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## 4<sup>th</sup> Quarter Earnings Conference

January 11, 2016

**UPDATE (2/1/16):** This document is updated by, and should be read in conjunction with, the [Form 8-K/A](#) filed by Alcoa Inc. with the SEC on Feb. 1, 2016.

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# 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 Alcoa’s portfolio transformation; and statements regarding the separation transaction, including the future performance of 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; (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 discipline, or strengthening of competitiveness and operations (including executing on the Upstream business improvement plan, 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 targeted credit ratings for Value-Add Company or Upstream Company; and (s) the other risk factors discussed in Alcoa’s Form 10-K for the year ended December 31, 2014, 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 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 Alcoa without unreasonable effort. 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

January 11, 2016



# Positioning Two Strong Companies

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## 4Q 2015 Overview

**Growth + Active  
Portfolio Mgmt  
+ Productivity**

- **\$5.2B revenue:** ~7% YoY sales increase from **aero and acquisitions** more than offset by lower alumina and aluminum prices & divestitures and closures (~-25%)
- \$65 million<sup>1</sup> adjusted net income and **\$590M<sup>2</sup> EBITDA:**
  - **Value-Add:** ~\$3.3B revenue, \$215M ATOI and \$448M adjusted EBITDA
    - GRP: YoY auto sheet **shipments up 18%**; **shifting mix to higher margin products, driving 19% YoY higher adjusted EBITDA/MT**
    - EPS: **Record revenue** of \$1.4B; YoY aerospace revenue up **34%**
    - TCS: **Record 4<sup>th</sup> quarter** adjusted EBITDA margin of **14.6%**
  - **Upstream:** ~\$2.4B<sup>3</sup> revenue, \$58M ATOI and \$239M adjusted EBITDA
    - **Profitable despite lower alumina** (-24% sequential quarter; -43% in 2015) and **aluminum prices** (-1% sequential quarter; -28% in 2015)
    - **Alumina profitable** and **Primary Metals adjusted EBITDA/MT improved** by \$26/MT to \$30/MT
    - **Projecting robust global aluminum demand growth, up 6% over 2015, and global alumina and aluminum deficits in 2016**
- **Productivity gains: \$350M YoY and full year of \$1.2B across all segments**
- **Free Cash Flow: \$467M; Cash from Operations: \$865 million; Cash on Hand: \$1.9B**

**Strengthened  
Portfolios –  
On Track for  
Successful  
Separation**

- **Aero growth strategy delivering - Three major multi-year aero contracts in 4Q; ~\$9B in 2015 contracts (2x 2014)**
  - ~\$2.5B in Multi-year agreements with **Boeing** for fastening systems and titanium seat tracks, RTI pull-through
  - >\$1.5B Multi-year agreement with **GE Aviation** for blades, vanes, and structural parts
  - **Acquisitions** substantially **strengthened aerospace position**; Firth Rixson operationally behind; RTI ahead of plan
- **Significantly restructured Upstream portfolio**
  - **Aggressive portfolio actions** to close/curtail operating smelting (~25%) and operating refining (~20%) capacity in 2015
- **Launched new Business Improvement Program for 2016**
  - **Value Add to deliver \$650M**
  - **Upstream to drive \$600M**
  - Includes **overhead reduction** across Alcoa with **\$100M** to be realized in 2016, **\$225M over two years**
- **Two strengthened portfolios on track for separation in second half 2016:**
  - Announced **executive management teams** for the future **Value-Add** and **Upstream** companies
  - **Form 10** filing with the U.S. Securities and Exchange Commission targeted **by mid-year**

1) Reported net loss of \$500 million in 4Q15. 2) EBITDA excludes \$71M special items. 3) Including \$445M in sales to Value-Add. See appendix for adjusted earnings and EBITDA reconciliations.



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**William Oplinger**

Executive Vice President and Chief Financial Officer

January 11, 2016

# Income Statement Summary

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\$ Millions, except aluminum prices and per-share amounts

	4Q14	3Q15	4Q15	Prior Year Change	Sequential Change
<b>Realized Aluminum Price (\$/MT)</b>	<b>\$2,578</b>	<b>\$1,901</b>	<b>\$1,799</b>	<b>(\$779)</b>	<b>(\$102)</b>
<b>Revenue</b>	<b>\$6,377</b>	<b>\$5,573</b>	<b>\$5,245</b>	<b>(\$1,132)</b>	<b>(\$328)</b>
Cost of Goods Sold	\$4,973	\$4,559	\$4,404	\$569	\$155
COGS % Revenue	78.0%	81.8%	84.0%	6.0 % pts.	2.2 % pts.
Selling, General Administrative, Other	\$271	\$261	\$262	(\$9)	\$1
SGA % Revenue	4.2%	4.7%	5.0%	0.8 % pts.	0.3 % pts.
Other Expenses (Income), Net	(\$6)	(\$15)	\$29	\$35	\$44
Restructuring and Other Charges	\$388	\$66	\$534	\$146	\$468
Effective Tax Rate	51.3%	48.6%	(8.5%)	(59.8 % pts.)	(57.1 % pts.)
<b>EBITDA</b>	<b>\$1,073</b>	<b>\$698</b>	<b>\$519*</b>	<b>(\$554)</b>	<b>(\$179)</b>
Net (Loss) Income	\$159	\$44	(\$500)	(\$659)	(\$544)
Net (Loss) Income per Diluted Share	\$0.11	\$0.02	(\$0.39)	(\$0.50)	(\$0.41)
<b>Income excl. Special Items</b>	<b>\$432</b>	<b>\$109</b>	<b>\$65</b>	<b>(\$367)</b>	<b>(\$44)</b>
<b>Income per Diluted Share excl. Special Items</b>	<b>\$0.33</b>	<b>\$0.07</b>	<b>\$0.04</b>	<b>(\$0.29)</b>	<b>(\$0.03)</b>

\*4Q'15 EBITDA of \$519 million includes \$71 million of Special Items  
See appendix for EBITDA and Adjusted Income reconciliations

# Special Items

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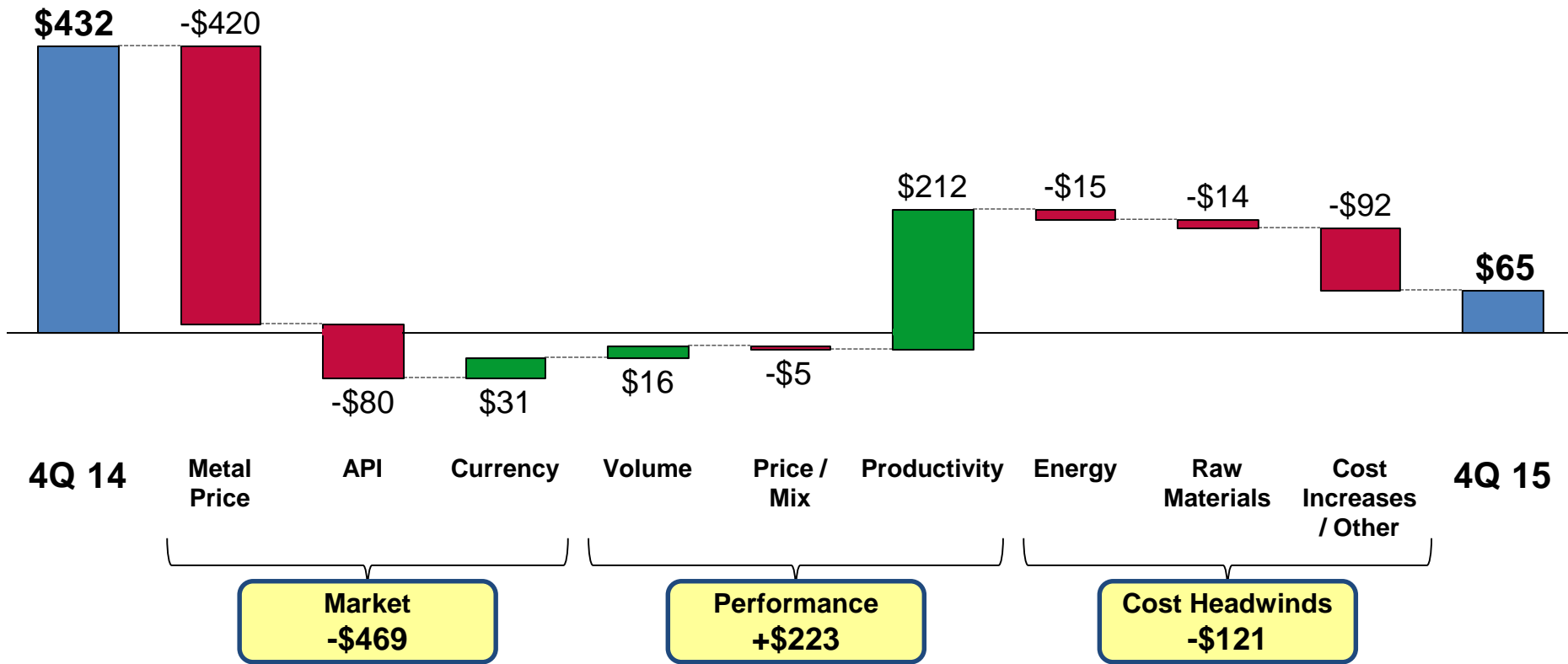
\$ Millions, except per-share amounts

	4Q14	3Q15	4Q15	Income Statement Classification	Segment
<b>Net (Loss) Income</b>	<b>\$159</b>	<b>\$44</b>	<b>(\$500)</b>		
<b>Net (Loss) Income per Diluted Share</b>	<b>\$0.11</b>	<b>\$0.02</b>	<b>(\$0.39)</b>		
Restructuring-Related	(\$200)	(\$43)	(\$287)	Restructuring and Other Charges/COGS	Corporate/ Alumina/ Primary Metals
Q4'15 Overhead Reduction Program	-	-	(\$47)	Restructuring and Other Charges/COGS	Corporate
Tax Items	(\$53)	(\$15)	(\$189)	Income Taxes	Corporate/GRP
Goodwill Impairment	-	-	(\$25)	Impairment of Goodwill	Corporate
Gain on Asset Sale	-	\$25	-	Other Income, Net	Corporate
Portfolio Transaction Costs	(\$22)	(\$22)	(\$12)	SG&A	Corporate
Mark-to-Market Energy Contracts	\$2	(\$10)	(\$5)	Other Expenses, Net	Corporate
<b>Special Items</b>	<b>(\$273)</b>	<b>(\$65)</b>	<b>(\$565)</b>		
<b>Net Income excl. Special Items</b>	<b>\$432</b>	<b>\$109</b>	<b>\$65</b>		
<b>Net Income per Diluted Share excl. Special Items</b>	<b>\$0.33</b>	<b>\$0.07</b>	<b>\$0.04</b>		



# Adjusted Earnings Down on Lower LME, API and Regional Premiums

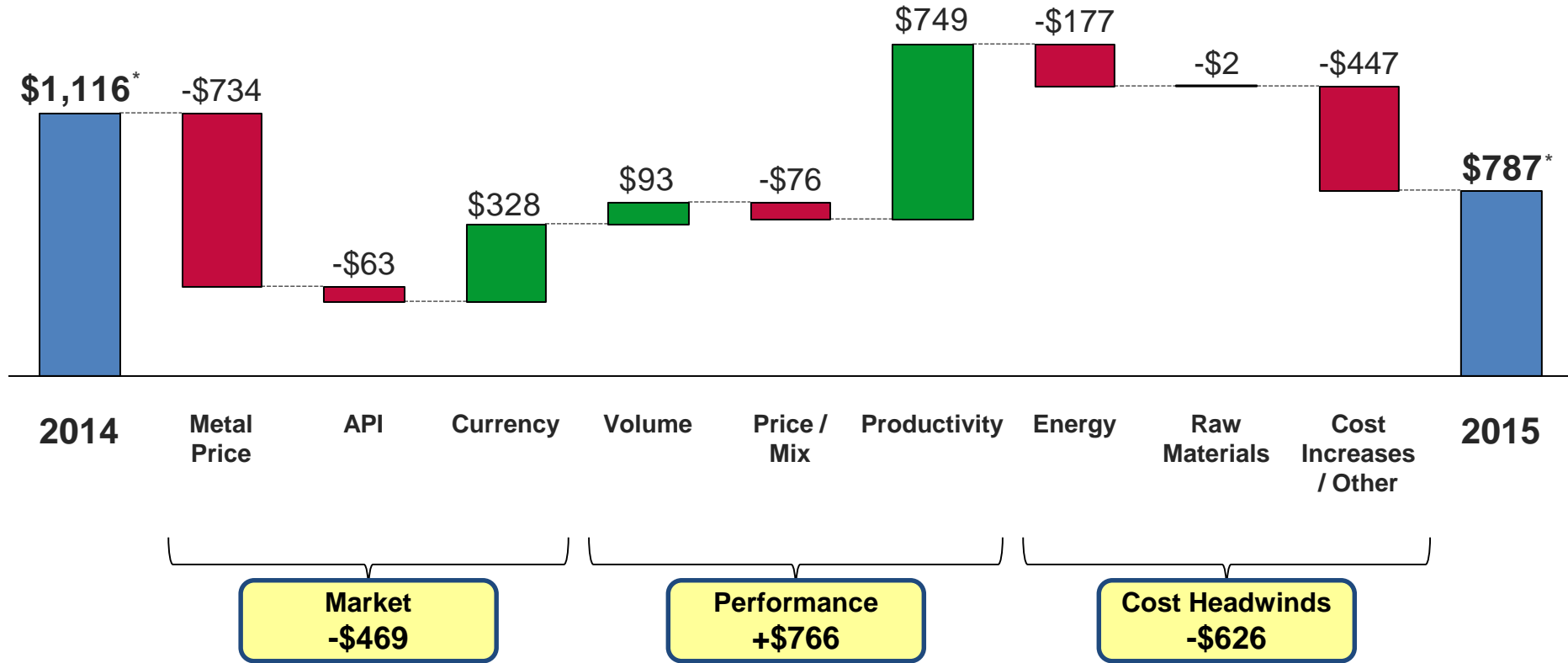
Net Income excluding Special Items (\$ Millions)



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

# Full Year Adjusted Earnings Down on Lower LME and Premiums

Net Income excluding Special Items (\$ Millions)



\*2014 Net Income of \$268M and 2015 Net Loss of \$121M. See appendix for Adjusted Income reconciliation  
 Note: Metal Price = LME + Regional Premium; Regional Premium previously reported in Price/Mix category

