respectively, were not included in the computation of diluted EPS because their effect was anti-dilutive.

Options to purchase 10 million, 9 million, and 1 million shares of common stock at a weighted average exercise price of $26.93, $38.25, and $48.72 per share were outstanding as of December 31, 2016, 2015, and 2014, respectively, but were not included in the computation of diluted EPS because they were anti-dilutive, as the exercise prices of the options were greater than the average market price of Arconic's common stock.

R. Income Taxes

The components of income from continuing operations before income taxes were as follows:

	2016	2015	2014
United States	$ 84	$124	$207
Foreign	330	59	(94)
	$414	$183	$113

The provision for income taxes consisted of the following:

	2016	2015	2014
Current:			
Federal*	$ -	$ -	$ -
Foreign	133	115	70
State and local	1	(1)	1
	134	114	71
Deferred:			
Federal*	1,208	196	67
Foreign	136	29	37
State and local	(2)	-	(1)
	1,342	225	103
Total	$1,476	$339	$174

* Includes U.S. taxes related to foreign income

The exercise of employee stock options generated a tax benefit of $0, $2 and $8 in 2016, 2015 and 2014, respectively, representing only the difference between compensation expense recognized for financial reporting and tax purposes. These amounts increased equity and either decreased current taxes payable or increased deferred tax assets (net operating losses) in the respective periods.

Arconic has unamortized tax-deductible goodwill of $23 resulting from intercompany stock sales and reorganizations. Arconic recognizes the tax benefits (at a 25% rate) associated with this tax-deductible goodwill as it is being amortized for local income tax purposes rather than in the period in which the transaction is consummated.

A reconciliation of the U.S. federal statutory rate to Arconic's effective tax rate was as follows (the effective tax rate for all periods was a provision on income):

	2016	2015	2014
U.S. federal statutory rate	35.0%	35.0%	35.0%
Taxes on foreign operations	(10.2)	2.5	(9.4)
Permanent differences on restructuring and other charges and asset disposals	(107.8)	3.6	(1.0)
Non-deductible acquisition costs	8.4	7.1	7.3
Statutory tax rate and law changes(1)	(15.7)	(1.0)	78.8
Tax holidays(2)	(0.8)	(3.9)	38.5
Tax credits	(1.2)	(2.8)	(1.9)
Changes in valuation allowances	426.8	145.8	17.3
Impairment of goodwill	-	4.8	-
Company-owned life insurance/split-dollar net premiums	23.0	(3.0)	(9.6)
Changes in uncertain tax positions	2.3	(2.0)	(5.6)
Other	(3.3)	(0.9)	4.6
Effective tax rate	356.5%	185.2%	154.0%

(1) 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, Arconic remeasured certain deferred tax assets related to Spanish subsidiaries. In December 2016, Spain and the United States enacted tax law changes which resulted in the remeasurement of certain deferred tax liabilities recorded by Arconic.

(2) In 2014, a tax holiday for certain former Arconic subsidiaries in Brazil became effective (see below).

The components of net deferred tax assets and liabilities were as follows:

	2016		2015	
December 31,	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
Depreciation	$ 15	$ 817	$ 8	$ 964
Employee benefits	1,382	8	1,521	11
Loss provisions	181	1	172	2
Tax loss carryforwards	1,540	-	926	-
Tax credit carryforwards	652	-	673	-
Other	184	93	311	31
	3,954	919	3,611	1,008
Valuation allowance	(1,940)	-	(1,291)	-
	$ 2,014	$ 919	$ 2,320	$ 1,008

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	$ 81	$ 744	$ 715	$ -	$ 1,540
Tax credit carryforwards	428	89	100	35	652
Other	-	-	72	1,690	1,762
Valuation allowance	(465)	(663)	(677)	(135)	(1,940)
	$ 44	$ 170	$ 210	$ 1,590	$ 2,014

* 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. A substantial amount

of Other relates to employee benefits that will become deductible for tax purposes over an extended period of time as contributions are made to employee benefit plans and payments are made to retirees.

The total deferred tax asset (net of valuation allowance) is supported by projections of future taxable income exclusive of reversing temporary differences (59%) and taxable temporary differences that reverse within the carryforward period (41%).

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 Arconic'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.

In 2016, Arconic recognized a $1,267 discrete income tax charge for valuation allowances related to the Separation Transaction, including $925 with respect to Alcoa Corporation's net deferred tax assets in the United States, $302 with respect to Arconic's foreign tax credits in the United States, $42 with respect to certain deferred tax assets in Luxembourg, and $(2) related to the net impact of other smaller items. After weighing all positive and negative evidence, as described above, management determined that the net deferred tax assets of Alcoa Corporation were not more likely than not to be realized due to lack of historical and projected domestic source taxable income. As such, a valuation allowance was recorded immediately prior to separation.

Upon separation, Arconic retained foreign tax credits in the United States which have a 10-year carryforward period with expirations ranging from 2017 to 2026 (as of December 31, 2016). Arconic also retained suspended foreign tax credit carryforwards whose expiration period begins when the credits become unsuspended. A valuation allowance of $135 was initially established in 2013 on a portion of the foreign tax credit carryforwards, primarily due to insufficient foreign source income to allow for full utilization of the credits within the expiration period. An incremental valuation allowance of $134 was recognized in 2015. At the end of 2015 and 2016, $15 and $128 of foreign tax credits respectively expired resulting in a corresponding decrease to the valuation allowance. As a result of the Separation Transaction, management determined that it was no longer more likely than not that Arconic would realize the full tax benefit of its foreign tax credit carryforwards based on changes in the availability of foreign sourced taxable income. After consideration of all available evidence including potential tax planning strategies and earnings of foreign subsidiaries projected to be distributable as taxable foreign dividends, an incremental valuation allowance of $302 was recognized in 2016. At December 31, 2016, the cumulative amount of the valuation allowance was $427. The need for this valuation allowance will be reassessed on a continuous basis in future periods and, as a result, the allowance may increase or decrease based on changes in facts and circumstances.

In addition, Arconic recognized a $42 discrete income tax charge in 2016 for a valuation allowance on the full value of certain net deferred tax assets in Luxembourg. Sources of taxable income which previously supported the net deferred tax asset are no longer available as a result of the Separation Transaction. The need for this valuation allowance will be reassessed on a continuous basis in future periods and, as a result, the allowance may increase or decrease based on changes in facts and circumstances.

In 2016, Arconic also recognized discrete income tax benefits related to the release of valuation allowances on certain net deferred tax assets in Russia and Canada of $19 and $20 respectively. After weighing all available evidence, management determined that it was more likely than not that the net income tax benefits associated with the underlying deferred tax assets would be realizable based on historic cumulative income and projected taxable income.

Arconic also recorded additional valuation allowances in Australia of $93 related to the Separation Transaction, in Spain of $163 related to a tax law change and in Luxembourg of $280 related to the Separation Transaction as well as a tax law change. These valuation allowances fully offset current year changes in deferred tax asset balances of each respective jurisdiction, resulting in no net impact to tax expense. The need for a valuation allowance will be reassessed on a continuous basis in future periods by each jurisdiction and, as a result, the allowances may increase or decrease based on changes in facts and circumstances.

In 2015, Arconic 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 2016 to 2022 (as of December 31, 2015). 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 Arconic will realize the tax benefit of either of these deferred tax assets. This was mainly driven by a decline in the outlook of the Primary Metals business, combined with prior year cumulative losses and a short expiration period.

In December 2011, one of Arconic's former 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 Arconic's former subsidiaries in Brazil. The deadline for the Brazilian government to deny the application was July 11, 2014. Since Arconic 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 subsidiaries 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 subsidiaries net deferred tax assets 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). This remeasurement resulted in a decrease to that subsidiary's net deferred tax assets and a noncash charge to earnings of $52 ($31 after noncontrolling interests).

The following table details the changes in the valuation allowance:

December 31,	2016	2015	2014
Balance at beginning of year	$1,291	$1,151	$1,252
Increase to allowance	772	180	102
Release of allowance	(209)	(42)	(70)
Acquisitions and divestitures (F)	(1)	29	(36)
Tax apportionment, tax rate and tax law changes	106	(15)	(67)
Foreign currency translation	(19)	(12)	(30)
Balance at end of year	$1,940	$1,291	$1,151

The cumulative amount of Arconic's foreign undistributed net earnings for which no deferred taxes have been provided was approximately $450 at December 31, 2016. Arconic has a number of commitments and obligations related to the Company's growth strategy in 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.

Arconic and its subsidiaries file income tax returns in the U.S. federal jurisdiction and various states and foreign jurisdictions. With a few minor exceptions, Arconic is no longer subject to income tax examinations by tax authorities for years prior to 2006. All U.S. tax years prior to 2016 have been audited by the Internal Revenue Service. Various state and foreign jurisdiction tax authorities are in the process of examining Arconic's income tax returns for various tax years through 2015.

A reconciliation of the beginning and ending amount of unrecognized tax benefits (excluding interest and penalties) was as follows:

December 31,	2016	2015	2014
Balance at beginning of year	$ 18	$ 7	$ 8
Additions for tax positions of the current year	12	-	-
Additions for tax positions of prior years	-	14	4
Reductions for tax positions of prior years	-	(2)	(3)
Settlements with tax authorities	(1)	-	(1)
Expiration of the statute of limitations	(1)	(1)	-
Foreign currency translation	-	-	(1)
Balance at end of year	$ 28	$ 18	$ 7

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 approximately 6%, 7%, and 4%, respectively, of pretax book income. Arconic 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 L for a matter for which no reserve has been recognized).

It is Arconic'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, Arconic did not recognize any interest or penalties. Due to the expiration of the statute of limitations, settlements with tax authorities, and refunded overpayments, Arconic recognized interest income of $1 in 2015 but did not recognize any interest income in 2016 or 2014. As of December 31, 2016 and 2015, the amount accrued for the payment of interest and penalties was $2 and $1, respectively.

S. Receivables

Sale of Receivables Programs

Arconic has an arrangement with three financial institutions to sell certain customer receivables without recourse on a revolving basis. The sale of such receivables is completed through the use of a bankruptcy remote special purpose entity, which is a consolidated subsidiary of Arconic. This arrangement provides for minimum funding of $200 up to a maximum of $400 for receivables sold. On March 30, 2012, Arconic initially sold $304 of customer receivables in exchange for $50 in cash and $254 of deferred purchase price under this arrangement. Arconic has received additional net cash funding of $300 for receivables sold ($1,758 in draws and $1,458 in repayments) since the program's inception, including $100 ($500 in draws and $400 in repayments) in 2016. No draws or repayments occurred in 2015.

As of December 31, 2016 and 2015, the deferred purchase price receivable was $83 and $249, respectively, which was included in Other receivables on the accompanying Consolidated Balance Sheet. The deferred purchase price receivable is reduced as collections of the underlying receivables occur; however, as this is a revolving program, the sale of new receivables will result in an increase in the deferred purchase price receivable. The net change in the deferred purchase price receivable was reflected in the (Increase) decrease in receivables line item on the accompanying Statement of Consolidated Cash Flows. This activity is reflected as an operating cash flow because the related customer receivables are the result of an operating activity with an insignificant, short-term interest rate risk.

In 2016 and 2015, the gross cash outflows and inflows associated with the deferred purchase price receivable were $5,340 and $5,406, respectively, and $6,893 and $7,001, respectively. The gross amount of receivables sold and total cash collected under this program since its inception was $29,938 and $29,505 respectively. Arconic services the customer receivables for the financial institutions at market rates; therefore, no servicing asset or liability was recorded.

Allowance for Doubtful Accounts

The following table details the changes in the allowance for doubtful accounts related to customer receivables and other receivables:

	Customer receivables			Other receivables		
December 31,	**2016**	**2015**	**2014**	**2016**	**2015**	**2014**
Balance at beginning of year	$ 8	$ 6	$ 8	$ 34	$ 24	$ 28
Provision for doubtful accounts	7	4	4	6	8	8
Write off of uncollectible accounts	(3)	(2)	(3)	(1)	2	(4)
Recoveries of prior write-offs	(1)	-	(2)	1	(1)	(7)
Other	2	-	(1)	(8)	1	(1)
Balance at end of year	$ 13	$ 8	$ 6	$ 32	$ 34	$ 24

T. Interest Cost Components

	2016	2015	2014
Amount charged to expense	$499	$473	$442
Amount capitalized	32	27	22
	$531	$500	$464

U. Pension and Other Postretirement Benefits

Arconic 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.

Arconic 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. Arconic 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.

Effective January 1, 2015, Arconic no longer offers postretirement health care benefits to Medicare-eligible, primarily non-bargaining, U.S. retirees through Company-sponsored plans. Qualifying retirees (hired prior to January 1, 2002), both current and future, may access these benefits in the marketplace by purchasing coverage directly from insurance carriers. This change resulted in the adoption of a significant plan amendment by certain Arconic U.S. postretirement benefit plans in August 2014. Accordingly, these plans were required to be remeasured.

Effective August 1, 2016, in preparation for the Separation Transaction, certain U.S. pension and postretirement benefit plans were separated, requiring a remeasurement as of that date. Additionally, one pension plan was required to be remeasured as a result of settlement accounting. Together, these remeasurements resulted in an increase of $845 to Arconic's pension liability and an increase of $551 (net of tax) to the plans' unrecognized net actuarial loss (included in Accumulated other comprehensive loss).

The funded status of all of Arconic's pension and other postretirement benefit plans are measured as of December 31 each calendar year.

Obligations and Funded Status

	Pension benefits		Other postretirement benefits	
December 31,	**2016**	**2015**	**2016**	**2015**
Change in benefit obligation[(1)]				
Benefit obligation at beginning of year	$14,247	$15,019	$ 2,319	$ 2,368
Service cost	165	187	13	14
Interest cost	435	583	63	92
Amendments	2	18	-	-
Actuarial (gains) losses	770	(222)	112	26
Acquisitions (F)	-	188	-	48
Transfer to Alcoa Corporation	(7,577)	-	(1,340)	-
Settlements	(82)	(72)	-	-
Curtailments	-	(12)	-	(6)
Benefits paid, net of participants' contributions	(794)	(1,033)	(197)	(235)
Medicare Part D subsidy receipts	-	-	9	15
Foreign currency translation impact	(140)	(409)	1	(3)
Benefit obligation at end of year[(2)]	$ 7,026	$14,247	$ 980	$ 2,319
Change in plan assets[(1)]				
Fair value of plan assets at beginning of year	$10,928	$11,717	$ -	$ -
Actual return on plan assets	89	24	-	-
Employer contributions	296	479	-	-
Participants' contributions	16	21	-	-
Benefits paid	(762)	(1,015)	-	-
Administrative expenses	(65)	(55)	-	-
Acquisitions (F)	-	164	-	-
Transfer to Alcoa Corporation	(5,610)	-	-	-
Settlements	(82)	(72)	-	-
Foreign currency translation impact	(144)	(335)	-	-
Fair value of plan assets at end of year[(2)]	$ 4,666	$10,928	$ -	$ -
Funded status*	$ (2,360)	$ (3,319)	$ (980)	$ (2,319)
Less: Amounts attributed to joint venture partners	-	30	-	-
Net funded status	$ (2,360)	$ (3,289)	$ (980)	$ (2,319)
Amounts recognized in the Consolidated Balance Sheet consist of:				
Noncurrent assets	$ 6	$ 9	$ -	$ -
Noncurrent assets of discontinued operations	-	35	-	-
Current liabilities	(21)	(23)	(91)	(93)
Current liabilities of discontinued operations	-	(12)	-	(120)
Noncurrent liabilities	(2,345)	(1,925)	(889)	(917)
Noncurrent liabilities of discontinued operations	-	(1,373)	-	(1,189)
Net amount recognized	$ (2,360)	$ (3,289)	$ (980)	$ (2,319)
Amounts recognized in Accumulated Other Comprehensive Loss consist of:				
Net actuarial loss	$ 2,979	$ 5,351	$ 150	$ 398
Prior service cost (benefit)	15	70	(45)	(106)
Total, before tax effect	2,994	5,421	105	292
Less: Amounts attributed to joint venture partners	-	38	-	-
Net amount recognized, before tax effect	$ 2,994	$ 5,383	$ 105	$ 292
Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Loss consist of:				
Net actuarial loss	$ (1,992)	$ 440	$ (224)	$ 23
Amortization of accumulated net actuarial loss	(380)	(468)	(24)	(17)
Prior service (benefit) cost	(42)	(7)	37	1
Amortization of prior service (cost) benefit	(13)	(25)	24	37
Total, before tax effect	(2,427)	(60)	(187)	44
Less: Amounts attributed to joint venture partners	(38)	(5)	-	-
Net amount recognized, before tax effect	$ (2,389)	$ (55)	$ (187)	$ 44

(1) The roll forward of the benefit obligation and the roll forward of plan assets have not been restated for discontinued operations for 2015 as it is impractical to do so.

(2) At December 31, 2016, the benefit obligation, fair value of plan assets, and funded status for U.S. pension plans were $5,707, $3,495, and $(2,212), respectively. At December 31, 2015, the benefit obligation, fair value of plan assets, and funded status for U.S. pension plans were $10,983, $8,077, and $(2,906), respectively.

Pension Plan Benefit Obligations

	Pension benefits	
	2016	**2015**
The projected benefit obligation and accumulated benefit obligation for all defined benefit pension plans was as follows:		
Projected benefit obligation	$7,026	$14,247
Accumulated benefit obligation	6,850	13,832
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	6,995	14,146
Fair value of plan assets	4,629	10,786
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	6,104	12,510
Fair value of plan assets	3,894	9,512

Components of Net Periodic Benefit Cost

	Pension benefits(1)			Other postretirement benefits(2)		
	2016	**2015**	**2014**	**2016**	**2015**	**2014**
Service cost	$ 155	$ 175	$ 166	$ 13	$ 14	$ 15
Interest cost	431	577	630	63	92	114
Expected return on plan assets	(677)	(753)	(782)	-	-	-
Recognized net actuarial loss	380	468	391	24	17	13
Amortization of prior service cost (benefit)	13	16	18	(24)	(37)	(25)
Settlements(3)	19	16	26	-	-	-
Curtailments(4)	-	9	-	-	(4)	-
Special termination benefits(5)	2	16	-	-	-	-
Net periodic benefit cost(6)	$ 323	$ 524	$ 449	$ 76	$ 82	$ 117
Discontinued operations	122	248	215	41	43	68
Net amount recognized in Statement of Consolidated Operations	$ 201	$ 276	$ 234	$ 35	$ 39	$ 49

Note: the footnotes below include components of Net Periodic Benefit Cost related to Alcoa Corporation through the completion of the Separation Transaction.

(1) In 2016, 2015, and 2014, net periodic benefit cost for U.S pension plans was $261, $423, and $335, respectively.

(2) In 2016, 2015, and 2014, net periodic benefit cost for other postretirement benefits reflects a reduction of $22, $34, and $38, respectively, related to the recognition of the federal subsidy awarded under Medicare Part D.

(3) In 2016, settlements were due to workforce reductions (see Note D) and the payment of lump sum benefits and/or purchases of annuity contracts. In 2015, settlements were due to workforce reductions (see Note D) and the payment of lump sum benefits and/or purchases of annuity contracts. In 2014, settlements were due to workforce reductions (see Note D).

(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

	Pension benefits	Other postretirement benefits
	2017	2017
Net actuarial loss recognition	216	8
Prior service cost (benefit) recognition	5	(8)

Assumptions

Weighted average assumptions used to determine benefit obligations for U.S. pension and other postretirement benefit plans were as follows (assumptions for non-U.S plans did not differ materially):

December 31,	2016	2015
Discount rate	4.20%	4.29%
Rate of compensation increase	3.5	3.5

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, including finance and banking, consumer products, transportation, insurance, and pharmaceutical, among others. The yield curve model parallels the plans' projected cash flows, which have an average duration of 11 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.

The rate of compensation increase is based upon actual experience. For 2017, the rate of compensation increase will be 3.5%, which approximates the five-year average.

Weighted average assumptions used to determine net periodic benefit cost for U.S. pension and other postretirement benefit plans were as follows (assumptions for non-U.S plans did not differ materially):

	2016	2015	2014
Discount rate*	4.29%	4.00%	4.80%
Expected long-term rate of return on plan assets	7.75	7.75	8.00
Rate of compensation increase	3.50	3.50	3.50

* In all periods presented, the respective discount rates were used to determine net periodic benefit cost for most U.S. pension 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 new union labor agreements, settlements, and/or curtailments. The updated discount rates used were not significantly different from the discount rates presented.

In conjunction with the annual measurement of the funded status of Arconic's pension and other postretirement benefit plans at December 31, 2015, management elected to change the manner in which the interest cost component of net periodic benefit costs is determined in 2016 and beyond. Previously, the interest component was determined by multiplying the single equivalent rate and the aggregate discounted cash flows of the plans' projected benefit obligations. Under the new methodology, the interest cost component is determined by aggregating the product of the discounted cash flows of the plans' projected benefit obligations for each year and an individual spot rate (referred to as the "spot rate" approach). This change resulted in a lower interest cost component of net periodic benefit cost under the new methodology compared to the previous methodology of $84 for pension plans and $14 for other postretirement benefit plans. Management believes this new methodology, which represents a change in an accounting estimate, is a better measure of the interest cost as each year's cash flows are specifically linked to the interest rates of bond payments in the same respective 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 a combination of historical asset return information and forward-looking returns by asset class. As it relates to historical asset return information, management focuses on various historical moving averages when developing this assumption. While consideration is given to recent performance and historical returns, the assumption represents a long-term, prospective return. Management also 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, 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. These rates fell within the respective range of the 20-year moving average of actual performance and the expected future return developed by asset class. In 2015, the decrease of 25 basis points in the expected long-term rate of return was due to a decrease in the 20-year moving average of actual performance. For 2017, management anticipates that 7.75% will be the expected long-term rate of return.

Assumed health care cost trend rates for U.S. other postretirement benefit plans were as follows (assumptions for non-U.S plans did not differ materially):

	2016	2015	2014
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 Arconic'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 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 the health care plan. A one-percentage point change in these assumed rates would have the following effects:

	1% increase	1% decrease
Effect on other postretirement benefit obligations	$ 44	$ (40)
Effect on total of service and interest cost components	4	(3)

Plan Assets

Arconic's pension plans' investment policy and weighted average asset allocations at December 31, 2016 and 2015, by asset class, were as follows:

		Plan assets at December 31,	
Asset class	**Policy range**	**2016**	**2015**
Equities	20–55%	30%	30%
Fixed income	25–55%	42	43
Other investments	15–35%	28	27
Total		100%	100%

The principal objectives underlying the investment of the pension plans' assets are to ensure that Arconic 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. The use of derivative instruments is permitted where appropriate and necessary for achieving overall investment policy objectives. The investment strategy has used long duration cash bonds and derivative instruments to offset a portion of the interest rate sensitivity of U.S. pension liabilities. 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 the Employee Retirement Income Security Act of 1974 (ERISA) and other applicable laws and regulations.

The following section describes the valuation methodologies used by the trustees to measure the fair value of pension plan assets, including an indication of the level in the fair value hierarchy in which each type of asset is generally classified (see Note V for the definition of fair value and a description of the fair value hierarchy).

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 the net asset value of shares held at December 31 (included in Level 1); and (iii) direct investments in long/short equity hedge funds and private equity (limited partnerships and venture capital partnerships) and are valued by investment managers based on the most recent financial information available, which typically represents significant unobservable data.

Fixed income. These securities consist of: (i) U.S. government debt and are generally valued using quoted prices (included in Level 1); (ii) 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); (iii) cash and cash equivalents; and (iv) interest rate swaps and are generally valued using industry standard models with market-based observable inputs.

Other investments. These investments include, among others: (i) exchange traded funds, such as gold, and real estate investment trusts and are valued based on the closing price reported in an active market on which the investments are traded (included in Level 1) and (ii) direct investments of discretionary and systematic macro hedge funds and private real estate (includes limited partnerships) and are valued by investment managers based on the most recent financial information available, which typically represents significant unobservable data.

The fair value methods described above may not be indicative of net realizable value or reflective of future fair values. Additionally, while Arconic 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.

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The following table presents the fair value of pension plan assets classified under the appropriate level of the fair value hierarchy:

December 31, 2016	Level 1	Level 2	Total
Equities:			
Equity securities	$ 393	$ -	$ 393
Fixed income:			
Intermediate and long duration government/credit	$ 23	$ 95	$ 118
Other	1,060	51	1,111
	$ 1,083	$ 146	$ 1,229
Other investments:			
Real estate	$ 81	$ -	$ 81
Other	65	-	65
	$ 146	$ -	$ 146
Net plan assets subject to leveling	$ 1,622	$ 146	$ 1,768
Plan assets measured at net asset value:			
Equity securities			$ 431
Long/short equity hedge funds			406
Private equity			165
Fixed income			729
Real estate			185
Discretionary and systematic macro hedge funds			784
Other investments			178
Total plan assets measured at net asset value			$ 2,878
Net plan assets*			$ 4,646

December 31, 2015	Level 1	Level 2	Total
Equities			
Equity securities	$ 826	$ -	$ 826
Fixed income:			
Intermediate and long duration government/credit	$ 2,496	$ 487	$ 2,983
Other	-	307	307
	$ 2,496	$ 794	$ 3,290
Other investments:			
Real estate	$ 158	$ -	$ 158
Other	126	-	126
	$ 284	$ -	$ 284
Net plan assets subject to leveling	$ 3,606	$ 794	$ 4,400
Plan assets measured at net asset value:			
Equity securities			$ 1,099
Long/short equity hedge funds			932
Private equity			466
Fixed income			1,413
Real estate			578
Discretionary and systematic macro hedge funds			1,671
Other investments			367
Total plan assets measured at net asset value			$ 6,526
Net plan assets**			$10,926

* As of December 31, 2016, the total fair value of pension plans' assets excludes a net receivable of $20, which represents assets due from the Alcoa Corporation as a result of plan separations and securities sold not yet settled plus interest and dividends earned on various investments.
** As of December 31, 2015, the total fair value of pension plans' assets excludes a net receivable of $2 which represents securities sold not yet settled plus interest and dividends earned on various investments.

Funding and Cash Flows

It is Arconic'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 21st Century Act of 2012; the Highway and Transportation Funding Act of 2014; and the Bipartisan Budget Act of 2015 for U.S. plans. From time to time, Arconic contributes additional amounts as deemed appropriate. In 2016 and 2015, cash contributions to Arconic's pension plans were $290 and $470. The minimum required contribution to pension plans in 2017 is estimated to be $310, of which $290 is for U.S. plans.

During the third quarter of 2016, the Pension Benefit Guaranty Corporation approved management's plan to separate the Alcoa Inc. pension plans between Arconic and Alcoa Corporation in connection with the Separation Transaction. The plan stipulates that Arconic will make cash contributions totaling $150 over a period of 30 months to its two largest pension plans. The payments are expected to be made in increments no less than $50 each over the 30-month period, with the first payment due no later than six months after the separation date of November 1, 2016.

Benefit payments expected to be paid to pension and other postretirement benefit plans' participants and expected Medicare Part D subsidy receipts are as follows utilizing the current assumptions outlined above:

Year ended December 31,	Pension benefits	Gross Other post-retirement benefits	Medicare Part D subsidy receipts	Net Other post-retirement benefits
2017	$ 420	$ 95	$ 5	$ 90
2018	425	95	5	90
2019	425	95	5	90
2020	430	95	5	90
2021	435	95	5	90
2022 through 2026	2,195	415	35	380
	$ 4,330	$ 890	$ 60	$ 830

Defined Contribution Plans

Arconic sponsors savings and investment plans in various countries, primarily in the United States. Expenses related to these plans were $71 in 2016, $83 in 2015, and $83 in 2014. In the United States, employees may contribute a portion of their compensation to the plans, and Arconic matches a portion of these contributions in equivalent form of the investments elected by the employee.

V. 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.

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

	2016		2015	
December 31,	**Carrying value**	**Fair value**	**Carrying value**	**Fair value**
Cash and cash equivalents	$ 1,863	$1,863	$ 1,362	$1,362
Restricted cash	15	15	37	37
Derivatives – current asset	14	14	67	67
Noncurrent receivables	21	21	17	17
Derivatives – noncurrent asset	10	10	31	31
Available-for-sale securities	102	102	193	193
Investment in common stock of Alcoa Corporation	1,020	1,020	-	-
Short-term borrowings	36	36	38	38
Derivatives – current liability	5	5	49	49
Commercial paper	-	-	-	-
Long-term debt due within one year	4	4	3	3
Derivatives – noncurrent liability	3	3	19	19
Contingent payment related to an acquisition	78	78	130	130
Long-term debt, less amount due within one year	8,044	8,519	8,786	8,714

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

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

Derivatives. The fair value of derivative contracts classified as Level 1 was based on identical unrestricted assets and liabilities. The fair value of derivative contracts classified as Level 2 was based on inputs other than quoted prices that are observable for the asset or liability (e.g. interest rates).

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

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

Investment in common stock of Alcoa Corporation (see Note C). The fair value was based on the closing stock price of Alcoa Corporation on the New York Stock Exchange at December 31, 2016 multiplied by the number of shares of Alcoa Corporation stock owned by Arconic as of December 31, 2016. This investment was classified in Level 1 of the fair value hierarchy.

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

Long-term debt due within one year and Long-term debt, less amount due within one year. The fair value was based on quoted market prices for public debt and on interest rates that are currently available to Arconic 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.

W. Related Party Transactions

On October 31, 2016, Arconic entered into several agreements with Alcoa Corporation that govern the relationship of the parties following the completion of the Separation Transaction. These agreements include the following: Separation and Distribution Agreement, Transition Services Agreement, Tax Matters Agreement, Employee Matters Agreement, Alcoa Corporation to Arconic Inc. Patent, Know-How, and Trade Secret License Agreement, Arconic Inc. to Alcoa Corporation Patent, Know-How, and Trade Secret License Agreement, Alcoa Corporation to Arconic Inc. Trademark License Agreement, Toll Processing and Services Agreement, Master Agreement for the Supply of Primary Aluminum, Massena Lease and Operations Agreement, Fusina Lease and Operations Agreement, and Stockholder and Registration Rights Agreement.

Effective November 1, 2016, Arconic entered into a Toll Processing and Services Agreement with Alcoa Corporation for the tolling of metal for the Warrick, Indiana rolling mill which became a part of Alcoa Corporation on the completion of the Separation Transaction. As part of this arrangement, Arconic will provide a toll processing service to Alcoa Corporation to produce can sheet products at its facility in Tennessee through the expected end date of the contract, December 31, 2018. Alcoa Corporation will supply all required raw materials to Arconic and Arconic will process the raw materials into finished can sheet coils ready for shipment to the end customer. Tolling revenues for the two month period ending December 31, 2016 and accounts receivable at December 31, 2016 were not material to the consolidated results of operations and financial position for the year ended December 31, 2016.

Additionally, Arconic buys products from and sells products to various related companies, including Alcoa Corporation, at negotiated prices between the two parties. These transactions, including accounts payable, were not material to the financial position or results of operations of Arconic for all periods presented.

X. Subsequent Events

Management evaluated all activity of Arconic 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 noted below:

On February 14, 2017, Arconic sold 23,353,000 of its shares of Alcoa Corporation common stock at $38.03 per share which resulted in $888 in cash proceeds and a pre-tax gain of approximately $350 to be recorded in Other income in the first quarter of 2017.

Supplemental Financial Information (unaudited)

Quarterly Data
(in millions, except per-share amounts)

	First	Second	Third	Fourth[3]	Year
2016					
Sales	$3,055	$ 3,234	$3,138	$ 2,967	$12,394
Net income (loss) attributable to Arconic	$ 16	$ 135	$ 166	$ (1,258)	$ (941)
Earnings per share attributable to Arconic common shareholders[1][2]:					
Basic					
Continuing operations	$ 0.21	$ 0.08	$ 0.11	$ (2.98)	$ (2.58)
Discontinued operations	(0.21)	0.19	0.23	0.07	0.27
Net income (loss) per share—basic	$ 0.00	$ 0.27	$ 0.34	$ (2.91)	$ (2.31)
Diluted					
Continuing operations	$ 0.21	$ 0.08	$ 0.11	$ (2.98)	$ (2.58)
Discontinued operations	(0.21)	0.19	0.22	0.07	0.27
Net income (loss) per share—diluted	$ 0.00	$ 0.27	$ 0.33	$ (2.91)	$ (2.31)
2015					
Sales	$3,091	$ 3,204	$3,127	$ 2,991	$12,413
Net income (loss) attributable to Arconic	$ 195	$ 140	$ 44	$ (701)	$ (322)
Earnings per share attributable to Arconic common shareholders[1][2]:					
Basic					
Continuing operations	$ (0.31)	$ 0.21	$ 0.05	$ (0.48)	$ (0.54)
Discontinued operations	0.75	0.09	0.01	(1.16)	(0.39)
Net income (loss) per share—basic	$ 0.44	$ 0.30	$ 0.06	$ (1.64)	$ (0.93)
Diluted					
Continuing operations	$ (0.31)	$ 0.21	$ 0.05	$ (0.48)	$ (0.54)
Discontinued operations	0.74	0.09	0.01	(1.16)	(0.39)
Net income (loss) per share—basic	$ 0.43	$ 0.30	$ 0.06	$ (1.64)	$ (0.93)

(1) 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.

(2) Per share amounts for all periods presented have been updated to reflect the Reverse Stock Split (see Note A).

(3) In the fourth quarter of 2016, as a result of the Separation Transaction, Arconic recorded a charge of $1,267 for valuation allowances on certain deferred tax assets. In the fourth quarter of 2015, operations related to Alcoa Corporation, which were recorded in discontinued operations, recorded a loss of $508 primarily relating to restructuring and other charges of $685.

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

Arconic'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

Management's Report on Internal Control over Financial Reporting is included in Part II, Item 8 of this Form 10-K beginning on page 65.

(c) Attestation Report of the Registered Public Accounting Firm

The effectiveness of Arconic's internal control over financial reporting as of December 31, 2016 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report, which is included in Part II, Item 8 of this Form 10-K on page 66.

(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.

In connection with the Separation, Arconic's Board of Directors conducted a special review of the Company's compensation arrangements, and on January 13, 2017, it approved amendments to the Company's Change in Control Severance Plan (the "CIC Plan") which took effect on February 27, 2017. Certain senior executives of the Company, including Klaus Kleinfeld, the Chief Executive Officer, and Ken Giacobbe, the Chief Financial Officer, participate in the CIC Plan. Prior to the amendments, Mr. Kleinfeld was the sole participant in the CIC Plan who retained two grandfathered benefits under the plan – eligibility for a golden parachute excise tax reimbursement, and the right to resign for any reason during a window of thirty days beginning six months following a change in control and receive severance benefits – which were previously eliminated from the CIC Plan for new participants who became eligible on or after January 1, 2010. The amendments to the CIC Plan eliminated both of these grandfathered benefits for Mr. Kleinfeld. In addition, the amendments reduced the level of severance benefits for participants in the CIC Plan below the level of Chief Executive Officer. Consequently, the severance benefits for which Mr. Giacobbe is potentially eligible under the amended CIC Plan are (i) a cash payment equal to two times annual salary plus target annual cash incentive compensation (reduced from three times), (ii) continuation of health care benefits for two years (reduced from three years), (iii) two additional years of pension credit calculated as described in the CIC Plan (reduced from three years), and (iv) six months of outplacement benefits (there was no change to this benefit).

Arconic's Board of Directors also approved, on January 13, 2017, the Arconic Inc. Executive Severance Plan (the "Severance Plan"), which took effect on February 27, 2017. The Severance Plan covers the same executives who are eligible to participate in the CIC Plan, other than any such executive who is party to an individual agreement providing for severance benefits. Mr. Kleinfeld is party to an individual agreement, dated December 8, 2008, with the Company providing for severance benefits on an involuntary termination of employment that are substantially similar to those provided under the Severance Plan, which are described below. Mr. Kleinfeld has waived the severance benefits under such individual agreement pursuant to a letter agreement dated February 27, 2017 (the “Letter Agreement”) and is therefore eligible to participate in the Severance Plan. The Severance Plan provides for severance benefits upon a termination of a participant’s employment without cause or resignation by a participant for good reason (unless the participant receives severance benefits under the CIC Plan), subject to execution and non-revocation of a general release of legal claims against the Company. The severance benefits under the Severance Plan for Messrs. Kleinfeld and Giacobbe are: (i) a cash severance payment equal to two times, for Mr. Kleinfeld, and one times, for Mr. Giacobbe, the sum of base salary and target annual cash incentive, (ii) continued health care benefits for a two-year period, and (iii) two additional years of pension accrual calculated as described in the Severance Plan.

The foregoing descriptions of the amendments to the CIC Plan, the Severance Plan and the Letter Agreement do not purport to be complete and are qualified in their entirety by reference to the full text of the applicable documents filed as exhibits 10(x), 10(aa) and 10(y)(1), respectively, to this Form 10-K.

On February 23, 2017, Arconic’s Board of Directors approved and adopted amended and restated by-laws (the “Amended By-laws”) in order to provide eligible shareholders with a “proxy access” mechanism for nominating director candidates, subject to the terms and conditions set forth therein. The proxy access provision allows eligible shareholders or groups of up to 20 shareholders, who have maintained continuous qualifying ownership of at least 3% of the Company’s outstanding common stock for at least three years and have complied with the other requirements set forth in the Amended By-laws, to include director nominees for up to the greater of two candidates or 20% of the Board in the Company’s proxy materials for an annual meeting of shareholders. The amendments also include certain conforming and ministerial changes to certain advance notice provisions of the Amended By-laws.

In addition, the Amended By-laws provide that meetings of shareholders may be held by means of the Internet or other electronic communications technology in the manner provided by Pennsylvania law.

The Amended By-laws became effective immediately upon approval and adoption by the Board. The proxy access provision will be first available to shareholders in connection with the Company’s 2018 Annual Meeting of Shareholders.

The foregoing description of the Amended By-laws does not purport to be complete and is qualified in its entirety by reference to the full text of the Amended By-laws filed as exhibit 3(b) to this Form 10-K.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by Item 401 of Regulation S-K regarding directors is contained under the caption “Item 1 Election of Directors” of the Proxy Statement and is incorporated by reference. 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 405 of Regulation S-K is contained under the caption “Section 16(a) Beneficial Ownership Reporting Compliance” of the Proxy Statement and is incorporated 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.arconic.com under the section “Investors—Corporate Governance.” 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 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—Committees of the Board—Audit Committee” of the Proxy Statement and is incorporated by reference.

Item 11. Executive Compensation.

The information required by Item 402 of Regulation S-K is contained under the captions “Director Compensation”, “Executive Compensation” and “Corporate Governance—Recovery of Incentive Compensation” of the Proxy Statement. Such information is incorporated 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 “Item 3 Advisory Approval of Executive Compensation—Compensation Committee Report” of the Proxy Statement. Such information (other than the Compensation Committee Report, which shall not be deemed to be “filed”) is incorporated by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The following table gives information about Arconic’s common stock that could be issued under the company’s equity compensation plans as of December 31, 2016.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights *(a)*	Weighted-average exercise price of outstanding options, warrants and rights *(b)*	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) *(c)*
Equity compensation plans approved by security holders[1]	20,911,605[1]	$ 24.14	25,952,673[2]
Equity compensation plans not approved by security holders	0	0	0
Total	20,911,605[1]	$ 24.14	25,952,673[2]

1 Includes the 2013 Arconic Stock Incentive Plan (approved by shareholders in May 2013) (2013 ASIP) and 2009 Alcoa Stock Incentive Plan (approved by shareholders in May 2009) (2009 ASIP). Also includes 438,157 stock options and 96,223 restricted share units resulting from the merger conversion of RTI Metals employee equity. Table amounts are comprised of the following:

- 12,787,786 stock options
- 567,551 performance options

- 5,236,870 restricted share units
- 2,319,398 performance share awards (1,399,565 granted in 2016 at target)

[2] The 2013 ASIP authorizes, in addition to stock options, other types of stock-based awards in the form of stock appreciation rights, restricted shares, restricted share units, performance awards and other awards. The shares that remain available for issuance under the 2013 ASIP may be issued in connection with any one of these awards. Up to 46,666,667 shares may be issued under the plan. Any award other than an option or a stock appreciation right shall count as 2.33 shares. Options and stock appreciation rights shall be counted as one share for each option or stock appreciation right. In addition, the 2013 ASIP provides the following are available to grant under the 2013 ASIP: (i) shares that are issued under the 2013 ASIP, which are subsequently forfeited, cancelled or expire in accordance with the terms of the award and (ii) shares that had previously been issued under prior plans that are outstanding as of the date of the 2013 ASIP which are subsequently forfeited, cancelled or expire in accordance with the terms of the award.

The information required by Item 403 of Regulation S-K is contained under the captions "Arconic Stock Ownership— Stock Ownership of Certain Beneficial Owners" and "— Stock Ownership of Directors and Executive Officers" of the Proxy Statement and is incorporated by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by Item 404 of Regulation S-K is contained under the captions "Executive Compensation" (excluding the information under the caption "Compensation Committee Report") and "Corporate Governance— Related Person Transactions" of the Proxy Statement and is incorporated by reference.

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 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 Appointment of Independent Registered Public Accounting Firm—Report of the Audit Committee" and "— Audit and Non-Audit Fees" of the Proxy Statement and in Attachment A (Pre-Approval Policies and Procedures for Audit and Non-Audit Services) thereto and is incorporated by reference.

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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 65 through 124 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.

Exhibit Number	Description*
2(a).	Share Purchase Agreement, dated as of June 25, 2014, by and among Alcoa Inc., Alcoa IH Limited, FR Acquisition Corporation (US), Inc., FR Acquisitions Corporation (Europe) Limited, FR Acquisition Finance Subco (Luxembourg), S.à.r.l. and Oak Hill Capital Partners III, L.P. and Oak Hill Capital Management Partners III, L.P., collectively in their capacity as the Seller Representative, incorporated by reference to exhibit 2.1 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated June 26, 2014.
2(b).	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 (Commission file number 1-3610) dated November 4, 2016.
2(c).	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 (Commission file number 1-3610) dated November 4, 2016.
2(d).	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 (Commission file number 1-3610) dated November 4, 2016.
2(e).	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 (Commission file number 1-3610) dated November 4, 2016.
2(e)(1).	Amendment No. 1, dated December 13, 2016, to Employee Matters Agreement, dated as of October 31, 2016, by and between Arconic Inc. and Alcoa Corporation.
2(f).	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 (Commission file number 1-3610) dated November 4, 2016.
2(g).	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 (Commission file number 1-3610) dated November 4, 2016.

2(h).	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 (Commission file number 1-3610) dated November 4, 2016.
2(i).	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 (Commission file number 1-3610) dated November 4, 2016.
2(j).	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 (Commission file number 1-3610) dated November 4, 2016.
2(k).	Massena Lease and Operations Agreement, dated as of October 31, 2016, by and between Arconic Inc. and Alcoa Corporation, incorporated by reference to exhibit 2.10 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated November 4, 2016.
2(l).	English Translation of Fusina Lease and Operations Agreement, dated as of August 4, 2016, by and between Alcoa Servizi S.r.l. and Fusina Rolling S.r.l., incorporated by reference to exhibit 2(k) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended September 30, 2016.
3(a).	Articles of the Registrant, as amended effective November 1, 2016, incorporated by reference to exhibit 3(a) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended September 30, 2016.
3(b).	By-Laws of the Registrant, as amended effective as of February 23, 2017.
4(a).	Articles. See Exhibit 3(a) above.
4(b).	By-Laws. See Exhibit 3(b) above.
4(c).	Form of Indenture, dated as of September 30, 1993, between Alcoa Inc. and The Bank of New York Trust Company, N.A., as successor to J. P. Morgan Trust Company, National Association (formerly Chase Manhattan Trust Company, National Association), as successor Trustee to PNC Bank, National Association, as Trustee (undated form of Indenture incorporated by reference to exhibit 4(a) to Registration Statement No. 33-49997 on Form S-3).
4(c)(1).	First Supplemental Indenture, dated as of January 25, 2007, between Alcoa Inc. and The Bank of New York Trust Company, N.A., as successor to J.P. Morgan Trust Company, National Association (formerly Chase Manhattan Trust Company, National Association), as successor Trustee to PNC Bank, National Association, as Trustee, incorporated by reference to exhibit 99.4 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated January 25, 2007.
4(c)(2).	Second Supplemental Indenture, dated as of July 15, 2008, between Alcoa Inc. and The Bank of New York Mellon Trust Company, N.A., as successor in interest to J. P. Morgan Trust Company, National Association (formerly Chase Manhattan Trust Company, National Association, as successor to PNC Bank, National Association), as Trustee, incorporated by reference to exhibit 4(c) to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated July 15, 2008.
4(d).	Form of 5.90% Notes Due 2027, incorporated by reference to exhibit 4(d) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2008.
4(e).	Form of 5.95% Notes Due 2037, incorporated by reference to exhibit 4(d) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2008.

4(f).	Form of 6.75% Notes Due 2018, incorporated by reference to exhibit 4(b) to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated July 15, 2008.
4(g).	Form of 6.150% Notes Due 2020, incorporated by reference to exhibit 4 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated August 3, 2010.
4(h).	Form of 5.40% Notes Due 2021, incorporated by reference to exhibit 4 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated April 21, 2011.
4(i).	Form of 5.125% Notes Due 2024, incorporated by reference to exhibit 4.5 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated September 22, 2014.
4(j).	Deposit Agreement, dated September 22, 2014, among Alcoa Inc., Computershare Trust Company, N.A., Computershare Inc., and the holders from time to time of the depositary receipts evidencing the Depositary Shares (including Form of Depositary Receipt), incorporated by reference to exhibit 4.1 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated September 22, 2014.
4(k).	Form of Depositary Receipt for Deposit Agreement, dated September 22, 2014, among Alcoa Inc., Computershare Trust Company, N.A., Computershare Inc., and the holders from time to time of the depositary receipts evidencing the Depositary Shares, incorporated by reference to exhibit A to exhibit 4.1 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated September 22, 2014.
4(l).	Indenture, dated as of December 14, 2010, between RTI International Metals, Inc. and The Bank of New York Trust Company, N.A., as Trustee, incorporated by reference to exhibit 4(m) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2015.
4(m).	Third Supplemental Indenture, dated as of April 17, 2013, between RTI International Metals, Inc. and The Bank of New York Trust Company, N.A., as Trustee, incorporated by reference to exhibit 4(n) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2015.
4(n).	Fourth Supplemental Indenture, dated as of July 23, 2015, between RTI International Metals, Inc. and The Bank of New York Trust Company, N.A., as Trustee, incorporated by reference to Exhibit 4.1 on Form 8-K (Commission file number 1-3610) dated July 23, 2015.
4(o).	Arconic Bargaining Retirement Savings Plan (formerly known as the Alcoa Retirement Savings Plan for Bargaining Employees), as Amended and Restated effective January 1, 2015, incorporated by reference to exhibit 4(p) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2015.
4(p).	Arconic Hourly Non-Bargaining Retirement Savings Plan (formerly known as the Alcoa Retirement Savings Plan for Hourly Non-Bargaining Employees), as Amended and Restated effective January 1, 2015, incorporated by reference to exhibit 4(q) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2015.
4(q).	Arconic Fastener Systems and Rings Retirement Savings Plan (formerly known as the Alcoa Retirement Savings Plan for Fastener Systems Employees), as Amended and Restated effective January 1, 2015, incorporated by reference to exhibit 4(r) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2015.

