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

Amendment No. 1
to
FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ALCOA INC.
(Exact Name of Registrant as Specified in its Charter)

Pennsylvania
(State or Other Jurisdiction of
Incorporation or Organization)

25-0317820
(I.R.S. Employer
Identification Number)

390 Park Avenue
New York, New York 10022-4608
212-836-2600
(Address, including Zip Code, and Telephone Number, including Area Code, of Registrant's Principal Executive Offices)

Audrey Strauss
Executive Vice President, Chief Legal Officer and Secretary
Alcoa Inc.
390 Park Avenue
New York, New York 10022-4608
212-836-2731
(Name, Address, including Zip Code, and Telephone Number, including Area Code, of Agent for Service)

Copy to:
Karessa L. Cain
Wachtell, Lipton, Rosen & Katz
51 West 52nd Street
New York, New York 10019
212-403-1000

Approximate date of commencement of proposed sale to the public: From time to time after the effectiveness of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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

Large accelerated filer Accelerated filer

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

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered(1)	Proposed maximum offering price per unit(2)	Proposed maximum aggregate offering price(2)	Amount of registration fee
Common Stock, \$1.00 par value per share	36,523,010 shares	\$14.78	\$539,810,088	\$62,726(3)

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also covers an indeterminate number of shares of common stock that may be issued as a result of a stock split, stock dividend, recapitalization or other similar adjustment of the outstanding common stock.
- (2) Estimated solely for the purpose of calculating the registration fee under Rule 457(c) of the Securities Act, based on the average of the high and low prices of \$15.07 and \$14.49, respectively, of the registrant's common stock on the New York Stock Exchange on December 17, 2014.
- (3) Previously paid.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment that specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. The securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, Dated January 14, 2015

PROSPECTUS



Alcoa Inc.

36,523,010 Shares of Common Stock

This prospectus relates to the resale of up to 36,523,010 shares of common stock of Alcoa Inc. that may be offered and sold from time to time by the selling shareholder named in this prospectus and, if applicable, by such selling shareholder's permitted transferees identified as selling shareholders in a prospectus supplement that will be filed to update this prospectus. The shares of common stock offered under this prospectus were initially issued to Firth Rixson (Cyprus) Limited, a private company limited by shares incorporated under the laws of the Republic of Cyprus in a private placement in connection with our acquisition of the Firth Rixson business on November 19, 2014. We are registering the offer and sale of the shares to satisfy certain registration rights we have granted. We will not receive any of the proceeds from the sale of the shares hereunder.

The selling shareholder and its permitted transferees may sell the shares of common stock described in this prospectus in a number of different ways and at varying prices. We provide more information about how the selling shareholder and its permitted transferees may sell shares of common stock using this prospectus in the section titled "Plan of Distribution." We have agreed to bear the expenses (excluding any underwriting discounts or commissions, broker or dealer commissions, transfer taxes, and out-of-pocket expenses of the selling shareholder and its permitted transferees (other than certain legal expenses)) in connection with the registration of the common stock being offered under this prospectus.

Our common stock is listed on the New York Stock Exchange under the symbol "AA." The last reported sale price on January 13, 2015 was \$[] per share.

Investing in the offered securities involves risks. See "[Risk Factors](#)" on page 5 of this prospectus and the risk factors described in the documents we incorporate by reference.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this Prospectus is , 2014.

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ABOUT THIS PROSPECTUS

This prospectus relates to the resale of up to an aggregate of 36,523,010 shares of common stock, which shares were issued by us on November 19, 2014 in connection with the completion of our acquisition of the Firth Rixson business. We will not receive any proceeds from the sale of the shares offered pursuant to this prospectus.

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process. Under this shelf registration process, the selling shareholder and, if applicable, its permitted transferees that will be identified as selling shareholders in a prospectus supplement that will be filed to this prospectus may, from time to time, offer and sell shares of our common stock, as described in this prospectus, in one or more offerings. To the extent we file any prospectus supplements, such prospectus supplements may add, update or change information contained in this prospectus to the extent permitted by the Securities Act of 1933, as amended (the “Securities Act”). You should read both this prospectus and any prospectus supplement together with additional information described under the heading “Where You Can Find More Information.”

You should rely only on the information contained or incorporated by reference in this prospectus, any prospectus supplement and any related free writing prospectus we prepare or authorize. We have not, the selling shareholder has not, and none of the selling shareholder’s permitted transferees have, authorized anyone to give you any other information. We and the selling shareholder and its permitted transferees take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should not assume that the information contained or incorporated by reference in this prospectus or any prospectus supplement is accurate as of any date other than the date of the document containing the information. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Unless otherwise indicated, or the context otherwise requires, references in this prospectus to “Alcoa,” “the Company,” “we,” “us” and “our” are to Alcoa Inc. and its consolidated subsidiaries.

WHERE YOU CAN FIND MORE INFORMATION

Available Information

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document we file with the SEC at the SEC's Public Reference Room in Washington, D.C. located at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. The SEC maintains an Internet site at <http://www.sec.gov>, which contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. Our SEC filings are available to the public from the SEC's Internet site. Information about us is also available at our Internet site at <http://www.alcoa.com>. The information on our Internet site is not a part of this prospectus or any prospectus supplement.

This prospectus is part of a registration statement that we have filed with the SEC relating to the securities to be offered. This prospectus does not contain all of the information we have included in the registration statement and the accompanying exhibits and schedules in accordance with the rules and regulations of the SEC, and we refer you to the omitted information. The statements this prospectus makes pertaining to the content of any contract, agreement or other document that is an exhibit to the registration statement or otherwise filed with the SEC are necessarily summaries of their material provisions and do not describe all provisions, exceptions and qualifications contained in those contracts, agreements or documents. You should read those contracts, agreements or documents for information that may be important to you. The registration statement, exhibits and schedules are available at the SEC's Public Reference Room or through its Internet site.

Incorporation by Reference

The rules of the SEC allow us to incorporate by reference in this prospectus the information in other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus, and certain information in documents that we file later with the SEC will automatically update and supersede information contained in documents filed earlier with the SEC or contained in this prospectus. We incorporate by reference in this prospectus the documents listed below and any future filings that we may make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), on or after the date of this prospectus and before the termination of the offering (except that we are not incorporating by reference, in any case, any document or information that is not deemed to be "filed" and that is not specifically incorporated by reference in this prospectus):

- Our Annual Report on Form 10-K for the year ended December 31, 2013;
- Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2014, June 30, 2014 and September 30, 2014; and
- Our Current Reports on Form 8-K filed January 10, 2014 (Item 1.01 and Exhibit 99.1 of Item 9.01), January 21, 2014, January 23, 2014, February 21, 2014, March 18, 2014, April 14, 2014 (Item 8.01), May 8, 2014 (Item 5.07), June 27, 2014 (Items 1.01 and 3.02 and Exhibits 2.1, 10.1 and 10.2 of Item 9.01), July 31, 2014, August 25, 2014, September 15, 2014, September 17, 2014 (of which there are two), September 22, 2014 (of which there are two), October 16, 2014, October 31, 2014 and November 20, 2014 (Items 1.01 and 3.02 and Exhibit 10.1 of Item 9.01).

You may obtain a copy of any or all of the documents referred to above which have been or will be incorporated by reference in this prospectus (including exhibits specifically incorporated by reference in those documents), as well as a copy of the registration statement of which this prospectus is a part and its exhibits, at no cost to you by writing or telephoning us at the following address:

Alcoa Inc.
390 Park Avenue
New York, New York 10022-4608
Attention: Investor Relations
Telephone: (212) 836-2674

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You also may review a copy of the registration statement of which this prospectus is a part and its exhibits at the SEC's Public Reference Room at the address listed above, as well as through the SEC's Internet site at <http://www.sec.gov>.

