

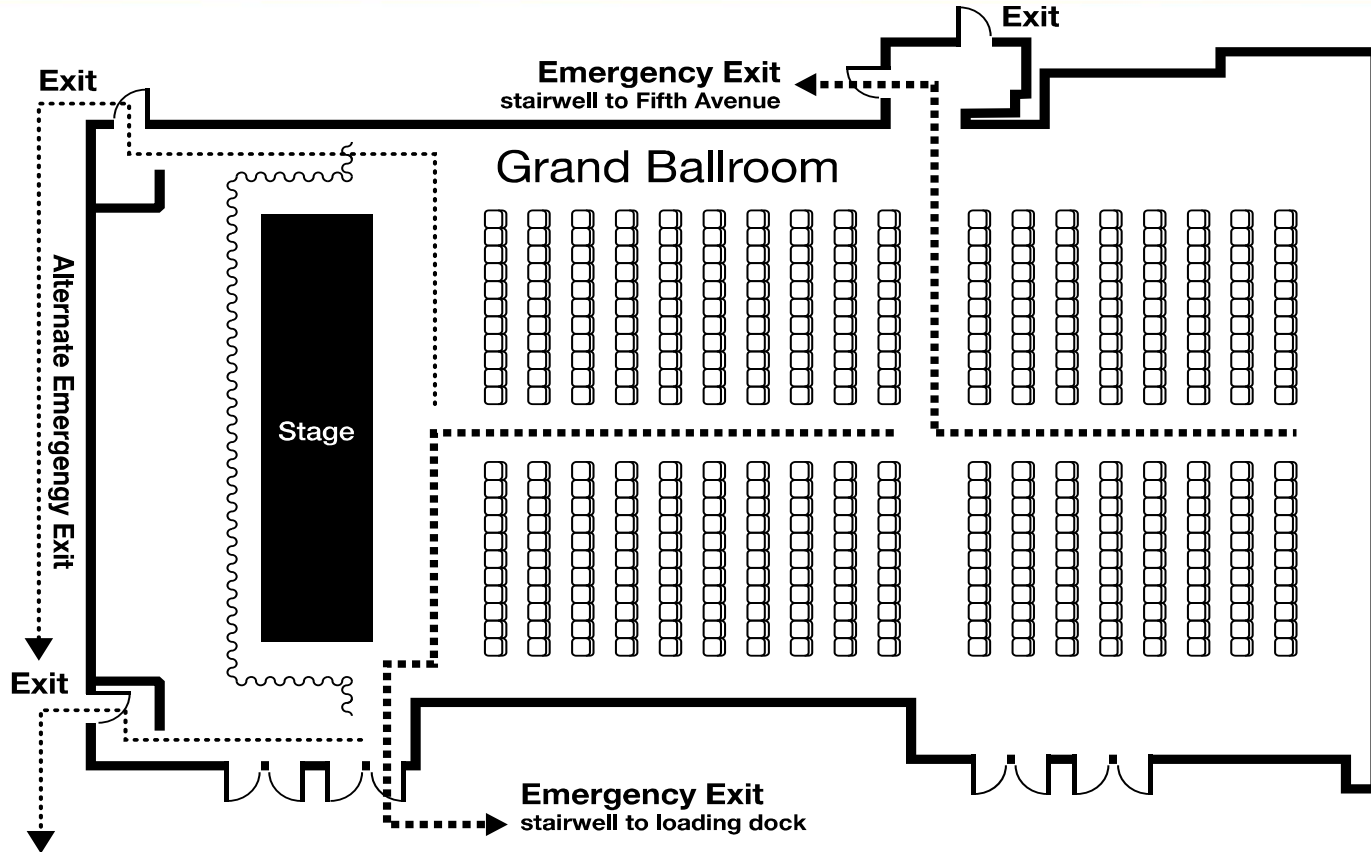
Advancing each generation.



Annual Meeting of Shareholders

May 6, 2016

Safety Instructions



Agenda

- **Welcome and Call Meeting to Order – Klaus Kleinfeld, Chairman and Chief Executive Officer**
 - Introduce Alcoa Directors
 - Introduce Executive Council
- **Items of Business – Audrey Strauss, Executive Vice President, Chief Legal Officer and Secretary**
- **Voting / Preliminary Results of Voting – Audrey Strauss**
- **Adjournment of Business Portion of the Meeting – Audrey Strauss**
- **Report of the Chairman and Chief Executive Officer – Klaus Kleinfeld**
- **Questions and Answers**

Director Nominees To Service for a Three-Year Term Expiring in 2019



Arthur D. Collins, Jr.
Former Chairman and CEO
Medtronic, Inc.
Director since 2010



Sean O. Mahoney
Private Investor and
Former Partner, Investment
Banking, Goldman, Sachs & Co.
Director since 2016



Michael G. Morris
Former Chairman and
President and CEO
American Electric Power
Company, Inc.
Director since 2008



E. Stanley O'Neal
Former Chairman and CEO
Merrill Lynch & Co., Inc.
Director since 2008



Carol L. Roberts
Senior Vice President and
CFO, International Paper
Company
Director since 2014

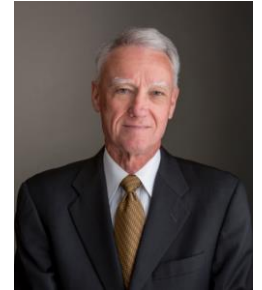
Directors Whose Term Expires in 2017



Klaus Kleinfeld
Chairman and CEO
Alcoa Inc.
Director since 2003



James W. Owens
Former Chairman and CEO
Caterpillar Inc.
Director since 2005



Ulrich "Rick" Schmidt
Former CFO
Spirit Aerosystems
Holdings, Inc.
Director since 2016



Sir Martin Sorrell
Founder, CEO and Director
WPP plc
Director since 2012



Ratan N. Tata
Chairman Emeritus
Tata Sons Limited
Director since 2007

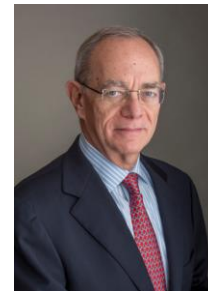
Directors Whose Term Expires in 2018



Kathryn S. Fuller
Chair, Smithsonian
National Museum of
Natural History
Director since 2002



John C. Plant
Former Chairman and CEO
TRW Automotive
Director since 2016



L. Rafael Reif
President
Massachusetts Institute
of Technology
Director since 2015



Patricia F. Russo
Former CEO
Alcatel-Lucent
Director since 2008



Ernesto Zedillo
Director, Yale Center for the
Study of Globalization
Director since 2002

Executive Council

Libby Archell	VP, Chief Communications Officer
John D. Bergen	VP, Corporate Projects
Graeme W. Bottger	EVP & President, Alcoa Global Business Services
Daniel Cruise	VP, Government Affairs and Business Development
Leigh Ann Fisher	Chief Financial Officer, Global Primary Products
Glenn J. Garnaut	VP, Finance, Alcoa Titanium and Engineered Products
Matthew Garth	VP, Financial Planning and Analysis and Investor Relations
Ken Giacobbe	Chief Financial Officer, Engineered Products and Solutions
Roy Harvey	EVP & Group President, Global Primary Products
Olivier Jarrault	EVP & Group President, Engineered Products and Solutions
Ray J. Kilmer	EVP & Chief Technology Officer
Klaus Kleinfeld	Chairman & Chief Executive Officer
Christoph Kollatz	EVP, Corporate Development, Strategy and New Ventures
Kay Meggers	EVP & Group President, Global Rolled Products
Glenn Miller	Chief Financial Officer, Global Rolled Products
W. Paul Myron	VP, Finance, Alcoa Power and Propulsion
Vas Nair	EVP, Human Resources, Environment, Health, Safety and Sustainability
William F. Oplinger	EVP & Chief Financial Officer
Eric V. Roegner	COO, Alcoa Investment Castings, Titanium and Engineered Products; President, Alcoa Titanium & Engineered Products; President, Alcoa Defense
Vitaliy V. Rusakov	COO, Alcoa Fastening Systems & Rings, Alcoa Forgings & Extrusions; President, Alcoa Fastening Systems & Rings
Tómas Mar Sigurdsson	COO, Global Primary Products
Audrey Strauss	EVP, Chief Legal Officer and Secretary
Karl Tragl	EVP & Group President, Alcoa Transportation and Construction Solutions
L. Paris Watts-Stanfield	Chief Financial Officer, Alcoa Transportation and Construction Solutions
Kenneth Wisnoski	President, International Project Development and Asset Management