4(r).	Arconic Salaried Retirement Savings Plan (formerly known as the Alcoa Retirement Savings Plan for Salaried Employees), as Amended and Restated effective January 1, 2015, incorporated by reference to exhibit 4(s) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2015.
4(s).	Arconic Retirement Savings Plan for ATEP Bargaining Employees, effective January 1, 2017, incorporated by reference to exhibit 4 to Post-Effective Amendment, dated December 30, 2016, to Registration Statement No. 333-32516 on Form S-8.
10(a).	Earnout Agreement, dated as of June 25, 2014, by and among Alcoa Inc., FR Acquisition Finance Subco (Luxembourg), S.à.r.l. and Oak Hill Capital Partners III, L.P. and Oak Hill Capital Management Partners III, L.P., collectively in their capacity as the Seller Representative, incorporated by reference to exhibit 10.1 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated June 26, 2014.
10(b).	Stockholder and Registration Rights Agreement, dated as of October 31, 2016, by and between Arconic Inc. and Alcoa Corporation, incorporated by reference to exhibit 10.1 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated November 4, 2016.
10(c).	Five-Year Revolving Credit Agreement, dated as of July 25, 2014, among Alcoa Inc., the Lenders and Issuers named therein, Citibank, N.A., as Administrative Agent for the Lenders and Issuers, and JPMorgan Chase Bank, N.A., as Syndication Agent, incorporated by reference to exhibit 10.2 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated July 31, 2014.
10(c)(1).	Extension Request and Amendment Letter, dated as of June 5, 2015, among Alcoa Inc., each lender and issuer party thereto, and Citibank, N.A., as Administrative Agent, effective July 7, 2015, incorporated by reference to exhibit 10.1 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated July 13, 2015.
10(c)(2).	Amendment No. 1, dated September 16, 2016, to the Five-Year Revolving Credit Agreement dated as of July 25, 2014, among Arconic Inc., the lenders and issuers named therein, Citibank, N.A., as administrative agent, and JPMorgan Chase Bank, N.A. as syndication agent, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated September 19, 2016.
10(d).	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 the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2013.
10(e).	Offer of Settlement of Alcoa Inc. before the Securities and Exchange Commission dated December 27, 2013, incorporated by reference to exhibit 10(m) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2013.
10(f).	Securities and Exchange Commission Order dated January 9, 2014, incorporated by reference to exhibit 10(n) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2013.
10(g).	Agreement, dated February 1, 2016, by and between Elliott Associates, L.P., Elliott International, L.P., Elliott International Capital Advisors Inc. and Alcoa Inc., incorporated by reference to exhibit 10.1 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated February 1, 2016.

10(h).	Alcoa Internal Revenue Code Section 162(m) Compliant Annual Cash Incentive Compensation Plan, as Amended and Restated, incorporated by reference to Exhibit 10(b) to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated May 11, 2016.
10(i).	2004 Summary Description of the Alcoa Incentive Compensation Plan, incorporated by reference to exhibit 10(g) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended September 30, 2004.
10(i)(1).	Incentive Compensation Plan of Alcoa Inc., as revised and restated effective November 8, 2007, incorporated by reference to exhibit 10(k)(1) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2007.
10(i)(2).	Amendment to Incentive Compensation Plan of Alcoa Inc., effective December 18, 2009, incorporated by reference to exhibit 10(n)(2) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2009.
10(j).	Arconic Employees' Excess Benefits Plan C (formerly referred to as the Alcoa Inc. Employees' Excess Benefits Plan, Plan C), as amended and restated effective August 1, 2016.
10(k).	Deferred Fee Plan for Directors, as amended effective July 9, 1999, incorporated by reference to exhibit 10(g)(1) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended June 30, 1999.
10(l).	Amended and Restated Deferred Fee Plan for Directors, effective November 1, 2016, incorporated by reference to exhibit 10(c) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended September 30, 2016.
10(m).	Restricted Stock Plan for Non-Employee Directors, as amended effective March 10, 1995, incorporated by reference to exhibit 10(h) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 1994.
10(m)(1).	Amendment to Restricted Stock Plan for Non-Employee Directors, effective November 10, 1995, incorporated by reference to exhibit 10(h)(1) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 1995.
10(n).	Non-Employee Director Compensation Policy, effective November 1, 2016, incorporated by reference to exhibit 10(d) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended September 30, 2016.
10(o).	Fee Continuation Plan for Non-Employee Directors, incorporated by reference to exhibit 10(k) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 1989.
10(o)(1).	Amendment to Fee Continuation Plan for Non-Employee Directors, effective November 10, 1995, incorporated by reference to exhibit 10(i)(1) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 1995.
10(o)(2).	Second Amendment to the Fee Continuation Plan for Non-Employee Directors, effective September 15, 2006, incorporated by reference to exhibit 10.2 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated September 20, 2006.
10(p).	Arconic Deferred Compensation Plan, as amended and restated effective August 1, 2016.

10(q).	Summary of the Executive Split Dollar Life Insurance Plan, dated November 1990, incorporated by reference to exhibit 10(m) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 1990.
10(r).	Amended and Restated Dividend Equivalent Compensation Plan, effective January 1, 1997, incorporated by reference to exhibit 10(h) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended September 30, 2004.
10(s).	Form of Indemnity Agreement between the Company and individual directors or officers, incorporated by reference to exhibit 10(j) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 1987.
10(t).	Amended and Restated 2009 Alcoa Stock Incentive Plan, dated February 15, 2011, incorporated by reference to exhibit 10(z)(1) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2010.
10(u).	Terms and Conditions for Special Retention Awards under the 2009 Alcoa Stock Incentive Plan, effective January 1, 2010, incorporated by reference to exhibit 10(e) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended March 31, 2010.
10(v).	Arconic Supplemental Pension Plan for Senior Executives (formerly referred to as the Alcoa Supplemental Pension Plan for Senior Executives), as amended and restated effective August 1, 2016.
10(w).	Deferred Fee Estate Enhancement Plan for Directors, effective July 10, 1998, incorporated by reference to exhibit 10(r) to the Company's Annual Report on Form 10-K (Commission file number 1- 3610) for the year ended December 31, 1998.
10(x).	Arconic Inc. Change in Control Severance Plan, as amended and restated effective February 27, 2017.
10(y).	Executive Severance Agreement, as amended and restated effective December 8, 2008, between Alcoa Inc. and Klaus Kleinfeld, incorporated by reference to exhibit 10(gg) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2008.
10(y)(1).	Letter Agreement between Arconic Inc. and Klaus Kleinfeld, dated February 27, 2017.
10(z).	Form of Executive Severance Agreement between the Company and new officers entered into after July 22, 2010, incorporated by reference to exhibit 10(a) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended September 30, 2010.
10(z)(1).	Letter Agreement between Arconic Inc. and Kay Meggers, dated February 27, 2017.
10(aa).	Arconic Inc. Executive Severance Plan, as effective February 27, 2017.
10(bb).	Arconic Global Pension Plan, as amended and restated effective August 1, 2016.
10(cc).	Form of Award Agreement for Stock Options, effective May 8, 2009, incorporated by reference to exhibit 10.2 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated May 13, 2009.
10(dd).	Terms and Conditions for Stock Options, effective January 1, 2011, incorporated by reference to exhibit 10(c) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended June 30, 2011.

10(ee).	Form of Award Agreement for Restricted Share Units, effective May 8, 2009, incorporated by reference to exhibit 10.3 to the Company's Current Report on Form 8-K (Commission file number 1- 3610) dated May 13, 2009.
10(ff).	Terms and Conditions for Restricted Share Units, effective January 1, 2011, incorporated by reference to exhibit 10(b) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended June 30, 2011.
10(gg).	Summary Description of Equity Choice Program for Performance Equity Award Participants, dated November 2005, incorporated by reference to exhibit 10.6 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated November 16, 2005.
10(hh).	Global Expatriate Employee Policy (pre-January 1, 2003), incorporated by reference to exhibit 10(uu) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2005.
10(ii).	Form of Special Retention Stock Award Agreement, effective July 14, 2006, incorporated by reference to exhibit 10.3 to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated September 20, 2006.
10(jj).	Letter Agreement, dated August 14, 2007, between Alcoa Inc. and Klaus Kleinfeld, incorporated by reference to exhibit 10(b) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended September 30, 2007.
10(kk).	Consulting Agreement, effective January 1, 2017, between Arconic Inc. and Audrey Strauss.
10(ll).	Director Plan: You Make a Difference Award, incorporated by reference to exhibit 10(uu) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2008.
10(mm).	Form of Award Agreement for Stock Options, effective January 1, 2010, incorporated by reference to exhibit 10(ddd) to the Company's Annual Report on Form 10-K (Commission file number 1-3610) for the year ended December 31, 2009.
10(nn).	2013 Alcoa Stock Incentive Plan, as Amended and Restated, incorporated by reference to exhibit 10(a) to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated May 11, 2016.
10(oo).	Alcoa Inc. Terms and Conditions for Stock Option Awards, effective May 3, 2013, incorporated by reference to exhibit 10(b) to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated May 8, 2013.
10(pp).	Terms and Conditions for Stock Option Awards under the 2013 Alcoa Stock Incentive Plan, effective July 22, 2016, incorporated by reference to Exhibit 10(d) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended June 30, 2016.
10(qq).	Alcoa Inc. Terms and Conditions for Restricted Share Units, effective May 3, 2013, incorporated by reference to exhibit 10(c) to the Company's Current Report on Form 8-K (Commission file number 1- 3610) dated May 8, 2013.

10(rr).	Terms and Conditions for Restricted Stock Units under the 2013 Alcoa Stock Incentive Plan, effective July 22, 2016, incorporated by reference to Exhibit 10(c) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended June 30, 2016.
10(ss).	Terms and Conditions (Australian Addendum) 2013 Alcoa Stock Incentive Plan, effective May 3, 2013, incorporated by reference to exhibit 10(d) to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated May 8, 2013.
10(tt).	Alcoa Inc. Terms and Conditions for Special Retention Awards under the 2013 Alcoa Stock Incentive Plan, incorporated by reference to exhibit 10(a) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended June 30, 2013.
10(uu).	Terms and Conditions for Special Retention Awards under the 2013 Alcoa Stock Incentive Plan, effective July 22, 2016, incorporated by reference to exhibit 10(e) to the Company's Quarterly Report on Form 10-Q (Commission file number 1-3610) for the quarter ended June 30, 2016.
10(vv).	Terms and Conditions for Restricted Share Units for Annual Director Awards under the 2013 Arconic Stock Incentive Plan, effective November 30, 2016.
10(ww).	Terms and Conditions for Deferred Fee Restricted Share Units for Director Awards under the 2013 Arconic Stock Incentive Plan, effective November 30, 2016.
10(xx).	Terms and Conditions for Restricted Share Units issued on or after January 13, 2017, under the 2013 Arconic Stock Incentive Plan, effective January 13, 2017.
10(yy).	RTI International Metals, Inc. 2014 Stock and Incentive Plan, incorporated by reference to Exhibit 4(a) to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated July 23, 2015.
10(zz).	RTI International Metals, Inc. 2004 Stock Plan, incorporated by reference to Exhibit 4(b) to the Company's Current Report on Form 8-K (Commission file number 1-3610) dated July 23, 2015.
12.	Computation of Ratio of Earnings to Fixed Charges.
21.	Subsidiaries of the Registrant.
23.	Consent of Independent Registered Public Accounting Firm.
24.	Power of Attorney for certain directors.
31.	Certifications pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101. INS	XBRL Instance Document.
101. SCH	XBRL Taxonomy Extension Schema Document.

101. CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101. DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101. LAB	XBRL Taxonomy Extension Label Linkbase Document.
101. PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

* Exhibit Nos. 10(h) through 10(zz) 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.

None.

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.

ARCONIC INC.

February 28, 2017

By /s/ Paul Myron
Paul Myron
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.

Signature	Title	Date
/s/ Klaus Kleinfeld Klaus Kleinfeld	Chairman and Chief Executive Officer (Principal Executive Officer and Director)	February 28, 2017
/s/ Ken Giacobbe Ken Giacobbe	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 28, 2017

Dr. Amy E. Alving, Arthur D. Collins, Jr., Rajiv L. Gupta, Sean O. Mahoney, E. Stanley O'Neal, John C. Plant, Dr. L. Rafael Reif, Julie G. Richardson, Patricia F. Russo, Ulrich R. Schmidt, Sir Martin Sorrell and Ratan N. Tata, each as a Director, on February 28, 2017, by W. Paul Myron, their Attorney-in-Fact.*

*By /s/ Paul Myron

W. Paul Myron
Attorney-in-Fact

AMENDMENT NO. 1 TO
EMPLOYEE MATTERS AGREEMENT

THIS AMENDMENT NO. 1 TO EMPLOYEE MATTERS AGREEMENT (this "Amendment") is made as of December 13, 2016, by and between Arconic Inc., formerly known as Alcoa Inc. ("Parent") and Alcoa Corporation, formerly known as Alcoa Upstream Corporation ("UpstreamCo").

WHEREAS, on October 31, 2016, Parent and UpstreamCo entered into an Employee Matters Agreement (the "EMA") (all capitalized terms used and not otherwise defined in this Amendment shall have the meanings given to them in the EMA) in connection with the separation of Parent into two publicly-traded companies;

WHEREAS, the EMA allocates liabilities and responsibilities relating to employee compensation and benefit plans, including the Parent Divided Nonqualified Plans and the UpstreamCo Nonqualified Plans;

WHEREAS, Sections 6.01(b) and 6.01(c) of the EMA provide for the treatment of Parent Shares notionally credited to participants accounts under the Parent Divided Nonqualified Plans prior to the Effective Time in accordance with a method of equitable adjustment to reflect the Distribution that would have resulted in the applicable participant accounts in the Parent Divided Nonqualified Plans immediately after the Effective Time being notionally credited solely with Parent Shares and the applicable participant accounts in the UpstreamCo Nonqualified Plans being notionally credited solely with UpstreamCo Shares;

WHEREAS, the Benefits Management Committee of Parent (the "Committee") approved the treatment of the Parent Shares notionally credited under the Parent Divided Nonqualified Plans and the UpstreamCo Nonqualified Plans prior to the Effective Time in a manner that is consistent with the treatment of the Parent Share Fund under the Parent Savings Plans, which results in the applicable participant accounts in the Parent Divided Nonqualified Plans and the UpstreamCo Nonqualified Plans immediately after the Effective Time being notionally credited with both Parent Shares and UpstreamCo Shares (the "Basket Method");

WHEREAS, the equitable adjustments actually made to participant accounts under the Parent Divided Nonqualified Plans and the UpstreamCo Nonqualified Plans effective as of the Effective Time reflected the Basket Method, consistent with the intent and approval of the Committee;

WHEREAS, the Parties desire to amend the EMA to reflect the Basket Method treatment of Parent Shares notionally credited to participant accounts under the Parent Divided Nonqualified Plans prior to the Effective Time, as approved by the Committee and effectuated by the applicable plan administrators;

NOW, THEREFORE, the EMA shall be amended as follows, effective as of the date of this Amendment set forth above.

1. The last sentence of Section 6.01(b) of the EMA is hereby deleted and replaced with the following:

"All Parent Shares notionally credited to participants' accounts under the Parent Divided Nonqualified Plans, the liability for which is transferred to UpstreamCo and the UpstreamCo Nonqualified Plans pursuant to the preceding sentence, shall be adjusted so that, from and after the Effective Time, such notionally credited shares represent: (A) a number of Parent Shares equal to the number of Parent Shares notionally credited to such account immediately prior to the Effective Time and (B) a number of UpstreamCo Shares equal to the number of Parent Shares notionally credited to such account immediately prior to the Effective Time multiplied by the Distribution Ratio."

2. The last sentence of Section 6.01(c) of the EMA is hereby deleted and replaced with the following:

"All Parent Shares notionally credited to participants' accounts under the Parent Divided Nonqualified Plans shall be adjusted so that, from and after the Effective Time, such notionally credited shares represent: (A) a number of Parent Shares equal to the number of Parent Shares notionally credited to such account immediately prior to the Effective Time and (B) a number of UpstreamCo Shares equal to the number of Parent Shares notionally credited to such account immediately prior to the Effective Time multiplied by the Distribution Ratio."

[Signature Page Follows.]

IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed by their duly authorized representatives.

ARCONIC INC.

By: /s/ Katherine H. Ramundo
Name: Katherine H. Ramundo
Title: Executive Vice President,
Chief Legal Officer and Secretary

ALCOA CORPORATION

By: /s/ Jeffrey D. Heeter
Name: Jeffrey D. Heeter
Title: Executive Vice President,
General Counsel and Secretary

Exhibit 3(b)

ARCONIC INC.
BY-LAWS
(Amended as of February 23, 2017)

ARTICLE I - IDENTIFICATION

Section 1. *Principal Office*. The principal office of the Company shall be in the City of New York, New York.

Section 2. *Seal*. The Company shall have a corporate seal in such form as the board of directors shall by resolution from time to time prescribe.

Section 3. *Fiscal Year*. The fiscal year of the Company shall end on the 31st day of December.

ARTICLE II - SHAREHOLDERS' MEETINGS

Section 1. *Place of Meetings*. Meetings of the shareholders of the Company shall be held at such place within or without the Commonwealth of Pennsylvania, and may be held by means of the Internet or other electronic communications technology in the manner and to the extent provided by the Pennsylvania Business Corporation Law (the "PBCL"), in each case as may be fixed by the board of directors pursuant to authority hereby granted.

Section 2. *Annual Meeting*. The annual meeting of the shareholders shall be held on the Friday next following the first Monday in May of each year at nine thirty o'clock A.M., local time in effect at the place of the meeting, or on such other day or at such other time as may be fixed by the board of directors pursuant to authority hereby granted.

Section 3. *Special Meeting*.

(A) Calling of Special Meetings of Shareholders. Special meetings of the shareholders may be called only by (1) the chairman of the board, (2) the board of directors pursuant to a resolution adopted by the board, (3) the secretary of the Company at the request in proper form of an interested shareholder (as defined in section 2553 of the PBCL) for the purpose of approving a business combination under section 2555(3) or 2555(4) of the PBCL or (4) the secretary of the Company at the request in proper form of shareholders who have continuously held as shareholders of record "Net Long Shares" (as determined in accordance with Section 3(C) of this Article II) representing in the aggregate at least twenty-five (25) percent of the outstanding shares of common stock of the Company (the "Requisite Percent") for at least one year prior to the date such request is delivered to the secretary. Special meetings of shareholders shall be held at such place, on such date, and at such time as the board of directors shall fix pursuant to a resolution adopted by the board. Following receipt by the secretary of the Company of a request of shareholders that complies with the requirements set forth in this Section 3 (a "Special Meeting Request"), the secretary of the Company shall call a special meeting of the shareholders, except as otherwise provided in Section 3(E) of this Article II. References to sections of the PBCL in this Section 3(A) shall be deemed to be a reference to any successor provision of similar import.

(B) Special Meeting Request. To be in proper form, a Special Meeting Request must be in writing, must state the purpose or purposes of the proposed meeting and must include all information that would be required to be included in a notice of a business proposal delivered pursuant to Section 5(A)(2) of this Article II and, in the case of a director nomination, all information that would be required to be included in a notice satisfying the requirements set forth in Section A(3) of Article EIGHTH of the Company's Articles, which in each case shall be updated or supplemented as set forth in the last paragraph of Section 5(A)(2) of this Article II. In addition to the foregoing, a Special Meeting Request made pursuant to Section 3(A)(4) of this Article II must include (x) an acknowledgment of the shareholders requesting the special meeting that any reduction in such shareholders' aggregate Net Long Shares below the Requisite Percent following the delivery of a Special Meeting Request to the secretary of the Company shall constitute a revocation of such Special Meeting Request and (y) documentary evidence that the requesting shareholders own the Requisite Percent of Net Long Shares as of the date on which the Special Meeting Request was delivered to the secretary of the Company (the "Delivery Date") and that such shareholders have continuously held such Requisite Percent for at least one year prior to such Delivery Date.

(C) Net Long Shares. For purposes of this Section 3, "Net Long Shares" shall be limited to the number of shares beneficially owned, directly or indirectly, by any shareholder or beneficial owner that constitute such person's net long position as defined in Rule 14e-4 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), provided that (1) for purposes of such definition, in determining such holder's "short position," the reference in such rule to "the date that a tender offer is first publicly announced or otherwise made known by the bidder to the holders of the security to be acquired" shall be the Delivery Date of the relevant Special Meeting Request, and the reference to the "highest tender offer price or stated amount of the consideration offered for the subject security" shall refer to the closing sales price of the Company's common stock on the New York Stock Exchange on such date (or, if such date is not a trading day, the next succeeding trading day), and (2) "Net Long Shares" shall not include any shares as to which such person does not have the right to vote or direct the vote at the special meeting or as to which such person has entered into a derivative or other agreement, arrangement or understanding that hedges or transfers, in whole or in part, directly or indirectly, any of the economic consequences of ownership of such shares. In addition, to the extent that any affiliates of the shareholder or beneficial owner are acting in concert with the shareholder or beneficial owner with respect to the calling of the special meeting, the determination of Net Long Shares may include the effect of aggregating the Net Long Shares (including any negative number) of such affiliate or affiliates. Whether shares constitute "Net Long Shares" shall be decided by the board of directors in its reasonable determination, which determination shall be conclusive and binding on the Company and the shareholders.

(D) Revocation of Special Meeting Request. A shareholder may revoke a Special Meeting Request at any time by written revocation. Following such revocation, the board of directors, in its discretion, may cancel the special meeting unless, in the case of a Special Meeting Request made pursuant to Section 3(A)(4) of this Article II, any remaining requesting shareholders continue to satisfy the requirements set forth in this Section 3. For purposes of this Section 3, written revocation shall mean delivering a notice of revocation to the secretary of the Company or a public announcement (as such term is defined in Section 5(C)(2) of this Article II) that the shareholders who submitted a Special Meeting Request no longer meet the requirements set forth in this Section 3.

(E) Limitations. The secretary of the Company shall not call a special meeting in response to a Special Meeting Request made pursuant to Section 3(A)(4) of this Article II if (1) an identical or substantially similar item (as determined by the board of directors, a "Similar Item") is included or will be included in the Company's notice of meeting as an item of business to be brought before a meeting of shareholders that will be held not later than ninety (90) days after the Delivery Date of the Special Meeting Request; (2) the Delivery Date is during the period commencing ninety (90) days prior to the date of the next annual meeting and ending on the date of the next annual meeting; (3) a Similar Item was presented at any meeting of shareholders held within one hundred and eighty (180) days prior to the Delivery Date; (4) the Special Meeting Request relates to an item of business that is not a proper subject for shareholder action under applicable law; or (5) such Special Meeting Request was made in a manner that involved a violation of Regulation 14A under the Exchange Act or other applicable law. For purposes of this Section 3(E), the election of directors shall be deemed to be a Similar Item with respect to all items of business involving the election or removal of directors.

Section 4. *Chairman of the Meeting*. All meetings of the shareholders shall be called to order and presided over by the chairman of the board, or in the absence of the chairman of the board, by a vice chairman of the board, the president or another director, in the order designated by the chairman of the board, or if none of these be present, by a chairman elected by a majority of the votes which all shareholders present are entitled to cast on any matter coming before the meeting.

Section 5. *Notice of Shareholder Business*.

(A) Annual Meetings of Shareholders.

(1) The proposal of business (other than director nominations) to be considered by the shareholders may be made at an annual meeting of shareholders (a) pursuant to the Company's notice of meeting, (b) by or at the direction of the board of directors or (c) by any shareholder of the Company who was a shareholder of record at the time of giving of notice provided for in these By-laws, who is entitled to vote at the meeting and who complies with the notice procedures set forth in these By-laws.

(2) For business (other than director nominations, which are subject to the requirements of Section A(3) of Article EIGHTH of the Company's Articles, as the same may be amended from time to time) to be properly brought before an annual meeting by a shareholder pursuant to Section 5(A)(1)(c) of this Article II, the shareholder must have given timely notice thereof in proper form in writing to the secretary of the Company and such business must otherwise be a proper matter for shareholder action. To be timely, a shareholder's notice shall be delivered to the secretary of the Company at the principal executive offices of the Company not later than ninety (90) days prior to the anniversary date of the immediately preceding annual meeting and shall be updated and supplemented as set forth below; provided, however, that in the event that the date of the annual meeting is more than thirty (30) days before or more than sixty (60) days after such anniversary date, notice by the shareholder must be so delivered not later than ninety (90) days prior to the date of such annual meeting or, if the first public announcement of the date of such annual meeting is less than one hundred (100) days prior to the date of such annual meeting, the tenth (10th) day following the day on which public announcement of the date of such meeting is first made by the Company. In no event shall the public announcement of an adjournment of an annual meeting commence a new time period for the giving of a shareholder's notice as described above. To be in proper form, a shareholder's notice shall set forth and disclose:

(i) as to any business (other than director nominations) that the shareholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting and any material interest in such business of (x) the shareholder making the proposal, (y) the beneficial owner, if any, on whose behalf the proposal is made and (z) their respective affiliates and associates or others acting in concert therewith (each person or entity specified by the foregoing clauses (x), (y) and (z), a "Proposing Shareholder");

(ii) a description of all agreements, arrangements and understandings between a Proposing Shareholder and any other person or persons (including their names) in connection with the proposal of such business by the shareholder;

(iii) the text of the proposal or business (including the text of any resolutions proposed for consideration and, in the event that such proposal or business includes a proposal to amend the By-laws or Articles of Incorporation of the Company, the text of the proposed amendment);

(iv) the name and address, as they appear on the Company's books, of each Proposing Shareholder;

(v) the class or series and number of shares of the Company which are, directly or indirectly, owned beneficially and of record by each Proposing Shareholder;

(vi) any option, warrant, convertible security, stock appreciation right, or similar right with an exercise or conversion privilege or a settlement payment or mechanism at a price related to any class or series of shares of the Company or with a value derived in whole or in part from the value of any class or series of shares of the Company, or any derivative or synthetic arrangement having the characteristics of a long position in any class or series of shares of the Company, or any contract, derivative, swap or other transaction or series of transactions designed to produce economic benefits and risks that correspond substantially to the ownership of any class or series of shares of the Company, including due to the fact that the value of such contract, derivative, swap or other transaction or series of transactions is determined by reference to the price, value or volatility of any class or series of shares of the Company, whether or not such instrument, contract or right shall be subject to settlement in the underlying class or series of shares of the Company, through the delivery of cash or other property, or otherwise, and without regard to whether the shareholder of record, the beneficial owner, if any, or any affiliates or associates or others acting in concert therewith, may have entered into transactions that hedge or mitigate the economic effect of such instrument, contract or right, or any other direct or indirect opportunity to profit or share in any profit derived from any increase or decrease in the value of shares of the Company (any of the foregoing, a "Derivative Instrument") directly or indirectly owned beneficially by each Proposing Shareholder;

(vii) any proxy, contract, arrangement, understanding, or relationship pursuant to which any Proposing Shareholder has a right to vote any class or series of shares of the Company;

(viii) any agreement, arrangement, understanding, relationship or otherwise, including any repurchase or similar so-called "stock borrowing" agreement or arrangement, involving a Proposing Shareholder, directly or indirectly, the purpose or effect of which is to mitigate loss to, reduce the economic risk (of ownership or otherwise) of any class or series of the shares of the Company by, manage the risk of share price changes for, or increase or decrease the voting power of, such shareholder with respect to any class or series of the shares of the Company, or which provides, directly or indirectly, the opportunity to profit or share in any profit derived from any decrease in the price or value of any class or series of the shares of the Company (any of the foregoing, a "Short Interest");

(ix) any rights to dividends on the shares of the Company owned beneficially by any Proposing Shareholder that are separated or separable from the underlying shares of the Company;

(x) any proportionate interest in shares of the Company or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which any Proposing Shareholder is a general partner or, directly or indirectly, beneficially owns an interest in a general partner of such general or limited partnership;

(xi) any performance-related fees (other than an asset-based fee) that a Proposing Shareholder is entitled to based on any increase or decrease in the value of shares of the Company or Derivative Instruments, if any, including without limitation any such interests held by members of such Proposing Shareholder's immediate family sharing the same household;

(xii) any significant equity interests or any Derivative Instruments or Short Interests in any principal competitor of the Company held by a Proposing Shareholder;

(xiii) any direct or indirect interest of a Proposing Shareholder in any contract with the Company, any affiliate of the Company or any principal competitor of the Company (including, in any such case, any employment agreement, collective bargaining agreement or consulting agreement);

(xiv) to the extent not covered by the foregoing clauses (i) through (xiii), any disclosures that would be required pursuant to Item 5 or Item 6 of Schedule 13D if the requirements therein were applicable to each Proposing Shareholder; and

(xv) any other information relating to each Proposing Shareholder that would be required to be disclosed in a proxy statement and form of proxy or other filings required to be made in connection with solicitations of proxies for, as applicable, the proposal and/or for the election of directors in a contested election pursuant to Section 14 of the Exchange Act and the rules and regulations promulgated thereunder.

To be considered timely, a shareholder's notice shall be updated and supplemented, if necessary, so that the information provided or required to be provided in such notice shall be true and correct as of the record date for the meeting and as of the date that is ten (10) business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to the secretary of the Company at the principal executive offices of the Company not later than five business days after the record date for the meeting in the case of the update and supplement required to be made as of the record date, and not later than eight (8) business days prior to the date for the meeting or any adjournment or postponement thereof in the case of the update and supplement required to be made as of ten (10) business days prior to the meeting or any adjournment or postponement thereof.

(B) Special Meetings of Shareholders.

(1) Except as otherwise required by law or the Articles, only such business shall be conducted at a special meeting of shareholders as shall have been brought before the meeting pursuant to the Company's notice of meeting or otherwise brought by or at the direction of the board of directors.

(2) Nominations of persons for election to the board of directors may be made at a special meeting of shareholders at which directors are to be elected pursuant to the Company's notice of meeting (a) by or at the direction of the board of directors or (b) provided that the board of directors has determined that directors shall be elected at such meeting or the secretary of the Company has called a special meeting pursuant to Section 3 of this Article II for the purpose of electing directors, by any shareholder of the Company who is a shareholder of record at the time of giving notice provided for in these By-laws and at the time of the special meeting, who shall be entitled to vote at such special meeting and who complies with the notice procedures set forth in these By-laws. In the event the Company calls a special meeting of shareholders for the purpose of electing one or more directors to the board of directors, any such shareholder may nominate a person or persons (as the case may be), for election to such position(s) as specified in the Company's notice of meeting, if a shareholder's notice setting forth the information required by Section A(3) of Article EIGHTH of the Company's Articles is delivered to the secretary of the Company not later than the close of business on the later of the ninetieth (90th) day prior to such special meeting or the tenth (10th) day following the day on which public announcement is first made of the date of the special meeting. A shareholder's notice shall be updated and supplemented as set forth in the last paragraph of Section 5(A)(2) of this Article II. In no event shall the public announcement of an adjournment of a special meeting commence a new time period for the giving of a shareholder's notice as described in this Section 5(B)(2).

(C) General.

(1) Only such persons who are nominated in accordance with the procedures set forth in the Articles and in these By-laws shall be eligible to serve as directors and only such business shall be conducted at a meeting of shareholders as shall have been brought before the meeting in accordance with the procedures set forth in these By-laws or in the Articles of the Company. Except as otherwise provided by law, the Articles or these By-laws, the presiding officer of the meeting shall have the power and duty to determine whether any business proposed to be brought before the meeting was proposed in accordance with the procedures set forth in these By-laws or the Articles and, if any proposed business is not in compliance with these By-laws or the Articles, to declare that such defective proposal shall be disregarded.

(2) For purposes of these By-laws, "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Company with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act.

(3) Notwithstanding the foregoing provisions of these By-laws, a shareholder shall also comply with all applicable requirements of the Exchange Act with respect to the matters set forth in these By-laws; provided, however, that any references in these By-laws to the Exchange Act are not intended to and shall not limit the separate and additional requirements set forth in these By-laws with respect to nominations or proposals as to any other business to be considered pursuant to this Section 5. Nothing in these By-laws shall be deemed to affect any rights (i) of shareholders to request inclusion of proposals in the Company's proxy statement pursuant to Rule 14a-8 under the Exchange Act, including without limiting the generality of the foregoing, the time limits for notice of such proposals as provided under Rule 14a-8 under the Exchange Act or (ii) of the holders of any series of preferred stock to elect directors under specified circumstances. Subject to Rule 14a-8 under the Exchange Act and Section 8 of this Article II, nothing in these By-laws shall be construed to permit any shareholder, or give any shareholder the right, to include or have disseminated or described in the Company's proxy statement any nomination of a director or directors or any other business proposal.

(D) Submission of Questionnaire, Representation and Agreement. To be eligible to be a nominee for election or reelection as a director of the Company, a person must deliver (in accordance with the time periods prescribed for delivery of notice under Section A(3) of Article EIGHTH of the Company's Articles or Sections 5(B) or 8 of this Article II, as applicable) to the secretary of the Company a written questionnaire with respect to the background and qualification of such person and any other person or entity that such person may represent or on whose behalf the nomination is being made (which questionnaire shall be provided by the secretary) and a written representation and agreement (in the form provided by the secretary) that such person (A) has no agreement or understanding with any person or entity as to how such person will act or vote on any issue or question as a director, (B) is not and will not become a party to any agreement or understanding with any person or entity other than the Company with respect to compensation, reimbursement or indemnification in connection with service or action as a director, (C) will comply with the director stock ownership guidelines of the Company and (D) in such person's individual capacity and on behalf of any person or entity for whom such person may be a representative or on whose behalf the nomination is being made, has complied and will comply with all applicable corporate governance, conflicts, confidentiality and stock ownership and trading policies of the Company, including, for the avoidance of doubt, Section 6 of this Article II. In addition, a director nominee must comply with all applicable laws regarding service as a director of the Company, including, without limitation, the requirements as amended of: the Clayton Antitrust Act of 1914, 15 U.S.C. §19; the Company's Department of State export license; the Department of Defense rules and regulations applicable to the Company; the New York Stock Exchange and other exchanges on which the Company's securities are listed; and the minimum standards for service as a director prescribed in the Company's Corporate Governance Guidelines.

Section 6. *Election of Directors*. In any non-contested election of directors, any incumbent director nominee who receives a greater number of votes cast against his or her election than in favor of his or her election (excluding abstentions) by holders of shares entitled to vote in the election shall immediately tender his or her resignation, and the board of directors shall decide, through a process managed by the Governance and Nominating Committee and excluding the nominee in question, whether to accept the resignation at its next regularly scheduled board meeting. The board's explanation of its decision shall be promptly disclosed in accordance with the rules and regulations of the Securities and Exchange Commission. An election of directors shall be considered to be contested if there are more nominees for election than positions on the board of directors to be filled by election at the meeting of shareholders.

Section 7. *Shareholder Action by Written Consent.*

(A) Shareholder Action by Written Consent.

(1) Any action required or permitted to be taken at a meeting of the shareholders or of a class of shareholders of the Company may be taken without a meeting, provided that a consent or consents in writing to such action, setting forth the action so taken, shall be (1) signed by the shareholders who would have been entitled to cast the minimum number of votes that would be necessary to authorize the action at a meeting at which all shareholders entitled to vote thereon were present and voting and (2) filed with the secretary of the Company. Delivery made to the secretary shall be by hand or by certified or registered mail, return receipt requested, at the Company's principal executive offices.

(2) Every written consent shall bear the date of signature of each shareholder who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within 45 days of the earliest dated written consent received in accordance with this Section 7, a written consent or consents signed by a sufficient number of holders to take such action are delivered to the Company in the manner prescribed in this Section 7. The Company shall provide prompt notice of such action to those shareholders entitled to vote on the action who have not consented.

(B) Record Date for Action by Written Consent.

(1) In order that the Company may determine the shareholders entitled to consent to corporate action in writing without a meeting, the board of directors may fix a record date, which record date shall not precede the earlier of (x) the date upon which the resolution fixing the record date is adopted by the board of directors and, if any, (y) the date upon which the Company received a request from a shareholder to set a record date for such action, and which date shall not be more than twenty (20) days after the date upon which the resolution fixing the record date is adopted by the board of directors. Any shareholder of record seeking to have the shareholders authorize or take corporate action by written consent shall request the board of directors to fix a record date, which request shall be in proper form and delivered to the secretary of the Company at the principal executive offices of the Company. To be in proper form, such request must be in writing and shall set forth and disclose:

(i) a brief description of the action or actions proposed to be taken by written consent, and reasons for such action(s) and any material interest in such action of each Proposing Shareholder (which, for purposes of this Section 6(B)(1), shall mean the shareholder requesting the record date, any beneficial shareholder on whose behalf the request is made and their respective affiliates and associates and others acting in concert therewith);

(ii) a description of all agreements, arrangements and understandings between a Proposing Shareholder and any other person or persons (including their names) in connection with the action proposed to be taken by written consent;

(iii) the information specified in Section 5(A)(2)(iii) through (xiv) of this Article II;

(iv) any other information relating to any Proposing Shareholder that would be required to be disclosed in a proxy statement and form of proxy or other filings required to be made in connection with solicitations of proxies for the action proposed to be taken by written consent pursuant to Section 14 of the Exchange Act;

(v) in the case of any director election proposed to be made by written consent, (X) the information required by Section A(3) of Article EIGHTH (but excluding clause (b) thereof) of the Company’s Articles to be included in a shareholder’s notice of director nominations and (Y) a description of all direct and indirect compensation and other material monetary agreements, arrangements and understandings during the past three years, and any other material relationships, between or among each Proposing Shareholder, on the one hand, and each proposed nominee and his or her respective affiliates and associates, or others acting in concert therewith, on the other hand, including, without limitation all information that would be required to be disclosed pursuant to Rule 404 promulgated under Regulation S-K if the Proposing Shareholder were the “registrant”.

Section 8. *Inclusion of Shareholder Director Nominations in the Company's Proxy Materials*. Subject to the terms and conditions set forth in these By-laws, the Company will include in its proxy statement for annual meetings of shareholders the name, together with the Required Information (as defined in paragraph (A) below), of an eligible person nominated for election to the board of directors pursuant to this Section 8 (the "Shareholder Nominee") by a shareholder or group of shareholders that satisfy the requirements of this Section 8, including qualifying as an Eligible Shareholder (as defined in paragraph (D) below) and that expressly elects at the time of providing the written notice required by this Section 8 (a "Proxy Access Notice") to have its nominee(s) included in the Company's proxy statement pursuant to this Section 8. For the purposes of this Section 8:

(1) "Voting Stock" shall mean outstanding shares of capital stock of the Company entitled to vote generally for the election of directors;

(2) "Constituent Holder" shall mean any shareholder, investment fund included within a Qualifying Fund (as defined in paragraph (D) below) or beneficial holder whose stock ownership is counted for the purposes of qualifying as holding the Proxy Access Request Required Shares (as defined in paragraph (D) below) or qualifying as an Eligible Shareholder (as defined in paragraph (D) below);

(3) "affiliate" and "associate" shall have the meanings ascribed thereto in Rule 405 under the Securities Act of 1933, as amended; provided, however, that the term "partner" as used in the definition of "associate" shall not include any limited partner that is not involved in the management of the relevant partnership; and

(4) a shareholder (including any Constituent Holder) shall be deemed to "own" only those outstanding shares of Voting Stock as to which the shareholder itself (or such Constituent Holder itself) possesses both (a) the full voting and investment rights pertaining to the shares and (b) the full economic interest in (including the opportunity for profit and risk of loss on) such shares. The number of shares calculated in accordance with the foregoing clauses (a) and (b) shall be deemed not to include (and to the extent any of the following arrangements have been entered into by affiliates of the shareholder (or of any Constituent Holder), shall be reduced by) any shares (x) sold by such shareholder or Constituent Holder (or any of either's affiliates) in any transaction that has not been settled or closed, including any short sale, (y) borrowed by such shareholder or Constituent Holder (or any of either's affiliates) for any purposes or purchased by such shareholder or Constituent Holder (or any of either's affiliates) pursuant to an agreement to resell, or (z) subject to any option, warrant, forward contract, swap, contract of sale, other derivative or similar agreement entered into by such shareholder or Constituent Holder (or any of either's affiliates), whether any such instrument or agreement is to be settled with shares or with cash based on the notional amount or value of Voting Stock, in any such case which instrument or agreement has, or is intended to have, or if exercised by either party thereto would have, the purpose or effect of (i) reducing in any manner, to any extent or at any time in the future, such shareholder's or Constituent Holder's (or either's affiliate's) full right to vote or direct the voting of any such shares, and/or (ii) hedging, offsetting or altering to any degree gain or loss arising from the full economic ownership of such shares by such shareholder or Constituent Holder (or either's affiliate), other than any such arrangements solely involving an exchange listed multi-industry market index fund in which Voting Stock represents at the time of entry into such arrangement less than ten (10) percent of the proportionate value of such index. For purposes of this Section 8, a shareholder (including any Constituent Holder) will be deemed to "own" shares held in the name of a nominee or other intermediary so long as the shareholder itself (or such Constituent Holder itself) retains the right to instruct how the shares are voted with respect to the election of directors and the right to direct the disposition thereof and possesses the full economic interest in the shares. For purposes of this Section 8, a shareholder's (including any Constituent Holder's) ownership of shares will be deemed to continue during any period in which such person has

loaned such shares in the ordinary course of its business so long as such shareholder retains the unrestricted power to recall such shares on no greater than five (5) business days' notice or delegated any voting power over such shares by means of a proxy, power of attorney or other instrument or arrangement so long as such delegation is revocable at any time by the shareholder. The terms "owned," "owning" and other variations of the word "own" have correlative meanings.

(A) For purposes of this Section 8, the "Required Information" that the Company will include in its proxy statement is (1) the information concerning the Shareholder Nominee and the Eligible Shareholder that the Company determines is required to be disclosed in the Company's proxy statement by the regulations promulgated under the Exchange Act; and (2) if the Eligible Shareholder so elects, a Statement (as defined in paragraph (F) below). The Company will also include the name of the qualifying Shareholder Nominee in its proxy card. For the avoidance of doubt, and any other provision of these By-laws notwithstanding, the Company may in its sole discretion solicit against, and include in the proxy statement its own statements or other information relating to, any Eligible Shareholder and/or Shareholder Nominee, including any information provided to the Company with respect to the foregoing.

(B) To be timely, a shareholder's Proxy Access Notice must be delivered to the principal executive offices of the Company no earlier than one hundred and fifty (150) days and no later than one hundred and twenty (120) days before the one-year anniversary of the date that the Company commenced mailing of its definitive proxy statement (as stated in such proxy statement) for the immediately preceding annual meeting with the Securities and Exchange Commission. In no event shall any adjournment or postponement of an annual meeting, the date of which has been announced by the Company, commence a new time period for the giving of a Proxy Access Notice.

(C) The number of Shareholder Nominees (including Shareholder Nominees that were submitted by an Eligible Shareholder for inclusion in the Company's proxy materials pursuant to this Section 8 but either are subsequently withdrawn or that the board of directors decides to nominate as board of directors' nominees or otherwise appoint to the board of directors) appearing in the Company's proxy materials with respect to an annual meeting of shareholders may not exceed the greater of (x) two (2) and (y) the largest whole number that does not exceed twenty (20) percent of the number of directors in office as of the last day on which a Proxy Access Notice may be delivered in accordance with the procedures set forth in this Section 8 (such greater number, the "Permitted Number"); provided, however, that the Permitted Number shall be reduced by the number of directors in office with respect to whom a Proxy Access Notice was previously provided to the Company pursuant to this Section 8, other than (a) any such director whose term of office will expire at such annual meeting and who is not nominated by the Company at such annual meeting for another term of office and who is not seeking or agreeing to be nominated at such meeting for another term of office, and (b) any such director who at the time of such annual meeting will have served as a director continuously through at least two annual meetings; provided, further, that in no circumstance shall the Permitted Number exceed the number of directors to be elected at the applicable annual meeting as noticed by the Company; and provided, further, that in the event the board of directors resolves to reduce the size of the board of directors effective on or prior to the date of the annual meeting, the Permitted Number shall be calculated based on the number of directors in office as so reduced. Any Eligible Shareholder submitting more than one Shareholder Nominee for inclusion in the Company's proxy statement pursuant to this Section 8 shall (i) rank such Shareholder Nominees based on the order that the Eligible Shareholder desires such Shareholder Nominees to be selected for inclusion in the Company's proxy statement in the event that the number of Shareholder Nominees submitted by Eligible Shareholders pursuant to this Section 8 exceeds the Permitted Number and (ii) explicitly specify and include the respective rankings referred to in the foregoing clause (i) in the Proxy Access Notice delivered to the Company with respect to all Shareholder Nominees submitted pursuant thereto. In the event that the number of Shareholder Nominees submitted by Eligible Shareholders pursuant to this Section 8 exceeds the Permitted Number, each Eligible Shareholder will have its highest ranking Shareholder Nominee (as ranked pursuant to the preceding sentence) who meets the requirements of this Section 8 selected for inclusion in the Company's proxy materials until the Permitted Number is reached, going in order of the amount (largest to smallest) of shares of Voting Stock each Eligible Shareholder disclosed as owned in its Proxy Access Notice submitted to the Company (with the understanding that an Eligible Shareholder may not ultimately have any of its Shareholder Nominees included if the Permitted Number has previously been reached). If the Permitted Number is not reached after each Eligible Shareholder has had one (1) Shareholder Nominee selected, this selection process shall continue as many times as necessary, following the same order each time, until the Permitted Number is reached. After reaching the Permitted Number of Shareholder Nominees, if any Shareholder Nominee who satisfies the eligibility requirements in this Section 8 thereafter withdraws, has his or her nomination withdrawn or is thereafter not submitted for director election, no other nominee or nominees shall be required to be substituted for such Shareholder Nominee and included in the Company's proxy statement or otherwise submitted for director election pursuant to this Section 8.

(D) An "Eligible Shareholder" is one or more shareholders of record who own and have owned, or are acting on behalf of one or more beneficial owners who own and have owned (in each case as defined above), in each case continuously for at least three (3) years as of both the date that the Proxy Access Notice is received by the Company pursuant to this Section 8, and as of the record date for determining shareholders eligible to vote at the annual meeting, at least three (3) percent of the aggregate voting power of the Voting Stock (the "Proxy Access Request Required Shares"), and who continue to own the Proxy Access Request Required Shares at all times between the date such Proxy Access Notice is received by the Company and the date of the applicable annual meeting, provided that the aggregate number of shareholders, and, if and to the extent that a shareholder is acting on behalf of one or more beneficial owners, of such beneficial owners, whose stock ownership is counted for the purpose of satisfying the foregoing ownership requirement may not exceed twenty (20). Two or more investment funds that are (I) under common management and investment control, (II) under common management and funded primarily by the same employers or (III) a "group of investment companies" as such term is defined in Section 12(d)(1)(G)(ii) of the Investment Company Act of 1940 (a "Qualifying Fund") will be treated as one shareholder for the purpose of determining the aggregate number of shareholders in this paragraph (D), provided that each fund included within a Qualifying Fund otherwise meets the requirements set forth in this Section 8. No shares may be attributed to more than one group constituting an Eligible Shareholder under this Section 8 (and, for the avoidance of doubt, no shareholder may be a member of more than one group constituting an Eligible Shareholder). A record holder acting on behalf of one or more beneficial owners will not be counted separately as a shareholder with respect to the shares owned by beneficial owners on whose behalf such record holder has been directed in writing to act, but each such beneficial owner will be counted separately, subject to the other provisions of this paragraph (D), for purposes of determining the number of shareholders whose holdings may be considered as part of an Eligible Shareholder's holdings. For the avoidance of doubt, Proxy Access Request Required Shares shall qualify as such if and only if the beneficial owner of such shares as of the date of the Proxy Access Notice has itself individually beneficially owned such shares continuously for the three-year (3 year) period ending on that date and through the other applicable dates referred to above (in addition to the other applicable requirements being met).