PROSPECTUS SUMMARY

This summary contains basic information about us and the offering. Because it is a summary, it does not contain all of the information that you should consider before making an investment decision. You should read this entire prospectus carefully, including the section entitled “Risk Factors,” and our financial statements and the notes thereto and the other documents incorporated herein by reference, before making an investment decision.

Alcoa Inc.

Formed in 1888, Alcoa is a Pennsylvania corporation with its principal executive offices at 390 Park Avenue, New York, New York 10022-4608 (telephone number (212) 836-2600).

A global leader in lightweight metals technology, engineering and manufacturing, Alcoa innovates multi-material solutions that advance our world. Our technologies enhance transportation, from automotive and commercial transport to air and space travel, and improve industrial and consumer electronics products. We enable smart buildings, sustainable food and beverage packaging, high-performance defense vehicles across air, land and sea, deeper oil and gas drilling and more efficient power generation. We pioneered the aluminum industry over 125 years ago. Today, Alcoa is a global company of approximately 59,000 people, operating in 30 countries to deliver value-add products made of titanium, nickel and aluminum, and produce bauxite, alumina and primary aluminum products.

Alcoa is continuing to execute on its strategy of transforming its portfolio by growing its value-add business to capture profitable growth as a lightweight metals innovation leader and by creating a lower cost, competitive commodity business. We are investing in our value-add manufacturing and engineering businesses to capture growth opportunities in strong end markets like automotive and aerospace. We also are building out our value-add businesses, including by introducing innovative new products and technology solutions, and investing in expansions of value-add capacity. From time to time, we also pursue growth opportunities that are strategically aligned with our objectives. In addition, we are optimizing our rolling mill portfolio as part of our strategy for profitable growth in our midstream business. At the same time, Alcoa is creating a competitive commodity business by taking decisive actions to lower the cost base of our upstream operations, closing or curtailing high-cost global smelting capacity, optimizing alumina refining capacity, and pursuing the sale of our interest in certain other operations as we continually review our portfolio.

The Offering

This prospectus relates to the resale of up to 36,523,010 shares of common stock that may be offered and sold from time to time by the selling shareholder named in this prospectus and, if applicable, by such selling shareholder’s permitted transferees identified as selling shareholders in a prospectus supplement that will be filed to update this prospectus (“Permitted Transferees”). The shares of common stock offered under this prospectus were initially issued to Firth Rixson (Cyprus) Limited, a private company limited by shares incorporated under the laws of the Republic of Cyprus, in a private placement in connection with our acquisition of the Firth Rixson business on November 19, 2014. We are registering the offer and sale of the shares to satisfy certain registration rights we have granted. See “Selling Shareholder.” We will not receive any of the proceeds from the sale of the shares hereunder. See “Use of Proceeds.”

RISK FACTORS

Investing in our securities involves risks. Before deciding to purchase any of our securities, you should carefully consider the discussion of risks and uncertainties described below, as well as under the heading “Risk Factors” contained in our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 and our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2014, June 30, 2014 and September 30, 2014, which are incorporated by reference in this prospectus, and under similar headings in our subsequently filed quarterly reports on Form 10-Q and annual reports on Form 10-K, as well as the other risks and uncertainties described in any prospectus supplement, any amendment to the registration statement of which this prospectus is a part, and in the other documents incorporated by reference in this prospectus. See the section entitled “Where You Can Find More Information” in this prospectus. The risks and uncertainties we discuss below and in the documents incorporated by reference in this prospectus are those we currently believe may materially affect our company. Additional risks and uncertainties not presently known to us or that we currently believe are immaterial also may materially and adversely affect our business, financial condition and results of operations.

This prospectus and the documents incorporated by reference also contain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of a number of factors, including the risks described below and elsewhere in this prospectus, any prospectus supplement and the documents incorporated by reference. See “Note Regarding Forward-Looking Statements.”

Risks Relating to Our Common Stock

The trading price of our common stock may be volatile, which may make it difficult for you to resell the common stock when you want or at prices you find attractive.

The market price and volume of our common stock have been and may continue to be subject to significant fluctuations due not only to general stock market conditions but also to a change in sentiment in the market regarding our operations, business prospects, or liquidity. During the period from January 1, 2013 to the date of this prospectus, our common stock has fluctuated from a high of \$17.75 per share to a low of \$7.63 per share. The price and volume volatility of our common stock may be influenced by many factors, some of which are beyond our control, including the following:

- the factors described below under the heading “Note Regarding Forward-Looking Statements”;
- the risk factors described in our Annual Report on Form 10-K for the year ended December 31, 2013 and in our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2014, June 30, 2014 and September 30, 2014, which are incorporated into this prospectus by reference;
- operating results that vary from expectations of management, securities analysts and investors;
- declines in regional premiums, London Metal Exchange-based prices for primary aluminum, alumina and other products, and index-based and spot prices for alumina;
- increases in energy costs or the cost of other raw materials, including, without limitation, prices for electricity, natural gas, fuel oil, caustic soda, carbon products and other raw materials used in our production processes;
- supply and demand conditions for primary aluminum and conditions in the aluminum and other end markets we serve, including, without limitation, automotive and commercial transportation, aerospace, building and construction, packaging, industrial gas turbine, oil and gas, and defense;
- our inability to achieve the level of revenue growth, cash generation, cost savings, improvement in profitability and margins, fiscal discipline, or strengthening of operations anticipated from our restructuring programs, cash sustainability, productivity improvement, and other initiatives;

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- developments in our business, in the aerospace, metals technology, engineering and manufacturing sectors or in the aluminum industry generally;
- regulatory changes affecting our industry generally or our business and operations;
- changes in global financial and economic markets and general market conditions, such as interest or foreign exchange rates, commodity and equity prices, availability of credit, asset valuations, and volatility;
- changes in stock market analyst recommendations regarding us, our competitors or our industry generally, or lack of analyst coverage of our common stock;
- hedging or arbitrage trading activity involving our common stock;
- sales of our common stock by our executive officers, directors and significant stockholders or sales of substantial amounts of our common stock;
- investors' anticipation of the potential resale in the market of a substantial number of shares of our common stock that will be issued upon conversion of our outstanding 5.375% Class B Mandatory Convertible Preferred Stock, Series 1 (the "Mandatory Convertible Preferred Stock") or of the 36,523,010 shares of our common stock that may be offered pursuant to this prospectus;
- announcements of strategic developments, acquisitions and other material events by us or our competitors;
- changes in accounting principles; and
- changes in tax laws and regulations.

Sales of substantial amounts of our common stock in the public market, or the perception that these sales may occur, could cause the market price of our common stock to decline.

Sales of substantial amounts of our common stock in the public market, including the shares being offered pursuant to this prospectus which represent approximately 3.0% of our issued and outstanding common stock as of December 1, 2014, or the perception that these sales may occur, could cause the market price of our common stock to decline. Future sales or the availability for sale of substantial amounts of our common stock in the public market, or the perception that such sales may occur, could adversely affect the prevailing market price of our common stock.

The availability of our common stock for sale in the future could reduce the market price of our common stock.

In the future we may issue additional securities to raise capital. We may also acquire interests in other companies by using a combination of cash and our common stock or solely our common stock. We may also issue securities convertible into our common stock. Any of these events may dilute your ownership interest in our Company and have an adverse impact on the price of our common stock.

Our common stock ranks junior to our outstanding preferred stock with respect to dividends and amounts payable in the event of our liquidation.

