Advancing each generation. ALCOA

3rd Quarter Earnings Conference

October 11, 2016

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. 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) the impact of the separation on the businesses of Alcoa; (d) 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; (e) 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; (f) deterioration in global economic and financial market conditions generally; (g) unfavorable changes in the markets served by Alcoa; (h) the impact of changes in foreign currency exchange rates on costs and results; (i) increases in energy costs; (j) the 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 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; (k) 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 joint ventures; (l) political, economic, and regulatory risks in the countries in which Alcoa operates or sells products; (m) the outcome of contingencies, including legal proceedings, government or regulatory investigations, and environmental remediation; (n) the impact of cyber attacks and potential information technology or data security breaches; and (o) 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.

Important Information (continued)

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. Alcoa has not provided a reconciliation of the forecasted range for adjusted EBITDA per metric ton or adjusted EBITDA margin on a segment basis for fiscal 2016 to the most directly comparable GAAP financial measures because Alcoa is unable to quantify certain amounts that would be required to be included in the GAAP measure without unreasonable efforts and Alcoa believes such reconciliations would imply a degree of precision that would be confusing or misleading to investors. In particular, reconciliation of guidance for adjusted EBITDA per metric ton and adjusted EBITDA margin to the most directly comparable GAAP measure is not available without unreasonable efforts on a forward-looking basis due to the variability and complexity with respect to the charges and other components excluded from these non-GAAP measures, such as the effects of the Warrick cold metal plan, foreign currency movements, equity income, gains or losses on sales of assets, and taxes. These reconciling items are in addition to the inherent variability already included in the GAAP measure which includes, but is not limited to, price/mix, volume, and the impact of the impending separation of Alcoa Inc. Any reference to historical EBITDA means adjusted EBITDA, for which we have provided calculations and reconciliations in the Appendix.

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Klaus Kleinfeld

Chairman and Chief Executive Officer

October 11, 2016

Alcoa Steady and Resilient in Spite of Near-Term Market Challenges

3Q 2016 Overview

ARCONIC
Innovation, engineered.

Arconic Segments

- **Revenue** of **$3.4 billion**, **down 1 percent** year over year;
  Reflects ***customer adjustments*** *to delivery schedules in the* ***aerospace*** *industry,* ***softness*** *in the* ***North America Commercial Transportation*** *and* ***Pricing Pressures****,* ***partially offset*** *by strong* ***North America automotive*** *volume*
- After-tax **Operating Income** (ATOI) of **$267 million**, **up 4 percent** year over year (YoY)
  - **Global Rolled Products: $58 million** of ATOI, **up 23% YoY** (ex $18m impact to transform Warrick rolling mill into cold metal plant), **Record** quarter **automotive sheet** shipments, **up 49 percent** (YoY)
  - **Engineered Products and Solutions**: **Record** third quarter ATOI of **$162 million**, **up 7 percent** (YoY)
  - **Transportation and Construction Solutions**: **$47** million of ATOI, **up 7 percent** (YoY)
- Achieved **$187 million** in **productivity** savings; **$547** million **year-to-date**
  on track to deliver $650 million in 2016
- **Adjusted** Segment **Targets** for **2016** to reflect **near-term industry challenges**

Alcoa

Alcoa Corporation Segments

- **Total Revenue** of **$2.3 billion**, **flat sequentially**,
  reflecting continued low alumina prices and the impact of curtailed and closed operations
- **Third-party revenue** of **$1.8 billion**, **up 1 percent sequentially**
- **ATOI** of **$128 million**, **down 15 percent sequentially**,
  improved metal price *more than* ***offset*** *by* ***lower alumina pricing*** *and unfavorable* ***currency*** *impacts*
- **New third-party bauxite contracts** valued at **$53 million** over the next two years;
  $468 million in third-party bauxite contracts year-to-date in 2016
- **Met or exceeded three-year cost curve targets:**
  - **Alumina: 17th percentile**, 4 points better than target, 13-point improvement from 2010
  - **Aluminum: 38th percentile**, 13-point improvement from 2010
- Achieved **$190 million** in **productivity** savings; **$569** million **year-to-date**, surpassing the $550 million 2016 target

Separation Scheduled for Nov 1st

- **PBGC approval** of separation of pensions of future companies
- Received **IRS private letter ruling**
- **Successful $1.25B debt raise** by Alcoa Corp.
- **Both boards announced**

1) Arconic segments: Global Rolled Products (GRP), Engineered Products and Solutions and Transportation and Construction solutions. Alcoa Corporation segments: Alumina and Primary Metals. After the separation, Warrick and Saudi Arabia rolling mill operations (currently in GRP segment) will be in Alcoa Corporation. See appendix for EBITDA reconciliations

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William Oplinger

Executive Vice President and Chief Financial Officer

October 11, 2016

Income Statement Summary

$ Millions, except aluminum prices and per-share amounts	3Q15	2Q16	3Q16	Prior Year Change	Sequential Change
Realized Aluminum Price ($/MT)	**$1,901**	**$1,849**	**$1,874**	**($27)**	**$25**
Revenue	**$5,573**	**$5,295**	**$5,213**	**($360)**	**($82)**
Cost of Goods Sold	$4,559	$4,216	$4,217	($342)	$1
COGS % Revenue	81.8%	79.6%	80.9%	(0.9% pts)	1.3% pts
Selling, General Administrative, Other	$261	$286	$275	$14	($11)
SGA % Revenue	4.7%	5.4%	5.3%	0.6% pts	(0.1% pts)
Other Income, Net	($15)	($37)	($117)	($102)	($80)
Restructuring and Other Charges	$66	$23	$18	($48)	($5)
Effective Tax Rate	48.6%	46.1%	44.1%	(4.5% pts)	(2.0% pts)
EBITDA	**$698**	**$754**	**$683**	**($15)**	**($71)**
Net Income (Loss)	$44	$135	$166	$122	$31
Net Income (Loss) per Diluted Share	$0.06	$0.27	$0.33	$0.27	$0.06
Adjusted Net Income excl. Special Items	$109	$213	$161	$52	($52)
Adjusted Net Income per Diluted Share excl. Special Items	$0.21	$0.44	$0.32	$0.11	($0.12)

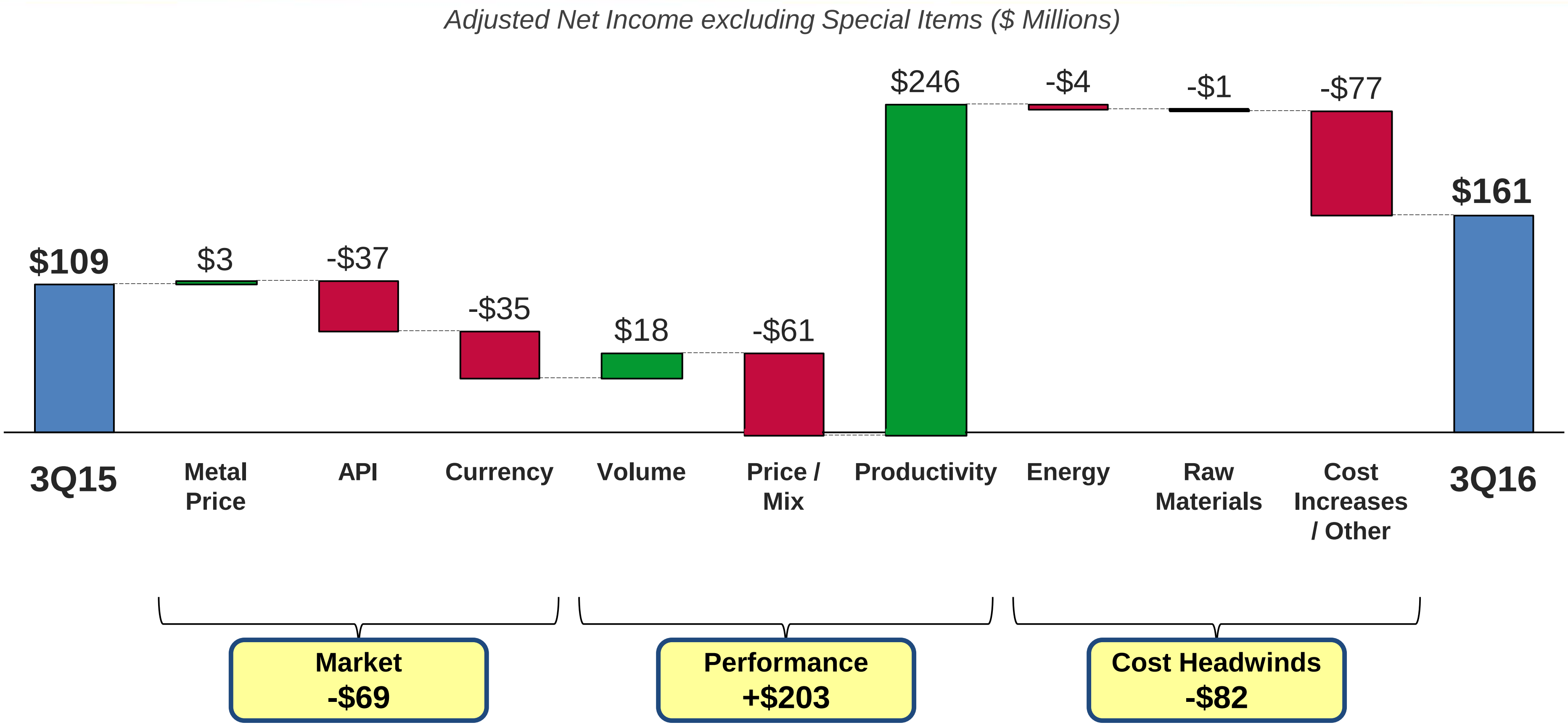
See appendix for EBITDA and Adjusted Income reconciliations

Special Items

$ Millions, except per-share amounts	3Q15	2Q16	3Q16	Income Statement Classification	Segment
Net Income	**$44**	**$135**	**$166**		
Net Income per Diluted Share	**$0.06**	**$0.27**	**$0.33**		
Gain on Sale	$25	$11	$77	Other Income, Net	Corporate
Acquisition Settlement	-	-	$20	Other Income, Net	Corporate
Mark-to-Market Energy Contracts	($10)	($3)	$2	Other Income, Net	Corporate
Restructuring-Related	($43)	($17)	($10)	Restructuring and Other Charges/COGS	Corporate
Tax Items	($15)	($44)	($40)	Income Taxes	Corporate
Portfolio Transaction Costs (including Separation Costs)	($22)	($37)	($44)	SG&A / Interest Expense	Corporate
Supplier Arbitration Recovery	-	$12	-	Other Income, Net	Corporate
Special Items	**($65)**	**($78)**	**$5**		
Adjusted Net Income excl. Special Items	$109	$213	$161		
Adjusted Net Income per Diluted Share excl. Special Items	$0.21	$0.44	$0.32		

1) See appendix for Adjusted Income reconciliation

Strong Productivity Drives Profitability



Note: Metal Price = LME + Regional Premium; Regional Premium previously reported in Price/Mix category
See appendix for Adjusted Income reconciliation

GRP: Strong Productivity and Auto Sheet Growth Offset Headwinds

3Q16 Actual and 4Q16 Outlook – Global Rolled Products

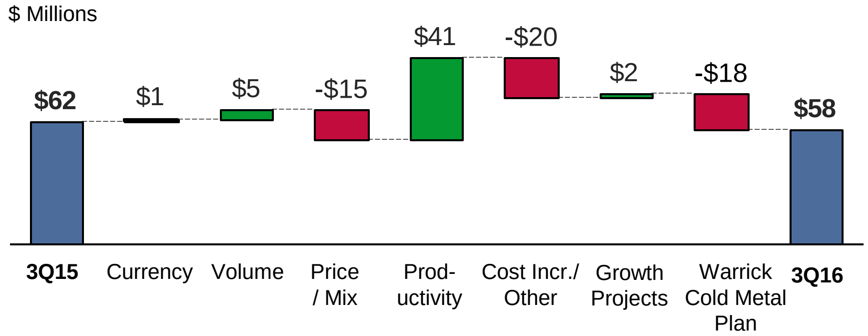
3rd Quarter ATOI Results

	3Q15	2Q16	**3Q16**
3rd Party Revenue ($ Millions)	1,527	1,550	**1,521**
3rd Party Conversion Revenue ($ Millions)	765	795	**776**
ATOI ($ Millions)	62	68[1]	**58[1]**
EBITDA/MT ($)	330	326[2]	**295[2]**

3rd Quarter Business Highlights

- Year-over-year **EBITDA/MT[2] up 7%** excluding Warrick cold metal plan (EBITDA $29M, ATOI $18M)
- **Strong productivity** more than offsets cost increases
- **Record quarter for auto sheet shipments**; **up 49%** year-over-year
- Lower demand in airframes from supply chain **inventory destocking** and **model transition**; **N.A. heavy duty truck** build rates continue to decline
- **Pricing pressure** in **packaging** continues

3rd Quarter ATOI Performance Bridge



4th Quarter Year-over-Year Outlook

- **Auto sheet shipments** expected to be **up 45% to 50%**
- Lower demand in airframes from supply chain **inventory destocking** and **build rate reductions** on A380, B777, B747-8 and C-Series; **N.A. heavy duty truck** build rates continue to decline
- **ATOI** is expected to be **flat year over year at $49M** at current exchange rates. Q4'15 reported ATOI of $52M; Q4'15 ATOI of $49M adjusted for transfer of Warrick and Saudi Arabia rolling mills

1. ATOI excluding Warrick cold metal plan is $85 (2Q16) and $76 (3Q16). 2. EBITDA/MT excluding Warrick cold metal plan is $380 (2Q16) and $354 (3Q16). See appendix for additional information and EBITDA reconciliation.