(E) No later than the final date when a Proxy Access Notice pursuant to this Section 8 may be timely delivered to the Company, an Eligible Shareholder (including each Constituent Holder) must provide the following information in writing to the Secretary of the Company:

(1) with respect to each Constituent Holder, the information, representations and agreements that would be required to be provided in a shareholder's notice of nomination pursuant to the requirements of Section A(3) of Article EIGHTH of the Company's Articles and in a shareholder's notice of business to be brought before an annual meeting pursuant to Section 5(A)(2) of these By-Laws;

(2) a description of all direct and indirect compensation and other material monetary agreements, arrangements and understandings during the past three (3) years, and any other material relationships, between or among the Eligible Shareholder (including any Constituent Holder) and its or their respective affiliates and associates, or others acting in concert therewith, on the one hand, and each of such Eligible Shareholder's Shareholder Nominee(s), and his or her respective affiliates and associates, or others acting in concert therewith, on the other hand, including without limitation all information that would be required to be disclosed pursuant to Rule 404 promulgated under Regulation S-K if the Eligible Shareholder (including any Constituent Holder), or any affiliate or associate thereof or person acting in concert therewith, were the "registrant" for purposes of such rule and the Shareholder Nominee were a director or executive officer of such registrant;

(3) one or more written statements from the record holder of the shares (and from each intermediary through which the shares are or have been held during the requisite three-year (3 year) holding period) verifying that, as of a date within seven (7) calendar days prior to the date the Proxy Access Notice is delivered to the Company, such person owns, and has owned continuously for the preceding three (3) years, the Proxy Access Request Required Shares, and such person's agreement to provide:

(i) within ten (10) days after the record date for the annual meeting, written statements from the record holder and intermediaries verifying such person's continuous ownership of the Proxy Access Request Required Shares through the record date, together with any additional information reasonably requested to verify such person's ownership of the Proxy Access Request Required Shares; and

(ii) immediate notice if the Eligible Shareholder ceases to own any of the Proxy Access Request Required Shares prior to the date of the applicable annual meeting of shareholders;

(4) a representation that such person:

(i) acquired the Proxy Access Request Required Shares in the ordinary course of business and not with the intent to change or influence control of the Company, and does not have such intent;

(ii) has not nominated and will not nominate for election to the board of directors at the annual meeting any person other than the Shareholder Nominee(s) being nominated pursuant to this Section 8;

(iii) has not engaged and will not engage in, and has not and will not be a "participant" in another person's, "solicitation" within the meaning of Rule 14a-1(l) under the Exchange Act in support of the election of any individual as a director at the annual meeting other than its Shareholder Nominee(s) or a nominee of the board of directors;

(iv) will not distribute to any shareholder any form of proxy for the annual meeting other than the form distributed by the Company; and

(v) will provide facts, statements and other information in all communications with the Company and its shareholders that are and will be true and correct in all material respects and do not and will not omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading, and will otherwise comply with all applicable laws, rules and regulations in connection with any actions taken pursuant to this Section 8;

(5) in the case of a nomination by a group of shareholders that together is such an Eligible Shareholder, the designation by all group members of one group member that is authorized to act on behalf of all members of the nominating shareholder group with respect to the nomination and matters related thereto, including withdrawal of the nomination; and

(6) an undertaking that such person agrees to:

(i) assume all liability stemming from, and indemnify and hold harmless the Company and its affiliates, and each of its and their directors, officers, and employees, individually against any liability, loss or damages in connection with any threatened or pending action, suit or proceeding, whether legal, administrative or investigative, against the Company or any of its affiliates, or any of its or their directors, officers or employees, arising out of any legal or regulatory violation arising out of the Eligible Shareholder's communications with the shareholders of the Company or out of the information that the Eligible Shareholder (including such person) provided to the Company in connection with the nomination of the Shareholder Nominee(s) or efforts to elect such Shareholder Nominee(s) or out of any failure of the Eligible Shareholder to comply with, or any breach of, its obligations, agreements or representations pursuant to these By-laws;

(ii) comply with all laws, rules, regulations and listing standards applicable to nominations or solicitations in connection with the annual meeting of shareholders, and promptly provide the Company with such other information as the Company may reasonably request; and

(iii) file with the Securities and Exchange Commission any solicitation by the Eligible Shareholder of shareholders of the Company relating to the annual meeting at which the Shareholder Nominee will be nominated.

In addition, no later than the final date when a Proxy Access Notice pursuant to this Section 8 may be timely delivered to the Company, a Qualifying Fund whose stock ownership is counted for purposes of qualifying as an Eligible Shareholder must provide to the Secretary of the Company documentation reasonably satisfactory to the board of directors that demonstrates that the funds included within the Qualifying Fund satisfy the definition thereof. In order to be considered timely, any information required by this Section 8 to be provided to the Company must be supplemented (by delivery to the Secretary of the Company) (1) no later than ten (10) days following the record date for the applicable annual meeting, to disclose the foregoing information as of such record date, and (2) no later than the fifth day before the annual meeting, to disclose the foregoing information as of the date that is no earlier than ten (10) days prior to such annual meeting. For the avoidance of doubt, the requirement to update and supplement such information shall not permit any Eligible Shareholder or other person to change or add any proposed Shareholder Nominee or be deemed to cure any defects or limit the remedies (including without limitation under these By-laws) available to the Company relating to any defect.

(F) The Eligible Shareholder may provide to the Secretary of the Company, at the time the information required by this Section 8 is originally provided, a written statement for inclusion in the Company's proxy statement for the annual meeting, not to exceed five hundred (500) words, in support of the candidacy of such Eligible Shareholder's Shareholder Nominee (the "Statement"). Notwithstanding anything to the contrary contained in this Section 8, the Company may omit from its proxy materials any information or Statement that it, in good faith, believes is materially false or misleading, omits to state any material fact, or would violate any applicable law or regulation.

(G) No later than the final date when a Proxy Access Notice pursuant to this Section 8 may be timely delivered to the Company, each Shareholder Nominee must:

(1) provide an executed agreement, in a form deemed satisfactory by the board of directors or its designee (which form will be provided by the Company reasonably promptly upon written request of a shareholder), that such Shareholder Nominee consents to being named in the Company's proxy statement and form of proxy card (and will not agree to be named in any other person's proxy statement or form of proxy card with respect to the Company) as a nominee;

(2) complete, sign and submit all questionnaires, representations and agreements required by these By-laws, including Section 5(D) of these By-laws, or of the Company's directors generally; and

(3) provide such additional information as necessary to permit the board of directors to determine if such Shareholder Nominee:

(i) is independent under the listing standards of each principal U.S. exchange upon which the common stock of the Company is listed, any applicable rules of the Securities and Exchange Commission and any publicly disclosed standards used by the board of directors in determining and disclosing the independence of the Company's directors;

(ii) has any direct or indirect relationship with the Company other than those relationships that have been deemed categorically immaterial pursuant to the Company's Corporate Governance Guidelines;

(iii) would, by serving on the board of directors, violate or cause the Company to be in violation of these By-laws, the Company's Articles, the rules and listing standards of the principal U.S. exchange upon which the common stock of the Company is listed or any applicable law, rule or regulation; and

(iv) is or has been subject to any event specified in Item 401(f) of Regulation S-K (or successor rule) of the Securities and Exchange Commission.

In the event that any information or communications provided by the Eligible Shareholder (or any Constituent Holder) or the Shareholder Nominee to the Company or its shareholders ceases to be true and correct in all material respects or omits a material fact necessary to make the statements made, in light of the circumstances under which they were made, not misleading, each Eligible Shareholder or Shareholder Nominee, as the case may be, shall promptly notify the Secretary of the Company of any defect in such previously provided information and of the information that is required to correct any such defect; it being understood for the avoidance of doubt that providing any such notification will not be deemed to cure any such defect or limit the remedies (including without limitation under these By-laws) available to the Company relating to any such defect.

(H) Any Shareholder Nominee who is included in the Company's proxy materials for a particular annual meeting of shareholders but withdraws from or becomes ineligible or unavailable for election at that annual meeting (other than by reason of such Shareholder Nominee's disability or other health reason) shall be ineligible to be a Shareholder Nominee pursuant to this Section 8 for the next two annual meetings. Any Shareholder Nominee who is included in the Company's proxy statement for a particular annual meeting of shareholders, but subsequently is determined not to satisfy the eligibility requirements of this Section 8 or any other provision of these By-laws, the Company's Articles or other applicable regulation any time before the annual meeting of shareholders, shall not be eligible for election at the relevant annual meeting of shareholders.

(I) (x) The Company will not be required to include, pursuant to this Section 8, any Shareholder Nominee in its proxy materials for any annual meeting of shareholders, and (y) if the proxy statement already has been filed, any Shareholder Nominee will cease to be eligible for nomination as a Shareholder Nominee, notwithstanding that proxies in respect of such vote may have been received by the Company, if:

(1) such Shareholder Nominee is not independent under the listing standards of the principal U.S. exchange upon which the common stock of the Company is listed, any applicable rules of the Securities and Exchange Commission and any publicly disclosed standards used by the board of directors in determining and disclosing independence of the Company's directors, in each case as determined by the board of directors;

(2) such Shareholder Nominee's service as a member of the board of directors would violate or cause the Company to be in violation of these By-laws, the Company's Articles, the rules and listing standards of the principal U.S. exchange upon which the common stock of the Company is traded, or any applicable law, rule or regulation;

(3) such Shareholder Nominee is or has been, within the past three (3) years, an officer or director of a competitor, as defined in Section 8 of the Clayton Antitrust Act of 1914, 15 U.S.C. §19;

(4) such Shareholder Nominee is a named subject of a pending criminal proceeding (excluding traffic violations and other minor offenses) or has been convicted in such a criminal proceeding within the past ten (10) years;

(5) such Shareholder Nominee is subject to any order of the type specified in Rule 506(d) of Regulation D promulgated under the Securities Act of 1933;

(6) the Eligible Shareholder (or any Constituent Holder) or applicable Shareholder Nominee otherwise breaches or fails to comply in any material respect with its obligations pursuant to this Section 8 or any agreement, representation or undertaking required by this section;

(7) the Eligible Shareholder ceases to be an Eligible Shareholder for any reason, including but not limited to not owning the Proxy Access Request Required Shares through the date of the applicable annual meeting or

(8) the Secretary of the Company receives a notice that any shareholder has nominated or intends to nominate a person for election to the board of directors at such annual meeting pursuant to Section A(3) of Article EIGHTH of the Company's Articles.

For the purposes of this paragraph (I), clauses (1), (2), (3), (4) and (5) and, to the extent related to a breach or failure by the Shareholder Nominee, clause (6) will result in the exclusion from the proxy materials pursuant to this Section 8 of the specific Shareholder Nominee to whom the ineligibility applies, or, if the proxy statement already has been filed, the ineligibility of such Shareholder Nominee to be nominated pursuant to this Section 8; provided, however, that clause (7) and, to the extent related to a breach or failure by an Eligible Shareholder (or any Constituent Holder), clause (6) will result in the Voting Stock owned by such Eligible Shareholder (or Constituent Holder) being excluded from the Proxy Access Request Required Shares (and, if as a result the Proxy Access Notice will no longer have been filed by an Eligible Shareholder, the exclusion from the proxy materials pursuant to this Section 8 of all of the applicable shareholder's Shareholder Nominees from the applicable annual meeting of shareholders or, if the proxy statement has already been filed, the ineligibility of all of such shareholder's Shareholder Nominees to be nominated).

Notwithstanding anything to the contrary set forth herein, the board of directors or the person presiding at the annual meeting shall declare a nomination by an Eligible Shareholder to be invalid, and the nominated Shareholder Nominee shall cease to be eligible for nomination pursuant to this Section 8, notwithstanding that proxies in respect of such vote may have been received by the Company, if (i) the Eligible Shareholder (or a qualified representative thereof) does not appear at the annual meeting to present any nomination pursuant to this Section 8 or (ii) the Eligible Shareholder (or any Constituent Holder) becomes ineligible to nominate a director for inclusion in the Company's proxy materials pursuant to this Section 8 or withdraws its nomination or a Shareholder Nominee becomes unwilling, unavailable or ineligible to serve on the board of directors, whether before or after the Company's issuance of the definitive proxy statement.

ARTICLE III - BOARD OF DIRECTORS

Section 1. *Number*. Until the board of directors has increased or decreased the number of the directors as hereinafter provided, the number of the directors shall be thirteen (13). The board is hereby authorized to increase or decrease the number of the directors from time to time without a vote of the shareholders, provided, however, that such number shall not be less than seven (7) nor more than fifteen (15).

Section 2. *General Powers*. The board of directors shall have power in general to manage the business and affairs of the Company consistent with the law, the Articles of the Company and these By-laws, and may from time to time adopt such regulations regarding the powers and duties of the respective officers, assistant officers and agents and the conduct of the Company's business as the board may deem proper and expedient.

Section 3. *Election and Nomination of Directors*. Candidates for election as directors at any annual meeting of shareholders shall be nominated and elected for terms to expire not later than the third annual meeting following their election, in accordance with the By-laws and Articles of the Company and applicable law.

Section 4. *Annual Meeting*. The board of directors shall without notice meet each year upon adjournment of the annual meeting of the shareholders at the principal office of the Company, or on such other day or at such other time or place as shall be fixed by the board at any time in advance of the meeting date or designated in a notice of the meeting, for the purposes of organization, election of officers and consideration of any other business that may properly be brought before the meeting.

Section 5. *Regular Meetings.* Regular meetings of the board of directors shall be held at such times and places as shall be fixed by the board at any time in advance of the meeting date or designated in a notice of the meeting.

Section 6. *Special Meetings*. Special meetings of the board of directors may be called by the chairman of the board, a vice chairman of the board, the president or any two directors.

Section 7. *Notice of Annual, Regular and Special Meetings.*

(A) No Notice For Meetings Held at Time and Place Fixed in Advance. No notice of the annual or a regular meeting of the board of directors shall be necessary if the meeting is held at the time and place fixed by the board in advance of the meeting date.

(B) Notice. Notice of the annual or any regular meeting to be held at another time or place and of all special meetings of the board, setting forth the time and place of the meeting, shall be given by letter or other writing deposited in the United States mail or with an express mail or private courier service not later than during the second day immediately preceding the day for such meeting, or by word of mouth, telephone, facsimile, e-mail or other oral, written or electronic communication means received not later than during the day immediately preceding the day for such meeting.

Section 8. *Quorum and Action by Unanimous Consent.*

(A) Quorum. A majority of the directors in office shall be necessary to constitute a quorum for the transaction of business at a meeting of the board of directors, but if at any meeting a quorum shall not be present the meeting may adjourn from time to time until a quorum shall be present.

(B) Action by Unanimous Consent. Any action required or permitted to be taken at a meeting of the board of directors or any committee thereof may be taken without a meeting if a consent or consents thereto by all of the directors in office, or, in the case of any action by a committee of the board of directors, by all of the directors of such committee, is filed with the secretary of the Company. For the purposes of this Section 8(B), consent may be given by means of a physical written copy or transmitted by facsimile transmission, e-mail or similar electronic communications technology, provided that the means of giving consent shall enable the Company to keep a record of the consents in a manner satisfying the requirements of Section 107 of the Pennsylvania Associations Code.

Section 9. *Executive Committee*. The board of directors may, by resolution adopted by a majority of the whole board, designate three or more of the directors to constitute an executive committee which to the extent provided in a resolution adopted by a majority of the whole board shall have and exercise the authority of the board in the management of the business and affairs of the Company except as otherwise limited by law.

Section 10. *Audit Committee.* The board of directors shall, by resolution adopted by a majority of the whole board, designate three or more of the directors to constitute an audit committee. Audit committee members shall not be officers or full time employees of the Company or its subsidiaries. The audit committee shall have such authority and shall perform such duties as shall be provided from time to time in accordance with resolutions of the board.

Section 11. *Compensation and Benefits Committee.* The board of directors may, by resolution adopted by a majority of the whole board, designate three or more of the directors to constitute a compensation committee which to the extent provided in such resolution or other action by the board shall have and exercise the authority (a) to fix and determine, and change from time to time, the compensation of all officers of the Company elected by the board, including, but not restricted to, monthly or other periodic compensation and incentive or other additional compensation, (b) to authorize or approve all contracts of the Company with any officer for remuneration (whether in the form of a pension, deferred compensation or otherwise) to be paid from the general funds of the Company after the termination of regular employment of such officer, and (c) to administer or perform specified functions under any one or more of the stock option or other incentive, pension or benefit plans of the Company; provided that the said committee shall not exercise any of its said authority with respect to any of its members.

Section 12. *Compensation of Assistant Officers and Agents*. Unless otherwise determined by the board of directors, the chief executive officer of the Company shall have the authority to fix and determine, and change from time to time, the compensation of all assistant officers and agents of the Company elected or appointed by the board or by the chief executive officer, including, but not restricted to, monthly or other periodic compensation and incentive or other additional compensation.

Section 13. *Limitation Regarding Incentive Plans*. Nothing contained in the foregoing two sections of this Article III shall be construed to vest, or to authorize vesting, in the chief executive officer of the Company any authority with respect to stock options or other incentives under plans which provide for administration by the board of directors or a committee thereof.

Section 14. *Other Committees*. In addition to the committees described in this Article III, the board of directors may, by resolution adopted by a majority of the whole board, designate one or more other committees of the board, each of which shall consist of one or more of the directors. Each such other committee shall have such authority and shall perform such other duties as may be provided from time to time in resolutions of the board.

Section 15. *Substitute Committee Members*. In the absence or disqualification of any member of any committee of the board of directors, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another director to act at the meeting in the place of any such absent or disqualified member.

Section 16. *Participation by Conference Telephone or Other Electronic Technology*. One or more directors may participate in a meeting of the board of directors or of a committee thereof by means of conference telephone or other electronic technology by means of which all persons participating in the meeting can hear each other.

Section 17. *Personal Liability of Directors*. To the fullest extent that the laws of the Commonwealth of Pennsylvania, as in effect on May 15, 1987 or as thereafter amended, permit elimination or limitation of the liability of directors, no director of the Company shall be personally liable for monetary damages for any action taken, or any failure to take any action. This Section 17 shall not apply to any action filed prior to May 15, 1987, nor to any breach of performance of duty or any failure of performance of duty occurring prior to May 15, 1987. The provisions of this Section 17 shall be deemed to be a contract with each director of the Company who serves as such at any time while such provisions are in effect, and each such director shall be deemed to be serving as such in reliance on the provisions of this Section 17. Any amendment or repeal of this Section 17 or adoption of any other By-law or provision of the Articles of the Company which has the effect of increasing director liability shall operate prospectively only and shall not affect any action taken, or any failure to act, prior to such amendment, repeal or adoption. This Section 17 may be amended or repealed only with the affirmative vote of the holders of a majority of the outstanding shares of common stock of the Company.

ARTICLE IV - OFFICERS

Section 1. *Number and Election.* The board of directors at its annual meeting shall elect a president, a secretary and a treasurer, or persons who act as such, and may elect a chairman of the board, one or more vice presidents, a controller, a general counsel and such other officers and assistant officers as the board may deem appropriate. The board shall from time to time designate the chief executive officer who shall be either the chairman of the board or the president. The board may also from time to time elect such other officers and assistant officers and appoint such agents as it may deem appropriate. Assistant officers and agents also may be appointed by the chief executive officer.

Section 2. *Qualifications*. The chairman of the board shall be a member of the board of directors but the other officers need not be directors.

Section 3. *Term of Office*. Each officer and assistant officer shall hold office until the annual meeting of the board of directors next following the meeting of the board at which such officer or assistant officer is elected, except in the case of earlier death, resignation or removal.

Section 4. *Chairman of the Board*. The chairman of the board shall preside at all meetings of the board of directors at which such chairman is present. In the absence of the chairman of the board, a vice chairman of the board, the president or another director, in the order designated by the chairman of the board, shall preside at meetings of the board of directors. If the chairman of the board is not the chief executive officer, the chairman of the board shall have such powers and perform such other duties as the president may from time to time delegate to such chairman, except as otherwise determined by the board.

Section 5. *President*. If the president is not the chief executive officer, the president shall have such powers and perform such other duties as the chairman of the board may from time to time delegate to the president, except as otherwise determined by the board.

Section 6. *Vice Presidents*. Each vice president, including any vice president designated as executive, senior or otherwise, shall have such powers and perform such duties as the chairman of the board or the president may from time to time delegate to such vice president, except as otherwise determined by the board of directors.

Section 7. *Secretary*. The secretary shall attend meetings of the shareholders, the board of directors and the executive committee, shall keep minutes thereof in suitable books, and shall send out all notices of meetings as required by law or these By-laws. The secretary shall be ex officio an assistant treasurer. The secretary shall, in general, perform all duties incident to the office of secretary.

Section 8. *Treasurer*. The treasurer shall receive all money paid to the Company and keep or cause to be kept accurate accounts of all money received or payments made in books kept for that purpose. The treasurer shall deposit all money received by the treasurer in the name and to the credit of the Company in banks or other places of deposit. The treasurer shall disburse the money of the Company by checks or vouchers. The treasurer shall be ex officio an assistant secretary. The treasurer shall, in general, perform all duties incident to the office of treasurer.

Section 9. *Controller*. The controller shall be responsible for the implementation of accounting policies and procedures, the installation and supervision of all accounting records, including the preparation and interpretation of financial statements, the compilation of production costs and cost distributions and the taking and valuation of physical inventories. The controller shall also be responsible for the maintenance of adequate records of authorized appropriations and the approval for payment of all checks and vouchers. The controller shall, in general, perform all duties incident to the office of controller.

Section 10. *General Counsel*. The general counsel shall advise the Company on legal matters affecting the Company and its activities and shall supervise and direct the handling of all such legal matters. The general counsel shall, in general, perform all duties incident to the office of general counsel.

Section 11. *Assistant Officers*. Each assistant officer shall have such powers and perform such duties as may be delegated to such assistant officer by the officer to whom such assistant officer is an assistant or, in the absence or inability to act of such officer, by the officer to whom such officer reports or by the chief executive officer.

ARTICLE V - INDEMNIFICATION

Section 1. *Indemnification Granted*. Every person who is or was a director, officer or employee of the Company or of any other corporation, partnership, joint venture, trust or other enterprise which such person serves or served as such at the request of the Company (hereinafter referred to as an “eligible person”) shall in accordance with this Article V, but not if prohibited by law, be indemnified by the Company as hereinafter provided against reasonable expense and any liability paid or incurred by such person in connection with or resulting from any claim in which such person may be involved, as a party or otherwise, by reason of such person’s being or having been a director, officer or employee of the Company or such other enterprise, whether or not such person continues to be such at the time such liability or expense shall have been paid or incurred.

Section 2. *Certain Definitions*. As used in this Article V, the term “claim” shall mean any threatened or actual claim, action, suit or proceeding (whether brought by or in the right of the Company or such other enterprise or otherwise), whether civil, criminal, administrative or investigative; the term “expense” shall mean counsel fees and disbursements and all other expenses (except any liability) incurred in connection with any claim; and the term “liability” shall mean amounts of judgments, fines or penalties against, and amounts paid in settlement by, an eligible person with respect to any claim.

Section 3. *Expense Reimbursement to the Extent Successful*. Any eligible person who has been wholly successful, on the merits or otherwise, with respect to any claim shall be reimbursed by the Company for such person’s reasonable expense. Any eligible person who has been partially successful shall be proportionately reimbursed by the Company for such person’s reasonable expense.

Section 4. *Indemnification Where Not Wholly Successful*. Any eligible person who has been partially unsuccessful and any other eligible person not described in Section 3 of this Article V shall be reimbursed by the Company for such person’s reasonable expense and for any liability if a Referee shall deliver to the Company the written finding of such Referee that such person acted in good faith and in a manner such person reasonably believed to be in, or not opposed to, the best interests of the Company, and in addition with respect to any criminal action or proceeding, had no reasonable cause to believe the conduct of such person was unlawful.

Where such person is found by the Referee to have met the foregoing standards of conduct with respect to one or more but not all the claims made against such person, such person shall be entitled to indemnification for such expense and liability in such proportion as the Referee shall determine. The termination of any claim by judgment, order, settlement (whether with or without court approval), adverse decision, or conviction after trial or upon a plea of guilty or of nolo contendere or its equivalent, shall not of itself create a presumption that an eligible person did not meet the foregoing standards of conduct. The person claiming indemnification shall, at the request of the Referee, appear before the Referee and answer questions which the Referee deems relevant and shall be given ample opportunity to present to the Referee evidence upon which such person relies for indemnification; and the Company shall at the request of the Referee, make available to the Referee facts, opinions or other evidence in any way relevant for the Referee's finding which are within the possession or control of the Company. As used in this Article V, the term "Referee" shall mean independent legal counsel (who may be regular independent legal counsel of the Company), or other disinterested person or persons, selected to act as such hereunder by the board of directors of the Company, whether or not a disinterested quorum exists.

Section 5. *Advancement of Expenses*. Any expense incurred with respect to any claim may be advanced by the Company prior to the final disposition thereof upon receipt of an undertaking by or on behalf of the recipient to repay such amount if it is ultimately determined that such recipient is not to be indemnified under this Article V.

Section 6. *Article V Not Exclusive; Survival of Rights*. The rights of indemnification provided in this Article V shall be in addition to any rights to which any eligible person may otherwise be entitled by contract or as a matter of law; and in the event of such person's death, such rights shall extend to the heirs and legal representatives of such person.

ARTICLE VI - SHARE CERTIFICATES AND TRANSFERS

Section 1. *Share Certificates*. Share certificates shall be in such form as the board of directors may from time to time determine. Each certificate shall be signed by the chairman of the board, the president, the treasurer or the secretary of the Company, by manual or facsimile signature.

Section 2. *Transfer Agent and Registrar*. The board of directors may from time to time appoint one or more transfer agents and may appoint one or more registrars of transfer, each to act with respect to such preferred and common shares of the Company as the board of directors may designate. No share certificate of the Company shall be valid or binding unless countersigned, manually or by facsimile signature, by a transfer agent if one has been appointed to act with respect to the shares evidenced by such certificate, and registered before issue by a registrar if one has been appointed to act with respect to the shares evidenced by such certificate.

Section 3. *Signatures by Former Corporate Officers or Agents*. In case any officer of the Company, or any authorized signatory of any transfer agent or registrar, who has signed, or whose facsimile signature has been placed upon, any share certificate shall have ceased to be such officer or authorized signatory because of death, resignation or otherwise, before the certificate is issued, it may be issued with the same effect as if the officer or authorized signatory had not ceased to be such at the date of its issue.

ARTICLE VII - AMENDMENTS

These By-laws may be altered, amended, added to or repealed by the board of directors at any meeting of the board duly convened with or without notice of that purpose, subject to the power of the shareholders to change such action.

ARTICLE VIII - INDEMNIFICATION FOR DIRECTORS

Section 1. *Right to Indemnification*. Except as prohibited by law, every director of the Company shall be entitled as of right to be indemnified by the Company against expenses and any liability paid or incurred by such person in connection with any actual or threatened claim, action, suit or proceeding, civil, criminal, administrative, investigative or other, whether brought by or in the right of the Company or otherwise, in which he or she may be involved, as a party or otherwise, by reason of such person being or having been a director of the Company or by reason of the fact that such person is or was serving at the request of the Company as a director, officer, employee, fiduciary or other representative of another corporation, partnership, joint venture, trust, employee benefit plan or other entity (such claim, action, suit or proceeding hereinafter being referred to as a “claim”); provided, that no such right of indemnification shall exist with respect to a claim brought by a director against the Company except as provided in the last sentence of this Section 1. Indemnification hereunder shall include the right to have expenses incurred by such person in connection with a claim paid in advance by the Company prior to final disposition of such claim, subject to any obligation which may be imposed by law, By-law, agreement or otherwise to reimburse the Company in certain events. As used herein, “expenses” shall include fees and expenses of counsel selected by any such director and “liability” shall include amounts of judgments, excise taxes, fines, penalties and amounts paid in settlement. With respect to any claim brought by a director or other person against the Company, the director or other person shall be entitled to be indemnified for expenses incurred in connection with such claim pursuant to this Section 1 only (i) if the claim is a suit brought as a claim for indemnity under Section 2 of this Article VIII or otherwise, (ii) if the director or other person is successful in whole or in part in the claim for which expenses are claimed or (iii) if the indemnification for expenses is included in a settlement of the claim or is awarded by a court.

Section 2. *Right of Claimant to Bring Suit*. If a claim under Section 1 of this Article VIII is not paid in full by the Company within thirty (30) days after a written claim has been received by the Company, the claimant may at any time thereafter bring suit against the Company to recover the unpaid amount of the claim and, if successful in whole or in part, the claimant shall also be entitled to be paid the expense of prosecuting such claim. It shall be a defense to any such suit to recover indemnification that the claimant’s conduct was such that under Pennsylvania law the Company is prohibited from indemnifying the claimant for the amount claimed, but the burden of proving such defense shall be on the Company. Neither the failure of the Company (including its board of directors, legal counsel and its shareholders) to have made a determination prior to the commencement of such suit that indemnification of the claimant is proper in the circumstances, nor an actual determination by the Company (including its board of directors, legal counsel or its shareholders) that the claimant’s conduct was such that indemnification is prohibited by law, shall be a defense to the suit to recover indemnification or create a presumption that the claimant’s conduct was such that indemnification is prohibited by law. The only defense to any such suit to receive payment of expenses in advance shall be failure to make an undertaking to reimburse if such an undertaking is required by law, By-law, agreement or otherwise.

Section 3. *Insurance and Funding*. The Company may purchase and maintain insurance to protect itself and any person eligible to be indemnified hereunder against any liability or expense asserted or incurred by such person in connection with any claim, whether or not the Company would have the power to indemnify such person against such liability or expense by law or under the provisions of this Article. The Company may create a trust fund, grant a security interest, cause a letter of credit to be issued or use other means (whether or not similar to the foregoing) to ensure the payment of such sums as may become necessary to effect indemnification as provided herein.

Section 4. *Non-Exclusivity; Nature and Extent of Rights*. The right of indemnification provided for in this Article VIII (i) shall not be deemed exclusive of any other rights, whether now existing or hereafter created, to which those seeking indemnification hereunder may be entitled under any provision of the Articles or By-laws, or any agreement, vote of shareholders or directors or otherwise, (ii) shall be deemed to create contractual rights in favor of persons entitled to indemnification hereunder, (iii) shall continue as to persons who have ceased to have the status pursuant to which they were entitled or were denominated as entitled to indemnification hereunder and shall inure to the benefit of the heirs and legal representatives of persons entitled to indemnification hereunder and (iv) shall be applicable to claims commenced after the adoption hereof, whether arising from acts or omissions occurring before or after the adoption hereof. The right of indemnification provided for herein may not be amended or repealed so as to limit in any way the indemnification provided for herein with respect to any acts or omissions occurring prior to any such amendment or repeal.

(Amended February 23, 2017)

ARCONIC EMPLOYEES' EXCESS BENEFITS PLAN C
(as amended and restated August 1, 2016)

Alcoa Inc. has adopted the following Arconic Employees' Excess Benefits Plan C, as amended and restated effective August 1, 2016. This Excess Plan was formerly referred to as the Alcoa Inc. Employees' Excess Benefits Plan C. Effective August 1, 2016, in anticipation of its separation into two separate publicly-traded companies, Alcoa Inc. separated this Excess Plan into two separate plans: this Excess Plan and the Alcoa USA Corp. Nonqualified Supplemental Retirement Plan C. No person is entitled to a benefit under both plans.

This Excess Plan is for the exclusive benefit of selected management and highly compensated employees, whose pension benefits calculated under certain qualified and non-qualified plans does not take into account certain deferred compensation amounts.

ARTICLE I - DEFINITIONS

1.1 The following terms have the specified meanings:

"Additional Compensation" means any amount which the Participant has irrevocably elected to defer under one or more of the following: (1) the Incentive Compensation Plan of the Company, not including any gain or loss thereon, (2) the Arconic Deferred Compensation Plan, not including any gain or loss thereon, or (3) the Performance Pay Plan of the Company, not including any gain or loss thereon.

"Annual Compensation" means the total payments made by the Company and by any Subsidiaries during a calendar year for services rendered as an employee, except as otherwise provided by contractual agreement, other than living and similar allowances and premium pay and payments made for specific purposes as determined under supplemental rules adopted by the Company. Annual Compensation will include any amounts by which the Participant has elected to reduce his or her salary under the Arconic Retirement Savings Plan for Hourly Non-Bargaining Employees or under any cash or deferred arrangement established under Section 401(k) of the Code, and will include any Additional Compensation. "Special Payments" within the meaning of the Alcoa Deferred Compensation Plan are not treated as Annual Compensation.

"Average Final Compensation" means the average Annual Compensation as determined under the Rule of Plan I in which the Participant participates.

"Board of Directors" means the Board of Directors of the Company.

"Code" means the Internal Revenue Code of 1986, as amended.

"Committee" means the Benefits Management Committee of the Company, which has been delegated by the Board of Directors to have the discretionary authority to interpret and administer the Plan.

"Company" means Alcoa Inc. It is contemplated that Alcoa Inc. will formally change its corporate name to Arconic Inc. in the second half of 2016.

"Excess Plan" means the amended and restated Arconic Employees' Excess Benefits Plan C, adopted by the Company as described herein or as from time to time hereafter amended.

"Other Plans" means Plan I, any defined benefit retirement plan of any Subsidiary, Arconic Employees' Excess Benefits Plan A and Arconic Employees' Excess Benefits Plan B ("Excess B"), or such similar plan of any Subsidiary, as any presently exist or may exist in the future.

"Participant" means, on or after August 1, 2016, any employee of the Company or any Subsidiary who meets one or more of the following requirements:

(1) retires or dies while covered under Excess B, or

(2) has Additional Compensation and is a participant in Plan I, or

(3) on or after January 1, 1989, and before August 11, 2014, retired, died or terminated employment while covered under Plan I, and immediately prior to retirement, death or termination was in a job grade of 19 or above, or

(4) on or after August 11, 2014, retires, dies or terminates while covered under Plan I, and immediately prior to retirement, death or termination is in a job band of 35 or above, or an equivalent of such job bands as determined by the Company.

Effective January 1, 2008, any employee who as of December 31, 2007 was a participant in Rule IC of Plan I and was in a job grade of 27 or above (currently the equivalent of job band 70 or above), or an equivalent of such job grade as determined by the Company, was excluded from participation in this Excess Plan but became eligible under the Arconic Supplemental Pension Plan for Senior Executives (prior to August 1, 2016 named the Alcoa Supplemental Pension Plan for Senior Executives). Effective August 1, 2016, "Participant" shall not include any person who is a participant in the Alcoa USA Corp. Nonqualified Supplemental Retirement Plan C.

"Pension Service" means the service used to calculate the Participant's monthly retirement benefit under Plan I.

"Plan I" means Arconic Retirement Plan I (prior to August 1, 2016 named Alcoa Retirement Plan I).

"Reduced Average Final Compensation" means Average Final Compensation which is calculated by reducing each year's Annual Compensation used by one-half of the amount, if any, received by a Participant from the Incentive Compensation Plan and the Performance Pay Plan of the Company.

"Retirement" or "Retires" means the termination of employment after attainment of a specified age and specified service as determined under Normal or Early Retirement type under the Plan I Rules or Excess B. Notwithstanding the foregoing, "Retirement" also includes termination of active employment under a Disability Retirement under Plan I Rules, and such disability must also comply with Section 409A of the Code and the regulations promulgated thereunder for purposes of this Excess Plan. "Retirement" shall also mean any retirement as may be defined under any executive severance agreement entered into between the Company and a Participant to the extent it otherwise complies with termination of employment for purposes of Section 409(A) of the Code.

"Short Term Applicable Rate of Interest" shall mean the rate prescribed for January of the year of retirement under Section 1274(d) of the Code.

"Specified Employee" means an employee as defined under written guidelines adopted by the Company, which comply with Section 409A of the Code and any regulations promulgated thereunder.

"Subsidiary" means a corporation at least 50% of whose outstanding voting stock is owned or controlled by the Company and/or one or more other Subsidiaries, and any non-corporate business entity in which the Company and/or one or more other Subsidiaries have at least a 50% interest in capital or profits. Subsidiary shall not include Alcoa Corporation or Alcoa USA Corp.

"Surviving Spouse" means a deceased Participant's spouse who is entitled to receive surviving spouse benefits under Plan I or Excess B. For any Participant retiring with a benefit under this Excess Plan on or after January 1, 2012, the term Surviving Spouse in the Plan will include a Surviving Domestic Partner as defined in Plan I who is designated as a beneficiary under Plan I.

ARTICLE II - BENEFITS

2.1 Effective January 1, 2008, the benefit payable under this Excess Plan to a Participant who retires or terminates with a vested benefit on or after January 1, 2008 under Plan I - Rules IC, ID, IE, IF, IG, IH, IM, IN, IP or Excess B as it relates to the foregoing Rules, is equal to the portion of pension benefits in pay status that would have been payable had Plan I used Annual Compensation in determining the pension benefit, without regard to Section 401(a)(17) of the Code. The pension otherwise payable under this Excess Plan will be subject to offsets for payments made from Other Plans.

Effective at the close of business on December 31, 2011, Plan I, Rule IC was amended to stop future accruals of age and service for purposes of calculating the amount of a 70/80 Retirement or a Rule of 65 Retirement for any Participant in a job grade 19 (the equivalent of job band 35) or above on October 1, 2012. Effective January 1, 2012, this Excess Plan was amended to provide a 70/80 Retirement for age and service accrued on or after January 1, 2012, including any applicable Supplemental Pension (as such terms are described under Plan I, Rule IC), for any such impacted Participant who meets the age, service and other contingent eligibility requirements for such Retirement and Supplement on or after that date under this nonqualified Plan; subject to any offset for 70/80 Retirement made under Rule IC (including an offset for any 70/80 Retirement provided due to a Change in Control).

2.2 Notwithstanding the foregoing Section 2.1, the following formulas continued to apply through December 31, 2012, for anyone who is a Participant as of December 31, 2007. Effective December 31, 2012, the formulas were frozen as to any additional accruals. Anyone who became a Participant after December 31, 2007, will only receive accruals under Section 2.1, and is ineligible for the following formulas:

A. <u>FORMULA 1</u> -

(1) for participants who retire on or after January 1, 1989 and are eligible under Plan I - Rules IC, ID, IE, IF, IG, or IH, or Excess B as it relates to the foregoing Rules, the portion of pension benefits in pay status that would have been payable for that month to a Participant under Plan I at the time Pension Service terminates, had Plan I used Annual Compensation in determining the pension benefit; however, Annual Compensation is subject to the limits provided for in Section 401(a)(17) of the Code through 1993, and $250,000 thereafter, or

(2) for participants who retire under Plan I – Rules IM, IN, or IP, or Excess B as it relates to Rules IM, IN, or IP, the portion of pension benefits in pay status that would have been payable for that month to a Participant under Plan I at the time Pension Service terminates, had Plan I used Annual Compensation in determining the pension benefit, without regard to Section 401(a)(17) of the Code.

B. <u>FORMULA 2</u> - for participants who retire on or after January 1, 1989, and are eligible under Plan I, Rule IC, or Excess B as it relates to Rule IC, the amount of pension benefits which would have been payable to the Participant using the formula contained in Plan I, Rule IC, effective December 31, 1988, had Plan I, Rule IC used Annual Compensation in determining the pension benefit, or

C. <u>FORMULA 3</u> - for participants who retire on or after January 1, 1989 under Plan I, Rule IC, or Excess B as it relates to Rule IC, one-twelfth of the following:

(1) a. 1.7% of Reduced Average Final Compensation for each year of Pension Service up to 30 years, plus

b. 1.3% of Reduced Average Final Compensation for each year of Pension Service in excess of 30, less

c. the projected earnings Social Security offset as defined in Plan I, Rule IC as of December 31, 1988, less the amount determined in the following paragraph (2) a. and b, or (3) a. and b., as applicable.

(2) a. for Participants who retire prior to attaining age 62 on any type of pension provided under Plan I, Rule IC, or pension equivalent under Excess B as it relates to Rule IC (other than a 55/10 pension or deferred vested pension), a reduction which equals one percent (1%) for each year, and prorated monthly for a partial year, said retirement precedes age 62, times the amount calculated in the foregoing paragraph (1), plus

b. any and all applicable reductions and offsets in accordance with the provisions of Plan I, Rule IC, or of Excess B as it relates to Rule IC, (i.e., actuarial reductions and any other percentage reduction made in order to create a joint and survivor annuity).

(3) a. for Participants who retire prior to attaining age 62 on a 55/10 pension or deferred vested pension, the Plan I, Rule IC, actuarial reduction to provide for payment prior to age 62, times the amount calculated in the foregoing paragraph (1), plus

b. any and all applicable reductions and offsets in accordance with the provisions of Plan I, Rule IC, or Excess B as it relates to Rule IC (i.e., actuarial reductions and any other percentage reduction made in order to create a joint and survivor annuity).

D. The pension otherwise payable under Formulas 1, 2 or 3 will be subject to offsets for payments made from Other Plans.

2.3 A benefit payable under this Excess Plan to the Surviving Spouse:

A. of a deceased retiree, will be 50% of the pension payable to the retiree on the retiree's date of death, subject to offset for payments made from Other Plans.

B. of an employee who dies while accruing Pension Service, will be 50% of the pension calculated under paragraph 2.1, (or if applicable, the greater of: Formula 1, Formula 2 or Formula 3 (excluding paragraphs 2.2 C. (2), as applicable) on the employee's date of death, subject to the offset for payments made under Other Plans.

C. of an employee who terminates with only rights to a deferred vested pension, will be 50% of the pension calculated under paragraph 2.1, (or if applicable, the greater of Formula 1, Formula 2 or Formula 3, as applicable) on the date that the employee's Pension Service is terminated, subject to the offset of payments made under Other Plans.

2.4 Where the benefits under the Other Plans are not payable solely in the form of monthly pension benefits over the same time period, the Committee will, if necessary, adjust the benefits payable under this Excess Plan so that the Participant or Surviving Spouse is neither advantaged nor disadvantaged for pension purposes.

2.5 Benefits payable to a Participant who retires or to a Surviving Spouse under this Excess Plan in conjunction with benefits payable under any specific Other Plans will commence concurrently with benefits payable to said Participant or Surviving Spouse under such Other Plans. Upon the cessation of payment of benefits to a Participant or Surviving Spouse under any Other Plans, benefits payable under this Excess Plan in conjunction with benefits payable under said Other Plans will concurrently cease.

2.6 This Excess Plan will not be construed as conferring any rights upon any Participant for continuation of employment with the Company or any Subsidiary, nor will it interfere with the rights of the Company or Subsidiary to terminate the employment of any Participant and/or to take any personnel action affecting any Participant without regard to the effect which such action might have upon such Participant as a prospective recipient of benefits under this Excess Plan.

2.7 No benefit under this Excess Plan may be assigned, transferred, pledged or encumbered or be subject in any manner to alienation or anticipation, except that any exceptions to the non-alienation provisions in Plan I, will also apply to benefits hereunder.

2.8 Notwithstanding the foregoing provisions of this Article II, effective January 1, 2009, all Benefits not in pay status, will be payable in monthly installments as provided below:

a. Benefits will be payable commencing on the last day of the month of

i) a Participant's Retirement, or

ii) to the extent the Participant is not eligible for Retirement, but is otherwise vested in Plan I, the later of:

x) termination of vesting service as provided in Plan I, or

y) attainment of age 55, or

z) such other date as irrevocably elected in writing by the Participant prior to December 31, 2008.

b. Notwithstanding the foregoing, to the extent the Participant is a Specified Employee, such monthly installment will commence on the last day of the seventh month following the date determined in a. above, and will be paid retroactively to the date determined in a. above, and will include interest accrued on the missed payments. "Interest" means the interest calculated using the Short Term Applicable Rate of Interest in effect as of January of the year of retirement.

c. The determination of any Benefit payable with respect to Participant who Retires pursuant to the terms of an executive severance agreement, will include any service credit provided by such agreement for purposes of determining vesting and eligibility, but not benefit accrual.

d. i) The form of payment of Benefit paid to a Participant who has a Surviving Spouse as defined under Plan I, is a joint and survivor annuity, in which the Participant's Benefit paid during his or her lifetime is reduced, and an amount equal to 50% of the Benefit amount received by the Participant is paid to the Surviving Spouse. There are no optional forms of payment or Qualified Optional Survivor Annuities (as that term is described in Plan I) under this Excess Plan.

To the extent a Participant dies before his or her payments have begun, payments to the Surviving Spouse will be as follows:

1) If the Participant was a Participant in Rule IM of Plan I, and dies while accruing pension service, the survivor annuity under this Excess Plan will begin the later of: a) the month following the Participant's death or b) the month after the Participant would have turned age 55.

2) If the Participant was a Participant in Rule IC or Rule IN of Plan I, and dies while accruing pension service, the survivor annuity under this Excess Plan will begin the month following the Participant's death.

3) If the Participant dies after pension service has terminated, the survivor annuity under this Excess Plan will begin the later of: the month following the Participant's death or the month after the Participant would have turned age 55.

ii) The form of payment of Benefits paid to a Participant who has no Surviving Spouse on the date payment of Benefits commence is a single life annuity as described in Plan I.

e. If a Participant is receiving payments under this Excess Plan and is subsequently reemployed by the Company, payments under this Excess Plan shall continue regardless of the cessation of the Participant's monthly Pension payments due to such reemployment under Plan I.

2.9 Notwithstanding any provision to the contrary in this Excess Plan, if at any time the present value of a Participant's nonqualified benefits under all nonqualified defined benefit plans of the Company, not otherwise payable under the provisions of the Plan, shall be equal to or less than the Code Section 402(g) limit in effect at the time of any payment event (for 2016, $18,000 or less and as adjusted from time to time by the Internal Revenue Service), the Company may, in the sole and absolute discretion of the Company, elect to distribute the entire benefit to the Participant in the form of a lump sum payment, in lieu of any other benefit payable under the Plan. The present value shall be determined by the Company, in the Company's sole and absolute discretion, using reasonable actuarial assumptions. The distribution of the lump sum shall be made as soon as reasonably practicable, but no later than ninety (90) days after a payment event or two and one-half (2 ½) months after the year of the payment event, whichever is later. This payment shall extinguish any and all liability under this Excess Plan and any and all the plans from which the lump sum is provided.

ARTICLE III - CONTRIBUTIONS

3.1 Benefits payable hereunder will be payable out of general assets of the Company or a participating Subsidiary, and no segregation of assets for such benefits will be made. The right of a Participant or a Surviving Spouse to receive benefits under this Excess Plan will be an unsecured claim against said assets.

ARTICLE IV - ADMINISTRATION OF EXCESS PLAN

4.1 The general administration of this Excess Plan will be by the Committee. The Committee's discretion with respect to this Excess Plan includes the authority to determine eligibility under all provisions, correct all defects, supply all omissions, reconcile all inconsistencies in plan, ensure all benefits are paid in accordance to this Excess Plan, interpret plan provisions for all Participants or Surviving Spouses, and decide all issues of credibility necessary to carry out and operate this Excess Plan. Benefits under this Excess Plan will be paid only if the Committee in its sole and absolute discretion decides that the applicant is entitled to them. All actions, decisions, or interpretations of the Committee are conclusive, final, and binding.

ARTICLE V - AMENDMENT AND TERMINATION

5.1 This Excess Plan may be amended, suspended or terminated at any time by the Board of Directors or any other entity approved by the Board of Directors, including the Committee, provided, however, that no amendment, suspension or termination will reduce or in any manner adversely affect any Participant's rights with respect to benefits that are payable or may become payable under Article II hereof based upon said Participant's Additional Compensation as of the date of such amendment, suspension termination.

ARTICLE VI - CONSTRUCTION

6.1 This Excess Plan will be construed, regulated and administered under the laws of the Commonwealth of Pennsylvania except as modified by any applicable law.

ARTICLE VII- CHANGE IN CONTROL

7.1 Provisions Upon Change in Control. Notwithstanding any other provision of the Plan, in the event of a Change in Control, as that term is defined in Plan I, neither the Company, the Board of Directors, the Committee, or other designee of the Board of Directors, may, during the three-year period commencing on the date that the Change in Control occurs:

a. Amend, modify, or terminate this Excess Plan, except to the extent as may be legally required by any law or regulations prescribed thereunder, or any provision of the Code or any regulation prescribed thereunder; or

b. Reduce future Excess Plan benefits of any Participant.

ARTICLE VIII - CLAIMS AND APPEALS

8.1 If a claim by a Participant or Surviving Spouse is denied in whole or in part, the Participant or Surviving Spouse, or their representative will receive written notice from the plan administrator. This notice will include the reasons for denial, the specific Plan provision involved, an explanation of how claims are reviewed, the procedure for requesting a review of the denied claim, and a description of the information that must be submitted with the appeal. The Participant or Surviving Spouse, or their representative, may file a written appeal for review of a denied claim to the Committee or its delegate. The process and the time frames for the determination claims and appeals are as follows:

a. The plan administrator reviews initial claim and makes determination within 90 days of the date the claim is received.

b. The plan administrator may extend the above 90-day period an additional 90 days if required due to special circumstances beyond control of plan administrator.

c. The Participant or Surviving Spouse, or their representative, may submit an appeal of a denied claim within 60 days of receipt of the denial.

d. The plan administrator reviews and makes a determination on the appeal within 60 days of the date the appeal was received.

e. The plan administrator may extend the above 60-day period an additional 60 days if required by special circumstances beyond the control of the plan administrator.

8.2 In the case where the plan administrator requires an extension of the period to provide a determination on an initial claim or an appeal, the plan will notify the Participant or Surviving Spouse, or their representative, prior to the expiration of the initial determination period. The notification will describe the circumstances requiring the extension and the date a determination is expected to be made. If additional information is required from the Participant or Surviving Spouse, the determination period will be suspended until the earlier of i) the date the information is received by the plan administrator or ii) 45 days from the date the information was requested.

8.3 Participants or Surviving Spouses, or their representative, who having received an adverse appeal determination and thereby exhausted the remedies provided under the Excess Plan, proceed to file suit in state or federal court, must file such suit within 180 days from the date of the adverse appeal determination notice or any right to file such suit will be permanently foreclosed.