With respect to the payment of dividends and amounts payable in the event of our liquidation, dissolution or winding up, our common stock ranks junior to our outstanding preferred stock, which currently comprises our \$3.75 Cumulative Preferred Stock and the Mandatory Convertible Preferred Stock. This means that, unless full cumulative dividends have been paid or set aside for

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payment on all outstanding preferred stock for all accrued dividend periods, no dividends may be declared or paid on our common stock. Likewise, in the event of our voluntary or involuntary liquidation, dissolution or winding up, no distribution of our assets may be made to holders of our common stock until we have paid to our preferred stock holders the liquidation preference relating to such preferred stock, plus in each case any accrued and unpaid dividends. The Statement with Respect to Shares designating our \$3.75 Cumulative Preferred Stock provides that the dividend rate per annum on such stock is \$3.75 per share, and that in the event of any voluntary or involuntary liquidation, winding up or dissolution of the Company, holders of each share are entitled to receive a liquidation preference of \$100 per share plus any accrued and unpaid dividends. The Statement with Respect to Shares designating our Mandatory Convertible Preferred Stock provides that the dividend rate per annum is 5.375% of the liquidation preference per share of Mandatory Convertible Preferred Stock (equivalent to \$26.8750 per annum per share), and that in the event of any voluntary or involuntary liquidation, winding up or dissolution of the Company, holders of each share are entitled to receive a liquidation preference of \$500 per share plus any accrued and unpaid dividends.

Offerings of debt, which would be senior to our common stock upon liquidation, or preferred equity securities which may be senior to our common stock for purposes of dividend distributions or upon liquidation, may adversely affect the market price of our common stock.

We may increase our capital resources or raise additional capital by making additional offerings of debt, such as senior or subordinated notes, or by offering preferred stock. Upon liquidation, holders of our debt securities and shares of preferred stock and lenders with respect to other borrowings will receive distributions of our available assets prior to the holders of our common stock. Additional equity offerings may dilute the holdings of our existing stockholders or reduce the market price of our common stock, or both. Holders of our common stock are not entitled to preemptive rights or other protections against dilution.

Our Articles of Incorporation authorize our board of directors to issue preferred stock without shareholder approval. Our board of directors also has the power, without shareholder approval, subject to our Articles of Incorporation, to set the terms of any such preferred stock that may be issued, including the preferences over our common stock with respect to dividends or upon our dissolution, winding-up and liquidation and other terms. If we issue preferred stock in the future that has a preference over our common stock with respect to the payment of dividends or upon our liquidation, dissolution, or winding up, the rights of holders of our common stock or the market price of our common stock could be adversely affected.

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

Under the Pennsylvania Business Corporation Law (the "PBCL"), holders of our common stock are only entitled to receive such dividends payable on our common stock as our board of directors may declare out of funds legally available for such payments. Our board of directors reviews the appropriateness of the dividend on our common stock each quarter. The determination of the amount of future dividends on our common stock will depend on our future earnings, capital requirements, financial condition and other relevant factors. Our board may determine to reduce or eliminate our common stock dividend in the event of material future deteriorations in business conditions.

Anti-takeover provisions could enable our management to resist a takeover attempt by a third party and limit the power of our stockholders.

Provisions of Pennsylvania law and of our Articles of Incorporation and By-laws could make it more difficult for a third party to acquire control of us or have the effect of discouraging, delaying or preventing a third party from attempting to acquire control of us, even if an acquisition might be in the best interest of our shareholders. For example, we are subject to Subchapters E-J of Chapter 25 and Section 2538 of Subchapter D of Chapter 25 of the PBCL, which could make it more difficult for another party to acquire us. Additionally, our Articles of Incorporation authorize our board of directors to issue preferred stock or adopt other anti-takeover measures without shareholder approval. The existence and adoption of these provisions could adversely affect the voting power of holders of common stock and limit the price that investors might be willing to pay in the future for shares of our common stock. See "Description of Common Stock."

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, the information incorporated by reference in this prospectus, any applicable prospectus supplement, and any oral communications made by Alcoa may contain “forward-looking statements” within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. These statements relate to future events and expectations and can be identified by the use of predictive, future-tense or forward-looking terminology, such as “anticipates,” “believes,” “estimates,” “expects,” “forecasts,” “hopes,” “intends,” “may,” “outlook,” “plans,” “projects,” “seeks,” “sees,” “should,” “targets,” “will,” “will likely result,” or other similar expressions. All statements that reflect Alcoa’s expectations, assumptions or projections about the future other than statements of historical fact are forward-looking statements, including, without limitation, forecasts concerning aluminum industry growth or other trend projections, anticipated financial results or operating performance, targeted or planned schedules for completion and start-up of growth projects, statements regarding the expected benefits of the Firth Rixson acquisition, and statements regarding Alcoa’s strategies, objectives, goals, targets, outlook, and business and financial prospects. Forward-looking statements are subject to a number of risks, uncertainties and other factors and are not guarantees of future performance. Actual results, performance or outcomes may differ materially from those expressed in or implied by those forward-looking statements. Accordingly, you should not place undue reliance on such forward-looking statements. Any forward-looking statement made by us in this prospectus, any prospectus supplement, any document we incorporate by reference or any free writing prospectus filed by us with the SEC speaks only as of the date on which it is made.

Important factors that could cause actual results to differ materially from those expressed or implied in the forward-looking statements include:

(a) material adverse changes in aluminum industry conditions, including global supply and demand conditions and fluctuations in London Metal Exchange-based prices and premiums, as applicable, for primary aluminum, alumina, and other products, and fluctuations in indexed-based and spot prices for alumina; (b) deterioration in global economic and financial market conditions generally; (c) unfavorable changes in the markets served by Alcoa, including aerospace, automotive, commercial transportation, building and construction, packaging, defense, and industrial gas turbine; (d) the impact of changes in foreign currency exchange rates on costs and results; (e) increases in energy costs or the unavailability or interruption of energy supplies; (f) increases in the costs of other raw materials; (g) Alcoa’s inability to achieve the level of revenue growth, cash generation, cost savings, improvement in profitability and margins, fiscal discipline, or strengthening of competitiveness and operations (including moving its alumina refining and aluminum smelting businesses down on the respective industry cost curves and increasing revenues and improving margins in its Global Rolled Products and Engineered Products and Solutions segments) anticipated from its restructuring programs and productivity improvement, cash sustainability, technology, and other initiatives; (h) Alcoa’s inability to realize expected benefits, in each case as planned and by targeted completion dates, from sales of non-core assets, or from newly constructed, expanded, or acquired facilities, or from international joint ventures, including the joint venture in Saudi Arabia; (i) political, economic, and regulatory risks in the countries in which Alcoa operates or sells products, including unfavorable changes in laws and governmental policies, civil unrest, imposition of sanctions, expropriation of assets, or other events beyond Alcoa’s control; (j) the outcome of contingencies, including legal proceedings, government investigations, and environmental remediation; (k) the impact of cyber attacks and potential information technology or data security breaches; (l) the risk that the Firth Rixson business will not be integrated successfully or such integration may be more difficult, time-consuming or costly than expected; (m) the possibility that certain assumptions with respect to Firth Rixson could prove to be inaccurate; (n) the loss of key customers, suppliers and other business relationships of Alcoa or Firth Rixson as a result of the acquisition; and (o) the other risk factors summarized in Alcoa’s Form 10-K for the year ended December 31, 2013, Forms 10-Q for the quarters ended March 31, 2014, June 30, 2014, and September 30, 2014, and other reports filed with the SEC.

Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to update publicly any forward-looking statements, whether in response to new information, future events or otherwise, except as required by applicable law.

USE OF PROCEEDS

The selling shareholder and, if applicable, the Permitted Transferees, will receive all of the proceeds from the sale of shares of common stock under this prospectus. We will not receive any of the proceeds from these sales.