# GRP: Strong Productivity; Capacity, Innovation Investments Continue

## 4Q15 Actual and 1Q16 Outlook – Global Rolled Products

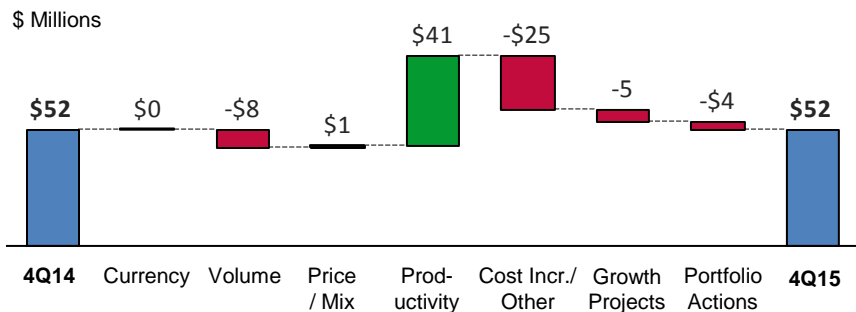
### 4<sup>th</sup> Quarter ATOI Results

	4Q 14	3Q 15	4Q 15
3 <sup>rd</sup> Party Revenue (\$ Millions)	1,888	1,527	1,422
ATOI <sup>1</sup> (\$ Millions)	52	62	52
EBITDA/MT <sup>1</sup> (\$)	262	330	312

### 4<sup>th</sup> Quarter Business Highlights

- **Revenue up 6%** year-over-year **excluding** divestitures/closures (-15%), lower metal prices and currency (-16%); **down 25%** year-over-year
- **EBITDA/MT up 19%**
- **Auto sheet shipments up 18%** year-over-year; **Aero volume down** due to fewer spot sales opportunities and an unplanned outage
- **Very strong productivity** more than offset cost increases
- **Continued investments of \$5M** in Growth projects including **Micromill™ R&D** and **throughput/capacity increases** at key plants

### 4<sup>th</sup> Quarter ATOI Performance Bridge



### 1<sup>st</sup> Quarter Year-over-Year Outlook

- **Auto sheet shipments** expected to be **up approximately 45%** as Tennessee Auto ramp-up accelerates
- **Volume and pricing pressure** from slower growing **China economy**, **packaging**, fewer spot sales opportunities in **Aero**, and reduced **heavy duty truck build rates in N.A.**
- **Tennessee Auto and Texarkana cast house ramp-up costs** continue
- **ATOI is expected to be flat year-over-year**, including **\$4M impact to secure alternative metal supply at Warrick**, and **current currency rates**

<sup>1</sup>The 4Q14 amount has been updated to remove the impact of metal price lag, consistent with the 3Q15 and 4Q15 presentation. See appendix for additional information and EBITDA reconciliation.

# EPS: Record Revenue up 26% Year-Over-Year; Aerospace up 34%

4Q15 Actual and 1Q16 Outlook – Engineered Products and Solutions

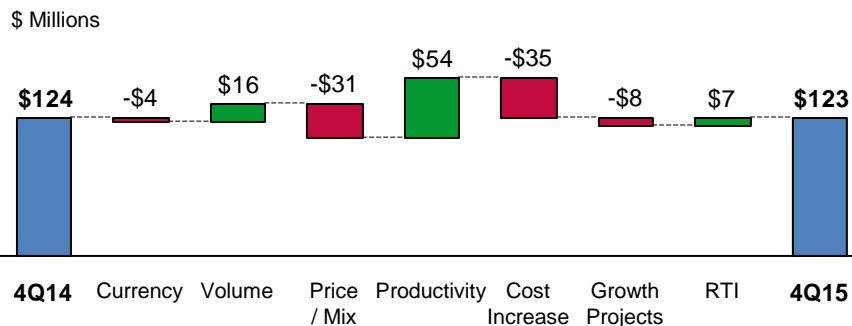
## 4<sup>th</sup> Quarter ATOI Results

	4Q 14	3Q 15	4Q 15
3 <sup>rd</sup> Party Revenue (\$ Millions)	1,114	1,397	<b>1,409</b>
ATOI <sup>1</sup> (\$ Millions)	124	151	<b>123</b>
EBITDA Margin <sup>1</sup>	20.6%	20.3%	<b>17.3%</b>

## 4<sup>th</sup> Quarter Business Highlights

- **Record 4Q Revenue, up 26% year-over-year; Aerospace up 34%**
- **Revenue growth** driven mainly by **acquisitions** and supported by **share gains**, partially offset by **currency**
- **Unfavorable currency** ATOI impact of **\$4M**
- **RTI ATOI of +\$7M** including **\$6M of unfavorable purchase accounting**

## 4<sup>th</sup> Quarter ATOI Performance Bridge



## 1<sup>st</sup> Quarter Year-over-Year Outlook

- **Aerospace** market remains **strong** but will be tempered by inventory management at OEMs
- **Oil & Gas and European Industrial Gas Turbine** markets remain **soft**
- **Pricing pressure** across **all markets**
- **Share gains** through **innovation** and **productivity** **continue**
- **ATOI** is expected to be **flat to up 2% year-over-year** including **currency pressures**

<sup>1</sup>The 4Q14 amount has been updated to remove the impact of metal price lag, consistent with the 3Q15 and 4Q15 presentation. See appendix for additional information and EBITDA reconciliation.



# TCS: Strong Productivity Drove Record Q4 EBITDA Margin

4Q15 Actual and 1Q16 Outlook – Transportation and Construction Solutions

## 4<sup>th</sup> Quarter ATOI Results

	4Q 14	3Q 15	4Q 15
3 <sup>rd</sup> Party Revenue (\$ Millions)	500	475	444
ATOI <sup>1</sup> (\$ Millions)	38	44	40
EBITDA Margin <sup>1</sup>	12.6%	15.2%	14.6%

## 4<sup>th</sup> Quarter Business Highlights

- **Revenue down 11%** year-over-year; -7% currency and -4% volume (Brazil)
- **Record Q4 EBITDA margin of 14.6%**
- **Recovery continues in N.A. Non-Residential Construction** while **weakness** remains in Europe
- **N.A. Heavy Duty Truck** build rates **declined further**; Europe continues to improve
- **Unfavorable currency** ATOI impact of **\$5M**, due to the stronger U.S. dollar

## 4<sup>th</sup> Quarter ATOI Performance Bridge

\$ Millions



## 1<sup>st</sup> Quarter Year-over-Year Outlook

- Further **uptick** within **N.A. Non-Residential Construction** with continued **weakness in Europe**
- **N.A. Heavy Duty Truck** build rates **decline**, partially offset by steady improvement in Europe
- Continued strong **productivity gains**
- **ATOI** is expected to be **flat to a 3% increase year-over-year** including currency pressures

<sup>1</sup>The 4Q14 amount has been updated to remove the impact of metal price lag, consistent with the 3Q15 and 4Q15 presentation. See appendix for additional information and EBITDA reconciliation.

# Alumina: Lower Prices Impact Result

4Q15 Actual and 1Q16 Outlook – Alumina

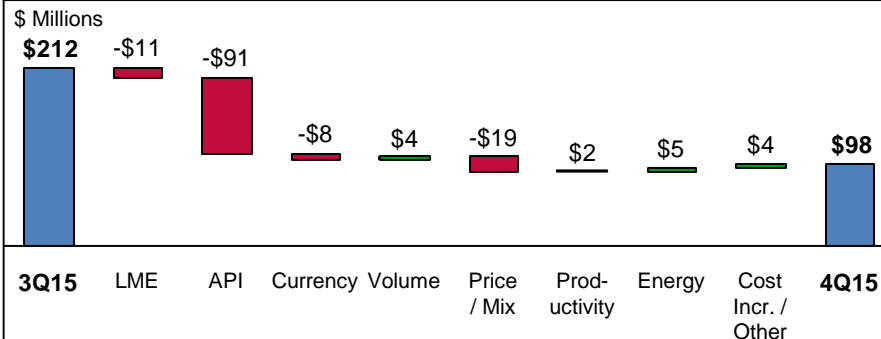
## 4<sup>th</sup> Quarter ATOI Results

	4Q 14	3Q 15	4Q 15
Production (kmt)	4,161	3,954	<b>3,856</b>
3 <sup>rd</sup> Party Shipments (kmt)	2,928	2,798	<b>2,713</b>
3 <sup>rd</sup> Party Revenue (\$ Millions)	1,017	912	<b>732</b>
3 <sup>rd</sup> Party Price (\$/MT)	343	323	<b>267</b>
ATOI (\$ Millions)	178	212	<b>98</b>

## 4<sup>th</sup> Quarter Business Highlights

- **API pricing down 24% sequentially, 43% in 2015**
- **Announced 2.2 MMT, or 15%, of annual capacity curtailments**
- **Higher Australian production** partially offsets Suriname curtailment
- Continued **productivity gains through strong cost control**
- **Saudi Arabia refinery** continued to ramp-up

## 4<sup>th</sup> Quarter ATOI Performance Bridge



## 1<sup>st</sup> Quarter Sequential Outlook

- Announced curtailments drive **Production down ~340 KMT**, further reductions in Q2'16
- **~85%** of 3<sup>rd</sup> party shipments on API or spot pricing for 2016
- **Seasonal increase in maintenance** in Western Australia
- **API pricing follows 30-day lag**; **LME pricing follows 60-day lag**
- **ATOI to be up \$7M** excluding pricing and currency impacts

# Primary Metals: Lower Cost Position Improving Performance

4Q15 Actual and 1Q16 Outlook – Primary Metals

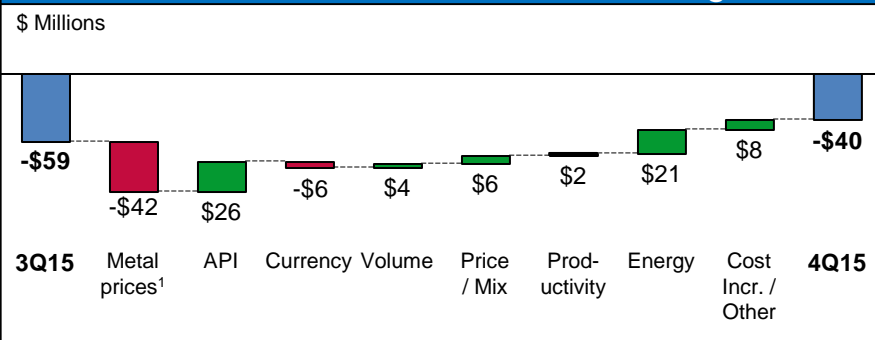
## 4<sup>th</sup> Quarter ATOI Results

	4Q 14	3Q 15	4Q 15
Production (kmt)	731	700	699
3 <sup>rd</sup> Party Shipments (kmt)	637	615	644
3 <sup>rd</sup> Party Revenue (\$ Millions)	1,852	1,249	1,236
3 <sup>rd</sup> Party Price (\$/MT)	2,578	1,901	1,799
ATOI (\$ Millions)	267	(59)	(40)

## 4<sup>th</sup> Quarter Business Highlights

- Realized price declined ~5% sequentially; **Midwest transaction price down 28% in 2015**
- Announced 642 KMT, or 23%, of annual capacity curtailments**
- Lower alumina and energy costs** effectively offset unfavorable metal prices and currency
- Reduced maintenance costs**, optimized **raw materials consumption** and higher **volume** contributed **\$14M**

## 4<sup>th</sup> Quarter ATOI Performance Bridge



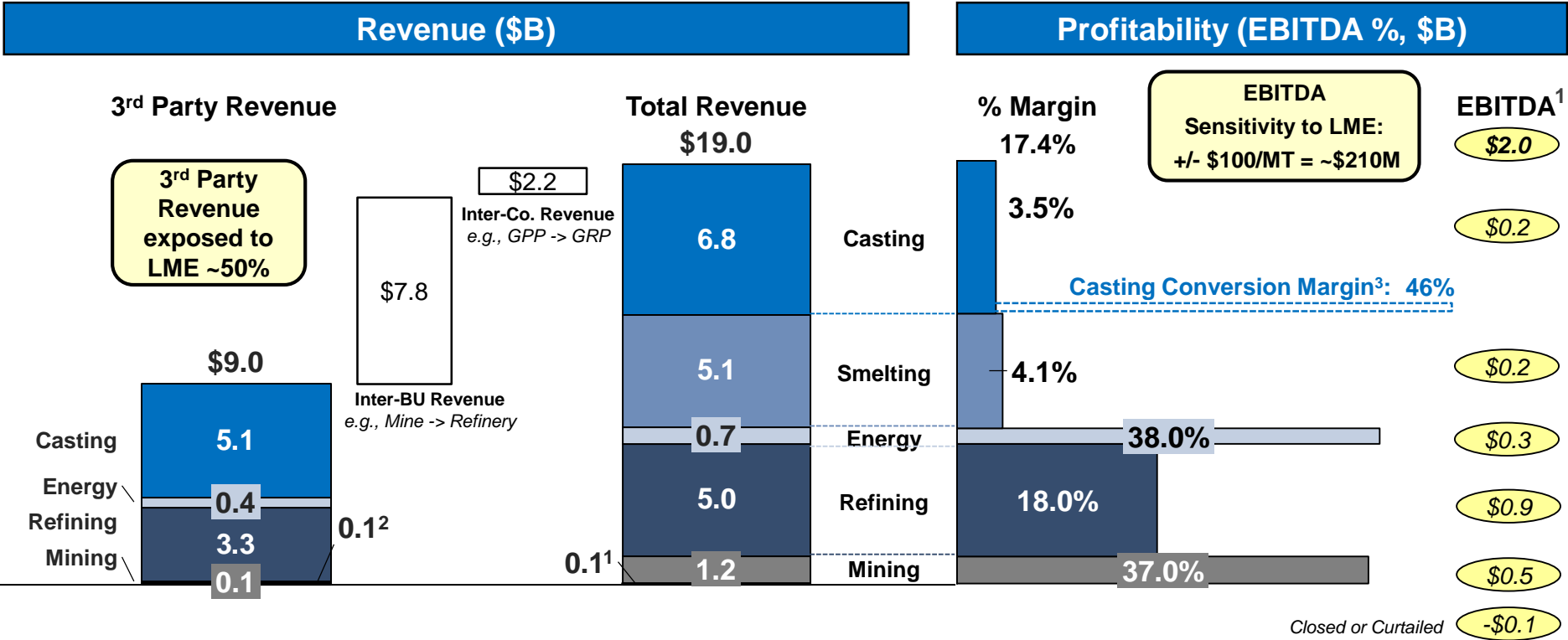
## 1<sup>st</sup> Quarter Sequential Outlook

- Announced curtailments drive **Production down ~40 KMT**, full benefit in Q2'16
- Pricing** to follow a **15-day lag** to LME
- Lower energy sales** in Brazil, negatively impacting ATOI by **\$12M**
- Productivity** and **cost decreases** more than **offsetting higher seasonal energy costs of \$13M**, improving ATOI by **\$5M**
- ATOI to be down \$7M** excluding impact of pricing and currency

<sup>1</sup>Metal Price = LME + Regional Premium; Regional Premium previously reported in Price/Mix category