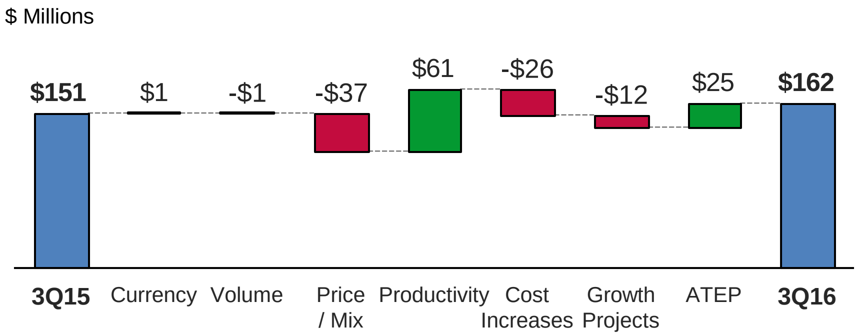
EPS: Strong Productivity and Benefits from ATEP Acquisition

3Q16 Actual and 4Q16 Outlook – Engineered Products and Solutions

3rd Quarter ATOI Results

	3Q15	2Q16	**3Q16**
3rd Party Revenue ($ Millions)	1,397	1,465	**1,406**
ATOI ($ Millions)	151	180	**162**
EBITDA Margin	20.3%	22.5%	**21.1%**

3rd Quarter ATOI Performance Bridge



3rd Quarter Business Highlights

- **Record 3Q ATOI; up 7%** year-over-year
- **Strong aero engine demand** with **industry ramp-up challenges** and **higher new product introduction cost**
- Lower demand in **airframes** from supply chain inventory **destocking, model transition** and **wide-body build rate** reductions
- **Strong productivity** and benefits from **the ATEP acquisition** offset **pricing pressure** and **growth investments** in La Porte and Acuna
- **Improved cost structure;** YTD >1,200 positions reduced or reloctated

4th Quarter Year-over-Year Outlook

- Lower demand in airframe from supply chain **inventory destocking** and **build rate reductions** on A380, B777, B747-8 and C-Series
- **Strong aero engine demand** with **industry ramp-up challenges** and **higher new product introduction cost**
- **Strong N.A. IGT growth,** while **Oil & Gas, European IGT** and **North America Commercial Transportation** markets continue to be **soft**
- **ATOI** is expected to be **up 6 to 14%** year over year to **$130M to $140M** at current exchange rates

See appendix for additional information and EBITDA reconciliation.

TCS: Productivity Offsets N.A. Heavy Duty Truck and Brazil Headwinds

3Q16 Actual and 4Q16 Outlook – Transportation and Construction Solutions

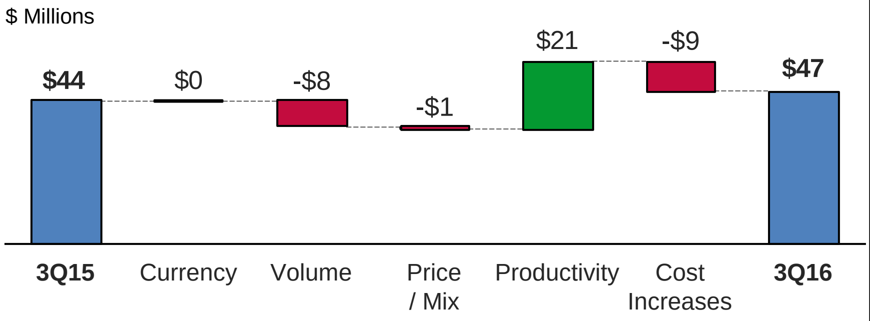
3rd Quarter ATOI Results

	3Q15	2Q16	**3Q16**
3rd Party Revenue ($ Millions)	475	467	**450**
ATOI ($ Millions)	44	46	**47**
EBITDA Margin	15.2%	16.3%	**16.9%**

3rd Quarter Business Highlights

- **ATOI up 7%** year-over-year. **Revenue down 5%** on **N.A. Heavy Duty Truck and Brazilian** market pressures
- **Record EBITDA margin**; **Productivity** actions offset cost increases and revenue decline
- **N.A. Non-Residential Construction strong**; **Europe stable**
- **N.A. Heavy Duty Truck** build rates continue to **decline; Europe continues to grow**

3rd Quarter ATOI Performance Bridge



4th Quarter Year-over-Year Outlook

- **Non-Residential Construction** in N.A. and Europe continues to show strength
- **N.A. Heavy Duty Truck market continues decline,** partially offset by strength in Europe and in Asia Pacific
- **Continued productivity** to offset cost increases and market headwinds
- **ATOI** expected to be **up 8% to 10%** year over year to **$43M to $44M** at current exchange rates

Alumina: Market Factors API and FX Impact Earnings

3Q16 Actual and 4Q16 Outlook – Alumina

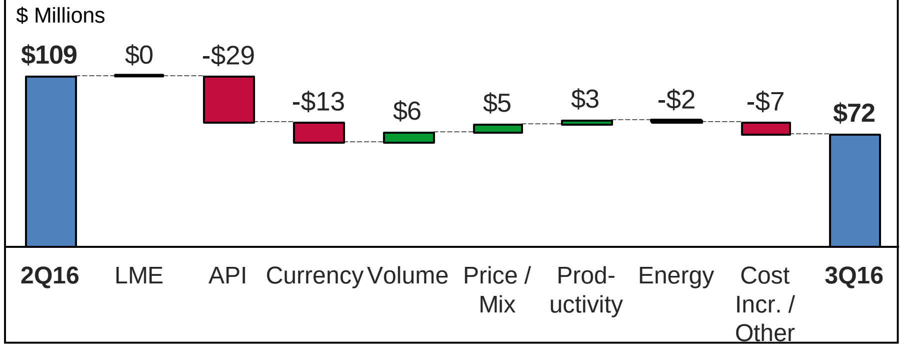
3rd Quarter ATOI Results

	3Q15	2Q16	**3Q16**
Production (kmt)	3,954	3,316	**3,310**
3rd Party Shipments (kmt)	2,798	2,266	**2,361**
3rd Party Revenue ($ Millions)	912	694	**687**
3rd Party Price ($/MT)	323	304	**287**
ATOI ($ Millions)	212	109	**72**

3rd Quarter Business Highlights

- **API pricing down 6% sequentially, down 23% year-over-year**
- **Production down 6 kmt** driven by Pt Comfort curtailment, partially offset by increased production across the system
- **Higher alumina** shipments drive favorable volume benefit of **$6M**
- **All-time Juruti bauxite production record**

3rd Quarter ATOI Performance Bridge



4th Quarter Sequential Outlook

- **Production** to be **up 30 kmt** sequentially
- **85%** of 3rd party shipments on API or spot pricing for 2016
- **API** pricing follows **30-day lag**; **LME** pricing follows **60-day lag**
- **Continued productivity actions** will offset **higher energy** and other **cost** increases

Primary Metals: Favorable Performance Drives Improvement

3Q16 Actual and 4Q16 Outlook – Primary Metals

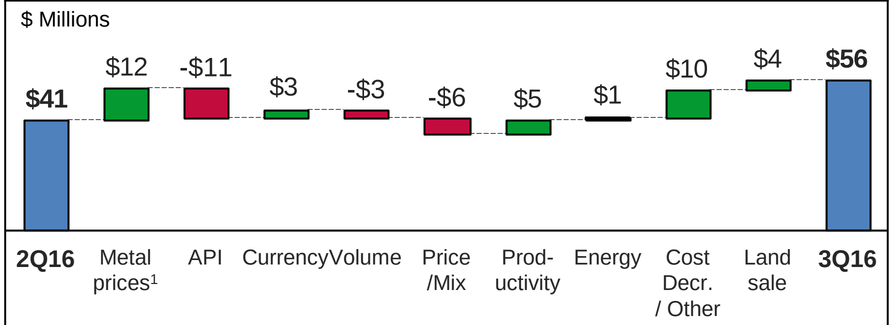
3rd Quarter ATOI Results

	3Q15	2Q16	**3Q16**
Production (kmt)	700	595	**586**
3rd Party Shipments (kmt)	615	565	**557**
3rd Party Revenue ($ Millions)	1,249	1,119	**1,148**
3rd Party Price ($/MT)	1,901	1,849	**1,874**
ATOI ($ Millions)	(59)	41	**56**

3rd Quarter Business Highlights

- **Realized price up 1%** sequentially
- **Production down 9 kmt** due to production instability at Fjardaal
- Benefit from increased **productivity/**decreased **cost,** mainly maintenance, overhead and transportation across the system
- **Brazil energy sales volume up 17%** due to seasonal distribution of energy

3rd Quarter ATOI Performance Bridge



4th Quarter Sequential Outlook

- **Production up 10 kmt** on improved stability at Fjardaal; offset by **downward** pressure in **product premiums**
- **Pricing** to follow a **15-day lag** to LME
- **Alumina costs follow 90-day lag on API pricing, $15-$20** decrease per aluminum ton
- Structural changes in **Portland energy contract** and **seasonal energy prices in Spain** will drive energy prices up $15m
- Continued **productivity** to **offset** all other **cost headwinds**

[1]Metal Price = LME + Regional Premium; Regional Premium previously reported in Price/Mix category

Q4'16 Will Be Reported Separately for Arconic and Alcoa Corp

Expected format and selected items of Q4'16 results for Arconic and Alcoa Corp. based on November 1 target date

Arconic Q4'16 Reporting

- **3 Months of Arconic results** (Oct – Dec)
- **1 Month of GPP results** reported in **discontinued operations** (Oct)
- **Charges** related to separation[1]

Item	Charge	Location
Deferred Tax Asset Valuation Allowance	$800M to $1,000M	Corporate
Loss on Disposal	$300M-$700M	Disc Ops

- Segment level reporting
  - **GRP adjusted** to reflect **separation** of the **Warrick and Saudi Arabian** rolling mills
  - **EPS & TCS unchanged**

Alcoa Corp Q4'16 Reporting

- **2 Months of Alcoa Corp results** (Nov, Dec)
- **1 Month of Alcoa Corp carve-out financials** (Oct)
- Segment level reporting
  - **Bauxite**
  - **Alumina**
  - **Energy**
  - **Aluminum**
  - **Cast Products**
  - **Rolled Products**
- **Rolled Products segment guidance**
  - **Q3'16 actual ATOI -$9M**
  - **Seasonal volume decline** partially offset by **productivity savings**, impacts Q4 **ATOI negatively** by **$1M-$2M**

[1]Charges triggered only by the Alcoa Inc. Separation

FCF at $31M in Q3'16

3Q15, 2Q16 and 3Q16 Cash Flow

($ Millions)	3Q15	2Q16	3Q16
Net Income before Noncontrolling Interests	$106	$178	$186
Depreciation, Depletion and Amortization	$318	$313	$316
Change in Working Capital	$38	$5	$50
Pension Expense in Excess of Contributions	($72)	$8	($2)
Australian Gas Prepayment	-	($200)	-
Other Adjustments	$30	$28	($244)
Cash from Operations	**$420**	**$332**	**$306**
Dividends to Shareholders	($40)	($57)	($57)
Change in Debt	($9)	($11)	($6)
Net Distributions to Noncontrolling Interests	($1)	($34)	($92)
Other Financing Activities	($2)	$2	$1
Cash from Financing Activities	**($52)**	**($100)**	**($154)**
Capital Expenditures	($268)	($277)	($275)
Acquisitions/Divestitures/Asset Sales	$354	$327	$144
Investment Sales	$18	$256	$5
Other Investing Activities	($22)	$5	($94)
Cash from Investing Activities	**$82**	**$311**	**($220)**
Free Cash Flow	**$152**	**$55**	**$31**
Cash on Hand	**$1,739**	**$1,929**	**$1,863**

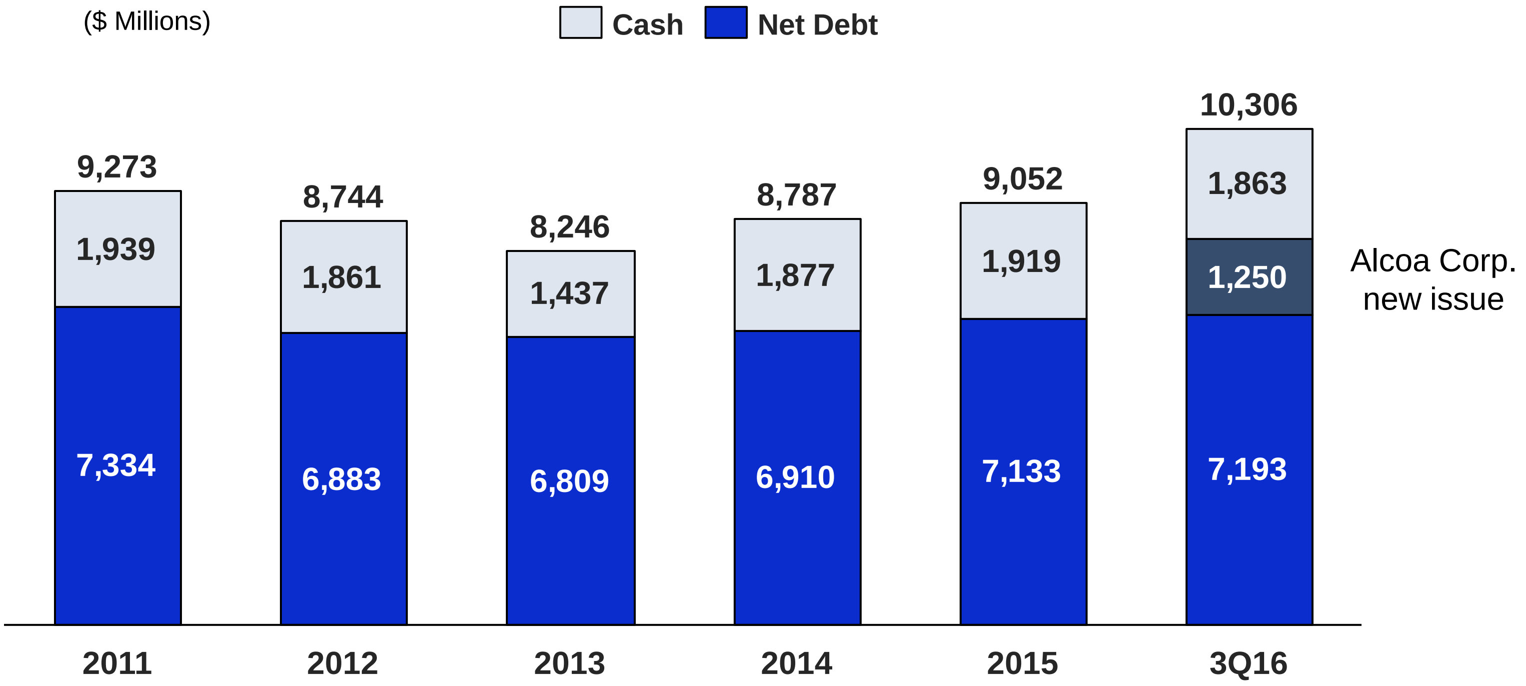
Almost $1.2 Billion Expected to be Generated by Asset Sales in 2016