SELLING SHAREHOLDER

Alcoa's Issuance of Shares to Firth Rixson (Cyprus) Limited

On June 25, 2014, Alcoa Inc. and Alcoa IH Limited, a wholly owned subsidiary of Alcoa Inc., entered into a Share Purchase Agreement (the "Share Purchase Agreement") with FR Acquisition Corporation (US), Inc., FR Acquisitions Corporation (Europe) Limited, FR Acquisition Finance Subco (Luxembourg), S.à.r.l. (the "Seller"), and Oak Hill Capital Partners III, L.P. and Oak Hill Capital Management Partners III, L.P. (collectively, the "Seller Representative") pursuant to which we agreed to acquire the Firth Rixson business for aggregate consideration of \$2.35 billion in cash, subject to adjustment as provided in the agreement, and \$500 million in Alcoa's common stock based on a per share price of \$13.69 as determined on the execution date of the Share Purchase Agreement (which is equivalent to 36,523,010 shares). Alcoa also entered into an Earnout Agreement, dated as of June 25, 2014, with the Seller and the Seller Representative, pursuant to which we agreed to make earn-out payments up to an aggregate maximum amount of \$150 million to the Seller, with the amount of such payments to be determined based on the post-closing financial performance of Firth Rixson's Savannah, Georgia facility.

On November 19, 2014, Alcoa completed its acquisition of the Firth Rixson business (the "Closing"). At Closing, Alcoa paid \$2.4 billion in cash (which amount is subject to adjustment as provided in the Share Purchase Agreement) and issued to Firth Rixson (Cyprus) Limited ("Firth Rixson (Cyprus)"), an affiliate of the Seller, 36,523,010 shares of Alcoa's common stock (the "Shares"). At Closing, the Shares had an aggregate value of \$609.6 million, based on the closing price of \$16.69 per share on that date. The Shares were issued pursuant to an exemption from registration under Section 4(a)(2) of the Securities Act because such issuance did not involve a public offering.

Pursuant to the Share Purchase Agreement and an investor representation letter delivered by Firth Rixson (Cyprus) to Alcoa upon the Closing, Firth Rixson (Cyprus) and any Permitted Transferees are subject to a lock-up (the "Lock-Up") for a period of 120 days following the Closing date (the "Lock-Up Period"), during which, subject to certain exceptions, they may not, directly or indirectly, without the prior written consent of Alcoa, offer, sell, contract to sell, transfer, pledge, grant any option to purchase, make any short sale or otherwise dispose of the Shares or any options or warrants to purchase the Shares, or any securities convertible into, exchangeable for or that represent the right to receive the Shares or engage in any hedging or other transaction which is designed to or which reasonably could be expected to lead to or result in a sale or disposition of the Shares.

Registration Rights Agreement

In accordance with the terms of the Share Purchase Agreement, on November 19, 2014, Alcoa also entered into a registration rights agreement (the "Registration Rights Agreement") with Firth Rixson (Cyprus). The Registration Rights Agreement requires Alcoa, subject to the terms and conditions thereof, to use commercially reasonable efforts to file with the SEC a registration statement on Form S-3 (the "Registration Statement") for an offering to be made on a continuous or delayed basis pursuant to Rule 415 under the Securities Act, covering the resale of the Shares, pursuant to which Firth Rixson (Cyprus) or any Permitted Transferees may dispose of the Shares on a registered basis after the Lock-Up Period.

Under the Registration Rights Agreement, we agreed to use our commercially reasonable efforts to cause the Registration Statement to be declared effective as promptly as practicable and to remain continuously effective until the date that is the earliest of (i) the first date when all securities entitled to registration rights under the terms and conditions set forth in the Registration Rights Agreement ("Eligible Securities") have been sold in the manner set forth and as contemplated in the Registration Statement, (ii) the first date on which there are no longer any Eligible Securities and (iii) the End Date, which is November 19, 2015 plus the number of days (if any) of Blackout Periods (as defined in the Registration Rights Agreement) during the one-year period from November 19, 2014 to November 19, 2015 and plus the number of days (if any) after the expiration of the Lock-Up Period that the Registration Statement is not effective.

With respect to the foregoing clause (ii), a security shall cease to be an Eligible Security upon the earliest of (A) the first date when the Registration Statement shall have become effective under the Securities Act and such security shall have been disposed of in accordance with such Registration Statement; (B) for so long as (i) such security is permitted to be disposed of (without limit

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as to manner of sale or volume) pursuant to Rule 144 under the Securities Act (“Rule 144”) and Alcoa is in compliance with the filing requirements described in Rule 144(c)(1) so as to enable the Eligible Securities to be sold without registration under the Securities Act and (ii) such holder owning such security owns, together with its affiliates, less than \$100,000,000 of the Shares; (C) the first date when such security shall have been otherwise transferred pursuant to Rule 144 or pursuant to another applicable exemption under the Securities Act, other than to a Permitted Transferee, and the transferee thereof does not receive “restricted securities” as defined in Rule 144; and (D) the first date when such security is no longer outstanding.

Under the Registration Rights Agreement, we agreed to pay all expenses incurred with respect to the registration of the Shares (excluding any underwriting discounts or commissions, broker or dealer commissions, transfer taxes, and out-of-pocket expenses of the selling shareholder and Permitted Transferees (other than certain legal expenses)). The Registration Rights Agreement provides for cross-indemnification for certain liabilities arising under the Securities Act and contribution to payments that the other party may be required to make in that respect.

The Selling Shareholder

In accordance with the terms of the Registration Rights Agreement, this prospectus covers the resale of up to an aggregate of 36,523,010 Shares by Firth Rixson (Cyprus). When we refer to the “selling shareholder” in this prospectus, we mean the person listed in the table below. This prospectus only covers resales of the Shares by the selling shareholder named in the table below. Before any of such selling shareholder’s Permitted Transferees who may later hold the Shares can sell Shares under this prospectus, we will file a prospectus supplement to update the selling shareholder information in this prospectus.

The following table sets forth information regarding the beneficial ownership of the selling shareholder as of the date hereof, including the name of the selling shareholder, the number and percentage of shares of our common stock beneficially owned by the selling shareholder, and the number and percentage of shares beneficially owned by the selling shareholder after completion of the sale of the maximum number of shares that may be offered under this prospectus by such selling shareholder. The selling shareholder may, from time to time, offer and sell pursuant to this prospectus none, any or all of the Shares registered for its account, and thus we cannot state with certainty the amount of shares that the selling shareholder will hold upon consummation of any such sales. We cannot advise you as to whether the selling shareholder will in fact sell any or all of the Shares.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to our shares of common stock. Generally, a person “beneficially owns” shares if the person has or shares with others the right to vote those shares or to dispose of them, or if the person has the right to acquire voting or disposition rights within 60 days.

Other than as set forth above, the table below or elsewhere in this prospectus or the documents incorporated herein by reference, neither the selling shareholder nor any of its affiliates has, or within the past three years has had, any material relationship with us or any of our predecessors or affiliates.

The information in the following table is based on the selling shareholder’s representations to us regarding its ownership as of the date of this prospectus.

Name of Beneficial Owner	Shares Beneficially Owned Prior to the Offering		Number of Shares Offered	Shares Beneficially Owned After the Offering	
	Number	Percent⁽¹⁾		Number	Percent
Firth Rixson (Cyprus) Limited ⁽²⁾	36,523,010	3.0%	36,523,010	— ⁽³⁾	— ⁽³⁾

(1) Based on 1,216,251,841 shares of Alcoa common stock outstanding as of December 1, 2014.