# Upstream: Five Business Units Diversify Revenue and EBITDA Sources

Upstream Revenues and EBITDA: Full year 2015 Actual

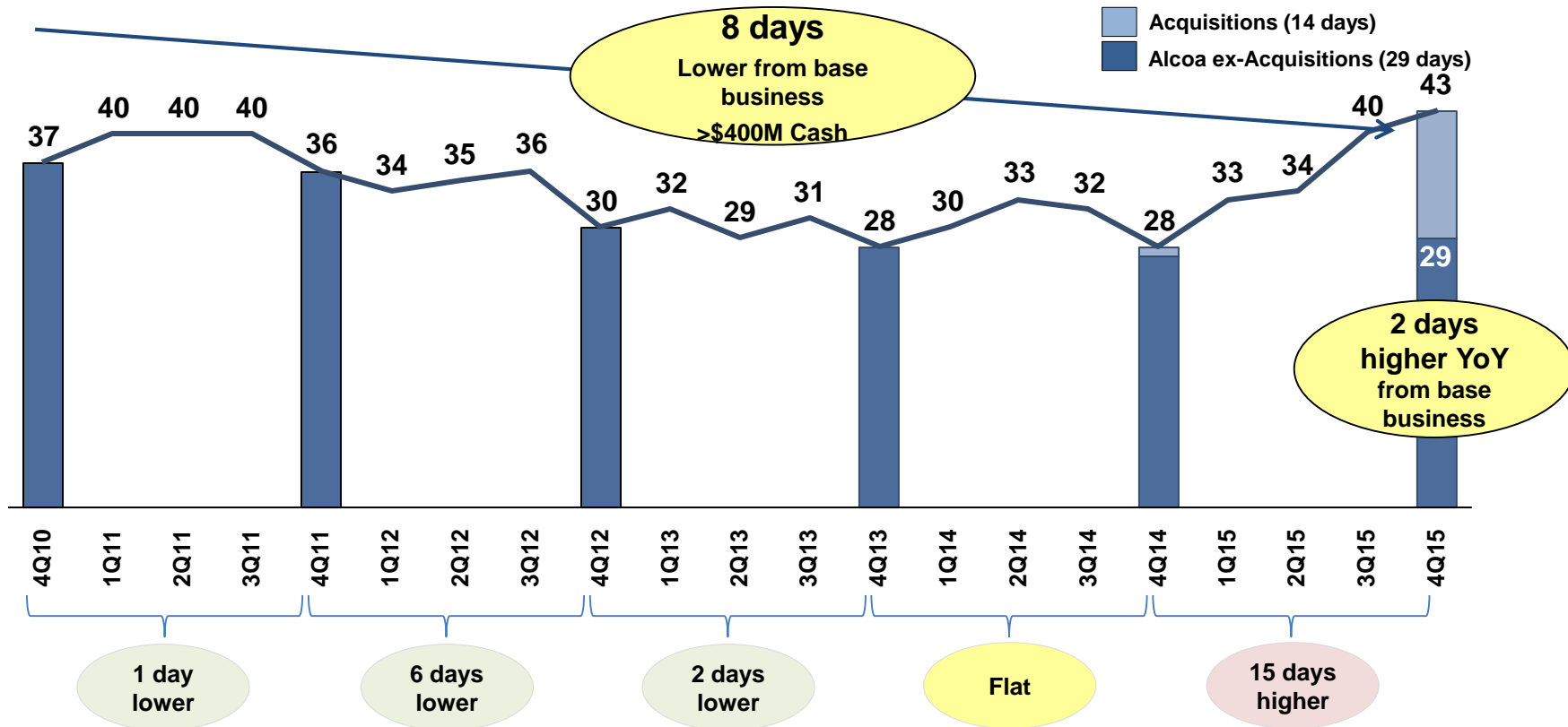


<sup>1</sup> 2015 ATOI of \$901M. See appendix for EBITDA reconciliations  
<sup>2</sup> Closed or curtailed locations <sup>3</sup> Conversion Margin removes pass through metal cost from margin calculation



# Base Business DWC +2 days Year-over-Year, Acquisitions Add 14 days

Average Days Working Capital since Fourth Quarter 2010



# Strong Cash Generation; Cash Balance at \$1.9 Billion

## 4Q14, 3Q15 and 4Q15F Cash Flow

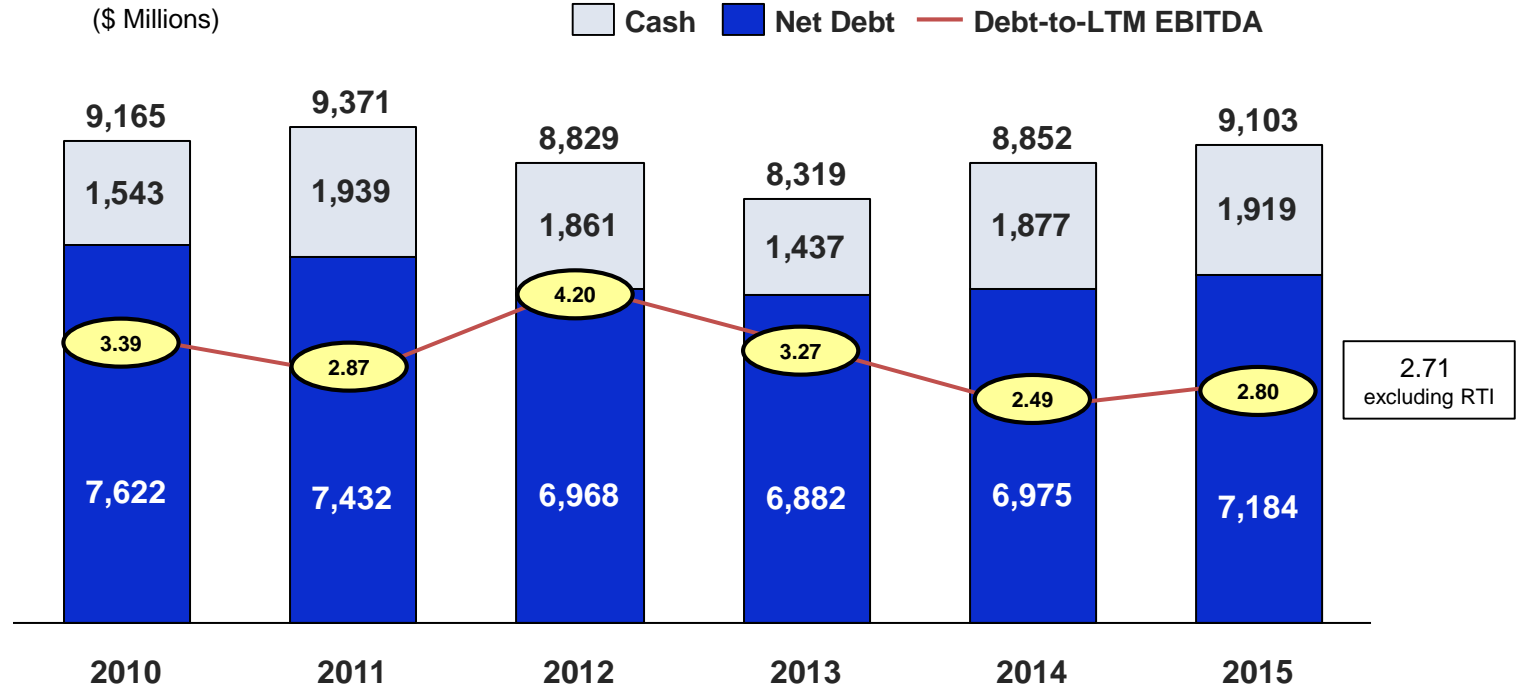
(\$ Millions)	4Q14	3Q15	4Q15
Net Income (Loss) before Noncontrolling Interests	\$114	\$106	(\$564)
Depreciation, Depletion and Amortization	\$336	\$318	\$321
Change in Working Capital	\$656	\$38	\$591
Pension Expense in Excess of Contributions	\$47	(\$72)	\$13
Other Adjustments	\$305	\$30	\$504
<b>Cash from Operations</b>	<b>\$1,458</b>	<b>\$420</b>	<b>\$865</b>
Dividends to Shareholders	(\$56)	(\$40)	(\$74)
Change in Debt	(\$110)	(\$9)	(\$122)
Net (Distributions)/Contributions from Noncontrolling Interests	(\$36)	(\$1)	(\$32)
Other Financing Activities	\$21	(\$2)	(\$2)
<b>Cash from Financing Activities</b>	<b>(\$181)</b>	<b>(\$52)</b>	<b>(\$230)</b>
Capital Expenditures	(\$469)	(\$268)	(\$398)
Acquisitions/Divestitures/Asset Sales	(\$2,138)	\$354	-
Other Investing Activities	(\$46)	(\$4)	(\$59)
<b>Cash from Investing Activities</b>	<b>(\$2,653)</b>	<b>\$82</b>	<b>(\$457)</b>
<b>Free Cash Flow</b>	<b>\$989</b>	<b>\$152</b>	<b>\$467</b>
<b>Cash on Hand</b>	<b>\$1,877</b>	<b>\$1,739</b>	<b>\$1,919</b>

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# Leverage Within Target Range of 2.25x to 2.75x Excluding RTI

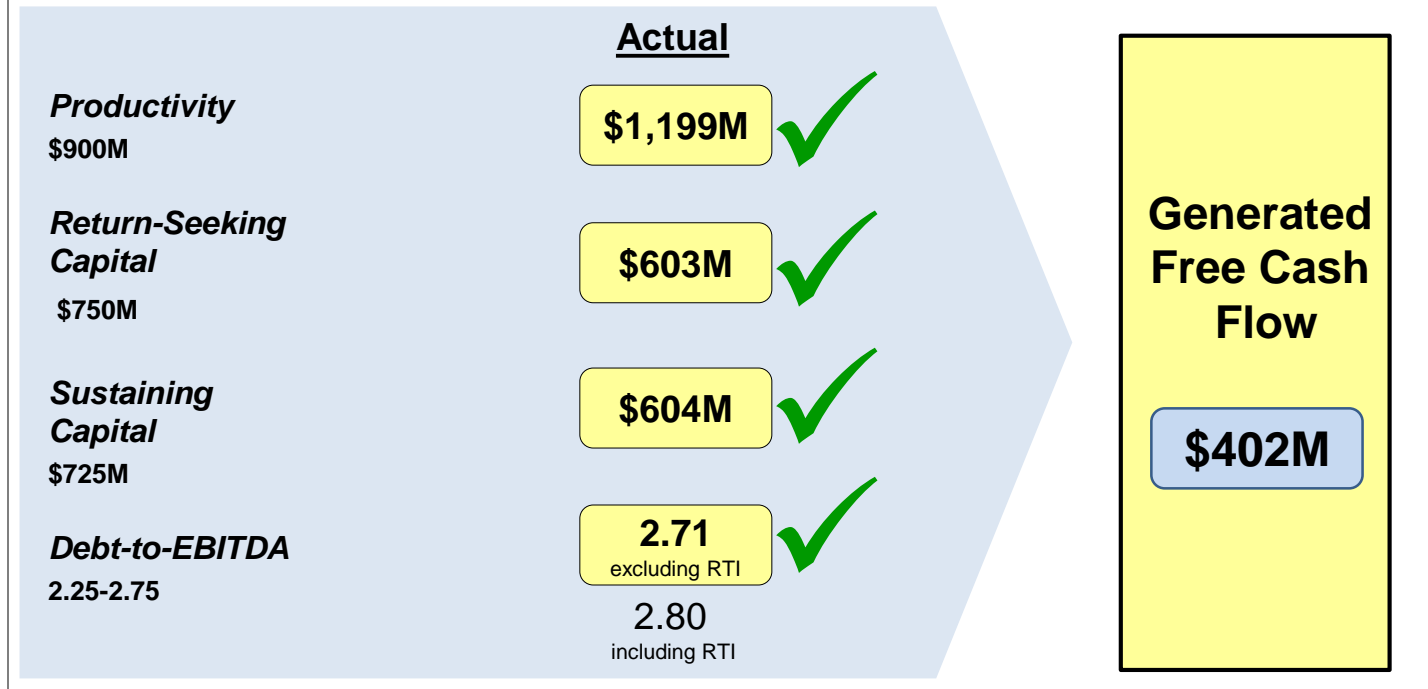
Debt, Net Debt, and Debt-to-LTM EBITDA



# Delivered Strong Results in 2015

2015 full year results against Targets

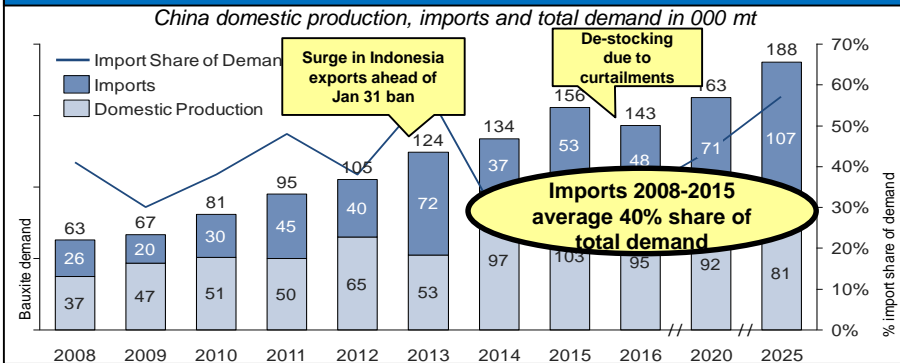
## Generated \$402M Free Cash Flow in 2015



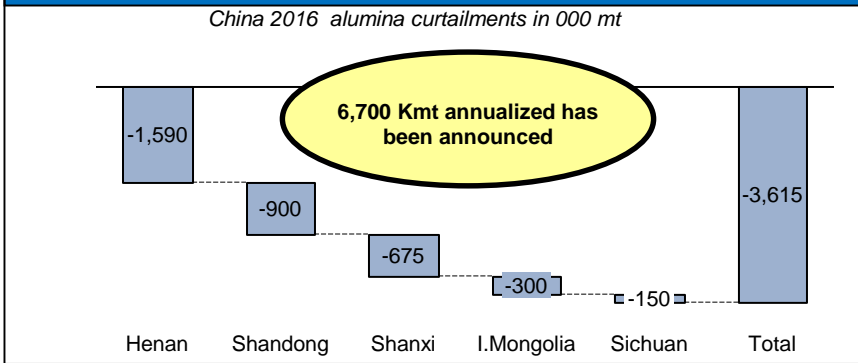


# China Aluminum Dynamic Improving, But More Action Still Required

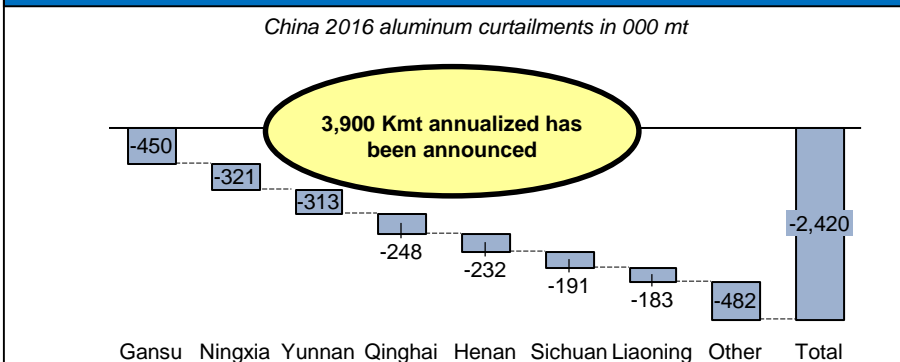
## China's dependency on import bauxite is rising



