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

FORM 8-K

**CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934**

Date of Report (Date of earliest event reported): January 14, 2016 (January 11, 2016)

ALCOA INC.

(Exact name of Registrant as specified in its charter)

Pennsylvania
(State or Other Jurisdiction
of Incorporation)

1-3610
(Commission
File Number)

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

390 Park Avenue, New York, New York
(Address of Principal Executive Offices)

10022-4608
(Zip Code)

Office of Investor Relations 212-836-2674
Office of the Secretary 212-836-2732
(Registrant's telephone number, including area code)

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the Registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 2.02. Results of Operations and Financial Condition.

On January 11, 2016, Alcoa Inc. held its fourth quarter 2015 earnings conference call, broadcast live by webcast. A transcript of the call and a copy of the slides presented during the call are attached hereto as Exhibits 99.1 and 99.2, respectively, and are hereby incorporated by reference.

The information in this Item 2.02 of Current Report on Form 8-K, including Exhibits 99.1 and 99.2, is being furnished in accordance with the provisions of General Instruction B.2 of Form 8-K.

Item 2.05 Costs Associated with Exit or Disposal Activities.

On January 7, 2016, Alcoa Inc. (“Alcoa”) announced that it will permanently close the Warrick smelter (capacity of 269,000 metric-tons-per-year) in Evansville, Indiana by the end of the first quarter of 2016. The decision to permanently close the Warrick smelter was based on the existence of challenging global market conditions for primary aluminum and higher operating costs, which made the smelter uncompetitive. Demolition and remediation activities related to this action will begin in 2016 subsequent to the closure and are expected to be completed by the end of 2020. The rolling mill and power plant at the Warrick location will continue normal operations.

As a result of this decision, Alcoa recorded restructuring-related charges of approximately \$130 million (\$85 million after-tax, or \$0.06 per diluted share) in the fourth quarter of 2015. These charges include approximately \$50 million for accelerated depreciation of a portion of the remaining book value of all related properties, plants, and equipment (the remainder will be recognized in the first quarter of 2016 as the facility continues to operate) and the write down of inventory to net realizable value, approximately \$35 million for asset retirement obligations and environmental remediation resulting from the decision to permanently close and demolish this facility and related infrastructure, approximately \$35 million for layoff costs related to approximately 630 employees, and approximately \$10 million for supplier contract termination costs. Of these charges, approximately \$80 million will result in future cash outlays, including approximately \$60 million in 2016.

Additional details will be provided in Alcoa’s Form 10-K for the year ended December 31, 2015. Also, it is possible that charges in addition to those described above may be recognized in future periods.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

The following are furnished as exhibits to this report:

- 99.1 Transcript of Alcoa Inc. fourth quarter 2015 earnings call.
- 99.2 Slides presented during Alcoa Inc. fourth quarter 2015 earnings call.

Forward-Looking Statements

This communication 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 the acceleration of Alcoa’s portfolio transformation; statements regarding the expected timing for completing, and the expected financial impact of, closures and curtailments; 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 Company’s alumina refining and aluminum smelting businesses down on the industry cost curves and increasing revenues and improving margins in the Value-Add Company’s 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; (s) the inability to complete the closure, demolition and/or remediation activities relating to the Warrick smelter in the United States as planned or within the time periods anticipated, whether due to changes in regulations, technology or other factors; (t) changes in preliminary accounting estimates due to the significant judgments and assumptions required; and (u) 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.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ALCOA INC.

By: /s/ Audrey Strauss
Name: Audrey Strauss
Title: Executive Vice President, Chief Legal Officer and Secretary

Dated: January 14, 2016

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
99.1	Transcript of Alcoa Inc. fourth quarter 2015 earnings call.
99.2	Slides presented during Alcoa Inc. fourth quarter 2015 earnings call.

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EDITED TRANSCRIPT

AA - Q4 2015 Alcoa Inc. Earnings Call

EVENT DATE/TIME: JANUARY 11, 2016 / 10:00PM GMT

OVERVIEW:

Co. reported 4Q15 revenues of \$5.2b and net loss of \$500m or \$0.39 a share.

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CORPORATE PARTICIPANTS

Nahla Azmy *Alcoa Inc. - VP of IR*

Klaus Kleinfeld *Alcoa Inc. - Chairman & CEO*

William Oplinger *Alcoa Inc. - EVP & CFO*

CONFERENCE CALL PARTICIPANTS

David Gagliano *BMO Capital Markets - Analyst*

Timna Tanners *BofA Merrill Lynch - Analyst*

Brian Yu *Citigroup - Analyst*

Justin Bergner *Gabelli & Company - Analyst*

Paul Massoud *Stifel Nicolaus - Analyst*

Josh Sullivan *Sterne, Agee & Leach, Inc. - Analyst*

Michael Gambardella *JPMorgan - Analyst*

PRESENTATION

Operator

Good day, ladies and gentlemen, and welcome to the fourth-quarter 2015 Alcoa earnings conference call. My name is Connor and I'll be your operator for today. As a reminder, today's conference is being recorded for replay purposes. I would now like to turn the conference over to your host for today, Nahla Azmy, Vice President of Investor Relations. Please proceed.

Nahla Azmy - Alcoa Inc. - VP of IR

Thank you, Connor. Good afternoon and welcome to Alcoa's fourth-quarter 2015 earnings conference call. I'm joined by Klaus Kleinfeld, Chairman and Chief Executive Officer, and William Oplinger, Executive Vice President and Chief Financial Officer. After comments by Klaus and Bill, we will take your questions.

Before we begin, I'd like to remind you that today's discussion will contain forward-looking statements relating to the future events and expectations. You can find factors that cause the Company's actual results to differ materially from these projections listed in today's press release and presentation and in our most recent SEC filing.

In addition, we have included some non-GAAP financial measures in our discussion. Reconciliations to the most directly comparable GAAP financial measures can be found in today's press release, in the appendix to today's presentation and on our website at www.alcoa.com under the "Invest" section. Any reference in our discussion today to historical EBITDA means adjusted EBITDA for which we have provided reconciliations and calculations in the appendix. With that, I'd like to turn the call over to Klaus.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Thank you, Nahla. Let me start in the usual fashion by characterizing the quarter. As you've seen over the last year, that we have grown our portfolio aggressively and we have managed to deliver value.

What are we seeing in the fourth quarter? We see \$5.2 billion of revenues. This actually is a composition of two opposing factors. One is a 7% growth year over year, mainly through aero as well as acquisitions. And that gets offset by price declines as well as divestitures and closures of 25%.