(2) The address of Firth Rixson (Cyprus) Limited is 12 Esperidon Street, 4th Floor, P.C. 1087, Nicosia, Cyprus. Oak Hill Capital Partners III, L.P., Oak Hill Capital Management Partners III, L.P. and OHCP III FR COI, L.P. (collectively, the “Oak Hill Funds”) and Oak Hill Capital Partners II (Cayman), L.P., Oak Hill Capital Partners II (Cayman II), L.P. and Oak Hill Capital Management Partners II (Cayman), L.P. (collectively, the “Oak Hill Cayman Funds”), are each shareholders of Firth Rixson (Cyprus) Limited and collectively hold approximately 72% of the voting power of, and approximately 66% of the

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economic interest in, Firth Rixson (Cyprus) Limited. OHCP MGP III, Ltd. is the sole general partner of OHCP MGP Partners III, L.P., which is the sole general partner of OHCP GenPar III, L.P., which is the sole general partner of each of the Oak Hill Funds. OHCP MGP III, Ltd. exercises voting and dispositive control over any Shares beneficially held by each of the Oak Hill Funds. Investment and voting decisions with regard to any Shares beneficially owned by the Oak Hill Funds are made by the Investment Committee of OHCP MGP III, Ltd. The members of the Board of Directors are J. Taylor Crandall, Steven B. Gruber and Denis J. Nayden. OHCP MGP II (Cayman), Ltd. is the sole general partner of OHCP MGP Partners II (Cayman), L.P., which is the sole general partner of OHCP GenPar II (Cayman), L.P., which is the sole general partner of each of the Oak Hill Cayman Funds. OHCP MGP II (Cayman), Ltd. exercises voting and dispositive control over any Shares beneficially owned by the Oak Hill Cayman Funds. Investment and voting decisions with regard to any Shares beneficially owned by the Oak Hill Cayman Funds are made by the Investment Committee of OHCP MGP II (Cayman), Ltd. The members of the Board of Directors are J. Taylor Crandall, Steven B. Gruber, Kevin G. Levy, Denis J. Nayden and Ray Pinson. Each of these entities and individuals disclaims beneficial ownership of the shares held by Firth Rixson (Cyprus) Limited.

- (3) Assumes the sale of all Shares offered by the selling shareholder pursuant to this prospectus.

DESCRIPTION OF COMMON STOCK

The following is a description of certain general terms and provisions of our common stock. The following summary does not purport to be complete, and is subject to, and qualified in its entirety by, our Articles of Incorporation and By-Laws, and the Pennsylvania Business Corporation Law (the "PBCL"). Copies of our Articles of Incorporation and By-Laws have been filed and incorporated by reference as exhibits to the registration statement of which this prospectus forms a part.

General

As of the date of this prospectus, Alcoa is authorized to issue 1,800,000,000 shares of common stock, par value \$1.00 per share. As of December 1, 2014, there were 1,216,251,841 shares of Alcoa common stock outstanding. As of the same date, there were 87.6 million shares of Alcoa common stock issued and held in Alcoa's treasury and 90.1 million shares of Alcoa common stock reserved for issuance under Alcoa's stock-based compensation plans. In addition, up to 77.4 million shares of Alcoa common stock may be issued upon conversion of Alcoa's outstanding 5.375% Class B Mandatory Convertible Preferred Stock, Series 1, assuming conversion at the maximum conversion rate and that dividends related to such preferred stock are paid in cash.

Dividend Rights

Holders of Alcoa common stock are entitled to receive dividends as declared by Alcoa's board of directors. However, no dividend will be declared or paid on Alcoa's common stock until Alcoa has paid (or declared and set aside funds for payment of) all dividends that have accrued on all classes of Alcoa's outstanding preferred stock, which currently comprise Alcoa's \$3.75 Cumulative Preferred Stock and Alcoa's 5.375% Class B Mandatory Convertible Preferred Stock, Series 1.

Voting Rights

Holders of Alcoa common stock are entitled to one vote per share.

Liquidation Rights

Upon any liquidation, dissolution or winding up of Alcoa, whether voluntary or involuntary, after payments to creditors and holders of Alcoa's preferred stock of amounts to which they are then entitled under the terms of the classes or series of the preferred stock previously established by the board of directors, plus any accrued dividends, Alcoa's remaining assets will be divided among holders of Alcoa common stock. Under our Articles of Incorporation, neither the consolidation or merger of Alcoa with or into one or more corporations or any share exchange or division involving Alcoa will be deemed a liquidation, dissolution or winding up of Alcoa.

Preemptive or Other Subscription Rights

Holders of Alcoa common stock will not have any preemptive right to subscribe for any securities of Alcoa.

Conversion and Other Rights

No conversion, redemption or sinking fund provisions apply to Alcoa common stock, and Alcoa common stock is not liable to further call or assessment by Alcoa. All issued and outstanding shares of Alcoa common stock are fully paid and non-assessable.

Other Matters

Alcoa's Articles of Incorporation provide for the following:

- a classified board of directors with staggered three-year terms;
- special shareholder voting requirements allowing removal of directors only upon the vote of shareholders entitled to cast at least 80% of votes that shareholders would be entitled to cast at an election of the removed directors; and
- certain procedures relating to the nomination of directors, filling of vacancies and a special shareholder vote (of at least 80% of the votes that all shareholders would be entitled to cast in an annual election of directors) required to amend or repeal any of these provisions.

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Alcoa's Articles of Incorporation also prohibit Alcoa's payment of "green-mail," that is, payment of a premium in purchasing shares of common stock or preferred stock from a present or recent holder of 5% or more of the common stock, except with the approval of a majority of the disinterested shareholders or if made pursuant to an offer available to all holders of the affected class of stock or an open-market program. This provision may be amended or repealed only with the affirmative vote of at least 80% of the voting stock. In addition, the Articles of Incorporation limit or eliminate to the fullest extent permitted by Pennsylvania law, as from time to time in effect, the personal liability of Alcoa's directors for monetary damages, and authorize Alcoa, except as prohibited by law, to indemnify directors, officers, employees and others against liabilities and expenses incurred by them in connection with the performance of their duties to Alcoa. The classified board article provision and the anti-"green-mail" provision may have certain anti-takeover effects.

Alcoa is governed by "anti-takeover" provisions in the PBCL. Chapter 25 of the PBCL contains several anti-takeover provisions that apply to registered corporations such as Alcoa. Section 2538 of the PBCL requires shareholder approval for certain transactions between a registered corporation and a shareholder who is a party to the transaction or is treated differently from other shareholders (an "interested shareholder"). Section 2538 applies if an interested shareholder (together with anyone acting jointly with such shareholder and any affiliates of such shareholder):

- is to be a party to a merger or consolidation, a share exchange or certain sales of assets involving such corporation or one of its subsidiaries;
- is to receive a disproportionate amount of any of the securities of any corporation which survives or results from a division of the corporation;
- is to be treated differently from others holding shares of the same class in a voluntary dissolution of such corporation; or
- is to have his or her percentage of voting or economic share interest in such corporation materially increased relative to substantially all other shareholders in a reclassification.

In such a case, the proposed transaction must be approved by the affirmative vote of the holders of shares representing at least a majority of the votes that all shareholders other than the interested shareholder are entitled to cast with respect to such transaction, without counting the vote of the interested shareholder. This special voting requirement does not apply if the proposed transaction has been approved in a prescribed manner by the corporation's board of directors or if certain other conditions, including the amount of consideration to be paid to certain shareholders, are satisfied or the transaction involves certain subsidiaries. This voting requirement is in addition to any other voting requirement under the PBCL, the Articles of Incorporation or the By-laws.