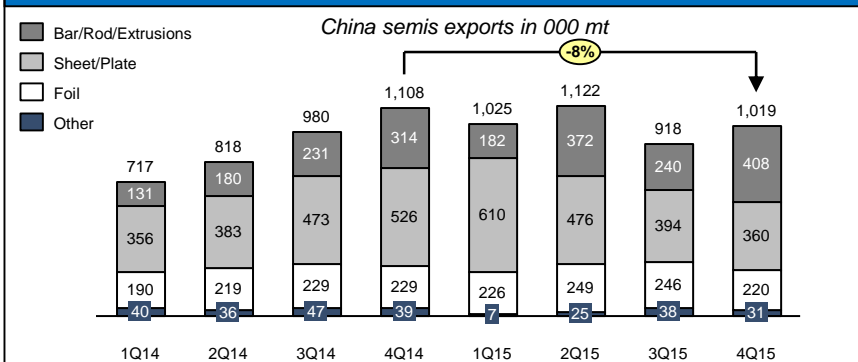
## Alumina curtailments response is substantial



## Aluminum curtailments equally substantial



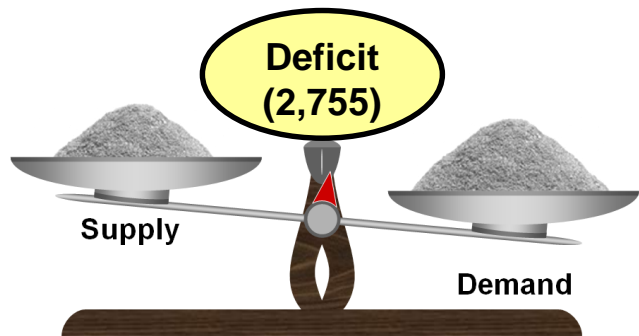
## Semis exports are higher, but fake share down



# Chinese Refining Curtailments Contribute To A 2016 Alumina Deficit

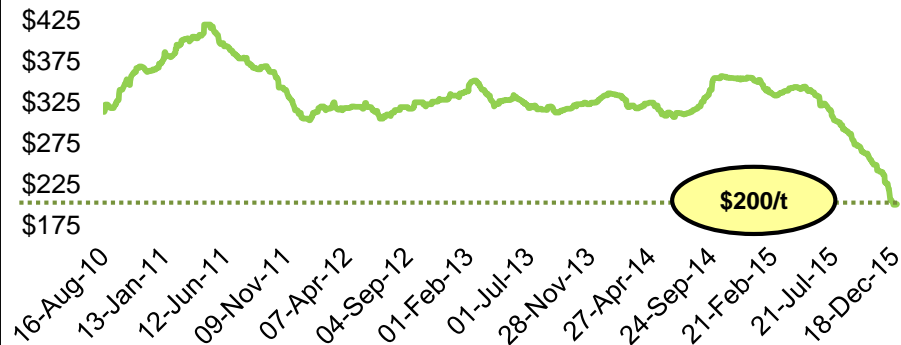
## Alumina fundamentals overview

### 2016 Alumina Forecast (as of Q42015)

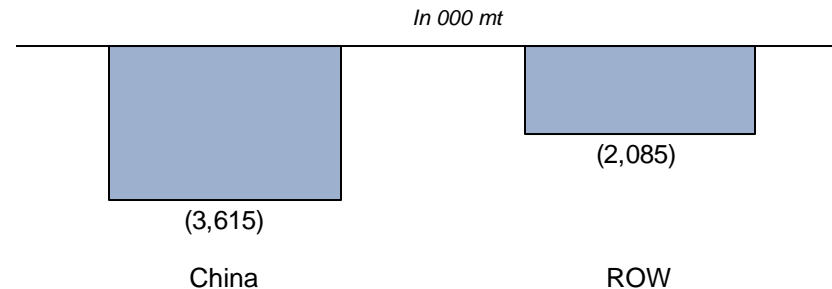


	China	Rest of World
2016 Prod. at Beginning Run Rate	56,807	56,900
2016 Prod. to be Added/Restarted	3,993	1,610
2016 Prod. to be Closed/Curtailed	(3,615)	(2,085)
Imports/(Exports) – Full Year	<u>4,400</u>	<u>(4,400)</u>
Total 2016 Production	61,585	52,025
2016 Demand	<u>(62,805)</u>	<u>(53,560)</u>
<b>Net Balance</b>	<b>(1,220)</b>	<b>(1,535)</b>

### Alumina Price History: Platts Australia FOB (\$/t)

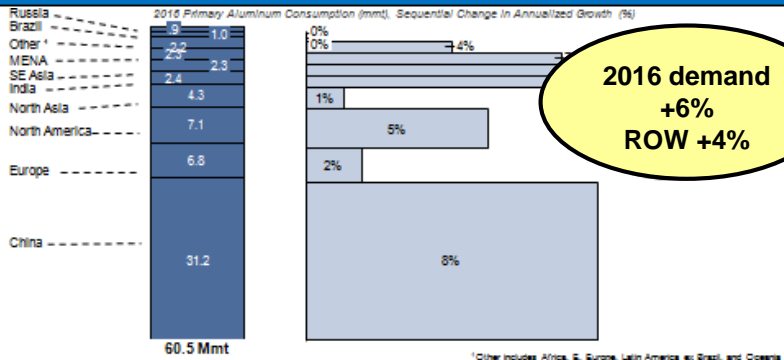


### Major curtailments in response to price action

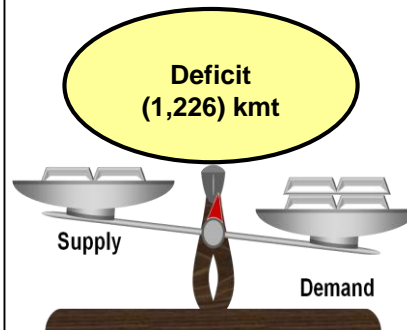


# Aluminum Market Fundamentals Are Solid

## 6% 2016E Demand Growth

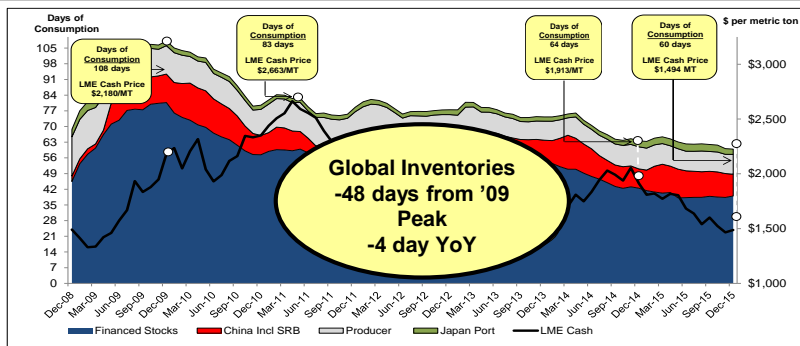


## Aluminum deficit increasing

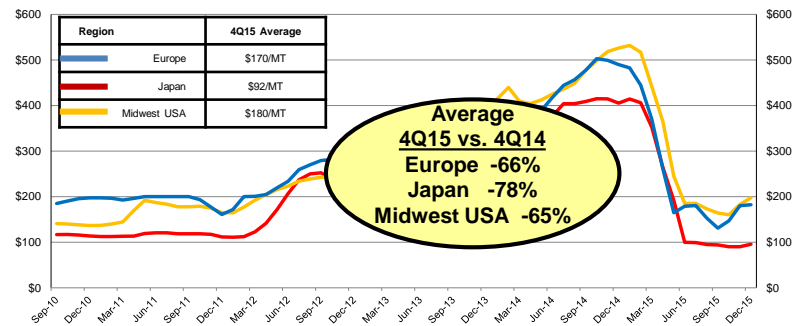


'000 mt	China	Rest of World
2016 Production at Beginning Run Rate	31,053	26,968
2016 Production to be Added/Restarted	3,400	1,010
2016 Production to be Closed/Curtailed	(2,420)	(766)
<b>Total Supply</b>	<b>32,033</b>	<b>27,212</b>
<b>Demand</b>	<b>(31,217)</b>	<b>(29,254)</b>
<b>Net Balance</b>	<b>816</b>	<b>(2,042)</b>

## Global Inventories at 60 days; -4 days YoY



## Regional Premiums Stable





*Advancing each generation.*



**Klaus Kleinfeld**

Chairman and Chief Executive Officer

January 11, 2016



# Aerospace Remains Strong; Continued Growth in Automotive

Alcoa End Markets: Current Assessment of 2016 vs. 2015

## End Market

## 2016 Growth

## Global and Regional Commentary

### Aerospace



  
8% to 9%  
Global sales  
growth

- **Large Commercial Aircraft** segment **growth** of 15% as **ramp-up increases** continue for such programs as the **A320, A350 and B787**
- **Strong Commercial Jet engine Order Book: ~23,400** Engines on firm order
- **Strong demand continues** as 2015 ends with a book-to-bill ratio of 1.25<sup>1</sup>
- **Strong Commercial Jet Order Book: >9 Years of Production** at 2015 delivery rates
- **Solid Airline Fundamentals**<sup>2</sup>: +6.9% Passenger and +2.8% Cargo Demand; all-time record for Airline Profitability expected (\$36B in 2016)

### Automotive




  
1% to 4%  
Global  
production  
growth

- **Record Sales:** U.S. sales **+5.8%YTD<sub>Dec'15</sub>**; **Light Truck** penetration **highest** at 61.2%, Ford F-Series best selling pick-up; interest rates increase may spur sales in 1H16
- **Sustained demand: Vehicles 12+ years old** continue to grow and **will increase 15% by 2020**<sup>3</sup>
- **Production Up:** N.A. production **+3.1%YTD<sub>Nov'15</sub>** (16.2M vehicles)
- **Stable Inventory: 61 days**, Flat YoY (<sub>Dec'15 vs. Dec'14</sub>) (industry target is 60-65 days)
- **Incentives Up: +4.2% YoY** (<sub>Dec'15 vs. Dec'14</sub>) (\$3,073/unit), driven by Passenger Cars +7.2% YoY
- **Production Up: +2.7% YTD<sub>Nov'15</sub>**; W. Eur. continues to improve, offsetting decline in East
- **Strong Registrations: +8.6% YTD<sub>Nov'15</sub>**; **Exports to increase 8.7% in 2016** after +2.3% in 2015
- **Recovering Production: +3.1% YTD<sub>Nov'15</sub> and 18.8% YoY** (<sub>Nov'15 vs. Nov'14</sub>)
- **Sales +4.7% YTD<sub>Nov'15</sub> and 21.3% YoY** (<sub>Nov'15 vs. Nov'14</sub>) propelled by tax incentives
- **Growth driven by increasing middle class, exports, and evolving emissions policies**

# HDT – N.A.: Relative Decline, Strength in Europe; Packaging Stable

Alcoa End Markets: Current Assessment of 2016 vs. 2015

End Market	2016 Growth	Global and Regional Commentary
<p><b>Heavy Duty Truck and Trailer</b></p> 	<p style="text-align: center;">↓</p> <p><b>N.A.</b> -19% to -23%</p> <p><b>-3% to +1%</b> Global production decline</p>	<ul style="list-style-type: none"> <li>• <b>2015 4<sup>th</sup> highest production year:</b> 322k trucks produced, record 376k trucks in 2006</li> <li>• <b>2016 Production:</b> 248k-262k trucks (10-year average rate of 243k trucks)</li> <li>• <b>High inventory levels: Up 26% YoY</b> (Nov'15 vs. Nov'14) 56% above 10-year average of 47.4k</li> <li>• <b>Lowering build rates:</b> Aligning to lower orders (<b>down 22% YTD</b> Nov'15), and lighter order book, <b>down 15% YoY</b> (Nov'15 vs. Nov'14) <b>at 128k</b>, a 9<sup>th</sup> straight m/m decline, and above 10-year average of 101k</li> </ul> <p><b>E.U.</b> ↑ 3% to 7%</p> <ul style="list-style-type: none"> <li>• <b>Strong Production:</b> Western Europe <b>+12.6% YoY</b> (Nov'15 vs. Nov'14) and <b>+7.1% YTD</b> Nov'15</li> <li>• <b>Improving conditions in W. Eur.:</b> Orders <b>+10.8% YTD</b>, Registrations <b>+19.1% YTD</b> Nov'15; Freight tons <b>+3.6%</b> (4Q '15 vs. 4Q '14)</li> </ul> <p><b>China</b> ↑ 1% to 4%</p> <ul style="list-style-type: none"> <li>• <b>Production Improving:</b> 554k trucks vs. 540k in 2015, regulatory pre-buy absorbed</li> </ul>
<p><b>Packaging</b></p> 	<p style="text-align: center;">↑</p> <p><b>1% to 3%</b> Global sales growth</p>	<p><b>N.A.</b> ↓ -1% to 0%</p> <ul style="list-style-type: none"> <li>• <b>Demand decline:</b> Weakness (-1% to -2%) in <b>Carbonated Soft Drinks (CSD)</b></li> <li>• <b>Moderate growth in Beer Segment</b> (+1% to +2%) to partially offset CSD</li> </ul> <p><b>E.U.</b> ↑ 1% to 2%</p> <ul style="list-style-type: none"> <li>• <b>Growth</b> led by modest growth (1% to 2%) in <b>Western Europe</b>, partially offset by downward pressure in <b>Eastern Europe</b> (primarily declines in Russia)</li> </ul> <p><b>China</b> ↑ 5% to 8%</p> <ul style="list-style-type: none"> <li>• <b>Growth</b> based on more conservative projections from fillers and economic expectations</li> </ul>

# Commercial B&C and Global Airfoil Market Continue to Grow

Alcoa End Markets: Current Assessment of 2016 vs. 2015

## End Market


## 2016 Growth


## Global and Regional Commentary


### Building and Construction



  
**4% to 6%**  
 Global sales growth

  
**N.A.**  
 4% to 6%

  
**E.U.**  
 0% to -2%

  
**China**  
 3% to 5%

#### Leading Indicators Positive but volatile:


- **Non-Residential Contracts Awarded: +8.6%** in Nov. (mean of 12-month rolling average)
- **Architectural Billings Index Volatile in 2015:** Growth followed by occasional decline; **till Nov. positive for 7 months** and **negative for 4 months** (Jan., Apr., Aug. and Nov.)
- **Housing Starts up +10.9% YTD Nov.** ('15 vs. '14); starts grew +8.5% in 2014 (vs. '13).