ARCONIC DEFERRED COMPENSATION PLAN
(as amended and restated August 1, 2016)

The Arconic Deferred Compensation Plan (the “Plan”) has been adopted for the exclusive benefit of select management and highly compensated employees (1) who are actively at work for the Company or a subsidiary on or after June 1, 1990, (2) who meet the requirements for participation hereunder, and (3) who are not in a collective bargaining unit. This Plan was formerly referred to as the Alcoa Deferred Compensation Plan. Effective August 1, 2016, in anticipation of its separation into two separate publicly-traded companies, Alcoa Inc. separated this Plan into two separate plans: this Plan and the Alcoa USA Corp. Deferred Compensation Plan. No person is entitled to a benefit under both plans.

The purposes of this Plan are to promote the growth and profitability of the Company, to attract and retain employees and to provide eligible employees with certain benefits under the terms and conditions as set forth herein. In order to enhance the benefits provided under this Plan it was amended and restated effective October 30, 1992. All Credits in Participants’ accounts as of December 31, 2004, including any Earnings Credits thereon after December 31, 2004, shall continue to be subject to all Plan provisions in effect as of that date.

Effective January 1, 2009, the AFL Deferred Compensation and Excess Plan, (which was created by the merger of the Alcoa Fujikura Ltd. Telecommunications Division Deferred Compensation Plan and Alcoa Fujikura Ltd. Deferred Compensation Plan effective January 1, 1993) (“AFL Plan”) was merged into this Plan and this Plan was the surviving plan. All Pre-2005 Credits from the AFL Plan and earnings thereon continued to be treated as Pre-2005 Credits under this Plan. All Post-2004 Credits from the AFL Plan and earnings thereon, including all account balances of any Participant with less than three (3) years of Continuous Service as of January 1, 2005, are treated as Post-2004 Credits under this Plan.

This Plan was amended and restated effective August 1, 2016 to incorporate all amendments to the Plan to date and to reflect the separation of the Plan into this Plan and the Alcoa USA Corp. Deferred Compensation Plan.

ARTICLE I - DEFINITIONS

1.1 The following terms have the specified meanings.

“Additional Salary Reduction Credits” means any amounts deemed to be credited to a Participant’s account equivalent to the dollar amount by which a Participant elected to reduce his or her salary up to a whole percentage of not more than 14%. Effective June 1, 1995, a Participant who is authorized by the Committee may elect to reduce his or her salary up to a whole percentage of not more than 20%. Effective January 1, 2011, a Participant who is authorized by the Committee may elect to reduce his or her salary up to a whole percentage of not more than 25%; provided however that a Participant who has elected and is contributing a portion of his or her Salary under the Savings Plan, may not elect to defer any percentage of said Salary as an Additional Salary Reduction Credit under this Plan, except as otherwise provided in Section 3.2 but only up to the foregoing limitation. In no circumstance shall any portion of an Employee’s sales incentive payments be included for the preceding purposes.

“Affiliate” means any corporate or non-corporate business entity which the Company and/or one or more Subsidiaries control in fact. Affiliate excludes all subsidiaries of Alcoa Upstream Corporation.

“Award Year” means the calendar year for which awards are made under the provisions of the Incentive Compensation Plan.

“Award Date” means February of the calendar year following the Award Year except as may be otherwise designated in accordance with the provisions of the Incentive Compensation Plan.

"Beneficiary" means the person or persons designated in writing by a Participant, in accordance with Article VIII of this Plan, to receive benefits in the event of the Participant's death. Beneficiary also includes any person or persons designated in writing by a Participant's Beneficiary, to receive benefits in the event of the Participant's Beneficiary's death.

"Board" means the Board of Directors of the Company or any duly authorized committee thereof.

"Code" means the Internal Revenue Code of 1986, as amended and the regulations promulgated thereunder.

"Committee" means the Benefits Management Committee of the Company, administrative committee that has complete authority to control and manage the operation and administration of this Plan.

"Company" means Alcoa Inc. It is contemplated that Alcoa Inc. will formally change its corporate name to Arconic Inc. in the second half of 2016.

"Company Stock" means Company Stock as defined in the Savings Plan.

"Continuous Service" means, except as modified by the balance of this definition, the period of continuous employment with the Company, Subsidiary or Affiliate, either as a salaried employee or as an hourly-rated employee, subject to such rules as may be adopted from time to time by the Committee. Continuous Service shall terminate upon any quit, dismissal, discharge or any other termination of employment with the Company, Subsidiary or Affiliate; any determination by the Committee that employment with these entities has terminated shall be conclusive. Continuous Service upon reemployment does not include any Continuous Service accrued prior to a termination of Continuous Service, except that if a Participant's Continuous Service is terminated by reason of Retirement, Continuous Service at the time of such termination shall be reinstated upon the date of his or her reemployment with the Company, a Subsidiary or Affiliate. Effective January 1, 2009, absences from such employment due to inactive status, sick leave, leave of absence or layoff shall constitute a termination of Continuous Service after such status has continued for 6 months, except to the extent the Participant has the legal right to be reemployed either through contract or statute. Effective as of July 1, 1998 all years of service accrued with Alumax, Inc. or any of its subsidiaries ("Alumax") on and after June 16, 1998, by any Participant who was actively employed with Alumax on June 16, 1998, will be taken into account to determine Continuous Service.

"Credits" means the Salary Reduction Credits, Additional Salary Reduction Credits, Incentive Compensation Deferral Credits, Employer Contribution Credits, Excess D Deferral Credits and Matching Company Credits credited to a Participant's account with a deemed value equivalent to the unit value of the Investment Option in which each Credit is deemed to be invested. In no circumstance shall any portion of an Employee's sales incentive payments be included for the preceding purposes.

"Earnings Credits" mean:

(a) the interest deemed to be credited to the accounts of Participants in the Equivalent Fixed Income Investment Fund,

(b) the amount of the increase or decrease in the deemed value of Participant's investments in the Equivalent Equity Investment Fund, and

(c) the deemed amount of dividends received, and gain or loss realized on, Equivalent Company Stock.

"Eligible Employee" means any employee who is a member of the group of select management and highly compensated employees, who on or after June 1, 1990 is actively at work for the Company, a Subsidiary or Affiliate, has a job grade of 19 or higher, as determined by the Company, is not in a collective bargaining unit, and (a) who is eligible for participation in the Savings Plan, or (b) who on or after January 1, 1999 is eligible to participate in the Alumax Inc. Thrift Plan for Salaried Employees and is named as an Eligible Employee by the Executive Vice President - Human Resources, as previously identified, or (c) who on or after May 3, 2000 is a Reynolds Metals Company employee and is eligible for Incentive Compensation. Such Alumax eligible employees will be eligible to make Salary Reduction Credits and/or Incentive Compensation Deferral Credits, in accordance with this plan, as previously identified, or (d) who is a participant in the Howmet Deferred Compensation Plan, and has elected to transfer their account balance in that plan to this Plan prior to December 1, 2007. Effective January 1, 2013, only employees~~,~~ who are in a job grade 21 or higher or effective August 11, 2014, employees who are in a job band of 40 or higher (or under a comparable level of compensation band), as determined by the Company, are eligible to participate in the Plan. All Credits, including Earnings Credits in the accounts of former Eligible Employees who are not in a job grade of 21 or higher or effective August 11, 2014, a job band of 40 or higher (or under a comparable level of compensation band) will continue to be maintained under all Plan provisions.

“Employer Contribution Credits” means an amount deemed to be equivalent to the dollar amount that otherwise would have been contributed by the Company to the Participant’s account under the Savings Plan as either a Discretionary Contribution, Restricted Discretionary Contribution or an Employer Retirement Income Contribution, had the contribution under the Savings Plan not been limited by the Code’s limits on contributions to the Savings Plan. In no circumstance shall any portion of an Employee’s sales incentive payments be included for the preceding purposes.

“Equivalent Company Stock” means the number of shares of Company Stock deemed to be credited to a Participant’s account.

“Equivalent Equity Investment Fund” means the phantom investment vehicle which is deemed to be equivalent in all respects, including value, to the Equity Investment Fund established under the Savings Plan.

“Equivalent Fixed Income Fund” means the phantom investment vehicle which is deemed to be equivalent in all respects, including value, to the Fixed Income Fund established under the Savings Plan.

“Excess D Deferral Credits” means any amounts on and after January 1, 1993 deemed to be credited to a Participant’s account equivalent to the dollar amount which the Participant will have automatically credited to the Plan in accordance with the Company’s Employees’ Excess Benefits Plan D.

“Incentive Compensation Plan” means the Incentive Compensation Plan of the Company, and effective January 1, 1997 the Management Incentive Program of Alcoa Building Products for employees in Job Grades 19 and above.

“Incentive Compensation Deferral Credits” means any amounts deemed to be credited to a Participant’s account on the applicable Award Date equivalent to the percentage that the Participant has elected to defer from an award which he or she is eligible to receive under the Company’s Incentive Compensation Plan for the 1991 Award Year or any later Award Year. Any such deferrals must be in an amount equal to 25%, 50%, 75%, or 100% of such award.

“Investment Options” means the phantom investment vehicles established hereunder for either Salary Reduction Credits, Additional Salary Reduction Credits, Matching Company Credits, Incentive Compensation Deferral Credits, Employer Contribution Credits, and/or Excess D Deferral Credits with reference to the equivalent investment options under the Savings Plan, or any other such equivalent investment option added to the Savings Plan after January 1, 1993 unless otherwise determined by the Committee.

“Matching Company Credits” means an amount deemed to be equivalent to the dollar amount that otherwise would have been contributed by the Company to the Participant’s account under the Savings Plan, had the Participant elected to contribute to the Savings Plan an amount equivalent to the Participant’s elected Salary Reduction Credits under this Plan and the Participant’s contribution under the Savings Plan had not been limited by the Code’s limits on contributions to the Savings Plan. In no circumstance shall any portion of an Employee’s sales incentive payments be included for the preceding purposes.

“Other Plan” means any cash or deferred arrangements established under Section 401(k) of the Code, other than the Savings Plan, under which a Participant may elect to have a portion of his or her Salary reduced.

“Participant” means any Eligible Employee who commences participation in this Plan as provided in Article II. Effective August 1, 2016, “Participant” shall not include any person who is a participant in the Alcoa USA Corp. Deferred Compensation Plan or who is employed by any subsidiary of Alcoa Upstream Corporation (including but not limited to Alcoa USA Corp. and Reynolds Metals Company LLC).

“Plan” means the Arconic Deferred Compensation Plan, adopted by the Company as described herein or as from time to time hereafter amended.

“Post-2004 Credits” means Salary Reduction Credits, Additional Salary Reduction Credits, Incentive Compensation Deferral Credits, and Matching Company Credits credited to a Participant’s account on and after January 1, 2005, including any Earnings Credits on such amounts. Notwithstanding anything herein to the contrary, Post-2004 Credits also include all Credits of any Participant with less than three (3) years of Continuous Service as of January 1, 2005. In no circumstance shall any portion of an Employee’s sales incentive payments be included for the preceding purposes.

“Retirement” means termination of employment after either:

(a) becoming eligible for a normal or early Retirement type under a qualified pension plan of the Company, a Subsidiary or Affiliate; or

(b) if not eligible to participate in a qualified pension plan pursuant to the above subsection (a) , attaining either:

(i) age 55 and completing 10 or more years of Continuous Service; or

(ii) age 65 and completing three or more years of Continuous Service.

“Salary” means “Eligible Compensation” as defined in the Savings Plan or “Compensation” as defined in the Alumax Inc. Thrift Plan for Salaried Employees, as applicable, without regard to the limitations imposed by Section 401(a)(17) of the Code. In no circumstance shall any portion of an Employee’s sales incentive payments be included for the preceding purposes.

“Salary Reduction Credits” means any amounts deemed to be credited to a Participant’s account equivalent to the dollar amount by which a Participant elected to reduce his or her Salary by a whole percentage of not more than 6%; provided, however, a Participant who has elected and is contributing a portion of his or her Salary under the Savings Plan, may not elect to defer any percentage of said Salary as a Salary Reduction Credit under this Plan except as otherwise provided in Section 3.2 but only up to the foregoing limitation. In no circumstance shall any portion of an Employee’s sales incentive payments be included for the preceding purposes.

“Savings Plan” means the Arconic Salaried Retirement Savings Plan, the Arconic Hourly Non-Bargaining Retirement Savings Plan, and/or the Arconic Fastener Systems and Rings Retirement Savings Plan, as they are now in existence or as hereafter amended.

“Specified Employee” means a “specified employee” as defined under written guidelines adopted by the Company, which comply with Section 409A of the Code and any regulations promulgated thereunder.

“Subsidiary” means a corporation at least 50% of whose outstanding voting stock is owned or controlled by the Company and/or one or more other Subsidiaries, and any non-corporate business entity in which the Company and/or one or more other Subsidiaries have at least a 50% interest in capital or profits. Subsidiary excludes all subsidiaries of Alcoa Upstream Corporation.

“Year of Plan Participation” means any 12-month period extending from the first day of the month a Participant begins participation in the Savings Plan and/or this Plan if the Participant has maintained an account in the Savings Plan and/or this Plan for such 12-month period.

ARTICLE II - PARTICIPATION

2.1 An Eligible Employee shall commence participation in this Plan upon the first day of his or her first full payroll period following the receipt of his or her application or request for participation by the Company or its designee. Such Eligible Employee may only become a Participant after executing the appropriate form for authorizing payroll deductions from his or her Salary and for selecting investment options. An Eligible Employee shall also commence participation on the Award Date applicable to the portion of any award which he or she is eligible to receive under the provisions of the Incentive Compensation Plan and has deferred for the 1991 Award Year or any later Award Year, or on such date that his or her account would have been credited with Excess D Deferral Credits. If a Participant ceases to participate in this Plan as a result of the transfer of such Participant’s employment to a company whose employees participate in the Alcoa USA Deferred Compensation Plan (“Alcoa USA Plan”) after August 1, 2016, but before the date of the legal separation of Alcoa Inc. into two separate publicly traded companies (Arconic Inc. and Alcoa Corporation) (the “Separation Date”), the account balance of such Participant shall automatically be transferred from this Plan to the Alcoa USA Plan and such person shall cease to be a Participant. If a participant in the Alcoa USA Plan transfers employment to the Company (or an Affiliate or Subsidiary) after August 1, 2016, but before the Separation Date, the Alcoa USA Plan account balance of such Participant shall be accepted by this Plan.

ARTICLE III - PARTICIPANT DEFERRALS

3.1 Commencing January 1, 1993 a Participant may by proper election reduce his or her Salary each month in an amount up to, but not more than 6% of his or her Salary, which shall be deemed to be credited to his or her account as Salary Reduction Credits. Whether or not the Participant elects any Salary Reduction Credits, Participant may by proper election reduce his or her Salary each month in an amount up to, but not more than 14% of said Salary, which shall be credited to his or her account as Additional Salary Reduction Credits. Effective June 1, 1995, the figure 14% in the foregoing sentence is revised to read 20% for Participants whose Additional Salary Reduction Credit limitation has been increased to 20% by the Committee.

A Participant may change a previously elected percentage of Salary reduction or terminate further deferrals in this Plan effective for the first full payroll period following the date the Company or its designee is advised of such request either orally or in writing in accordance with uniform rules established by the Committee. Effective January 1, 2005, elections for salary reductions must be received by the Plan in the year before such salary is earned, and such election is irrevocable. Effective January 1, 2011, the figure 20% in the foregoing sentence is revised to read 25% for Participants whose Additional Salary Reduction Credit limitation has been increased to 25% by the Committee.

3.2 In accordance with uniform rules established by the Committee, Salary Reduction Credits and Additional Salary Reduction Credits shall be deemed to be credited to the Participant’s account equivalent to the amount by which the Participant’s Salary is reduced in each category.

Effective January 1, 2013, only Eligible Employees, including any promotions, new hires or rehires on or after that date, who are in a job band of 60 or above (or under a comparable level of compensation band and formerly job grade 25) at the time of election may elect or remove a “spill over” election. From that date forward, an Eligible Employee who is in a job band 60 or above (or under a comparable level of compensation band and formerly job grade 25), who has elected and is contributing a portion of his or her Salary under the Savings Plan, but has been limited by Code limits on their contributions to the Savings Plan, and who has elected to make a “spill-over” election to this Plan will be credited with Salary Reduction Credits or Additional Salary Reduction Credits, as applicable, up to the amount that their election to the Savings Plan was limited. An Eligible Employee, who is in a job band 50 (or under a comparable level of compensation band and formerly job grade 24) on or after January 1, 2013 will not be eligible to elect a “spill-over” election. Notwithstanding the forgoing, any Participant who was in a job band 50 (formerly job grade 24), and who was eligible to make a “spill-over” election to this Plan, on December 31, 2012, will remain eligible to do so in the future as long as they have not incurred a severance from service.

3.3 Commencing for the 1991 Award Year and later Award Years a Participant who by proper election has deferred under the Incentive Compensation Plan all or a portion of an award which he or she is eligible to receive under said Plan, shall have his or her account deemed to be credited with Incentive Compensation Deferred Credits in an amount equal to the amount of such deferral. Effective January 1, 2005, such Incentive Compensation Deferral Credit elections must be received by the Plan at least 6 months before the end of the year in which they are earned, and such election is irrevocable.

3.4 Excess D Deferral Credits shall be credited to Participants' accounts as applicable.

3.5 A Participant who is authorized by the Committee and who by proper election has deferred the receipt of any "special payments" (as determined by the Company), shall have his or her account credited in an amount equal to the amount of such deferral. Such special payment credits shall be treated as Incentive Compensation Deferral Credits. Participant elections related to the deferrals of "special payments," which were elected prior to the Participant's termination of Continuous Service, will be credited to the Participant's Plan account at the time payment would otherwise have been made. Payments in 2001 under the Performance Enhancement Reward Program will be treated as "special payments" under this plan.

3.6 Effective as of May 1, 2008, to the extent the Company agrees to contribute an amount(s) to a Participant's account pursuant to an employment agreement approved by the Compensation Committee of the Board, the Participant shall have his or her account credited with such amount(s). Any vesting contingencies related to such amount(s) that are provided for in such employment agreement will continue to apply to any such amount(s) pursuant to the terms of such employment agreement. Except for the vesting contingencies, which will continue to apply, any such contributed amount(s) will be treated the same as an Employer Contribution Credit.

ARTICLE IV - MATCHING COMPANY CREDIT

4.1 A Participant who has elected to reduce his or her Salary under this Plan shall have his or her account deemed to be credited with Matching Company Credits for which he or she is eligible.

Effective April 1, 2009, no Matching Company Credits will be deemed to be credited to any Participant account under this Plan. Effective February 1, 2010, Matching Company Credits equivalent to the dollar amount that otherwise would have been contributed by the Company to the Participant's account under the Savings Plan on or after February 1, 2010 will again be deemed to be credited to Participant accounts under this Plan.

ARTICLE V – INVESTMENTS

5.1 (a) Employer Contribution Credits, Salary Reduction Credits, Additional Salary Reduction Credits, Excess D Deferral Credits and Incentive Compensation Deferral Credits shall be deemed to be invested in 1% increments, at the election of the Participant, in one or more of the Investment Options. A Participant may change his or her investment election, effective for the first full payroll period following the date the appropriate direction has been properly received by the Company or its designee, in accordance with uniform rules established by the Committee.

(b) Matching Company Credits shall be deemed to be invested in the phantom investment vehicle which is equivalent to the investment vehicle under the Savings Plan in which the Company's matching contributions to Participants' accounts are invested.

ARTICLE VI - CREDIT CONVERSION

All Credits and Earnings Credits in a Participant's account on October 30, 1992 shall be converted to the applicable Investment Option in accordance with the conversion of investments in the Savings Plan as in effect on October 30, 1992, and shall thereafter be contingently credited by reference to the unit value of the Investment Options.

ARTICLE VII - TRANSFER OF CREDITS

7.1 (a) A Participant may, by appropriate direction which is properly received by the Company or its designee, in accordance with uniform rules established by the Company, elect to transfer in increments of 1% or $1.00 all or part of the deemed value of his or her Salary Reduction Credits, Additional Salary Reduction Credits, Incentive Compensation Deferral Credits, Matching Company Credits, Excess D Deferral Credits, except as may be limited by the Committee, from any one or more investment Options to any one or more other such Investment Options. Such a transfer may be made daily.

(b) Effective Date of Transfer. The effective date of any transfer under paragraph (a) above shall be the date for which the Appropriate Direction to the Company or its designee has been properly received in accordance with uniform rules established by the Company.

(c) Notwithstanding the foregoing, upon a Participant's termination of employment, for any reason other than Retirement, he or she may not elect to transfer any part of his or her Salary Reduction Credits, Additional Salary Reduction Credits, Matching Company Credits, Incentive Compensation Deferral Credits, Excess D Deferral Credits and Earnings Credits from the investment vehicle in which such Credits were deemed to be invested on the date employment was terminated, to any other investment vehicle.

(d) The Company reserves the right to refuse to honor any Participant direction related to investments or withdrawals, including transfers among investment options, where necessary or desirable to assure compliance with applicable law including U.S. and other Securities laws. However, the Company does not assume any responsibility for compliance by officers or others with any such laws, and any failure by the Company to delay or dishonor any such direction shall not be deemed to increase the Company's legal exposure to the Participant or third parties.

ARTICLE VIII - DISTRIBUTIONS

8.1 Except as otherwise specified in this Article VIII, the amount of Credits in a Participant's account shall be distributed to the Participant upon his or her termination of Continuous Service, unless the Participant has the legal right to be reemployed either through contract or statute.

Effective September 1, 2000, any transfer of employment to a subsidiary or affiliate in which the Company and/or any one or more Subsidiaries have at least a 20% ownership interest will not be considered a termination in Continuous Service for purposes of this Article VIII - Distributions.

Effective June 1, 2007, Participants, whose employment is with such a subsidiary or affiliate of the Company in which the Company and/or any one or more Subsidiaries have at least a 20% ownership interest but less than a majority ownership interest, must notify the Company upon his or her termination of Continuous Service with such subsidiary or affiliate. Notwithstanding the foregoing, any contributions made pursuant to Section 3.6 will be subject to the vesting contingencies related thereto.

8.2 All distributions made pursuant to the termination of the Participant's Continuous Service by reason other than death or Retirement shall be paid to the Participant as soon as administratively practical in a lump sum. All distributions of Post-2004 Credits made pursuant to the termination of the Participant's Continuous Service by reason other than Retirement, or to the extent such Post-2004 Credits are valued equal or less than $50,000, shall be paid to the Participant as soon as administratively practical in a lump sum. The term "as soon as administratively practical" for purposes of this paragraph means within the later of: (a) 90 days of Retirement or termination or (b) 2 ½ months after the year of Retirement or termination.

8.3 For Pre-2005 Credits, prior to his or her Retirement date, a Participant may elect that the value of his or her account be distributed either in a lump sum at Retirement or in annual installments of any number designated by the Participant up to, but not more than ten (10) following his or her Retirement, commencing the January 31 of the first calendar year following such Retirement and each January 31 thereafter until he or she has received all installments. A Participant's election to receive installments must be made at least 6 months prior to his or her Retirement date. The Participant's election to receive either a lump sum or annual installments shall become irrevocable 6 months prior to the Participant's Retirement date, or at such other time as may be approved by the Committee. In the event the Participant fails to make such an election, all amounts in his or her account shall be distributed as a lump sum distribution as soon as administratively practical after his or her Retirement. All distributions of Post-2004 Credits made pursuant to the termination of the Participant's Continuous Service by reason of Retirement and to the extent such Post-2004 Credits are valued more than $50,000, shall be paid to the Participant in ten (10) annual installments, unless the Participant made an irrevocable election for a different distribution option as of the later of: i. June 30, 2005 or ii. within 30 days after becoming a Eligible Participant. The term "as soon as administratively practical" for purposes of this paragraph means within the later of: (a) 90 days of Retirement or (b) 2 ½ months after the year of Retirement.

If a Participant has irrevocably elected to receive annual installments following Retirement or is receiving annual installments, for either Pre-2005 or Post-2004 Credits, and is subsequently reemployed by the Company on or after January 1, 2009, such annual installments shall continue regardless of reemployment or reinstatement of Continuous Service. Credits and Earnings Credits thereon accrued during the term of reemployment will be distributed separately upon subsequent termination.

8.4 The Beneficiary under this Plan shall be the Participant's spouse unless otherwise designated in writing by the Participant and such other designated Beneficiary has been agreed to in writing by the Participant's spouse on a form approved by the Committee.

Distributions from this Plan to a Beneficiary shall be in a lump sum or in annual installments of any number designated by the Participant up to, but not more than ten (10) following his or her death commencing the first January 31 after the Participant's death and each January 31 thereafter until all installments have been distributed.

In the event a Beneficiary dies prior to receiving all the annual installments which he or she is entitled to receive from this Plan, any remaining installments will be distributed as soon as administratively practical in a lump sum to the Beneficiary's designated Beneficiary, or if there is no designated Beneficiary, then to the Beneficiary's estate, The term "as soon as administratively practical" for purposes of this paragraph means within the later of: (a) 90 days of death or (b) 2 ½ months after the year of death.

8.5 This Plan shall not be construed as conferring any rights upon any Participant for continuation of employment with the Company, Subsidiary or Affiliate, nor shall it interfere with the rights of the Company, Subsidiary or Affiliate to terminate the employment of any Participant and/or to take any personnel action affecting any Participant without regard to the effect which such action may have upon such Participant as to recipient of benefits under this Plan.

8.6 No benefit under this Plan may be assigned, transferred, pledged or encumbered or be subject in any manner to alienation or anticipation except as provided in a qualified domestic relations order.

8.7 (a) Benefits payable hereunder shall be payable out of the general assets of the Company or a participating Subsidiary, and no segregation of assets for such benefits shall be made. The right of a Participant or any Beneficiary to receive benefits under this Plan shall be an unsecured claim against said assets and shall be no greater than the rights of an unsecured general creditor to the Company. Notwithstanding the foregoing, in the event the Company establishes a trust, to which it may, but shall not be required to contribute money or other property of the Company in contemplation of paying benefits under this Plan, such money or other property shall remain subject to the claims of creditors of the Company.

(b) Notwithstanding any other provisions of this Plan, if any amounts held in a trust of the above described nature are found, due to the creation or operation of said trust, in a final decision by a court of competent jurisdiction, or under a "determination" by the Internal Revenue Service in a closing agreement in audit or a final refund disposition (within the meaning of Section 1313(a) of the Code), to have been includable in the gross income of a Participant or Beneficiary prior to payment of such amounts from said trust, the trustee for the trust shall, as soon as administratively practicable, pay to such Participant or Beneficiary an amount equal to the amount determined to have been includable in gross income in such determination, and shall accordingly reduce the Participant's or Beneficiary's future benefits payable under this Plan. The trustee shall not make any distribution to a Participant or Beneficiary pursuant to this paragraph 8.7(b) unless it has received a copy of the written determination described above together with any legal opinion which it may request as to the applicability thereof. The term "as soon as administratively practical" in this Section means within the later of: (a) 90 days of the trustee's determination or (b) 2 ½ months after the year of the trustee's determination.

8.8 To the extent a Participant is a Specified Employee, any distribution to the Participant, will be delayed until the first day of the seventh month following the date that the distribution would otherwise have begun. Other than Earnings Credits, no other Credits will be applied to the Participant's account during that time.

ARTICLE IX - ADMINISTRATION AND EXPENSES OF THE PLAN

9.1 The general administration of this Plan shall be by the Committee. The Committee's discretion with respect to this Plan includes the authority to determine eligibility under all provisions, correct all defects, supply all omissions, reconcile all inconsistencies in the Plan, ensure all benefits are paid in accordance to the Plan, interpret Plan provisions for all Participants or Beneficiaries, and decide all issues of credibility necessary to carry out and operate the Plan. Benefits under this Plan will be paid only if the Committee in its sole and absolute discretion decides that the applicant is entitled to them. All actions, decisions, or interpretations of the Committee are conclusive, final, and binding.

All costs and expenses incurred in administering the Plan, including the expenses of the Committee, the fees and expenses of the Trustee, the fees and charges payable under the investment arrangements, and other legal and administrative expenses, shall be paid by the Plan. Notwithstanding, for any Affiliate of which the Company owns less than an 80% interest as defined under Code Section 1504, the obligation of and liability for the deferred compensation benefits accrued under this Plan for Participants employed by such an Affiliate, shall remain the sole obligation and liability of the Affiliate by express resolution of its board or other governing body.

ARTICLE X - AMENDMENT AND TERMINATION

10.1 This Plan may be amended, suspended or terminated at any time by the Board or any other entity approved by the Board, including the Committee, provided that no such amendment, suspension or termination shall reduce or in any manner adversely affect any Participant's or Board's rights with respect to benefits that are payable or may become payable under this Plan based upon said Participant's Credits as of the date of such amendment, suspension or termination.

ARTICLE XI - CONSTRUCTION

11.1 This Plan shall be construed, regulated and administered under the laws of the Commonwealth of Pennsylvania, including its choice of law provisions and applicable statute of limitations.

ARTICLE XII - CLAIMS AND APPEALS

12.1 If a claim by a Participant or Beneficiary is denied, in whole or in part the Participant or Beneficiary, or their representative will receive written notice from the plan administrator. This notice will include the reasons for denial, the specific plan provision involved, an explanation of how claims are reviewed, the procedure for requesting a review of the denied claim, and a description of the information that must be submitted with the appeal. The Participant or Beneficiary, or their representative, may file a written appeal for review of a denied claim to the Committee or its delegate. The process and the time frames for the determination claims and appeals are as follows:

(a) The plan administrator reviews initial claim and makes determination within 90 days of the date the claim is received.

(b) The plan administrator may extend the above 90-day period an additional 90 days if required due to special circumstances beyond control of plan administrator.

(c) The Participant or Beneficiary, or their representative, may submit an appeal of a denied claim within 60 days of receipt of the denial.

(d) The plan administrator reviews and makes a determination on the appeal within 60 days of the date the appeal was received.

(e) The plan administrator may extend the above 60-day period an additional 60 days if required by special circumstances beyond the control of the plan administrator.

12.2 In the case where the plan administrator requires an extension of the period to provide a determination on an initial claim or an appeal, the Plan will notify the Participant or Beneficiary, or their representative, prior to the expiration of the initial determination period. The notification will describe the circumstances requiring the extension and the date a determination is expected to be made. If additional information is required from the Participant or Beneficiary, the determination period will be suspended until the earlier of i) the date the information is received by the plan administrator or ii) 45 days from the date the information was requested.

12.3 Participants or Beneficiaries, or their representative, who having received an adverse appeal determination and thereby exhausted the remedies provided under the this Plan, proceed to file suit in state or federal court, must file such suit within 180 days from the date of the adverse appeal determination notice or any right to file such suit will be permanently foreclosed.

ARCONIC SUPPLEMENTAL PENSION PLAN FOR SENIOR EXECUTIVES
(as amended and restated August 1, 2016)

Alcoa Inc. has adopted the following Arconic Supplemental Pension Plan for Senior Executives as amended and restated effective August 1, 2016. This Excess Plan was formerly referred to as the Alcoa Supplemental Pension Plan for Senior Executives. Effective August 1, 2016, in anticipation of its separation into two separate publicly-traded companies, Alcoa Inc. separated this Excess Plan into two separate plans: this Excess Plan and the Alcoa USA Supplemental Pension Plan for Senior Executives. No person is entitled to a benefit under both plans.

This Excess Plan is for the exclusive benefit of select management and highly compensated employees (1) whose Pension Service terminates on or after January 1, 1999, (2) who are participants in the IC Rules adopted under Arconic Retirement Plan I and/or in the Arconic Employees' Excess Benefits Plan B due to their previous participation in the IC Rules, (3) who meet the requirements for participation hereunder, and (4) whose monthly retirement benefits under other benefit plans are less than the monthly retirement benefits calculated under this Excess Plan. Effective December 31, 2007, this Excess Plan was frozen as to new participants, and only certain Participants as of that date will be eligible for a benefit accrual under this Excess Plan.

ARTICLE I - DEFINITIONS

1.1 The following terms have the specified meanings:

"Annual Compensation" means the total payments which includes 100% of Performance Pay and Incentive Compensation Awards, made by the Company, and by any Subsidiaries or affiliates of the Company, for any period of Pension Service, for services rendered as a salaried employee, except as otherwise provided by contractual agreement. Annual Compensation does not include living and similar allowances, premium pay, and payments made for specific purposes as determined under supplemental rules adopted by the Company. Annual Compensation includes any amounts by which the Participant has elected to reduce his or her salary under any Arconic Savings Plan, and also includes amounts deferred under any non-qualified deferred compensation arrangement that would otherwise meet the definition of Annual Compensation. "Special Payments" within the meaning of the Arconic Deferred Compensation Plan are not treated as Annual Compensation.

"Average Final Compensation" means the average Annual Compensation received during the five highest paid calendar years out of the ten calendar years (including the calendar year in which such compensation was discontinued if this would increase Average Final Compensation), immediately preceding the Participant's termination of Pension Service by virtue of employment termination, retirement or death.

"Board of Directors" means the Board of Directors of the Company.

"Code" means the Internal Revenue Code of 1986, as amended.

"Committee" means the Benefits Management Committee of the Company, which has been delegated by the Board of Directors to have the discretionary authority to interpret and administer this Excess Plan.

"Company" means Alcoa Inc. It is contemplated that Alcoa Inc. will formally change its corporate name to Arconic Inc. in the second half of 2016.

"Excess Benefits" means the monthly benefits payable under this Excess Plan at such time as the Participant's monthly Pension Benefits are determinable under the Other Plan(s). Subject to Section 2.1, the Excess Benefits are calculated in the following manner:

(1) On and after Age 62:

(a) 1.1% of Average Final Compensation times each year of Pension Service up to the Social Security "Covered Compensation" amount as defined in the IC Rules, plus

(b) 1.475% of Average Final Compensation in excess of Covered Compensation for each year of Pension Service.

(2) Before Age 62:

(a) 1.475% of Average Final Compensation for each year of Pension Service, reduced by

(b) For Participants who retire prior to attaining age 62 on any type of pension provided under the Other Plan(s) (other than a 55/10 pension under the IC Rules, or 55/10 pension equivalent under Excess Plan B), the Excess Benefits calculated as described in 2(a) above are reduced by 1% for each year, prorated monthly for a partial year, their retirement precedes age 62.

(3) The Excess Benefits calculated in paragraphs (1) or (2) above are reduced by any and all applicable reductions and offsets in accordance with the provisions of the Other Plan(s), (i.e., actuarial reductions and any other percentage reduction made in order to create a joint and survivor annuity, offsets for social security benefits, offsets for other pensions, etc.).

Effective at the close of business on December 31, 2011, Plan I, Rule IC was amended to stop future accruals of age and service for purposes of calculating the amount of a 70/80 Retirement or a Rule of 65 Retirement for any Participant in a job grade 19 or above on October 1, 2012. Effective January 1, 2012, this Excess Plan was amended to provide accruals for a 70/80 Retirement for age and service accrued on or after January 1, 2012, including any applicable Supplemental Pension (as such terms are described under Plan I, Rule IC), for any such impacted Participant who meets the age, service and other contingent eligibility requirements for such Retirement and Supplement on or after that date under this nonqualified Plan; subject to any offset for 70/80 Retirement payments made under Rule IC (including an offset for any 70/80 Retirement benefit provided due to a Change in Control).

(4) The Excess Benefits for the Participant's Surviving Spouse equals 50% of the Participant's Excess Benefits, determined in accordance with the Surviving Spouse Pension provision in the Other Plan(s). If the Participant's death occurs prior to his or her attainment of age 62, the Participant's Excess Benefits, for the purpose of determining the Excess Benefits for the Surviving Spouse, are not be subject to the foregoing paragraph (2)(b).

"Excess Plan" means the Arconic Supplemental Pension Plan for Senior Executives adopted by the Company as described herein or from time to time amended hereafter.

"Excess Plan B" means the Arconic Employees' Excess Benefits Plan B as now in effect and as from time to time amended hereafter.

"IC Rules" means the IC Rules adopted under Arconic Retirement Plan I as now in effect and as from time to time amended hereafter.

"Other Plan(s)" means the IC Rules, any other defined benefit retirement plan of the Company or any Subsidiary, Employees' Excess Benefits Plan A of the Company, Excess Benefits Plan B, and Arconic Employees' Excess Benefits Plan C. Effective December 31, 2007, Participants in this Excess Plan became ineligible to participate in Arconic Excess Benefits Plan C and have no accrual under that plan.

"Participant" means any employee (1) whose Pension Service terminates on or after January 1, 1999, (2) who is a participant in the IC Rules or Excess Plan B, and (3) who has a job band of 70 (formerly job grade of

27) or higher, as determined by the Company. Effective December 31, 2007, no new Participants will participate in this Excess Plan. Effective August 1, 2016, “Participant” shall not include any person who is a participant in the Alcoa USA Supplemental Pension Plan for Senior Executives.

“Pension Benefits” means any and all retirement benefits provided under the Other Plan(s), excluding the Special Retirement Pension or Supplemental Pension provided under the IC Rules or the equivalent thereof provided under Excess Plan B.

“Pension Service” means the service used to calculate the Participant’s monthly retirement benefit under the Other Plan(s).

“Plan I” means Arconic Retirement Plan I (prior to August 1, 2016, referred to as Alcoa Retirement Plan I).

“Retirement” or “Retires” means the termination of employment after attainment of a specified age and specified service as determined under Normal or Early Retirement type under Plan I Rules or Excess Plan B. Notwithstanding the foregoing, “Retirement” also includes termination of active employment under a Disability Retirement under Plan I Rules, and such disability must also comply with Section 409A of the Code and the regulations promulgated thereunder for purposes of this Excess Plan. “Retirement” shall also mean any retirement as may be defined under any executive severance agreement entered into between the Company and a Participant to the extent it otherwise complies with termination of employment for purposes of Section 409(A) of the Code.

“Short Term Applicable Rate of Interest” shall mean the rate prescribed for January of the year of retirement under Section 1274(d) of the Code.

“Specified Employee” means an employee as defined under written guidelines adopted by the Company, which comply with Section 409A of the Code and any regulations promulgated thereunder.

“Subsidiary” means a corporation at least 50% of whose outstanding voting stock is owned or controlled by the Company and/or one or more other Subsidiaries, and any noncorporate business entity in which the Company and/or one or more other Subsidiaries have at least a 50% interest in capital or profits. Subsidiary shall not include Alcoa Corporation or Alcoa USA Corp.

“Surviving Spouse” means a deceased Participant’s spouse who is entitled to receive surviving spouse benefits under the Other Plan(s). For any Participant under this Excess Plan retiring on or after January 1, 2012, the term Surviving Spouse in the Plan will include a Surviving Domestic Partner as defined in Plan I and designated as a beneficiary under Plan I.

ARTICLE II – BENEFITS

2.1 All Excess Benefits will be payable to a Participant, or Surviving Spouse as described in Section 2.2.

2.2 Excess Benefits are payable to a Participant or Surviving Spouse under this Excess Plan only in conjunction with monthly Pension Benefits, payable under the Other Plan(s) and will commence concurrently with monthly Pension Benefits payable to the Participant or Surviving Spouse under the Other Plan(s). Upon the cessation of payment of monthly Pension Benefits to a Participant or Surviving Spouse under the Other Plan(s), Excess Benefits payable under this Excess Plan will concurrently cease.

Effective January 1, 2009, all Excess Benefits not in pay status, will be payable in monthly installments as provided below:

a. Excess Benefits will be payable commencing on the last day of the month of

i) a Participant’s Retirement, or

ii) to the extent the Participant is not eligible for Retirement, but is otherwise vested in an Other Plan, the later of:

x) termination of vesting service as provided in Rule IC, or

y) attainment of age 55, or

z) such other date as irrevocably elected in writing by the Participant prior to December 31, 2008.

Notwithstanding the foregoing, effective December 16, 2009, a subsequent election may be made by an active participant that delays the date payment the Excess Benefits commence to the later of age 62 or retirement subject to the following:

1) payment must commence on a date that is at least 5 years from the date payment would have commenced pursuant to the original election, or the date to which commencement of payment defaults where no election was made, and

2) provided further that such subsequent election shall not take effect before the date that is 12 months following the date the subsequent election is received by the Plan.

The subsequent election remains subject to all other requirements and provisions of the original election. To the extent the foregoing requirements for the subsequent election are not fulfilled, the original election (or default, if no election was made) will apply.

b. Notwithstanding the foregoing, to the extent the Participant is a Specified Employee, such monthly installment will commence on the last day of the seventh month following the date determined in a. above, and will be paid retroactively to the date determined in a. above, and will include interest accrued on the missed payments. “Interest” means the interest calculated using the Short Term Applicable Rate of Interest in effect as of January of the year of retirement.

c. The determination of any Excess Benefits payable with respect to a Participant who Retires pursuant to the terms of an executive severance agreement, will include any service credit provided by such agreement for purposes of determining vesting and eligibility, but not benefit accrual.

d. The form of payment of Excess Benefits paid to a Participant who has a Surviving Spouse as defined under Plan I Rules, is a joint and survivor annuity as described in Rule IC, in which the Participant’s Excess Benefits paid during his or her lifetime is reduced, and an amount equal to 50% of the Excess Benefits amount received by the Participant is paid to the Surviving Spouse. There are no optional forms of payment or Qualified Optional Survivor Annuities (as that term is described in Rule IC) under this Excess Plan.

To the extent a Participant dies before his or her payments have begun, payments to the Surviving Spouse will be as follows:

1) If the Participant dies while accruing pension service, the survivor annuity under this Excess Plan will begin the month following the Participant’s death.

2) If the Participant dies after pension service has terminated, the survivor annuity under this Excess Plan will begin the later of: the month following the Participant's death or the month after the Participant would have turned age 55.

e. The form of payment of Excess Benefits paid to a Participant who has no Surviving Spouse on the date payment of Excess Benefits commences is a single life annuity as described in Rule IC.

2.3 This Excess Plan is not to be construed as conferring any rights upon any Participant for continuation of employment with the Company or any Subsidiary, nor will it interfere with the rights of the Company or any Subsidiary to terminate the employment of any Participant and/or to take any personnel action affecting any Participant without regard to the effect which such action might have upon such Participant or Surviving Spouse as a prospective recipient of Excess Benefits under this Excess Plan.

2.4 No Excess Benefits under this Excess Plan may be assigned, transferred, pledged or encumbered or be subject in any manner to alienation or anticipation, except that any exceptions to the non-alienation provisions in Plan I, shall also apply to Excess Benefits hereunder.

2.5 If a Participant is receiving payments under this Excess Plan and is subsequently reemployed by the Company, payments under this Excess Plan shall continue regardless of the cessation of the Participant's monthly Pension payments due to such reemployment under an Other Plan.

2.6 Notwithstanding any provision to the contrary in this Excess Plan, if at any time the present value of a Participant's nonqualified benefits under all nonqualified defined benefit plans of the Company, not otherwise payable under the provisions of the Plan, shall be equal to or less than the Code Section 402(g) limit in effect at the time of any payment event (for 2016, $18,000 or less and as adjusted from time to time by the Internal Revenue Service), the Company may, in the sole and absolute discretion of the Company, elect to distribute the entire Excess Benefits to the Participant in the form of a lump sum payment, *in lieu* of any other Excess Benefits payable under the Plan. The present value shall be determined by the Company, in the Company's sole and absolute discretion, using reasonable actuarial assumptions. The distribution of the lump sum shall be made as soon as reasonably practicable, but no later than ninety (90) days after a payment event or two and one-half (2 ½) months after the year of the payment event, whichever is later. This payment shall extinguish any and all liability under this Excess Plan and any and all the plans from which the lump sum is provided.

ARTICLE III - CONTRIBUTIONS

3.1 Excess Benefits payable hereunder are payable out of the general assets of the Company or a participating Subsidiary, no segregation of assets for such Excess Benefits will be made, and the right of a Participant, Surviving Spouse and/or beneficiary to receive Excess Benefits under this Excess Plan is that of an unsecured claim against those assets, except as the Company in its sole discretion otherwise provides.

ARTICLE IV - ADMINISTRATION OF EXCESS PLAN

4.1 The general administration of this Excess Plan is by the Committee, which has the discretionary authority to make all decisions regarding this Excess Plan. The Committee's discretion with respect to this Excess Plan includes the authority to determine eligibility under all provisions, correct all defects, supply all omissions, reconcile all inconsistencies in plan, ensure all Excess Benefits are paid in accordance to this Excess Plan, interpret plan provisions for all Participants or Surviving Spouses, and decide all issues of credibility necessary to carry out and operate this Excess Plan. Excess Benefits under this Excess Plan will be paid only if the Committee in its sole and absolute discretion decides that the applicant is entitled to them. All actions, decisions, or interpretations of the Committee are conclusive, final, and binding.

ARTICLE V - AMENDMENT AND TERMINATION

5.1 This Excess Plan may be amended, suspended or terminated at any time by the Board of Directors or any other entity approved by the Board of Directors, including the Committee, provided, however, that no such amendment, suspension or termination will reduce or in any manner adversely affect any Participant's rights with respect to Excess Benefits that are payable or may become payable under Article II as of the date of such amendment, suspension or termination. This Excess Plan may also be amended, from time to time by Committee, except for amendments which have more than a minimal effect upon the Company's cost of providing Excess Benefits for Company employees at the officer level.

5.2 Provisions Upon Change of Control. Notwithstanding any other provision of the plan, in the event of a Change in Control, as defined in Plan I, neither the Company, the Board of Directors, the plan administrator, the Committee or other designee of the Board of Directors, may, during the three-year period commencing on the date that the Change of Control occurs:

A. Amend, modify, or terminate the Plan, except to the extent as may be legally required by any law or regulations prescribed thereunder, or any provisions of the Code or any regulation prescribed thereunder; or

B. Reduce future Excess Benefits of any Participant.

ARTICLE VI - CONSTRUCTION

6.1 This Excess Plan is construed, regulated and administered under the laws (except the law of conflicts) of the Commonwealth of Pennsylvania except as modified by any applicable law.

ARTICLE VII - CLAIMS AND APPEALS

7.1 If a claim by a Participant, Surviving Spouse or beneficiary is denied in whole or in part, the Participant, Surviving Spouse or beneficiary, or their representative will receive written notice from the plan administrator. This notice will include the reasons for denial, the specific plan provision involved, an explanation of how claims are reviewed, the procedure for requesting a review of the denied claim, and a description of the information that must be submitted with the appeal. The Participant, Surviving Spouse or beneficiary, or their representative, may file a written appeal for review of a denied claim to the Committee or its delegate. The process and the time frames for the determination claims and appeals are as follows:

(a) The plan administrator reviews initial claim and makes determination within 90 days of the date the claim is received.

(b) The plan administrator may extend the above 90-day period an additional 90 days if required due to special circumstances beyond control of plan administrator.

(c) The Participant, Surviving Spouse or beneficiary, or their representative, may submit an appeal of a denied claim within 60 days of receipt of the denial.

(d) The plan administrator reviews and makes a determination on the appeal within 60 days of the date the appeal was received.

(e) The plan administrator may extend the above 60-day period an additional 60 days if required by special circumstances beyond the control of the plan administrator.

7.2 In the case where the plan administrator requires an extension of the period to provide a determination on an initial claim or an appeal, the Plan will notify the Participant, Surviving Spouse or beneficiary, or their representative, prior to the expiration of the initial determination period. The notification will describe the circumstances requiring the extension and the date a determination is expected to be made. If additional information is required from the Participant, Surviving Spouse or beneficiary, the determination period will be suspended until the earlier of i) the date the information is received by the plan administrator or ii) 45 days from the date the information was requested.

7.3 Participants, Surviving Spouses or Beneficiaries, or their representative, who having received an adverse appeal determination and thereby exhausted the remedies provided under this Excess Plan, proceed to file suit in state or federal court, must file such suit within 180 days from the date of the adverse appeal determination notice or any right to file such suit will be permanently foreclosed.

Exhibit 10(x)

ARCONIC INC.
CHANGE IN CONTROL SEVERANCE PLAN

The Company hereby amends and restates, effective as of February 27, 2017, the Arconic Inc. Change in Control Severance Plan (this "Plan"), which was originally adopted on January 11, 2002 (the "Effective Date") and subsequently amended on January 1, 2010. All capitalized terms used and not otherwise defined herein are defined in Section 1 hereof.

SECTION 1. DEFINITIONS. As hereinafter used:

1.1 "Affiliate" shall have the meaning set forth in Rule 12b-2 under Section 12 of the Exchange Act.