Section 2555 of the PBCL may also apply to a transaction between a registered corporation and an interested shareholder, even if Section 2538 also applies. For purposes of Section 2555, an "interested shareholder" means (A) a direct or indirect beneficial owner of shares entitling that person to cast at least 20% of the votes that all shareholders would be entitled to cast in an election of directors or (B) an affiliate or associate of the registered corporation who, at any time within the five-year period prior to the transaction, had been a direct or indirect beneficial owner of shares entitling that person to cast at least 20% of the votes that all shareholders would be entitled to cast in an election of directors. Section 2555 prohibits a corporation from engaging in a business combination with an interested shareholder unless one of the following conditions is met:

- the board of directors has previously approved either the proposed transaction or the interested shareholder's acquisition of shares, in each case before the interested shareholder became an interested shareholder;

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- the interested shareholder owns at least 80% of the stock entitled to vote in an election of directors and, no earlier than three months after the interested shareholder reaches the 80% level and:
 - the majority of the remaining, non-interested shareholders entitled to vote in an election of directors approve the proposed transaction;
 - shareholders receive a minimum “fair price” for their shares in the transaction;
 - the other conditions of Section 2556 of the PBCL are met;
- holders of all outstanding common stock approve the transaction;
- no earlier than 5 years after the interested shareholder became an interested shareholder, a majority of the remaining, non-interested shareholders entitled to vote in an election of directors approve the transaction; or
- no earlier than 5 years after the interested shareholder acquired the 20%, a majority of all the shares approve the transaction, all shareholders receive a minimum fair price for their shares, and certain other conditions are met.

Under the PBCL, a person or group of persons acting in concert who hold 20% of the shares of a registered corporation entitled to vote in the election of directors constitutes a control group, with certain exceptions. On the occurrence of the transaction that makes the group a control group, any other shareholder of the registered corporation who objects can, under procedures set forth under the PBCL, require the control group to purchase his or her shares at “fair value,” as defined in the PBCL.

The PBCL also contains certain provisions applicable to a registered corporation such as Alcoa which, under certain circumstances, permit a corporation to:

- redeem “control shares,” as defined in the PBCL;
- remove the voting rights of control shares; and
- require the disgorgement of profits by a “controlling person,” as defined in the PBCL.

The transfer agent, registrar and dividend disbursing agent for our common stock is Computershare Trust Company, N.A.

PLAN OF DISTRIBUTION

We are registering the Shares covered by this prospectus to permit the selling shareholder and any of its Permitted Transferees that will be identified as selling shareholders in a supplement to this prospectus to conduct public secondary trading of these Shares from time to time after the date of this prospectus. The selling shareholder and its Permitted Transferees are prohibited from transferring the Shares prior to the expiration of the Lock-Up Period described below, subject to certain exceptions. We will not receive any of the proceeds of the sale of the Shares offered by this prospectus. The aggregate proceeds to the selling shareholder or Permitted Transferees from the sale of the Shares will be the purchase price of the Shares less any discounts, commissions and concessions. We will not pay any brokers' or underwriters' discounts and commissions in connection with the registration and sale of the Shares covered by this prospectus. The selling shareholder and its Permitted Transferees reserve the right to accept and, together with their respective agents, to reject, any proposed purchases of Shares to be made directly or through agents.

Pursuant to the Share Purchase Agreement and an investor representation letter delivered by Firth Rixson (Cyprus) to Alcoa upon the Closing of the Firth Rixson acquisition, Firth Rixson (Cyprus) and any Permitted Transferees are subject to a Lock-Up for a period of 120 days following November 19, 2014. During the Lock-Up Period, subject to certain exceptions, they may not, directly or indirectly, without the prior written consent of Alcoa, offer, sell, contract to sell, transfer, pledge, grant any option to purchase, make any short sale or otherwise dispose of the Shares or any options or warrants to purchase the Shares, or any securities convertible into, exchangeable for or that represent the right to receive the Shares or engage in any hedging or other transaction which is designed to or which reasonably could be expected to lead to or result in a sale or disposition of the Shares. The Lock-Up provisions permit the pledging of the Shares to any bona fide third party lender or transferring the Shares (a) in connection with a sale of Alcoa approved by our board of directors or a tender offer or exchange offer for all of the outstanding shares of Alcoa's common stock, (b) to any affiliate or direct or indirect equityholders of a Permitted Transferee or (c) to any family member of a Permitted Transferee or trust for estate planning purposes; provided, however, that in each such case, it shall be a condition to the transfer that (i) the lender or transferee either execute and deliver an investor representation letter and be a Permitted Transferee and (ii) there shall be no further transfer of such Shares except in accordance with the Lock-Up provisions. Before any Permitted Transferee that receives Shares from Firth Rixson (Cyprus) can sell Shares under this prospectus, we will file a prospectus supplement to update the selling shareholder information in this prospectus.

The Shares offered by this prospectus may be sold from time to time to purchasers:

- directly by the selling shareholder or Permitted Transferees; or
- through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, commissions, concessions or agents' commissions from the selling shareholder, any Permitted Transferees or the purchasers of the Shares. These discounts, concessions, or commissions may be in excess of those customary in the types of transaction involved.

Any underwriters, broker-dealers or agents who participate in the sale or distribution of the Shares may be deemed to be "underwriters" within the meaning of the Securities Act. As a result, any discounts, commissions or concessions received by any such broker-dealer or agents who are deemed to be underwriters will be deemed to be underwriting discounts and commissions under the Securities Act. Underwriters are subject to the prospectus delivery requirements of the Securities Act and may be subject to certain statutory liabilities, including, but not limited to, those relating to Sections 11, 12 and 17 of the Securities Act and Rule 10b-5 under the Exchange Act. We will make copies of this prospectus available to the selling shareholder and any Permitted Transferees for the purpose of satisfying the prospectus delivery requirements of the Securities Act.

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The Shares may be sold in one or more transactions at:

- fixed prices;
- prevailing market prices at the time of sale;
- prices related to such prevailing market prices;
- varying prices determined at the time of sale; or
- negotiated prices.

These sales may be effected in one or more transactions:

- on any national securities exchange or quotation service on which the Shares may be listed or quoted at the time of sale, including the New York Stock Exchange;
- in the over-the-counter market;
- in transactions otherwise than on such exchanges or services or in the over-the-counter market;
- through the writing of options (including the issuance by the selling shareholder or Permitted Transferees of derivative securities), whether the options or such other derivative securities are listed on an options exchange or otherwise;
- through the settlement of short sales;
- any other method permitted by applicable law; or
- through any combination of the foregoing.

These transactions may include block transactions or crosses. Crosses are transactions in which the same broker acts as an agent on both sides of the trade. In connection with the sales of the Shares, the selling shareholder or Permitted Transferees may enter into hedging transactions with broker-dealers or other financial institutions that in turn may:

- engage in short sales of the Shares in the course of hedging their positions;
- sell the Shares short and deliver the Shares to close out short positions;
- loan or pledge the Shares to broker-dealers or other financial institutions that in turn may sell the Shares;
- enter into option or other transactions with broker-dealers or other financial institutions that require the delivery to the broker-dealer or other financial institution of the Shares, which the broker-dealer or other financial institution may resell under the prospectus; or
- enter into transactions in which a broker-dealer makes purchases as a principal for resale for its own account or through other types of transactions.

A short sale of Shares by a broker-dealer, financial institution or the selling shareholder or Permitted Transferee would involve the sale of such Shares that are not owned, and therefore must be borrowed, in order to make delivery of the security in connection with such sale. In connection with a short sale of Shares, a broker-dealer, financial institution or the selling shareholder or Permitted Transferee may purchase shares on the open market to cover positions created by short sales. In determining the source of the shares to close out such short positions, the broker-dealer, financial institution or selling shareholder or Permitted Transferee may consider, among other things, the price of shares available for purchase in the open market.

In this prospectus, the term “selling shareholder” or “Permitted Transferee” includes the selling shareholder and the Permitted Transferees and their respective successors, which include their donees, pledgees, distributees or transferees or other successors in interest, as applicable, to the extent such persons hold Eligible Securities and are identified as selling shareholders in a supplement to this prospectus and to the extent permitted by the Registration Rights Agreement, the Share Purchase Agreement and any investor representation letters delivered pursuant to the Share Purchase Agreement.