- **Flat to slight decline** as E.U. economies continue to stabilize, outlook varies by country

- **Drivers** – industrial & manufacturing sectors – **2015 softening** will impact 2016 growth

### 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**
- **U.S. (60 Hz) gas-fired generation +17.9% YTD Oct** driving strong demand for **spares** and **component upgrades** on existing turbines
- New heavy duty **gas turbine units ordered +2.4% YTD Sept.** (globally)

# Upstream: Cost Competitive Industry Leader

## Upstream Co. Business Operations and Key Attributes

### Key Attributes

- **Robust** projected aluminum **demand growth** of **6%** in **2016** and double between 2010 and 2020;  
**3<sup>rd</sup> Party bauxite demand projected to double** by 2025
- **Attractive Portfolio:**
  - **World's largest, low cost bauxite miner** at the **1<sup>st</sup> quartile<sup>1</sup>** on the cost curve (**47M BDMT<sup>2</sup>**)
  - **World's largest, most attractive alumina** business in the **1<sup>st</sup> quartile<sup>3</sup>** 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 **2<sup>nd</sup> quartile<sup>3</sup>** cost curve position
  - **17 casthouses<sup>4</sup>** providing **value-add** products
- **Diverse sites – close proximity** to major markets
- **Committed to disciplined capital allocation** and **prudent return of capital** to shareholders

### ALUMINA

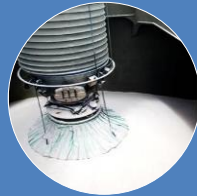
### ALUMINUM

#### MINING



**World's largest  
bauxite miner<sup>1</sup>**

#### REFINING



**1<sup>st</sup> quartile<sup>3</sup>  
cost curve  
refiner**

#### ENERGY



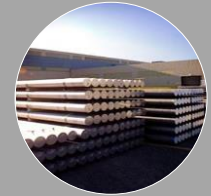
**Flexibility to  
profit from  
market cycles**

#### SMELTING



**Strategic global  
footprint**

#### CASTING



**Value-add  
products in  
key markets**

# Upstream: Track Record to Drive Profitability

Alumina, Al pricing (\$/MT), Portfolio Drivers for Upstream EBITDA from 2010 to 2015, Portfolio Improvements

## Maintaining earnings in unfavorable market conditions

Alumina Price (\$/MT)

\$333

-6%

\$314

All-In Metal Price (\$/MT)<sup>1</sup>

\$2,311

-16%

\$1,938

\$1.3B  
in lower  
revenue

Alumina  
Primary  
Metals

Fix/Sell/Curtail/Close

Portfolio Enhancements

Margin Growth

\$1.9B

0.8

1.1

- 14% of refining and 28% of smelting capacity closed, curtailed or divested
- Improved from 30<sup>th</sup> to 23<sup>rd</sup> percentile on alumina and 51<sup>st</sup> to 43<sup>rd</sup> on aluminum cost curve
- Secured energy positions (W. Australia, Canada, Massena West)

- Ma'aden JV (lowest cost smelter in the world)
- 70% of energy sales to 3<sup>rd</sup> parties
- Focused growth on 3<sup>rd</sup> party bauxite market
- 75% of 3<sup>rd</sup> party smelter-grade shipments on API/Spot vs. 5% in 2010

- Increased value-add products from 57% to 67%
- Launched innovative new foundry alloys
- Slab casting expansion supporting automotive growth

\$2.0B

1.4

0.6

2010

\$2.8B Productivity<sup>2</sup>

2015

## 2015 Portfolio Improvements

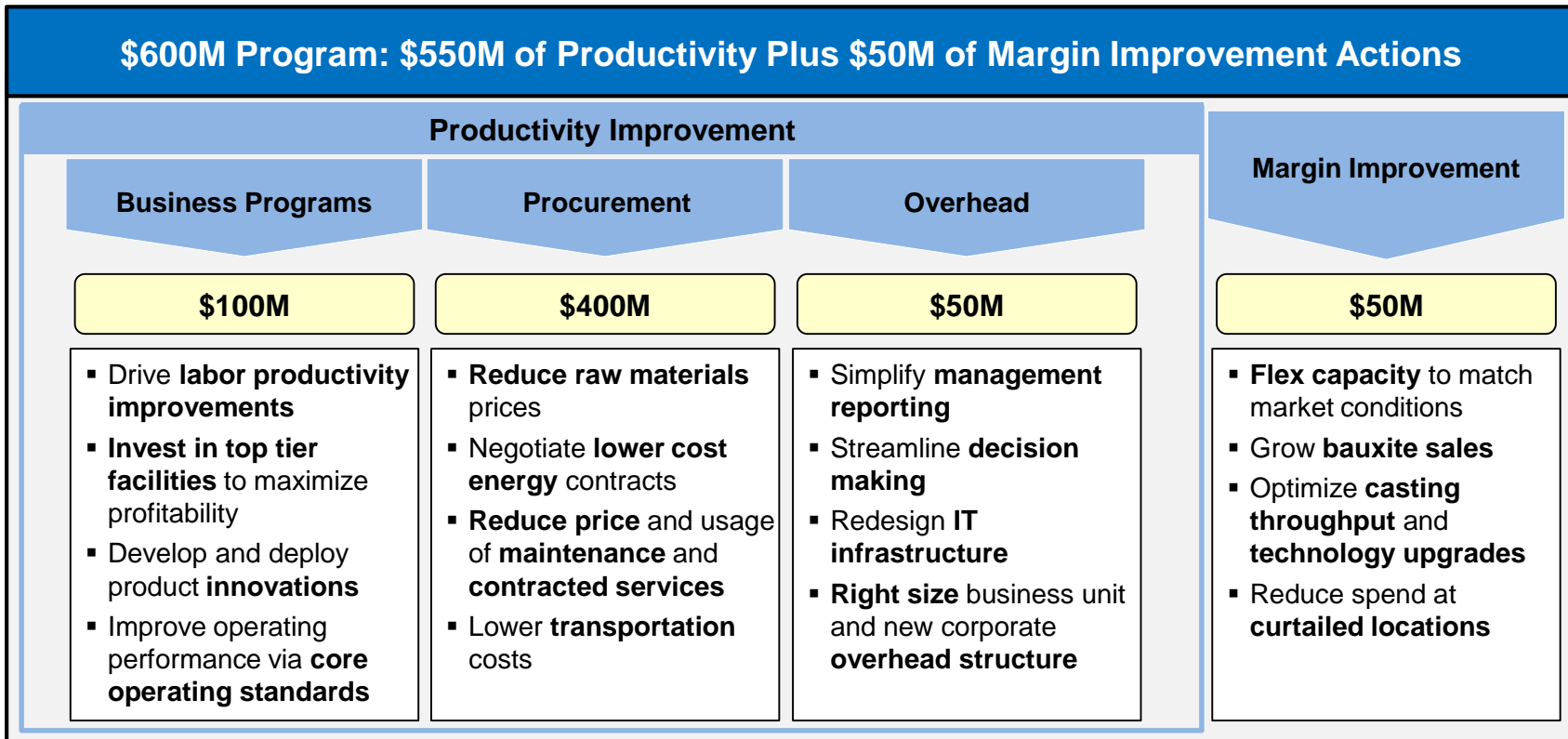
- Curtailed Sao Luis smelter: 74 kmt<sup>3</sup>
- Closed Pocos smelter: 96 kmt
- Curtailed Wenatchee smelter: 143 kmt<sup>3</sup>
- Closed Anglesea power station: 150 MW
- Secured 3.5-year agreement with NY State for Massena West: 130 kmt
- Closed Massena East site
- Curtailed Suralco refinery: 1.3 mmt<sup>3</sup>
- Closing Warrick smelter: 269 kmt
- Curtailing Intalco smelter: 230 kmt<sup>3</sup>
- Curtailing Pt. Comfort refinery: 2.0 mmt<sup>3</sup>
- Curtailed Lake Charles Anode Plant

Expected to meet or exceed 2016 global cost curve targets of 38<sup>th</sup> (smelting) & 21<sup>st</sup> (refining) percentiles

<sup>1</sup>Represents combined annual averages of the LME aluminum price + Midwest premium (as published by Platts). <sup>2</sup>2011-2015 represent gross productivity. <sup>3</sup> Capacity figures shown represent the amount of curtailments made in 2015 only; total site capacities are: 194 kmt (Sao Luis), 184 kmt (Wenatchee), 2,207 mmt (Suralco), 279 kmt (Intalco), and 2,305 mmt (Pt. Comfort).

# Upstream: \$600M Business Improvement Program to Counteract Market Headwinds

2016 Upstream EBITDA Improvement Program, \$US Millions





# Value-Add Co: Premier Provider of Innovative Solutions to Growing Markets

## Value-Add Co. 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, automotive, and building and construction*
- **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



Global Leader in the automotive & aerospace markets

Brazing, Commercial Transportation and Industrial



Global Leader for heat exchanger, commercial transportation and industrial solutions

Micromill Products and Services



Bringing breakthrough products and technology to customers around the world

Global Packaging



Market Leader in N.A., Russia, MENA, China

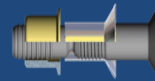
### EPS

Power and Propulsion



Global Leader in jet engine and industrial gas turbine airfoils

Fastening Systems and Rings



Global Leader in aerospace; N.A. lead position in commercial transportation market

Forgings and Extrusions



Global technology leader in aero, defense structures and forged jet engine disks

Titanium and Engineered Products



World class producer of Ti aero ingot, mill products; subassemblies/adv. technologies leader

### TCS

Building and Construction Systems



N.A. Market Leader in commercial architectural systems

Wheel and Transportation Products



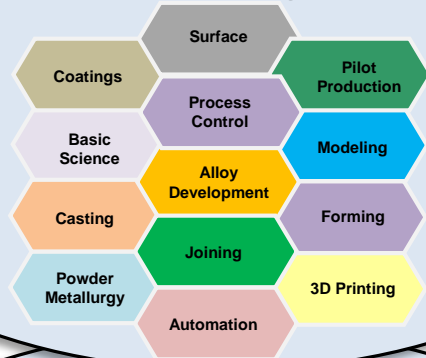
Global Leader in forged aluminum commercial vehicle wheels



# Value-Add Co: Meaningful Synergies Create Value

Value-Add Co. Operating Model and Synergies between EPS, TCS, and GRP Businesses

## Technology:



## Customers:

- Over **65%** of revenue<sup>1</sup> from **top 10** customers in **key growth markets** generated by customers who **overlap** across Value-Add Co. businesses
- Cross-business key account management**
- Net Promoter Score<sup>2</sup> increased 4x** since 2010

## Operating Model

**Disciplined Execution:**  
Degrees of Implementation

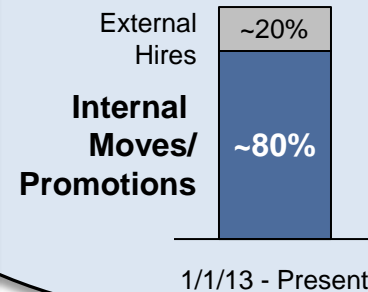
**~12,000 actionable ideas and  
26,000+ employees participating**

**~9,800  
Productivity Actions**

**~1,600  
Growth Actions**

**~600  
Asset Management Actions**

## Talent<sup>3</sup>:



## Purchasing:

\$6.6B



Total Value-Add Spend

- Size and scale** to apply **professional** procurement tools/team
- Substantial overlap** in suppliers


# Multi-Year Contracts Drive Future Value-Add Profits ...

Aerospace Portfolio Capabilities and Highlights of Aerospace Multi-Year Contracts Signed in 2015

2015 a  
Banner Year:  
~\$9B


## Aerospace Portfolio

### Full Service Ti Mill and Fabricated Products




- Complete range of Ti melting, billetizing and rolling capabilities
- Multi-material high-velocity machining, subassemblies

### High Performance Engine Castings




- Airfoils: 100% nickel super alloys
- Structural Castings: ~40% titanium, ~35% nickel super alloys and ~25% aluminum

### Jet Engine Rings and Forgings




- Global leader in jet engine seamless rolled rings
- ~70% nickel alloys, ~17% titanium, ~10% steel, ~3% aluminum
- Full range of global engine forgings
- ~55% nickel alloys, ~25% titanium, ~10% steel and ~10% aluminum

### Innovative Fastening Systems



- Both airframe and engine applications
- ~40% titanium, ~25% steel and ~35% nickel alloys

### Advanced Aerospace Structures



- Aluminum sheet, plate and extrusions
- Aluminum ~85%, titanium ~10%, and steel forgings ~5%
- Structural castings: ~50% titanium and ~50% aluminum

## Multi-Year Contracts

### Power and Propulsion



~\$3.2 Billion with GE Aviation and other OEMs for engine components

### Fastening Systems & Rings



~\$3.2 Billion with Boeing, Airbus, and other global OEMs for fasteners and rings

### Titanium & Engineered Products



~\$2.1 Billion with Lockheed, Boeing, and other global OEMs for Ti airframe structures, seat tracks, and other structural components