1.2 "Applicable Multiplier" shall mean (a) in the case of a Tier I Employee, three (3), (b) in the case of a Tier II Employee, two (2), and (c) in the case of a Tier III Employee, one and one-half (1.5); provided, however, that, with respect to an Eligible Employee who incurs a Severance Event during the three-year period immediately preceding such individual's Mandatory Retirement Age, such multiplier shall be multiplied by a fraction, the numerator of which is the number of full and partial months remaining until such Eligible Employee attains Mandatory Retirement Age, and the denominator of which is thirty-six (36).

1.3 "Applicable Period" shall mean (a) in the case of a Tier I Employee, the thirty-six (36)-month period immediately following such Tier I Employee's Severance Date, (b) in the case of a Tier II Employee, the twenty-four (24)-month period immediately following such Tier II Employee's Severance Date, and (c) in the case of a Tier III Employee, the eighteen (18)-month period immediately following such Tier III Employee's Severance Date; provided, however, that, with respect to an Eligible Employee who incurs a Severance Event during the three-year period immediately preceding such individual's Mandatory Retirement Age, such period shall be multiplied by a fraction, the numerator of which is the number of full and partial months remaining until such Eligible Employee attains Mandatory Retirement Age, and the denominator of which is thirty-six (36).

1.4 "Beneficial Owner" shall have the meaning set forth in Rule 13d-3 under the Exchange Act.

1.5 "Board" means (a) prior to a Change in Control, the Board of Directors of the Company and (b) following a Change in Control, if the Company is not the ultimate parent corporation of the group that includes the Company and all of its Affiliates and is not publicly traded, the board of directors of the ultimate parent company of such group.

1.6 "Business Combination" shall have the meaning set forth in Section 1.8(c).

1.7 "Cause" means: (a) the willful and continued failure by the Eligible Employee to substantially perform the Eligible Employee's duties with the Employer that has not been cured within thirty (30) days after a written demand for substantial performance is delivered to the Eligible Employee by the Board, which demand specifically identifies the manner in which the Board believes that the Eligible Employee has not substantially performed the Eligible Employee's duties, or (b) the willful engaging by the Eligible Employee in conduct that is demonstrably and materially injurious to the Company, monetarily or otherwise. For purposes of clauses (a) and (b) of this definition, (i) no act, or failure to act, on the Eligible Employee's part shall be deemed "willful" unless done, or omitted to be done, by the Eligible Employee not in good faith and without reasonable belief that the Eligible Employee's act, or failure to act, was in the best interest of the Company and (ii) in the event of a dispute concerning the application of this provision, no claim by the Company that Cause exists shall be given effect unless the Board determines that it has been established by clear and convincing evidence that Cause exists is adopted by the affirmative vote of not less than three quarters (3/4) of the entire membership of the Board (after reasonable notice to the Eligible Employee and an opportunity for the Eligible Employee, together with the Eligible Employee's counsel, to be heard by the Board).

1.8 "Change in Control" means the occurrence of an event set forth in any one of the following paragraphs:

(a) any individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act) (a "Person") becomes the beneficial owner (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of 30% or more of either (A) the then-outstanding shares of common stock of the Company (the "Outstanding Company Common Stock") or (B) the combined voting power of the then-outstanding voting securities of the Company entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); provided, however, that, for purposes of this Section 1.8, the following acquisitions shall not constitute a Change of Control: (i) any acquisition directly from the Company, (ii) any acquisition by the Company, (iii) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Company or any of its Affiliates or (iv) any acquisition pursuant to a transaction that complies with Sections 1.8(c)(i), 1.8(c)(ii) and 1.8(c)(iii);

(b) individuals who, as of the Effective Date, constitute the Board (the "Incumbent Board") cease for any reason to constitute at least a majority of the Board; provided, however, that any individual becoming a director subsequent to the date hereof whose election, or nomination for election, by the Company's shareholders, was approved by a vote of at least two-thirds (2/3) of the directors then comprising the Incumbent Board shall be considered as though such individual was a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board;

(c) consummation of a reorganization, merger, statutory share exchange or consolidation or similar transaction involving the Company or any of its subsidiaries, a sale or other disposition of all or substantially all of the assets of the Company, or the acquisition of assets or stock of another entity by the Company or any of its subsidiaries (each, a "Business Combination"), in each case unless, following such Business Combination, (i) all or substantially all of the individuals and entities that were the beneficial owners of the Outstanding Company Common Stock and the Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, 55% or more of the then-outstanding shares of common stock (or, for a non-corporate entity, equivalent securities) and the combined voting power of the then-outstanding voting securities entitled to vote generally in the election of directors (or, for a non-corporate entity, equivalent governing body), as the case may be, of the entity resulting from such Business Combination (including, without limitation, an entity that, as a result of such transaction, owns the Company or all or substantially all of the Company's assets either directly or through one or more Subsidiaries) in substantially the same proportions as their ownership immediately prior to such Business Combination of the Outstanding Company Common Stock and the Outstanding Company Voting Securities, as the case may be, (ii) no Person (excluding any corporation resulting from such Business Combination or any employee benefit plan (or related trust) of the Company or such corporation resulting from such Business Combination) beneficially owns, directly or indirectly, 20% or more of, respectively, the then-outstanding shares of common stock (or, for a non-corporate entity, equivalent securities) of the entity resulting from such Business Combination or the combined voting power of the then-outstanding voting securities of such entity entitled to vote generally in the election of directors (or, for a non-corporate entity, equivalent securities), except to the extent that such ownership existed prior to the Business Combination, and (iii) at least a majority of the members of the board of directors (or, for a non-corporate entity, equivalent governing body) of the entity resulting from such Business Combination were members of the Incumbent Board at the time of the execution of the initial agreement or of the action of the Board providing for such Business Combination; or

(d) the shareholders of the Company approve a plan of complete liquidation or dissolution of the Company.

1.9 "<u>Code</u>" means the Internal Revenue Code of 1986, as it may be amended from time to time.

1.10 "<u>Committee</u>" means the Compensation and Benefits Committee of the Board.

1.11 "<u>Company</u>" means Arconic Inc. or any successors thereto.

1.12 "<u>DB Pension Plan</u>" means any tax-qualified, supplemental or excess defined benefit pension plan maintained by the Company or any of its Affiliates and any other defined benefit plan or agreement entered into between the Eligible Employee and the Company or any of its Affiliates which is designed to provide the Eligible Employee with supplemental defined benefit retirement benefits.

1.13 "<u>DC Pension Plan</u>" means any tax-qualified, supplemental or excess defined contribution plan maintained by the Company or any of its Affiliates and any other defined contribution plan or agreement entered into between the Eligible Employee and the Company or any of its Affiliates which is designed to provide the Eligible Employee with supplemental defined contribution retirement benefits.

1.14 "Delayed Payment Date" shall have the meaning given in Section 2.1(g).

1.15 "Eligible Employee" means any Tier I, Tier II, or Tier III Employee. An Eligible Employee becomes a "Severed Employee" once he or she incurs a Severance Event.

1.16 "Employer" means the Company or any of its Subsidiaries that employs the applicable Eligible Employee.

1.17 "Entity" means any individual, entity, person (within the meaning of Section 3(a)(9) of the Exchange Act), or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act), other than (a) an employee plan of the Company or any of its Affiliates, (b) any Affiliate of the Company, (c) an underwriter temporarily holding securities pursuant to an offering of such securities, or (d) a corporation owned, directly or indirectly, by shareholders of the Company in substantially the same proportions as their ownership of the Company.

1.18 "Exchange Act" shall mean the Securities Exchange Act of 1934, as amended from time to time.

1.19 "Excise Tax" shall mean any excise tax imposed under Section 4999 of the Code.

1.20 "Good Reason" in respect of an Eligible Employee means the occurrence, after a Change in Control (or prior to a Change in Control, under the circumstances described in the second sentence of Section 1.28 hereof, treating all references below to a "Change in Control" as references to a "Potential Change in Control"), of:

(a) the assignment to the Eligible Employee of any duties inconsistent with the Eligible Employee's employment status with the Employer immediately prior to the Change in Control or a substantial adverse alteration in the nature or status of the Eligible Employee's responsibilities from those in effect immediately prior to the Change in Control, including, but not limited to, (i) with respect to a Tier I Employee, the Eligible Employee's ceasing to hold the office as the sole chief executive officer of the Company (or its parent or successor) and to function in that capacity, reporting directly to the board of directors of a public company, and (ii) with respect to a Tier II Employee, the Eligible Employee's ceasing to report directly to the chief executive officer of a public company;

(b) a reduction by the Company in the Eligible Employee's total compensation and benefits in the aggregate from that in effect immediately prior to the Change in Control. Total compensation and benefits includes, but is not limited to (i) annual base salary, annual variable compensation opportunity (taking into account applicable performance criteria and the target bonus amount of annual variable compensation); (ii) long-term stock-based and cash incentive opportunity (taking into account applicable performance criteria and the target equity compensation amount); and (iii) benefits and perquisites under pension, savings, life insurance, medical, health, disability, accident and material fringe benefit plans of the Company or its Subsidiaries or Affiliates in which the Eligible Employee was participating immediately before the Change in Control;

(c) the relocation of the Eligible Employee's principal place of employment to a location more than fifty (50) miles from the Eligible Employee's principal place of employment immediately prior to the Change in Control; or

(d) the failure by the Employer to pay to the Eligible Employee any portion of the Eligible Employee's compensation, within fourteen (14) days of the date such compensation is due.

The Eligible Employee's right to terminate the Eligible Employee's employment for Good Reason shall not be affected by the Eligible Employee's incapacity due to physical or mental illness. The Eligible Employee's continued employment shall not constitute consent to, or a waiver of rights with respect to, any act or failure to act constituting Good Reason hereunder. For purposes of any determination regarding the existence of Good Reason, any good faith determination by the Eligible Employee that Good Reason exists shall be conclusive.

1.21 "<u>Incumbent Board</u>" shall have the meaning set forth in Section 1.8(b).

1.22 "<u>Mandatory Retirement Age</u>" means, solely for purposes of this Plan, age seventy-five (75).

1.23 "<u>Notice of Termination</u>" shall have the meaning set forth in Section 3.5.

1.24 "<u>Outstanding Company Common Stock</u>" shall have the meaning set forth in Section 1.8(a).

1.25 "<u>Outstanding Company Voting Securities</u>" shall have the meaning set forth in Section 1.8(a).

1.26 "<u>Person</u>" shall have the meaning set forth in Section 1.8(a).

1.27 "<u>Plan Payments</u>" shall have the meaning given in Section 2.2(a).

1.28 A "<u>Potential Change in Control</u>" means the occurrence of an event set forth in any one of the following paragraphs:

(a) the Company commences negotiating an agreement, the consummation of which may result in the occurrence of a Change in Control;

(b) the Company or any Entity states an intention to take or to consider taking actions which, if consummated, would constitute a Change in Control;

(c) any Entity becomes the Beneficial Owner, directly or indirectly, of securities of the Company representing five percent (5%) or more of either the then-outstanding shares of common stock of the Company or the combined voting power of the Company's then outstanding securities with the purpose or with the effect of changing or influencing the control of the Company.

A Potential Change in Control shall be considered to be pending during the period beginning on the date on which it occurs and ending on the occurrence of a subsequent Change in Control; provided, that a Potential Change in Control shall be considered to cease to be pending on the first anniversary of the date on which it occurs unless either (i) a Change in Control has occurred prior to such first anniversary or (ii) the Incumbent Board determines that the Potential Change in Control is still pending; and if the Incumbent Board does so determine, then the Potential Change in Control shall continue to be considered pending until the occurrence of a Change in Control or a determination by the Incumbent Board that the Potential Change in Control is no longer pending.

1.29 A "Separation from Service" means a "separation from service" within the meaning of Section 409A of the Code and Treasury Regulation Section 1.409A-1(h).

1.30 "Severance Event" means an Eligible Employee's Separation from Service on or within three (3) years immediately following the date of a Change in Control, (a) by the Employer other than for Cause, or (b) by the Eligible Employee for Good Reason. In addition, for purposes of this Plan, the Eligible Employee shall be deemed to have incurred a Severance Event, if (i) the Eligible Employee's Separation from Service occurs because his employment is terminated by the Employer without Cause prior to a Change in Control (whether or not a Change in Control ever occurs) and such termination was at the request or direction of an Entity that has entered into an agreement with the Company the consummation of which would constitute a Change in Control or (ii) the Eligible Employee's Separation from Service occurs because he terminates his employment for Good Reason during prior to a Change in Control (whether or not a Change in Control ever occurs) and the circumstance or event which constitutes Good Reason occurs at the request or direction of such Entity. For purposes of any determination regarding the applicability of the immediately preceding sentence, any position taken by the Eligible Employee shall be presumed to be correct unless the Board affirmatively determines that it has been established by clear and convincing evidence that such position is not correct. An Eligible Employee will not be considered to have incurred a Severance Event if his or her employment is discontinued by reason of the Eligible Employee's death or a physical or mental condition causing such Eligible Employee's inability to substantially perform his or her duties with the Employer, including, without limitation, such condition entitling him or her to benefits under any sick pay or disability income policy or program of the Company or any of its Affiliates.

1.31 "Severance Date" means the date on which an Eligible Employee's Severance Event takes place.

1.32 "Severance Pay" shall have the meaning set forth in Section 2.1(a).

1.33 "Severed Employee" shall have the meaning set forth in Section 1.15.

1.34 "Subsidiary" shall have the meaning set forth in Rule 12b-2 under Section 12 of the Exchange Act.

1.35 "Tier I Employee" means the Chief Executive Officer of the Company.

1.36 "Tier II Employee" means any Executive Vice President of the Company.

1.37 "Tier III Employee" means each Board-elected officer who is not a Tier I Employee or Tier II Employee.

SECTION 2. BENEFITS.

2.1 Severance Payments and Benefits. Each Severed Employee shall be entitled, subject to Section 2.4, to receive the following payments and benefits from the Company.

(a) Severance Pay. A lump sum cash amount (the "Severance Pay") equal to the product of (i) the sum of (A) the Severed Employee's annual base salary, and (B) the Severed Employee's target annual cash incentive compensation as in effect immediately prior to the Change in Control, and (ii) the Applicable Multiplier. For purposes of this Section 2.1(a), annual base salary shall be the higher of the Severed Employee's (x) base monthly salary in the calendar month immediately preceding a Change in Control and (y) base monthly salary in the calendar month immediately preceding the Severed Employee's Severance Date (in each case, without regard to any reductions therein which constitute Good Reason), multiplied by twelve (12).

(b) Benefits. During the Applicable Period, the Company shall arrange to provide the Severed Employee and anyone entitled to claim through the Severed Employee life, accident and health (including medical, behavioral, prescription drug, dental and vision) benefits substantially similar to those provided to the Severed Employee and anyone entitled to claim through the Severed Employee immediately prior to the Severed Employee's Severance Date or, if more favorable to the Severed Employee, those provided to the Severed Employee and those entitled to claim through the Severed Employee immediately prior to the first occurrence of an event or circumstance constituting Good Reason, at no greater after-tax cost to the Severed Employee than the after tax cost to the Severed Employee immediately prior to such Severance Date or occurrence.

(c) Pension Plans. In addition to the retirement benefits to which the Severed Employee is entitled under each DC Pension Plan, the Company shall pay the Severed Employee a lump sum cash amount equal to the product of (i) the value of contributions or allocations actually made by the Company (excluding any employee deferrals or contributions, and earnings) to all DC Pension Plans, on behalf of the employee, with respect to the calendar year immediately preceding the year in which the Change in Control occurs (but assuming such contributions and allocations had been based on the annualized base salary plus target annual cash incentive compensation as determined in Section 2.1(a)) and (ii) the Applicable Multiplier.

(d) DB Pension Plans. In addition to the retirement benefits to which the Severed Employee is entitled under each DB Pension Plan, the Company shall pay the Severed Employee a lump sum cash amount equal to the excess of the actuarial equivalent of the aggregate retirement pension (taking into account any early retirement subsidies associated therewith and determined in accordance with the normal form of payment under each DB Pension Plan, commencing at the date on or after the last day of the Applicable Period as of which the actuarial equivalent of such form of payment is greatest) which the Severed Employee would have accrued and vested in under the terms of all DB Pension Plans determined:

(i) without regard to any amendment to any DB Pension Plan made subsequent to a Change in Control and on or prior to the date of the Severed Employee's Severance Date, which amendment adversely affects in any manner the computation of retirement benefits thereunder, and

(ii) for all purposes of determining pension benefits and eligibility for such benefits, including all applicable retirement subsidies, as if the Severed Employee had accumulated (after the Severed Employee's Severance Date) the number of additional months of age and service credit thereunder that the Severed Employee would have accumulated had the Severed Employee remained employed by the Company during the Applicable Period, and

(iii) as if the Severed Employee had been credited under each DB Pension Plan with compensation, for each full calendar month during the Applicable Period following the calendar month of the Severed Employee's Severance Date, equal to the Severed Employee's annualized base salary plus target annual cash incentive compensation as determined in Section 2.1(a), divided by twelve (12);

over the actuarial equivalent of the aggregate retirement pension (taking into account any early retirement subsidies associated therewith and determined in accordance with the normal form of payment under each DB Pension Plan, commencing at the date on or after the Severed Employee's Severance Date as of which the actuarial equivalent of such form of payment is greatest) that the Severed Employee had accrued and vested in pursuant to the provisions of the DB Pension Plans as of the Severed Employee's Severance Date.

For purposes of this Section 2.1(d), "actuarial equivalent" shall be determined based upon the Severed Employee's age as of the Severed Employee's Severance Date using the same assumptions utilized under the Arconic Retirement Plan I, Section 8.3(d)(ii) or the successor to such provision (without regard to applicable dollar limitations ($5,000 as of the Effective Date)) immediately prior to the Severed Employee's Severance Date or, if more favorable to the Severed Employee, immediately prior to the first occurrence of an event or circumstance constituting Good Reason.

(e) Post-Retirement Benefit Plans. If the Severed Employee would have become entitled to benefits under the Company's post-retirement health care plans, as in effect immediately prior to the Severed Employee's Severance Date or, if more favorable to the Severed Employee, as in effect immediately prior to the first occurrence of an event or circumstance constituting Good Reason, had the Severed Employee's employment terminated at any time during the Applicable Period, the Company shall provide such post-retirement health care benefits to the Severed Employee and the Severed Employee's dependents commencing on the later of (i) the date on which such coverage would have first become available in accordance with the terms of the applicable plan and (ii) the date on which benefits described in Section 2.1(b) terminate, and ending upon the death of the Eligible Employee Any such benefit that is dependent on service or compensation shall be determined as if the Severed Employee had accumulated (after the Severed Employee's Severance Date) the number of additional months of age and service credit thereunder that the Severed Employee would have accumulated had the

Severed Employee remained employed by the Company through the end of the Applicable Period, and as if the Severed Employee had been credited with compensation for each full calendar month following the calendar month of the Severed Employee's Severance Date up to the end of the Applicable Period equal to the Severed Employee's annualized based salary as determined in Section 2.1(a), plus the Severed Employee's target annual cash incentive compensation as determined in Section 2.1(a), divided by twelve (12). Except for the additional service and compensation credit during the Applicable Period, nothing herein is intended to provide the Severed Employee with benefits that exceed the benefits provided to other participants in the applicable post-retirement health care plans, as in effect from time to time.

(f) The Company shall provide the Severed Employee with reasonable outplacement services suitable to the Severed Employee's position through the date that is six (6) months following the Severed Employee's Severance Date or, if earlier, the date on which the Severed Employee first accepts an offer of employment from a new employer.

(g) The amounts described in Sections 2.1(a), (c) and (d) shall be paid to the Eligible Employee in a cash lump sum as soon as practicable after the Severance Date but in no event later than thirty (30) days after the Severance Date; provided that, if the Severed Employee is, as of the Severance Date, a "specified employee" within the meaning of Section 409A of the Code as determined in accordance with the methodology duly adopted by the Company as in effect on the Severance Date, then such lump sum amounts shall instead be paid on the first business day that is at least six (6) months after the Severance Date (or if sooner, upon the death of the Severed Employee) (the "Delayed Payment Date"), with interest at the applicable federal rate provided for in Section 7872(f)(2)(A) of the Code, from the first business day after the Severance Date through the Delayed Payment Date.

2.2 Reduction of Certain Payments.

(a) Anything in this Plan to the contrary notwithstanding, if the Accounting Firm (as defined below) shall determine that receipt of all Payments (as defined below) of any Severed Employee would subject the Severed Employee to the Excise Tax, the Accounting Firm shall determine whether to reduce any of the Payments paid or payable pursuant to this Plan (the "Plan Payments") so that the Parachute Value (as defined below) of all Payments, in the aggregate, equals the Safe Harbor Amount (as defined below). The Plan Payments shall be so reduced only if the Accounting Firm determines that the Severed Employee would have a greater Net After-Tax Receipt (as defined below) of aggregate Payments if the Plan Payments were so reduced. If the Accounting Firm determines that the Severed Employee would not have a greater Net After-Tax Receipt of aggregate Payments if the Plan Payments were so reduced, the Severed Employee shall receive all Plan Payments to which the Participant is entitled hereunder.

(b) If the Accounting Firm determines that aggregate Plan Payments should be reduced so that the Parachute Value of all Payments, in the aggregate, equals the Safe Harbor Amount, the Company shall promptly give the Severed Employee notice to that effect and a copy of the detailed calculation thereof. All determinations made by the Accounting Firm under this Section 2.2 shall be binding upon the Company, its Affiliates and the Severed Employee and shall be made as soon as reasonably practicable and in no event later than fifteen

(15) days following the Severance Date. For purposes of reducing the Plan Payments so that the Parachute Value of all Payments, in the aggregate, equals the Safe Harbor Amount, only amounts payable under the Plan (and no other Payments) shall be reduced. The reduction of the amounts payable hereunder, if applicable, shall be made by reducing the Plan Payments that have a Parachute Value in the following order: Section 2.1(c), Section 2.1(d), Section 2.1(a), Section 2.1(b), in each case, beginning with payments or benefits that do not constitute non-qualified deferred compensation and reducing payments or benefits in reverse chronological order beginning with those that are to be paid or provided the farthest in time from the Severance Date, based on the Accounting Firm's determination. All reasonable fees and expenses of the Accounting Firm shall be borne solely by the Company.

(c) To the extent requested by the Severed Employee, the Company and its Affiliates shall cooperate with the Severed Employee in good faith in valuing, and the Accounting Firm shall take into account the value of, services provided or to be provided by the Severed Employee (including, without limitation, the Severed Employee's agreeing to refrain from performing services pursuant to a covenant not to compete or similar covenant, before, on or after the date of a change in ownership or control of the Company (within the meaning of Q&A-2(b) of the final regulations under Section 280G of the Code)), such that payments in respect of such services may be considered reasonable compensation within the meaning of Q&A-9 and Q&A-40 to Q&A-44 of the Treasury Regulations under Section 280G of the Code and/or exempt from the definition of the term "parachute payment" within the meaning of Q&A-2(a) of the Treasury Regulations under Section 280G of the Code in accordance with Q&A-5(a) of the Treasury Regulations under Section 280G of the Code.

(d) The following terms shall have the following meanings for purposes of this Section 2.2:

"Accounting Firm" shall mean a nationally recognized certified public accounting firm or other professional organization that is a certified public accounting firm recognized as an expert in determinations and calculations for purposes of Section 280G of the Code that is selected by the Company prior to a Change in Control for purposes of making the applicable determinations hereunder.

"Net After-Tax Receipt" shall mean the present value (as determined in accordance with Sections 280G(b)(2)(A)(ii) and 280G(d)(4) of the Code) of a Payment net of all taxes imposed on the Participant with respect thereto under Sections 1 and 4999 of the Code and under applicable state and local laws, determined by applying the highest marginal rate under Section 1 of the Code and under state and local laws which applied to the Severed Employee's taxable income for the immediately preceding taxable year, or such other rate(s) as the Accounting Firm determines to be likely to apply to the Severed Employee in the relevant tax year(s).

"Parachute Value" of a Payment shall mean the present value as of the date of the change in control for purposes of Section 280G of the Code of the portion of such Payment that constitutes a "parachute payment" under Section 280G(b)(2) of the Code, as determined by the Accounting Firm for purposes of determining whether and to what extent the Excise Tax will apply to such Payment.

“Payment” shall mean any payment or distribution in the nature of compensation (within the meaning of Section 280G(b)(2) of the Code) to or for the benefit of the Severed Employee, whether paid or payable pursuant to this Plan or otherwise.

“Safe Harbor Amount” shall mean the maximum Parachute Value of all Payments that the Severed Employee can receive without any Payments being subject to the Excise Tax.

The provisions of this Section 2.2 shall survive the expiration or termination of the Plan.

2.3 Legal Fees. The Company shall pay to any Eligible Employee all legal fees and expenses incurred by such Eligible Employee in disputing in good faith any issue hereunder or in seeking in good faith to obtain or enforce any benefit or right provided by this Plan; provided, that the payment of legal fees hereunder by the Company shall not be required if the Eligible Employee pursues such dispute in a manner inconsistent with the provisions of Section 3.3 hereof; and provided further, that the Eligible Employee shall be required to repay any such amounts to the Company to the extent that an arbitrator issues a final, unappealable order setting forth a determination that the position taken by the Eligible Employee was frivolous or advanced in bad faith. The Company shall pay to the Eligible Employee all legal fees and expenses incurred in connection with any tax audit or proceeding to the extent attributable to the application of Section 4999 of the Code to any payment or benefit provided hereunder. All payments for legal fees and expenses shall be made within fourteen (14) business days after delivery of the Eligible Employee’s written requests for payment accompanied with such evidence of fees and expenses incurred as the Company reasonably may require. In order to comply with Section 409A of the Code, in no event shall the payments by the Company under this Section 2.3 be made later than the end of the calendar year next following the calendar year in which such fees and expenses were incurred, provided, that the Eligible Employee shall have submitted an invoice for such fees and expenses at least fourteen (14) business days before the end of the calendar year next following the calendar year in which such fees and expenses were incurred. The amount of such legal fees and expenses that the Company is obligated to pay in any given calendar year shall not affect the legal fees and expenses that the Company is obligated to pay in any other calendar year, and the Eligible Employee’s right to have the Company pay such legal fees and expenses may not be liquidated or exchanged for any other benefit.

2.4 Withholding. The Company shall be entitled to withhold from amounts to be paid to any Eligible Employee hereunder any federal, state or local withholding or other taxes or charges (or foreign equivalents of such taxes or charges) which it is from time to time required to withhold under applicable law or regulation.

2.5 Status of Plan Payments. No payments or benefits pursuant to this Plan shall constitute “compensation” (or similar term) under any employee benefit plan sponsored or maintained by the Company or any of its Affiliates, including any DB Pension Plan or DC Pension Plan.

2.6 Mitigation; Setoff. A Severed Employee is not required to seek other employment or attempt in any way to reduce any amounts payable to the Severed Employee under the Plan. Further, no payment or benefit provided for in this Plan shall be reduced by any compensation earned by the Severed Employee as a result of employment by another employer, by retirement benefits, by offset against any amount claimed to be owed by the Severed Employee to the Company or its Affiliates, or otherwise.

SECTION 3. PLAN ADMINISTRATION; CLAIMS PROCEDURES.

3.1 The Committee shall administer the Plan and, prior to a Change in Control:

(a) the Committee may interpret and construe the terms of the Plan, prescribe, amend and rescind rules and regulations under the Plan and make all other determinations necessary or advisable for the administration of the Plan, subject to all of the provisions of the Plan;

(b) any determination by the Committee shall be final and binding with respect to the subject matter thereof on all Eligible Employees and all other persons;

(c) the Committee may delegate any of its duties hereunder to such person or persons from time to time as it may designate.

Notwithstanding anything in the Plan to the contrary, after a Change in Control, neither the Committee nor any other person shall have discretionary authority in the administration of the Plan, and any arbitrator, court or tribunal that adjudicates any dispute, controversy, or claim in connection with benefits under Section 2 will apply a *de novo* standard of review to any determinations made by the Committee or the Company. Such de novo standard shall apply notwithstanding the grant of full discretion hereunder to the Committee or any person or characterization of any decision by the Committee or by such person as final, binding or conclusive on any party.

3.2 The Committee is empowered, on behalf of the Company, to engage accountants, legal counsel and such other personnel as it deems necessary or advisable to assist it in the performance of its duties under the Plan. The functions of any such persons engaged by the Committee shall be limited to the specified services and duties for which they are engaged, and such persons shall have no other duties, obligations or responsibilities under the Plan. Such persons shall exercise no discretionary authority or discretionary control respecting the management of the Plan. All reasonable expenses thereof shall be borne by the Company.

3.3 Claims Procedure.

(a) In the event of a claim by an Eligible Employee, such Eligible Employee shall present the reason for his or her claim in writing to the Committee. The Committee shall, within ninety (90) days after receipt of such written claim (unless special circumstances require an extension of up to ninety (90) days, in which case written notice of the extension shall be furnished to the Eligible Employee prior to the end of the initial ninety (90)-day period, indicating the special circumstances requiring an extension and the date by which the

Committee expects to render its decision), send a written notification to the Eligible Employee as to its disposition. In the event the claim is wholly or partially denied, such written notification shall (i) state the specific reason or reasons for the denial, (ii) make specific reference to the relevant Plan provisions on which the denial is based, (iii) provide a description of any additional material or information necessary for the Eligible Employee to perfect the claim and an explanation of why such material or information is necessary, and (iv) describe the Plan's review procedures and the time limits applicable to such procedures, including the Eligible Employee's right to bring a civil action under Section 502(a) of ERISA following a full or partial denial of the claim on review.

(b) In the event that an Eligible Employee wishes to appeal the denial of his or her claim he or she may request a review of such denial by making application in writing to the Committee within sixty (60) days after receipt of such denial. An Eligible Employee (or his or her duly authorized legal representative) shall be provided, upon written request to the Committee and free of charge, reasonable access to, and copies of, all documents, records or other information in the Company's possession relevant to his or her claim and may submit comments, documents, records and other information relating to the claim, which shall be taken into account by the Committee in reviewing its denial of the Eligible Employee's claim, without regard to whether such information was submitted or considered in the initial claim.

(c) Within sixty (60) days after receipt of a written appeal (unless special circumstances require an extension of up to sixty (60) days, in which case written notice of the extension shall be furnished to the Eligible Employee prior to the end of the initial sixty (60)-day period, indicating the special circumstances requiring an extension and the date by which the Committee expects to render its decision on review), the Committee shall notify the Eligible Employee of the final decision in writing. In the event the claim is wholly or partially denied on review, such written notification shall (i) state the specific reason or reasons for the denial, (ii) make specific reference to the relevant Plan provisions on which the denial is based, (iii) a statement of the Eligible Employee's entitlement, upon written request to the Committee and free of charge, reasonable access to, and copies of, all documents, records or other information in the Company's possession relevant to his or her claim, and (iv) describe the Eligible Employee's right to bring a civil action under Section 502(a) of ERISA.

(d) Notwithstanding the foregoing, upon the mutual agreement of the Eligible Employee and the Committee, any claim, dispute or controversy that has been submitted by the Eligible Employee in writing to the Committee may be submitted directly to arbitration in accordance with Section 3.4.

3.4 Any claim, dispute or controversy arising under or in connection with the Plan, and which is not resolved in accordance with Section 3.3, shall be settled exclusively by arbitration in New York City. All claims, disputes and controversies shall be submitted to the CPR Institute for Dispute Resolution ("CPR") in accordance with the CPR's rules then in effect; provided, however, that the evidentiary standards set forth in this Agreement shall apply. The claim, dispute or controversy shall be heard and decided by three (3) arbitrators selected from CPR's employment panel. The arbitrators' decision shall be final and binding on all parties. Judgment may be entered on the arbitrators' award in any court having jurisdiction.

3.5 Any purported termination of an Eligible Employee's employment shall be communicated by written Notice of Termination from one party hereto to the other party in accordance with Section 4.7. For purposes of this Plan, a "Notice of Termination" shall mean a notice which shall indicate the specific termination provision in this Plan relied upon, shall set forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of the Eligible Employee's employment under the provision so indicated, and shall specify the Severance Date (which, in the case of a termination by the Company, shall not be less than thirty (30) days, and, in the case of a termination by the Eligible Employee, shall not be less than fifteen (15) days nor more than sixty (60) days, respectively, after the date such Notice of Termination is given).

3.6 PLAN MODIFICATION OR TERMINATION.

The Plan may be amended or terminated by the Board at any time; provided, however, that the Committee may make amendments to the Plan (a) that are required by applicable law, (b) that will have minimal effect upon the Company's cost of providing benefits under the Plan, or (c) that do not change or alter the character and intent of the Plan; and provided, further that the Plan may not be terminated, or amended in any manner that adversely affects any Eligible Employee, (i) within three (3) years immediately following a Change in Control, or (ii) during the pendency of a Potential Change in Control.

SECTION 4. GENERAL PROVISIONS.

4.1 Except as otherwise provided herein or by law, no right or interest of any Eligible Employee under the Plan shall be assignable or transferable, in whole or in part, either directly or by operation of law or otherwise, including, without limitation, by execution, levy, garnishment, attachment, pledge or in any manner. No attempted assignment or transfer of any such right or interest shall be effective, and no right or interest of any Eligible Employee under the Plan shall be liable for, or subject to, any obligation or liability of such Eligible Employee. The Plan shall inure to the benefit of, and be binding upon, the Company and its successors and assigns. The Company will require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company to assume expressly and agree to perform the obligations set forth in the Plan in the same manner and to the same extent as the Company would be required to do so.

4.2 Neither the establishment of the Plan, nor any modification thereof, nor the creation of any fund, trust or account, nor the payment of any benefits shall be construed as giving any Eligible Employee, or any person whomsoever, the right to be retained in the service of the Company, and all Eligible Employees shall remain subject to discharge to the same extent as if the Plan had never been adopted.

4.3 If any provision of this Plan shall be held invalid or unenforceable, such invalidity or unenforceability shall not affect any other provisions hereof, and this Plan shall be construed and enforced as if such provisions had not been included.

4.4 If a Severed Employee dies while any amount is still payable to such Severed Employee, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Plan to the executor, personal representative or administrators of the Severed Employee's estate.

4.5 The headings and captions herein are provided for reference and convenience only, shall not be considered part of the Plan, and shall not be employed in the construction of the Plan.

4.6 The Plan shall not be funded. No Eligible Employee shall have any right to, or interest in, any assets of the Company which may be applied by the Company to the payment of benefits or other rights under this Plan.

4.7 Any notice or other communication required or permitted pursuant to the terms hereof shall be in writing and shall be deemed to have been duly given when personally delivered or when mailed by United States certified mail, return receipt requested, or by overnight courier, postage prepaid, to the Company at its corporate headquarters address, to the attention of the Chief Legal Officer of the Company, or to the Eligible Employee at the Eligible Employee's most recent home address reflected on the books and records of the Company.

4.8 This Plan shall be construed and enforced according to the laws of the State of New York, without regard to its principles of conflicts of law.

4.9 Payments to a Severed Employee under this Plan shall be in lieu of any severance or similar payments that otherwise might be payable under any plan, program, policy or agreement sponsored or maintained by the Company that provides severance benefits to employees upon termination of employment, except that the payment or acceleration of equity or equity-based awards shall be in addition to, rather than in lieu of, any payment or benefits due under the Plan.

4.10 The obligations under this Plan are intended to comply with the requirements of Section 409A of the Code or an exemption or exclusion therefrom and shall in all respects be administered in accordance with Section 409A of the Code. Each payment of compensation under this Plan shall be treated as a separate payment of compensation for purposes of applying Section 409A of the Code. All payments to be made upon a termination of employment under this Plan may only be made upon a "separation from service" under Section 409A of the Code to the extent necessary in order to avoid the imposition of penalty taxes on a Severed Employee pursuant to Section 409A of the Code. In no event may a Severed Employee, directly or indirectly, designate the calendar year of any payment under this Plan. Notwithstanding anything to the contrary in this Plan, all reimbursements and in-kind benefits provided under this Plan that are subject to Section 409A of the Code shall be made in accordance with the requirements of Section 409A of the Code, including without limitation, where applicable, the requirement that (a) the amount of expenses eligible for reimbursement, or in-kind benefits provided, during a calendar year may not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other calendar year; (b) the reimbursement of any eligible fees and expenses shall be made no later than the last day of the calendar year following the year in which the applicable fees and expenses were incurred; and (c) the right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

IN WITNESS WHEREOF, the undersigned has caused this Plan to be effective as of the date first set forth above.

ARCONIC INC.

By: /s/ Katherine H. Ramundo

Name: Katherine H. Ramundo

Title: Executive Vice President, Chief Legal Officer and Secretary

Exhibit 10(y)(1)

February 27, 2017

Klaus Kleinfeld
Chairman and Chief Executive Officer
Arconic Inc.
390 Park Avenue
New York, New York 10022

Re: Modification of Severance Agreement

Dear Klaus,

Arconic Inc. (the "Company") has adopted the Arconic Inc. Executive Severance Plan (the "Severance Plan") effective as of February 27, 2017. Under the terms of the Severance Plan, an executive in your current position with the Company is eligible to participate in the Severance Plan, unless such executive is party to an individual agreement with the Company that provides for severance benefits upon an involuntary termination of employment. You previously entered into a letter agreement dated December 8, 2008 with the Company's predecessor, Alcoa Inc. (your "Letter Agreement"), which provides for severance benefits upon your involuntary termination of employment. In order for you to be eligible to participate in the Severance Plan, you hereby agree to waive all severance benefits under the Letter Agreement and to the termination of all provisions of your Letter Agreement relating to your termination of employment, except as otherwise provided in this letter agreement (this "Letter").

You acknowledge and agree that, effective as of the date hereof, the following sections of your Letter Agreement shall continue in full force and effect: "Restrictive Covenants", "Governing Law; Jurisdiction", "Amendment; Waiver" (except that the reference therein to "Chief Executive Officer" shall be replaced with "authorized officer of the Company"), and "Severability", and all other provisions of your Letter Agreement shall have no further force or effect. Accordingly, and in consideration for the continued effectiveness of the covenants in the section of your Letter Agreement entitled "Restrictive Covenants," beginning on the date hereof, you will be treated as an "Eligible Employee" pursuant to the Severance Plan, as in effect from time to time.

The surviving section of your Letter Agreement entitled "Governing Law; Jurisdiction" will apply to this Letter as if set forth herein. This Letter may be modified only by a written agreement signed by you and an authorized officer of the Company.

Please acknowledge your agreement to the terms of this Letter by signing below.

Sincerely,

Arconic Inc.

/s/ Vas Nair

By: Vas Nair
EVP, Human Resources, Environment,
Health, Safety and Sustainability

Acknowledged and Agreed

/s/ Klaus Kleinfeld

Klaus Kleinfeld

Exhibit 10(z)(1)

February 27, 2017

Kay Meggers
EVP & Group President Global Rolled Products
Arconic Inc.
390 Park Avenue
New York, New York 10022

Re: Modification of Severance Agreement

Dear Kay,

Arconic Inc. (the "Company") has adopted the Arconic Inc. Executive Severance Plan (the "Severance Plan") effective as of February 27, 2017. Under the terms of the Severance Plan, an executive in your current position with the Company is eligible to participate in the Severance Plan, unless such executive is party to an individual agreement with the Company that provides for severance benefits upon an involuntary termination of employment. You previously entered into a letter agreement dated December 2, 2011 with the Company's predecessor, Alcoa Inc. (your "Letter Agreement"), which provides for severance benefits upon your involuntary termination of employment. In order for you to be eligible to participate in the Severance Plan, you hereby agree to waive all severance benefits under the Letter Agreement and to the termination of all provisions of your Letter Agreement relating to your termination of employment, except as otherwise provided in this letter agreement (this "Letter").

You acknowledge and agree that, effective as of the date hereof, the following sections of your Letter Agreement shall continue in full force and effect: "Restrictive Covenants", "Governing Law; Jurisdiction", "Amendment; Waiver", and "Severability", and all other provisions of your Letter Agreement shall have no further force or effect. Accordingly, and in consideration for the continued effectiveness of the covenants in the section of your Letter Agreement entitled "Restrictive Covenants," beginning on the date hereof, you will be treated as an "Eligible Employee" pursuant to the Severance Plan, as in effect from time to time.

The surviving section of your Letter Agreement entitled "Governing Law; Jurisdiction" will apply to this Letter as if set forth herein. This Letter may be modified only by a written agreement signed by you and an authorized officer of the Company.

Please acknowledge your agreement to the terms of this Letter by signing below.

Sincerely,

Arconic Inc.

/s/ Vas Nair

By: Vas Nair
EVP, Human Resources, Environment, Health,
Safety and Sustainability

Acknowledged and Agreed

/s/ Kay Meggers

Kay Meggers

Exhibit 10(aa)

ARCONIC INC.
EXECUTIVE SEVERANCE PLAN

The Company hereby adopts, as of February 27, 2017 (the "Effective Date"), the Arconic Inc. Executive Severance Plan (this "Plan") for the benefit of certain employees of the Company and its Subsidiaries, on the terms and conditions hereinafter stated. All capitalized terms used and not otherwise defined herein are defined in Section 1 hereof.

SECTION 1. DEFINITIONS. As hereinafter used:

1.1 "Affiliate" shall have the meaning set forth in Rule 12b-2 under Section 12 of the Exchange Act.

1.2 "Applicable Period" shall mean (a) in the case of a Tier I Employee or a Tier II Employee, the twenty-four (24)-month period immediately following such Tier I or Tier II Employee's Severance Date, and (b) in the case of a Tier III Employee, the twelve (12)-month period immediately following such Tier III Employee's Severance Date.

1.3 "Board" means the Board of Directors of the Company.

1.4 "Cause" means: (a) the willful and continued failure by the Eligible Employee to substantially perform the Eligible Employee's duties with the Employer that has not been cured within thirty (30) days after a written demand for substantial performance is delivered to the Eligible Employee by the Board, which demand specifically identifies the manner in which the Board believes that the Eligible Employee has not substantially performed the Eligible Employee's duties, or (b) the willful engaging by the Eligible Employee in conduct that is demonstrably and materially injurious to the Company, monetarily or otherwise.

1.5 "Code" means the Internal Revenue Code of 1986, as it may be amended from time to time.

1.6 "Committee" means the Compensation Committee of the Board.

1.7 "Company" means Arconic Inc. or any successors thereto.

1.8 "DB Pension Plan" means any tax-qualified, supplemental or excess defined benefit pension plan maintained by the Company or any of its Affiliates and any other defined benefit plan or agreement entered into between the Eligible Employee and the Company or any of its Affiliates which is designed to provide the Eligible Employee with supplemental defined benefit retirement benefits.

1.9 "DC Pension Plan" means any tax-qualified, supplemental or excess defined contribution plan maintained by the Company or any of its Affiliates and any other defined contribution plan or agreement entered into between the Eligible Employee and the Company or any of its Affiliates which is designed to provide the Eligible Employee with supplemental defined contribution retirement benefits.

1.10 "Delayed Payment Date" shall have the meaning set forth in Section 2.1(e).

1.11 "Effective Date" shall have the meaning given in the preamble hereto.

1.12 "Eligible Employee" means any Tier I, Tier II or Tier III Employee; provided that, any Tier I, Tier II or Tier III Employee who is party to an individual agreement with the Company or any of its Affiliates that provides for severance benefits upon an involuntary termination shall not be considered an "Eligible Employee" while such agreement is in effect. An Eligible Employee becomes a "Severed Employee" once he or she incurs a Severance Event.

1.13 "Employer" means the Company or any of its Subsidiaries that employs the applicable Eligible Employee.

1.14 "Exchange Act" shall mean the Securities Exchange Act of 1934, as amended from time to time.

1.15 "Notice of Termination" shall have the meaning set forth in Section 3.5.

1.16 "Plan" shall have the meaning given in the preamble hereto.

1.17 "Release Date" shall have the meaning set forth in Section 2.1.

1.18 A "Separation from Service" means a "separation from service" within the meaning of Section 409A of the Code and Treasury Regulation Section 1.409A-1(h).

1.19 "Severance Event" means an Eligible Employee's Separation from Service by the Employer other than for Cause. An Eligible Employee will not be considered to have incurred a Severance Event if his or her employment is discontinued by reason of the Eligible Employee's death or a physical or mental condition causing such Eligible Employee's inability to substantially perform his or her duties with the Employer, including, without limitation, such condition entitling him or her to benefits under any sick pay or disability income policy or program of the Company or any of its Affiliates.

1.20 "Severance Date" means the date on which an Eligible Employee's Severance Event takes place.

1.21 "Severance Pay" shall have the meaning set forth in Section 2.1(a).

1.22 "Severed Employee" shall have the meaning set forth in Section 1.12.

1.23 "Tier I Employee" means the Chief Executive Officer of the Company.

1.24 "Tier II Employee" means any Executive Vice President of the Company.

1.25 "Tier III Employee" means each Board-elected officer who is not a Tier I Employee or Tier II Employee.

SECTION 2. BENEFITS.

2.1 Severance Payments and Benefits. Each Severed Employee shall be entitled, subject to Section 2.2, and subject to the Severed Employee executing a general release of claims in favor of the Company and its Affiliates in a form satisfactory to the Company and such release becoming effective and irrevocable no later than the date that is sixty (60) days following the Severance Date (the "Release Date"), to receive the following payments and benefits from the Company. If the Severed Employee does not satisfy such release requirement, then the Severed Employee shall not be entitled to receive the payments described in Sections 2.1(a), (c) and (d) and the Company shall have no obligation to provide the benefits described in Section 2.1(b) after the end of the month in which the Release Date occurs.

(a) Severance Pay. A lump sum cash amount (the "Severance Pay") equal to (i) in the case of a Tier I Employee, two times the sum of the Severed Employee's (A) annual base salary as of the Severance Date, and (B) target annual cash incentive compensation with respect to the fiscal year of the Company in which the Severance Date occurs, (ii) in the case of a Tier II Employee, one times the sum of the Severed Employee's (A) annual base salary as of the Severance Date, and (B) target annual cash incentive compensation with respect to the fiscal year of the Company in which the Severance Date occurs, and (iii) in the case of a Tier III Employee, the Severed Employee's annual base salary as of the Severance Date; provided that, if the amount of the cash severance pay for such Severed Employee calculated under the Arconic Involuntary Separation Pay Plan, as in effect from time to time, or any successor plan, is greater than the amount calculated in accordance with this Section 2.1(a), then such Severed Employee's Severance Pay shall equal such greater amount.

(b) Benefits. During the Applicable Period, the Company shall arrange to provide the Severed Employee and anyone entitled to claim through the Severed Employee life, accident and health (including medical, behavioral, prescription drug, dental and vision) benefits substantially similar to those provided to the Severed Employee and anyone entitled to claim through the Severed Employee immediately prior to the Severed Employee's Severance Date or, if more favorable to the Severed Employee, those provided to the Severed Employee and those entitled to claim through the Severed Employee immediately prior to the first occurrence of an event or circumstance constituting Good Reason, at no greater after-tax cost to the Severed Employee than the after tax cost to the Severed Employee immediately prior to such Severance Date or occurrence.

(c) Defined Contribution Pension Plans. For a Severed Employee who is eligible to receive the Employer Retirement Income Contributions (ERIC) under any DC Pension Plan, in addition to the retirement benefits to which the Severed Employee is entitled under each DC Pension Plan or any successor plan thereto, the Company shall pay the Severed Employee a lump sum cash amount equal to the product of (i) the ERIC contribution percentage in effect for the Severed Employee on the Severance Date, multiplied by (ii) the Severed Employee's annual base salary plus target annual cash incentive compensation as determined in Section 2.1(a)), multiplied by (iii) the number of years during the Applicable Period.

(d) Defined Benefit Pension Plans. For a Severed Employee who participates in any DB Pension Plan, in addition to the retirement benefits to which the Severed Employee is entitled under each DB Pension Plan, the Company shall pay the Severed Employee a lump sum cash amount equal to the excess of (i) the actuarial equivalent of the aggregate retirement pension (taking into account any early retirement subsidies associated therewith and determined in accordance with the normal form of payment under each DB Pension Plan, commencing at the date on or after the last day of the Applicable Period as of which the actuarial equivalent of such form of payment is greatest) which the Severed Employee would have accrued and vested in under the terms of all DB Pension Plans determined for all purposes of determining pension benefits and eligibility for such benefits, including all applicable retirement subsidies, as if the Severed Employee had accumulated (after the Severed Employee's Severance Date) the number of additional months of age and service credit thereunder that the Severed Employee would have accumulated had the Severed Employee remained employed by the Company during the Applicable Period, over (ii) the actuarial equivalent of the aggregate retirement pension (taking into account any early retirement subsidies associated therewith and determined in accordance with the normal form of payment under each DB Pension Plan, commencing at the date on or after the Severed Employee's Severance Date as of which the actuarial equivalent of such form of payment is greatest) that the Severed Employee had accrued and vested in pursuant to the provisions of the DB Pension Plans as of the Severed Employee's Severance Date.