Then we've seen a \$65 million of adjusted net income, \$590 million of EBITDA and that includes \$71 million of special items. Then if you go one level deeper and look into the value-add side, value add \$3.3 billion revenues, \$448 million of adjusted EBITDA.

When you look at our midstream business, the GRP business, auto sheet shipments are up 18%. We've continued to shift the mix to higher-margin products and this has been driving a 90% year-over-year increase in regards to higher adjusted EBITDA per metric ton.

If you look into our EPS business, record revenues in the fourth quarter of \$1.4 billion and aerospace revenues have been up by 34%. Last but not least, our TCS value-add segment record fourth-quarter margins of 14.6%.

So let's move over to the upstream business. Upstream business, in total \$2.4 billion of revenues and \$239 million of adjusted EBITDA. It's been profitable despite lower alumina. Alumina has actually decreased in the quarter by 24%, and over the course of the whole year, 43%. Alumina prices continue to go further down, even 1% further down in the quarter and with a total year have declined 28%.

Alumina's profitable and Primary Metals has actually, in regards to the adjusted EBITDA per metric ton, improved. It's a pretty good sign here. We're also projecting robust aluminum demand growth for this year of 6%. We are believing that alumina and aluminum deficits are going to happen in this year.

We have seen productivity gains in the quarter of \$350 million and in the year of \$1.2 billion and basically coming from all segments. And free cash flows has been at \$467 million, cash from operations at \$865 million and cash on hand at \$1.9 billion.

Let's also talk about the portfolio and our separation. Our aero growth strategy really delivers results. We've seen three major multi-year aero contracts in the fourth quarter alone, roughly a value of \$4 billion. But in the whole year it's been \$9 billion of long-term contracts in aerospace. That's more than twice the volume of the year before.

Then in regards to the acquisitions, we've clearly seen that the acquisitions have strengthened our aerospace portfolio. I think it's right to say the customers have put their money where their mouth is with granting us these long-term contracts. At the same time, if you look at the operational integration, Firth Rixson is behind and RTI is ahead of plan.

We have significantly restructured in the quarter our upstream portfolio. In smelting in the quarter alone we have closed or curtailed 25% of the capacity and refining 21% [*Alcoa correction: 20%*]. That's 2015, not just the quarter.

So at the same time we are launching, now with the new year, we are launching business improvement programs. And on value-add this has a value of \$650 million and an upstream \$600 million. This includes an overhead reduction that's in total going to bring us to \$225 million over two years and \$100 million of this will be realized in 2016. So last but not least, but certainly important for all of us, we are on track for the separation in the second half of 2016. With this, Bill, over to you.

William Oplinger - Alcoa Inc. - EVP & CFO

Thanks, Klaus. Let's review the income statement. Fourth-quarter 2015 revenue totaled \$5.2 billion, down approximately 18% year over year. Growth from the recent acquisitions in aerospace volume was offset by lower alumina and metal pricing, unfavorable currency and the impact of divested and closed businesses.

Cost of goods sold percentage increased by 220 basis points sequentially due to lower pricing, somewhat offset by productivity gains. Overhead spending held flat sequentially. Other expenses of \$29 million primarily related to the currency impact from the stronger US dollar on our balance sheet.

As Klaus mentioned, EBITDA of \$519 million includes the impact of \$71 million of special items. So excluding specials, EBITDA is \$590 million in the quarter.

Also, the fourth-quarter effective tax rate of negative 8.5% was due to the net unfavorable discrete tax and special items in the quarter. I'll discuss these further in the next slide. Excluding these impacts, our operational rate for the quarter was 25% and 31% for the year.

Overall, net loss for the quarter was \$500 million or \$0.39 a share. Excluding special items, net income was \$65 million or \$0.04 a share. It's important to remember that preferred dividends were \$16.8 million in the quarter which reduced EPS by \$0.01 per share.

Let's take a closer look at the special items in the quarter. In the quarter we recorded after-tax charges of \$565 million or \$0.43 per share, primarily related to restructuring and tax items. The announced curtailment of several US smelters and the Point Comfort refinery resulted in a \$220 million after-tax charge.

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Other restructuring across the business included the curtailment of Suriname, capturing synergies in our acquisitions and a significant effort to improve efficiency through an overhead reduction program. Note that roughly half of the restructuring-related charges are non-cash.

Discrete and special tax items totaled \$189 million, primarily related to booking non-cash valuation allowances against deferred tax assets in certain jurisdictions whose realization is no longer assured. This is largely driven by the current market situation in the smelting business. You should note that the underlying tax losses and credits are still available should earnings and dividends improve in the future and there's no impact on cash taxes.

Other special items included a \$25 million non-cash impairment of goodwill related to the extrusions business in Latin America and \$12 million of expense based on the separation of the Company. Consistent with the third quarter, we've provided a reconciliation in the appendix which provides corporate and other expenses before the impact of these special items.

Now let's look at our performance versus a year ago. Fourth-quarter adjusted earnings of \$65 million were down \$367 million from the prior-year quarter, driven largely by the drop in alumina and metal prices. Volume growth of \$16 million was driven primarily by our acquisitions in the EPS segment.

Very strong productivity gains in all segments contributed \$212 million in after-tax savings, more than offsetting \$92 million in cost increases. These cost increases were predominantly higher spending on labor and benefits as well as increased maintenance.

Now let's review our full-year performance. For the full year adjusted earnings were down \$329 million versus 2014, as lower alumina and metal prices down 43% and 28%, respectively, impacted the Company by \$797 million. Strong productivity and increased volumes offset unfavorable cost increases and the impact of lower energy sales.

Volume growth of \$93 million was driven by a combination of acquisitions, auto growth, aerospace and commercial transportation while price mix declines stemmed mainly from pricing pressures in our packaging and aerospace businesses. The largest component of our decline in energy came from power sales in Brazil as prices receded from their 2014 levels. Productivity continued to be a major lever for Alcoa in 2015 as \$749 million in after-tax savings more than offset \$447 million in cost increases.

Let's move to the segments. In the Global Rolled Products business, fourth-quarter revenue grew 6% year over year when adjusting for the divestitures and unfavorable metal prices and currency. ATOI performance was flat versus the fourth quarter of 2014, as growth in automotive shipments and solid productivity gains were offset by cost increases which included spending on growth projects, lower aerospace volume and continued packaging market pressure. It's important to note that GRP realized significant year-on-year EBITDA per metric ton improvement.