2016 Expected Asset Sales		Cash Proceeds	Expected Closing
DBNG Pipeline	▪ **Sell all of Alcoa of Australia's[1] 20% minority interest** in the Australia **Dampier to Bunbury Natural Gas Pipeline**	**$145M**	**2Q16**
Remmele	▪ **A $70M[2] contract manufactur**er of medical devices, ▪ **Acquired in 2015** as part of **RTI** transaction	**$102M**	**2Q16**
Company Owned Life Insurance	▪ **Redemption of company-owned life insurance** ▪ **Portions** sold in **1Q ($234M),** and **in 2Q ($223M)**	**$457M**	**1Q & 2Q 2016**
Captive Insurance Co. Assets	▪ **Sell** portion of **investments** held by **Three Rivers Insurance co.** ▪ **Received regulatory approval in 2Q16** for sale	**$111M**	**2Q16**
Intalco Wharf	▪ **Sell excess property and Wharf** at site of **Intalco Smelter**	**$120M**	**3Q16**
Cash Proceeds through 3Q 2016:		**~ $0.94 Billion**	
Additional Asset Sales in 2016	▪ **Other potential asset sales**	**~$250M**	**4Q16**
Total Cash Proceeds expected in 2016:		**~ $1.19 Billion**	

[1]Alcoa of Australia is owned 60% by Alcoa Inc. and 40% by Alumina Limited. [2]Represents full year 2015 Pro forma revenue

Strong Liquidity, with Cash on Hand at $1.9 Billion

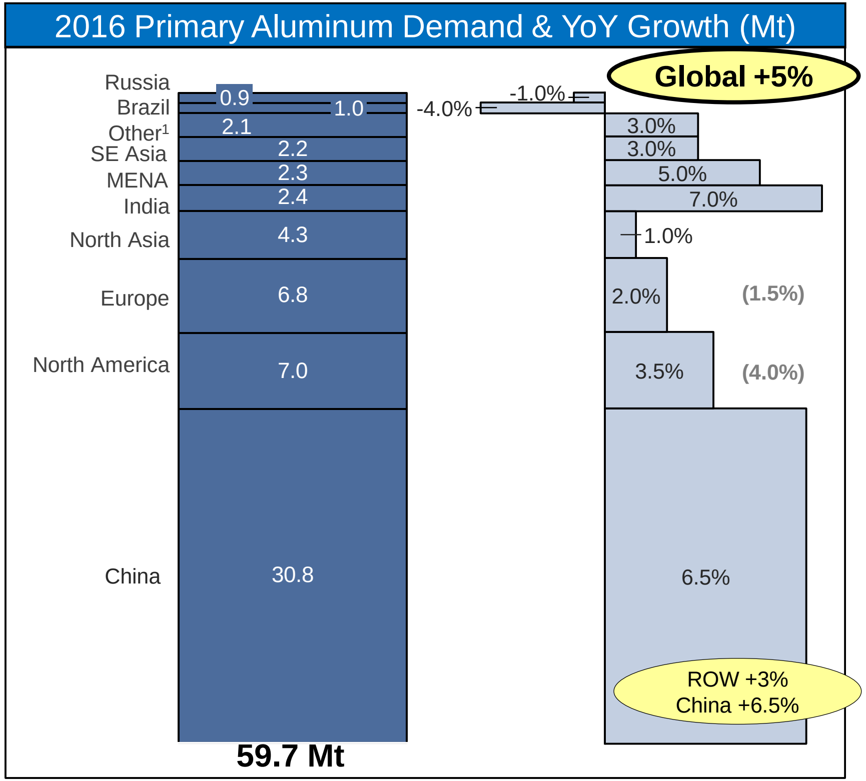
Debt, Net Debt

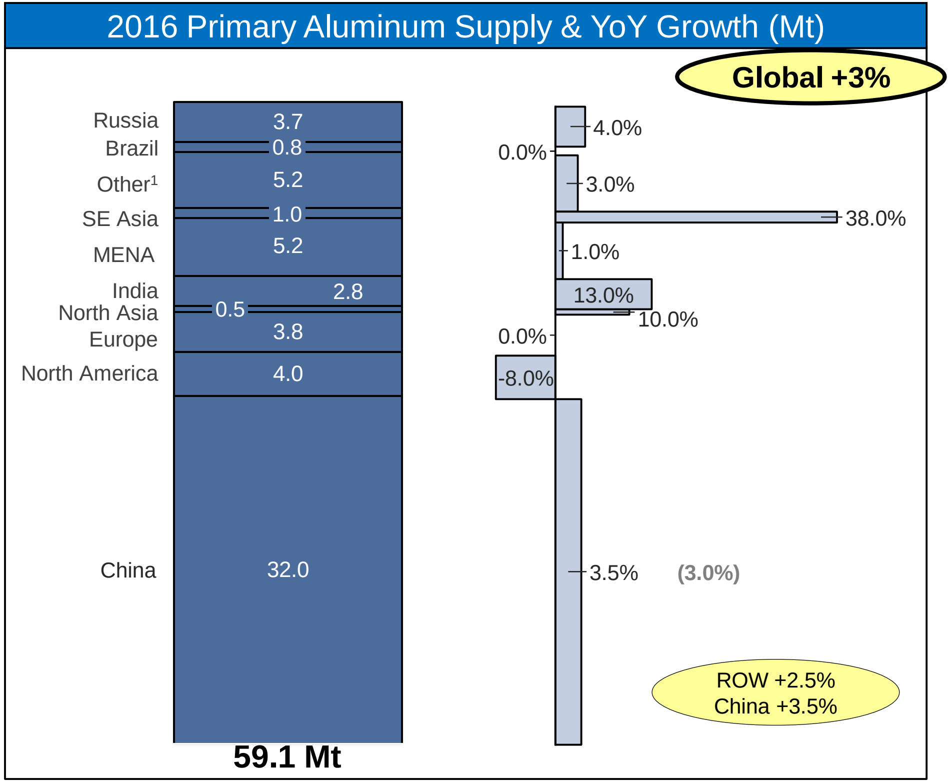


Note: Debt amounts for 2011 – 2015 have been updated to reflect the adoption of FASB guidance (effective January 1, 2016) requiring presentation of debt issuance costs as a reduction to debt rather than as a noncurrent asset.

Demand Growth at 5% While Supply Grows at 3% in 2016

Primary aluminum demand and supply by region (figures in grey denote 2Q16 estimates)





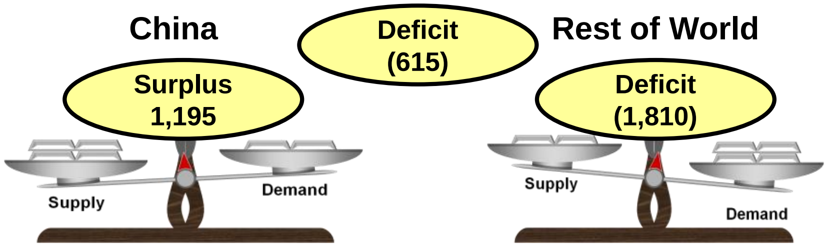
Source: Alcoa analysis, CRU, Wood Mackenzie, IAI, CNIA, NBS, Aladdiny; figures rounded;
[1]Other includes Africa, E. Europe, Latin America ex Brazil, Oceania, Other Asia

Aluminum Market Remains in Deficit at 615 kmt

Aluminum fundamentals overview

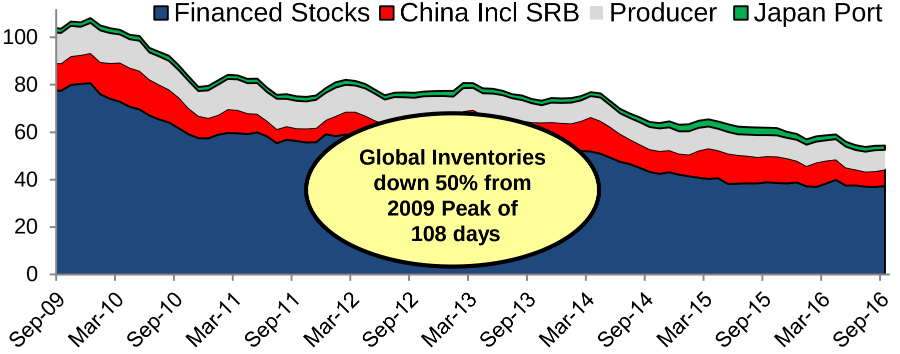
Continue to see global deficit in 2016

2016E Aluminum Balance (kmt)

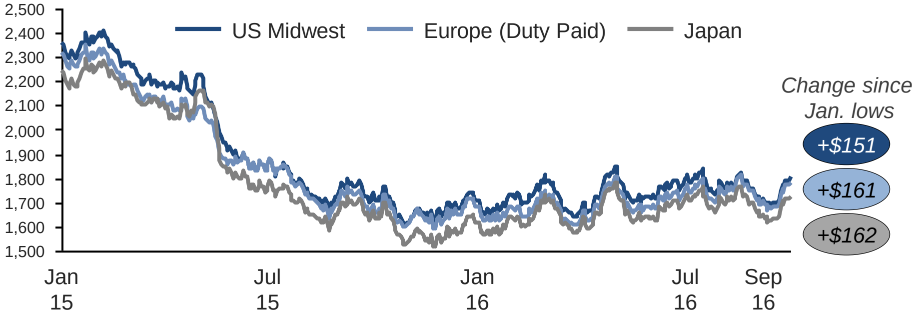


China		Rest of World
30,235	Prod. at Beginning Run Rate	26,665
2,045	Additions/Creep	1,090
(345)	Restarts/(Curtailments[1])	(565)
40	Imports/(Exports)	(40)
31,975	Total Supply	27,150
(30,780)	Demand	(28,960)
1,195	**Net Balance**	**(1,810)**

Global Inventories at 54 days, -7.5 days YoY



Total price stabilizing ($/t)



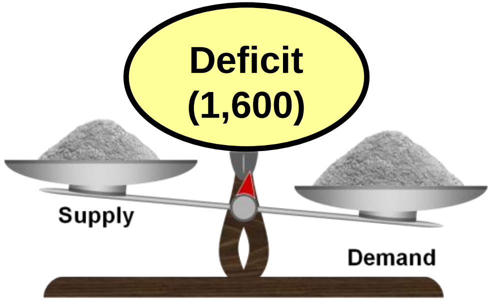
Source: Alcoa analysis, CRU, Wood Mackenzie, IAI, CNIA, NBS, Aladdiny, Bloomberg
[1]Includes excursions

Alumina Market Remains in Deficit at 1.6 Mmt

Alumina fundamentals overview

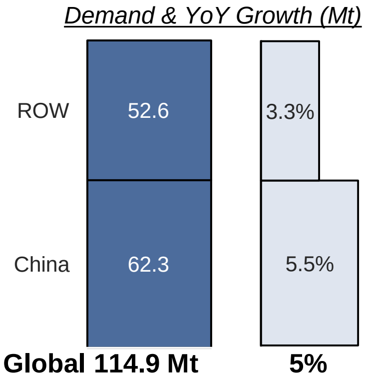
Continue to see large deficit for 2016

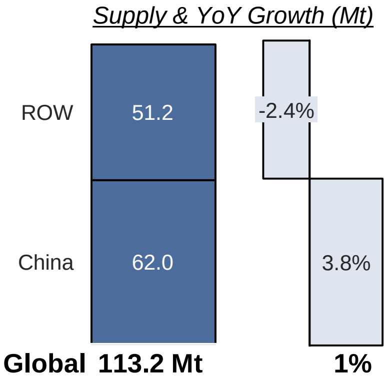
2016E Alumina Balance (kmt)