At the time a particular offering of the Shares is made, a prospectus supplement, if required, will be distributed, which will set forth the name of the selling shareholder or Permitted Transferee(s) selling shares in such offering, the aggregate amount of Shares being offered and the terms of the offering, including, to the extent required, (1) the name or names of any underwriters, broker-dealers or agents, (2) any discounts, commissions and other terms constituting compensation from the selling shareholder or Permitted Transferee(s) and (3) any discounts, commissions or concessions allowed or reallowed to be paid to broker-dealers. We may suspend the sale of Shares by the selling shareholder or Permitted Transferee(s) pursuant to this prospectus for certain periods of time for certain reasons, including if the prospectus is required to be supplemented or amended to include additional material information.

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Pursuant to a requirement by the Financial Industry Regulatory Authority, Inc. (“FINRA”), the maximum commission or discount to be received by any FINRA member or independent broker-dealer may not be greater than 8% of the gross proceeds received by the selling shareholder and any Permitted Transferee(s) for the sale of any Shares being offered by this prospectus.

Broker-dealers and agents, and their respective affiliates, may be engaged in transactions with, or perform commercial or investment banking or other services for, us or our subsidiaries or affiliates, in the ordinary course of business.

The Shares are listed on the New York Stock Exchange under the symbol “AA.”

Klaus Kleinfeld, Chairman and Chief Executive Officer and a director of Alcoa, and James W. Owens, a director of Alcoa, are directors of Morgan Stanley. Ernesto Zedillo, a director of Alcoa, is a director of Citigroup Inc. Arthur D. Collins, Jr., a director of Alcoa, is a senior advisor to Oak Hill Capital Partners, L.P.

The selling shareholder and any Permitted Transferee(s) selling Shares under this prospectus will act independently of us in making decisions with respect to the timing, manner, and size of each resale. There can be no assurance that the selling shareholder and any Permitted Transferee(s) will sell any or all of the Shares under this prospectus. Further, we cannot assure you that the selling shareholder and any Permitted Transferee(s) will not transfer, distribute, devise or gift the Shares by other means not described in this prospectus, including through dividends or other distributions made by the selling shareholder or Permitted Transferees on a private placement basis to their respective partners, members or stockholders. In addition, any Shares covered by this prospectus that qualify for sale under Rule 144 of the Securities Act may be sold under Rule 144 rather than under this prospectus. The Shares may be sold in some states only through registered or licensed brokers or dealers. In addition, in some states the Shares may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification is available and complied with.

The selling shareholder, any Permitted Transferee(s) and any other person participating in the sale of the Shares will be subject to the Exchange Act. The Exchange Act rules include, without limitation, Regulation M, which may limit the timing of purchases and sales of any of the Shares by the selling shareholder, Permitted Transferee(s) and any other person. In addition, Regulation M may restrict the ability of any person engaged in the distribution of the Shares to engage in market-making activities with respect to the particular Shares being distributed. This may affect the marketability of the Shares and the ability of any person or entity to engage in market-making activities with respect to the Shares.

In the Registration Rights Agreement, we have agreed to indemnify or provide contribution to the selling shareholder and any Permitted Transferees against certain liabilities, including certain liabilities under the Securities Act. In addition, we have agreed to pay all of the expenses incidental to the registration of the Shares to the public, including the payment of federal securities law and state blue sky registration fees, except that we will not bear any underwriting discounts or commissions, broker or dealer commissions, transfer taxes relating to the sale of the Shares, and out-of-pocket expenses of the selling shareholder or Permitted Transferees (other than certain legal expenses). The selling shareholder has agreed and any Permitted Transferee shall agree to indemnify us in certain circumstances against certain liabilities, including certain liabilities under the Securities Act. We, the selling shareholder and any Permitted Transferee(s) may indemnify any underwriter that participates in transactions involving the sale of the Shares against certain liabilities, including liabilities arising under the Securities Act.

LEGAL MATTERS

The validity of the common stock being offered by this prospectus will be passed upon for Alcoa by Thomas F. Seligson, Esq., Counsel of Alcoa. Mr. Seligson is paid a salary by Alcoa, is a participant in various employee benefit plans offered to Alcoa employees, and beneficially owns, or has rights to acquire, an aggregate of less than one percent of the shares of Alcoa common stock.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The consolidated financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting), incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2013, have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

With respect to the unaudited financial information of Alcoa for the three month periods ended March 31, 2014 and 2013, the three and six month periods ended June 30, 2014 and 2013, and the three and nine month periods ended September 30, 2014 and 2013 incorporated by reference in this prospectus, PricewaterhouseCoopers LLP reported that they have applied limited procedures in accordance with professional standards for a review of such information. However, their separate reports dated April 24, 2014, July 24, 2014, and October 23, 2014, respectively, incorporated by reference herein state that they did not audit and they do not express an opinion on that unaudited financial information. Accordingly, the degree of reliance on their reports on such information should be restricted in light of the limited nature of the review procedures applied.

PricewaterhouseCoopers LLP is not subject to the liability provisions of Section 11 of the Securities Act for their reports on the unaudited financial information because those reports are not a "report" or a "part" of the registration statement prepared or certified by PricewaterhouseCoopers LLP within the meaning of Sections 7 and 11 of the Securities Act.

PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution.**

The following table sets forth those expenses to be incurred by Alcoa Inc. in connection with the securities being registered hereby.

Securities and Exchange Commission Registration Fee	\$ 62,726
Accounting Fees and Expenses	50,000*
Printing Fees and Expenses	60,000*
Legal Fees and Expenses	250,000*
Miscellaneous Expenses	50,000*
Total	<u>\$472,726*</u>

* Estimated

Item 15. Indemnification of Directors and Officers.

Article V of the By-Laws of Alcoa Inc. (“Alcoa”) provides that Alcoa shall indemnify, under specified circumstances, persons who were or are directors, officers or employees of Alcoa or who served or serve other business entities at the request of Alcoa. Under these By-Law provisions, a person who is wholly successful in defending a claim will be indemnified for any reasonable expenses. To the extent a person is not successful in defending a claim, reasonable expenses of the defense and any liability incurred are to be indemnified under these provisions only where independent legal counsel or another disinterested person selected by the board of directors determines 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 Alcoa, and in addition with respect to any criminal action or proceeding, had no reasonable cause to believe the conduct of such person was unlawful. Any expense incurred with respect to any claim may be advanced by Alcoa if the recipient agrees to repay such amount if it is ultimately determined that such recipient is not to be indemnified pursuant to Article V.

The foregoing By-Law provisions generally parallel Sections 1741 and 1745 of the Pennsylvania Business Corporation Law (“PBCL”). Section 1746 and Alcoa’s By-Laws both also provide that the indemnification provided for therein shall not be deemed exclusive of any other rights to which those seeking indemnification may otherwise be entitled.

Section 1746 of the PBCL and Alcoa’s By-Laws provide for increased indemnification protections for directors, officers and others. Indemnification may be provided by Pennsylvania corporations in any case except where the act or failure to act giving rise to the claim for indemnification is determined by a court to have constituted willful misconduct or recklessness.

Section 1713 of the PBCL also sets forth a framework whereby Pennsylvania corporations, with the approval of the shareholders, may limit the personal liability of directors for monetary damages except where the act or omission giving rise to a claim constitutes self-dealing, willful misconduct or recklessness. The section does not apply to a director’s responsibility or liability under a criminal or tax statute and may not apply to liability under Federal statutes, such as the Federal securities laws.

Alcoa’s Articles of Incorporation and By-Laws were amended by the shareholders to implement the increased protections made available to directors under the PBCL as described in the preceding paragraph. Article VIII of the By-Laws provides that, except as prohibited by law, every director of Alcoa shall be entitled as of right to be indemnified by Alcoa for expenses and any and all liability paid or incurred by such person by reason of such person being or having been a director of Alcoa. Expenses incurred with respect to any claim may be advanced by Alcoa, subject to certain exceptions. The shareholders have also approved a form of indemnity agreement. Alcoa has entered into such an indemnity agreement with each of its current directors and officers.