As we look to the first quarter of 2016, we expect GRP performance to reflect the following factors: strong automotive sheet shipments, continued pricing pressure in the packaging business, costs related to the ramp up of Tennessee expansion and Texarkana cast house and \$4 million of costs to secure metal as a result of the Warrick smelter curtailment.

Overall ATOI for the segment is expected to be flat year over year, assuming current exchange rates. Also note one point on the Warrick smelter curtailment. For the full year the GRP segment will be negatively impacted by \$40 million to \$50 million due to the closure of the Warrick smelter in preparation to run the rolling facility on cold metal.

Let's move to the EPS segment. EPS posted record revenue for the fourth quarter, driven mainly by acquisitions as well as share gains in aerospace. ATOI was \$123 million for the quarter, flat versus the prior year. Note that this result includes \$6 million of after-tax expenses attributable to purchase accounting adjustments in connection to our acquisition of RTI.

On an operational basis, Firth Rixson and RTI made solid contributions to the business this quarter. After-tax productivity gains of \$54 million offset cost increases and \$8 million of spend on growth projects such as our La Porte expansion.

As we look to the first quarter, we expect aerospace to remain strong but tempered by inventory management at OEMs. This gain will be somewhat offset by continued softness in the European IGT market. We expect to obtain share gains through innovation and continue to drive productivity across all businesses amid pricing pressures. Overall, for the first quarter, we anticipate ATOI to be flat to up 2%, including the unfavorable impact of currency.

Let's move on to the TCS segment. TCS fourth-quarter revenue declined 11% year over year, driven by the strengthening US dollar and lower volumes largely in the Brazil market. However, the segment delivered a record fourth-quarter EBITDA margin of 14.6%. Strong productivity more than offset cost increases and the decline in volume.

As we look to the first quarter of 2016, we expect TCS ATOI to be driven by continued improvement in North American nonresidential construction that will be somewhat offset by weakness in Europe, additional declines in North American heavy duty truck build rates while Europe heavy truck will continue its steady improvement and continued productivity gains. In total, ATOI for the segment is expected to be flat to up 3% year over year including the impact of unfavorable currency pressures.

Now let's move to the Alumina segment. Sequentially the Alumina segment was heavily impacted by the 24% decline in API pricing. Lower costs and continued productivity gains at our operating locations helped offset unfavorable product mix in smelter-grade and non-metallurgical alumina.

In the quarter, we announced curtailments of nearly 2.2 million metric tons, representing 15% of our operating capacity. This action, along with continued strong productivity efforts, helped to improve the competitiveness of our refining business.

Looking forward to the first quarter, we expect that production will decline by 340,000 metric tons due to the curtailments of Suralco and Point Comfort. Note that these curtailments will have a larger impact in the second quarter of 2016.

We expect 85% of third-party shipments to be on API or spot pricing in 2016. API pricing is still expected to follow a 30-day lag and LME pricing to follow a 60-day lag. And ATOI in aggregate for the segment is expected to be up \$7 million, excluding the impacts of pricing and currency.

So let's turn to Primary Metals. Primary Metals' fourth-quarter ATOI improved by \$19 million sequentially, as lower alumina and energy costs and a strong operating performance more than offset unfavorable metal pricing and ForEx. We announced curtailments of 642,000 metric tons of our operating capacity to improve the segment's profitability and competitiveness.

Looking forward to the first quarter, we expect production will decrease 40,000 metric tons due to the announced curtailments. The full impact of the reductions will be realized beginning in the second quarter of 2015 [*Alcoa correction: 2016*].

Pricing will follow a 15-day lag to LME as it has before, lower energy sales due to the price decline in Brazil power market. And in aggregate we would anticipate ATOI is expected to be down \$7 million, excluding the impacts of pricing and currency.

One additional point to note before I move off of Primary. I want to remind you that we typically see a shift in the first quarter from third-party to internal sales, as the primary segment restocks the pipeline of our midstream business.

Now I'd like to take a deeper dive into the upstream business. This is a chart that if you were at our investor's conference Analyst Day back in November, you saw it for the first time and I thought we would refresh it for full-year numbers in 2015. I'm not going to spend a lot of time on this chart since we've shown it before. However, it does make one point clear and that means that our upstream business is really more than just metal.

To set up the chart, external revenue for the year was \$9 billion but you need to take into account that there is considerable inter-Company revenue that generates the ultimate EBITDA of \$2 billion in 2015. On the right hand side of the chart we've broken down the EBITDA and the EBITDA margin percentage for each upstream business unit.

Note that the casting business margin percentage doesn't tell the whole story, as casting is converting molten metal into cold metal forms. Casting's essentially a conversion business if we adjust for the metal cost in the revenue. The casting business return on sales is 46%.

One more point to note from this chart. Half of our external revenue is not exposed to LME as a result of API pricing in our refining business and the value-add revenue generated in our casting business.

We move on to working capital. Days working capital continues to be a core focus for us as we grow our aerospace and automotive businesses. This growth included ramping up production in our second automotive plant in Tennessee as well as preparing for new jet engine programs in 2016. As such, our base business increased by two days versus the same period last year.

Including acquisitions, days working capital increased 15 days. Our integration teams are working to reduce the working capital of our acquisitions and help drive a more efficient use of capital in these businesses.

Moving on to the cash flow statement and liquidity. Cash from operations totaled \$865 million for the quarter leading to positive free cash flow of \$467 million in the quarter. As I mentioned earlier, most of the special items for the quarter are non-cash and therefore do not significantly impact our liquidity position.

This quarter we contributed \$107 million of cash to the pension plan for a total of \$470 million in 2015. The global pension contribution requirement for 2016 is estimated to be approximately \$300 million.

Also in the quarter we paid down \$114 million of the convertible debt assumed in the RTI transaction. And as Klaus mentioned in his opening comments, we ended the year with \$1.9 billion of cash on hand, reflecting the strong working capital management and cash management that we had during the course of the year.

So let's turn to the balance sheet. We've got very strong liquidity and ended the quarter with \$1.9 billion of cash on hand and debt of \$9.1 billion, resulting in net debt of \$7.2 billion. The \$209 million increase in net debt year over year is associated with the acquisition of RTI during the year.

Excluding the RTI, the debt to EBITDA was 2.71 times on a trailing 12-month basis, which is within our target range of 2.25 to 2.75. Including the RTI acquisition debt to EBITDA was at 2.8.