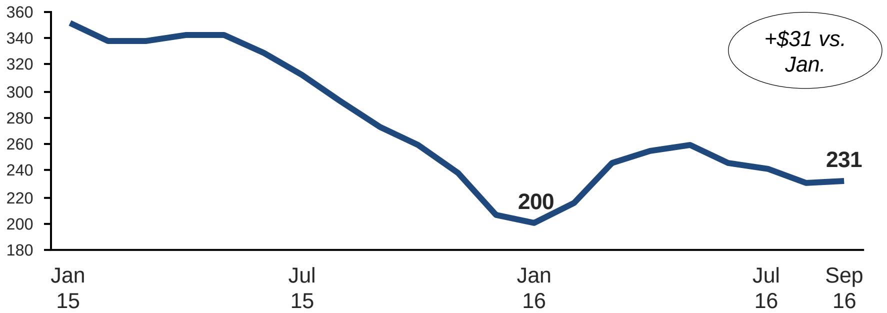
	China	Rest of World
Prod. at Beg. Run Rate (Dec 2015)	55,685	55,250
Additions/Creep	5,295	980
Restarts/(Curtailments[1])	(1,935)	(2,030)
Imports/(Exports)	3,000	(3,000)
Total Supply	62,045	51,200
Demand	(62,215)	(52,630)
Net Balance	**(170)**	**(1,430)**

Demand growth at 5% while supply only grows at 1% in 2016





Price[2] remains above January lows ($/t)



Source: Alcoa analysis, CRU, Wood Mackenzie, IAI, CNIA, NBS, Aladdiny, Bloomberg
[1]Includes excursions; [2]Alumina price = Alumina Price Index (API)

Advancing each generation. ALCOA

Klaus Kleinfeld

Chairman and Chief Executive Officer

October 11, 2016

Aerospace End-Market in Transition; Strength in Narrow bodies

Alcoa Current Assessment of Aerospace Market

Market	Growth[1]	Global Commentary
Aerospace[1]	2016 FY →	▪ **Solid Airline Fundamentals[2]:** Airline profitability at an **all time high** ($39B net profit for 2016); travel demand up 5.8% YTD (vs. 20-year average of 5.5%) ▪ **Robust Commercial Jet Order Book: >9 Years** of Production (at 2015 delivery rates)
	2016 2H vs. 1H16 ↑ +6%	▪ **Transition year 2016 with strong 2H** – 3Q Large Commercial Aircraft (LCA) deliveries +3% YoY – Growth YTD flat, projection 2016 rather on the low-end of the range (0 to 3%) – Solid growth of narrow bodies and softening demand for wide body segment ▪ **Low LCA cancellations** YTD**: 1.9% of order book**

Airframe

(e.g., fasteners, extrusions, forgings, castings, sheet & plate)

De-stocking absorbs demand and continues into 2017

- Recent build **rate reductions** for **A380, B777,** and **CSeries**
- Part **standardization** and **supply chain optimization**: e.g. distributor consolidation, stock level reduction at OEMs continuing into 2017

Aero Engines

(e.g., fan and turbine blades, rings, discs, shafts, structural castings)

Ramp-ups accelerating demand

- **New engine launches** with multiple new technologies and product introductions generating industry **ramp-up challenges**
- **Strong engine ramp-up** demand in the 2nd Half 2016 with increased product introduction cost
- **Legacy** engine spares and replacements **remain strong**

1) Large Commercial Aircraft - dollar value of deliveries. 2) International Air Transport Association 2016E.
Sources: Boeing, Airbus, Airline Monitor, Teal, and Alcoa analysis

Continued Growth in Automotive; HDT- N.A. Further Decline, China/EU Strength

Alcoa End Markets: Current Assessment of 2016 vs. 2015

End Market	2016 Growth	Region		Global and Regional Commentary
Automotive 	**1% to 4%** Global production growth	**N.A.** 1% to 2%	↑	• **Production Up: +2.4%YTD**Aug'16(11.9M units); Truck up **+7.3% YTD**Aug'16 **and** Car down **-4.6% YTD**Aug'16**,** OEMs align output to demand • **FY 2016 N.A. Production** projected to finish at 17.9M units, up from FY 2015 (17.5M units) • **Sales: U.S. Up +0.4%YTD**Sept'16**, U.S.** SAAR through Sept '16 of 17.3M flat vs. same-period 2015 (record year) • **Growing U.S. Inventory: 65 days**Sept'16 (industry target is 60-65 days) **up 3 days** MoM and **up 6 days** YoY • **Rising Incentives: +17.4%YoY**($3,690/unit)Sept'16; **Car** at **$3,836**/unitSept'16 (14.0% of ATP); Truck to **$3,592**/unitSept'16 (9.3% of ATP) • **Sustained Demand: US vehicles 12+ years old made up 100.4M vehicles out of the 258M in operation1**
		E.U. 2% to 4%	↑	• **Rising Production: +3.7%YTD**Aug '16, **West** up **+5.2%YTD** (88% share)**, offsets East,** down **-6.1%YTD** (12% share) • **Strong Registrations: +8.1%YTD**Aug'16; **Exports forecast to increase +2.0%** in **2016** (+1.9% in 2015)Apr'16
		China 6% to 8%	↑	• **Strong Production: +10.8%YTD**Aug'16 and **+27.3%YoY**(Aug'16 vs. Aug'15) • **Sales +11.2%YTD**Aug'16 and **+23.5%YoY** (Aug'16 vs. Aug'15) driven by sustained demand for light-truck segments • **Growth** boosted by pull-ahead sales of models in compliance with expiring tax-incentive **on small-engine vehicles**
Heavy Duty Truck and Trailer 	**0% to +2%** Global production growth	**N.A.** -30% to -28%	↓	• **Declining Production: Down -26.8% YTD**Aug'16 at 162.9k trucks vs. 222.7k **YTD**Aug'15 • **Freight growth up 1.2%YoY**(Sept'16 vs. Sept'15)**, down from 4Q15 Forecast of 2.2%**(FY2016 vs. FY2015) 2 • **Weak Orders: Down -28.4% YoY**(Sept'16 vs. Sept'15), and **down -39.8% YTD**(Sept'16 vs. Sept'15)3 • **High Inventory:** Standing at **57.9k; 22.2% higher** than the 10-year historical avg. of 47.4k • **Falling Orderbook: At 89.3k, down 39.1% YoY**(Aug '16 vs. Aug '15), and **down 4.9%** MoM; below **historical avg. of 101k**
		E.U. 3% to 5%	↑	• **Strength in WEU: Production up 8.3% YoY**(Aug'16 vs. Aug'15) and **up 8.9% YTD**Aug '16 • **Registrations in WEU up 15.7% YTD**Aug '16 and **Orders** in WEU up **4.0% YTD**Aug '16 • **Decline in EEU:** Builds projected to drop -5.0%(FY 2016 vs. FY 2015) due to Russia and Turkey weakness
		China 13% to 15%	↑	• **Increasing Production: Up 54.6% YoY**(Aug'16 vs. Aug'15), and **up 19.4% YTD**Aug '16 • **Strong Sales: Up 44.2% YoY**(Aug '16 vs. Aug'15), and **up 19.4% YTD**Aug'16 • **Government stimulus** and **regulatory changes**, including size and **weight limits**, drive **uptick in demand**

Source: Alcoa analysis 1) IHS (Jul 2015) 2) 4Q15 FTR Truck & Trailer Outlook 3) ACT Research: NA Preliminary September Net Orders

Packaging Stable; Commercial B&C and Global Airfoil Markets Grow

Alcoa End Markets: Current Assessment of 2016 vs. 2015

End Market	2016 Growth	Region	Global and Regional Commentary
Packaging 	**2% to 3%** Global sales growth	**N.A.** 0% to 1%	• **Demand decline :** Weakness (0% to -1%) in **Carbonated Soft Drinks** (CSD) • **Improved growth** in **Beer Segment** (+2% to +3%) to partially offset CSD
		E.U. 1% to 2%	• **Growth** led by modest growth (1% to 2%) in **Western Europe** and flat performance (0% to 1%) in **Eastern Europe,** as aluminum cans in Russia gain share
		China 5% to 8%	• **Growth** led by aluminum can penetration from glass in beer segment
Building and Construction 	**4% to 6%** Global sales growth	**N.A.** 4% to 5%	• **Non-Residential Contracts Awarded: Down -1.8%** in Aug. (mean of 12-month rolling avg.). • **Architectural Billings Index Positive in 2016**: In Aug'16 it was 49.7. Positive reading (>50) for 28 out of the last 32 months. It's the second time this year it's below 50, it was 49.6 in Jan.'16. • **Housing Starts up 10.6% in 2015** (vs. 2014); it grew 6.9% YTD Aug.'16 (vs. YTD Aug.'15). Annualized starts for Aug.'16 was 1,250K, below the long-run average of 1,319K (1990-2014).
		E.U. 0% to +1%	• **Slight growth** as E.U. economies stabilize and start to grow, growth outlook varies by country
		China 3% to 5%	• **Moderate growth continuing in 2016 at 3%-5%,** ensuing 5% growth in 2015.
Industrial Gas Turbines 	**2% to 4%** Global airfoil market growth		• Market moving towards **higher value-add product** as customers develop new, **high efficiency turbines** with **advanced technology** • New worldwide **gas turbine capacity ordered +0.7%** (versus prior five H1's) • **U.S. (60 Hz) gas-fired generation +7.7% July-YTD** (YoY) driving demand for **spares** and **component upgrades** on existing turbines • **1H16 OECD electricity demand down 0.6% YoY** and still 1.6% below 2008 levels

Packaging: 2016 Projections. B&C = Building and construction
Source: Alcoa analysis

ARCONIC

Innovation, engineered.

Revenue Goals Adjusted for Market Changes; Holding Margin Goals

3Q16 Arconic Performance and 2016 Goals

3rd Party Revenue($B)
EBITDA (%, $/MT)

	3Q 2016 Highlights	Prior	2016 Goal and Outlook[1]	Current
GRP	▪ **ATOI up ~23% and EBITDA/MT up 7%** excluding impact to secure alternative metal supply at Warrick	5.0-5.2[3] $344+/MT[2]	▪ **Q4'16 ATOI** to be **flat at $49M** ▪ **Drivers for Full Year 2016 revenue goal change:** - North American auto build rates plateauing - North American heavy duty truck market decline - Airframe: destocking, model transition, lower build rates + Auto aluminization continues strong	4.8 – 5.0 $344+/MT[2]
TCS	▪ **ATOI up 7%** year-over-year. **Record EBITDA %**	2.1 ~15%	▪ **Q4'16 ATOI** to **be up 8-10% y-o-y to $43M to $44M** ▪ **Drivers for Full Year 2016 revenue goal change:** - North American heavy duty truck market decline - Re-structuring of Latin American Extrusions	1.7-1.8 ~15%
EPS	▪ **Record 3Q ATOI; up 7%** year-over-year	5.9-6.1 21-22%	▪ **Q4'16 ATOI** is expected to be **up 6-14% y-o-y to $130M to $140M** ▪ **Drivers for Full Year 2016 revenue goal change:** - Airframe: destocking, model transition, lower build rates - Strong aero engine demand / industry ramp-up challenges ▪ **Firth Rixson acquisition performance:** • Targeting **2016 Revenue $900M – $950M** (prior $1.0 – $1.1B) at **EBITDA Margin 14% - 15%** (prior 14% – 16%) ▪ **ATEP (formerly RTI) acquisition performance:** • Targeting **2016 Revenue $755M – $775M** (prior $755 – $775M) at **EBITDA Margin ~19%** (prior ~17% – 19%)	5.6-5.8 ~21%

1) 4Q 2016 outlooks at current exchange rates 2) Excludes Warrick CMP impact 3) 2016 GRP revenue goal adjusted from prior quarter: $6.0B-$6.2B less transfer of Warrick to Alcoa Corp, Tennessee tolling and updated LME/FX = $5.0B-$5.2B. See appendix for EBITDA reconciliations

Alcoa

Achievements Continue across Alcoa Corporation Businesses

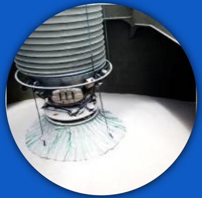
Q3 developments in Alcoa Corporation business segments

Bauxite

- All-time **Juruti production record** in 3Q
- **$53M contracts in 3Q;** total 3rd party bauxite sales **$468M** (2016-17)

Alumina

- **Saudi refinery achieves 90% of nameplate** production capacity
- 3Q YoY **$66M productivity** improvement



Energy

- **Brazil 3rd party revenue up 26%** sequentially, driven by higher volume
- **3Q EBITDA 37% of revenue;** up from 33% in 2Q

Aluminum

- Smelting cash production **costs down $349/mt** compared to 2015 YTD
- 3Q YoY **$65M productivity** improvement

Cast Products

- 3Q **EBITDA/mt 41% higher** than prior year
- 3Q **ATOI** is **1.5X higher** than prior year

Rolled Products

- Warrick **conversion to cold metal plant** on track
- Warrick all time **record YTD recovery**

Exceeded our Cost Curve Target in Alumina and Met our Target in Aluminum

Cost curve target achievement

Source: Alcoa and CRU Analysis

Alcoa Inc. has Generated $1,116M in Productivity and a Record 20K+ Ideas

Alcoa Degrees of Implementation Ideas and Gross Productivity Program through Q3 2016

Productivity

Procurement Savings

Overhead Reductions

tion
ervices
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uctions

Process Productivity

- *Optimize flow paths utilizing Mega Kaizens*
- *Reduce product lead times*
- *Improved quality*

~17,180
Action Sheets

Growth

Existing Customers

New Regions / Segments

novation
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kets

New Customers

- *Penetrate Competitive products*
- *Expand distributor base*
- *Automotive Light Weighting*