### Forgings & Extrusions



~\$100 Million with global OEMs for structural forgings and extrusions

### Aerospace Structures



~\$100 Million with global OEMs for aluminum plate

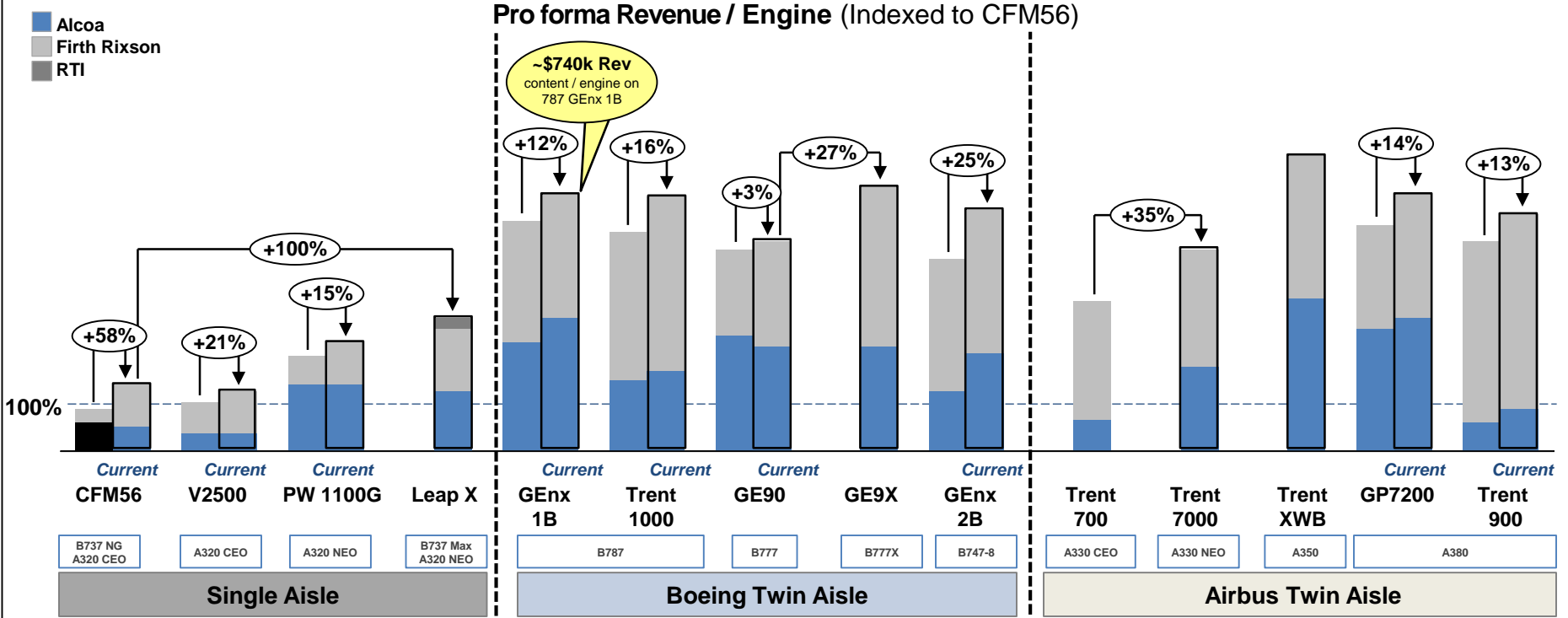
EPS

GRP

# ...Increasing Content on Every High Growth Jet Engine...

Indexed Revenue by Key Engine Type

## Better Coverage of Key Engine Platforms



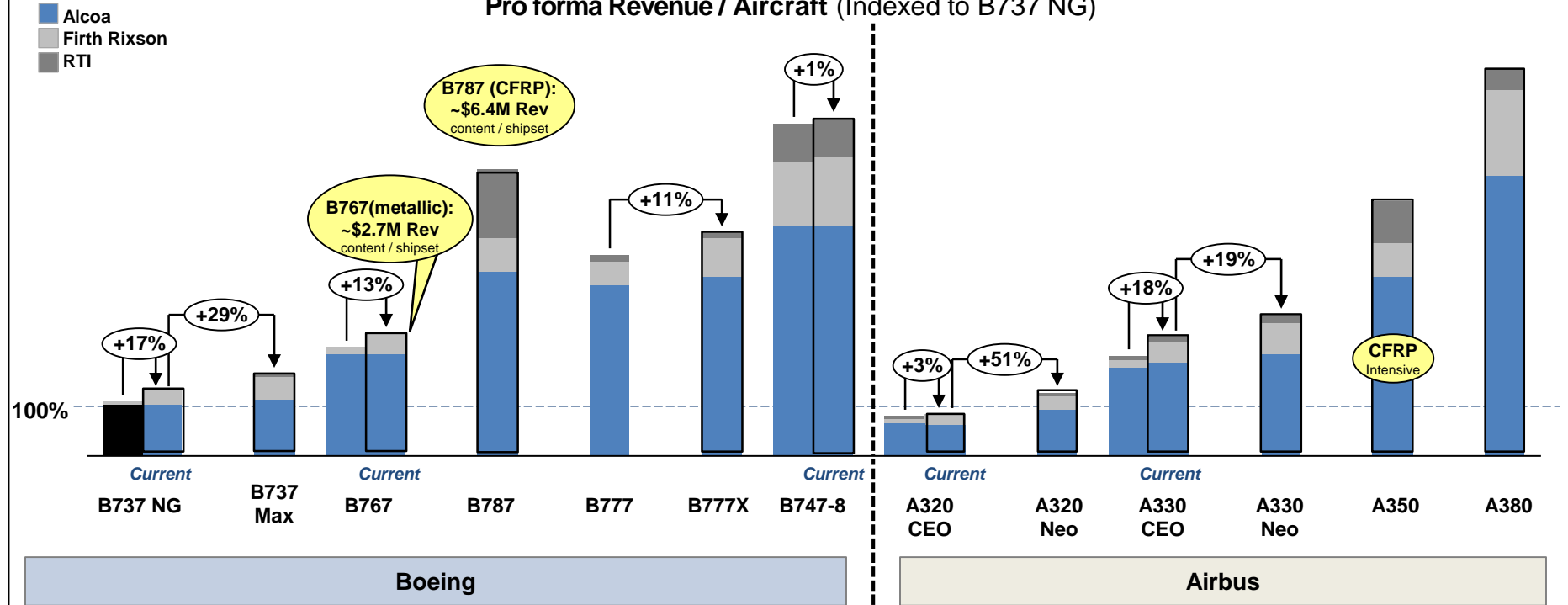
CFRP = Carbon Fiber Reinforced Polymer.

# ...and Increasing Content on Every High Growth Aircraft Platform

Indexed Revenue by Aircraft Type

## Strong Revenue Generator on All Platforms

Pro forma Revenue / Aircraft (Indexed to B737 NG)

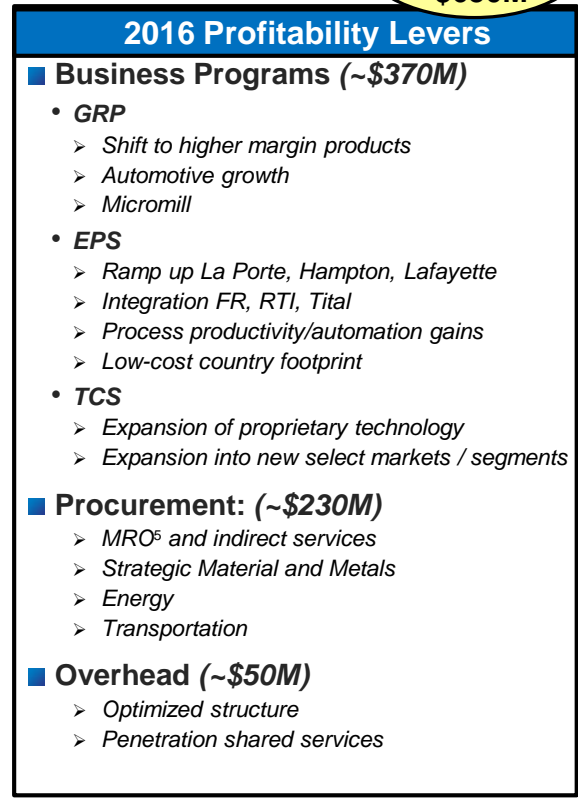
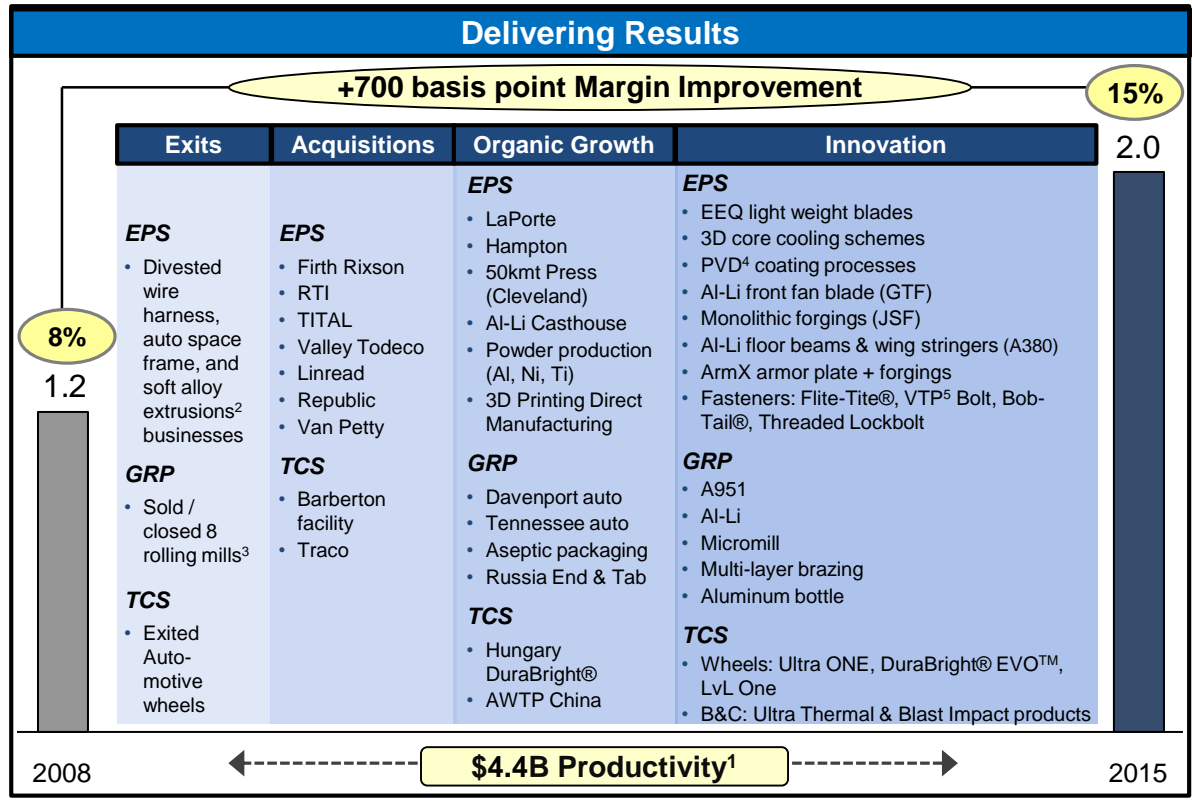


CFRP = Carbon Fiber Reinforced Polymer.

# Innovation, Investments and Productivity Drive Past and Future Growth

Value-Add Portfolio Drivers to EBITDA and Margin Growth from 2008 to 2015 (in \$B), Future Drivers

Business Improvement Program:  
~\$650M



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

# 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
  - Value-Add to Deliver \$650M
  - Upstream to Deliver \$600M
  - Above Includes Overhead Reductions Across Alcoa (\$100M<sup>1</sup> in 2016, \$225M over two years)

**1<sup>st</sup> Half 2016**

- Launch **New Value-Add Name and 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

**2<sup>nd</sup> 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.

# On Track to Separate into Two Strong Companies

**Pulling All Upstream Levers to Improve Profitability**

**Value-Add Geared for Profitable Growth; Significant Aero, Auto Traction**

**Robust Business Improvement Programs to Strengthen Both Portfolios**

**On Track for Completing Separation 2<sup>nd</sup> Half of 2016**



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# 2016 modeling support

2016 Modeling Support

## Operational, Investment, and Financial

Business Improvement Programs			Capital Expenditures	Pension Contribution	Operational Tax Rate
Value Add	Overhead	Upstream			
\$600M	\$50M	\$550M	<ul style="list-style-type: none"> <li>Sustaining: \$700M</li> <li>Return Seeking: \$700M</li> </ul>	~\$300M	32%
<b>Total: \$650M</b>		\$600M			

## Net Income Sensitivities<sup>1</sup>

	Commodity Prices		Currencies				
	LME Aluminum	API Spot / Alumina	Australian \$	Brazilian Real	Euro €	Canadian \$	Norwegian Kroner
<b>Change</b>	+/- \$100/MT	+/- \$10/MT	0.01 change in USD / AUD	0.01 change in BRL / USD	0.01 change in USD / EUR	0.01 change in CAD/ USD	0.01 change in NOK / USD
<b>Impact to Net Income</b>	+/- \$160 Million	+/- \$20 Million	+/- \$11 Million	Minimal Impact	+/- \$1 Million	+/- \$2 Million	+/- \$2 Million

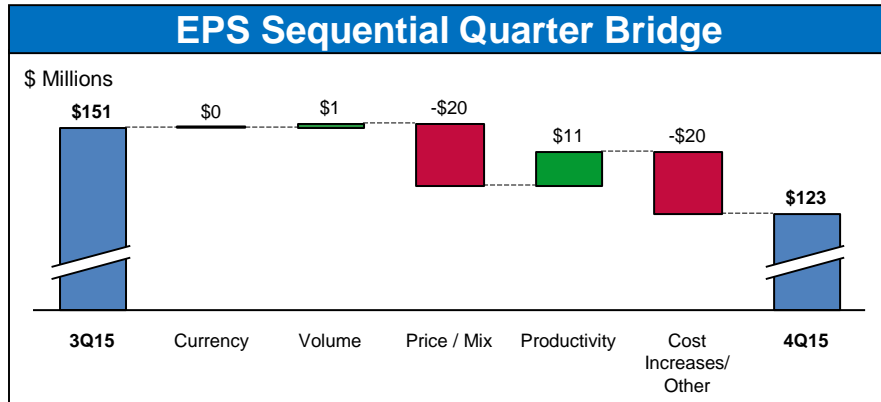
1) Sensitivities are on an annual basis, variances may occur on a quarterly basis

# Composition of Regional Premium Pricing Convention

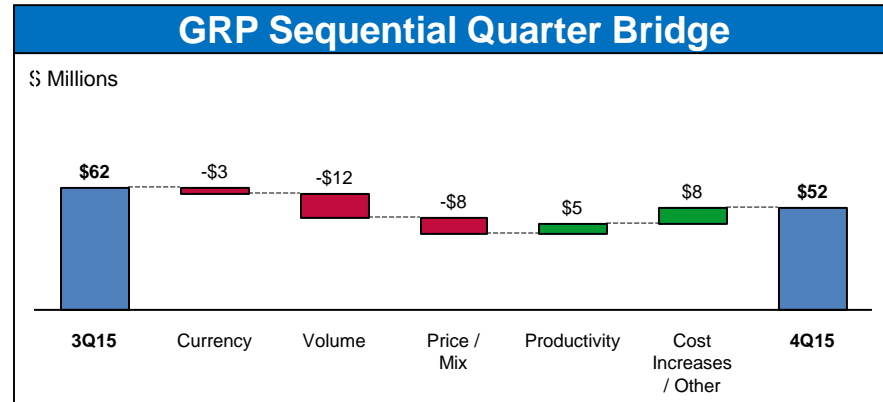
2015 Shipments	Regional Premiums	Estimated Pricing Convention
54%	Midwest – Platts	15-day lag
35%	Rotterdam DP – Metal Bulletin	15-day lag
10%	CIF Japan – Platts	Month prior to Quarter start
1%	Negotiated	Annual