Items of Business

- Election of Five Director Nominees to Serve for a Three-Year Term Expiring in 2019
- Ratification of Appointment of PricewaterhouseCoopers LLP as the Company's Independent Registered Public Accounting Firm for 2016
- Advisory Vote to Approve Executive Compensation
- Approval of 2013 Alcoa Stock Incentive Plan, as Amended and Restated, including Approval of Material Terms under Code Section 162(m)
- Re-approval of the Material Terms of the Performance Goals under the Alcoa Inc. 162(m) Compliant Annual Cash Incentive Plan, as Amended and Restated
- Shareholder Proposal (Independent Board Chairman)

Voting and Preliminary Results of Voting

- Ballots
- Opening of voting polls
- Closing of voting polls
- Preliminary results

Important Information

Forward-Looking Statements

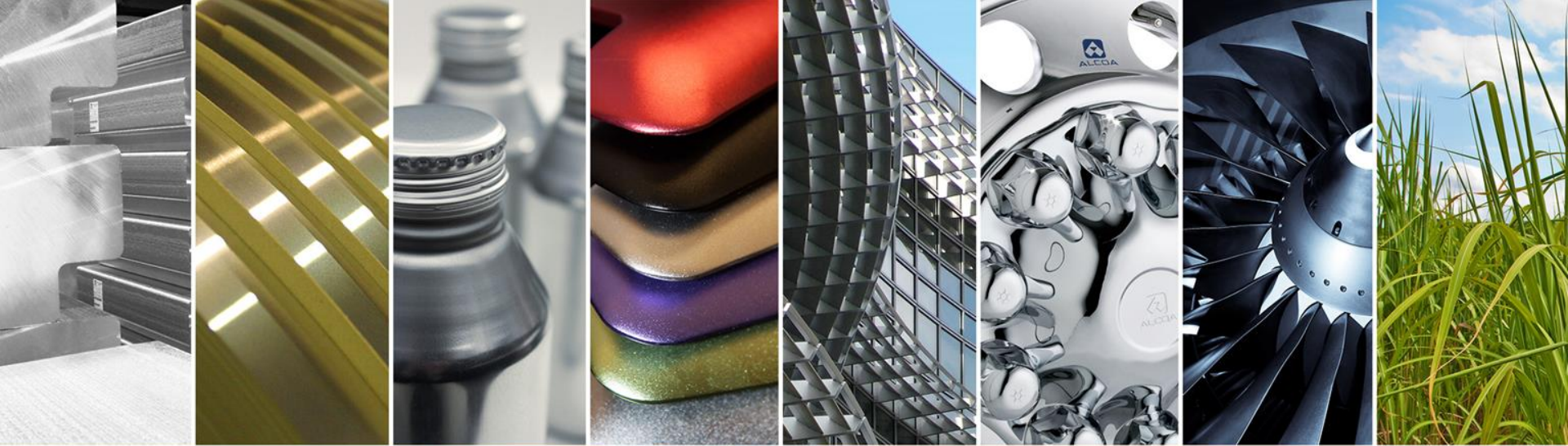
This presentation contains statements that relate to future events and expectations and, as such, constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include those containing such words as “anticipates,” “believes,” “could,” “estimates,” “expects,” “forecasts,” “goal,” “intends,” “may,” “outlook,” “plans,” “projects,” “seeks,” “sees,” “should,” “targets,” “will,” “would,” or other words of similar meaning. All statements that reflect Alcoa’s expectations, assumptions or projections about the future, other than statements of historical fact, are forward-looking statements, including, without limitation, forecasts concerning global demand growth for aluminum, supply/demand balances, and growth of the aerospace, automotive, and other end markets; statements regarding targeted financial results or operating performance; statements about Alcoa’s strategies, outlook, business and financial prospects; and statements regarding the separation transaction, including the future performance of the Value-Add Company and Upstream Company if the separation is completed, the expected benefits of the separation, the expected timing of the Form 10 filing and the completion of the separation, and the expected qualification of the separation as a tax-free transaction. Forward-looking statements are not guarantees of future performance and are subject to risks, uncertainties, and changes in circumstances that are difficult to predict. Although Alcoa believes that the expectations reflected in any forward-looking statements are based on reasonable assumptions, it can give no assurance that these expectations will be attained and it is possible that actual results may differ materially from those indicated by these forward-looking statements due to a variety of risks and uncertainties. Such risks and uncertainties include, but are not limited to: (a) uncertainties as to the timing of the separation and whether it will be completed; (b) the possibility that various closing conditions for the separation may not be satisfied; (c) failure of the separation to qualify for the expected tax treatment; (d) the possibility that any third-party consents required in connection with the separation will not be received; (e) the impact of the separation on the businesses of Alcoa; (f) the risk that the businesses will not be separated successfully or such separation may be more difficult, time-consuming or costly than expected, which could result in additional demands on Alcoa’s resources, systems, procedures and controls, disruption of its ongoing business and diversion of management’s attention from other business concerns; (g) material adverse changes in aluminum industry conditions, including global supply and demand conditions and fluctuations in London Metal Exchange-based prices and premiums, as applicable, for primary aluminum, alumina, and other products, and fluctuations in indexed-based and spot prices for alumina;; (h) deterioration in global economic and financial market conditions generally; (i) unfavorable changes in the markets served by Alcoa; (j) the impact of changes in foreign currency exchange rates on costs and results; (k) increases in energy costs; (l) the inability to achieve the level of revenue growth, cash generation, cost savings, improvement in profitability and margins, fiscal

Important Information

discipline, or strengthening of competitiveness and operations (including executing on the business improvement plans, moving the Upstream alumina and aluminum businesses down on the industry cost curves, and increasing revenues and improving margins in the Value-Add businesses) anticipated from restructuring programs and productivity improvement, cash sustainability, technology advancements (including, without limitation, advanced aluminum alloys, Alcoa Micromill, and other materials and processes), and other initiatives; (m) Alcoa's inability to realize expected benefits, in each case as planned and by targeted completion dates, from acquisitions, divestitures, facility closures, curtailments, or expansions, or international joint ventures; (n) political, economic, and regulatory risks in the countries in which Alcoa operates or sells products; (o) the outcome of contingencies, including legal proceedings, government or regulatory investigations, and environmental remediation; (p) the impact of cyber attacks and potential information technology or data security breaches; (q) the potential failure to retain key employees while the separation transaction is pending or after it is completed; (r) the risk that increased debt levels, deterioration in debt protection metrics, contraction in liquidity, or other factors could adversely affect the credit ratings for the Value-Add Company or the Upstream Company; and (s) the other risk factors discussed in Alcoa's Form 10-K for the year ended December 31, 2015, and other reports filed with the U.S. Securities and Exchange Commission (SEC). Alcoa disclaims any obligation to update publicly any forward-looking statements, whether in response to new information, future events or otherwise, except as required by applicable law. Market projections are subject to the risks discussed above and other risks in the market.