And now I'll move to a review of our full-year performance. Klaus mentioned a couple of these but I'll reiterate. For the year we generated productivity of nearly \$1.2 billion versus a \$900 million target. We managed both return-seeking and sustaining capital within our targets.

Return-seeking capital was \$603 million and sustaining capital was \$604 million, both below the annual target rates. Sustaining capital expenditures was split roughly 50% between value-add and upstream businesses, while return-seeking capital was approximately 80% attributable to value-add.

Excluding the RTI acquisition, debt to EBITDA was within our target range, as I said. And finally, against a target of \$500 million, we generated \$402 million in free cash flow, despite pricing pressures from both metal and alumina prices. And in addition to that, as you'll recall, we made a \$300 million prepayment for gas in Australia which is included in that free cash flow number.

Now let me turn to market performance in the upstream. And we've added a couple of charts to give you more detail around what's going on in the upstream market fundamentals. So we'll start with China. In China we're starting to see the aluminum dynamic improving.

China continues to be the world's largest user of third-party bauxite with imports growing and domestic production decreasing. Imports for 2015 reached 53 million metric tons versus 36.6 million metric tons in 2014. That makes up about 40% of China's total bauxite demand.

China has effectively replaced bauxite from Indonesia prior to that country's bauxite ban with bauxite from Malaysia. Year on year Malaysia exports to China are up 17 million metric tons. However, as many of you know, the Malaysian government has recently imposed a three-month moratorium on mining in order to address illegal and unsustainable mining practices. We view the growing need for imported bauxite as an opportunity to expand our third-party business, capitalizing on our role as the world's largest producer with substantial reserves.

If we move to refining, we estimate that the sharp decline in alumina prices has pushed 75% of China's refineries to be cash-negative based on a \$200 alumina price index price. This has triggered China to announce more than 6.7 million metric tons of alumina curtailments. We expect these cuts to be fully executed by the end of the first quarter of 2016.

On metal, China aluminum prices on the Shanghai Exchange fell to an all-time low during the quarter, driving about 70% of China's smelting operating capacity into a cash-negative position. We've seen 3.9 million metric tons of announced curtailments during the second half of 2015. We would anticipate, again, that these would be fully executed by the end of the first quarter.

Exports of semi-fabricated products continued to increase from China and shipments were 12.5% higher than 2014. Exports of extrusions have risen significantly, expected to be up about 40%. These are heavily concentrated towards Southeast Asia.

And just a data point, in November alone 75% of all extrusion exports from China went to Vietnam, or over 140,000 metric tons. This equates to 63% of Vietnam's total annual demand for primary aluminum. These abnormally large export flows continue to raise serious questions about the legitimacy of these exports in the context of fake semis that we've spoken about in the past.

So if we turn to the alumina market, an important point to note is that we've tightened our alumina forecast to a deficit of 2.8 million metric tons. That's nearly 1.8 million metric tons more than forecasted during our Investor Day.

The alumina price index has fallen \$154 a ton or 43% in 2015. Due to this, there's been a corresponding decline in Chinese domestic prices. And at prevailing prices, as I said earlier, we estimate that 61% of the rest of the world refineries and approximately 70% of Chinese refineries are cash-negative.

In addition to the Chinese curtailments that I covered on the prior slide, in the rest of the world about 65% of the curtailments are the result of our actions. The balance is based on our analysis of the additional capacity in the rest of the world.

If we move to the alumina market, we see that fundamentals are solid. Klaus, I believe, mentioned that we continue to expect 6% growth in aluminum. Demand is on track to double between 2010 and 2020. Chinese consumption continues to be strong at 8% and North America will surpass Europe as the largest region of demand outside of China, delivering growth of 5%.

Similar to refining, our aluminum outlook for 2016 continues to improve with a global deficit of 1.2 million metric tons. This is roughly 890,000 metric tons tighter than the forecast that we put out in Investor Day back in November, largely based on increased curtailments in China and the rest of the world.

Global inventories stand at 60 days of consumption, 4 days lower than a year ago and this level is below the 35-year average of 61 days. Lastly, we saw regional premiums stabilize this quarter.

Let me sum it up. The market — on the metal side — the market continues to grow substantially. Inventory days are below historical averages. The alumina market is tightening with increased announced curtailments and we project a global deficit in 2016. So let me turn it back over to you, Klaus.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Thank you, Bill, and let's go to the end markets, those end markets, obviously, that are most relevant to Alcoa. Let's start with aerospace. We believe that aerospace in 2016 is going to grow 8% to 9%. The large commercial aircraft segment, we believe, would show a growth of 15%, the ramp-up increases of these large volume platforms like the 320, the A350 and the 787.

So then the reflection of this is the jet engine order book now stands at 23,400 engines on firm order. The strong demand continues. If you look at the book-to-bill ratio of last year, it's at 1.25. So the already high order book, which is over nine years of production in 2015 delivery rates, continues to increase.

The good news also is the fundamentals are solid, 6.9% passenger growth and 2.8% cargo demand. And the profitability of airlines is substantially increased with what's expected of \$36 billion in 2016. So good outlook for aerospace.

Automotive, let's start with North America. Detroit Auto Show, some of you have certainly followed it today, an equally very, very positive picture. We believe the growth is going to continue 1% to 5%. We project for this year the record sales in the last year of 5.8% year to date, light trucks are leading it. It's been the highest number of penetration in the mix, with 61.2%, and in this segment the F-150 is the best selling pickup. That's obviously very, very good.

We also think that this demand is going to have some sustainability also. Vehicles of 12 years and older have increased and will continue to increase to 15% by 2020. That kind of spells also that there's probably some pent-up demand still sitting there.

Production is up in light of all of this, 3.1%. Inventories are stable with 61 days. The industry average is somewhere between 60 and 65 days. Incentives are up 4.2%, but if you look under the hood, literally spoken, you see that this is basically driven by passenger cars trying to regain their position in the mix against the light truck segment.

In Europe, we expect growth also in the segment between 1% to 4%. Production is interestingly up 2.7% year to date and Western Europe continues to improve, offsetting the declines in the east. Strong registrations were 8.6% year to date and exports are believed to increase in 2016 to 8.7% after only 2.3% in 2015.

China also we see a recovery of the production 3.1% up, 18.8% year on year. Sales up 4.7% and 21% year on year. A lot of this is helped and supported by the Texan center mainly for smaller engines and lower-emission cars. Obviously all of this is a very strong reflection of the growing middle class and evolving emissions policies, but I think that's more something also to look for in the mid term.