~2,419
Action Sheets

Asset Mgmt

Capex Savings

Receivables & Payables

s
Capex
n rate
erms

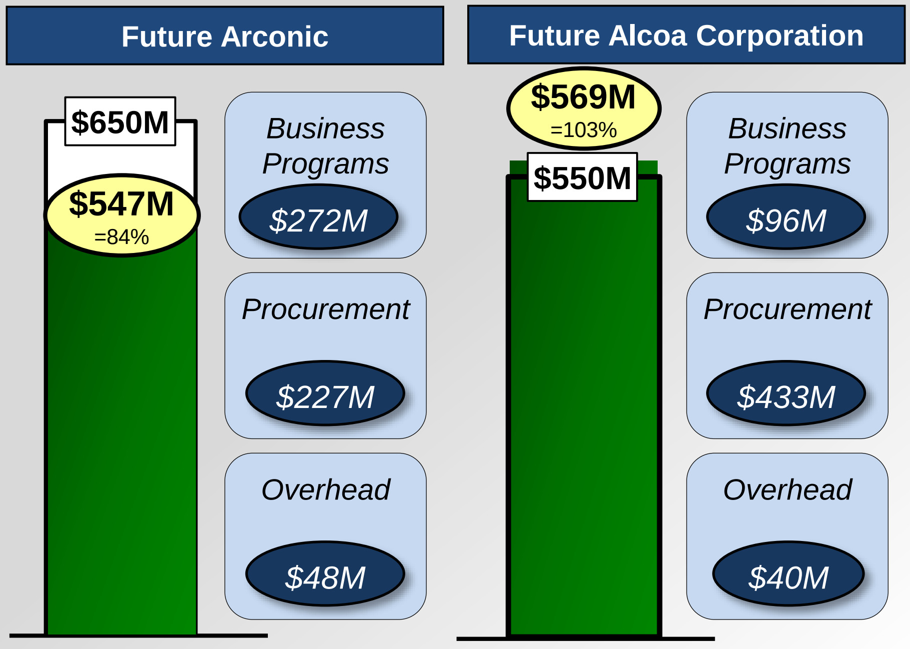
Inventory Reductions

- *Automate inventory replenishment (MinMax)*
- *Consignment inventory programs*

~786
Action Sheets

2016 3Q YTD Productivity Tracking Ahead of Targets

2016 Productivity ($ Millions)



Get Ready for The Launch of Two Strong, New Companies

ARCONIC

Innovation, engineered.

Alcoa

Arconic – Launching a Strong Company

Arconic – Key Messages

- **Strongly Positioned** in **Attractive Markets**
  - ***Secular-growth***, ***compelling margins***: *Aerospace / Automotive (~50% revenues)*
  - ***Solid growth, attractive margins***: *Transportation, Specialty Industrial, Building & Construction (~50% revenues)*
- **Clear Market Leader** in **Major Markets**
  - Revenues in **#1 / #2 position** *(2015)*: ***85% Aero***, ***96% N.A. Auto***, ***93%*** *Commercial* ***Transportation***, ***49%*** *Building & Construction*
  - ***Major supplier*** *to the* ***industry leaders*** *in* ***all sectors***
- **Differentiated driver** of **Innovation / Advanced Technology Solutions**
  - ***Development partner*** *to* ***industry leaders driving share gain***
  - ***Unparalleled capabilities*** *in* ***multi-materials, manufacturing processes***, *and* ***application engineering***
  - ***Track record*** *of* ***breakthrough advances:*** *e.g., Al-Li, Ti Al, Enhanced Equiax Castings, metal powders, Ampliforge™, lightning strike fasteners, auto bonding and Micromill*
  - ***Innovation-driven engineering culture*** *and* ***extensive R&D base***
- **Compelling margin profile**
  - ***Attractive profitability***
  - ***Relentless pursuit*** *of* ***cost reduction***; ***consistently delivering*** *productivity improvements*
  - ***Disciplined capital allocation*** *priority on high-return uses*

Management Team and Culture focused on Performance and creating Value

Alcoa Corp.: Reshaped Aluminum Leader – Compelling Industry Play

Alcoa Corporation key elements

- World-class, low-cost assets across the aluminum value chain
- Global partnerships with access to key, high growth strategic markets
- An exciting industry with a positive outlook
- Well positioned for future market scenarios
- Experienced management team promoting a focused, operator-centered culture
- Disciplined approach to capital allocation with focus on high return projects

Additional Information

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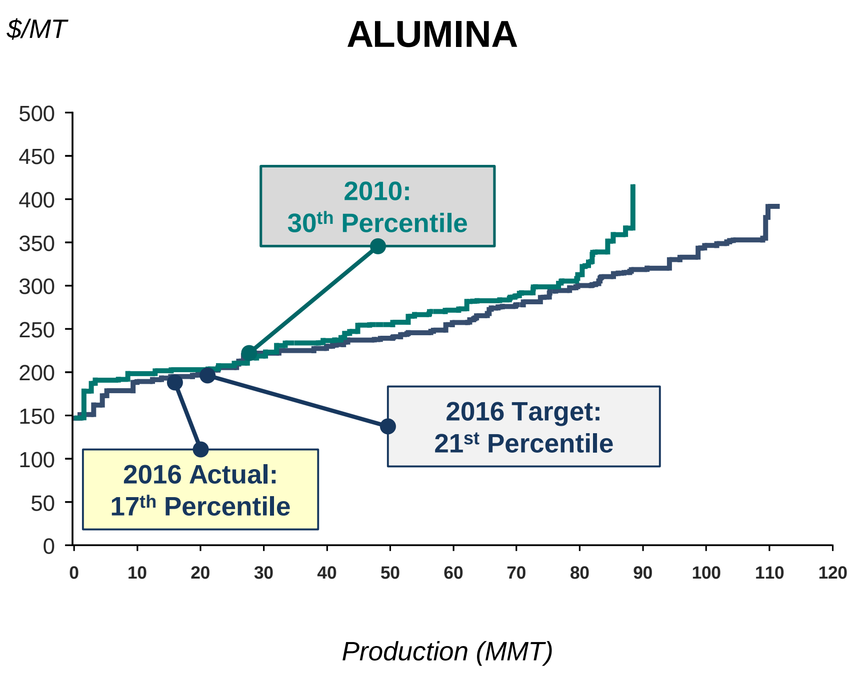
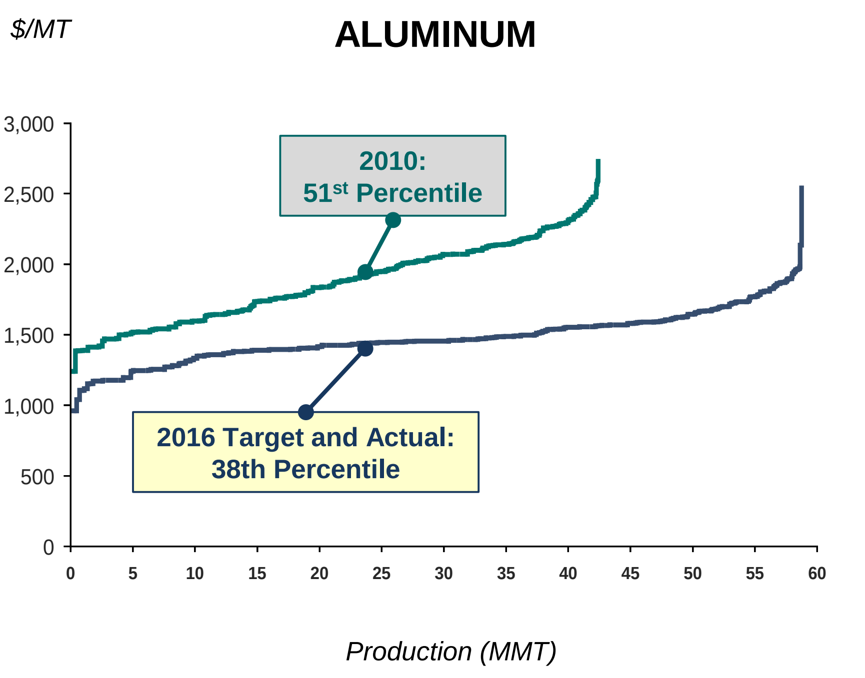
APPENDIX