For purposes of this Section 2.1(d), "actuarial equivalent" shall be determined based upon the Severed Employee's age as of the Severed Employee's Severance Date using the same assumptions utilized under the Arconic Retirement Plan I, Section 8.3(d)(ii) or the successor to such provision (without regard to applicable dollar limitations ($5,000 as of the Effective Date)) immediately prior to the Severed Employee's Severance Date.

(e) The amounts described in Sections 2.1(a), (c) and (d) shall be paid to the Eligible Employee in a cash lump sum on the Release Date; provided that, if the Severed Employee is, as of the Severance Date, a "specified employee" within the meaning of Section 409A of the Code as determined in accordance with the methodology duly adopted by the Company as in effect on the Severance Date, then, to the extent necessary to avoid the imposition of the excise tax under Section 409A of the Code, such lump sum amounts shall instead be paid on the first business day that is at least six (6) months after the Severance Date (or if sooner, upon the death of the Severed Employee) (the "Delayed Payment Date"), with interest at the applicable federal rate provided for in Section 7872(f)(2)(A) of the Code, from the first business day after the Severance Date through the Delayed Payment Date.

2.2 Withholding. The Company shall be entitled to withhold from amounts to be paid to any Eligible Employee hereunder any federal, state or local withholding or other taxes or charges (or foreign equivalents of such taxes or charges) which it is from time to time required to withhold under applicable law or regulation.

2.3 Status of Plan Payments. No payments or benefits pursuant to this Plan shall constitute "compensation" (or similar term) under any employee benefit plan sponsored or maintained by the Company or any of its Affiliates, including any DB Pension Plan or DC Pension Plan.

2.4 Mitigation; Setoff. A Severed Employee is not required to seek other employment or attempt in any way to reduce any amounts payable to the Severed Employee under the Plan. Further, no payment or benefit provided for in this Plan shall be reduced by any compensation earned by the Severed Employee as a result of employment by another employer, by retirement benefits, by offset against any amount claimed to be owed by the Severed Employee to the Company or its Affiliates, or otherwise.

SECTION 3. PLAN ADMINISTRATION; CLAIMS PROCEDURES.

3.1 The Committee shall administer the Plan and:

(a) the Committee may interpret and construe the terms of the Plan, prescribe, amend and rescind rules and regulations under the Plan and make all other determinations necessary or advisable for the administration of the Plan, subject to all of the provisions of the Plan;

(b) any determination by the Committee shall be final and binding with respect to the subject matter thereof on all Eligible Employees and all other persons;

(c) the Committee may delegate any of its duties hereunder to such person or persons from time to time as it may designate.

3.2 The Committee is empowered, on behalf of the Company, to engage accountants, legal counsel and such other personnel as it deems necessary or advisable to assist it in the performance of its duties under the Plan. The functions of any such persons engaged by the Committee shall be limited to the specified services and duties for which they are engaged, and such persons shall have no other duties, obligations or responsibilities under the Plan. Such persons shall exercise no discretionary authority or discretionary control respecting the management of the Plan. All reasonable expenses thereof shall be borne by the Company.

3.3 Claims Procedure.

(a) In the event of a claim by an Eligible Employee, such Eligible Employee shall present the reason for his or her claim in writing to the Committee. The Committee shall, within ninety (90) days after receipt of such written claim (unless special circumstances require an extension of up to ninety (90) days, in which case written notice of the extension shall be furnished to the Eligible Employee prior to the end of the initial ninety (90)-day period, indicating the special circumstances requiring an extension and the date by which the Committee expects to render its decision), send a written notification to the Eligible Employee as to its disposition. In the event the claim is wholly or partially denied, such written notification shall (i) state the specific reason or reasons for the denial, (ii) make specific reference to the relevant Plan provisions on which the denial is based, (iii) provide a description of any additional material or information necessary for the Eligible Employee to perfect the claim and an explanation of why such material or information is necessary, and (iv) describe the Plan's review procedures and the time limits applicable to such procedures, including the Eligible Employee's right to bring a civil action under Section 502(a) of ERISA following a full or partial denial of the claim on review.

(b) In the event that an Eligible Employee wishes to appeal the denial of his or her claim he or she may request a review of such denial by making application in writing to the Committee within sixty (60) days after receipt of such denial. An Eligible Employee (or his or her duly authorized legal representative) shall be provided, upon written request to the Committee and free of charge, reasonable access to, and copies of, all documents, records or other information in the Company's possession relevant to his or her claim and may submit comments, documents, records and other information relating to the claim, which shall be taken into account by the Committee in reviewing its denial of the Eligible Employee's claim, without regard to whether such information was submitted or considered in the initial claim.

(c) Within sixty (60) days after receipt of a written appeal (unless special circumstances require an extension of up to sixty (60) days, in which case written notice of the extension shall be furnished to the Eligible Employee prior to the end of the initial sixty (60)-day period, indicating the special circumstances requiring an extension and the date by which the Committee expects to render its decision on review), the Committee shall notify the Eligible Employee of the final decision in writing. In the event the claim is wholly or partially denied on review, such written notification shall (i) state the specific reason or reasons for the denial, (ii) make specific reference to the relevant Plan provisions on which the denial is based, (iii) a statement of the Eligible Employee's entitlement, upon written request to the Committee and free of charge, reasonable access to, and copies of, all documents, records or other information in the Company's possession relevant to his or her claim, and (iv) describe the Eligible Employee's right to bring a civil action under Section 502(a) of ERISA.

(d) Notwithstanding the foregoing, upon the mutual agreement of the Eligible Employee and the Committee, any claim, dispute or controversy that has been submitted by the Eligible Employee in writing to the Committee may be submitted directly to arbitration in accordance with Section 3.4.

3.4 Any claim, dispute or controversy arising under or in connection with the Plan, and which is not resolved in accordance with Section 3.3, shall be settled exclusively by arbitration in New York City. All claims, disputes and controversies shall be submitted to the CPR Institute for Dispute Resolution ("CPR") in accordance with the CPR's rules then in effect. The claim, dispute or controversy shall be heard and decided by three (3) arbitrators selected from CPR's employment panel. The arbitrators' decision shall be final and binding on all parties. Judgment may be entered on the arbitrators' award in any court having jurisdiction.

3.5 Any purported termination of an Eligible Employee's employment shall be communicated by written Notice of Termination from the Company to the Eligible Employee in accordance with Section 5.7. For purposes of this Plan, a "Notice of Termination" shall mean a notice which shall specify the Severance Date (which shall not be more than thirty (30) days after the date such Notice of Termination is given).

SECTION 4. PLAN MODIFICATION OR TERMINATION.

The Plan may be amended or terminated by the Board at any time; provided, however, that the Committee may make amendments to the Plan (a) that are required by applicable law, (b) that will have minimal effect upon the Company's cost of providing benefits under the Plan, or (c) that do not change or alter the character and intent of the Plan. Notwithstanding the foregoing, any termination of the Plan, or amendment that materially adversely affects any Eligible Employee, shall not be effective as to such Eligible Employee until the first anniversary of the date that such Eligible Employee receives written notice from the Company of such termination or amendment.

SECTION 5. GENERAL PROVISIONS.

5.1 Except as otherwise provided herein or by law, no right or interest of any Eligible Employee under the Plan shall be assignable or transferable, in whole or in part, either directly or by operation of law or otherwise, including, without limitation, by execution, levy, garnishment, attachment, pledge or in any manner. No attempted assignment or transfer of any such right or interest shall be effective, and no right or interest of any Eligible Employee under the Plan shall be liable for, or subject to, any obligation or liability of such Eligible Employee. The Plan shall inure to the benefit of, and be binding upon, the Company and its successors and assigns.

5.2 Neither the establishment of the Plan, nor any modification thereof, nor the creation of any fund, trust or account, nor the payment of any benefits shall be construed as giving any Eligible Employee, or any person whomsoever, the right to be retained in the service of the Company, and all Eligible Employees shall remain subject to discharge to the same extent as if the Plan had never been adopted.

5.3 If any provision of this Plan shall be held invalid or unenforceable, such invalidity or unenforceability shall not affect any other provisions hereof, and this Plan shall be construed and enforced as if such provisions had not been included.

5.4 If a Severed Employee dies while any amount is still payable to such Severed Employee, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Plan to the executor, personal representative or administrators of the Severed Employee's estate.

5.5 The headings and captions herein are provided for reference and convenience only, shall not be considered part of the Plan, and shall not be employed in the construction of the Plan.

5.6 The Plan shall not be funded. No Eligible Employee shall have any right to, or interest in, any assets of the Company which may be applied by the Company to the payment of benefits or other rights under this Plan.

5.7 Any notice or other communication required or permitted pursuant to the terms hereof shall be in writing and shall be deemed to have been duly given when personally delivered or when mailed by United States certified mail, return receipt requested, or by overnight courier, postage prepaid, to the Company at its corporate headquarters address, to the attention of the Chief Legal Officer of the Company, or to the Eligible Employee at the Eligible Employee's most recent home address reflected on the books and records of the Company.

5.8 This Plan shall be construed and enforced according to the laws of the State of New York, without regard to its principles of conflicts of law.

5.9 Payments to a Severed Employee under this Plan shall be in lieu of any severance or similar payments that otherwise might be payable under any plan, program, policy or agreement sponsored or maintained by the Company that provides severance benefits to employees upon termination of employment, except that (a) the payment or acceleration of equity or equity-based awards shall be in addition to, rather than in lieu of, any payment or benefits due under the Plan and (b) if a Severed Employee receives severance payments under the Company’s Amended and Restated Change in Control Severance Plan in connection with such Severed Employee’s Severance Event, then no payments will be provided to such Severed Employee under this Plan.

5.10 The obligations under this Plan are intended to comply with the requirements of Section 409A of the Code or an exemption or exclusion therefrom and shall in all respects be administered in accordance with Section 409A of the Code. Each payment of compensation under this Plan shall be treated as a separate payment of compensation for purposes of applying Section 409A of the Code. All payments to be made upon a termination of employment under this Plan may only be made upon a “separation from service” under Section 409A of the Code to the extent necessary in order to avoid the imposition of penalty taxes on a Severed Employee pursuant to Section 409A of the Code. In no event may a Severed Employee, directly or indirectly, designate the calendar year of any payment under this Plan. Notwithstanding anything to the contrary in this Plan, all reimbursements and in-kind benefits provided under this Plan that are subject to Section 409A of the Code shall be made in accordance with the requirements of Section 409A of the Code, including without limitation, where applicable, the requirement that (a) the amount of expenses eligible for reimbursement, or in-kind benefits provided, during a calendar year may not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other calendar year; (b) the reimbursement of any eligible fees and expenses shall be made no later than the last day of the calendar year following the year in which the applicable fees and expenses were incurred; and (c) the right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

[Signature page follows.]

IN WITNESS WHEREOF, the undersigned has caused this Plan to be effective as of the date first set forth above.

ARCONIC INC.

By: /s/ Katherine H. Ramundo

Name: Katherine H. Ramundo

Title: Executive Vice President, Chief Legal Officer and Secretary

ARCONIC GLOBAL PENSION PLAN
(effective August 1, 2016)

Alcoa Inc., a Pennsylvania corporation, anticipated to be renamed Arconic Inc. in the second half of 2016 ("Arconic") established the following Arconic Global Pension Plan (the "Plan") an unfunded nonqualified defined contribution pension plan, originally effective January 1, 1998 and referred to as the Global Pension Plan, for the exclusive benefit of eligible select management and highly compensated employees of Arconic and its majority owned subsidiaries and affiliates (the "Company"). Majority owned non-US subsidiaries and affiliates eligible to participate as of August 1, 2016, are memorialized in Schedule A, and the Schedule will automatically be adjusted to account for changes to the list of majority owned non-US subsidiaries and affiliates participating in this Plan in the future. This list encompasses any predecessor employing entities of which the listed companies may be successor employers. The Plan will be "maintained outside of the United States primarily for the benefit of persons substantially all of whom are non-resident aliens," within the meaning of the Employee Retirement Income Security Act of 1974 ("ERISA"). The purpose of the Plan is to provide retirement benefits of eligible employees who are unable to participate in a home country pension plan, or who, due to frequent transfer among different countries, will otherwise be significantly disadvantaged financially.

Effective August 1, 2016, in anticipation of its separation into two separate publicly-traded companies, Arconic separated this Plan into two separate plans: this Plan and the Arconic USA Corp. Global Pension Plan. No person shall have a benefit under both plans.

ARTICLE I - PARTICIPATION

1.1 Eligibility. An Eligible Employee means any employee who on or after the effective date of the Plan:

(A) (1) is actively at work for the Company,

(2) is a non-resident alien of the United States of America, or otherwise ineligible to participate in a pension plan in the country in which they reside or work,

(3) is authorized by the Director, Global Benefits (or similarly situated position to the extent that such position no longer exists) (the "Director") to participate in the Plan,

(4) is not eligible to actively participate in any other pension or savings plan of the Company.

And

(B) is not actively participating in any other pension plan of the Company (including but not limited to the Alcoa USA Corp. Global Pension Plan) and is authorized by an officer of the Company to participate in the Plan. Participants who are U.S. residents, who are also eligible to participate in the Arconic Retirement Savings Plan, are not eligible to participate in this Plan.

1.2 Participation. An Eligible Employee will commence participation in this Plan on the first day they become an eligible employee, or such other date as determined by the Director, and will remain a participant until he or she is no longer an Eligible Employee. Effective August 1, 2016, the participants identified on **Schedule B** had their accounts transferred to the Alcoa USA Corp. Global Pension Plan and ceased to be Participants under this Plan. No person eligible for a benefit under the Alcoa USA Corp. Global Pension Plan shall have a benefit under this Plan.

1.3 Continuous Service. "Continuous Service" means, except as modified by the balance of this definition, the period of continuous employment with the Company, either as a salaried employee or as an hourly-rated employee, subject to such rules as may be adopted from time to time by the Director. Continuous Service terminates upon any quit, dismissal, discharge, Retirement, or any other termination of employment with the Company; any determination by the Director that employment with these entities has terminated is conclusive, final, and binding. Absences from such employment due to inactive status, sick leave, leave of absence or layoff shall constitute a termination of Continuous Service after such status has continued for 6 months, except to the extent the Participant has the legal right to be reemployed either through contract or statute.

1.4 Vesting. All Benefit Credits and Earning Credits are fully vested on the date that they are allocated to a Participant's account.

1.5 Retirement Under the Plan. A Participant will retire under this Plan upon the termination of employment after attainment of age 55 and completion of 10 years of Vesting Service or attainment of age 65. For purposes of this Section 1.5, Vesting Service will be determined in the same manner as Vesting Service is provided in Section 4.1 of Arconic Retirement Plan I.

ARTICLE II - CONTRIBUTIONS

2.1 The Company will provide each Participant's account with contribution credits ("Benefit Credits") equal to 8% of the Participant's annual Base Salary and Bonus. The Benefit Credits will be posted as of December 31 for the then current plan year.

The account of any Participant whose Continuous Service is terminated prior to December 31 of any plan year will be credited with Benefit Credits equal to 8% of the Participant's Base Salary and Bonus earned as of the date his or her Continuous Service ends, and will be posted on the earlier of December 31 of the then current plan year or as of the end of the month in which such Continuous Service terminates.

2.2 "Base Salary" means the regular base salary or hourly wages payable during such periods as the employee is a Participant. "Bonus" means the variable or incentive compensation payable during such periods as the employee is a Participant. Where commission payments constitute all or part of an employee's monthly remuneration, the commissions actually paid as remuneration during a regular pay period will be used to determine the Base Salary for such employee. Base Salary does not include non-recurring items such as: overtime, extended workweek premium, cost of living allowance where separately designated, shift or other premiums, or other payments, fees or allowances made for specific purposes as determined by the Company. Base Salary will be based on the amount of annual salary in local currency converted into US Dollars, based on the annual average exchange rate as determined by Arconic's Corporate Finance Department.

ARTICLE III - EARNINGS

3.1 Prior to January 1, 2002, Earnings Credits equaled the average annual London Interbank Offer Rate ("LIBOR"), and were applied to the balance of the Participant's account on December 31 of each Plan year, but prior to posting the current plan year's Benefit Credit. The average was determined by adding the LIBOR, as published in the Financial Times, as of the last day of each month and dividing that sum by 12. Effective as of January 1, 2002, the average annual LIBOR was the greater of a) the LIBOR as published in the Financial Times as of the last day of each month, divided by 12, or b) 5.5%.

Effective as of August 1, 2007, Earnings Credits with respect to a Participant whose Continuous Service was terminated prior to December 31 of the plan year was applied to the Participant's account as of the end of the month in which the participant's Continuous Service terminated, but prior to the posting of Benefits Credits as described in Section 2.1. Earnings Credits for such Participant were the greater of i) the average LIBOR for the portion of the plan year through the end of the month in which the Participant's Continuous Service terminated or ii) 5.5%, multiplied by a ratio that is the number of months the Participant was employed, including the month in which the Participant's Continuous Service ends, over 12 months.

Effective July 1, 2009, Earnings Credits equal the U.S. prime rate in effect as of December 31 of the prior plan year, but no greater than 6%. Earnings Credits applied to a Participant's account whose Continuous Service is terminated prior to December 31 of the plan year will be the U.S. prime rate in effect as of the last day of the calendar month in which the Participant's Continuous Service terminated, but no greater than 6%.

ARTICLE IV - DISTRIBUTIONS

4.1 The amount of Benefit Credits and Earnings Credits in a Participant's account will be distributed to the Participant as soon as administratively practicable following the date the Participant's Continuous Service terminates. Notwithstanding the foregoing, to the extent a Participant is a Specified Employee, any distribution to the Participant, will be delayed until the first day of the seventh month following the date that the distribution would otherwise have begun. Other than Earnings Credits, no other Credits will be applied to the Participant's account during that time. "Specified Employee" means a "specified employee" as defined under written guidelines adopted by the Company, which comply with Section 409A of the Internal Revenue Code and any regulations promulgated thereunder. The term "as soon as administratively practical" means within the later of: (a) 90 days of the date the Participant's Continuous Service terminates or (b) 2 ½ months after the year in which the Participant's Continuous Service terminated.

4.2 All distributions will be paid to the Participant or the Beneficiary in a lump sum, and will be paid in U.S. Dollars.

4.3 The Beneficiary under this Plan is the Participant's spouse. In the event that there is no spouse or the spouse is deceased at the time of the Participant's death, amounts will be distributed as soon as administratively practical in a lump sum to the Participant's estate. The spouse will be determined under the laws of the country of residence on the date of death, by the Director. The term "as soon as administratively practical" means within the later of: (a) 90 days of death or (b) 2 ½ months after the year of death.

ARTICLE V - ADMINISTRATION AND EXPENSES OF THE PLAN

5.1 The general administration of this Plan is by the Benefits Management Committee of Arconic, which has delegated certain authority to the Director. The Director's resolution of any matter concerning this Plan is final and binding upon the Company and any Participant and/or Beneficiary affected thereby. The Director has the discretionary authority to interpret the provisions of the Plan and take any and all actions in determining the eligibility, participation and coverage of any individual claiming benefits under this plan.

5.2 All costs and expenses incurred in administering the Plan, including the expenses of the Director, the fees and expenses of a trustee or custodian, the fees and charges payable under the investment arrangements, and other legal and administrative expenses, will be paid by the Plan.

ARTICLE VI - GENERAL PROVISIONS

6.1 This Plan will not be construed as conferring any rights upon any Participant for continuation of employment with the Company, nor will it interfere with the rights of the Company to terminate the employment of any Participant and/or to take any personnel action affecting any Participant without regard to the effect which such action may have upon such Participant as a recipient of benefits under this Plan.

6.2 No benefit under this Plan may be assigned, transferred, pledged or encumbered or be subject in any manner to alienation or anticipation.

6.3 Benefits payable hereunder are payable out of the general assets of the Company, and no segregation of assets for such benefits will be made. The right of a Participant or any Beneficiary to receive benefits under this Plan is an unsecured claim against the assets and are no greater than the rights of an unsecured general creditor of the Company. Notwithstanding the foregoing, in the event the Company establishes a trust, to which it may, but will not be required to contribute money or other property in contemplation of paying benefits under this Plan, such money or other property will remain subject to the claims of creditors of the Company. The Company will establish a book reserve to account for the benefits provided under this Plan.

6.4 This Plan may be amended, suspended or terminated at any time by the Benefits Management Committee of Arconic; provided, however, that no such amendment, suspension or termination will reduce or in any manner adversely affect any Participant's or Beneficiary's rights with respect to benefits that are payable or may become payable under this Plan based upon the Participant's Benefit Credits as of the date of such amendment, suspension or termination.

6.5 The Participant or beneficiary is liable for any taxes which are applicable to the amounts payable under this Plan. In addition, if any taxing authority should determine that amounts payable under this Plan are taxable at any point prior to payment, the Participant remains solely liable for such taxes. Arconic and/or participating subsidiaries and affiliates shall be authorized to withhold from any payment due under the Plan the amount of withholding taxes due in respect of such payment and to take such other action as may be necessary in its opinion to satisfy all obligations for the payment of such taxes under the laws of the applicable jurisdiction.

6.6 This Plan will be construed, regulated and administered under the laws of the Commonwealth of Pennsylvania, United States of America, except for laws relating to choice or conflict of laws, and except to the extent preempted by federal law. All claims or disputes, must be brought within the jurisdiction of the federal courts of the United States of America sitting in the Pennsylvania.

ARTICLE VII - CLAIMS AND APPEALS

7.1 If a claim by a Participant or spouse is denied in whole or in part, the Participant or spouse, or their representative will receive written notice from the Director. This notice will include the reasons for denial, the specific Plan provision involved, an explanation of how claims are reviewed, the procedure for requesting a review of the denied claim, and a description of the information that must be submitted with the appeal. The Participant or spouse, or their representative, may file a written appeal for review of a denied claim to the Plan. The process and the time frames for the determination of claims and appeals are as follows:

(a) The Director reviews initial claim and makes determination within 90 days of the date the claim is received.

(b) The Director may extend the above 90-day period an additional 90 days if required due to special circumstances beyond control of Director.

(c) The Participant or spouse, or their representative, may submit an appeal of a denied claim within 60 days of receipt of the denial.

(d) The Director reviews and makes a determination on the appeal within 60 days of the date the appeal was received.

(e) The Director may extend the above 60-day period an additional 60 days if required by special circumstances beyond the control of the Director.

7.2 In the case where the Director requires an extension of the period to provide a determination on an initial claim or an appeal, the plan will notify the Participant or spouse, or their representative, prior to the expiration of the initial determination period. The notification will describe the circumstances requiring the extension and the date a determination is expected to be made. If additional information is required from the Participant or spouse, the determination period will be suspended until the earlier of i) the date the information is received by the Director or ii) 45 days from the date the information was requested.

7.3 Participants or spouses, or their representative, who having received an adverse appeal determination and thereby exhausted the remedies provided under the Plan, proceed to file suit in state or federal court, must file such suit within 180 days from the date of the adverse appeal determination notice.

<u>Schedule A</u>
<u>As of August 1, 2016</u>

Howmet Canada Company
Howmet Japan Ltd.
Alcoa Inc. (anticipated to be renamed Arconic Inc.)
Alcoa Global Fasteners Inc.
Kawneer Company Canada Limited
Alcoa Europe SARL
Alcoa GmbH

Schedule B
Participants Transferred to Alcoa USA Corp. Global Savings Plan Effective August 1, 2016

[Names of Participants omitted.]

Exhibit 10(kk)

CONSULTING AGREEMENT

THIS AGREEMENT is made effective January 1, 2017, between ARCONIC INC., a Pennsylvania corporation, including all of its subsidiaries and divisions (hereinafter called “ARCONIC” or the “Company”), and Audrey Strauss, an individual currently residing at [ADDRESS] (hereinafter called “Consultant”).

WHEREAS, ARCONIC desires personal consulting services relating to legal, corporate and governance matters of ARCONIC, and Consultant desires to undertake performance of such services.

NOW, THEREFORE, in consideration of the mutual covenants contained in this Agreement, and intending to be legally bound, the parties agree as follows:

ARTICLE I - DEFINITIONS

Section 1.1. Consulting Services. The term “Consulting Services” means the personal and associated services of Consultant provided to ARCONIC in areas relating to Consultants’ expertise and knowledge of legal and corporate matters involving the Company’s businesses. The primary purpose of this consulting arrangement is to continue to facilitate the transition of Consultant’s responsibilities following her retirement from Arconic, and for Consultant to provide assistance in certain legal, corporate and governance matters. Requests for Consulting Services shall only be given by Klaus Kleinfeld or Kate Ramundo his/her designee. Consultant shall provide Consulting Services to ARCONIC as an independent contractor. ARCONIC disclaims any right to control the manner of performance of the Consulting Services by Consultant. It is understood that Arconic can accept or reject any or all proposals and recommendations of Consultant.

Section 1.2. It is understood that Consultant will, on request, meet with representatives of Arconic at its corporate headquarters in New York or Pittsburgh, at other domestic and non-domestic plant or office locations and with other related or unrelated business organizations as may be necessary from time to time to accomplish the objectives of this Agreement.

Section 1.3. It is agreed that Consultant will generally work from her home office but Consultant shall be provided with use of a desk and computer whenever requested services require her presence in the New York or Pittsburgh offices of Arconic. Consultant shall also be provided with necessary support and equipment, such as computers, phone, access to an administrative assistant, and IT support as needed.

Section 1.4. It is agreed that with respect to legal matters in which Arconic is seeking legal advice, it is Arconic’s desire that such consultation be covered by the attorney-client privilege, and as such, Consultant shall take all appropriate steps to protect Arconic’s attorney-client privilege.

ARTICLE II - COMPENSATION

Section 2.1. Effective with the date of this Agreement ARCONIC shall pay Consultant a sum of eight hundred dollars ($800) per hour for Consulting Services performed under this Agreement. Consultant shall record accumulated hours and submit such hours for payment. It is agreed that during the term of this Agreement Consulting Services will be requested for no more than a maximum of thirty hours per month.

Section 2.2. Consultant shall not charge ARCONIC for time spent in domestic travel to the extent that domestic travel time is four (4) hours or less. Consultant may charge ARCONIC for hours in excess of four hours for travel on any one trip. For Consulting Services which will require the Consultant to travel to non-domestic locations, Consultant shall charge Arconic for the number of hours determined from the time the Consultant leaves her place of residence, until Consultant returns to her place of residence. Consultant shall have the right to be reimbursed for all reasonable travel incurred in the performance of approved Consulting Services including domestic mainland air travel costs (coach class accommodations), international air travel costs (business class accommodations) and other expenses directly incurred in rendering Consulting Services to ARCONIC.

Section 2.3. For Consulting Services and incurred reimbursable expenses, Consultant shall be paid within thirty (30) days after receipt by ARCONIC of a statement showing the Days of Consulting Services provided by Consultant and itemized expenses incurred during the preceding calendar month.

ARTICLE III - CONFIDENTIALITY

Section 3.1. All data and other information of every kind, which is not generally known or used outside of ARCONIC and which gives ARCONIC a competitive advantage over others who do not know or use it, whether expressed in writing or otherwise, including information of a technical, engineering, operational or economic nature, learned or obtained by Consultant during the term of this Agreement or heretofore or hereafter disclosed or revealed to Consultant by ARCONIC, in the course of performing Consulting Services for ARCONIC under this Agreement, and which Consultant knows, or has reason to believe includes factual information which ARCONIC expects to be treated in confidence (all herein called "Information") shall be:

(a) received and maintained in strict confidence by Consultant and shall not be disclosed, directly or indirectly, by Consultant to any related or unrelated party whatsoever; and

(b) used by Consultant only for the performance of Consulting Services for ARCONIC.

Section 3.2. The foregoing obligations of confidentiality, limited use and non-disclosure shall not apply to the following two exclusions:

(a) Information of a factual nature which is or becomes available in issued patents, published patent applications or printed publications of general public circulation other than by acts or omissions of Consultant; or

(b) Information of a factual nature which Consultant hereafter lawfully obtains without restriction from a third party other than from a third party who obtained such Information from ARCONIC.
Consultant may not reveal to any party whatsoever without ARCONIC's express written approval the character of or compensation for Consulting Services being performed for ARCONIC.

Section 3.3. The obligations imposed by this Article III shall continue in effect for a period of two (2) year(s) from the date on which the last Consulting Services are performed by Consultant for ARCONIC, and shall survive any termination of this Agreement by either party.

ARTICLE IV - CONFLICT OF INTEREST

Section 4.1. It is acknowledged that Consultant's areas of accountability and the nature and character of the Consulting Services she will perform for ARCONIC are of a unique character which cannot be readily replaced. Therefore, it is agreed that during the term of this Agreement Consultant will not directly or indirectly enter into any employment arrangement as a director, officer, partner, owner, employee, inventor, consultant, advisor, agent, or otherwise with any business or firm which is engaged or may become engaged in the business of providing high-performance materials to aerospace, auto, and commercial building businesses (collectively "Competing Business"). This limitation of future employment is understood to include, but not limited to any domestic or international Competing Businesses, as well as all subsidiaries, partners, and affiliates of such Businesses.

If Consultant desires to accept employment with a Competing Business, she is required to notify ARCONIC prior to accepting such employment in order to determine if in fact such employment will violate the limitations set forth in this Agreement. ARCONIC's consent to future employment will not be unreasonably withheld.

If the limitations on future employment as set forth above or any part thereof should, for any reason whatsoever, be declared invalid by a court of competent jurisdiction, the validity or enforceability of the remainder of such limitations and of this Agreement shall not thereby be adversely affected. In the event that the territorial or time limitation is deemed to be unreasonable by a court of competent jurisdiction, Consultant agrees and submits to the reduction of either said territorial or time limitation to such an area or period as said court shall deem reasonable.

It is agreed that the breach of this Agreement cannot be reasonably or adequately compensated in damages in an action at law. Therefore, Consultant expressly agrees that ARCONIC, in addition to any other rights or remedies which it may possess, shall be entitled to injunctive or other equitable relief to prevent a breach of these provisions.

ARTICLE V - TERM

Section 5.1. The initial term of this Agreement shall be effective January 1, 2017, through December 31, 2017. The Agreement may be renewed upon such terms and conditions as may be agreed upon by Consultant and Arconic. The Agreement may be terminated by Arconic or Consultant at any time.

ARTICLE VI - MISCELLANEOUS

Section 6.1. Indemnification. Consultant agrees to indemnify and to hold ARCONIC harmless against any and all liability, claims and demands by or on behalf of Consultant or others (including but not limited to ARCONIC employees and other third-parties) including claims on account of injury or loss to property or life caused solely by the gross negligence or willful acts or omission solely of Consultant, arising out of or in any manner connected with the performance of the Consulting Services. In the event that it is determined that Consultant acted in good faith and in a manner believed to be in, or not opposed to the best interest of Arconic, Consultant shall not be required to indemnify or hold Arconic harmless against any and all liability, claims and demands. If necessary, the final determination of whether or not Consultant acted in good faith will be determined by independent legal counsel, or other disinterested person agreed upon by Arconic and Consultant. Nothing contained in this Section 6.1 shall obligate Consultant to save and hold Arconic harmless from and against any liability, claims or demands which may arise from the sole negligence of Arconic.

Arconic agrees to indemnify and hold Consultant harmless against any and all liability, claims and demands by or on behalf of Arconic or others (including, but not limited to Arconic employees and other third-parties) including claims on account of legal liability, personal injury or loss to property or life, resulting from acts or omissions solely of Arconic or others, arising out of or in any manner connected with the performance of the Consulting Services.

Section 6.2. Assignment. This Agreement shall inure to the benefit of and be binding upon ARCONIC, its successors and assigns. This Agreement may not be assigned by Consultant without the prior written approval of ARCONIC.

Section 6.3. Integration. This Agreement sets forth the entire understanding between the parties as to the subject matter of this Agreement, and supersedes all prior agreements, commitments, representations, writings and discussions between them, whether written or oral, with respect to the subject matter hereof. It is expressly understood that no representations, promises, warranties or agreements have been made by either party except as the same are set forth herein. Except as otherwise expressly provided in this Agreement, this Agreement may not be amended except in writing and signed by Arconic and Consultant.

Section 6.4. Waiver. No party shall be deemed to have waived any right, power or privilege under this Agreement or any provision hereof unless such waiver shall have been duly executed in writing and acknowledged by the party to be charged with such waiver. The failure of any party to enforce at any time any of the provisions of this Agreement shall in no way be construed to be a waiver of such provisions, nor in any way to affect the validity of this Agreement or any part thereof, or the right of any party to thereafter enforce each and every such provision. No waiver of any breach of this Agreement shall be held to be a waiver of any other or subsequent breach. All remedies permitted under this Agreement shall be taken and construed as cumulative.

Section 6.5. Notices. Notices to the parties shall be sent as follows;

To Arconic:	Vas Nair Executive Vice President Arconic Inc. 390 Park Avenue New York, NY 10022
To Consultant:	Audrey Strauss [ADDRESS]

Section 6.6. Severability. If any provision of this Agreement or its application to any person or circumstance is adjudged invalid or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement or the application of such provision to other persons or circumstances shall not be affected thereby; provided, however, that if any provision or application thereof is invalid or unenforceable, then a suitable and equitable provision shall be substituted therefor in order to satisfy, so far as may be valid and enforceable, the intent and purpose of this Agreement including the invalid or unenforceable provision.

Section 6.7. Applicable Law. This Agreement shall be governed by and interpreted in accordance with the laws of the State of New York, not including, however, the rules relating to the choice or conflict of laws.

WITNESS:	ARCONIC INC.	
/s/ Catherine D. Parroco Assistant Secretary	By	/s/ Katherine H. Ramundo EVP and Chief Legal Officer
	Date	December 16, 2016
WITNESS:	AUDREY STRAUSS	
/s/ Margaret S. Lam Chief Securities and Governance Counsel	By	/s/ Audrey Strauss
	Date	December 16, 2016

ARCONIC INC.
TERMS AND CONDITIONS FOR RESTRICTED SHARE UNITS
ANNUAL DIRECTOR AWARDS
Effective November 30, 2016

These terms and conditions, including Appendices A and B attached hereto (jointly, the "Award Terms"), are authorized by the Board of Directors. They are deemed to be incorporated into and form a part of every Award of Restricted Share Units issued as an annual equity award to a Director on or after November 30, 2016 under the 2013 Arconic Stock Incentive Plan, as amended and restated and as may be further amended from time to time (the "Plan").

Terms that are defined in the Plan have the same meanings in the Award Terms.

General Terms and Conditions

1. This Award of Restricted Share Units is granted as the Participant's annual equity award pursuant to the Company's Non-Employee Director Compensation Policy (the "Director Compensation Policy"). The number of Shares subject to this Award has been determined by dividing the dollar value of the annual equity award provided for under the Director Compensation Policy by the fair market value of a Share on the grant date, rounded to the nearest number of whole Shares. Restricted Share Units are subject to the provisions of the Plan and the provisions of the Award Terms. If the Plan and the Award Terms are inconsistent, the provisions of the Plan will govern. Interpretations of the Plan and the Award Terms by the Board are binding on the Participant and the Company. A Restricted Share Unit is an undertaking by the Company to issue the number of Shares indicated in the Participant's account at Merrill Lynch's OnLine® website www.benefits.ml.com, subject to the fulfillment of certain conditions, except to the extent otherwise provided in the Plan or herein. A Participant has no voting rights or rights to receive dividends on Restricted Share Units, but the Board of Directors may authorize that dividend equivalents be accrued on Restricted Share Units upon vesting in accordance with paragraphs 2 and 4 below. Any dividend equivalents on Restricted Share Units will be paid in the same manner and at the same time as the Restricted Share Units to which they relate, as set forth in paragraph 5 below.

Vesting and Payment

2. A Restricted Share Unit vests on the first anniversary date of the grant date, or, if earlier, the date of the next subsequent annual meeting of shareholders following the grant date.

3. Except as provided in paragraph 4, if a Participant's service with the Company is terminated before the Restricted Share Unit vests, the Award is forfeited and is automatically canceled.

4. The following are exceptions to the vesting rules:

- Death: a Restricted Share Unit held by a Participant who dies while a Director is not forfeited but becomes fully vested as of the date of the Participant's death.
- Change in Control: to the extent that (i) a Replacement Award is not provided to the Participant following a Change in Control; or (ii) the Participant's service is not continued by the successor or survivor corporation in connection with or following such Change in Control, the Restricted Share Unit will become fully vested immediately prior to the consummation of the Change in Control subject to the Participant's continued service through the date of such Change in Control.

5. *Payment*. A Participant will receive one Share upon payment of each vested Restricted Share Unit. Payment of vested Restricted Share Units is governed by the Arconic Inc. Amended and Restated Deferred Fee Plan for Directors (the "Deferred Fee Plan"). Except as otherwise set forth in the Deferred Fee Plan, payment of vested Restricted Share Units will occur upon the earlier of the Participant's "separation from service" (as defined in

Section 409A of the Code and the Treasury Regulations thereunder) and the Participant's death, within the payment periods specified in the Deferred Fee Plan. In accordance with the deferral election provisions of the Deferred Fee Plan, the Participant may elect to receive payment of his or her vested Restricted Share Units in either a single lump sum or in up to ten (10) annual installments, except as otherwise required or recommended due to applicable local law or set forth in the Deferred Fee Plan. In the absence of such election by the Participant, a vested Restricted Share Unit will be paid in a single lump sum.

Taxes

6. The Participant acknowledges that the Participant will consult with his or her personal tax advisor regarding any income tax, social security contributions or other tax-related items ("Taxes") that arise in connection with the Restricted Share Units. The Participant is relying solely on such advisor and is not relying in any part on any statement or representation of the Company or any of its agents. The Company shall not be responsible for withholding any applicable Taxes, unless required by applicable law. The Company may take such action as it deems appropriate to ensure that all Taxes, which are the Participant's sole and absolute responsibility, are withheld or collected from the Participant, if and to the extent required by applicable law. In this regard, the Company will have the power and the right to require the Participant to remit to the Company the amount necessary to satisfy federal, state and local taxes, U.S. or non-U.S., required by law or regulation to be withheld with respect to any taxable event arising as a result of the Restricted Share Units. Notwithstanding the foregoing, unless otherwise determined by the Board, any obligation to withhold Taxes will be met by the Company by withholding from the Shares to be issued upon payment of the Restricted Share Unit that number of Shares with a fair market value on the payment date equal to the Taxes required to be withheld at the minimum required rates or, to the extent permitted under applicable accounting principles, at up to the maximum individual tax rate for the applicable tax jurisdiction.

Beneficiaries

7. If permitted by the Company, the Participant will be entitled to designate one or more beneficiaries to receive all Restricted Share Units that have not yet vested or that have vested but have not been paid at the time of death of the Participant. All beneficiary designations will be on beneficiary designation forms approved for the Plan. Copies of the form are available from the Communications Center on Merrill Lynch's OnLine® website www.benefits.ml.com.

8. Beneficiary designations on an approved form will be effective at the time received by the Communications Center on Merrill Lynch's OnLine® website www.benefits.ml.com. A Participant may revoke a beneficiary designation at any time by written notice to the Communications Center on Merrill Lynch's OnLine® website www.benefits.ml.com or by filing a new designation form. Any designation form previously filed by a Participant will be automatically revoked and superseded by a later-filed form.

9. A Participant will be entitled to designate any number of beneficiaries on the form, and the beneficiaries may be natural or corporate persons.

10. The failure of any Participant to obtain any recommended signature on the form will not prohibit the Company from treating such designation as valid and effective. No beneficiary will acquire any beneficial or other interest in any Restricted Share Unit prior to the death of the Participant who designated such beneficiary.

11. Unless the Participant indicates on the form that a named beneficiary is to receive Restricted Share Units only upon the prior death of another named beneficiary, all beneficiaries designated on the form will be entitled to share equally in the Restricted Share Units. Unless otherwise indicated, all such beneficiaries will have an equal, undivided interest in all such Restricted Share Units.

12. Should a beneficiary die after the Participant but before the Restricted Share Unit is paid, such beneficiary's rights and interest in the Award will be transferable by the beneficiary's last will and testament or by the laws of descent and distribution. A named beneficiary who predeceases the Participant will obtain no rights or interest in a Restricted Share Unit, nor will any person claiming on behalf of such individual. Unless otherwise specifically indicated by the Participant on the beneficiary designation form, beneficiaries designated by class (such as "children," "grandchildren" etc.) will be deemed to refer to the members of the class living at the time of the Participant's death, and all members of the class will be deemed to take "per capita."

13. If a Participant does not designate a beneficiary or if the Company does not permit a beneficiary designation, the Restricted Share Units that have not yet vested or been paid at the time of death of the Participant will be paid to the Participant's legal heirs pursuant to the Participant's last will and testament or by the laws of descent and distribution.

Adjustments

14. In the event of an Equity Restructuring, the Board will equitably adjust the Restricted Share Unit as it deems appropriate to reflect the Equity Restructuring, which may include (i) adjusting the number and type of securities subject to the Restricted Share Unit; and (ii) adjusting the terms and conditions of the Restricted Share Unit. The adjustments provided under this paragraph 14 will be nondiscretionary and final and binding on all interested parties, including the affected Participant and the Company; provided that the Board will determine whether an adjustment is equitable.

Miscellaneous Provisions

15. *Stock Exchange Requirements; Applicable Laws.* Notwithstanding anything to the contrary in the Award Terms, no Shares issuable upon vesting and payment of the Restricted Share Units, and no certificate representing all or any part of such Shares, shall be issued or delivered if, in the opinion of counsel to the Company, such issuance or delivery would cause the Company to be in violation of, or to incur liability under, any securities law, or any rule, regulation or procedure of any U.S. national securities exchange upon which any securities of the Company are listed, or any listing agreement with any such securities exchange, or any other requirement of law or of any administrative or regulatory body having jurisdiction over the Company or a Subsidiary.

16. *Shareholder Rights.* No person or entity shall be entitled to vote, receive dividends or be deemed for any purpose the holder of any Shares until the Restricted Share Unit shall have vested and been paid in the form of Shares in accordance with the provisions of the Award Terms.

17. *Notices*. Any notice required or permitted under the Award Terms shall be in writing and shall be deemed sufficient when delivered personally or sent by confirmed email, telegram, or fax or five days after being deposited in the mail, as certified or registered mail, with postage prepaid, and addressed to the Company at the Company's principal corporate offices or to the Participant at the address maintained for the Participant in the Company's records or, in either case, as subsequently modified by written notice to the other party.

18. *Severability and Judicial Modification.* If any provision of the Award Terms is held to be invalid or unenforceable under the applicable laws of any country, state, province, territory or other political subdivision or the Company elects not to enforce such restriction, the remaining provisions shall remain in full force and effect and the invalid or unenforceable provision shall be modified only to the extent necessary to render that provision valid and enforceable to the fullest extent permitted by law. If the invalid or unenforceable provision cannot be, or is not, modified, that provision shall be severed from the Award Terms and all other provisions shall remain valid and enforceable.

19. *Successors.* The Award Terms shall be binding upon and inure to the benefit of the Company and its successors and assigns, on the one hand, and the Participant and his or her heirs, beneficiaries, legatees and personal representatives, on the other hand.

20. *Appendices*. Notwithstanding any provisions in the Award Terms, for Participants residing and/or providing services outside the United States, the Restricted Share Unit shall be subject to the additional terms and conditions set forth in Appendix A to the Award Terms and to any special terms and conditions for the Participant's country set forth in Appendix B to the Award Terms. Moreover, if the Participant relocates outside the United States or relocates between the countries included in Appendix B, subject to compliance with Section 409A of the Code, the additional terms and conditions set forth in Appendix A and the special terms and conditions for such country set

forth in Appendix B will apply to the Participant, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendices constitute part of the Award Terms.

21. *Imposition of Other Requirements*. The Company reserves the right to impose other requirements on the Participant's participation in the Plan, on the Restricted Share Unit and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require the Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

22. *Compliance with Code Section 409A*. It is intended that the Restricted Share Unit granted pursuant to the Award Terms be compliant with Section 409A of the Code and the Award Terms shall be interpreted, construed and operated to reflect this intent. Notwithstanding the foregoing, the Award Terms and the Plan may be amended at any time, without the consent of any party, to the extent necessary or desirable to satisfy any of the requirements under Section 409A of the Code, but the Company shall not be under any obligation to make any such amendment. Further, the Company and its Subsidiaries do not make any representation to the Participant that the Restricted Share Unit granted pursuant to the Award Terms satisfies the requirements of Section 409A of the Code, and the Company and its Subsidiaries will have no liability or other obligation to indemnify or hold harmless the Participant or any other party for any tax, additional tax, interest or penalties that the Participant or any other party may incur in the event that any provision of the Award Terms or any amendment or modification thereof or any other action taken with respect thereto, is deemed to violate any of the requirements of Section 409A of the Code.

23. *Waiver*. A waiver by the Company of breach of any provision of the Award Terms shall not operate or be construed as a waiver of any other provision of the Award Terms, or of any subsequent breach by the Participant or any other Participant.

24. *No Advice Regarding Award*. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding the Participant's participation in the Plan, or the Participant's acquisition or sale of the underlying Shares. The Participant is hereby advised to consult with the Participant's own personal tax, legal and financial advisors regarding the Participant's participation in the Plan before taking any action related to the Plan.

25. *Governing Law and Venue.* As stated in the Plan, the Restricted Share Unit and the provisions of the Award Terms and all determinations made and actions taken thereunder, to the extent not otherwise governed by the laws of the United States, shall be governed by the laws of the State of New York, United States of America, without reference to principles of conflict of laws, and construed accordingly. The jurisdiction and venue for any disputes arising under, or any actions brought to enforce (or otherwise relating to), the Restricted Share Unit will be exclusively in the courts in the State of New York, County of New York, including the Federal Courts located therein (should Federal jurisdiction exist).

26. *Electronic Delivery and Acceptance*. The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. The Participant hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

27. *Entire Agreement*. The Award Terms and the Plan embody the entire understanding and agreement of the parties with respect to the subject matter hereof, and no promise, condition, representation or warranty, express or implied, not stated or incorporated by reference herein, shall bind either party hereto.

Acceptance of Award

28. In accordance with Section 15(c) of the Plan (as in effect at the grant date), the Participant may reject the Restricted Share Unit by notifying the Company within 30 days of the grant date that he or she does not accept the Restricted Share Unit. The Participant's acceptance of the Restricted Share Unit constitutes the Participant's acceptance of and agreement with the Award Terms. Notwithstanding the foregoing, if required by the Company, the Participant will provide a signed copy of the Award Terms in such manner and within such timeframe as may be requested by the Company. The Company has no obligation to issue Shares to the Participant if the Participant does not accept the Restricted Share Unit.

APPENDIX A
TO THE ARCONIC INC.
2013 Stock Incentive Plan
Terms and Conditions for Restricted Share Units
For Non-U.S. Participants

This Appendix A contains additional (or, if so indicated, different) terms and conditions that govern the Restricted Share Units if the Participant resides and/or provides services outside of the United States. Capitalized terms used but not defined herein shall have the same meanings assigned to them in the Plan and the Terms and Conditions for Restricted Share Units (the "Terms and Conditions").

A. *Termination*. This provision supplements paragraph 3 of the Terms and Conditions.

The Company will determine when the Participant is no longer providing services for purposes of the Restricted Share Units (including whether the Participant may still be considered to be providing services while on a leave of absence).

B. *Responsibility for Taxes*. This provision supplements paragraph 6 of the Terms and Conditions.

The Participant acknowledges that, regardless of any action taken by the Company or any Subsidiary, the ultimate liability for all Taxes is and remains the Participant's responsibility and may exceed any amount actually withheld by the Company or any Subsidiary. The Participant further acknowledges that the Company (a) makes no representations or undertakings regarding the treatment of any Taxes in connection with any aspect of these Restricted Shares Units, including, but not limited to, the grant, vesting or payment of Restricted Shares Units, the subsequent sale of Shares acquired pursuant to the Restricted Share Unit and the receipt of any dividends or dividend equivalents; and (b) does not commit to and is under no obligation to structure the terms of the Restricted Share Units or any aspect of the Restricted Share Units to reduce or eliminate the Participant's liability for Taxes or achieve any particular tax result. The Participant shall not make any claim against the Company or any Subsidiary, or their respective board, officers or employees, related to Taxes arising from this Award. Furthermore, if the Participant has become subject to Taxes in more than one jurisdiction, the Participant acknowledges that the Company or a Subsidiary may be required to withhold or account for Taxes in more than one jurisdiction.