Non-GAAP Financial Measures

Some of the information included in this presentation is derived from Alcoa's consolidated financial information but is not presented in Alcoa's financial statements prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). Certain of these data are considered "non-GAAP financial measures" under SEC rules. These non-GAAP financial measures supplement our GAAP disclosures and should not be considered an alternative to the GAAP measure. Reconciliations to the most directly comparable GAAP financial measures and management's rationale for the use of the non-GAAP financial measures can be found in the Appendix to this presentation and on our website at www.alcoa.com under "About-Corporate Governance-Annual Meeting." Any reference to historical EBITDA means adjusted EBITDA, for which we have provided calculations and reconciliations in the Appendix and on our website. Alcoa has not provided a reconciliation of any forward-looking non-GAAP financial measures to the most directly comparable GAAP financial measures, due primarily to variability and difficulty in making accurate forecasts and projections, as not all of the information necessary for a quantitative reconciliation is available to the Company without unreasonable effort.



Advancing each generation.



Klaus Kleinfeld

Chairman and Chief Executive Officer

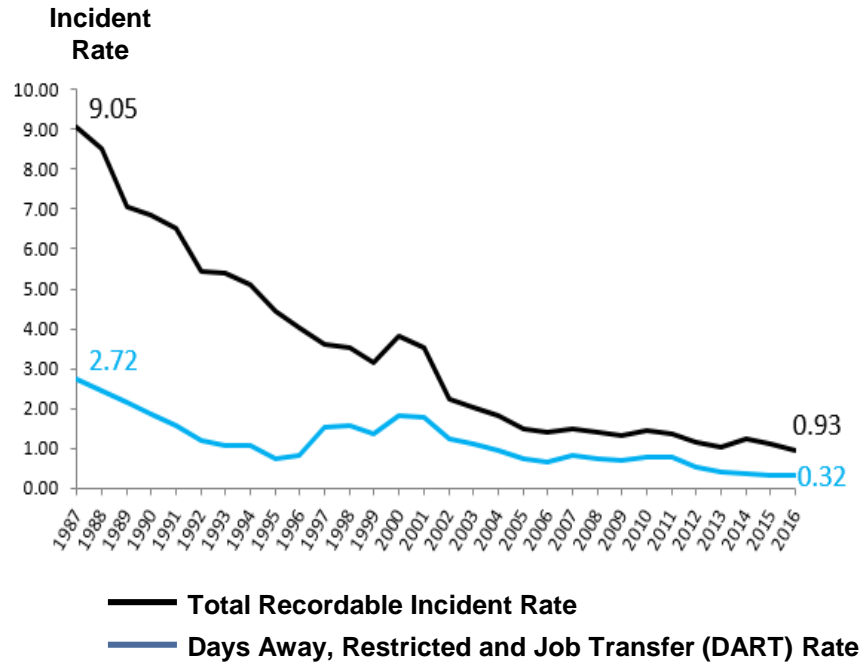
Annual Meeting of Shareholders

May 6, 2016

Heightening Efforts on Safety

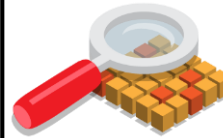
Alcoa Safety Statistics and Action Plans

Safety Performance



Recalibrating Fatality Prevention

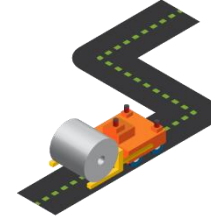
Refocus on Critical Few



Fatal & Serious Injury Risks

- Mobile Equipment & Cranes
- Lock Tag Verify
- Fall Protection
- Confined Space
- Contractor Safety

Automation & Technology



Engineering Out the Risks

- Truck Collision
- Avoidance Systems
- Automated Guided Vehicles
- Reduce Fork Trucks
- Start of Cast Automation
- Robotics

Human Performance



Predict, Manage & Prevent Human Error

- **STOP** Criteria
- Start of Shift Meetings
- High Risk Task
- Observations
- Pre-Task Brief Quality
- Build in Critical Controls

Consistent Rules Enforcement



Ownership & Accountability

- HP Formal Observation Process
- Leadership Walk-throughs
- Stopped jobs
- Contractor Project Oversight

Delivered Strong Results in 2015

2015 Full Year Results Against Targets

Generated \$402M Free Cash Flow in 2015

Productivity

\$900M

Actual

\$1,199M



**Return-Seeking
Capital**

\$750M

\$603M



**Sustaining
Capital**

\$725M

\$604M



Debt-to-EBITDA
2.25-2.75

2.71

excluding RTI



2.80

including RTI

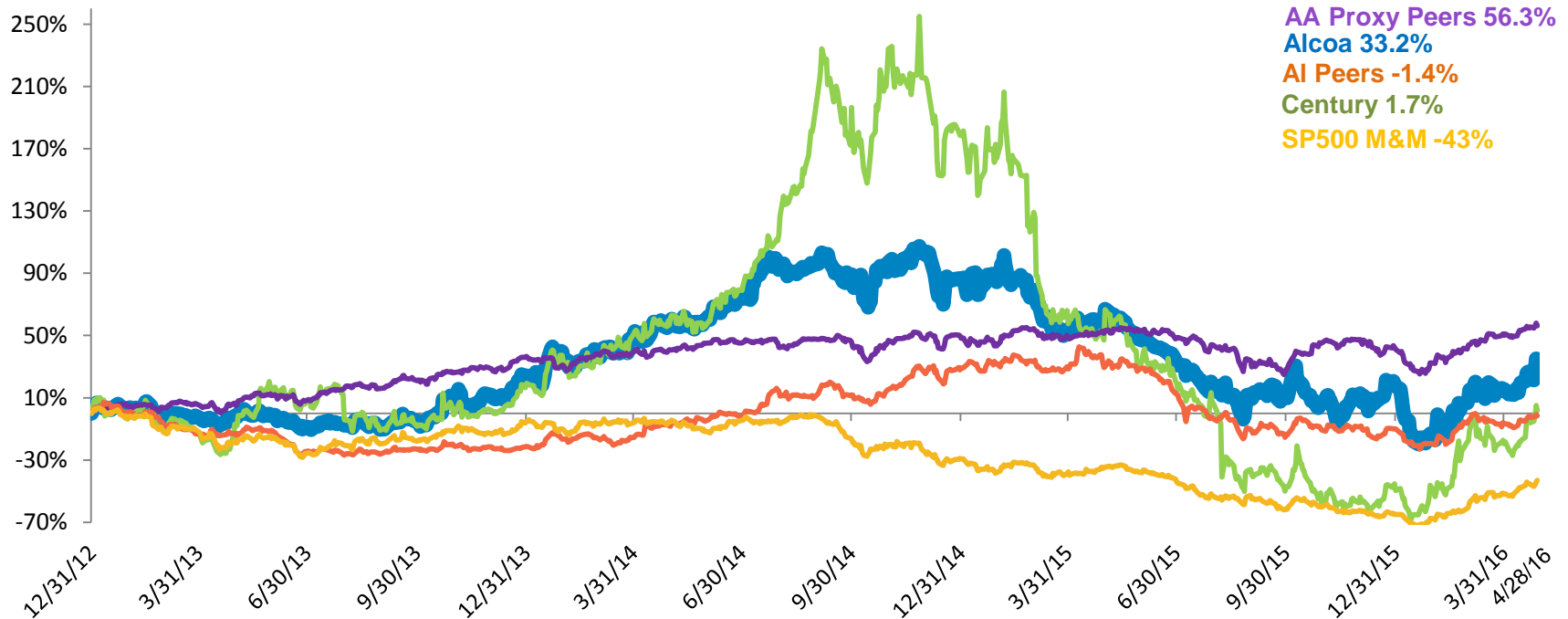
**Generated
Free Cash
Flow**

\$402M

3-Year TSR Ahead of Upstream Peers, Stock Price Driven by AI Price

Alcoa Relative TSR Performance vs. ISS Peers, Alcoa Proxy Peers, Aluminum Peers, LME, Midwest, and Century