# Value-Add Co. Segment Bridges – 4Q 2015

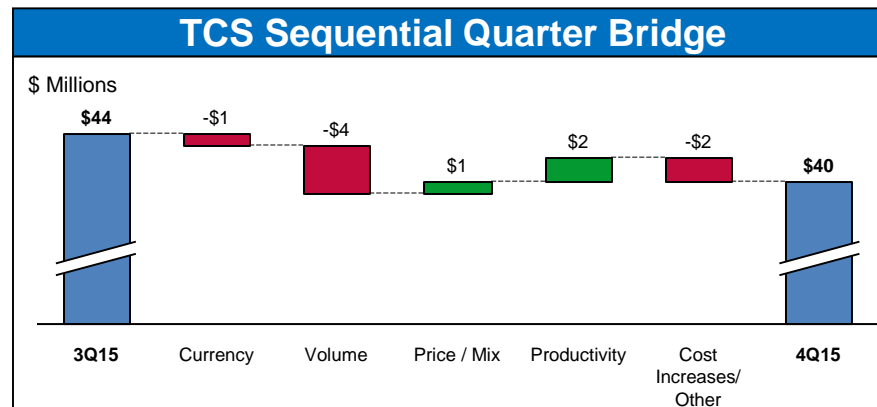
## EPS Sequential Quarter Bridge



## GRP Sequential Quarter Bridge

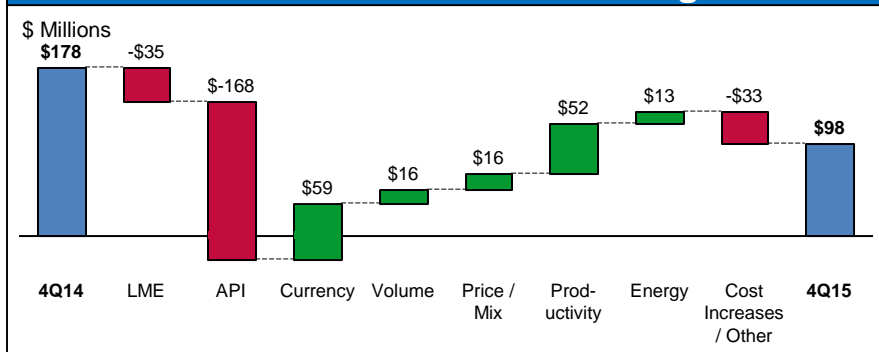


## TCS Sequential Quarter Bridge

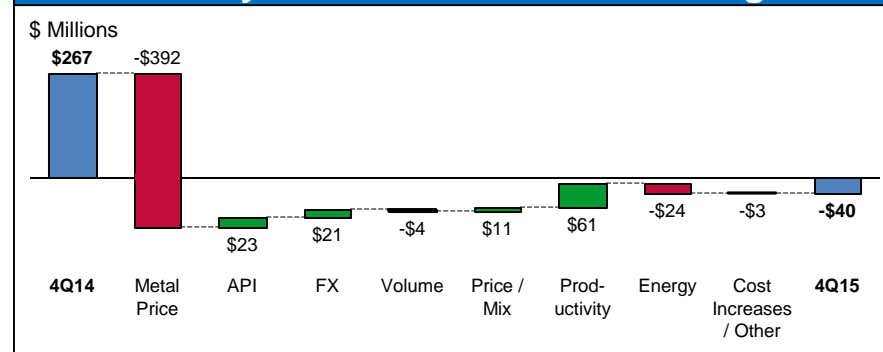


# Upstream Co. Segment Bridges – 4Q 2015

## Alumina Year-over-Year Bridge



## Primary Metals Year-over-Year Bridge



# Special Items

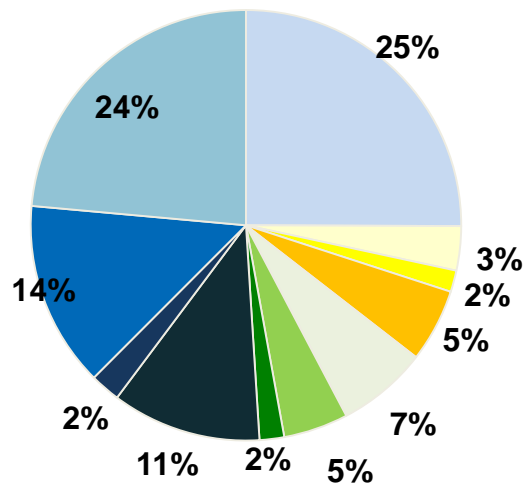
**UPDATE (2/1/16):** This document is updated by, and should be read in conjunction with, the [Form 8-K/A](#) filed by Alcoa Inc. with the SEC on Feb. 1, 2016.

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	Pre-tax, Before NCI		After-tax, After NCI		Income Statement Classification	Segment
	3Q15	4Q15	3Q15	4Q15		
\$ Millions, except per-share amounts						
<b>Income from Continuing Operations</b>	<b>\$206</b>	<b>(\$520)</b>	<b>\$44</b>	<b>(\$500)</b>		
<b>Income per Diluted Share</b>	<b>-</b>	<b>-</b>	<b>\$0.02</b>	<b>(\$0.39)</b>		
Restructuring-Related	(\$94)	(\$522)	(\$43)	(\$287)	Restructuring and Other Charges/COGS	Corporate/ Alumina/ Primary Metals
Q4'15 Overhead Reduction Program	-	(\$72)	-	(\$47)	Restructuring and Other Charges/COGS	Corporate
Tax Items	-	-	(\$15)	(\$189)	Income Taxes	Corporate/GRP
Goodwill Impairment	-	(\$25)	-	(\$25)	Impairment of Goodwill	Corporate
Gain on Land Sale	\$38	-	\$25	-	Other Income, Net	Corporate
Portfolio Transaction Costs	(\$25)	(\$12)	(\$22)	(\$12)	SG&A	Corporate
Mark-to-Market Energy Contracts	(\$17)	(\$9)	(\$10)	(\$5)	Other Expenses, Net	Corporate
<b>Special Items</b>	<b>(\$98)</b>	<b>(\$640)</b>	<b>(\$65)</b>	<b>(\$565)</b>		
<b>Income from Continuing Ops excl. Special Items</b>	<b>\$304</b>	<b>\$120</b>	<b>\$109</b>	<b>\$65</b>		
<b>Income per Diluted Share excl. Special Items</b>	<b>-</b>	<b>-</b>	<b>\$0.07</b>	<b>\$0.04</b>		

# Revenue Change by Market - 4Q 2015

## 4Q15 Third-Party Revenue



## Sequential Change

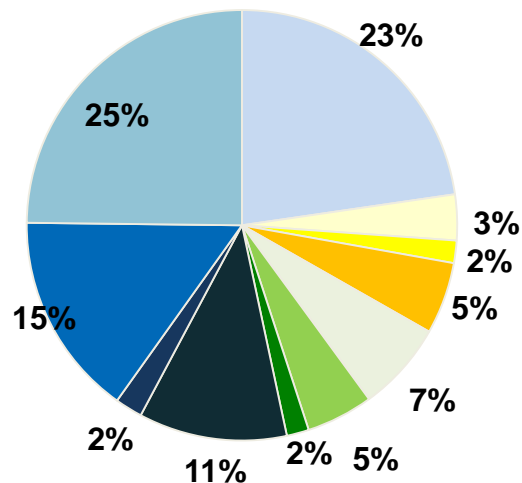
## Year-Over-Year Change

Aerospace	1%	21%
Automotive	(8%)	(2%)
Brazing	(9%)	(11%)
B&C	(9%)	(25%)
Comm. Transport	(6%)	(5%)
Industrial Products	(5%)	(37%)
IGT	(8%)	5%
Packaging	(7%)	(23%)
Distribution/Other	(8%)	(6%)
Alumina	(20%)	(28%)
Primary Metals	(1%)	(33%)



# Revenue Change by Market – FY 2015

## FY 2015 Third-Party Revenue

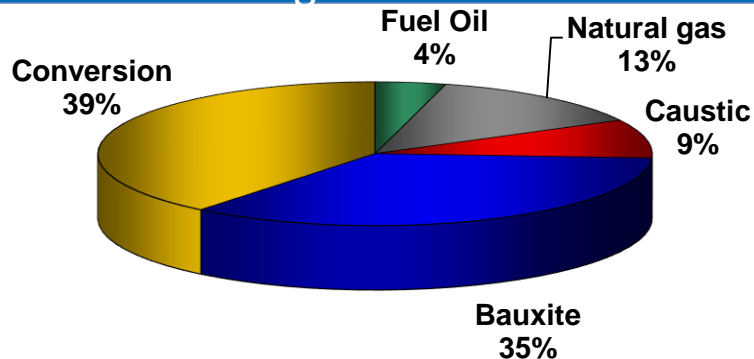


## Year-Over-Year Change

Aerospace	24%
Automotive	60%
Brazing	(8%)
B&C	(21%)
Comm. Transport	3%
Industrial Products	(34%)
IGT	3%
Packaging	(18%)
Distribution/Other	17%
Alumina	(2%)
Primary Metals	(18%)

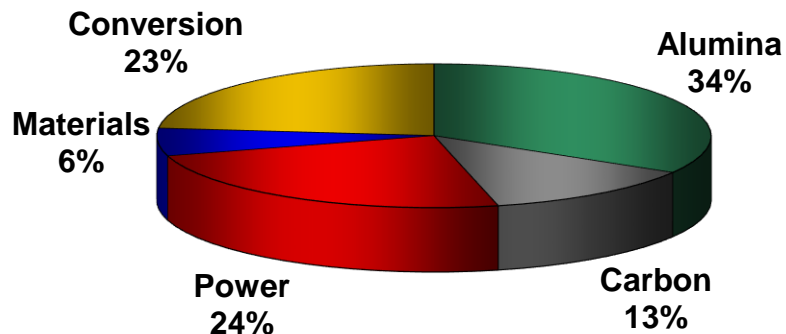
# Composition of Upstream Production Costs

## 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 <sup>1</sup>	N/A	N/A	N/A
Caustic soda	3 - 6 months	Spot & semi-annual	\$8m per \$10/DMT

## Smelting Cost Structure



Input Cost	Inventory flow	Pricing convention	Annual ATOI Sensitivity
Coke	1 - 2 months	Spot, quarterly & semi-annual	\$7m per \$10/MT
Pitch	1 - 2 months	Spot, quarterly & semi-annual	\$2m per \$10/MT

<sup>1</sup>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<sup>1</sup>

### Closed/sold since December 2007

Facility	Year	kmt
Baie Comeau	2008	53
Eastalco	2010	195
Badin	2010	60
Warrick	2010	40
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 of 50.33% interest)	2014	115
Pocos	2015	96
<b>Total</b>		<b>1,464</b>

### Idled

Facility	kmt
Rockdale	191
Sao Luis	268
Intalco	49
Wenatchee	184
Aviles	32
Portland	30
La Coruna	24
<b>Total</b>	<b>778</b>

## Refining Capacity<sup>1</sup>

### Closed/sold since December 2007

Facility	Year	kmt
Jamalco (sale of 55% interest)	2014	779
<b>Total</b>		<b>779</b>

### Idled

Facility	kmt
Suriname	2,207
Point Comfort	670
<b>Total</b>	<b>2,877</b>

1) As of December 31, 2015. Note: Once all announced actions are implemented, Alcoa globally will have 2.1 million metric tons of operating smelting capacity and 12.3million metric tons of operating refining capacity remaining.

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Certain financial information, including net loss and basic and diluted loss per share, has been updated in the Form 8-K/A to reflect the impact of a subsequent event—See the Form 8-K/A, on the SEC website ([www.sec.gov](http://www.sec.gov)) or via this link: [Form 8-K/A](#).

# RECONCILIATIONS

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

Alcoa<sup>(1)</sup>

**UPDATE (2/1/16):** This document is updated by, and should be read in conjunction with, the [Form 8-K/A](#) filed by Alcoa Inc. with the SEC on Feb. 1, 2016. Certain financial information, including net loss and basic and diluted loss per share, has been updated in the Form 8-K/A to reflect the impact of a subsequent event— See the Form 8-K/A, on the SEC website ([www.sec.gov](http://www.sec.gov)) or via this link: [Form 8-K/A](#).

(in millions)	1Q14	2Q14	3Q14	4Q14	2014	1Q15	2Q15	3Q15	4Q15	2015
Total segment ATOI <sup>(2)</sup>	\$320	\$408	\$581	\$659	\$1,968	\$656	\$567	\$410	\$273	\$1,906
Unallocated amounts (net of tax):										
Impact of LIFO	(7)	(8)	(18)	(21)	(54)	7	36	50	43	136
Metal price lag <sup>(2)</sup>	7	11	38	22	78	(23)	(39)	(48)	(23)	(133)
Interest expense	(78)	(69)	(81)	(80)	(308)	(80)	(80)	(80)	(84)	(324)
Noncontrolling interests	19	9	18	45	91	(60)	(67)	(62)	64	(125)
Corporate expense	(65)	(67)	(72)	(80)	(284)	(62)	(65)	(72)	(67)	(266)
Impairment of goodwill	–	–	–	–	–	–	–	–	(25)	(25)
Restructuring and other charges	(321)	(77)	(189)	(307)	(894)	(161)	(159)	(48)	(374)	(742)
Other	(53)	(69)	(128)	(79)	(329)	(82)	(53)	(106)	(307)	(548)
Consolidated net (loss) income attributable to Alcoa	\$(178)	\$138	\$149	\$159	\$268	\$195	\$140	\$44	\$(500)	\$(121)

<sup>(1)</sup> 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 soft alloy 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 updated to reflect the new segment structure.

<sup>(2)</sup> 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.

# Reconciliation of ATOI to Consolidated Net (Loss) Income Attributable to Alcoa<sup>(1)</sup> – Supplemental View

**UPDATE (2/1/16):** This document is updated by, and should be read in conjunction with, the [Form 8-K/A](#) filed by Alcoa Inc. with the SEC on Feb. 1, 2016.

Certain financial information, including net loss and basic and diluted loss per share, has been updated in the Form 8-K/A to reflect the impact of a subsequent event—See the Form 8-K/A, on the SEC website ([www.sec.gov](http://www.sec.gov)) or via this link: [Form 8-K/A](#).

(in millions)	1Q14	2Q14	3Q14	4Q14	2014	1Q15	2Q15	3Q15	4Q15	2015
Total segment ATOI <sup>(2)</sup>	\$320	\$408	\$581	\$659	\$1,968	\$656	\$567	\$410	\$273	\$1,906
Unallocated amounts (net of tax):										
Impact of LIFO	(7)	(8)	(18)	(21)	(54)	7	36	50	43	136
Metal price lag <sup>(2)</sup>	7	11	38	22	78	(23)	(39)	(48)	(23)	(133)
Interest expense	(78)	(69)	(72)	(80)	(299)	(80)	(80)	(80)	(84)	(324)
Noncontrolling interests	(20)	(13)	(29)	(72)	(134)	(95)	(87)	(92)	(25)	(299)
Corporate expense	(66)	(58)	(68)	(60)	(252)	(56)	(60)	(55)	(55)	(226)
Other	(58)	(55)	(62)	(16)	(191)	(46)	(87)	(76)	(64)	(273)
Income excluding special items	98	216	370	432	1,116	363	250	109	65	787
Special items <sup>(3)</sup>	(276)	(78)	(221)	(273)	(848)	(168)	(110)	(65)	(565)	(908)
Consolidated net (loss) income attributable to Alcoa	\$(178)	\$138	\$149	\$159	\$268	\$195	\$140	\$44	\$(500)	\$(121)

## 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.

<sup>(1)</sup> 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 soft alloy 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 updated to reflect the new segment structure.