The Participant shall pay to the Company or any Subsidiary any amount of Taxes that the Company or any Subsidiary may be required to withhold or account for as a result of the Participant's participation in the Plan that cannot be satisfied by the means described in paragraph 6 of the Terms and Conditions. The Company may refuse to issue or deliver the Shares or the proceeds of the sale of Shares if the Participant fails to comply with his or her obligations in connection with the Taxes.

C. *Nature of Award.* In accepting the Restricted Share Units, the Participant acknowledges, understands and agrees that:

a. the Plan is established voluntarily by the Company, is discretionary in nature and may be modified, amended, suspended, or terminated by the Company at any time, to the extent permitted by the Plan;

b. this Award of Restricted Share Units and the Participant's participation in the Plan shall not create a right to, or be interpreted as forming an employment contract with the Company;

c. the Participant's participation in the Plan is voluntary;

d. the future value of the Shares subject to the Restricted Share Unit is unknown and cannot be predicted with certainty;

e. no claim or entitlement to compensation or damages shall arise from forfeiture of any portion of this Award of Restricted Share Units resulting from termination of the Participant's service as a Director (for any reason whatsoever and regardless of whether later found to be invalid or in breach of the laws of any applicable jurisdiction), and, in consideration of this Award of Restricted Share Units, the Participant irrevocably agrees never to institute any claim against the Company and any Subsidiary, waives his or her ability, if any, to bring any such claim, and releases the Company and all Subsidiaries from any such claim; if, notwithstanding the foregoing, any such claim is allowed by a court of competent jurisdiction, then, by participating in the Plan, the Participant shall be deemed irrevocably to have agreed not to pursue such claim and agrees to execute any and all documents necessary to request dismissal or withdrawal of such claims;

f. unless otherwise provided in the Plan or by the Company in its discretion, this Award of Restricted Share Units and the benefits under the Plan evidenced by these Award Terms do not create any entitlement to have this Award of Restricted Share Units or any such benefits transferred to, or assumed by, another company nor to be exchanged, cashed out or substituted for, in connection with any corporate transaction affecting the Shares; and

g. neither the Company nor any Subsidiary shall be liable for any foreign exchange rate fluctuation between the Participant's local currency and the United States Dollar that may affect the value of the Restricted Share Units or of any amounts due to the Participant pursuant to the Restricted Share Units or the subsequent sale of any Shares acquired under the Plan.

D. Data Privacy. The Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of the Participant's personal data as described in these Award Terms and any other grant materials for the exclusive purpose of implementing, administering and managing the Participant's participation in the Plan and this Award.

The Participant understands that the Company may hold certain personal information about the Participant, including, but not limited to, the Participant's name, home address, email address and telephone number, date of birth, social insurance number, passport or other identification number, nationality, any shares of stock held in the Company, details of all Restricted Share Units or any other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in the Participant's favor ("Data"), for the exclusive purpose of implementing, administering and managing the Plan and this Award.

The Participant understands that Data will be transferred to Merrill Lynch, Pierce, Fenner & Smith Incorporated, a Delaware corporation with its principal place of business in New York, New York ("Merrill Lynch"), and to and Hewitt Associates, a Delaware corporation with its principal place of business in Lincolnshire, Illinois ("Hewitt"), which are assisting the Company with the implementation, administration and management of the Plan and this Award. The Participant understands that the recipients of Data are located in the United States, and that the recipients' country may have different data privacy laws and protections than the Participant's country. The Participant understands that the Participant may request a list with the names and addresses of any other potential recipients of Data by contacting the Company. The Participant authorizes the Company, Merrill Lynch, Hewitt and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the Plan and this Award to receive, possess, use, retain and transfer Data, in electronic or other form, for the sole purpose of implementing, administering and managing the Participant's participation in the Plan and this Award. The Participant understands that Data will be held only as long as is necessary to implement, administer and manage the Participant's participation in the Plan and this Award. The Participant understands that the Participant may, at any time, view Data, request additional information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing the Company. Further, the Participant understands that the Participant is providing the consents herein on a purely voluntary basis. If the Participant does not consent, or if the Participant later seeks to revoke the Participant's consent, the Participant's service as a Director will not be affected; the only consequence of refusing or withdrawing the Participant's consent is that the Company would not be able to grant this Award of Restricted Share Units or other Awards to the Participant or administer or maintain such Awards. Therefore, the Participant understands that refusing or withdrawing the Participant's consent may affect the Participant's ability to participate in the Plan. For more information on the consequences of the Participant's refusal to consent or withdrawal of consent, the Participant understands that the Participant may contact the Company.

E. *Language*. If the Participant has received these Award Terms, or any other document related to this Award of Restricted Share Units and/or the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

F. *Insider Trading Restrictions/Market Abuse Laws*. The Participant acknowledges that, depending on his or her country, the Participant may be subject to insider trading restrictions and/or market abuse laws, which may affect his or her ability to acquire or sell Shares or rights to Shares under the Plan during such times as the Participant is considered to have "inside information" regarding the Company (as defined by applicable laws in his or her country). Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. The Participant acknowledges that it is his or her responsibility to comply with any applicable restrictions, and the Participant should consult his or her personal advisor on this matter.

G. *Foreign Asset/Account Reporting Requirements, Exchange Controls and Tax Requirements*. The Participant acknowledges that his or her country may have certain foreign asset and/or account reporting requirements and exchange controls which may affect his or her ability to acquire or hold Shares under the Plan or cash received from participating in the Plan (including from any dividends received or sale proceeds arising from the sale of Shares) in a brokerage or bank account outside his or her country. The Participant understands that he or she may be required to report such accounts, assets or transactions to the tax or other authorities in his or her country. The Participant also may be required to repatriate sale proceeds or other funds received as a result of the Participant's participation in the Plan to his or her country through a designated bank or broker and/or within a certain time after receipt. The Participant acknowledges that it is his or her responsibility to be compliant with all such requirements, and that the Participant should consult his or her personal legal and tax advisors, as applicable, to ensure the Participant's compliance.

APPENDIX B
TO THE ARCONIC INC.
2013 Stock Incentive Plan
Terms and Conditions for Restricted Share Units
For Non-U.S. Participants

Capitalized terms used but not defined in this Appendix B have the meanings set forth in the Plan and the Terms and Conditions for Restricted Share Units (the "Terms and Conditions").

Terms and Conditions

This Appendix B includes special terms and conditions that govern the Restricted Share Units if the Participant resides and/or provides services in one of the countries listed below.

If the Participant is a citizen or resident of a country other than the country in which the Participant is currently residing and/or providing services, or if the Participant transfers to another country after the grant of Restricted Share Units or is considered a resident of another country for local law purposes, the Board shall, in its discretion, determine to what extent the special terms and conditions contained herein shall be applicable to the Participant.

Notifications

This Appendix B also includes information regarding exchange controls, tax and certain other issues of which the Participant should be aware with respect to participation in the Plan. The information is based on the securities, exchange control, tax and other laws in effect in the respective countries as of October 2016. Such laws are often complex and change frequently. As a result, the Company strongly recommends that the Participant not rely on the information in this Appendix B as the only source of information relating to the consequences of participation in the Plan because the information may be out of date at the time the Participant receives Shares or sells Shares acquired under the Plan.

In addition, the information contained herein is general in nature and may not apply to the Participant's particular situation and the Company is not in a position to assure the Participant of any particular result. Accordingly, the Participant should seek appropriate professional advice as to how the relevant laws in the Participant's country may apply to his or her situation.

Finally, if the Participant is a citizen or resident of a country other than the country in which the Participant currently provides services and/or resides, or if the Participant transfers to another country after the grant of the Restricted Share Unit, or is considered a resident of another country for local law purposes, the information contained herein may not be applicable to the Participant in the same manner.

INDIA

Notifications

Exchange Control Information.

Any proceeds the Participant may receive from the sale of Shares or dividends paid with respect to such Shares must be repatriated to India according to Indian exchange control requirements. In the case of proceeds from the sale of Shares, such repatriation must occur within 90 days of receipt and in the case of dividends, such repatriation must occur within 180 days of receipt. The Participant should obtain a foreign inward remittance certificate ("***FIRC***") from the bank where he or she deposits the proceeds in India as evidence of his or her compliance with the above repatriation requirements and the Participant agrees to submit a copy of the FIRC to the Reserve Bank of India, if requested.

Foreign Asset/Account Reporting Information.

If the Participant is an Indian resident he or she is required to declare the following items in his or her annual tax return: (i) any foreign assets held (including Shares acquired under the Plan), and (ii) any foreign bank accounts for which the Participant has signing authority. It is the Participant's responsibility to comply with applicable laws in India and the Participant should consult with his or her personal tax advisor to ensure that the Participant is properly reporting his or her foreign assets and bank accounts.

UNITED KINGDOM

There are no country-specific provisions.

Exhibit 10(ww)

ARCONIC INC.
TERMS AND CONDITIONS FOR DEFERRED FEE RESTRICTED SHARE UNITS
DIRECTOR AWARDS
Effective November 30, 2016

These terms and conditions, including Appendices A and B attached hereto, (jointly, the “Award Terms”) are authorized by the Board of Directors. They are deemed to be incorporated into and form a part of every Award of Restricted Share Units issued to a Director in lieu of Fees (as defined in the Arconic Inc. Amended and Restated Deferred Fee Plan for Directors) on or after November 30, 2016 under the 2013 Arconic Stock Incentive Plan, as amended and restated and as may be further amended from time to time (the “Plan”).

Terms that are defined in the Plan have the same meanings in the Award Terms.

General Terms and Conditions

1. This Award of Restricted Share Units is granted in lieu of Fees pursuant to the Participant’s election under the Arconic Inc. Amended and Restated Deferred Fee Plan for Directors (the “Deferred Fee Plan”). In accordance with the Deferred Fee Plan, the number of Shares subject to this Award has been determined by dividing the dollar amount of the Fees subject to the Director’s election by the fair market value of a Share on the date(s) that such Fees (or any installment thereof) would otherwise have been paid in cash to the Participant, rounded down to the nearest number of whole Shares; any remaining amount representing the value of a fractional Share will be paid in cash to the Participant as soon as practicable following the grant date of this Award, but in any event by no later than March 15th of the year following the year in which the relevant Fees were earned. Restricted Share Units are subject to the provisions of the Plan and the provisions of the Award Terms. If the Plan and the Award Terms are inconsistent, the provisions of the Plan will govern. Interpretations of the Plan and the Award Terms by the Board are binding on the Participant and the Company. A Restricted Share Unit is an undertaking by the Company to issue the number of Shares indicated in the Participant’s account at Merrill Lynch’s OnLine® website www.benefits.ml.com, subject to the fulfillment of certain conditions, except to the extent otherwise provided in the Plan or herein. A Participant has no voting rights or rights to receive dividends on Restricted Share Units, but the Board of Directors may authorize that dividend equivalents be accrued on Restricted Share Units. Any dividend equivalents on Restricted Share Units will be paid in the same manner and at the same time as the Restricted Share Units to which they relate, as set forth in paragraph 3 below.

Vesting and Payment

2. *Vesting*. A Restricted Share Unit granted in lieu of Fees pursuant to the Participant’s election under the Deferred Fee Plan (a “Deferred Fee RSU Award” as defined in the Deferred Fee Plan) is 100% vested on the grant date.

3. *Payment*. A Participant will receive one Share upon payment of each Restricted Share Unit. Payment of Restricted Share Units is governed by the Deferred Fee Plan. Except as otherwise set forth in the Deferred Fee Plan, payment of Restricted Share Units will occur upon the earlier of the Participant’s “separation from service” (as defined in Section 409A of the Code and the Treasury Regulations thereunder) and the Participant’s death, within the payment periods specified in the Deferred Fee Plan. In accordance with the deferral election provisions of the Deferred Fee Plan, the Participant may elect to receive payment of his or her Restricted Share Units in either a single lump sum or in up to ten (10) annual installments, except as otherwise required or recommended due to applicable local law or set forth in the Deferred Fee Plan. In the absence of such election by the Participant, a Restricted Share Unit will be paid in a single lump sum.

Taxes

4. The Participant acknowledges that the Participant will consult with his or her personal tax advisor regarding any income tax, social security contributions or other tax-related items (“Taxes”) that arise in connection with the Restricted Share Units. The Participant is relying solely on such advisor and is not relying in any part on any

statement or representation of the Company or any of its agents. The Company shall not be responsible for withholding any applicable Taxes, unless required by applicable law. The Company may take such action as it deems appropriate to ensure that all Taxes, which are the Participant's sole and absolute responsibility, are withheld or collected from the Participant, if and to the extent required by applicable law. In this regard, the Company will have the power and the right to require the Participant to remit to the Company, the amount necessary to satisfy federal, state and local taxes, U.S. or non-U.S., required by law or regulation to be withheld with respect to any taxable event arising as a result of the Restricted Share Units. Notwithstanding the foregoing, unless otherwise determined by the Board, any obligation to withhold Taxes will be met by the Company by withholding from the Shares to be issued upon payment of the Restricted Share Unit that number of Shares with a fair market value on the payment date equal to the Taxes required to be withheld at the minimum required rates or, to the extent permitted under applicable accounting principles, at up to the maximum individual tax rate for the applicable tax jurisdiction.

Beneficiaries

5. If permitted by the Company, the Participant will be entitled to designate one or more beneficiaries to receive all Restricted Share Units at the time of death of the Participant. All beneficiary designations will be on beneficiary designation forms approved for the Plan. Copies of the form are available from the Communications Center on Merrill Lynch's OnLine® website www.benefits.ml.com.

6. Beneficiary designations on an approved form will be effective at the time received by the Communications Center on Merrill Lynch's OnLine® website www.benefits.ml.com. A Participant may revoke a beneficiary designation at any time by written notice to the Communications Center on Merrill Lynch's OnLine® website www.benefits.ml.com or by filing a new designation form. Any designation form previously filed by a Participant will be automatically revoked and superseded by a later-filed form.

7. A Participant will be entitled to designate any number of beneficiaries on the form, and the beneficiaries may be natural or corporate persons.

8. The failure of any Participant to obtain any recommended signature on the form will not prohibit the Company from treating such designation as valid and effective. No beneficiary will acquire any beneficial or other interest in any Restricted Share Unit prior to the death of the Participant who designated such beneficiary.

9. Unless the Participant indicates on the form that a named beneficiary is to receive Restricted Share Units only upon the prior death of another named beneficiary, all beneficiaries designated on the form will be entitled to share equally in the Restricted Share Units. Unless otherwise indicated, all such beneficiaries will have an equal, undivided interest in all such Restricted Share Units.

10. Should a beneficiary die after the Participant but before the Restricted Share Unit is paid, such beneficiary's rights and interest in the Award will be transferable by the beneficiary's last will and testament or by the laws of descent and distribution. A named beneficiary who predeceases the Participant will obtain no rights or interest in a Restricted Share Unit, nor will any person claiming on behalf of such individual. Unless otherwise specifically indicated by the Participant on the beneficiary designation form, beneficiaries designated by class (such as "children," "grandchildren" etc.) will be deemed to refer to the members of the class living at the time of the Participant's death, and all members of the class will be deemed to take "per capita."

11. If a Participant does not designate a beneficiary or if the Company does not permit a beneficiary designation, the Restricted Share Units that have not been paid at the time of death of the Participant will be paid to the Participant's legal heirs pursuant to the Participant's last will and testament or by the laws of descent and distribution.

Adjustments

12. In the event of an Equity Restructuring, the Board will equitably adjust the Restricted Share Unit as it deems appropriate to reflect the Equity Restructuring, which may include (i) adjusting the number and type of securities subject to the Restricted Share Unit; and (ii) adjusting the terms and conditions of the Restricted Share Unit. The

adjustments provided under this paragraph 12 will be nondiscretionary and final and binding on all interested parties, including the affected Participant and the Company; provided that the Board will determine whether an adjustment is equitable.

Miscellaneous Provisions

13. *Stock Exchange Requirements; Applicable Laws.* Notwithstanding anything to the contrary in the Award Terms, no Shares issuable upon payment of the Restricted Share Units, and no certificate representing all or any part of such Shares, shall be issued or delivered if, in the opinion of counsel to the Company, such issuance or delivery would cause the Company to be in violation of, or to incur liability under, any securities law, or any rule, regulation or procedure of any U.S. national securities exchange upon which any securities of the Company are listed, or any listing agreement with any such securities exchange, or any other requirement of law or of any administrative or regulatory body having jurisdiction over the Company or a Subsidiary.

14. *Shareholder Rights.* No person or entity shall be entitled to vote, receive dividends or be deemed for any purpose the holder of any Shares until the Restricted Share Unit shall have vested and been paid in the form of Shares in accordance with the provisions of the Award Terms.

15. *Notices*. Any notice required or permitted under the Award Terms shall be in writing and shall be deemed sufficient when delivered personally or sent by confirmed email, telegram, or fax or five days after being deposited in the mail, as certified or registered mail, with postage prepaid, and addressed to the Company at the Company's principal corporate offices or to the Participant at the address maintained for the Participant in the Company's records or, in either case, as subsequently modified by written notice to the other party.

16. *Severability and Judicial Modification*. If any provision of the Award Terms is held to be invalid or unenforceable under the applicable laws of any country, state, province, territory or other political subdivision or the Company elects not to enforce such restriction, the remaining provisions shall remain in full force and effect and the invalid or unenforceable provision shall be modified only to the extent necessary to render that provision valid and enforceable to the fullest extent permitted by law. If the invalid or unenforceable provision cannot be, or is not, modified, that provision shall be severed from the Award Terms and all other provisions shall remain valid and enforceable.

17. *Successors.* The Award Terms shall be binding upon and inure to the benefit of the Company and its successors and assigns, on the one hand, and the Participant and his or her heirs, beneficiaries, legatees and personal representatives, on the other hand.

18. *Appendices*. Notwithstanding any provisions in the Award Terms, for Participants residing and/or providing services outside the United States, the Restricted Share Unit shall be subject to the additional terms and conditions set forth in Appendix A to the Award Terms and to any special terms and conditions for the Participant's country set forth in Appendix B to the Award Terms. Moreover, if the Participant relocates outside the United States or relocates between the countries included in Appendix B, subject to compliance with Section 409A of the Code, the additional terms and conditions set forth in Appendix A and the special terms and conditions for such country set forth in Appendix B will apply to the Participant, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendices constitute part of the Award Terms.

19. *Imposition of Other Requirements*. The Company reserves the right to impose other requirements on the Participant's participation in the Plan, on the Restricted Share Unit and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require the Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

20. *Compliance with Code Section 409A*. It is intended that the Restricted Share Unit granted pursuant to the Award Terms be compliant with Section 409A of the Code and the Award Terms shall be interpreted, construed and operated to reflect this intent. Notwithstanding the foregoing, the Award Terms and the Plan may be amended at any

time, without the consent of any party, to the extent necessary or desirable to satisfy any of the requirements under Section 409A of the Code, but the Company shall not be under any obligation to make any such amendment. Further, the Company and its Subsidiaries do not make any representation to the Participant that the Restricted Share Unit granted pursuant to the Award Terms satisfies the requirements of Section 409A of the Code, and the Company and its Subsidiaries will have no liability or other obligation to indemnify or hold harmless the Participant or any other party for any tax, additional tax, interest or penalties that the Participant or any other party may incur in the event that any provision of the Award Terms or any amendment or modification thereof or any other action taken with respect thereto, is deemed to violate any of the requirements of Section 409A of the Code.

21. *Waiver*. A waiver by the Company of breach of any provision of the Award Terms shall not operate or be construed as a waiver of any other provision of the Award Terms, or of any subsequent breach by the Participant or any other Participant.

22. *No Advice Regarding Award*. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding the Participant's participation in the Plan, or the Participant's acquisition or sale of the underlying Shares. The Participant is hereby advised to consult with the Participant's own personal tax, legal and financial advisors regarding the Participant's participation in the Plan before taking any action related to the Plan.

23. *Governing Law and Venue.* As stated in the Plan, the Restricted Share Unit and the provisions of the Award Terms and all determinations made and actions taken thereunder, to the extent not otherwise governed by the laws of the United States, shall be governed by the laws of the State of New York, United States of America, without reference to principles of conflict of laws, and construed accordingly. The jurisdiction and venue for any disputes arising under, or any actions brought to enforce (or otherwise relating to), the Restricted Share Unit will be exclusively in the courts in the State of New York, County of New York, including the Federal Courts located therein (should Federal jurisdiction exist).

24. *Electronic Delivery and Acceptance*. The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. The Participant hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

25. *Entire Agreement*. The Award Terms and the Plan embody the entire understanding and agreement of the parties with respect to the subject matter hereof, and no promise, condition, representation or warranty, express or implied, not stated or incorporated by reference herein, shall bind either party hereto.

Acceptance of Award

26. In accordance with Section 15(c) of the Plan (as in effect at the grant date), the Participant may reject the Restricted Share Unit by notifying the Company within 30 days of the grant date that he or she does not accept the Restricted Share Unit. The Participant's acceptance of the Restricted Share Unit constitutes the Participant's acceptance of and agreement with the Award Terms. Notwithstanding the foregoing, if required by the Company, the Participant will provide a signed copy of the Award Terms in such manner and within such timeframe as may be requested by the Company. The Company has no obligation to issue Shares to the Participant if the Participant does not accept the Restricted Share Unit.

APPENDIX A
TO THE ARCONIC INC.
2013 Stock Incentive Plan
Terms and Conditions for Restricted Share Units
For Non-U.S. Participants

This Appendix A contains additional (or, if so indicated, different) terms and conditions that govern the Restricted Share Units if the Participant resides and/or provides services outside of the United States. Capitalized terms used but not defined herein shall have the same meanings assigned to them in the Plan and the Terms and Conditions for Restricted Share Units (the "Terms and Conditions").

A. *Termination*. This provision supplements paragraph 3 of the Terms and Conditions.

The Company will determine when the Participant is no longer providing services for purposes of the Restricted Share Units (including whether the Participant may still be considered to be providing services while on a leave of absence).

B. *Responsibility for Taxes*. This provision supplements paragraph 4 of the Terms and Conditions.

The Participant acknowledges that, regardless of any action taken by the Company or any Subsidiary, the ultimate liability for all Taxes is and remains the Participant's responsibility and may exceed any amount actually withheld by the Company or any Subsidiary. The Participant further acknowledges that the Company (a) makes no representations or undertakings regarding the treatment of any Taxes in connection with any aspect of these Restricted Shares Units, including, but not limited to, the grant, vesting or payment of Restricted Shares Units, the subsequent sale of Shares acquired pursuant to the Restricted Share Unit and the receipt of any dividends or dividend equivalents; and (b) does not commit to and is under no obligation to structure the terms of the Restricted Share Units or any aspect of the Restricted Share Units to reduce or eliminate the Participant's liability for Taxes or achieve any particular tax result. The Participant shall not make any claim against the Company or any Subsidiary, or their respective board, officers or employees related to Taxes arising from this Award. Furthermore, if the Participant has become subject to Taxes in more than one jurisdiction, the Participant acknowledges that the Company or a Subsidiary may be required to withhold or account for Taxes in more than one jurisdiction.

The Participant shall pay to the Company or any Subsidiary any amount of Taxes that the Company or any Subsidiary may be required to withhold or account for as a result of the Participant's participation in the Plan that cannot be satisfied by the means described in paragraph 4 of the Terms and Conditions. The Company may refuse to issue or deliver the Shares or the proceeds of the sale of Shares if the Participant fails to comply with his or her obligations in connection with the Taxes.

C. Data Privacy. The Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of the Participant's personal data as described in these Award Terms and any other grant materials for the exclusive purpose of implementing, administering and managing the Participant's participation in the Plan and this Award.

The Participant understands that the Company may hold certain personal information about the Participant, including, but not limited to, the Participant's name, home address, email address and telephone number, date of birth, social insurance number, passport or other identification number, nationality, any shares of stock held in the Company, details of all Restricted Share Units or any other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in the Participant's favor ("Data"), for the exclusive purpose of implementing, administering and managing the Plan and this Award.

The Participant understands that Data will be transferred to Merrill Lynch, Pierce, Fenner & Smith Incorporated, a Delaware corporation with its principal place of business in New York, New York ("Merrill Lynch"), and to and Hewitt Associates, a Delaware corporation with its principal place of business in Lincolnshire, Illinois ("Hewitt"), which are assisting the Company with the implementation, administration and management of the Plan and this Award. The Participant understands that the recipients of Data are located in

the United States, and that the recipients' country may have different data privacy laws and protections than the Participant's country. The Participant understands that the Participant may request a list with the names and addresses of any other potential recipients of Data by contacting the Company. The Participant authorizes the Company, Merrill Lynch, Hewitt and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the Plan and this Award to receive, possess, use, retain and transfer Data, in electronic or other form, for the sole purpose of implementing, administering and managing the Participant's participation in the Plan and this Award. The Participant understands that Data will be held only as long as is necessary to implement, administer and manage the Participant's participation in the Plan and this Award. The Participant understands that the Participant may, at any time, view Data, request additional information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing the Company. Further, the Participant understands that the Participant is providing the consents herein on a purely voluntary basis. If the Participant does not consent, or if the Participant later seeks to revoke the Participant's consent, the Participant's service as a Director will not be affected; the only consequence of refusing or withdrawing the Participant's consent is that the Company would not be able to grant this Award of Restricted Share Units or other Awards to the Participant or administer or maintain such Awards. Therefore, the Participant understands that refusing or withdrawing the Participant's consent may affect the Participant's ability to participate in the Plan. For more information on the consequences of the Participant's refusal to consent or withdrawal of consent, the Participant understands that the Participant may contact the Company.

D. *Language*. If the Participant has received these Award Terms, or any other document related to this Award of Restricted Share Units and/or the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

E. *Insider Trading Restrictions/Market Abuse Laws*. The Participant acknowledges that, depending on his or her country, the Participant may be subject to insider trading restrictions and/or market abuse laws, which may affect his or her ability to acquire or sell Shares or rights to Shares under the Plan during such times as the Participant is considered to have "inside information" regarding the Company (as defined by applicable laws in his or her country). Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. The Participant acknowledges that it is his or her responsibility to comply with any applicable restrictions, and the Participant should consult his or her personal advisor on this matter.

F. *Foreign Asset/Account Reporting Requirements, Exchange Controls and Tax Requirements*. The Participant acknowledges that his or her country may have certain foreign asset and/or account reporting requirements and exchange controls which may affect his or her ability to acquire or hold Shares under the Plan or cash received from participating in the Plan (including from any dividends received or sale proceeds arising from the sale of Shares) in a brokerage or bank account outside his or her country. The Participant understands that he or she may be required to report such accounts, assets or transactions to the tax or other authorities in his or her country. The Participant also may be required to repatriate sale proceeds or other funds received as a result of the Participant's participation in the Plan to his or her country through a designated bank or broker and/or within a certain time after receipt. The Participant acknowledges that it is his or her responsibility to be compliant with all such requirements, and that the Participant should consult his or her personal legal and tax advisors, as applicable, to ensure the Participant's compliance.

APPENDIX B
TO THE ARCONIC INC.
2013 Stock Incentive Plan
Terms and Conditions for Restricted Share Units
For Non-U.S. Participants

Capitalized terms used but not defined in this Appendix B have the meanings set forth in the Plan and the Terms and Conditions for Restricted Share Units (the "Terms and Conditions").

Terms and Conditions

This Appendix B includes special terms and conditions that govern the Restricted Share Units if the Participant resides and/or provides services in one of the countries listed below.

If the Participant is a citizen or resident of a country other than the country in which the Participant is currently residing and/or providing, or if the Participant transfers to another country after the grant of Restricted Share Units or is considered a resident of another country for local law purposes, the Board shall, in its discretion, determine to what extent the special terms and conditions contained herein shall be applicable to the Participant.

Notifications

This Appendix B also includes information regarding exchange controls, tax and certain other issues of which the Participant should be aware with respect to participation in the Plan. The information is based on the securities, exchange control, tax and other laws in effect in the respective countries as of October 2016. Such laws are often complex and change frequently. As a result, the Company strongly recommends that the Participant not rely on the information in this Appendix B as the only source of information relating to the consequences of participation in the Plan because the information may be out of date at the time the Participant receives Shares or sells Shares acquired under the Plan.

In addition, the information contained herein is general in nature and may not apply to the Participant's particular situation and the Company is not in a position to assure the Participant of any particular result. Accordingly, the Participant should seek appropriate professional advice as to how the relevant laws in the Participant's country may apply to his or her situation.

Finally, if the Participant is a citizen or resident of a country other than the country in which the Participant currently provides services and/or resides, or if the Participant transfers to another country after the grant of the Restricted Share Unit, or is considered a resident of another country for local law purposes, the information contained herein may not be applicable to the Participant in the same manner.

INDIA

Notifications

<u>Exchange Control Information</u>.

Any proceeds the Participant may receive from the sale of Shares or dividends paid with respect to such Shares must be repatriated to India according to India exchange control requirements. In the case of proceeds from the sale of Shares, such repatriation must occur within 90 days of receipt and in the case of dividends, such repatriation must occur within 180 days of receipt. The Participant should obtain a foreign inward remittance certificate ("***FIRC***") from the bank where he or she deposits the proceeds in India as evidence of his or her compliance with the above repatriation requirements and the Participant agrees to submit a copy of the FIRC to the Reserve Bank of India, if requested.

Foreign Asset/Account Reporting Information.

If the Participant is an Indian resident he or she is required to declare the following items in his or her annual tax return: (i) any foreign assets held (including Shares acquired under the Plan), and (ii) any foreign bank accounts for which the Participant has signing authority. It is the Participant's responsibility to comply with applicable foreign laws in India and the Participant should consult with his or her personal tax advisor to ensure that the Participant is properly reporting his or her foreign assets and bank accounts.

UNITED KINGDOM

There are no country-specific provisions.

ARCONIC INC.
2013 ARCONIC STOCK INCENTIVE PLAN
TERMS AND CONDITIONS FOR RESTRICTED SHARE UNITS
Effective January 13, 2017

These terms and conditions, including Appendices A and B attached hereto, (the "Award Terms") are authorized by the Compensation and Benefits Committee of the Board of Directors. They are deemed to be incorporated into and form a part of every Award of Restricted Share Units issued on or after January 13, 2017 under the 2013 Arconic Stock Incentive Plan, as amended and restated and as may be further amended from time to time (the "Plan").

Terms that are defined in the Plan have the same meanings in the Award Terms.

General Terms and Conditions

1. Restricted Share Units are subject to the provisions of the Plan and the provisions of the Award Terms. If the Plan and the Award Terms are inconsistent, the provisions of the Plan will govern. Interpretations of the Plan and the Award Terms by the Committee are binding on the Participant and the Company. A Restricted Share Unit is an undertaking by the Company to issue the number of Shares indicated in the Participant's account at Merrill Lynch's OnLine website www.benefits.ml.com, subject to the fulfillment of certain conditions, except to the extent otherwise provided in the Plan or herein. A Participant has no voting rights or rights to receive dividends on Restricted Share Units, but the Board of Directors may authorize that dividend equivalents be accrued and paid on Restricted Share Units upon vesting in accordance with paragraphs 2 and 4 below.

Vesting and Payment

2. A Restricted Share Unit vests on the third anniversary date of the grant date and will be paid to the Participant in Shares on the vesting date or within 90 days thereafter.

3. Except as provided in paragraph 4, if a Participant's employment with the Company (including its Subsidiaries) is terminated before the Restricted Share Unit vests, the Award is forfeited and is automatically canceled.

4. The following are exceptions to the vesting rules:

- Death or Disability: a Restricted Share Unit held by a Participant, who dies while an Employee or who is permanently and totally disabled while an Employee, is not forfeited but vests and is paid on the original stated vesting date set forth in paragraph 2.

  A Participant is deemed to be permanently and totally disabled if the Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months. A Participant shall not be considered to be permanently and totally disabled unless the Participant furnishes proof of the existence thereof in such form and manner, and at such times, as the Company may require. In the event of a dispute, the determination whether a Participant is permanently and totally disabled will be made by the Committee or its delegate.

- Change in Control: a Restricted Share Unit vests if a Replacement Award is not provided following certain Change in Control events, as described in the Plan. If the Change in Control qualifies as a "change in control event" within the meaning of Treas. Reg. § 1.409-3(i)(5), the vested Restricted Share Unit will be paid to the Participant within 30 days following the Change in Control. If the Change in Control does not so qualify, the vested Restricted Share Unit will be paid to the Participant on the original stated vesting date set forth in paragraph 2.

- Termination Following Change in Control: as further described in the Plan, if a Replacement Award is provided following a Change in Control, but within 24 months of such Change in Control the Participant's employment is terminated without Cause (as defined in the Arconic Inc. Change in Control Severance Plan) or by the Participant for Good Reason (as defined in the Arconic Inc. Change in Control Severance Plan), the Replacement Award will vest and will be paid to the Participant on the original stated vested date set forth in paragraph 2.
- Retirement: a Restricted Share Unit is not forfeited if it is held by a Participant who retires at least 6 months after the grant date under a Company or Subsidiary plan (or if there is no Company or Subsidiary plan, a government retirement plan) in which the Participant is eligible for an immediate payment of a retirement benefit. In such event, the Restricted Share Unit vests and is paid in accordance with the original vesting schedule of the grant set forth in paragraph 2.
- Divestiture: if a Restricted Share Unit is held by a Participant who is to be terminated from employment with the Company or a Subsidiary as a result of a divestiture of a business or a portion of a business of the Company and the Participant either becomes an employee of (or is leased or seconded to) the entity acquiring the business on the date of the closing, or the Participant is not offered employment with the entity acquiring the business and is terminated by the Company or a Subsidiary within 90 days of the closing of the sale, then, at the discretion of the Chief Executive Officer of the Company, the Restricted Share Unit will not be forfeited and will vest and be paid in accordance with the original vesting schedule set forth in paragraph 2. For purposes of this paragraph, employment by "the entity acquiring the business" includes employment by a subsidiary or affiliate of the entity acquiring the business; and "divestiture of a business" means the sale of assets or stock resulting in the sale of a going concern. "Divestiture of a business" does not include a plant shut down or other termination of a business.

5. A Participant will receive one Share upon the vesting and payment of a Restricted Share Unit.

Taxes

6. All taxes required to be withheld under applicable tax laws in connection with a Restricted Share Unit must be paid by the Participant at the appropriate time under applicable tax laws. The Company may satisfy applicable tax withholding obligations by any of the means set forth in Section 15(l) of the Plan, but will generally withhold from the Shares to be issued upon payment of the Restricted Share Unit that number of Shares with a fair market value on the vesting date equal to the taxes required to be withheld at the minimum required rates or, to the extent permitted under applicable accounting principles, at up to the maximum individual tax rate for the applicable tax jurisdiction, which include, for Participants subject to taxation in the United States, applicable income taxes, federal and state unemployment compensation taxes and FICA/FUTA taxes. Notwithstanding the foregoing, if the Participant is subject to the short-swing profit rules of Section 16(b) of the Securities Exchange Act of 1934, as amended, the Company will withhold Shares from the Shares to be issued upon payment of the Restricted Share Unit, as described herein, and will not use the other means set forth in the Plan unless pursuant to an election by the Participant or in the event that withholding in Shares is problematic under applicable tax or securities law or has materially adverse accounting consequences.

Beneficiaries

7. If permitted by the Company, Participants will be entitled to designate one or more beneficiaries to receive all Restricted Share Units that have not yet vested at the time of death of the Participant. All beneficiary designations will be on beneficiary designation forms approved for the Plan. Copies of the form are available from the Communications Center on Merrill Lynch's OnLine® website www.benefits.ml.com

8. Beneficiary designations on an approved form will be effective at the time received by the Communications Center on Merrill Lynch's OnLine® website www.benefits.ml.com. A Participant may revoke a beneficiary designation at any time by written notice to the Communications Center on Merrill Lynch's OnLine® website www.benefits.ml.com or by filing a new designation form. Any designation form previously filed by a Participant will be automatically revoked and superseded by a later-filed form.

9. A Participant will be entitled to designate any number of beneficiaries on the form, and the beneficiaries may be natural or corporate persons.

10. The failure of any Participant to obtain any recommended signature on the form will not prohibit the Company from treating such designation as valid and effective. No beneficiary will acquire any beneficial or other interest in any Restricted Share Unit prior to the death of the Participant who designated such beneficiary.

11. Unless the Participant indicates on the form that a named beneficiary is to receive Restricted Share Units only upon the prior death of another named beneficiary, all beneficiaries designated on the form will be entitled to share equally in the Restricted Share Units upon vesting. Unless otherwise indicated, all such beneficiaries will have an equal, undivided interest in all such Restricted Share Units.

12. Should a beneficiary die after the Participant but before the Restricted Share Unit is paid, such beneficiary's rights and interest in the Award will be transferable by the beneficiary's last will and testament or by the laws of descent and distribution. A named beneficiary who predeceases the Participant will obtain no rights or interest in a Restricted Share Unit, nor will any person claiming on behalf of such individual. Unless otherwise specifically indicated by the Participant on the beneficiary designation form, beneficiaries designated by class (such as "children," "grandchildren" etc.) will be deemed to refer to the members of the class living at the time of the Participant's death, and all members of the class will be deemed to take "per capita."

13. If a Participant does not designate a beneficiary or if the Company does not permit a beneficiary designation, the Restricted Share Units that have not yet vested or been paid at the time of death of the Participant will be paid to the Participant's legal heirs pursuant to the Participant's last will and testament or by the laws of descent and distribution.

Adjustments

14. In the event of an Equity Restructuring, , the Committee will equitably adjust the Restricted Share Unit as it deems appropriate to reflect the Equity Restructuring, which may include (i) adjusting the number and type of securities subject to the Restricted Share Unit; and (ii) adjusting the terms and conditions of the Restricted Share Unit. The adjustments provided under this paragraph 14 will be nondiscretionary and final and binding on all interested parties, including the affected Participant and the Company; provided that the Committee will determine whether an adjustment is equitable.

Repayment/Forfeiture

15. As an additional condition of receiving the Restricted Share Unit, the Participant agrees that the Restricted Share Unit and any benefits or proceeds the Participant may receive hereunder shall be subject to forfeiture and/or repayment to the Company to the extent required (i) under the terms of any recoupment or "clawback" policy adopted by the Company to comply with applicable laws or with the Company's Corporate Governance Guidelines or other similar requirements, as such policy may be amended from time to time (and such requirements shall be deemed incorporated into the Award Terms without the Participant's consent) or (ii) to comply with any requirements imposed under applicable laws and/or the rules and regulations of the securities exchange or inter-dealer quotation system on which the Shares are listed or quoted, including, without limitation, pursuant to Section 954 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. Further, if the Participant receives any amount in excess of what the Participant should have received under the terms of the Restricted Share Unit for any reason (including without limitation by reason of a financial restatement, mistake in calculations or administrative error), all as determined by the Committee, then the Participant shall be required to promptly repay any such excess amount to the Company.

Miscellaneous Provisions

16. *Stock Exchange Requirements; Applicable Laws.* Notwithstanding anything to the contrary in the Award Terms, no Shares issuable upon vesting of the Restricted Share Units, and no certificate representing all or any part of such Shares, shall be issued or delivered if, in the opinion of counsel to the Company, such issuance or delivery would

cause the Company to be in violation of, or to incur liability under, any securities law, or any rule, regulation or procedure of any U.S. national securities exchange upon which any securities of the Company are listed, or any listing agreement with any such securities exchange, or any other requirement of law or of any administrative or regulatory body having jurisdiction over the Company or a Subsidiary.

17. *Non-Transferability.* The Restricted Share Units are non-transferable and may not be assigned, alienated, pledged, attached, sold or otherwise transferred or encumbered by the Participant other than by will or the laws of descent and distribution and any such purported assignment, alienation, pledge, attachment, sale, transfer or encumbrance shall be void and unenforceable against the Company; provided, that, the designation of a beneficiary shall not constitute an assignment, alienation, pledge, attachment, sale, transfer or encumbrance.

18. *Shareholder Rights.* No person or entity shall be entitled to vote, receive dividends or be deemed for any purpose the holder of any Shares until the Restricted Share Unit shall have vested and been paid in the form of Shares in accordance with the provisions of the Award Terms.

19. *Notices*. Any notice required or permitted under the Award Terms shall be in writing and shall be deemed sufficient when delivered personally or sent by confirmed email, telegram, or fax or five days after being deposited in the mail, as certified or registered mail, with postage prepaid, and addressed to the Company at the Company's principal corporate offices or to the Participant at the address maintained for the Participant in the Company's records or, in either case, as subsequently modified by written notice to the other party.

20. *Severability and Judicial Modification*. If any provision of the Award Terms is held to be invalid or unenforceable under the applicable laws of any country, state, province, territory or other political subdivision or the Company elects not to enforce such restriction, the remaining provisions shall remain in full force and effect and the invalid or unenforceable provision shall be modified only to the extent necessary to render that provision valid and enforceable to the fullest extent permitted by law. If the invalid or unenforceable provision cannot be, or is not, modified, that provision shall be severed from the Award Terms and all other provisions shall remain valid and enforceable.

21. *Successors.* The Award Terms shall be binding upon and inure to the benefit of the Company and its successors and assigns, on the one hand, and the Participant and his or her heirs, beneficiaries, legatees and personal representatives, on the other hand.

22. *Appendices*. Notwithstanding any provisions in the Award Terms, for Participants residing and/or working outside the United States, the Restricted Share Unit shall be subject to the additional terms and conditions set forth in Appendix A to the Award Terms and to any special terms and conditions for the Participant's country set forth in Appendix B to the Award Terms. Moreover, if the Participant relocates outside the United States or relocates between the countries included in Appendix B, the additional terms and conditions set forth in Appendix A and the special terms and conditions for such country set forth in Appendix B will apply to the Participant, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendices constitute part of the Award Terms.

23. *Imposition of Other Requirements*. The Company reserves the right to impose other requirements on the Participant's participation in the Plan, on the Restricted Share Unit and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require the Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

24. *Compliance with Code Section 409A*. It is intended that the Restricted Share Right granted pursuant to the Award Terms be compliant with Section 409A of the Code and the Award Terms shall be interpreted, construed and operated to reflect this intent. Notwithstanding the foregoing, the Award Terms and the Plan may be amended at any time, without the consent of any party, to the extent necessary or desirable to satisfy any of the requirements under Section 409A of the Code, but the Company shall not be under any obligation to make any such amendment. Further, the Company and its Subsidiaries do not make any representation to the Participant that the Restricted Share Right granted pursuant to the Award Terms satisfies the requirements of Section 409A of the Code, and the Company and its Subsidiaries will have no liability or other obligation to indemnify or hold harmless the Participant or any other party for any tax, additional tax, interest or penalties that the Participant or any other party may incur in the event that any provision of the Award Terms or any amendment or modification thereof or any other action taken with respect thereto, is deemed to violate any of the requirements of Section 409A of the Code.

25. *Waiver*. A waiver by the Company of breach of any provision of the Award Terms shall not operate or be construed as a waiver of any other provision of the Award Terms, or of any subsequent breach by the Participant or any other Participant.

26. *No Advice Regarding Award*. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding the Participant's participation in the Plan, or the Participant's acquisition or sale of the underlying Shares. The Participant is hereby advised to consult with the Participant's own personal tax, legal and financial advisors regarding the Participant's participation in the Plan before taking any action related to the Plan.

27. *Governing Law and Venue.* As stated in the Plan, the Restricted Share Unit and the provisions of the Award Terms and all determinations made and actions taken thereunder, to the extent not otherwise governed by the laws of the United States, shall be governed by the laws of the State of New York, United States of America, without reference to principles of conflict of laws, and construed accordingly. The jurisdiction and venue for any disputes arising under, or any actions brought to enforce (or otherwise relating to), the Restricted Share Unit will be exclusively in the courts in the State of New York, County of New York, including the Federal Courts located therein (should Federal jurisdiction exist).

28. *Electronic Delivery and Acceptance*. The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. The Participant hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

29. *Entire Agreement*. The Award Terms and the Plan embody the entire understanding and agreement of the parties with respect to the subject matter hereof, and no promise, condition, representation or warranty, express or implied, not stated or incorporated by reference herein, shall bind either party hereto.

Acceptance of Award

30. In accordance with Section 15(c) of the Plan (as in effect at the grant date), the Participant may reject the Restricted Share Unit by notifying the Company within 30 days of the grant date that he or she does not accept the Restricted Share Unit. The Participant's acceptance of the Restricted Share Unit constitutes the Participant's acceptance of and agreement with the Award Terms. Notwithstanding the foregoing, if required by the Company, the Participant will provide a signed copy of the Award Terms in such manner and within such timeframe as may be requested by the Company. The Company has no obligation to issue Shares to the Participant if the Participant does not accept the Restricted Share Unit.

Performance Feature

31. If the vesting of a Restricted Share Unit is subject to a performance condition, the following additional terms and conditions will apply to that Award:

- The Participant will have the right to receive from 0% to 200% of the number of Shares indicated on the grant date, based on achievement of performance goals established by the Committee for that Award.
- The performance period is three years. Attainment of performance goals for the three-year period will be determined or certified, as applicable, by the Committee on a date as soon as practicable following the end of the performance period (the "Determination Date").
- Notwithstanding paragraph 2 of the Award Terms, the vesting date of the Award shall be the *later* of the date set forth in paragraph 2 and the Determination Date. To vest in the Award, the Participant

must remain employed with the Company or a Subsidiary until such vesting date, except as otherwise set forth in paragraph 4. In any case, except where payment of the Award is made upon a Change in Control within the meaning of Treas. Reg. § 1.409-3(i)(5), in no event will payment of the Award occur outside of the time period set forth in paragraph 2.

- In the event of termination of the Participant's employment with the Company (including its Subsidiaries) before the vesting of the Restricted Share Unit by reason of death, disability, retirement or divestiture, each as described in paragraph 4, payment of the Restricted Share Unit will be based on the extent to which the performance objectives established by the Committee have been attained following the end of the performance period.
- In the event of a Change in Control, the performance feature of the Award will cease to apply and the Award will be converted into a time-based award in accordance with the formula set forth in Section 12(a)(v) of the Plan. The vesting and payment of such Award will then be governed in accordance with paragraph 4.
- Notwithstanding anything to the contrary in the Award Terms, if the Participant is or may be a Covered Employee, Section 13 of the Plan will be applicable to the Award.

APPENDIX A
TO THE ARCONIC, INC.
2013 Stock Incentive Plan
Terms and Conditions for Restricted Share Units
For Non-U.S. Participants

This Appendix A contains additional (or, if so indicated, different) terms and conditions that govern the Restricted Share Units if the Participant resides and/or works outside of the United States. Capitalized terms used but not defined herein shall have the same meanings assigned to them in the Plan and the Terms and Conditions for Restricted Share Units (the "Terms and Conditions").

A. *Termination*. This provision supplements paragraph 3 of the Terms and Conditions.

The Company will determine when the Participant is no longer providing services for purposes of the Restricted Share Units (including whether the Participant may still be considered to be providing services while on a leave of absence).

B. *Responsibility for Taxes*. This provision replaces paragraph 6 of the Terms and Conditions.

The Participant acknowledges that, regardless of any action taken by the Company or, if different, the Subsidiary that employs the Participant (the "Employer"), the ultimate liability for all income tax, social insurance, payroll tax, fringe benefits tax, payment on account or other tax-related items related to the Participant's participation in the Plan and legally applicable to the Participant ("Tax-Related Items") is and remains the Participant's responsibility and may exceed the amount actually withheld by the Company or the Employer. The Participant further acknowledges that the Company and/or the Employer (a) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of these Restricted Shares Units, including, but not limited to, the grant, vesting or settlement of Restricted Shares Units, the subsequent sale of Shares acquired pursuant to the Restricted Share Unit and the receipt of any dividends or dividend equivalents; and (b) do not commit to and are under no obligation to structure the terms of the Restricted Share Units or any aspect of the Restricted Share Units to reduce or eliminate the Participant's liability for Tax-Related Items or achieve any particular tax result. The Participant shall not make any claim against the Company, the Employer or any other Subsidiary, or their respective board, officers or employees related to Tax-Related Items arising from this Award. Furthermore, if the Participant has become subject to tax in more than one jurisdiction, the Participant acknowledges that the Company and/or the Employer (or former employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

Prior to any relevant taxable or tax withholding event, as applicable, the Participant will pay or make adequate arrangements satisfactory to the Company and/or the Employer to satisfy all Tax-Related Items. In this regard, the Participant authorizes the Company and/or the Employer, or their respective agents, at their discretion, to satisfy their withholding obligations with regard to all Tax-Related Items by: (i) requiring a cash payment from the Participant; (ii) withholding from the Participant's wages or other cash compensation paid to the Participant by the Company and/or the Employer, (iii) withholding from the proceeds of the sale of Shares acquired pursuant to the Restricted Share Units, either through a voluntary sale or through a mandatory sale arranged by the Company (on the Participant's behalf pursuant to this authorization without further consent); and/or (iv) withholding from the Shares subject to Restricted Share Units.