3-Year TSR: AA outperforms Ali peers, S&P M&M



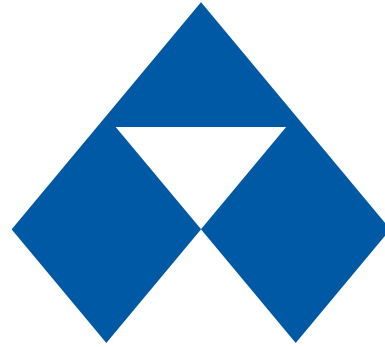
Successfully Launched Two Strong Brands Ahead of Separation

Arconic and New Alcoa Branding



ARCONIC

Innovation, engineered.



Alcoa

New Alcoa: Cost Competitive Industry Leader

New Alcoa Business Operations and Key Attributes

Key Attributes

- **Robust** projected aluminum **demand growth** of **5%** in **2016** and double between 2010 and 2020; **3rd Party bauxite demand projected to double** by 2025
- **Attractive Portfolio:**
 - World's **largest, low cost bauxite miner** at the **1st quartile¹** on the cost curve (**47M BDMT²**)
 - World's **largest, most attractive alumina** business in the **1st quartile³** of the cost curve (**17.3 MMT**)
 - **Substantial energy** assets with operational flexibility (Power production capacity of ~1,550 MW)
 - **Optimized smelting** capacity (**3.1 MMT**) continuing to **improve** its **2nd quartile³** cost curve position
 - **18 casthouses⁴** and **2 rolling mills** providing **value-add** products
- **Diverse sites** – **close proximity** to major markets
- **Committed to disciplined capital allocation** and **prudent return of capital** to shareholders

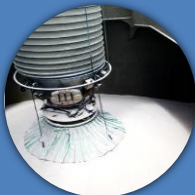
ALUMINA

MINING



**World's largest
bauxite miner¹**

REFINING



**1st quartile³
cost curve
refiner**

ENERGY



**Flexibility to
profit from
market cycles**

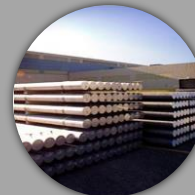
ALUMINUM

SMELTING



**Strategic global
footprint**

CASTING



**Value-add
products in
key markets**

New Alcoa: Track Record to Drive Profitability and Meet 2016 Targets

Alumina, AI Pricing (\$/MT), Portfolio Drivers for Upstream EBITDA from 2008 to 2015, 2016 Targets

Maintaining earnings in unfavorable market conditions

Alumina Price (\$/MT)

\$354

-11%

\$314

All-In Metal Price (\$/MT)¹

\$2,665

-27%

\$1,942

**\$3.8B
in lost
revenue**

Fix/Sell/Curtail/Close

\$2.8B

1.2

1.6

- 36% of refining and 43% of smelting capacity closed, curtailed or divested³
- Improved from 31st to 23rd percentile on alumina and 58th to 43rd on aluminum cost curve
- Secured energy positions (W. Australia, Canada, Massena West)

Portfolio Enhancements

- Ma'aden JV (lowest cost smelter in the world)
- 70% of energy sales to 3rd parties
- Growing 3rd party bauxite sales; doubling shipments in 2016
- 75% of 3rd party smelter-grade shipments on API/Spot vs. 5% in 2010

Margin Growth

- Increased value-add products from 51% to 67%
- Launched Innovative new foundry alloys
- Slab casting expansion supporting automotive growth

\$2.0B

1.4

0.6

2008

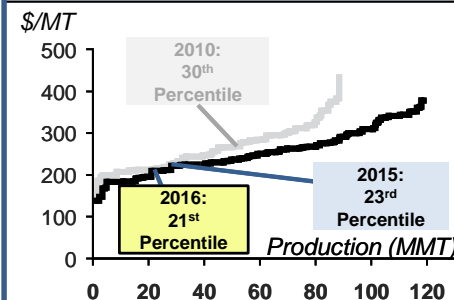
\$4.4B Productivity²

2015

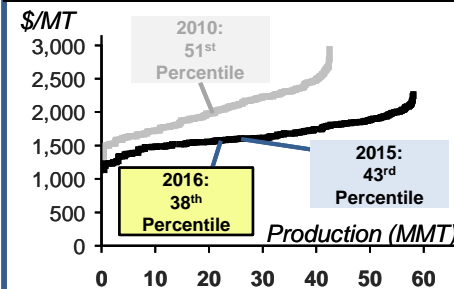
■ Alumina
■ Primary Metals

2016 Targets

Alumina: 21st Percentile



Aluminum: 38th Percentile



1) MW price represents combined annual averages of the LME aluminum price + Midwest premium.
2) 2011-2015 represent gross productivity 3) includes actions from beginning 2008 through May 3, 2016

Arconic: Premier Provider of Innovative Solutions to Growing Markets

Arconic Business Operations and Key Attributes

Key Attributes

- **Premier supplier** of high-performance advanced **multi-material products and solutions**
- **Positioned** to strengthen in **growth markets** with significant **customer synergies**
e.g., aerospace and automotive
- **Expanded multi-material**, technology and process **expertise**
- **Innovation leader** with full pipeline of products and solutions
- **Successfully shifting** product mix to **higher value-add**
- **Robust margins** and **investment opportunities** above **cost of capital**