So let's move to the next segment here, heavy duty trucks and trailers. It's a very different picture in North America here. We are seeing a change here. This has been a very strong growth year last year. And we now project it to come down, minus 9% to minus 23%. As I said, this is partially statistics because we've seen that 2015 has been the highest production year, or the fourth-highest production year, with 322,000 trucks produced. The record was in 2006 with 376,000 trucks produced.

The production that we are expecting for 2016 is somewhere between 248,000 to 262,000 trucks. Just to put it in perspective — so this obviously lower — but just to put it in perspective the 10-year average is around 243,000 trucks.

Inventory levels are high. They've increased 26% and that's substantially above the 10-year average of 47,000 trucks. The build rates, we believe, are going to come down, given the lower ordering situation, 22% year to date. And the light order book down 15% year on year at 128,000. However, if you put it in light of the 10-year average, it's at 101,000. But it's going to come down compared to last year, as we are projecting.

Europe, a very interesting situation. In Europe, we believe, we're going to see an increase of 3% to 7%. And 3% to 7%, we see the production coming up in Western Europe, 12.6% on a year-over-year, 7.1% year to date. We see the conditions, particularly in Western Europe, improving, orders up almost 11%, registrations up 19%. And the fundamentals are also improved.

On China, we also see a change here, growing again, China 1% to 4%. And the production also reflects that and much of this is the effect that the regulatory pre-buy. Remember, the Euro 3 to Euro 4 that caused the pre-buys in early 2014 is now kind of absorbed in the market. So that's mixed news from the heavy-duty truck and trailer segment.

Packaging, not much of a change, really. North America minus 1% to 0%. We see carbonated soft drinks coming down, minus 1% to minus 2% and the beer segment gaining and partially offsetting that.

Europe, 1% to 2%. Mainly Western Europe growth and partially offset by downward pressures in Eastern Europe and China 5% to 8%. This is based also on the more conservative projections from the fillers given in light of their little bit more conservative economic expectations.

Building and construction, as the next segment, in North America we see a continued recovery with 4% to 6% growth. The leading indicators are positive but a little volatile. Nonresidential contract awards up 8.6%. Architectural building index is volatile. We've seen seven positive months, four negative months but housing starts is up almost 11%.

In Europe we see a mixed picture but we believe an overall 0% to minus 2%. Outlook obviously varies from country to country. In China, a growth from 3% to 5% and this is coming down a little bit from the 4% to 6% growth that we've seen in 2015, obviously due to the softening of the economy in general.

Industrial gas turbines, our last segment here I want to cover, 2% to 4% increase driven by higher value-add products, new high-efficiency turbines and advanced technology. The 60-Hertz market is doing very well, 17.9% year to date. Demand also coming from spares and component upgrades of existing turbines. And we've also seen that the heavy duty 50-Hertz gas turbine market is starting to show some life again, with 2.4% up year to date in September globally.

So much about the end markets, let's now focus on our businesses. To give you a better feel for the two Companies that you will be seeing at the end of this year, I have structured the presentation in an upstream part and value-add part so that you can more easily see what's going on in each of the segments.

Let me first remind you on the upstream, what is in the upstream. And to repeat some of the things that we have newly put out here today, we believe that aluminum demand is going to continue to increase also in 2016 by 6%. We continue to believe that aluminum demand is going to double from 2010 to 2020. And to a market that we're now also catering to through the changes that we've made, the third-party bauxite market, we believe, is going to double by 2025.

When you look at the portfolio that's going to be in upstream, it's a pretty attractive portfolio. We've got the largest and lowest cost bauxite mining position in the first quartile, largest, most attractive alumina position in the first quartile. Substantial energy assets that we've been able to flexible-ize so we can use them independent of what we're doing with our businesses there. And we optimized our smelting capacity and continue to talk about it and we're improving to get it into a better position in the second quartile.

The cast houses are pumping our more value-add products than ever before. And we are very committed here to a disciplined capital allocation and prudent return on capital for the shareholders.

So let's take a look at what we have been able to accomplish in this business over the last years. Let's take a little bit of a longer-term perspective. In this case we chose from 2010 to 2015.

If you look at the left hand side you actually see there on the upper end, what has been the aluminum price and the alumina price. 2010 was not really a year of glory. The year of glory was really more than the 2008 year where aluminum pricing was \$3,200 [*Alcoa correction: \$3,000*] at its height. Even since then, prices have come down further as you can see here, alumina by 6% and aluminum by 16%. In total, this has eaten up revenues in the magnitude of \$1.3 billion.

In spite of this, we have been able to keep the profitability basically on the same level, from \$1.9 billion in spite of all the headwinds to \$2.0 billion in 2015. And you can see here — I'm not going to go through all of this — you can see here what have we done. We've basically used every lever that you can think of, fixing, selling,

curtailing closing, changing the portfolio, margin growth, all of this we've done. And just to give you one idea, once all the announced refinery and smelting curtailments or closures are completed 25% of our refining capacity and 42% of our smelting capacity will either be closed or curtailed or sold.

In addition to that, this all would not have been achieved if we wouldn't, every year basically, not have let our eyes off productivity. We've achieved over this period of time 2.8% of productivity improvement. Again, that's just the picture here for the upstream.

So I hope you agree with me that this has been a pretty good track record to drive profitability, and we have all intention to continue that as you've seen in 2015. This is just the list of the portfolio improvements that we've done in 2015. And I assume that you have a full understanding that this is not easy to achieve, all of these closures, curtailments, that we have been able to do there. So we very much expect to meet or exceed our 2016 cost curve targets, which is to get smelting to the 38th percentile and refining to the 21st percentile.

So we also launched, in light of all of this and in the spirit of what we've always done here, we've launched an upstream improvement program. And the upstream improvement program has the target of \$600 million for 2016. And it has those components that you can see in here, \$100 million are coming from the business programs, \$400 million out of procurement, \$50 million from overhead reductions and \$50 million also from margin improvement.

I'm not going to go through all of these levers. That's what we have launched and that's what you will see tracked in the usual fashion with all the degrees of implementation.

Let's also go to the value-add side and let's take a little bit of a deeper look. On the value-add side what type of a Company is that? It's basically an advanced multi-material product and solution provider. It caters to a number of growth markets like aerospace, automotive, building and construction, probably the biggest ones.

It leads through innovation. We are continuously shifting to higher value-add products has robust margin and has investment opportunities above the cost of capital.