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Alcoa has purchased a directors and officers liability insurance policy with an aggregate limit of \$500 million for liability of directors and officers. The insurance includes within that limit \$250 million of coverage, subject to a retention, for reimbursement to Alcoa for indemnification provided to directors and officers. The policy has an expiration date of October 1, 2015 and provides liability insurance and reimbursement coverage for Alcoa and its directors and officers that is permitted by the laws of Pennsylvania.

The Articles of Incorporation provide that except as prohibited by law, Alcoa may indemnify any person who is or was a director, officer, employee or agent of Alcoa or is or was serving at the request of Alcoa as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, including, without limitation, any employee benefit plan, and may take such steps as may be deemed appropriate by the board of directors, including purchasing and maintaining insurance, entering into contracts, including, without limitation, contracts of indemnification between Alcoa and its directors and officers, creating a trust fund, granting security interests or using other means, including, without limitation, a letter of credit to ensure the payment of such amounts as may be necessary to effect such indemnification. The By-Laws provide for indemnification of such persons to the fullest extent permitted by law.

The Articles of Incorporation also provide that to the fullest extent that the laws of the Commonwealth of Pennsylvania permit elimination or limitation of the liability of directors, no director of Alcoa shall be personally liable for monetary damages for any action taken, or any failure to take any action.

For the undertaking with respect to indemnification, see Item 17 herein.

Item 16. Exhibits.

See Exhibit Index attached hereto and incorporated herein by reference.

Item 17. Undertakings.

(a) Rule 415 Offering

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the registration statement is on Form S-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

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(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which the prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) Filings Incorporating Subsequent Exchange Act Documents by Reference

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934, as amended), that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) SEC Position on Indemnification for Securities Act Liabilities

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described in Item 15 above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933, and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, Alcoa Inc. certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Amendment No. 1 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, on January 14, 2015.

ALCOA INC.

By: /s/ ROBERT S. COLLINS
Name: Robert S. Collins
Title: Vice President and Controller

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 1 to the Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ KLAUS KLEINFELD</u> Klaus Kleinfeld	Director, Chairman of the Board and Chief Executive Officer (Principal Executive Officer and Director)	January 14, 2015
<u>/s/ WILLIAM F. OPLINGER</u> William F. Oplinger	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	January 14, 2015
<u>/s/ ROBERT S. COLLINS</u> Robert S. Collins	Vice President and Controller (Principal Accounting Officer)	January 14, 2015

Arthur D. Collins, Jr., Kathryn S. Fuller, Judith M. Gueron, Michael G. Morris, E. Stanley O'Neal, James W. Owens, Carol L. Roberts, Patricia F. Russo, Sir Martin Sorrell, Ratan N. Tata and Ernesto Zedillo, each as a Director, on January 14, 2015, by Robert S. Collins, their Attorney-in-Fact.*

*By: /s/ ROBERT S. COLLINS
Robert S. Collins
Attorney-in-Fact

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EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Exhibit</u>	<u>Incorporated by Reference to Filings Indicated</u>
1.1	Form of Underwriting Agreement.#	
4.1	Articles of Alcoa Inc., as amended September 22, 2014.	Exhibit 3(a) to Alcoa Inc.'s Quarterly Report on Form 10-Q filed with the SEC on October 23, 2014.
4.2	By-Laws of Alcoa Inc., as amended January 17, 2014.	Exhibit 3 to Alcoa Inc.'s Current Report on Form 8-K filed with the SEC on January 23, 2014.
4.3	Registration Rights Agreement, dated as of November 19, 2014, by and between Alcoa Inc. and Firth Rixson (Cyprus) Limited.	Exhibit 10.1 to Alcoa Inc.'s Current Report on Form 8-K filed with the SEC on November 20, 2014.
4.4	Form of Certificate for Shares of Common Stock.	Exhibit 4(i) to Registration Statement No. 33-49997 on Form S-3.
5	Opinion of Thomas F. Seligson, Esq., Counsel of Alcoa Inc.**	
10	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.	Exhibit 2.1 to Alcoa Inc.'s Current Report on Form 8-K filed with the SEC on June 27, 2014.
15	Letter regarding unaudited interim financial information.*	
23.1	Consent of Independent Registered Public Accounting Firm.*	
23.2	Consent of Thomas F. Seligson, Esq. (included in Exhibit 5 filed herewith).	
24	Power of Attorney for certain directors.**	

To be filed by amendment or as an exhibit to a document to be incorporated by reference, if applicable.

* Filed herewith.

** Previously filed.

January 14, 2015

Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549

Commissioners:

We are aware that our reports dated October 23, 2014, July 24, 2014, and April 24, 2014 on our review of interim financial information of Alcoa Inc. and its subsidiaries (the "Company") for the three-month and nine-month periods ended September 30, 2014 and 2013, the three-month and six-month periods ended June 30, 2014 and 2013, and the three-month periods ended March 31, 2014 and 2013, respectively, and included in the Company's quarterly report on Form 10-Q for the quarters ended September 30, 2014, June 30, 2014, and March 31, 2014, respectively, are incorporated by reference in its Amendment No. 1 to the Registration Statement on Form S-3 dated January 14, 2015.

Very truly yours,

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Pittsburgh, Pennsylvania

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Amendment No. 1 to the Registration Statement on Form S-3 of our report dated February 13, 2014 relating to the consolidated financial statements and the effectiveness of internal control over financing reporting, which appears in Alcoa Inc.'s Annual Report on Form 10-K for the year ended December 31, 2013. We also consent to the reference to us as experts under the heading "Independent Registered Public Accounting Firm" in such Amendment No. 1 to the Registration Statement.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Pittsburgh, Pennsylvania
January 14, 2015

January 14, 2015

VIA EDGAR

Pamela Long
Assistant Director
U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549

**Re: Alcoa Inc.
Registration Statement on Form S-3
Filed December 18, 2014
File No. 333-201055**

Dear Ms. Long:

On behalf of our client, Alcoa Inc. ("Alcoa"), we are providing Alcoa's response to the comment of the Staff of the Division of Corporation Finance (the "Staff") of the U.S. Securities and Exchange Commission set forth in your letter, dated January 7, 2015, with respect to the above-referenced filing.

This letter and Amendment No. 1 ("Amendment No. 1") to Alcoa's Registration Statement on Form S-3 (File No. 333-201055) are being filed electronically via the EDGAR system today. In addition to the EDGAR filing, we are delivering a hard copy of this letter, along with a copy of Amendment No. 1 marked to indicate changes from the version filed on December 18, 2014.

For the Staff's convenience, the text of the Staff's comment is set forth below in bold followed by the response.

W/2438498

Pamela Long
U.S. Securities and Exchange Commission
January 14, 2015
Page 2

Plan of Distribution, page 16

- We note disclosure in the last paragraph on page 16 that the selling shareholder has informed you that it is not a broker-dealer or affiliate thereof and would not otherwise be deemed to be an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act. Although we would not ask that the selling shareholder be identified as an underwriter in this instance, we believe it is inappropriate to affirmatively disclaim underwriter status. Note that we would not object to disclosure stating, if true, that the selling shareholder did not purchase the shares with a view toward distribution. Please revise accordingly.**

Response: In response to the Staff’s comment, Alcoa has removed the above-referenced disclosure from Amendment No. 1.

* * *

We hope the foregoing has been responsive to the Staff’s comment. If you have any questions, please do not hesitate to contact the undersigned at (212) 403-1117 or by email at RCChen@wlrk.com.

We thank the Staff in advance for its assistance.

Sincerely,

/s/ Ronald C. Chen

Ronald C. Chen

cc: Brenda A. Hart, Alcoa Inc.
Margaret S. Lam, Alcoa Inc.
Karessa L. Cain, Wachtell, Lipton, Rosen & Katz