GRP

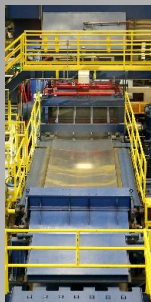
Aerospace
and
Automotive
Products



Brazing,
Commercial
Transportation
and Industrial



Micromill™
Products and
Services

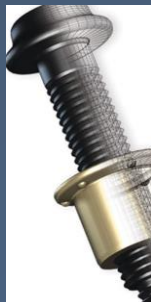


EPS

Power and
Propulsion



Fastening
Systems
and Rings



Forgings and
Extrusions



Titanium and
Engineered
Products



TCS

Building and
Construction
Systems

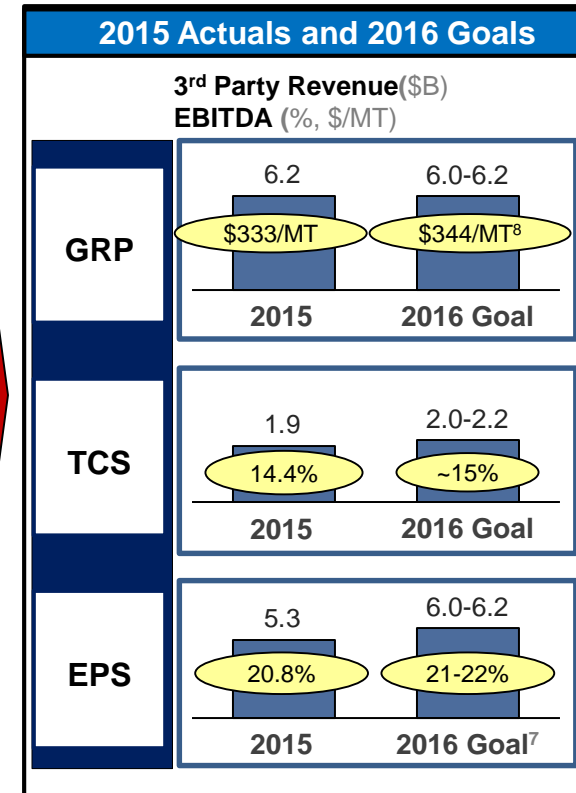
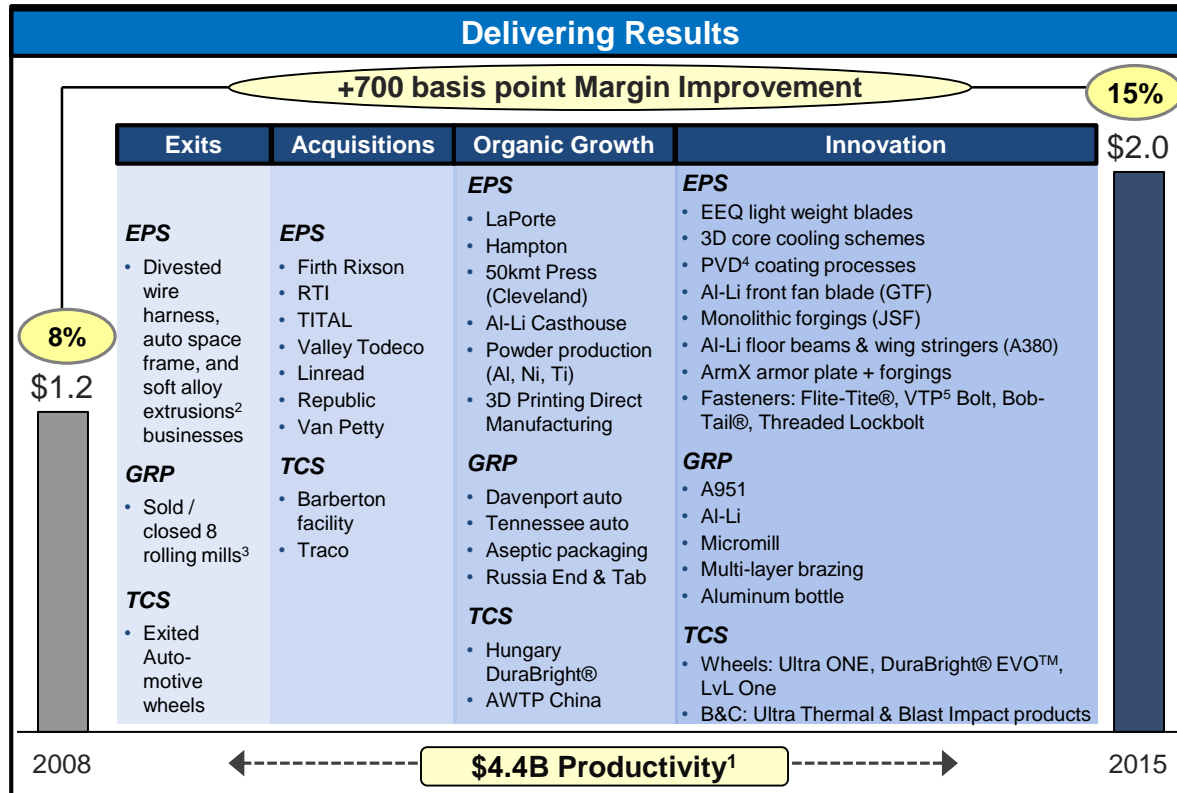


Wheel and
Transportation
Products



Innovation, Investments and Productivity Drive Profitable Growth

Arconic Portfolio Drivers to EBITDA and Margin Growth from 2008 to 2015 (in \$B), 2016 Goals



1) 2009-2010 represent net productivity; 2011-2015 represent gross productivity. 2) Does not include L.A. soft alloy extrusions business 3) The Texarkana casthouse was restarted in 2015 and, therefore, is no longer included in this number 4) PVD: Plasma Vapor Deposition. 5) VTP: Vertical Tail Plane. 6) Maintenance, Repair and Operations 7) Does not include impact of sale of Remmele Medical Business 8) Excludes Warrick CMP impact. See appendix for EBITDA reconciliations

Executing Separation – On Course for Second Half of 2016

Separation Approximate Timeline and Path to Completion

4Q 2015

- ☒ Launched the **Separation Program Office**
- ☒ Announced the **Executive Management Teams**
- ☒ Confirmed **U.S. Domicile** for Both Companies
- ☒ Launched New Business **Improvement Programs** for 2016
 - Arconic to Deliver \$650M
 - New Alcoa to Deliver \$600M
 - Above Includes Overhead Reductions Across Alcoa (\$100M¹ in 2016, \$225M over two years)

1st Half 2016

- ☒ Launched **New Value-Add Name and Brand** and **Refreshed Alcoa Brand**
- ☐ **Separate Supplier/Partner Contracts**
- ☐ **Form 10 Filing** - e.g.,
 - 3-Year Carve-Out and 1-Year Pro-Forma Financials
 - Form of Separation and Legal Structure
 - Capital Structure
 - Allocation of Assets and Liabilities
 - Governance Structure

2nd Half 2016

- ☐ **Form 10** Effectiveness and Final Board **Approval**
- ☐ Complete **Separation of IT Systems** and Infrastructure
- ☐ Complete **Financing**
- ☐ **Begin Trading** as Two Companies

1) \$50M of \$100M to be realized in 2016 comes from Value-Add, remaining \$50M from Upstream.

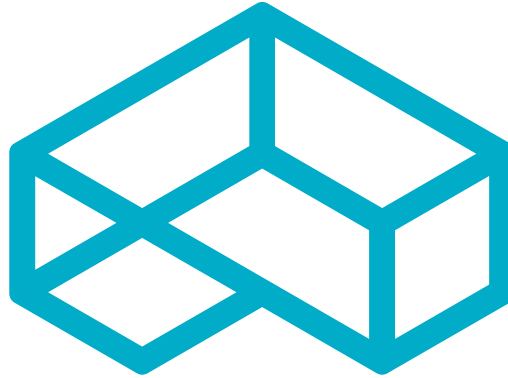
Alcoa: A Strong Brand. Evolved.

New Alcoa branding



Introducing Arconic. Innovation, Engineered.

Arconic branding



ARCONIC

Innovation, engineered.

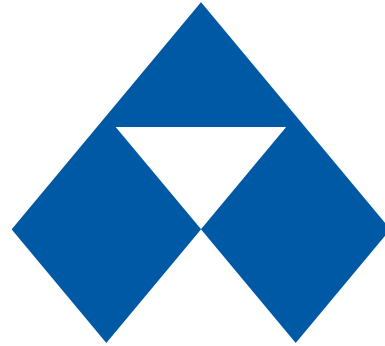
Successfully Launched Two Strong Brands Ahead of Separation

Arconic and New Alcoa Branding



ARCONIC

Innovation, engineered.



Alcoa

Advancing each generation.