The midstream, which we call GRP, consists of aerospace and automotive products, basically structural products, brazing and commercial transportation and industrial, micromill products, which is just ramping up, global packaging. Then we come to the EPS side which is power and propulsion, fastening systems and rings, forging and extrusion, titanium and engineered products. And then our TCS business with building and construction and wheels and transportation systems. So that's what we are talking about.

So when you look at those, have a lot of different businesses in there. You could ask yourself the question, is there anything that holds these businesses together? And the answer is, yes, there's a lot that holds these businesses together.

This is the magic sauce that holds the businesses together. Technology, there's a lot of joint technology that holds this together. Talent, we just done here a calculation of what has happened in the last years and 80% of the internal moves from a certain level on, for the moves have been filled internally. Only 20% externally, which I think is a very, very good indication for a good talent management process.

On the procurement side we have \$6.6 billion of volume in the value-add companies. Enough size and scale for professional procurement and there's also substantial overlap between the suppliers.

Last but not least, on the customer front, 65% of the revenues from the top 10 customers overlapped. We are having and pursuing a cross-business key account management. You saw, actually, the results of that coming through in the good contracts that we have been able to gain. Our Net Promoter Score, we measure everything and with this we measure also the customer engagement, with Net Promoter Score has increased four times since 2010.

And also on the disciplined execution side, we continue to use our degrees of implementation. We currently have about 12,000 actionable ideas and they're broken down into these categories: 9,800 productivity and so on. This is what holds this together.

Let's also talk a little bit about what's going on on the aerospace side. And those that have followed us over the last years have seen that through innovation and acquisition we have created a very strong portfolio of aerospace products, systems and solutions. What you see here in this little puzzle because these pieces very, very nicely fit together. It's composed today of a full-service titanium mill and fabricated products, high-performance engine casting, innovative fastening systems, jet engine rings and forging, advanced aerospace structures.

And the customers have responded very positively. But the most important thing is that you see that also reflected in their direct response. They've recognized it by — and validated our strategy — by making 2015 a banner year for large orders, large contracts. \$9 billion of orders. This is more than twice the amount that we got in the year before and you see some of those listed down below here.

So when you look at — can we have the next picture — when you look at what does that all do. And here you see a breakdown by the major jet engine types. What does that do, and some of you have seen these pictures of the before status.

What we've done here now is we now plotted in there what do these new contracts, what additional position do these new contracts give us. You can see always on the left hand side what our previous position was and on the right hand side what our new position is. And you can see, with the bubbles there it's all going up. This is very, very nicely, so we're basically growing our share.

But what is even more beautiful — and obviously you will probably take a little bit more time to study this — but actually even more beautiful is when you look, for instance, at the high-volume platforms like the CFM56 going into the 737 and the A320, so the high volume ones. And you look at number one, we are increasing our share in the CFM56 by 58%.

But then, when you look at going over to the Leap X, for instance, the share from that position, improved position, is going up 100% and also has an RTI component in there which is pretty unique through the entire aluminum that goes into the Leap X. And that goes onto the 737 Max and to the A320 NEO, so the two big work horses of the future.

And you see a similarly nice increase on the Pratt and Whitney 1100G, that is one of the engine options also for the 320. The rest I leave you for digestion.

And I have a similar slide here which now shows this aggregated on the aircraft types. And here you see it's a similar positive picture. I'm only going to show you here — going to go into the 737 Next Generation and to the 737 Max. And you see a similar thing, we're increasing our share in the Next Generation, NG, by 17% and then another 29% from that improved position. And when you look at the Airbus situation, pretty similar on the A320, going up 3% on the current version and then 51% going forward to the NEO. That's very nice.

If you also take larger perspective and say, well, what is really the track record of the value-add business. What have they really achieved? This is a track record from 2008 to 2015. You can see here — a little bit of a complicated chart — but you can see here on the left-hand side the profits have increased from \$1.2 billion to \$2 billion and a profitability of 8% up to 15%. So a margin improvement of 700 basis points.

What has happened? A lot has happened in the middle. Excess acquisitions, organic growth and innovations in pretty much every one of the businesses. And also what has happened is \$4.4 billion of productivity over the years. And that's a common theme.

Also for the value-add business we are launching a business improvement program for 2016 that has the target of \$650 million and it's broken down into those three levers: business programs that are going to get \$370 million, procurement \$230 million and overhead is going to get \$50 million.

So let me conclude also with an update on our planned separation. What have we been able to do on the fourth quarter? Obviously the list is very long. We basically had to summarize this here. We built the separation program office to manage the separation. The reason for this is to keep this out of the businesses, so basically to have the businesses focus on the business and the customers.

And you see that this is working out well. We are not losing sight of catering to our customers and making this a pleasant and successful experience for them to deal with Alcoa.

We've also announced the executive teams for both of the firms. We decided that both firms are going to be US-domiciled. And we launched in the improvement programs that I already talked about, including an overhead program across Alcoa that has a total impact for two years of \$225 million and \$100 million in 2016.

Then in this first half to 2016, we will launch, as the next thing, a new value-add brand name. We are working through already separating the partner and supplier contracts and most importantly, the Form 10 filing will come out. That has a lot of very, very important decisions in there. And that's what we're currently working on. And then the second half of 2016 the Form 10 will be approved and we will also do the separation of IT which is a big deal, and the financing and then we will begin trading. So that's all pretty exciting.

Last but not least, let me summarize here. We are on track with the separation. We are pulling all levers on the upstream side to improve our profitability. On the value-add side we are geared for more profitable growth, significantly in auto and aero. We have robust business improvement programs in place for 2016 and we are completing the separation in the second half of this year. With this, let's go to Q&A.

QUESTION AND ANSWER

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Operator

(Operator Instructions)

Your first question comes from the line of David Gagliano with BMO Capital Markets. Your line is open.

David Gagliano - BMO Capital Markets - Analyst

Great, thank you for taking my questions. I wanted to focus in on the targets, specifically in the EPS segment, and I wanted to compare it to the Investor Day two months ago. If we look back two months ago, I think the target for the EPS business was \$7.2 billion in revenues, EBITDA margin of 23%. That would imply EBITDA of \$1.7 billion.

But when I back into the EBITDA based on the Q1 guidance for ATOI, it looks to me like Q1 EBITDA for the segment will be, at best, \$300 million. So obviously that means quarterly EBITDA needs to increase quite a bit in Q2 through Q4, probably over 50%.