Exceeded our Cost Curve Target in Alumina and Met our Target in Aluminum

Alcoa moves to 17th Percentile in 2016

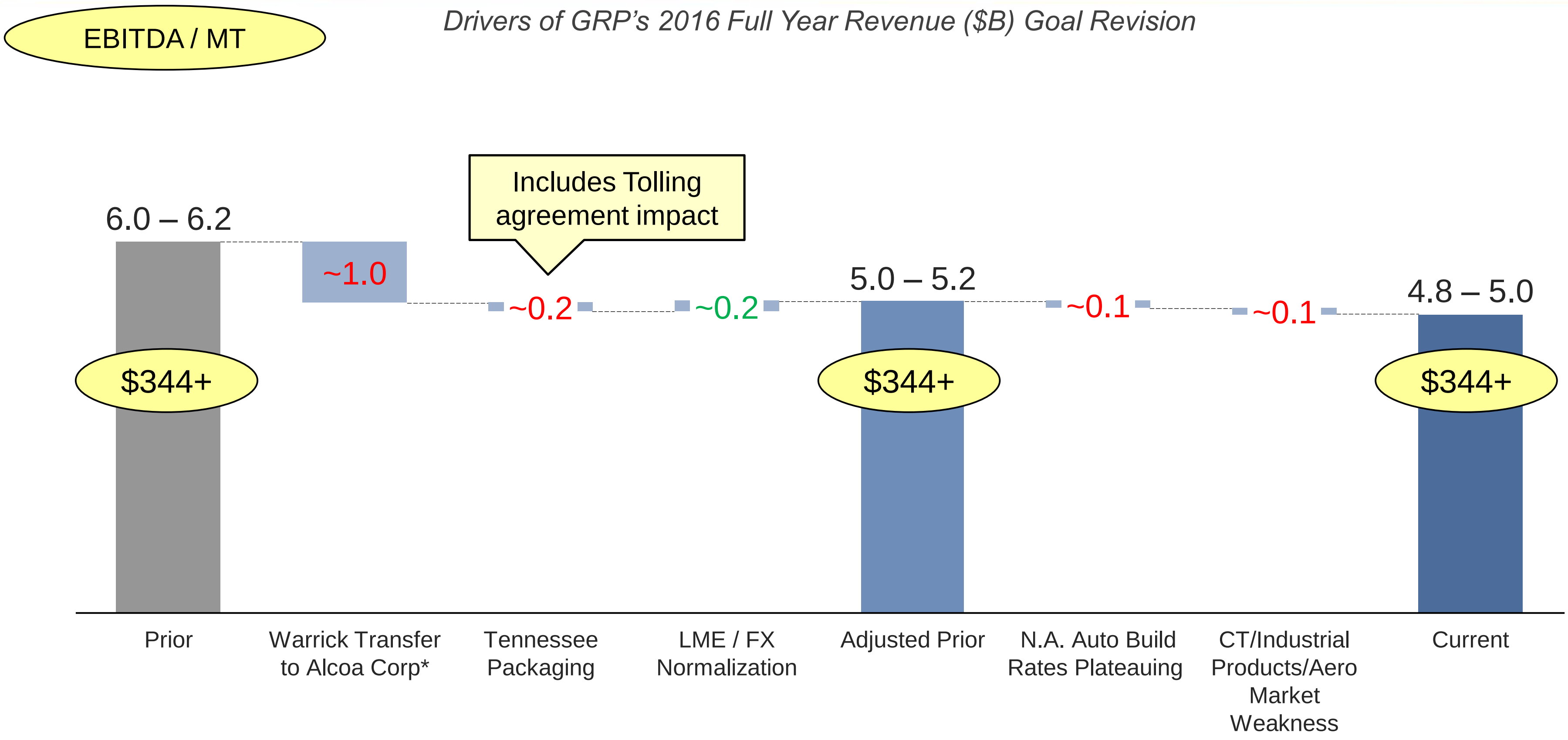


Alcoa moves to the 38th Percentile in 2016



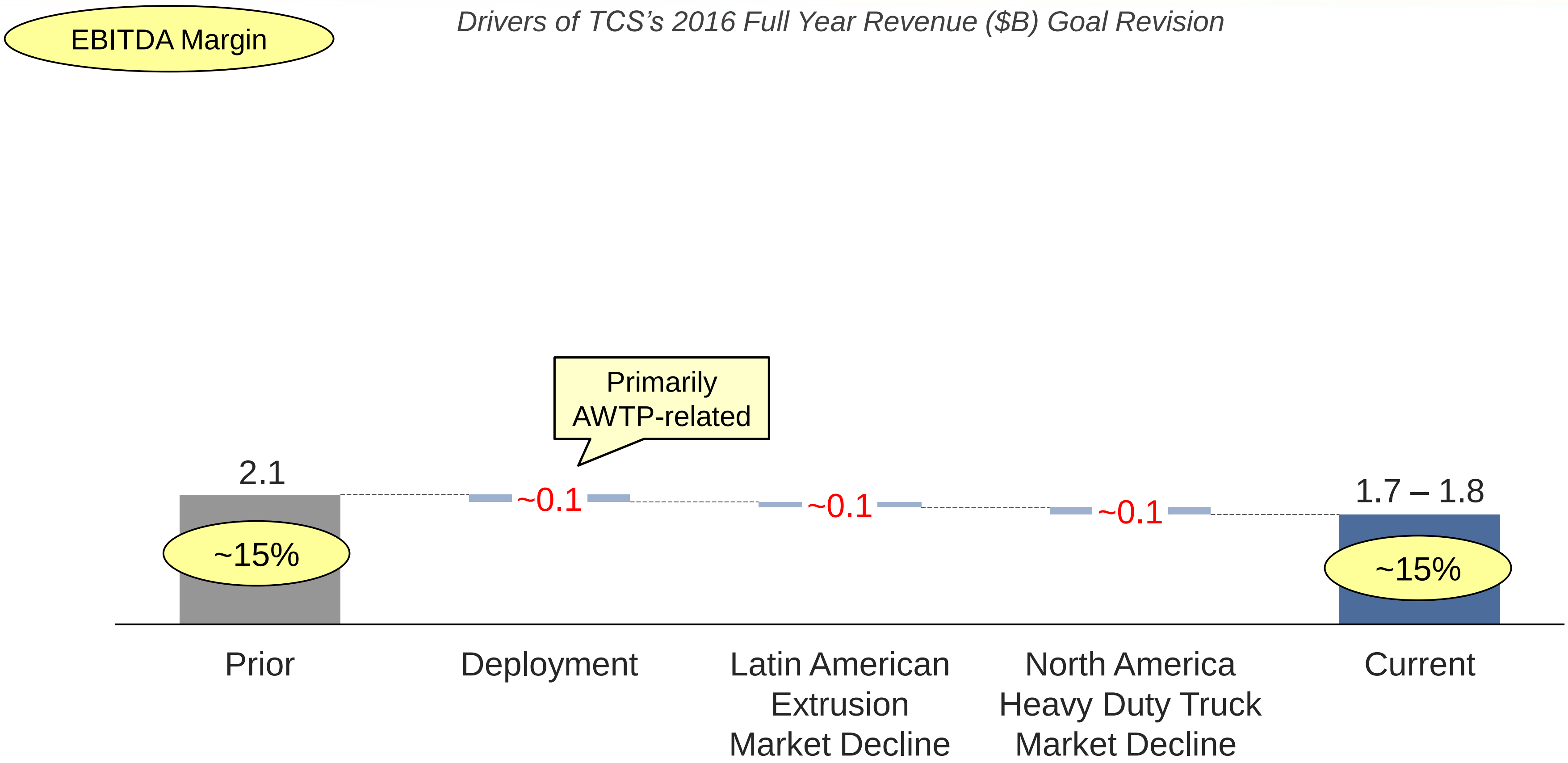
Source: CRU and Alcoa analysis

GRP Revenue Goal Bridge

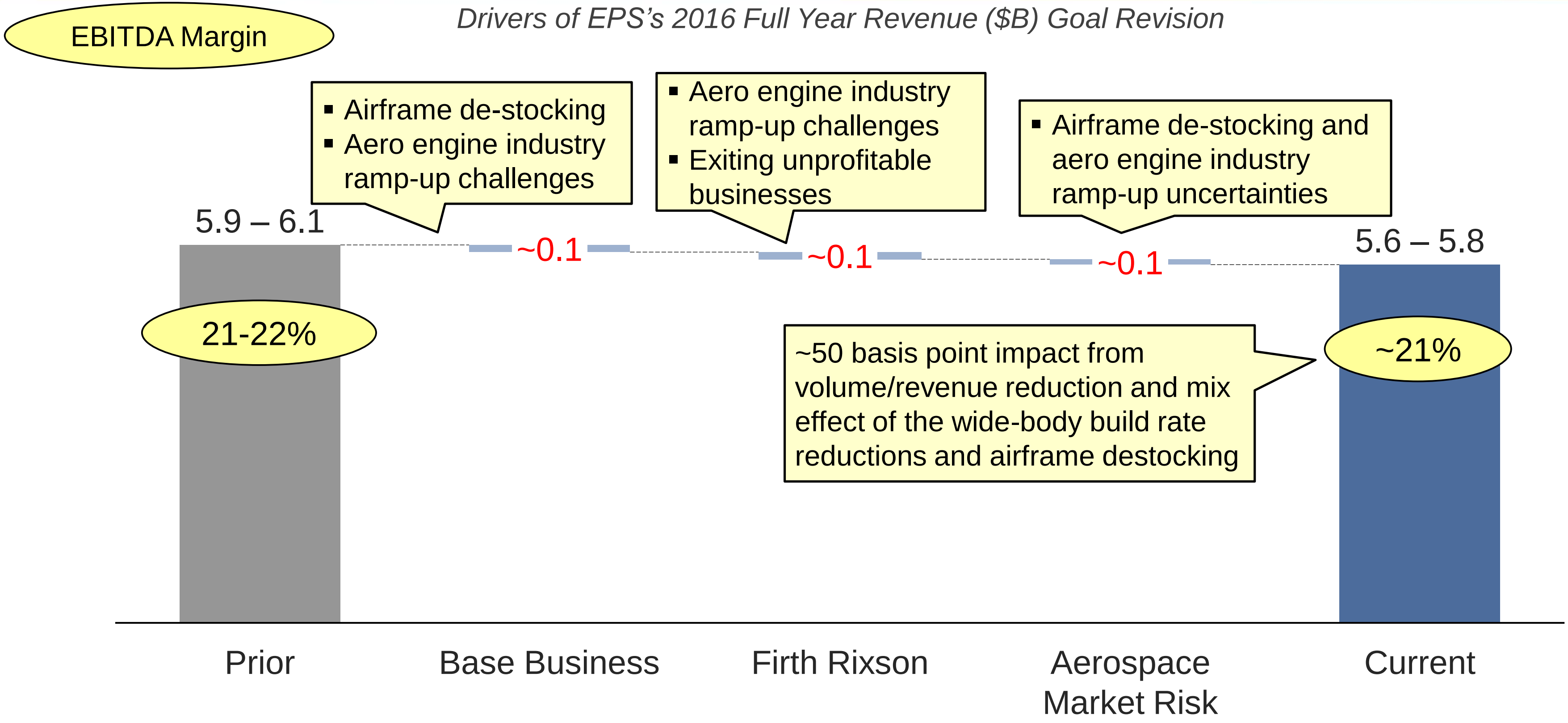


*Using Warrick 2013 Actual Revenue; CT = Commercial Transportation

TCS Revenue Goal Bridge



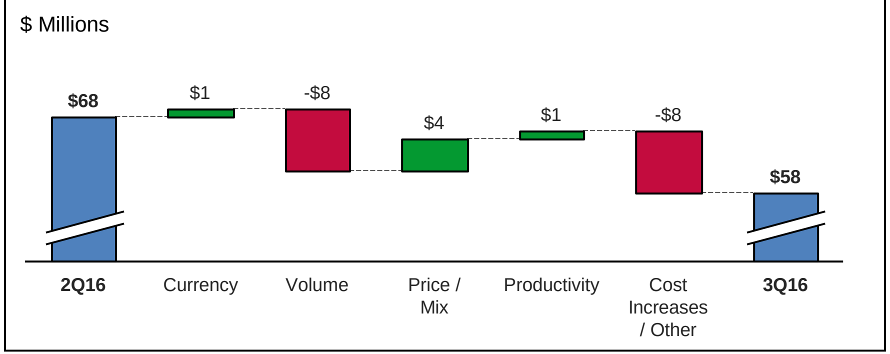
EPS Revenue Goal Bridge



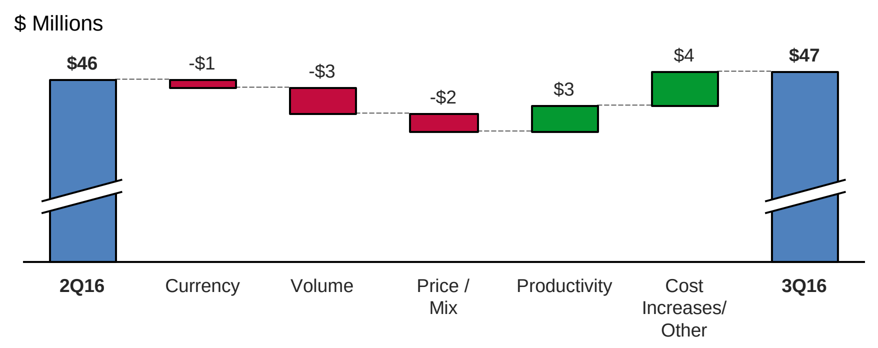
Arconic Segment Bridges – 3Q16

EPS Sequential Quarter Bridge

GRP Sequential Quarter Bridge



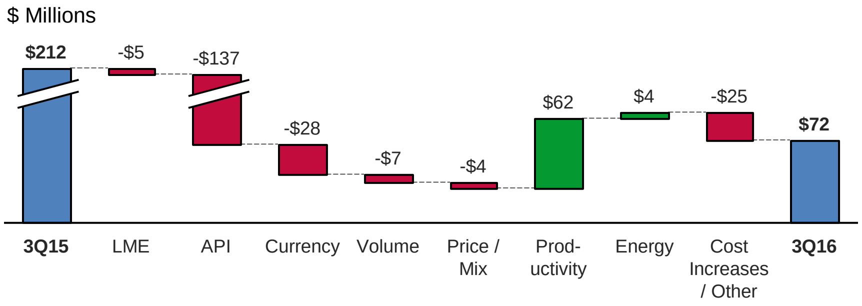
TCS Sequential Quarter Bridge



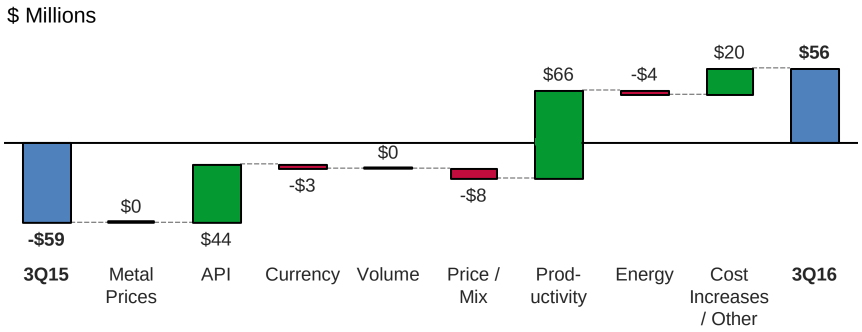
EPS = Engineered Products and Solutions GRP = Global Rolled Products
TCS = Transportation and Construction Solutions

Alcoa Corp Segment Bridges – 3Q16

Alumina Year-over-Year Bridge

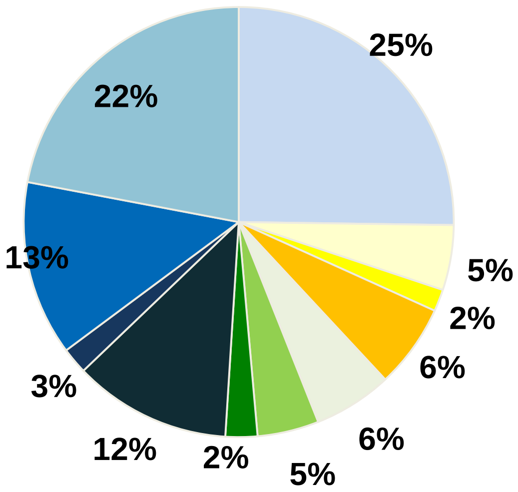


Primary Metals Year-over-Year Bridge



Revenue Change by Market – 3Q16

3Q16 Third-Party Revenue



	Sequential Change	Year-Over-Year Change
Aerospace	(4%)	1%
Automotive	13%	34%
Brazing	(9%)	(8%)
B&C	1%	4%
Comm. Transport	(2%)	(18%)
Industrial Products	(7%)	(11%)
IGT	(5%)	19%
Packaging	(3%)	(2%)
Distribution/Other	(15%)	(15%)
Alumina	(1%)	(25%)
Primary Metals	3%	(8%)

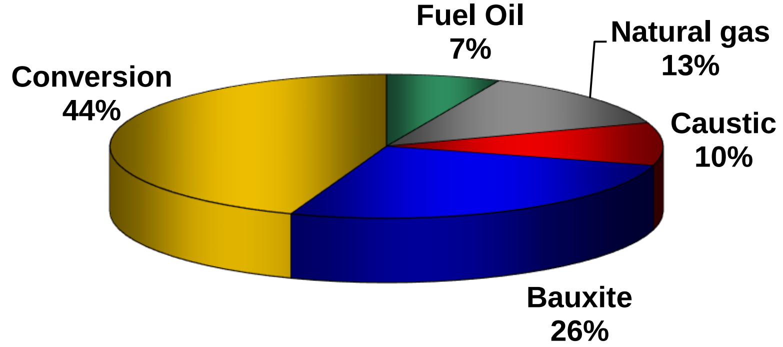
Special Items

$ Millions, except per-share amounts	Pre-tax, Before NCI		After-tax, After NCI			
	2Q16	3Q16	2Q16	3Q16	Income Statement Classification	Segment
Income from Continuing Operations	**$330**	**$333**	**$135**	**$166**		
Income per Diluted Share	**-**	**-**	**$0.27**	**$0.33**		
Gain on Sale	$27	$118	$11	$77	Other Income, Net	Corporate
Acquisition Settlement	-	$20	-	$20	Other Income, Net	Corporate
Mark-to-Market Energy Contracts	($6)	$1	($3)	$2	Other Income, Net	Corporate
Restructuring-Related	($26)	($18)	($17)	($10)	Restructuring and Other Charges/COGS	Corporate
Tax Items	-	-	($44)	($40)	Income Taxes	Corporate
Portfolio Transaction Costs	($45)	($55)	($37)	($44)	SG&A / Interest Expense	Corporate
Supplier Arbitration Recovery	$14	-	$12	-	Other Income, Net	Corporate
Special Items	**($36)**	**$66**	**($78)**	**$5**		
Adjusted Net Income from Continuing Ops excl. Special Items	**$366**	**$267**	**$213**	**$161**		
Adjusted Net Income per Diluted Share excl. Special Items	**-**	**-**	**$0.44**	**$0.32**		