Depending on the withholding method, the Company may withhold or account for Tax-Related Items by considering applicable minimum statutory withholding rates or other applicable withholding rates, including maximum applicable rates, in which case the Participant will receive a refund of any over-withheld amount in cash and will have no entitlement to the Share equivalent. If the obligation for Tax-Related Items is satisfied by withholding in Shares, the Participant is deemed, for tax purposes, to have been issued the full number of Shares subject to the vested Restricted Shares Units, notwithstanding that a number of the Shares is held back solely for the purpose of paying the Tax-Related Items.

Finally, the Participant shall pay to the Company and/or the Employer any amount of Tax-Related Items that the Company and/or the Employer may be required to withhold or account for as a result of the Participant's participation in the Plan that cannot be satisfied by the means previously described. The Company may refuse to issue or deliver the Shares or the proceeds of the sale of Shares if the Participant fails to comply with his or her obligations in connection with the Tax-Related Items.

C. *Nature of Award.* In accepting the Restricted Share Units, the Participant acknowledges, understands and agrees that:

a. the Plan is established voluntarily by the Company, is discretionary in nature and may be modified, amended, suspended, or terminated by the Company at any time, to the extent permitted by the Plan;

b. this Award of Restricted Share Units is voluntary and occasional and does not create any contractual or other right to receive future Restricted Share Units, or benefits in lieu of Restricted Share Units, even if Restricted Share Units have been granted in the past;

c. all decisions with respect to future Restricted Share Units or other Awards, if any, will be at the sole discretion of the Company;

d. this Award of Restricted Share Units and the Participant's participation in the Plan shall not create a right to, or be interpreted as forming an employment or service contract with the Company and shall not interfere with the ability of the Employer to terminate the Participant's employment contract (if any) at any time;

e. the Participant's participation in the Plan is voluntary;

f. this Award of Restricted Share Units and the Shares acquired under the Plan, and the income and value of same, are not part of normal or expected compensation or salary for any purposes, including, without limitation, calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments;

g. the future value of the Shares subject to the Restricted Share Unit is unknown and cannot be predicted with certainty;

h. unless otherwise agreed with the Company, Restricted Share Units and the Shares acquired under the Plan, and the income and value of same, are not granted as consideration for, or in connection with, the service the Participant may provide as a director of any Subsidiary;

i. no claim or entitlement to compensation or damages shall arise from forfeiture of any portion of this Award of Restricted Share Units resulting from termination of the Participant's employment relationship (for any reason whatsoever and regardless of whether later found to be invalid or in breach of applicable laws in the jurisdiction where the Participant is employed or the terms of the Participant's employment agreement, if any), and, in consideration of this Award of Restricted Share Units to which the Participant is not otherwise entitled, the Participant irrevocably agrees never to institute any claim against the Company, the Employer and any other Subsidiary, waives his or her ability, if any, to bring any such claim, and releases the Company, the Employer and all other Subsidiaries from any such claim; if, notwithstanding the foregoing, any such claim is allowed by a court of competent jurisdiction, then, by participating in the Plan, the Participant shall be deemed irrevocably to have agreed not to pursue such claim and agrees to execute any and all documents necessary to request dismissal or withdrawal of such claims;

j. unless otherwise provided in the Plan or by the Company in its discretion, this Award of Restricted Share Units and the benefits under the Plan evidenced by these Award Terms do not create any entitlement to have this Award of Restricted Share Units or any such benefits transferred to, or assumed by, another company nor to be exchanged, cashed out or substituted for, in connection with any corporate transaction affecting the Shares; and

k. neither the Company, the Employer nor any other Subsidiary shall be liable for any foreign exchange rate fluctuation between the Participant's local currency and the United States Dollar that may affect the value of the Restricted Share Units or of any amounts due to the Participant pursuant to the Restricted Share Units or the subsequent sale of any Shares acquired under the Plan.

D. Data Privacy. The Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of the Participant's personal data as described in these Award Terms and any other grant materials by and among, as applicable, the Company, the Employer and any other Subsidiary for the exclusive purpose of implementing, administering and managing the Participant's participation in the Plan.

The Participant understands that the Company and the Employer may hold certain personal information about the Participant, including, but not limited to, the Participant's name, home address, email address and telephone number, date of birth, social insurance number, passport or other identification number, salary, nationality, job title, any shares of stock or directorships held in the Company, details of all Restricted Share Units or any other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in the Participant's favor ("Data"), for the exclusive purpose of implementing, administering and managing the Plan.

The Participant understands that Data may be transferred to Merrill Lynch, which is assisting the Company with the implementation, administration and management of the Plan. The Participant understands that the recipients of Data may be located in the United States or elsewhere, and that the recipients' country (e.g., the United States) may have different data privacy laws and protections than the Participant's country. The Participant understands that the Participant may request a list with the names and addresses of any potential recipients of Data by contacting the Participant's local human resources representative. The Participant authorizes the Company, Merrill Lynch and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the Plan to receive, possess, use, retain and transfer Data, in electronic or other form, for the sole purpose of implementing, administering and managing the Participant's participation in the Plan. The Participant understands that Data will be held only as long as is necessary to implement, administer and manage the Participant's participation in the Plan. The Participant understands that the Participant may, at any time, view Data, request additional information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing the Participant's local human resources representative. Further, the Participant understands that the Participant is providing the consents herein on a purely voluntary basis. If the Participant does not consent, or if the Participant later seeks to revoke the Participant's consent, the Participant's employment and career with the Employer will not be affected; the only consequence of refusing or withdrawing the Participant's consent is that the Company would not be able to grant this Award of Restricted Share Units or other Awards to the Participant or administer or maintain such Awards. Therefore, the Participant understands that refusing or withdrawing the Participant's consent may affect the Participant's ability to participate in the Plan. For more information on the consequences of the Participant's refusal to consent or withdrawal of consent, the Participant understands that the Participant may contact the Participant's local human resources representative.

E. *Retirement*. Notwithstanding paragraph 4 of the Terms and Conditions, if the Company receives an opinion of counsel that there has been a legal judgment and/or legal development in the Participant's jurisdiction that would likely result in the favorable treatment applicable to the Restricted Share Units pursuant to paragraph 4 being deemed unlawful and/or discriminatory, then the Company will not apply the favorable treatment at the time of the Participant's retirement, and the Restricted Share Units will be treated as set forth in the remaining provisions of paragraph 4 of the Terms and Conditions.

F. *Language*. If the Participant has received these Award Terms, or any other document related to this Award of Restricted Share Units and/or the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

G. *Insider Trading Restrictions/Market Abuse Laws*. The Participant acknowledges that, depending on his or her country, the Participant may be subject to insider trading restrictions and/or market abuse laws, which may affect his or her ability to acquire or sell Shares or rights to Shares under the

Plan during such times as the Participant is considered to have “inside information” regarding the Company (as defined by applicable laws in his or her country). Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. The Participant acknowledges that it is his or her responsibility to comply with any applicable restrictions, and the Participant should consult his or her personal advisor on this matter.

H. *Foreign Asset/Account Reporting Requirements, Exchange Controls and Tax Requirements*. The Participant acknowledges that his or her country may have certain foreign asset and/or account reporting requirements and exchange controls which may affect his or her ability to acquire or hold Shares under the Plan or cash received from participating in the Plan (including from any dividends received or sale proceeds arising from the sale of Shares) in a brokerage or bank account outside his or her country. The Participant understands that he or she may be required to report such accounts, assets or transactions to the tax or other authorities in his or her country. The Participant also may be required to repatriate sale proceeds or other funds received as a result of the Participant’s participation in the Plan to his or her country through a designated bank or broker and/or within a certain time after receipt. The Participant acknowledges that it is his or her responsibility to be compliant with all such requirements, and that the Participant should consult his or her personal legal and tax advisors, as applicable, to ensure the Participant’s compliance.

APPENDIX B
TO THE ARCONIC, INC.
2013 Stock Incentive Plan
Terms and Conditions for Restricted Share Units
For Non-U.S. Participants

Capitalized terms used but not defined in this Appendix B have the meanings set forth in the Plan and the Terms and Conditions for Restricted Share Units (the "Terms and Conditions").

Terms and Conditions

This Appendix B includes special terms and conditions that govern Restricted Share Units if the Participant resides and/or works in one of the countries listed below.

If the Participant is a citizen or resident of a country other than the country in which the Participant is currently residing and/or working, or if the Participant transfers to another country after the grant of Restricted Share Units or is considered a resident of another country for local law purposes, the Committee shall, in its discretion, determine to what extent the special terms and conditions contained herein shall be applicable to the Participant.

Notifications

This Appendix B also includes information regarding exchange controls, tax and certain other issues of which the Participant should be aware with respect to participation in the Plan. The information is based on the securities, exchange control, tax and other laws in effect in the respective countries as of January 2016. Such laws are often complex and change frequently. As a result, the Company strongly recommends that the Participant not rely on the information in this Appendix B as the only source of information relating to the consequences of participation in the Plan because the information may be out of date at the time the Participant sells Shares acquired under the Plan.

In addition, the information contained herein is general in nature and may not apply to the Participant's particular situation and the Company is not in a position to assure the Participant of any particular result. Accordingly, the Participant should seek appropriate professional advice as to how the relevant laws in the Participant's country may apply to his or her situation.

Finally, if the Participant is a citizen or resident of a country other than the country in which the Participant currently works and/or resides, or if the Participant transfers to another country after the grant of the Restricted Share Unit, or is considered a resident of another country for local law purposes, the information contained herein may not be applicable to the Participant in the same manner.

AUSTRALIA

Notifications

Exchange Control Information.

Exchange control reporting is required for cash transactions exceeding A$10,000 and for international fund transfers. If an Australian bank is assisting with the transaction, the bank will file the report on the Participant's behalf.

Tax Information.

The Plan is a plan to which Subdivision 83A-C of the Income Tax Assessment Act 1997 (Cth) applies (subject to conditions in the Act).

BELGIUM

Notifications

Foreign Asset/Account Reporting Information.

If the Participant is a Belgian resident, the Participant is required to report any bank accounts opened and maintained outside of Belgium (*e.g.*, brokerage accounts opened in connection with the Plan) on his or her annual tax return. In a separate report, the Participant is required to provide the National Bank of Belgium with certain details regarding such foreign accounts (including the account number, bank name and country in which any such account was opened). This report, as well as additional information on how to complete it, can be found on the website of the National Bank of Belgium, www.nbb.be, under *Kredietcentrales / Centrales des crédits* caption. The Participant should consult with his or her personal tax advisor to determine his or her personal reporting obligations.

BRAZIL

Terms and Conditions

Compliance with Law.

By accepting the Restricted Share Units, the Participant acknowledges that he or she agrees to comply with applicable Brazilian laws and to pay any and all applicable taxes associated with the vesting of the Restricted Share Units, the sale of the Shares acquired under the Plan and the receipt of any dividends.

Acknowledgement of Nature of the Grant.

This provision supplements paragraph C "Nature of Award" of Appendix A:

By accepting the Restricted Share Units, the Participant agrees that he or she is making an investment decision, the Shares will be issued to the Participant only if the vesting conditions are met and any necessary services are rendered by the Participant over the vesting period, and the value of the underlying Shares is not fixed and may increase or decrease in value over the vesting period without compensation to the Participant.

Notifications

Exchange Control Information.

If the Participant is a resident of or domiciled in Brazil, he or she will be required to submit an annual declaration of assets and rights held outside of Brazil to the Central Bank of Brazil if the aggregate value of the assets and rights is equal to or greater than US$100,000. If such amount exceeds US$100,000,000, the declaration must be submitted quarterly. Assets and rights that must be reported include Shares acquired under the Plan.

Tax on Financial Transactions (IOF).

Repatriation of funds (*e.g.*, sale proceeds) into Brazil and the conversion of USD into BRL associated with such fund transfers may be subject to the Tax on Financial Transactions. It is the Participant's responsibility to comply with any applicable Tax on Financial Transactions arising from the Participant's participation in the Plan. The Participant should consult with his or her personal tax advisor for additional details.

CANADA

Terms and Conditions

Award Settled Only in Shares.

Notwithstanding any discretion in the Plan, the Award of Restricted Share Units shall be settled in Shares only. The Participant is not entitled to receive a cash payment pursuant to the Award.

Termination of Service.

The following provision replaces paragraph A "Termination" of Appendix A:

For purposes of the Restricted Share Units, the Participant's employment relationship will be considered terminated (regardless of the reason for such termination and whether or not later found to be invalid or in breach of Canadian laws or the terms of the Participant's employment agreement, if any) effective as of the date that is the earlier of (i) the date of the Participant's termination, (ii) the date the Participant receives notice of termination, or (iii) the date the Participant is no longer actively providing service and will not be extended by any notice period (*e.g.*, active service would not include any contractual notice period or any period of "garden leave" or similar period mandated under Canadian laws or the terms of the Participant's employment agreement, if any). Unless otherwise expressly provided in these Award Terms or determined by the Company, the Participant's right to vest in the Restricted Share Units, if any, will terminate on such date. The Committee shall have the exclusive discretion to determine when the Participant is no longer actively providing service for purposes of the Restricted Share Unit (including whether the Participant may still be considered to be providing services while on a leave of absence).

The Following Provisions Apply for Participants Resident in Quebec:

Consent to Receive Information in English.

The Participant acknowledges that it is the express wish of the parties that these Award Terms, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be written in English.

Les parties reconnaissent avoir exigé la rédaction en anglais de Conditions d'attribution, ainsi que de tous documents, avis et procédures judiciaires, exécutés, donnés ou intentés en vertu de, ou liés directement ou indirectement à, la présente convention.

Authorization to Release and Transfer Necessary Personal Information.

The following provision supplements paragraph D "Data Privacy" of Appendix A:

The Participant hereby authorizes the Company and the Company's representatives to discuss with and obtain all relevant information from all personnel, professional or not, involved in the administration and operation of the Plan. The Participant further authorizes the Company, any Subsidiary and the administrator of the Plan to disclose and discuss the Plan with their advisors. The Participant further authorizes the Company and any Subsidiary to record such information and to keep such information in the Participant's Employee file.

Notifications

Securities Law Information.

The Participant acknowledges that he or she is permitted to sell the Shares acquired under the Plan through the designated broker appointed by the Company, provided the sale of the Shares takes place outside of Canada through facilities of a stock exchange on which the Shares are listed (*i.e.*, the NYSE).

Foreign Asset/Account Reporting Information.

Canadian residents are required to report to the tax authorities any foreign property on form T1135 (Foreign Income Verification Statement) if the total cost of the foreign property exceeds C$100,000 at any time in the year. The form must be filed by April 30 of the following year. Restricted Share Units must be reported—generally at a nil cost—if the C$100,000 cost threshold is exceeded because of other foreign property the Participant holds. If Shares are acquired, their cost generally is the adjusted cost base ("ACB") of the Shares. The ACB would normally equal the fair market value of the Shares at vesting, but if the Participant owns other Shares, this ACB may have to be averaged with the ACB of the other Shares. The Participant should consult with his or her personal legal advisor to ensure compliance with applicable reporting obligations.

CHINA

Terms and Conditions

The following terms and conditions will apply to Participants who are subject to exchange control restrictions and regulations in the People's Republic of China ("PRC"), including the requirements imposed by the State Administration of Foreign Exchange ("SAFE"), as determined by the Company in its sole discretion:

Termination of Employment.

Due to legal restrictions in China, the Participant agrees that the Company reserves the right to require the sale of any Shares acquired at vesting of the Restricted Share Units upon the termination of the Participant's employment for any reason. The Participant hereby authorizes the sale of all Shares issued to the Participant as soon as administratively practicable after the applicable termination of employment and pursuant to this authorization. The Participant further agrees that the Company is authorized to instruct its designated broker to assist with the mandatory sale of such Shares and the Participant expressly authorizes the Company's designated broker to complete the sale of such Shares. The Participant acknowledges that the Company's designated broker is under no obligation to arrange for the sale of the Shares at any particular price. Upon the sale of Shares, the Participant will receive the sale proceeds less any amounts necessary to satisfy Tax-Related Items and applicable transaction fees or commissions. Due to currency exchange conversion rate fluctuation between the applicable vesting date of the Restricted Share Units and (if later) the date on which the Shares are sold, the amount of sale proceeds may be more or less than the fair market value of the Shares on the applicable vesting date (which is the relevant amount for purposes of calculating amounts necessary to satisfy applicable Tax-Related Items).

Exchange Control Restrictions.

The Participant understands and agrees that, pursuant to local exchange control requirements, the Participant will be required to immediately repatriate any cash payments or proceeds obtained with respect to participation in the Plan to the PRC. The Participant further understands that such repatriation of any cash payments or proceeds may need to be effectuated through a special exchange control account established by the Company or any Subsidiary, and the Participant hereby consents and agrees that any payment or proceeds may be transferred to such special account prior to being delivered to the Participant.

Any payment or proceeds may be paid to the Participant in U.S. dollars or local currency at the Company's discretion. If the payments or proceeds are paid to the Participant in U.S. dollars, the Participant will be required to set up a U.S. dollar bank account in the PRC so that the payments or proceeds may be deposited into this account. If the payments or proceeds are paid to the Participant in local currency, the Company is under no obligation to secure any particular exchange conversion rate and the Company may face delays in converting the payments or proceeds to local currency due to exchange control restrictions.

The Participant further agrees to comply with any other requirements that may be imposed by the Company in the future to facilitate compliance with exchange control requirements in the PRC.

CZECH REPUBLIC

Notifications

Foreign Asset/Account Reporting Information.

Upon request of the Czech National Bank, the Participant may be required to file a report in connection with the Restricted Share Units and the opening and maintenance of a foreign account. However, because exchange control regulations change frequently and without notice, the Participant should consult with his or her personal advisor before accepting the Restricted Share Units and before opening any foreign accounts in connection with the Restricted Share Units to ensure compliance with current regulations. The Participant is solely responsible for complying with applicable Czech exchange control laws.

FINLAND

There are no country-specific provisions.

FRANCE

Terms and Conditions

Language Consent.

By accepting the Restricted Share Units and the Award Terms, which provide for the terms and conditions of the Restricted Share Units, the Participant confirms having read and understood the documents relating to this Award (the Plan and the Award Terms, including the Appendices) which were provided to the Participant in English. The Participant accepts the terms of those documents accordingly.

En acceptant l'Attribution d'Actions Attribuées et ce Contrat d'Attribution qui contient les termes et conditions des Actions Attribuées, le Participant confirme avoir lu et compris les documents relatifs à cette attribution (le Plan et le Contrat d'Attribution, ainsi que les Annexes) qui ont été transmis au Participant en langue anglaise. Le Participant accepte ainsi les conditions et termes de ces documents.

Notifications

Foreign Asset/Account Reporting Information.

If the Participant is a French resident, he or she must declare all foreign bank and brokerage accounts (including any accounts that were opened or closed during the tax year) on an annual basis on form No. 3916, together with the Participant's income tax return. Failure to complete this reporting triggers penalties for the Participant. Further, French residents with foreign account balances exceeding €1,000,000 may have additional monthly reporting obligations.

GERMANY

Notifications

Exchange Control Information.

Cross-border payments in excess of €12,500 must be reported monthly to the German Federal Bank (*Bundesbank*). If the Participant makes or receives a payment in excess of this amount, the Participant must report the payment to Bundesbank electronically using the "General Statistics Reporting Portal" ("*Allgemeines Meldeportal Statistik*") available via Bundesbank's website (www.bundesbank.de).

GUINEA

Terms and Conditions

Award Settlement.

Notwithstanding any provision in the Award Terms to the contrary, if deemed by the Company to be necessary for regulatory reasons, the Company reserves the right to settle Restricted Share Units by payment in cash or its equivalent of an amount equal in value to the Shares subject to the vested Restricted Share Units.

HUNGARY

There are no country-specific provisions.

ICELAND

Terms and Conditions

Award Settlement.

Notwithstanding any provision in the Award Terms to the contrary, if deemed by the Company to be necessary for regulatory reasons, the Company reserves the right to settle Restricted Share Units by payment in cash or its equivalent of an amount equal in value to the Shares subject to the vested Restricted Share Units.

ITALY

Terms and Conditions

Authorization to Release and Transfer Necessary Personal Information**.** The following provision replaces in its entirety paragraph D. “Data Privacy” of Appendix A:

The Participant understands that the Employer and/or the Company may hold certain personal information about the Participant, including, but not limited to, the Participant’s name, home address and telephone number, date of birth, social security number (or any other social or national identification number), salary, nationality, job title, number of Shares held and the details of all Restricted Share Units or any other entitlement to Shares awarded, cancelled, exercised, vested, unvested or outstanding (the “Data”) for the exclusive purpose of implementing, administering and managing the Participant’s participation in the Plan. The Participant is aware that providing the Company with the Participant’s Data is necessary for the performance of the Award Terms and that the Participant’s refusal to provide such Data would make it impossible for the Company to perform its contractual obligations and may affect the Participant’s ability to participate in the Plan.

The Controller of personal data processing is Arconic, Inc., 390 Park Avenue, New York City, New York, 10022 U.S.A., and, pursuant to D.lgs 196/2003, its representative in Italy is Fusina Rolling Srl, Piazza Giuseppe Missori n.2, Milano, 20122 Italy. The Participant understands that the Data may be transferred to the Company or any of its Subsidiaries, or to any third parties assisting in the implementation, administration and management of the Plan, including any transfer required to Merrill Lynch with whom Shares acquired pursuant to the vesting of the Restricted Share Units or cash from the sale of such Shares may be deposited. Furthermore, the recipients that may receive, possess, use, retain and transfer such Data for the above mentioned purposes may be located in Italy or elsewhere, including outside of the European Union and the recipients’ country (e.g., the United States) may have different data privacy laws and protections than the Participant’s country. The processing activity, including the transfer of the Participant’s personal data abroad, outside of the European Union, as herein specified and pursuant to applicable laws and regulations, does not require the Participant’s consent thereto as the processing is necessary for the performance of contractual obligations related to the implementation, administration and management of the Plan. The Participant understands that Data processing relating to the purposes above specified shall take place under automated or non-automated conditions, anonymously when possible, that comply with the purposes for which Data are collected and with confidentiality and security provisions as set forth by applicable laws and regulations, with specific reference to D.lgs. 196/2003.

The Participant understands that Data will be held only as long as is required by law or as necessary to implement, administer and manage the Participant's participation in the Plan. Participant understands that pursuant to art.7 of D.lgs 196/2003, the Participant has the right, including but not limited to, access, delete, update, request the rectification of the Data and cease, for legitimate reasons, the Data processing. Furthermore, the Participant is aware that the Data will not be used for direct marketing purposes. In addition, the Data provided can be reviewed and questions or complaints can be addressed by contacting a local human resources representative.

Plan Document Acknowledgement

By accepting the Restricted Share Units, the Participant acknowledges that the Participant has received a copy of the Plan and the Award Terms and has reviewed the Plan and the Award Terms, including the Appendices, in their entirety and fully understands and accepts all provisions of the Plan and the Award Terms, including the Appendices. The Participant further acknowledges that the Participant has read and specifically and expressly approves the following paragraphs of the Award Terms: paragraphs 2-5: Vesting and Payment; paragraph 15: Repayment and Forfeiture; paragraph 16: Stock Exchange Requirements and Applicable Laws; paragraph 20: Severability and Judicial Modification; paragraph 22: Appendices; paragraph 23: Imposition of Other Requirements; paragraph 27: Governing Law and Venue; paragraph A of Appendix A: Termination; paragraph C of Appendix A: Nature of Award and the Data Privacy provisions above.

Notifications

Foreign Asset/Account Reporting Information.

Italian residents who, during the fiscal year, hold investments abroad or foreign financial assets (*e.g.*, cash, Shares) which may generate income taxable in Italy are required to report such on their annual tax returns (UNICO form, RW Schedule) or on a special form if no tax return is due. The same reporting obligations apply to Italian residents who, even if they do not directly hold investments abroad or foreign financial assets (*e.g*., cash, Shares), are beneficial owners of the investment pursuant to Italian money laundering provisions.

Tax on Foreign Financial Assets.

The value of the financial assets held outside of Italy by Italian residents is subject to a foreign asset tax at an annual rate of 2 per thousand (0.2%). The taxable amount will be the fair market value of the financial assets (including Shares) assessed at the end of the calendar year. No tax payment duties arise if the amount of the foreign assets tax calculated on all financial assets held abroad does not exceed €12.

JAMAICA

There are no country-specific provisions.

JAPAN

Notifications

Foreign Asset/Account Reporting Information.

The Participant will be required to report details of any assets held outside of Japan as of December 31 (including any Shares acquired under the Plan) to the extent such assets have a total net fair market value exceeding ¥50,000,000. Such report will be due by March 15 of the following year. The Participant should consult with his or her personal tax advisor as to whether the reporting obligation applies to the Participant and whether the Participant will be required to report details of any outstanding Restricted Share Units, Shares or cash held by the Participant in the report.

KOREA

Notifications

Exchange Control Information.

Exchange control laws require Korean residents who realize US$500,000 or more from the sale of Shares or the receipt of dividends in a single transaction to repatriate the proceeds back to Korea within three years of the sale/receipt.

Foreign Asset/Account Reporting Information.

If the Participant is a Korean resident, the Participant must declare all of his or her foreign financial accounts (including any brokerage account) to the Korean tax authority and file a report with respect to such accounts if the value of such accounts exceeds KRW 1 billion (or an equivalent amount in foreign currency). The Participant should consult with his or her personal tax advisor as to whether the reporting obligation applies.

MEXICO

Terms and Conditions

Policy Statement.

The Award of Restricted Share Units is a unilateral and discretionary award and, therefore, the Company reserves the absolute right to amend it and discontinue it at any time without any liability.

The Company, with offices at *390 Park Avenue, New York City, New York, 10022 U.S.A.*, is solely responsible for the administration of the Plan, and participation in the Plan and the Award of the Restricted Share Units does not, in any way, establish an employment relationship between the Participant and the Company since the Participant is participating in the Plan on a wholly commercial basis and the sole employer is a Mexican Subsidiary, nor does it establish any rights between the Participant and the Employer.

Plan Document Acknowledgment.

By accepting the Restricted Share Units, the Participant acknowledges that he or she has received copies of the Plan, has reviewed the Plan and the Award Terms in their entirety, and fully understands and accepts all provisions of the Plan and the Award Terms, including the Appendices.

In addition, the Participant expressly approves that: (i) participation in the Plan does not constitute an acquired right; (ii) the Plan and participation in the Plan is offered by the Company on a wholly discretionary basis; (iii) participation in the Plan is voluntary; and (iv) neither the Company nor any Subsidiary is responsible for any decrease in the value of the Shares acquired upon vesting of the Restricted Share Units.

Finally, the Participant hereby declares that he or she does not reserve any action or right to bring any claim against the Company for any compensation or damages as a result of his or her participation in the Plan and therefore grant a full and broad release to the Employer, the Company and its other Subsidiaries with respect to any claim that may arise under the Plan.

Spanish Translation

Declaración de Política.

El Otorgamiento de Unidades de Acciones Restringidas es un otorgamiento unilateral y discrecional y, por lo tanto, la Compañía se reserva el derecho absoluto de modificar y discontinuar el Plan en cualquier tiempo, sin responsabilidad alguna.

La Compañía, con oficinas registradas ubicadas en 390 Park Avenue, New York, New York 10022 U.S.A., es únicamente responsable de la administración del Plan, y la participación en el Plan y el Otorgamiento de Unidades de Acciones Restringidas no establecen, de forma alguna, una relación de trabajo entre el Participante y la Compañía, ya que el Participante está participando en el Plan sobre una base comercial y el único patrón es una Afiliada Mexicana y tampoco establece ningún derecho entre usted y el Patrón.

Reconocimiento del Documento del Plan.

Al aceptar el Otorgamiento de las Unidades de Acciones Restringidas, el Participante reconoce que ha recibido copias del Plan, ha revisado el Plan y los Términos del Otorgamiento en su totalidad y que entiende y acepta completamente todas las disposiciones contenidas en el Plan y en los Términos del Otorgamiento, incluyendo los Apéndices.

Adicionalmente, el Participante aprueba expresamente que (i) la participación en el Plan no constituye un derecho adquirido; (ii) el Plan y la participación en el Plan se ofrecen por la Compañía de forma enteramente discrecional; (iii) la participación en el Plan es voluntaria; y (iv) la Compañía, cualquier Filial y el Patrón no son responsables por cualquier disminución en el valor de las Acciones adquiridas al momento de tener derecho en relación con las Unidades de Acciones Restringidas.

Finalmente, el Participante declara que no se reserva ninguna acción o derecho para interponer una reclamación o demanda en contra de la Compañía por compensación, daño o perjuicio alguno como resultado de su participación en el Plan y, por lo tanto, otorga el más amplio y total finiquito al Patrón, la Compañía y sus Filiales en relación con cualquier reclamación demanda que pudiera surgir de conformidad con el Plan.

NETHERLANDS

There are no country-specific provisions.

NORWAY

There are no country-specific provisions.

POLAND

Notifications

Exchange Control Information.

Polish residents holding foreign securities (including Shares) and maintaining accounts abroad (including any brokerage account) must report information to the National Bank of Poland on transactions and balances of the securities and cash deposited in such accounts if the value of such securities and cash (calculated individually or together with all other assets/liabilities held abroad) exceeds a specified threshold (currently PLN 7,000,000). If required, the reports are due on a quarterly basis on special forms available on the website of the National Bank of Poland. Further, any transfer of funds in excess of a specified threshold (currently €15,000) must be effected through a bank account in Poland. The Participant should maintain evidence of such foreign exchange transactions for five (5) years, in case of a request for their production by the National Bank of Poland.

RUSSIA

Terms and Conditions

U.S. Transaction.

The Participant understands that the grant of the Restricted Share Units is a right to receive Shares if certain conditions are met and that the offer is made by the Company in the United States. Upon vesting of the Restricted Share Units, any Shares to be issued to the Participant shall be delivered to the Participant through a brokerage account in the United States. The Participant is not permitted to sell Shares directly to other Russian legal entities or residents.

Notifications

Exchange Control Information.

Upon the sale of Shares acquired under the Plan, the Participant must repatriate the proceeds of the sale back to Russia within a reasonably short time after receipt. The Participant may remit proceeds to Participant's foreign currency account at an authorized bank in Russia or in a foreign bank account opened in accordance with Russian exchange control laws. The Participant is encouraged to contact the Participant's personal advisor before remitting the Participant's sale proceeds to Russia.

Securities Law Information.

The grant of the Restricted Share Units and the distribution of the Plan and all other materials the Participant may receive regarding participation in the Plan do not constitute an offering or the advertising of securities in Russia. The issuance of Shares pursuant to the Plan has not and will not be registered in Russia and, therefore, the Shares may not be used for an offering or public circulation in Russia. In no event will Shares be delivered to the Participant in Russia; all Shares acquired under the Plan will be maintained on the Participant's behalf in the United States.

Data Privacy Acknowledgement.

The Participant hereby acknowledges that he or she has read and understands the terms regarding collection, processing and transfer of Data contained in Appendix A to the Award Terms and by participating in the Plan, the Participant agrees to such terms. In this regard, upon request of the Company or the Employer, the Participant agrees to provide an executed data privacy consent form to the Company or the Employer (or any other agreements or consents that may be required by the Company or the Employer) that the Company and/or the Employer may deem necessary to obtain under the data privacy laws of Russia, either now or in the future.

Labor Law Information.

If the Participant continues to hold Shares after involuntary termination, the Participant may not be eligible to receive unemployment benefits in Russia.

SOUTH AFRICA

Notifications

Tax Reporting Information.

By accepting the Restricted Share Units, the Participant agrees to notify the Employer of the amount of income realized at vesting of the Restricted Share Units. If the Participant fails to advise the Employer of the income at vesting, the Participant may be liable for a fine. The Participant will be responsible for paying any difference between the actual tax liability and the amount withheld.

Exchange Control Information.

The Participant is solely responsible for complying with applicable South African exchange control regulations. Since the exchange control regulations change frequently and without notice, the Participant should consult his or her legal advisor prior to the acquisition or sale of Shares acquired under the Plan to ensure compliance with current regulations. As it is the Participant's responsibility to comply with South African exchange control laws, neither the Company, the Employer nor any other Subsidiary will be liable for any fines or penalties resulting from the Participant's failure to comply with applicable laws.

SPAIN

Terms and Conditions

No Entitlement for Claims or Compensation.

The following provisions supplement paragraph A "Termination" of Appendix A.

By accepting the Restricted Share Units, the Participant consents to participation in the Plan and acknowledges that Participant has received a copy of the Plan.

The Participant understands and agrees that, as a condition of the grant of the Restricted Share Units, if the Participant's employment terminates, unless otherwise provided in the Award Terms or by the Company, any unvested Restricted Share Units shall be forfeited without entitlement to the underlying Shares or to any amount as indemnification in the event of a termination, including, but not limited to: resignation, disciplinary dismissal adjudged to be with cause, disciplinary dismissal adjudged or recognized to be without cause, individual or collective layoff on objective grounds, whether adjudged to be with cause or adjudged or recognized to be without cause, material modification of the terms of employment under Article 41 of the Workers' Statute, relocation under Article 40 of the Workers' Statute, Article 50 of the Workers' Statute, unilateral withdrawal by the Employer, and under Article 10.3 of Royal Decree 1382/1985.

The Participant understands that the Company has unilaterally, gratuitously and in its sole discretion decided to grant Restricted Share Units under the Plan to individuals who may be Employees of the Company or a Subsidiary. The decision is limited and entered into based upon the express assumption and condition that any Restricted Share Units will not economically or otherwise bind the Company or any Subsidiary, including the Employer, on an ongoing basis, other than as expressly set forth in the Award Terms. Consequently, the Participant understands that the Restricted Share Units are granted on the assumption and condition that the Restricted Share Units shall not become part of any employment or service agreement (whether with the Company or any Subsidiary, including the Employer) and shall not be considered a mandatory benefit, salary for any purpose (including severance compensation) or any other right whatsoever. Furthermore, the Participant understands and freely accepts that there is no guarantee that any benefit whatsoever shall arise from the grant of Restricted Share Units, which is gratuitous and discretionary, since the future value of the Restricted Share Units and the underlying Shares is unknown and unpredictable. The Participant also understands that the grant of Restricted Share Units would not be made but for the assumptions and conditions set forth hereinabove; thus, the Participant understands, acknowledges and freely accepts that, should any or all of the assumptions be mistaken or any of the conditions not be met for any reason, the Restricted Share Unit and any right to the underlying Shares shall be null and void.

Notifications

Securities Law Information.

No "offer of securities to the public", as defined under Spanish law, has taken place or will take place in the Spanish territory with respect to the Restricted Share Units. No public offering prospectus has been nor will be registered with the Comisión Nacional del Mercado de Valores (Spanish Securities Exchange Commission) ("*CNMV*"). Neither the Plan nor the Award Terms constitute a public offering prospectus and they have not been, nor will they be, registered with the CNMV.

Exchange Control Information.

It is the Participant's responsibility to comply with exchange control regulations in Spain. The Participant must declare the acquisition of Shares for statistical purposes to the Spanish Direccion General de Comercio e Inversiones (the "*DGCI*") of the Ministry of Economy and Competitiveness. In addition, the Participant must also file a Form D-6 with the Directorate of Foreign Transaction each January in which the Shares are owned. The sale of Shares also must be declared on Form D-6 filed with the DGCI in January, unless the sale proceeds exceed the applicable threshold (currently €1,502,530), in which case, the filing is due within one month after the sale.

Foreign Asset/Account Reporting Information.

The Participant is required to declare electronically to the Bank of Spain any securities accounts (including brokerage accounts held abroad), as well as the Shares held in such accounts if the value of the transactions during the prior tax year or the balances in such accounts as of December 31 of the prior tax year exceed €1,000,000.

Further, to the extent that the Participant holds Shares and/or has bank accounts outside Spain with a value in excess of €50,000 (for each type of asset) as of December 31, the Participant will be required to report information on such assets on his or her tax return (tax form 720) for such year. After such Shares and/or accounts are initially reported, the reporting obligation will apply for subsequent years only if the value of any previously-reported Shares or accounts increases by more than €20,000 or if the Participant sells or otherwise disposes of any previously-reported Shares or accounts.

SURINAME

Terms and Conditions

Award Settlement.

Notwithstanding any provision in the Award Terms to the contrary, if deemed by the Company to be necessary for regulatory reasons, the Company reserves the right to settle Restricted Share Units by payment in cash or its equivalent of an amount equal in value to the Shares subject to the vested Restricted Share Units.

SWITZERLAND

Notifications

Securities Law Information.

The grant of the Restricted Share Units under the Plan is considered a private offering in Switzerland and is, therefore, not subject to registration in Switzerland. Neither this document nor any other material related to the Restricted Share Units constitutes a prospectus as such term is understood pursuant to Article 652a of the Swiss Code of Obligations, and neither this document nor any other materials related to the Restricted Share Units may be publicly distributed or otherwise made publicly available in Switzerland.

UNITED KINGDOM

Terms and Conditions

Responsibility for Taxes.

The following supplements paragraph B "Responsibility for Taxes" of Appendix A:

The Participant shall pay to the Company or the Employer any amount of income tax that the Company or the Employer may be required to account to Her Majesty's Revenue & Customs ("*HMRC*") with respect to the event giving rise to the income tax (the "*Taxable Event*") that cannot be satisfied by the means described in paragraph B of

Appendix A. If payment or withholding of the income tax due is not made within ninety (90) days of the end of the U.K. tax year in which the Taxable Event occurs or such other period as required under U.K. law (the "*Due Date*"), the Participant agrees that the amount of any uncollected income tax shall constitute a loan owed by the Participant to the Employer, effective on the Due Date. The Participant agrees that the loan will bear interest at the then-current HMRC Official Rate, it will be immediately due and repayable, and the Company or the Employer may recover it at any time thereafter by any of the means referred to in paragraph B of Appendix A. If the Participant fails to comply with his or her obligations in connection with the income tax as described in this section, the Company may refuse to deliver the Shares acquired under the Plan.

Notwithstanding the foregoing, if the Participant is a Director or executive officer of the Company (within the meaning of Section 13(k) of the U.S. Securities Exchange Act of 1934), the Participant shall not be eligible for a loan from the Company to cover income tax. In the event that the Participant is a Director or executive officer and income tax is not collected from or paid by the Participant by the Due Date, the amount of any uncollected income tax may constitute a benefit to the Participant on which additional income tax and National Insurance contributions ("*NICs*") may be payable. The Participant will be responsible for reporting and paying any income tax due on this additional benefit directly to HMRC under the self-assessment regime and for reimbursing the Company or the Employer for the value of any employee NICs due on this additional benefit, which the Company or the Employer may recover by any of the means referred to in paragraph B of Appendix A.

Exhibit 12

COMPUTATIONS OF RATIO OF EARNINGS TO FIXED CHARGES AND RATIO OF EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS

(in millions, except ratios)

For the year ended December 31,	2016	2015	2014	2013	2012
Earnings:					
Income (loss) from continuing operations before income taxes	$ 414	$183	$113	$ 931	$ 659
Noncontrolling interests' share of earnings of majority-owned subsidiaries without fixed charges	-	-	-	-	-
Equity loss (income)	(22)	6	18	(12)	(99)
Fixed charges added to earnings	556	534	512	493	533
Distributed income of less than 50 percent-owned persons	66	152	86	89	101
Amortization of capitalized interest:					
Consolidated	36	42	47	46	44
Proportionate share of 50 percent-owned persons	-	-	-	-	-
Total earnings	$1,050	$917	$776	$1,547	$1,238
Fixed Charges:					
Interest expense:					
Consolidated	$ 526	$498	$473	$ 453	$ 490
Proportionate share of 50 percent-owned persons	-	-	-	-	-
	526	498	473	453	490
Amount representative of the interest factor in rents:					
Consolidated	30	36	39	40	43
Proportionate share of 50 percent-owned persons	-	-	-	-	-
	30	36	39	40	43
Fixed charges added to earnings	556	534	512	493	533
Interest capitalized:					
Consolidated	45	57	56	99	93
Proportionate share of 50 percent-owned persons	-	-	-	-	-
	45	57	56	99	93
Preferred stock dividend requirements of majority-owned subsidiaries	-	-	-	-	-
Total fixed charges	$ 601	$591	$568	$ 592	$ 626
Pretax earnings required to pay preferred stock dividends*	107	107	32	3	3
Combined total fixed charges and preferred stock dividends	$ 708	$698	$600	$ 595	$ 629
Ratio of earnings to fixed charges	1.7	1.6	1.4	2.6	2.0
Ratio of earnings to combined fixed charges and preferred stock dividends	1.5	1.3	1.3	2.6	2.0

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

Exhibit 21

SUBSIDIARIES OF THE REGISTRANT
(As of December 31, 2016)

Name	State or Country of Organization
Arconic Domestic LLC	Delaware
Arconic Securities LLC	Delaware
Howmet International Inc.	Delaware
Howmet Holdings Corporation	Delaware
Howmet Corporation	Delaware
Howmet Castings & Services, Inc.	Delaware
Arconic International Holding Company LLC	Delaware
Arconic (China) Investment Company Ltd.	China
Arconic Luxembourg S.à r.l.	Luxembourg
Arconic Inversiones España S.L.	Spain
Arconic Holding GmbH	Germany
Arconic Inversiones Internacionales S.L.	Spain
Arconic-Köfém Kft	Hungary
OOO Arconic Rus Investment Holdings	Russia
ZAO Alcoa SMZ	Russia
Howmet SAS	France
Arconic Holding France SAS	France
Arconic UK Holdings Limited	United Kingdom
Arconic Manufacturing (G.B.) Limited	United Kingdom
Alumax Inc.	Delaware
Alumax Mill Products, Inc.	Delaware
Cordant Technologies Holding Company	Delaware
Arconic Global Fasteners & Rings, Inc.	Delaware
Huck International, Inc.	Delaware
FR Acquisition Corporation U.S., Inc.	Delaware
JFB Firth Rixson, Inc.	Delaware
RTI International Metals, Inc.	Ohio
RMI Titanium Company, LLC	Ohio

The names of particular subsidiaries have been omitted because, considered in the aggregate as a single subsidiary, they would not constitute, as of the end of the year covered by this report, a “significant subsidiary” as that term is defined in Regulation S-X under the Securities Exchange Act of 1934.

Exhibit 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-197371) and Form S-8 (Nos. 333-32516, 333-106411, 333-128445, 333-146330, 333-153369, 333-155668, 333-159123, 333-168428, 333-170801, 333-182899, 333-189882, 333-205829, 333-203275, 333-209777, and 333-212246) of Arconic Inc. and its subsidiaries of our report dated February 28, 2017 relating to the consolidated financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Pittsburgh, Pennsylvania
February 28, 2017

Exhibit 24

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that each of the undersigned Directors of Arconic Inc. (the “Company”) hereby constitutes and appoints KENNETH J. GIACOBBE, PETER HONG, W. PAUL MYRON and KATHERINE H. RAMUNDO, or any of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution, to do any and all acts and things and to execute any and all instruments that said attorneys-in-fact and agents, or any of them, may deem necessary or advisable or may be required:

(1) To enable the Company to comply with the Securities Exchange Act of 1934, as amended (the “1934 Act”), and any rules, regulations or requirements of the Securities and Exchange Commission (the “Commission”) in respect thereof, in connection with the filing under the 1934 Act of the Company’s Annual Report on Form 10-K for the year ended December 31, 2016 (the “2016 Annual Report”), including specifically, but without limiting the generality of the foregoing, power and authority to sign the name of each of the undersigned in the capacity of Director of the Company to the 2016 Annual Report to be filed with the Commission and to any instruments or documents filed as part of or in connection with the 2016 Annual Report, including any amendments or supplements thereto;

(2) To enable the Company to comply with the Securities Act of 1933, as amended (the “1933 Act”), and any rules, regulations or requirements of the Commission in respect thereof, in connection with the registration under the 1933 Act during 2017 of the offer and sale or delivery of shares of common stock of the Company to be issued under the 2013 Alcoa Stock Incentive Plan, as such plan may be amended and/or restated from time to time (including any amendments thereto or restatements thereof, the “2013 Plan”), the 2009 Alcoa Stock Incentive Plan (the “2009 Plan”), the 2004 Alcoa Stock Incentive Plan (the “2004 Plan”), the Alcoa Stock Incentive Plan (the “Stock Incentive Plan”) or the Long Term Stock Incentive Plan of Aluminum Company of America (the “Long Term Stock Incentive Plan”), including specifically, but without limiting the generality of the foregoing, power and authority to sign the name of each of the undersigned in the capacity of Director of the Company to any registration statement on Form S-8, or on such other form as may be appropriate, to be filed with the Commission in respect of said shares and the 2013 Plan, the 2009 Plan, the 2004 Plan, the Stock Incentive Plan or the Long Term Stock Incentive Plan, or any of them, to any and all pre-effective amendments, post-effective amendments and supplements to any such registration statement, and to any instruments or documents filed as part of or in connection with any such registration statement or any such amendments or supplements thereto; and

(3) To enable the Company to comply with the 1933 Act, and any rules, regulations or requirements of the Commission in respect thereof, in connection with the registration under the 1933 Act during 2017 of the offer and sale or delivery of shares of common stock of the Company to be issued under the Company’s employee retirement savings plans (together with interests in such plans), including, without limitation, the Arconic Bargaining Retirement Savings Plan, the Arconic Salaried Retirement Savings Plan, the Arconic Hourly Non-Bargaining Retirement Savings Plan, the Arconic Fastener Systems and Rings Retirement Savings Plan, the Arconic Retirement Savings Plan for ATEP Bargaining Employees, and employee retirement or other savings plans sponsored by the Company or its subsidiaries or entities acquired by the Company from time to time (the “Plans”), including specifically, but without limiting the generality of the foregoing, power and authority to sign the name of each of the undersigned in the capacity of Director of the Company to any registration statement on Form S-8, or on such other form as may be appropriate, to be filed with the Commission in respect of said shares and the Plans (or interests in such Plans), or any of them, to

any and all pre-effective amendments, post-effective amendments and supplements to any such registration statement, and to any instruments or documents filed as part of or in connection with any such registration statement or any such amendments or supplements thereto; and

granting unto each of said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as the undersigned might or could do in person, and each of the undersigned hereby ratifies and confirms all that said attorneys-in-fact and agents, or any of them, shall do or cause to be done by virtue hereof.

This power of attorney will be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania. The execution of this power of attorney is not intended to, and does not, revoke any prior powers of attorney. This power of attorney may be signed in any number of counterparts, each of which shall constitute an original and all of which, taken together, shall constitute one power of attorney.

IN WITNESS WHEREOF, each of the undersigned has subscribed these presents this 13th day of January 2017.

/s/ Amy E. Alving Amy E. Alving	/s/ L. Rafael Reif L. Rafael Reif
/s/ Arthur D. Collins, Jr. Arthur D. Collins, Jr.	/s/ Julie G. Richardson Julie G. Richardson
/s/ Rajiv L. Gupta Rajiv L. Gupta	/s/ Patricia F. Russo Patricia F. Russo
/s/ Sean O. Mahoney Sean O. Mahoney	/s/ Ulrich R. Schmidt Ulrich R. Schmidt
/s/ E. Stanley O’Neal E. Stanley O’Neal	/s/ Martin Sorrell Martin Sorrell
/s/ John C. Plant John C. Plant	/s/ Ratan N. Tata Ratan N. Tata

Exhibit 31

Certifications

I, Klaus Kleinfeld, certify that:

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

Date: February 28, 2017

/s/ Klaus Kleinfeld
Name: Klaus Kleinfeld
Title: Chairman and Chief Executive Officer

I, Ken Giacobbe, certify that:

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

Date: February 28, 2017

/s/ Ken Giacobbe

Name: Ken Giacobbe

Title: Executive Vice President and Chief Financial Officer

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

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

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

Dated: February 28, 2017	/s/ Klaus Kleinfeld	
	Name:	Klaus Kleinfeld
	Title:	Chairman and Chief Executive Officer
Dated: February 28, 2017	/s/ Ken Giacobbe	
	Name:	Ken Giacobbe
	Title:	Executive Vice President and Chief Financial Officer

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

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