<sup>(2)</sup> 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.

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



# Reconciliation of Adjusted Income (Loss)

**UPDATE (2/1/16):** This document is updated by and should be read in conjunction with, the [Form 8-K/A](#) filed by Alcoa Inc. with the SEC on Feb. 1, 2016.

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(in millions, except per-share amounts)	Income (Loss)			Diluted EPS <sup>(3)</sup>		
	Quarter ended			Quarter ended		
	December 31, 2014	September 30, 2015	December 31, 2015	December 31, 2014	September 30, 2015	December 31, 2015
Net income (loss) attributable to Alcoa	\$159	\$44	\$(500)	\$0.11	\$0.02	\$(0.39)
Restructuring and other charges	200	30	306			
Discrete tax items <sup>(1)</sup>	16	4	187			
Other special items <sup>(2)</sup>	57	31	72			
<b>Net income attributable to Alcoa – as adjusted</b>	<b>\$432</b>	<b>\$109</b>	<b>\$65</b>	<b>0.33</b>	<b>0.07</b>	<b>0.04</b>

Net income (loss) 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 (loss) attributable to Alcoa determined under GAAP as well as Net income attributable to Alcoa – as adjusted.

<sup>(1)</sup> Discrete tax items include the following:

- for the quarter ended December 31, 2015, a charge for valuation allowances related to certain U.S. and Iceland deferred tax assets (\$190) and a net benefit for a number of small items (\$3);
- for the quarter ended September 30, 2015, a net charge for a number of small items; and
- for the quarter ended December 31, 2014, a charge for the remeasurement of certain deferred tax assets of a subsidiary in Spain due to a tax rate change (\$16), a benefit for an adjustment to the remeasurement of certain deferred tax assets of a subsidiary in Brazil due to a tax rate change (\$3), and a net charge for a number of small items (\$3).

<sup>(2)</sup> Other special items include the following:

- for the quarter ended December 31, 2015, a write-down of inventory related to the permanent closure or temporary curtailment of various facilities in Suriname and the United States (\$28), an impairment of goodwill related to the soft alloy extrusions business in Brazil (\$25), costs associated with the planned separation of Alcoa (\$12), a net unfavorable change in certain mark-to-market energy derivative contracts (\$5), and an unfavorable tax impact related to the interim period treatment of operational losses in certain foreign jurisdictions for which no tax benefit was recognized (\$2);
- for the quarter ended September 30, 2015, 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), a gain on the sale of land in the United States and an equity investment in a China rolling mill (\$25), costs associated with the planned separation of Alcoa and the acquisition of RTI International Metals (\$22), a favorable tax impact related to the interim period treatment of operational losses in certain foreign jurisdictions for which no tax benefit was recognized (\$16), a write-down of inventory related to a refinery in Suriname (\$13), and a net unfavorable change in certain mark-to-market energy derivative contracts (\$10); and
- for the quarter ended December 31, 2014, 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 (\$81), a favorable tax impact related to the interim period treatment of operational losses in certain foreign jurisdictions for which no tax benefit was recognized (\$44), costs associated with the acquisition of Firth Rixson and the then-planned acquisition of TITAL (\$22), and a net favorable change in certain mark-to-market energy derivative contracts (\$2).

<sup>(3)</sup> The average number of shares applicable to diluted EPS for Net income (loss) 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 December 31, 2015, share equivalents associated with outstanding employee stock options and awards were dilutive based on Net income attributable to Alcoa common shareholders – as adjusted, resulting in a diluted average number of shares of 1,324,378,133;
- 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 1,294,392,945; and
- for the quarter ended December 31, 2014, share equivalents associated with mandatory convertible preferred stock were dilutive based on Net income attributable to Alcoa common shareholders – as adjusted, resulting in a diluted average number of shares of 1,294,701,805 (the subtraction of preferred stock dividends declared from the numerator needs to be reversed since the related mandatory convertible preferred stock was dilutive).

# Reconciliation of Adjusted Income (Loss), continued

(in millions, except per-share amounts)	Income (Loss)		Diluted EPS <sup>(3)</sup>	
	Year ended		Year ended	
	December 31, 2014	December 31, 2015	December 31, 2014	December 31, 2015
Net income (loss) attributable to Alcoa	\$268	\$(121)	\$0.21	\$(0.15)
Restructuring and other charges	703	635		
Discrete tax items <sup>(1)</sup>	33	186		
Other special items <sup>(2)</sup>	112	87		
Net income attributable to Alcoa – as adjusted	\$1,116	\$787	0.92	0.56

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Net income (loss) 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 (loss) attributable to Alcoa determined under GAAP as well as Net income attributable to Alcoa – as adjusted.

<sup>(1)</sup> Discrete tax items include the following:

- for the year ended December 31, 2015, a charge for valuation allowances related to certain U.S. and Iceland deferred tax assets (\$190) and a net benefit for a number of small items (\$4); and
- for the year ended December 31, 2014, a charge for the remeasurement of certain deferred tax assets of a subsidiary in Brazil due to a tax rate change (\$31), a charge for the remeasurement of certain deferred tax assets of a subsidiary in Spain due to a tax rate change (\$16), and a net benefit for a number of other items (\$14).

<sup>(2)</sup> Other special items include the following:

- for the year ended December 31, 2015, costs associated with the planned separation of Alcoa and the acquisitions of RTI International Metals and TITAL (\$46), a gain on the sale of land in the United States and an equity investment in a China rolling mill (\$44), a write-down of inventory related to the permanent closure or temporary curtailment of various facilities in Suriname, the United States, Brazil, and Australia (\$43), an impairment of goodwill related to the soft alloy extrusions business in Brazil (\$25), and a net unfavorable change in certain mark-to-market energy derivative contracts (\$17); and
- for the year ended December 31, 2014, a write-down of inventory related to the permanent closure of various facilities in Italy, Australia, and the United States (\$47), costs associated with the acquisition of Firth Rixson and the then-planned acquisition of TITAL (\$47), a gain on the sale of both a mining interest in Suriname and an equity investment in a China rolling mill (\$20), an unfavorable impact related to the restart of one potline at the joint venture in Saudi Arabia that was previously shut down due to a period of pot instability (\$19), costs associated with preparation for and ratification of a new labor agreement with the United Steelworkers (\$11), a net unfavorable change in certain mark-to-market energy derivative contracts (\$6), and a loss on the write-down of an asset to fair value (\$2).

<sup>(3)</sup> The average number of shares applicable to diluted EPS for Net income (loss) 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 year ended December 31, 2015, share equivalents associated with both outstanding employee stock options and awards and convertible notes related to the acquisition of RTI International Metals were dilutive based on Net income attributable to Alcoa common shareholders – as adjusted, resulting in a diluted average number of shares of 1,288,633,988 (after-tax interest expense of \$8 needs to be added back to the numerator since the convertible notes were dilutive); and
- for the year ended December 31, 2014, share equivalents associated with both Alcoa’s 5.25% convertible notes and mandatory convertible preferred stock were dilutive based on Net income attributable to Alcoa common shareholders – as adjusted, resulting in a diluted average number of shares of 1,217,720,724 (after-tax interest expense of \$6 needs to be added back to the numerator since the convertible notes were dilutive and the subtraction of \$19 of the preferred stock dividends declared from the numerator needs to be reversed since the related mandatory convertible preferred stock was dilutive).

# Reconciliation of Alcoa Adjusted EBITDA

(\$ in millions)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	4Q14	3Q15	4Q15*
Net income (loss) attributable to Alcoa	\$1,233	\$2,248	\$2,564	\$(74)	\$(1,151)	\$254	\$611	\$191	\$(2,285)	\$268	\$(121)	\$159	\$44	\$(500)
Add:														
Net income (loss) attributable to noncontrolling interests	259	436	365	221	61	138	194	(29)	41	(91)	125	(45)	62	(64)
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	120	100	44
Other (income) expenses, net	(478)	(236)	(1,920)	(59)	(161)	5	(87)	(341)	(25)	47	2	(6)	(15)	29
Interest expense	339	384	401	407	470	494	524	490	453	473	498	122	123	129
Restructuring and other charges	266	507	268	939	237	207	281	172	782	1,168	994	388	66	534
Impairment of goodwill	–	–	–	–	–	–	–	–	1,731	–	25	–	–	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	335	318	322
<b>Adjusted EBITDA</b>	<b>\$3,362</b>	<b>\$5,422</b>	<b>\$4,795</b>	<b>\$3,313</b>	<b>\$359</b>	<b>\$2,704</b>	<b>\$3,260</b>	<b>\$2,105</b>	<b>\$2,546</b>	<b>\$3,556</b>	<b>\$3,248</b>	<b>\$1,073</b>	<b>\$698</b>	<b>\$519</b>
Sales	\$24,149	\$28,950	\$29,280	\$26,901	\$18,439	\$21,013	\$24,951	\$23,700	\$23,032	\$23,906	\$22,534	\$6,377	\$5,573	\$5,245
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%	16.8%	12.5%	9.9%

\* In 4Q15, the Adjusted EBITDA of Alcoa includes \$71 of special items as follows: a write-down of inventory related to the permanent closure or temporary curtailment of various facilities in Suriname and the United States (\$59) and costs associated with the planned separation of Alcoa (\$12). Excluding these special items, Adjusted EBITDA was \$590 in 4Q15.

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	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<sup>(1)</sup> Adjusted EBITDA

(in millions)	2008	2009	2010	2011	2012	2013	2014	2015 <sup>(2)</sup>
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<sup>(1)</sup>

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

	2005	2006	2007	2008	2009	2010 <sup>(2)</sup>	2011 <sup>(2)</sup>	2012 <sup>(2)</sup>	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

<sup>(1)</sup> 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.

<sup>(2)</sup> 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<sup>(1)</sup> Adjusted EBITDA<sup>(2)</sup>

(\$ 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	\$371	\$478	\$653	\$810	\$600	\$651	\$780	\$854	\$979	\$1,014	\$1,110	\$229	\$283	\$244
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%

<sup>(1)</sup> 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.

<sup>(2)</sup> 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<sup>(1)</sup> Adjusted EBITDA<sup>(2)</sup>

(\$ 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	\$175	\$203	\$146	\$135	\$47	\$137	\$190	\$208	\$274	\$291	\$271	\$63	\$72	\$65
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%

<sup>(1)</sup> 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.

<sup>(2)</sup> 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.

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# Reconciliation of Value Add<sup>(1)</sup> Adjusted EBITDA<sup>(2)</sup>

(\$ 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%

<sup>(1)</sup> 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.

<sup>(2)</sup> 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.

# Days Working Capital

(\$ in millions)

	Quarter ended															
	31-Mar-12	30-Jun-12	30-Sep-12	31-Dec-12	31-Mar-13	30-Jun-13	30-Sep-13	31-Dec-13	31-Mar-14	30-Jun-14	30-Sep-14	31-Dec-14	31-Mar-15 <sup>(3)</sup>	30-Jun-15 <sup>(3)</sup>	30-Sep-15 <sup>(3)</sup>	31-Dec-15 <sup>(3)</sup>
Receivables from customers, less allowances	\$1,709	\$1,650	\$1,600	\$1,573	\$1,704	\$1,483	\$1,427	\$1,383	\$1,391	\$1,401	\$1,526	\$1,513	\$1,487	\$1,548	\$1,489	\$1,428
Add: Deferred purchase price receivable <sup>(1)</sup>	85	144	104	53	50	223	347	339	238	371	438	395	389	421	382	324
Receivables from customers, less allowances, as adjusted	1,794	1,794	1,704	1,626	1,754	1,706	1,774	1,722	1,629	1,772	1,964	1,908	1,876	1,969	1,871	1,752
Add: Inventories	3,079	3,097	3,051	2,894	2,961	2,949	2,932	2,783	2,974	3,201	3,194	3,064	3,189	3,230	3,443	3,523
Less: Accounts payable, trade	2,660	2,594	2,496	2,587	2,656	2,820	2,746	2,816	2,813	2,880	3,016	3,021	2,936	2,978	2,871	2,849
Working Capital <sup>(2)</sup>	\$2,213	\$2,297	\$2,259	\$1,933	\$2,059	\$1,835	\$1,960	\$1,689	\$1,790	\$2,093	\$2,142	\$1,951	\$2,129	\$2,221	\$2,443	\$2,426
Sales	\$6,006	\$5,963	\$5,833	\$5,898	\$5,833	\$5,849	\$5,765	\$5,585	\$5,454	\$5,836	\$6,239	\$6,377	\$5,819	\$5,897	\$5,573	\$5,245
Days Working Capital	34	35	36	30	32	29	31	28	30	33	32	28	33	34	40	43

Days Working Capital = Working Capital divided by (Sales/number of days in the quarter).

<sup>(1)</sup> The deferred purchase price receivable relates to an arrangement to sell certain customer receivables to several financial institutions on a recurring basis. Alcoa is adding back this receivable for the purposes of the Days Working Capital calculation.

<sup>(2)</sup> The Working Capital for each period presented represents an average quarter Working Capital, which reflects the capital tied up during a given quarter. As such, the components of Working Capital for each period presented represent the average of the ending balances in each of the three months during the respective quarter.

<sup>(3)</sup> In the quarters ended March 31, 2015, June 30, 2015, September 30, 2015, and December 31, 2015, Working Capital and Sales include \$279 and \$233, respectively, \$315 and 268 respectively, \$708 and \$387, respectively, and \$924 and \$422, respectively, related to three acquisitions, Firth Rixson (November 2014), TITAL (March 2015), and RTI International Metals (July 2015). Excluding these amounts, Days Working Capital was 30, 31, 31, and 29 for the quarters ended March 31, 2015, June 30, 2015, September 30, 2015, and December 31, 2015, respectively.

# Reconciliation of Net Debt

(in millions)

	<u>December 31,</u>					
	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Short-term borrowings	\$92	\$62	\$53	\$57	\$54	\$38
Commercial paper	–	224	–	–	–	–
Long-term debt due within one year	231	445	465	655	29	21
Long-term debt, less amount due within one year	8,842	8,640	8,311	7,607	8,769	9,044
Total debt	9,165	9,371	8,829	8,319	8,852	9,103
Less: Cash and cash equivalents	1,543	1,939	1,861	1,437	1,877	1,919
Net debt	<u>\$7,622</u>	<u>\$7,432</u>	<u>\$6,968</u>	<u>\$6,882</u>	<u>\$6,975</u>	<u>\$7,184</u>

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.

# 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

**UPDATE (2/1/16):** This document is updated by, and should be read in conjunction with, the [Form 8-K/A](#) filed by Alcoa Inc. with the SEC on Feb. 1, 2016.

Certain financial information, including net loss and basic and diluted loss per share, has been updated in the Form 8-K/A to reflect the impact of a subsequent event—See the Form 8-K/A, on the SEC website ([www.sec.gov](http://www.sec.gov)) or via this link: [Form 8-K/A](#).

\* 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.

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