So my questions are, number one, do you stand by the \$1.7 billion EBITDA target for 2016? That's my first question.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Well, Dave, look, I said it already with my first slide. When you look at the larger picture here, we have built out our aerospace offering through innovation, as well as through acquisitions. This has helped us, for instance, to win those \$9 billion of contracts and substantially strengthen our position that we have in the aerospace market and that we will have also when we go into the separation.

That said, Firth Rixson is operationally behind and RTI is ahead of plan. We are expecting to address these issues. We are addressing them. We are on the course of bringing Firth Rixson up to the standards of the Alcoa basic operation system and also ramping up the new and emerging technologies and realizing all the benefits that are there.

On RTI, as I said, we are ahead of our plan. You will also see this coming through in the numbers once we are done with the purchasing accounting here, which is pretty much now. So that's where we are.

David Gagliano - BMO Capital Markets - Analyst

Okay. Just to clarify, that's a pretty big delta between what was communicated in November, specifically for that segment, and the run rate in Q1. So what I'm trying to figure out, and I think a lot of us are assuming that that EBITDA number is achieved in the EPS segment. So really what I'm trying to figure out is, should we be rethinking that full-year target? Or should we expect meaningful EBITDA growth in Q2 through Q4 for this business, sufficient enough to hit the \$1.7 billion EBITDA target?

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

We've shown you also in the Investor Day, what the team is working on. There's a whole host of things that the team is working on, from putting more productivity in place to capturing the synergies. We are actually on a very, very good course capturing the synergies, from gaining more market share there, from getting the operational availability of the equipment up to the level that we are used to, and that's all happening. That's all happening. Dave?

David Gagliano - BMO Capital Markets - Analyst

Okay, all right. I will just leave it at that, then. Thank you for the —

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Thank you, Dave.

Operator

Your next question comes from the line of Timna Tanners with Bank of America Merrill Lynch. Your line is open.

Timna Tanners - BofA Merrill Lynch - Analyst

Hey, good afternoon.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Hey, Timna.

Timna Tanners - BofA Merrill Lynch - Analyst

So Dave asked, I think, a really important question. I wanted to follow up with the other one I keep hearing people asking me, which is about the alumina segment. Fully appreciate that Alcoa is way ahead of everyone with cutting production and taking that very seriously and that the Chinese should cut more production.

My fear is — and I'm hoping if you can elaborate a little bit — my fear is that if we plug in the \$200-ish alumina price into the first quarter and beyond, a lot of downside to results. If you're cutting back volume that helps lessen your exposure. But what else can you do if the Chinese don't cut production? Can you talk to us about other cost cutting, other levers, that you can pull? And any confidence you have that the Chinese might this time rationalize, like they're suggesting?

William Oplinger - Alcoa Inc. - EVP & CFO

I'll start by addressing it and I'm sure Klaus will jump in, Timna. Clearly, we're going to take capacity off at Point Comfort. We've already curtailed the capacity at Suriname. Those were the two that were the biggest drags on profitability.

We are going to go heavily after raw materials to take cost out there, go after significant productivity improvements year over year and also try to drive our spend down on MRO and services. On the remaining facilities, a very aggressive cost cutting program.

And Klaus also alluded to an overhead program that the upstream Company will be going after, along with value-add. But the upstream, given the market conditions that we're in, will be going after the overhead restructuring very heavily also.

Timna Tanners - BofA Merrill Lynch - Analyst

Okay. If Klaus wanted to jump in, that's cool. The only other follow-up I would have is, also getting a lot of questions about how the debt will be allocated. I know you've said that most of all would be put on the downstream. But do you have any further insights on what you might do with the pension and under-funded healthcare liabilities?

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Timna, nothing has changed in our intentions compared to what we've said before.

William Oplinger - Alcoa Inc. - EVP & CFO

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And recall what we said on Investor Day. If there's a clear connection with the business, for instance active pensions, they go along with the business. So active employees go along with the business that they're going to. Environmental liabilities, things like that, clearly anything that's tied directly to the business, we'll allocate it to the business. And then from there, we haven't determined the capital structures yet.

Timna Tanners - BofA Merrill Lynch - Analyst

Okay, thanks for the help.

William Oplinger - Alcoa Inc. - EVP & CFO

Thanks, Timna.

Operator

Your next question comes from the line of Brian Yu with Citi. Your line is open.

Brian Yu - Citigroup - Analyst

Thanks and good afternoon.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Hello, Brian.

Brian Yu - Citigroup - Analyst

Hey. So my first question is, this goes with Dave's earlier bit is with Firth Rixson, you said it's behind plan. Could you give us a little bit more detail? And then also, what does this mean in the context of the \$350 million EBITDA target originally set for 2016?

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Happy to elaborate a little bit. First, you have to always put this in the larger context of what has this achieved for us. Not just Firth Rixson, but the total build-out through innovation as well as through acquisitions. It has strengthened our aerospace portfolio. It has created an aerospace portfolio. It has given us — it has doubled — Firth Rixson alone has doubled the content on jet engines and has given us a full range, basically, of global aero engine forgings, critical-rotating, light-limiting disk shafts, isothermal processes. All of this we didn't have before.

RTI has given us access to titanium, to the mid- and downstream titanium. As I said, RTI is ahead of plan, performing better than what we have expected.

So if I look at the first year of full ownership of Firth Rixson, I have to be very clear. It's not meeting our expectations, and this is mainly due to the operational issues and some technological issues.

Now, the good news of this is we know how to do these things. We know how to manage this. We know how to make sure that critical assets are run in a way that their operational availability is on par with what we are used to at Alcoa. This is partially an issue of lack of maintenance and bringing maintenance to the right levels and an understanding on how to run it.

At the same time, when it comes to technology, frankly, if you know that isothermal technology is a challenging one, the starting point was not where we expected it. At the same time, we are leveraging our own resources, our own technical resources and to speed up the process of bringing this up. We had a little bit of that already in our mind when we structured the deal. The way we structured the deal is we built in \$150 million of an earn-out provision that was entirely tied to the isothermal process, milestones on the isothermal process [*Alcoa correction*: tied to the financial performance of the Firth Rixson Savannah, Georgia facility]. And given where this is at this point in time, I am not optimistic, or this \$150 million will not be paid out.

I rather wish to pay them out, to be honest. That's reality there. I wish I could, Brian, and I — Dave asked me basically the same question. I wish I could give you a more specific one on this. We're really working through this as we speak, and you've seen the team. Both of you have seen the team at Investor Day. It's not for lack of focus. The team's working extremely hard on it. We have a lot of good ideas, and the ideas are coming through, but you, at the same time, have to be realistic. We had a very aggressive target, and I think that we will update you on when we will achieve this as we go, Brian.