Reconciliation of Alumina Adjusted EBITDA

(\$ in millions, except per metric ton amounts)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	4Q14	3Q15	4Q15
After-tax operating income (ATOI)	\$682	\$1,050	\$956	\$727	\$112	\$301	\$607	\$90	\$259	\$370	\$746	\$178	\$212	\$98
Add:														
Depreciation, depletion, and amortization	172	192	267	268	292	406	444	455	426	387	296	90	71	68
Equity loss (income)	–	2	(1)	(7)	(8)	(10)	(25)	(5)	4	29	41	10	9	14
Income taxes	246	428	340	277	(22)	60	179	(27)	66	153	300	75	85	36
Other	(8)	(6)	2	(26)	(92)	(5)	(44)	(8)	(6)	(28)	1	2	(1)	2
Adjusted EBITDA	<u>\$1,092</u>	<u>\$1,666</u>	<u>\$1,564</u>	<u>\$1,239</u>	<u>\$282</u>	<u>\$752</u>	<u>\$1,161</u>	<u>\$505</u>	<u>\$749</u>	<u>\$911</u>	<u>\$1,384</u>	<u>\$355</u>	<u>\$376</u>	<u>\$218</u>
Production (thousand metric tons) (kmt)	14,598	15,128	15,084	15,256	14,265	15,922	16,486	16,342	16,618	16,606	15,720	4,161	3,954	3,856
Adjusted EBITDA / Production (\$ per metric ton)	\$75	\$110	\$104	\$81	\$20	\$47	\$70	\$31	\$45	\$55	\$88	\$85	\$95	\$57

Alcoa's definition of Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) is net margin plus an add-back for depreciation, depletion, and amortization. Net margin is equivalent to Sales minus the following items: Cost of goods sold; Selling, general administrative, and other expenses; Research and development expenses; and Provision for depreciation, depletion, and amortization. The Other line in the table above includes gains/losses on asset sales and other non-operating items. Adjusted EBITDA is a non-GAAP financial measure. Management believes that this measure is meaningful to investors because Adjusted EBITDA provides additional information with respect to Alcoa's operating performance and the Company's ability to meet its financial obligations. The Adjusted EBITDA presented may not be comparable to similarly titled measures of other companies.

Reconciliation of Primary Metals Adjusted EBITDA

(\$ in millions, except per metric ton amounts)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	4Q14	3Q15	4Q15
After-tax operating income (ATOI)	\$822	\$1,760	\$1,445	\$931	\$(612)	\$488	\$481	\$309	\$(20)	\$594	\$155	\$267	\$(59)	\$(40)
Add:														
Depreciation, depletion, and amortization	368	395	410	503	560	571	556	532	526	494	429	117	106	105
Equity loss (income)	12	(82)	(57)	(2)	26	(1)	7	27	51	34	12	(11)	7	(3)
Income taxes	307	726	542	172	(365)	96	92	106	(74)	203	(28)	89	(49)	(42)
Other	(96)	(13)	(27)	(32)	(176)	(7)	2	(422)	(8)	(6)	(2)	(2)	(2)	1
Adjusted EBITDA	<u>\$1,413</u>	<u>\$2,786</u>	<u>\$2,313</u>	<u>\$1,572</u>	<u>\$(567)</u>	<u>\$1,147</u>	<u>\$1,138</u>	<u>\$552</u>	<u>\$475</u>	<u>\$1,319</u>	<u>\$566</u>	<u>\$460</u>	<u>\$3</u>	<u>\$21</u>
Production (thousand metric tons) (kmt)	3,554	3,552	3,693	4,007	3,564	3,586	3,775	3,742	3,550	3,125	2,811	731	700	699
Adjusted EBITDA / Production (\$ per metric ton)	\$398	\$784	\$626	\$392	\$(159)	\$320	\$301	\$148	\$134	\$422	\$201	\$629	\$4	\$30

Alcoa's definition of Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) is net margin plus an add-back for depreciation, depletion, and amortization. Net margin is equivalent to Sales minus the following items: Cost of goods sold; Selling, general administrative, and other expenses; Research and development expenses; and Provision for depreciation, depletion, and amortization. The Other line in the table above includes gains/losses on asset sales and other non-operating items. Adjusted EBITDA is a non-GAAP financial measure. Management believes that this measure is meaningful to investors because Adjusted EBITDA provides additional information with respect to Alcoa's operating performance and the Company's ability to meet its financial obligations. The Adjusted EBITDA presented may not be comparable to similarly titled measures of other companies.

Reconciliation of Upstream⁽¹⁾ Adjusted EBITDA

(in millions)	2008	2009	2010	2011	2012	2013	2014	2015 ⁽²⁾
After-tax operating income (ATOI)	\$1,658	\$(500)	\$789	\$1,088	\$399	\$239	\$964	\$901
Add:								
Depreciation, depletion, and amortization	771	852	977	1,000	987	952	881	725
Equity (income) loss	(9)	18	(11)	(18)	22	55	63	53
Income taxes	449	(387)	156	271	79	(8)	356	272
Other	(58)	(268)	(12)	(42)	(430)	(14)	(34)	(1)
Adjusted EBITDA	<u>\$2,811</u>	<u>\$(285)</u>	<u>\$1,899</u>	<u>\$2,299</u>	<u>\$1,057</u>	<u>\$1,224</u>	<u>\$2,230</u>	<u>\$1,950</u>

(1) Upstream is composed of the Alumina and Primary Metals segments.

(2) The Adjusted EBITDA for 2015 is composed of \$0.9 billion for the refining business unit, \$0.5 billion for the mining business unit, \$0.2 billion for the smelting business unit, \$0.2 billion for the casting business unit, \$0.3 billion for the energy business unit, and \$(0.1) billion related to curtailed locations and other.

Alcoa's definition of Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) is net margin plus an add-back for depreciation, depletion, and amortization. Net margin is equivalent to Sales minus the following items: Cost of goods sold; Selling, general administrative, and other expenses; Research and development expenses; and Provision for depreciation, depletion, and amortization. The Other line in the table above includes gains/losses on asset sales and other non-operating items. Adjusted EBITDA is a non-GAAP financial measure. Management believes that this measure is meaningful to investors because Adjusted EBITDA provides additional information with respect to Alcoa's operating performance and the Company's ability to meet its financial obligations. The Adjusted EBITDA presented may not be comparable to similarly titled measures of other companies.

Reconciliation of Global Rolled Products Adjusted EBITDA⁽¹⁾

(\$ in millions, except per metric ton amounts)

	2005	2006	2007	2008	2009	2010 ⁽²⁾	2011 ⁽²⁾	2012 ⁽²⁾	2013	2014	2015	4Q14	3Q15	4Q15
After-tax operating income (ATOI)	\$278	\$233	\$178	\$(3)	\$(49)	\$220	\$266	\$358	\$292	\$245	\$244	\$52	\$62	\$52
Add:														
Depreciation, depletion, and amortization	220	223	227	216	227	238	237	229	226	235	227	57	56	59
Equity loss	—	2	—	—	—	—	3	6	13	27	32	8	8	8
Income taxes	121	58	92	35	48	92	104	167	123	89	109	16	28	20
Other	1	20	1	6	(2)	1	1	(2)	—	(1)	(1)	—	(1)	—
Adjusted EBITDA	\$620	\$536	\$498	\$254	\$224	\$551	\$611	\$758	\$654	\$595	\$611	\$133	\$153	\$139
Total shipments (thousand metric tons) (kmt)	2,250	2,376	2,482	2,361	1,888	1,755	1,866	1,943	1,989	2,056	1,836	508	464	446
Adjusted EBITDA / Total shipments (\$ per metric ton)	\$276	\$226	\$201	\$108	\$119	\$314	\$327	\$390	\$329	\$289	\$333	\$262	\$330	\$312

⁽¹⁾ Effective in the second quarter of 2015, management removed the impact of metal price lag from the results of the Global Rolled Products segment in order to enhance the visibility of the underlying operating performance of this business. Metal price lag describes the timing difference created when the average price of metal sold differs from the average cost of the metal when purchased by this segment. The impact of metal price lag is now reported as a separate line item in Alcoa's reconciliation of total segment ATOI to consolidated net (loss) income attributable to Alcoa. As a result, this change does not impact the consolidated results of Alcoa. Segment information for all prior periods presented was updated to reflect this change.