NCI: Non-Controlling Interest
See appendix for Adjusted Income reconciliation

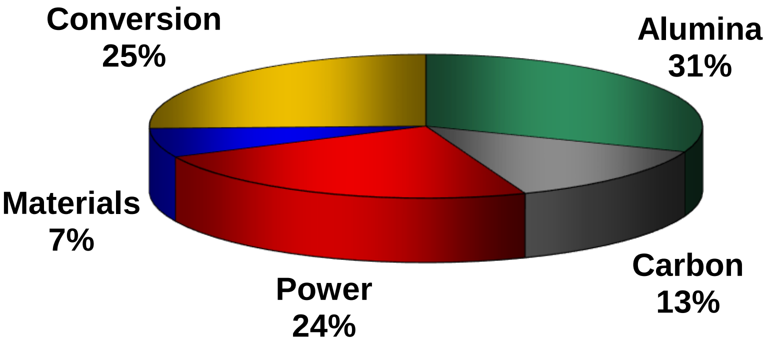
Composition of Upstream Production Costs

Refining Cost Structure



Input Cost	Inventory flow	Pricing convention	Annual ATOI Sensitivity
Fuel oil	1 – 2 months	Prior month	$2m per $1/bbl
Natural gas[1]	N/A	N/A	N/A
Caustic soda	3 - 6 months	Spot & semi-annual	$6m per $10/DMT

Smelting Cost Structure



Input Cost	Inventory flow	Pricing convention	Annual ATOI Sensitivity
Coke	1 - 2 months	Spot, quarterly & semi-annual	$5m per $10/MT
Alumina	~2 months	30 days lag API	$30m per $10/MT
Pitch	1 - 2 months	Spot, quarterly & semi-annual	$1m per $10/MT

[1]Natural gas information related to Point Comfort will no longer apply as we are curtailing the plant. Australia is priced on a rolling 16 quarter average

Alcoa Upstream Capacity Closed, Sold and Idled

Smelting Capacity

Closed/sold since December 2007

Facility	Year	kmt
Baie Comeau	2008	53
Eastalco	2010	195
Badin	2010	60
Tennessee	2011	215
Rockdale	2011	76
Baie Comeau	2013	105
Fusina	2013	44
Massena East	2013	41
Massena East	2014	84
Point Henry	2014	190
Portovesme	2014	150
Mt. Holly (sale)	2014	115
Pocos	2015	96
Warrick	2016	269
Total		**1,693**

Idled

Facility	Year	kmt
Portland	2008	30
Rockdale	2008	191
Aviles	2012	32
La Coruna	2012	24
Sao Luis	2013	97
Sao Luis	2014	97
Sao Luis	2015	74
Wenatchee	2015	184
Total		**729**

Refining Capacity

Closed/sold since December 2007

Facility	Year	kmt
Jamalco (sale)	2014	779
Total		**779**

Idled

Facility	Year	kmt
Point Comfort	2008	340
Suriname	2009	870
Suriname	2015	1,337
Point Comfort	2016	1,508
Total		**4,055**

2016 Alcoa Inc. Market Sensitivities by Segment

Alcoa Inc. Segment Annual ATOI[1] Sensitivities

		Alcoa Corporation		Arconic		
	Benchmark	Alumina[1]	Primary Metals	GRP[2]	TCS	EPS
LME	+/- $100/MT	$19M	$169M	$1M	($5M)	($1M)
API	+/- $10/MT	$72M	($28M)	N/A	N/A	N/A
AUD	+/- 0.01 USD/AUD	$17M	$2M	N/A	Min	Min
BRL	+/- 0.01 BRL/USD	$1M	Min	Min	Min	Min
EUR	+/- 0.01 USD/EUR	$1M	$3M	($1M)	($1M)	($1M)
CAD	+/- 0.01 CAD/USD	N/A	$2M	N/A	Min	Min
NOK	+/- 0.10 NOK/USD	N/A	$2M	N/A	N/A	N/A

'Min' is defined as less than $1 million; N/A is defined as the segment not having exposure to the benchmark

(1) Segment ATOI does not reflect Alumina Limited's 40% minority interest
(2) After the separation, Warrick and Saudi Arabia rolling mill operations (currently in GRP segment) will be in Alcoa Corporation.

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

(in millions)	1Q15	2Q15	3Q15	4Q15	2015	1Q16	2Q16	3Q16
Total segment ATOI[(1)]	$656	$567	$410	$273	$1,906	$291	$444	$395
Unallocated amounts (net of tax):								
Impact of LIFO	7	36	50	43	136	4	(10)	1
Metal price lag	(23)	(39)	(48)	(23)	(133)	1	7	4
Interest expense	(80)	(80)	(80)	(84)	(324)	(83)	(84)	(86)
Noncontrolling interests	(60)	(67)	(62)	64	(125)	5	(43)	(20)
Corporate expense	(62)	(65)	(72)	(67)	(266)	(55)	(77)	(77)
Impairment of goodwill	–	–	–	(25)	(25)	–	–	–
Restructuring and other charges	(161)	(159)	(48)	(575)	(943)	(61)	(15)	(13)
Other	(82)	(53)	(106)	(307)	(548)	(86)	(87)	(38)
Consolidated net income (loss) attributable to Alcoa	$195	$140	$44	$(701)	$(322)	$16	$135	$166

(1) Total segment ATOI is the summation of the respective ATOI of Alcoa's five reportable segments, which represent the two components of the Company, an Upstream business and a Value-Add business. Upstream is composed of the Alumina and Primary Metals segments and Value-Add is composed of the Global Rolled Products, Engineered Products and Solutions, and Transportation and Construction Solutions segments. As such, in all periods presented, ATOI of the Upstream business is equivalent to the summation of the respective ATOI of the Alumina and Primary Metals segments, and, likewise, ATOI of the Value-Add business is equivalent to the summation of the respective ATOI of the Global Rolled Products, Engineered Products and Solutions, and Transportation and Construction Solutions segments.

On September 29, 2016, Alcoa announced that its Board of Directors approved the completion of the Company's separation into two standalone, publicly-traded companies. The separation is scheduled to become effective before the opening of the market on November 1, 2016. One such company will be named Alcoa Corporation and will include Upstream. Additionally, the future Alcoa Corporation will include the Warrick, IN rolling operations and the equity interest in the rolling mill at the joint venture in Saudi Arabia, both of which are currently part of the Global Rolled Products segment of Alcoa Inc. The other such company will be named Arconic and will include Value-Add, except for the Warrick, IN rolling operations and the equity interest in the rolling mill at the joint venture in Saudi Arabia.

Reconciliation of ATOI to Consolidated Net Income (Loss) Attributable to Alcoa[1] – Supplemental View

(in millions)	2014	1Q15	2Q15	3Q15	4Q15	2015	1Q16	2Q16	3Q16
Total segment ATOI[2]	$1,968	$656	$567	$410	$273	$1,906	$291	$444	$395
Unallocated amounts (net of tax):									
Impact of LIFO	(54)	7	36	50	43	136	4	(10)	1
Metal price lag[2]	78	(23)	(39)	(48)	(23)	(133)	1	7	4
Interest expense	(299)	(80)	(80)	(80)	(84)	(324)	(83)	(84)	(85)
Noncontrolling interests	(134)	(95)	(87)	(92)	(25)	(299)	3	(38)	(25)
Corporate expense	(252)	(56)	(60)	(55)	(55)	(226)	(38)	(40)	(34)
Other	(191)	(46)	(87)	(76)	(64)	(273)	(70)	(66)	(95)
Income excluding special items	1,116	363	250	109	65	787	108	213	161
Special items[3]	(848)	(168)	(110)	(65)	(766)	(1,109)	(92)	(78)	5
Consolidated net (loss) income attributable to Alcoa	$268	$195	$140	$44	$(701)	$(322)	$16	$135	$166

NOTES FOR CORPORATE AMOUNTS:
LIFO and Metal price lag – these items tend to offset each other over time as the same underlying market conditions typically drive both amounts.
Noncontrolling interests – primarily represents Alumina Limited's 40% share of the operating results of the Alcoa World Alumina and Chemicals joint venture, which principally comprises Alcoa's Alumina segment.
Corporate expense – represents general and administrative expenses attributable to Alcoa's corporate and business support locations, as well as costs associated with Alcoa's corporate research and development center.
Other – includes all other income and expenses not included in the segments, primarily: postretirement benefits and environmental remediation costs associated with certain closed or divested businesses; various corporate eliminations of inter-segment transactions; certain corporate foreign currency gains and losses; and the impact of the difference between the income tax rates applicable to the segments and the consolidated effective tax rate of the Company.

(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. A portion of this realignment consisted of moving the Latin American extrusions business from Corporate into a new Transportation and Construction Solutions segment (see the Reconciliation of Transportation and Construction Solutions Adjusted EBITDA for additional information). Segment information for all prior periods presented was revised 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.

(3) Special items are defined as restructuring and other charges, discrete tax items, and other special items. See the Reconciliation of Adjusted Income for additional information.

Reconciliation of Adjusted Income

(in millions, except per-share amounts)	Income			Diluted EPS[5]		
	Quarter ended			Quarter ended		
	September 30, 2015	June 30, 2016	September 30, 2016	September 30, 2015	June 30, 2016	September 30, 2016
Net income attributable to Alcoa	$44	$135	$166	$0.06	$0.27	$0.33
Special items[1]:						
Restructuring and other charges	66	23	18			
Discrete tax items[2]	4	(5)	7			
Other special items[3]	42	62	(51)			
Tax impact[4]	(17)	(7)	26			
Noncontrolling interests impact[4]	(30)	5	(5)			
Net income attributable to Alcoa – as adjusted	$109	$213	$161	$0.21	$0.44	$0.32

Net income attributable to Alcoa – as adjusted is a non-GAAP financial measure. Management believes that this measure is meaningful to investors because management reviews the operating results of Alcoa excluding the impacts of restructuring and other charges, discrete tax items, and other special items (collectively, "special items"). There can be no assurances that additional special items will not occur in future periods. To compensate for this limitation, management believes that it is appropriate to consider both Net income attributable to Alcoa determined under GAAP as well as Net income attributable to Alcoa – as adjusted.

(1) In the second quarter of 2016, management changed the manner in which special items are presented in Alcoa's reconciliation of Adjusted Income. This change resulted in special items being presented on a pretax basis and the related tax and noncontrolling interests impacts on special items being aggregated into separate respective line items. The special items for all prior periods presented were updated to conform to the current period presentation.

(2) Discrete tax items include the following:

- for the quarter ended September 30, 2015, a net charge for a number of small items;
- for the quarter ended June 30, 2016, a benefit for one item; and
- for the quarter ended September 30, 2016, a net charge for a number of small items.

Reconciliation of Adjusted Income, continued

[(3)] Other special items include the following:

- for the quarter ended September 30, 2015, a gain on the sale of land in the United States and an equity investment in a China rolling mill ($39), a write-down of inventory related to a refinery in Suriname ($28), an unfavorable tax impact resulting from the difference between Alcoa's consolidated estimated annual effective tax rate and the statutory rates applicable to special items ($27), costs associated with the planned separation of Alcoa and the acquisition of RTI International Metals ($25), a net unfavorable change in certain mark-to-market energy derivative contracts ($17), and a favorable tax impact resulting from the interim period treatment of operational losses in certain foreign jurisdictions for which no tax benefit was recognized ($16);
- for the quarter ended June 30, 2016, an unfavorable tax impact resulting from the difference between Alcoa's consolidated estimated annual effective tax rate and the statutory rates applicable to special items ($60), costs associated with the planned separation of Alcoa ($45), a gain on the sale of an equity investment in a natural gas pipeline in Australia ($27), a benefit for an arbitration recovery related to a 2010 fire at the Iceland smelter ($14), a favorable tax impact related to the interim period treatment of operational losses in certain foreign jurisdictions for which no tax benefit was recognized ($11), a net unfavorable change in certain mark-to-market energy derivative contracts ($6), and a write-down of inventory related to two previously curtailed facilities ($3); and
- for the quarter ended September 30, 2016, a gain on the sale of land ($118), costs associated with the planned separation of Alcoa ($55), an unfavorable tax impact resulting from the difference between Alcoa's consolidated estimated annual effective tax rate and the statutory rates applicable to special items ($46), a favorable post-closing adjustment related to the November 2014 acquisition of Firth Rixson ($20), a favorable tax impact related to the interim period treatment of operational losses in certain foreign jurisdictions for which no tax benefit was recognized ($13), and a net favorable change in certain mark-to-market energy derivative contracts ($1).

[(4)] The tax impact on special items is based on the applicable statutory rates whereby the difference between such rates and Alcoa's consolidated estimated annual effective tax rate is itself a special item (see footnote 3 above). The noncontrolling interests impact on special items represents Alcoa's partners' share of certain special items.

[(5)] At a special meeting of Alcoa common shareholders held on October 5, 2016, shareholders approved a 1-for-3 reverse stock split of Alcoa's outstanding and authorized shares of common stock. The reverse stock split became effective at 5 pm Eastern Time on October 5, 2016. All share and per share data presented for all periods herein has been updated to reflect the reverse stock split.

The average number of shares applicable to diluted EPS for Net income attributable to Alcoa common shareholders excludes certain share equivalents as their effect was anti-dilutive. However, certain of these share equivalents may become dilutive in the EPS calculation applicable to Net income attributable to Alcoa common shareholders – as adjusted due to a larger and/or positive numerator. Specifically:

- for the quarter ended September 30, 2015, no additional share equivalents were dilutive based on Net income attributable to Alcoa common shareholders – as adjusted, resulting in a diluted average number of shares of 431,464,315;
- for the quarter ended June 30, 2016, no additional share equivalents were dilutive based on Net income attributable to Alcoa common shareholders – as adjusted, resulting in a diluted average number of shares of 452,052,847; and
- for the quarter ended September 30, 2016, no additional share equivalents were dilutive based on Net income attributable to Alcoa common shareholders-as adjusted, resulting in a diluted average number of shares of 453,152,896.