⁽²⁾ The average Adjusted EBITDA per metric ton of these three years equals \$344 and represents the average historical high for the Global Rolled Products segment. Alcoa has a 2016 target to meet or exceed this average historical high.

Alcoa's definition of Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) is net margin plus an add-back for depreciation, depletion, and amortization. Net margin is equivalent to Sales minus the following items: Cost of goods sold; Selling, general administrative, and other expenses; Research and development expenses; and Provision for depreciation, depletion, and amortization. The Other line in the table above includes gains/losses on asset sales and other non-operating items. Adjusted EBITDA is a non-GAAP financial measure. Management believes that this measure is meaningful to investors because Adjusted EBITDA provides additional information with respect to Alcoa's operating performance and the Company's ability to meet its financial obligations. The Adjusted EBITDA presented may not be comparable to similarly titled measures of other companies.

Reconciliation of Engineered Products and Solutions⁽¹⁾ Adjusted EBITDA⁽²⁾

(\$ in millions)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	4Q14	3Q15	4Q15
After-tax operating income (ATOI)	\$183	\$237	\$351	\$465	\$321	\$355	\$436	\$484	\$569	\$579	\$595	\$124	\$151	\$123
Add:														
Depreciation, depletion, and amortization	114	111	114	118	118	114	120	122	124	137	233	42	61	67
Income taxes	86	128	186	225	159	182	224	248	286	298	282	64	71	54
Other	(12)	2	2	2	2	—	—	—	—	—	—	(1)	—	—
Adjusted EBITDA	<u>\$371</u>	<u>\$478</u>	<u>\$653</u>	<u>\$810</u>	<u>\$600</u>	<u>\$651</u>	<u>\$780</u>	<u>\$854</u>	<u>\$979</u>	<u>\$1,014</u>	<u>\$1,110</u>	<u>\$229</u>	<u>\$283</u>	<u>\$244</u>
Third-party sales	\$2,966	\$3,406	\$3,821	\$4,215	\$3,355	\$3,225	\$3,716	\$3,863	\$4,054	\$4,217	\$5,342	\$1,114	\$1,397	\$1,409
Adjusted EBITDA Margin	12.5%	14.0%	17.1%	19.2%	17.9%	20.2%	21.0%	22.1%	24.1%	24.0%	20.8%	20.6%	20.3%	17.3%

⁽¹⁾ In the third quarter of 2015, management approved a realignment of Alcoa's Engineered Products and Solutions segment due to the expansion of this part of Alcoa's business portfolio through both organic and inorganic growth. This realignment consisted of moving both the Alcoa Wheel and Transportation Products and Building and Construction Systems business units to a new reportable segment named Transportation and Construction Solutions. Additionally, the Latin American soft alloy extrusions business previously included in Corporate was moved into the new Transportation and Construction Solutions segment. The remaining Engineered Products and Solutions segment consists of the Alcoa Fastening Systems and Rings (renamed to include portions of the Firth Rixson business acquired in November 2014), Alcoa Power and Propulsion (includes the TITAL business acquired in March 2015), Alcoa Forgings and Extrusions (includes the other portions of Firth Rixson), and Alcoa Titanium and Engineered Products (a new business unit that represents the RTI International Metals business acquired in July 2015) business units. Segment information for all prior periods presented was updated to reflect the new segment structure.

⁽²⁾ Effective in the second quarter of 2015, management removed the impact of metal price lag from the results of the Engineered Products and Solutions (now Engineered Products and Solutions and Transportation and Construction Solutions – see footnote 1 above) segment in order to enhance the visibility of the underlying operating performance of this business. Metal price lag describes the timing difference created when the average price of metal sold differs from the average cost of the metal when purchased by this segment. The impact of metal price lag is now reported as a separate line item in Alcoa's reconciliation of total segment ATOI to consolidated net (loss) income attributable to Alcoa. As a result, this change does not impact the consolidated results of Alcoa. Segment information for all prior periods presented was updated to reflect this change.

Alcoa's definition of Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) is net margin plus an add-back for depreciation, depletion, and amortization. Net margin is equivalent to Sales minus the following items: Cost of goods sold; Selling, general administrative, and other expenses; Research and development expenses; and Provision for depreciation, depletion, and amortization. The Other line in the table above includes gains/losses on asset sales and other non-operating items. Adjusted EBITDA is a non-GAAP financial measure. Management believes that this measure is meaningful to investors because Adjusted EBITDA provides additional information with respect to Alcoa's operating performance and the Company's ability to meet its financial obligations. The Adjusted EBITDA presented may not be comparable to similarly titled measures of other companies.

Reconciliation of Transportation and Construction Solutions⁽¹⁾ Adjusted EBITDA⁽²⁾

(\$ in millions)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	4Q14	3Q15	4Q15
After-tax operating income (ATOI)	\$94	\$129	\$94	\$82	\$5	\$73	\$109	\$126	\$167	\$180	\$166	\$38	\$44	\$40
Add:														
Depreciation, depletion, and amortization	50	45	55	53	65	48	45	42	42	42	43	11	11	11
Equity loss (income)	–	6	–	–	(2)	(2)	(1)	–	–	–	–	–	–	–
Income taxes	30	27	7	–	(21)	18	38	49	67	69	63	14	18	14
Other	1	(4)	(10)	–	–	–	(1)	(9)	(2)	–	(1)	–	(1)	–
Adjusted EBITDA	<u>\$175</u>	<u>\$203</u>	<u>\$146</u>	<u>\$135</u>	<u>\$47</u>	<u>\$137</u>	<u>\$190</u>	<u>\$208</u>	<u>\$274</u>	<u>\$291</u>	<u>\$271</u>	<u>\$63</u>	<u>\$72</u>	<u>\$65</u>
Third-party sales	\$1,954	\$2,204	\$2,249	\$2,270	\$1,537	\$1,656	\$1,936	\$1,914	\$1,951	\$2,021	\$1,882	\$500	\$475	\$444
Adjusted EBITDA Margin	9.0%	9.2%	6.5%	5.9%	3.1%	8.3%	9.8%	10.9%	14.0%	14.4%	14.4%	12.6%	15.2%	14.6%

⁽¹⁾ In the third quarter of 2015, management approved a realignment of Alcoa's Engineered Products and Solutions segment due to the expansion of this part of Alcoa's business portfolio through both organic and inorganic growth. This realignment consisted of moving both the Alcoa Wheel and Transportation Products and Building and Construction Systems business units to a new reportable segment named Transportation and Construction Solutions. Additionally, the Latin American extrusions business previously included in Corporate was moved into the new Transportation and Construction Solutions segment. The remaining Engineered Products and Solutions segment consists of the Alcoa Fastening Systems and Rings (renamed to include portions of the Firth Rixson business acquired in November 2014), Alcoa Power and Propulsion (includes the TITAL business acquired in March 2015), Alcoa Forgings and Extrusions (includes the other portions of Firth Rixson), and Alcoa Titanium and Engineered Products (a new business unit that represents the RTI International Metals business acquired in July 2015) business units. Segment information for all prior periods presented was updated to reflect the new segment structure.

⁽²⁾ Effective in the second quarter of 2015, management removed the impact of metal price lag from the results of the Engineered Products and Solutions (now Engineered Products and Solutions and Transportation and Construction Solutions – see footnote 1 above) segment in order to enhance the visibility of the underlying operating performance of this business. Metal price lag describes the timing difference created when the average price of metal sold differs from the average cost of the metal when purchased by this segment. The impact of metal price lag is now reported as a separate line item in Alcoa's reconciliation of total segment ATOI to consolidated net (loss) income attributable to Alcoa. As a result, this change does not impact the consolidated results of Alcoa. Segment information for all prior periods presented was updated to reflect this change.

Alcoa's definition of Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) is net margin plus an add-back for depreciation, depletion, and amortization. Net margin is equivalent to Sales minus the following items: Cost of goods sold; Selling, general administrative, and other expenses; Research and development expenses; and Provision for depreciation, depletion, and amortization. The Other line in the table above includes gains/losses on asset sales and other non-operating items. Adjusted EBITDA is a non-GAAP financial measure. Management believes that this measure is meaningful to investors because Adjusted EBITDA provides additional information with respect to Alcoa's operating performance and the Company's ability to meet its financial obligations. The Adjusted EBITDA presented may not be comparable to similarly titled measures of other companies.

Reconciliation of Value Add⁽¹⁾ Adjusted EBITDA⁽²⁾

(\$ in millions)	2008	2009	2010	2011	2012	2013	2014	2015
After-tax operating income (ATOI)	\$544	\$277	\$648	\$811	\$968	\$1,028	\$1,004	\$1,005
Add:								
Depreciation, depletion, and amortization	387	410	400	402	393	392	414	503
Equity (income) loss	–	(2)	(2)	2	6	13	27	32
Income taxes	260	186	292	366	464	476	456	454
Other	8	–	1	–	(11)	(2)	(1)	(2)
Adjusted EBITDA	\$1,199	\$871	\$1,339	\$1,581	\$1,820	\$1,907	\$1,900	\$1,992
Third-party sales	\$15,451	\$10,961	\$11,158	\$13,294	\$13,155	\$13,111	\$13,589	\$13,462
Adjusted EBITDA Margin	7.8%	7.9%	12.0%	11.9%	13.8%	14.5%	14.0%	14.8%

⁽¹⁾ Value Add Co. is composed of the Global Rolled Products, Engineered Products and Solutions, and Transportation and Construction Solutions segments. In the third quarter of 2015, management approved a realignment of Alcoa's Engineered Products and Solutions segment due to the expansion of this part of Alcoa's business portfolio through both organic and inorganic growth. This realignment consisted of moving both the Alcoa Wheel and Transportation Products and Building and Construction Systems business units to a new reportable segment named Transportation and Construction Solutions. Additionally, the Latin American soft alloy extrusions business previously included in Corporate was moved into the new Transportation and Construction Solutions segment. The remaining Engineered Products and Solutions segment consists of the Alcoa Fastening Systems and Rings (renamed to include portions of the Firth Rixson business acquired in November 2014), Alcoa Power and Propulsion (includes the TITAL business acquired in March 2015), Alcoa Forgings and Extrusions (includes the other portions of Firth Rixson), and Alcoa Titanium and Engineered Products (a new business unit that represents the RTI International Metals business acquired in July 2015) business units. Segment information for all prior periods presented was updated to reflect the new segment structure.

⁽²⁾ Effective in the second quarter of 2015, management removed the impact of metal price lag from the results of the Global Rolled Products and Engineered Products and Solutions (now Engineered Products and Solutions and Transportation and Construction Solutions – see footnote 1 above) segments in order to enhance the visibility of the underlying operating performance of these businesses. Metal price lag describes the timing difference created when the average price of metal sold differs from the average cost of the metal when purchased by the respective segment. The impact of metal price lag is now reported as a separate line item in Alcoa's reconciliation of total segment ATOI to consolidated net (loss) income attributable to Alcoa. As a result, this change does not impact the consolidated results of Alcoa. Segment information for all prior periods presented was updated to reflect this change.

Alcoa's definition of Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) is net margin plus an add-back for depreciation, depletion, and amortization. Net margin is equivalent to Sales minus the following items: Cost of goods sold; Selling, general administrative, and other expenses; Research and development expenses; and Provision for depreciation, depletion, and amortization. The Other line in the table above includes gains/losses on asset sales and other non-operating items. Adjusted EBITDA is a non-GAAP financial measure. Management believes that this measure is meaningful to investors because Adjusted EBITDA provides additional information with respect to Alcoa's operating performance and the Company's ability to meet its financial obligations. The Adjusted EBITDA presented may not be comparable to similarly titled measures of other companies.

Reconciliation of Free Cash Flow

(in millions)	Year ended							Quarter ended	
	December 31, <u>2010</u>	December 31, <u>2011</u>	December 31, <u>2012</u>	December 31, <u>2013</u>	December 31, <u>2014</u>	December 31, <u>2015</u>	December 31, <u>2014</u>	September 30, <u>2015</u>	December 31, <u>2015</u>
Cash from operations	\$2,261	\$2,193	\$1,497	\$1,578	\$1,674	\$1,582	\$1,458	\$420	\$865
Capital expenditures	(1,015)	(1,287)	(1,261)	(1,193)	(1,219)	(1,180)	(469)	(268)	(398)
Free cash flow	\$1,246	\$906	\$236	\$385	\$455	\$402	\$989	\$152	\$467

Free Cash Flow is a non-GAAP financial measure. Management believes that this measure is meaningful to investors because management reviews cash flows generated from operations after taking into consideration capital expenditures due to the fact that these expenditures are considered necessary to maintain and expand Alcoa's asset base and are expected to generate future cash flows from operations. It is important to note that Free Cash Flow does not represent the residual cash flow available for discretionary expenditures since other non-discretionary expenditures, such as mandatory debt service requirements, are not deducted from the measure.

Reconciliation of Debt-to-Adjusted EBITDA Ratio

(\$ in millions)	2010	2011	2012	2013	2014	2015*
Net income (loss) attributable to Alcoa	\$254	\$611	\$191	\$(2,285)	\$268	\$(121)
Add:						
Net income (loss) attributable to noncontrolling interests	138	194	(29)	41	(91)	125
Loss from discontinued operations	8	3	—	—	—	—
Provision for income taxes	148	255	162	428	320	445
Other expenses (income), net	5	(87)	(341)	(25)	47	2
Interest expense	494	524	490	453	473	498
Restructuring and other charges	207	281	172	782	1,168	994
Impairment of goodwill	—	—	—	1,731	—	25
Provision for depreciation, depletion, and amortization	1,450	1,479	1,460	1,421	1,371	1,280
Adjusted EBITDA	\$2,704	\$3,260	\$2,105	\$2,546	\$3,556	\$3,248
Total Debt	\$9,165	\$9,371	\$8,829	\$8,319	\$8,852	\$9,103
Debt-to-Adjusted EBITDA Ratio	3.39	2.87	4.20	3.27	2.49	2.80

* In 2015, the Total Debt and Adjusted EBITDA of Alcoa includes \$373 and \$21, respectively, related to the acquisition of RTI International Metals (RTI). The Total Debt amount of RTI reflects the debt outstanding at December 31, 2015; however, the Adjusted EBITDA of RTI is only from the acquisition date (July 23, 2015) through December 31, 2015. Excluding these amounts, the Debt-to-Adjusted EBITDA Ratio was 2.71 in 2015.

Alcoa's definition of Adjusted EBITDA (Earnings before interest, taxes, depreciation, and amortization) is net margin plus an add-back for depreciation, depletion, and amortization. Net margin is equivalent to Sales minus the following items: Cost of goods sold; Selling, general administrative, and other expenses; Research and development expenses; and Provision for depreciation, depletion, and amortization. Adjusted EBITDA is a non-GAAP financial measure. Management believes that this measure is meaningful to investors because Adjusted EBITDA provides additional information with respect to Alcoa's operating performance and the Company's ability to meet its financial obligations. The Adjusted EBITDA presented may not be comparable to similarly titled measures of other companies.