Reconciliation of Alcoa Adjusted EBITDA

($ in millions)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	3Q15	2Q16	3Q16
Net income (loss) attributable to Alcoa	$1,233	$2,248	$2,564	$(74)	$(1,151)	$254	$611	$191	$(2,285)	$268	$(322)	$44	$135	$166
Add:														
Net income (loss) attributable to noncontrolling interests	259	436	365	221	61	138	194	(29)	41	(91)	125	62	43	20
Cumulative effect of accounting changes	2	–	–	–	–	–	–	–	–	–	–	–	–	–
Loss (income) from discontinued operations	50	(22)	250	303	166	8	3	–	–	–	–	–	–	–
Provision (benefit) for income taxes	464	853	1,623	342	(574)	148	255	162	428	320	445	100	152	147
Other (income) expenses, net	(478)	(236)	(1,920)	(59)	(161)	5	(87)	(341)	(25)	47	2	(15)	(37)	(117)
Interest expense	339	384	401	407	470	494	524	490	453	473	498	123	129	133
Restructuring and other charges	266	507	268	939	237	207	281	172	782	1,168	1,195	66	23	18
Impairment of goodwill	–	–	–	–	–	–	–	–	1,731	–	25	–	–	–
Provision for depreciation, depletion, and amortization	1,227	1,252	1,244	1,234	1,311	1,450	1,479	1,460	1,421	1,371	1,280	318	309	316
Adjusted EBITDA	$3,362	$5,422	$4,795	$3,313	$359	$2,704	$3,260	$2,105	$2,546	$3,556	$3,248	$698	$754	$683
Sales	$24,149	$28,950	$29,280	$26,901	$18,439	$21,013	$24,951	$23,700	$23,032	$23,906	$22,534	$5,573	$5,295	$5,213
Adjusted EBITDA Margin	13.9%	18.7%	16.4%	12.3%	1.9%	12.9%	13.1%	8.9%	11.1%	14.9%	14.4%	12.5%	14.2%	13.1%

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.

Reconciliation of Alumina Adjusted EBITDA

($ in millions, except per metric ton amounts)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	3Q15	2Q16	3Q16
After-tax operating income (ATOI)	$682	$1,050	$956	$727	$112	$301	$607	$90	$259	$370	$746	$212	$109	$72
Add:														
Depreciation, depletion, and amortization	172	192	267	268	292	406	444	455	426	387	296	71	66	68
Equity loss (income)	–	2	(1)	(7)	(8)	(10)	(25)	(5)	4	29	41	9	7	9
Income taxes	246	428	340	277	(22)	60	179	(27)	66	153	300	85	40	31
Other	(8)	(6)	2	(26)	(92)	(5)	(44)	(8)	(6)	(28)	1	(1)	(7)	(7)
Adjusted EBITDA	$1,092	$1,666	$1,564	$1,239	$282	$752	$1,161	$505	$749	$911	$1,384	$376	$215	$173
Production (thousand metric tons) (kmt)	14,598	15,128	15,084	15,256	14,265	15,922	16,486	16,342	16,618	16,606	15,720	3,954	3,316	3,310
Adjusted EBITDA / Production ($ per metric ton)	$75	$110	$104	$81	$20	$47	$70	$31	$45	$55	$88	$95	$65	$52

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	3Q15	2Q16	3Q16
After-tax operating income (ATOI)	$822	$1,760	$1,445	$931	$(612)	$488	$481	$309	$(20)	$594	$155	$(59)	$41	$56
Add:														
Depreciation, depletion, and amortization	368	395	410	503	560	571	556	532	526	494	429	106	101	99
Equity loss (income)	12	(82)	(57)	(2)	26	(1)	7	27	51	34	12	7	–	(3)
Income taxes	307	726	542	172	(365)	96	92	106	(74)	203	(28)	(49)	–	–
Other	(96)	(13)	(27)	(32)	(176)	(7)	2	(422)	(8)	(6)	(2)	(2)	1	(7)
Adjusted EBITDA	$1,413	$2,786	$2,313	$1,572	$(567)	$1,147	$1,138	$552	$475	$1,319	$566	$3	$143	$145
Production (thousand metric tons) (kmt)	3,554	3,552	3,693	4,007	3,564	3,586	3,775	3,742	3,550	3,125	2,811	700	595	586
Adjusted EBITDA / Production ($ per metric ton)	$398	$784	$626	$392	$(159)	$320	$301	$148	$134	$422	$201	$4	$240	$247

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	3Q15	2Q16	3Q16[2]
After-tax operating income (ATOI)	$1,658	$(500)	$789	$1,088	$399	$239	$964	$901	$153	$150	$128
Add:											
Depreciation, depletion, and amortization	771	852	977	1,000	987	952	881	725	177	167	167
Equity (income) loss	(9)	18	(11)	(18)	22	55	63	53	16	7	6
Income taxes	449	(387)	156	271	79	(8)	356	272	36	40	31
Other	(58)	(268)	(12)	(42)	(430)	(14)	(34)	(1)	(3)	(6)	(14)
Adjusted EBITDA	$2,811	$(285)	$1,899	$2,299	$1,057	$1,224	$2,230	$1,950	$379	$358	$318

(1) Upstream is composed of the Alumina and Primary Metals segments. On September 29, 2016, Alcoa announced that its Board of Directors approved the completion of the Company's separation into two standalone, publicly-traded companies. One such company will be named Alcoa Corporation and will include Upstream. Additionally, the future Alcoa Corporation will include the Warrick, IN rolling operations and the equity interest in the rolling mill at the joint venture in Saudi Arabia, both of which are currently part of the Global Rolled Products segment of Alcoa Inc. See ATOI Reconciliation for a reconciliation of Alcoa Inc.'s total segment ATOI, which includes the Upstream ATOI presented in the table above, to its consolidated net income.

(2) The Adjusted EBITDA for 3Q16 is composed of $96 for the mining business unit, $78 for the refining business unit, $66 for the smelting business unit, $71 for the casting business unit, $44 for the energy business unit, and $(37) related to curtailed locations and other. The ATOI for 3Q16 is composed of $54 for the mining business unit, $17 for the refining business unit, $9 for the smelting business unit, $44 for the casting business unit, $23 for the energy business unit, and $(19) related to curtailed locations and other. The Adjusted EBITDA and ATOI for these business units are not necessarily representative of the results of the Bauxite, Alumina, Aluminum, Cast Products, and Energy segments of the future Alcoa Corporation due to differences in the structure of the Alcoa Inc. business units compared to the future Alcoa Corporation segments (e.g., results of certain curtailed and closed locations and certain overhead costs).

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

($ in millions, except per metric ton amounts)	2005	2006	2007	2008	2009	2010[1]	2011[1]	2012[1]	2013	2014	2015	3Q15	2Q16	3Q16
After-tax operating income (ATOI)	$278	$233	$178	$(3)	$(49)	$220	$266	$358	$292	$245	$244	$62	$68	$58
Add:														
Depreciation, depletion, and amortization	220	223	227	216	227	238	237	229	226	235	227	56	55	59
Equity loss	–	2	–	–	–	–	3	6	13	27	32	8	10	10
Income taxes	121	58	92	35	48	92	104	167	123	89	109	28	28	18
Other	1	20	1	6	(2)	1	1	(2)	–	(1)	(1)	(1)	1	–
Adjusted EBITDA	$620	$536	$498	$254	$224	$551	$611	$758	$654	$595	$611	$153	$162	$145
Total shipments (thousand metric tons) (kmt)	2,250	2,376	2,482	2,361	1,888	1,755	1,866	1,943	1,989	2,056	1,836	464	497	491
Adjusted EBITDA / Total shipments ($ per metric ton)	$276	$226	$201	$108	$119	$314	$327	$390	$329	$289	$333	$330	$326	$295

[1] 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 Transportation and Construction Solutions Adjusted EBITDA

($ in millions)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	3Q15	2Q16	3Q16
After-tax operating income (ATOI)	$94	$129	$94	$82	$5	$73	$109	$126	$167	$180	$166	$44	$46	$47
Add:														
Depreciation, depletion, and amortization	50	45	55	53	65	48	45	42	42	42	43	11	12	12
Equity loss (income)	–	6	–	–	(2)	(2)	(1)	–	–	–	–	–	–	–
Income taxes	30	27	7	–	(21)	18	38	49	67	69	63	18	18	17
Other	1	(4)	(10)	–	–	–	(1)	(9)	(2)	–	(1)	(1)	–	–
Adjusted EBITDA	$175	$203	$146	$135	$47	$137	$190	$208	$274	$291	$271	$72	$76	$76
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	$475	$467	$450
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%	15.2%	16.3%	16.9%

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 Adjusted EBITDA

($ in millions)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	3Q15	2Q16	3Q16
After-tax operating income (ATOI)	$183	$237	$351	$465	$321	$355	$436	$484	$569	$579	$595	$151	$180	$162
Add:														
Depreciation, depletion, and amortization	114	111	114	118	118	114	120	122	124	137	233	61	62	63
Income taxes	86	128	186	225	159	182	224	248	286	298	282	71	87	71
Other	(12)	2	2	2	2	–	–	–	–	–	–	–	–	–
Adjusted EBITDA	$371	$478	$653	$810	$600	$651	$780	$854	$979	$1,014	$1,110	$283	$329	$296
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	$1,397	$1,465	$1,406
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%	20.3%	22.5%	21.1%

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

($ in millions)	2008	2009	2010	2011	2012	2013	2014	2015	3Q15	2Q16	3Q16
After-tax operating income (ATOI)	$544	$277	$648	$811	$968	$1,028	$1,004	$1,005	$257	$294	$267
Add:											
Depreciation, depletion, and amortization	387	410	400	402	393	392	414	503	128	129	134
Equity (income) loss	–	(2)	(2)	2	6	13	27	32	8	10	10
Income taxes	260	186	292	366	464	476	456	454	117	133	106
Other	8	–	1	–	(11)	(2)	(1)	(2)	(2)	1	–
Adjusted EBITDA	$1,199	$871	$1,339	$1,581	$1,820	$1,907	$1,900	$1,992	$508	$567	$517
Third-party sales	$15,451	$10,961	$11,158	$13,294	$13,155	$13,111	$13,589	$13,462	$3,399	$3,482	$3,377
Adjusted EBITDA Margin	7.8%	7.9%	12.0%	11.9%	13.8%	14.5%	14.0%	14.8%	14.9%	16.3%	15.3%

[1] Value Add is composed of the Global Rolled Products, Engineered Products and Solutions, and Transportation and Construction Solutions segments. On September 29, 2016, Alcoa announced that its Board of Directors approved the completion of the Company's separation into two standalone, publicly-traded companies. One such company will be named Arconic and will include Value-Add, except for the Warrick, IN rolling operations and the equity interest in the rolling mill at the joint venture in Saudi Arabia, both of which are currently part of the Global Rolled Products segment of Alcoa Inc. and will be included in the other company, Alcoa Corporation. See ATOI Reconciliation for a reconciliation of Alcoa Inc.'s total segment ATOI, which includes the Value-Add ATOI presented in the table above, to its consolidated net income.

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, 2011	December 31, 2012	December 31, 2013	December 31, 2014	December 31, 2015	September 30, 2015	June 30, 2016	September 30, 2016
Cash from operations	$2,193	$1,497	$1,578	$1,674	$1,582	$420	$332	$306
Capital expenditures	(1,287)	(1,261)	(1,193)	(1,219)	(1,180)	(268)	(277)	(275)
Free cash flow	$906	$236	$385	$455	$402	$152	$55	$31

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 Net Debt

(in millions)	December 31,					March 31,	June 30,	September 30,
	2011[(1)]	2012[(1)]	2013[(1)]	2014[(1)]	2015[(1)]	2016	2016	2016
Short-term borrowings	$62	$53	$57	$54	$38	$40	$33	$32
Commercial paper	224	–	–	–	–	–	–	–
Long-term debt due within one year	445	465	655	29	21	772	774	773
Long-term debt, less amount due within one year	8,542	8,226	7,534	8,704	8,993	8,257	8,278	9,501
Total debt	9,273	8,744	8,246	8,787	9,052	9,069	9,085	10,306
Less: Cash and cash equivalents	1,939	1,861	1,437	1,877	1,919	1,384	1,929	1,863
Net debt	$7,334	$6,883	$6,809	$6,910	$7,133	$7,685	$7,156	$8,443

(1) In the first quarter of 2016, Alcoa adopted changes issued by the Financial Accounting Standards Board to the presentation of debt issuance costs, which require such costs to be classified as a direct deduction from the carrying value of the related debt liability on an entity's balance sheet. As such, all debt issuance costs were classified as a contra liability in the Long-term debt, less amount due within one year line item for all 2016 periods presented in the table above. These changes are required to be applied on a retrospective basis; therefore, all periods prior to 2016 presented in the table above were updated to conform to the presentation of the 2016 periods. As a result, $98, $85, $73, $65, and $51 of debt issuance costs were reflected as deductions in the Long-term debt, less amount due within one year line item for 2011, 2012, 2013, 2014, and 2015, respectively, presented in the table above.

Net debt is a non-GAAP financial measure. Management believes that this measure is meaningful to investors because management assesses Alcoa's leverage position after factoring in available cash that could be used to repay outstanding debt.