Brian Yu - Citigroup - Analyst

Okay. Second one, on the aerospace revenue. The slide deck, you said the industry's growing at 8% to 9%. You guys have also added about \$9 billion of long-term contracts.

At the same time, the deck also mentioned there's inventory management at OEMs. I'm trying to put all these pieces together, and what do you think is your EPS revenue growth going to be on a like-for-like basis in 2016? Can you give us a range?

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Look, you have two slides in there basically, one for the engines and one for the structures, that have the content of us for every one of those. So the only thing that you basically need is now the build rates and that gives you that number.

And by the way, on the inventory thing, this is very particular, but I think Bill said it right. It's particularly with one of the customers who prepared themselves for being well-equipped for the start-up of their new platforms. This typically goes in line with buying a little bit too much and they are currently going through this. So this is nothing that, at least for us, is of longer-term or even of midterm concern.

Brian Yu - Citigroup - Analyst

All right, thanks.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Yes, Brian, thank you.

Operator

Your next question comes from the line of Justin Bergner with Gabelli & Company. Your line is open.

Justin Bergner - Gabelli & Company - Analyst

Good afternoon, Klaus. Good afternoon, Bill.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Hey, Justin.

Justin Bergner - Gabelli & Company - Analyst

My question relates to the business improvement plan of about \$1.25 billion. How much of that should I think is similar to productivity gains that you generated in 2015? How much of that relates to activities beyond productivity gains?

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Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Well, the interesting thing is that when — I have it in one of my slides here. We have three categories that we track in our DI system and we also have, not just cost productivity in there, we also have growth actions and we have asset management actions. Obviously, the asset management actions only have an impact on the cash side, but that's one of the reasons why you see such strong cash performance. So that we manage that in the same way, we just don't talk about it that much.

But the growth actions and the productivity actions has been the part of the structure all the time. You should assume that this is pretty much the same logic that we are following, also the same logic in terms of how we are tracking these things. We have, what I call, the degrees of implementation logic. Basically, we currently have for value-add 12,000. I don't know, Bill, whether you know the number. It's probably also in the same magnitude. I believe we have about 20,000 in the system. So roughly 12,000 also in the system for the upstream, which is giving us the comfort of understanding that these 600 or 650, respectively, are doable. And we have, as I mentioned at the last point, we have also done a very substantial program in terms of overhead reduction, which we manage separately, but it's part of the numbers that I gave you. We manage it centrally.

William Oplinger - Alcoa Inc. - EVP & CFO

To be clear, Klaus, just so I do have the numbers in front of me, The value-add Co has around 12,000, the upstream Co has around 6,000.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

6,000. This is the new year. Okay, good. They have work to do.

Justin Bergner - Gabelli & Company - Analyst

Okay, thank you. But how much of that would be incremental to the gains that you've called as productivity in 2015.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

All of them. All incremental. All incremental.

Justin Bergner - Gabelli & Company - Analyst

Okay. It's beyond productivity?

William Oplinger - Alcoa Inc. - EVP & CFO

In both cases, it's largely productivity, year-over-year savings, on top of the productivity that was accomplished in 2015.

Justin Bergner - Gabelli & Company - Analyst

Okay, thank you. My second question, if I may, are you going to articulate cash flow goals for 2016? And if cash flow is challenging, given the challenging macroeconomic backdrop, what are your plans for generating additional liquidity as needed into the separation?

William Oplinger - Alcoa Inc. - EVP & CFO

Right. We have historically provided a cash flow goal. Given the fact two things that are going on this year that prevented us from providing a cash flow goal, first is going into the separation, there will be separation costs associated, and so we're looking at that. And then secondly, the volatility in the markets makes it very, very difficult to provide a firm cash flow goal in 2016. So we'll continue to work through that.

You saw that we generated over \$400 million of cash this year. Just to be clear on that, that included a negative impact of \$300 million that we made on the prepayment in Australia. That was also at a significantly lower metal price than what when we had set the target. We'll continue in 2016 to do all the same things that we did in 2015. And that is, productivity increases, driving down working capital and limit capital expenditures to critically important capital for both sustaining and growth.

Justin Bergner - Gabelli & Company - Analyst

Okay, thanks. And any comments on the question of liquidity into the separation as needed?

William Oplinger - Alcoa Inc. - EVP & CFO

Yes. As we go into the separation, we will continue to do all the things that we talked about and are confident that, as Klaus had alluded to earlier, that the separation is on track. So no real concerns there.

Justin Bergner - Gabelli & Company - Analyst

Thank you.

Operator

Your next question comes from the line of Paul Massoud with Stifel. Your line is open.

Paul Massoud - Stifel Nicolaus - Analyst

Hi, everyone, good afternoon. Thanks for taking the questions. I guess —

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Hello, Paul.

Paul Massoud - Stifel Nicolaus - Analyst

I had a question on the smelting portfolio review. Obviously, you've done a lot of work. You're aiming towards having 2.1 million tons in smelting capacity by the middle of 2016. This quarter we saw an increase in EBITDA in that business.

Once you're all said and done, are you happy with where the portfolio is at, given the current commodity price environment? Put another way, are there still operations out there today that are in negative EBITDA territory?

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

The answer is yes. And we are working, as we always have done these, to make sure that also the restructuring is done with an eye on the value creation for the shareholders.

William Oplinger - Alcoa Inc. - EVP & CFO

And if I could add just a little bit to that, recall that we have a smelting portfolio that sits, on average, in the second quartile of the cost curve. So that would tell you that we have some very, very strong assets globally in places like Canada, Norway, Iceland, the world's lowest cost smelter, 25% ownership in Saudi Arabia. And so there is a core set of assets that are very, very strong in the smelting portfolio.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

It's more than half of the — 1.7 million tons.

William Oplinger - Alcoa Inc. - EVP & CFO

Yes, given the fact that we're running around 2.1 million metric tons (multiple speakers), it has really gotten to the point where the operating capacity is a fairly strong set of assets.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

But that also gives you the answer of how much capacity is still on the radar, I would say.

Paul Massoud - Stifel Nicolaus - Analyst

I appreciate that, thanks for the color. The second question I had was on GRP. You're talking about flat year-over-year ATOI in the business, despite the step-up that we're seeing in revenues coming in from the auto side. I can appreciate that you've got costs elevated as a result of the Tennessee ramp-up. At what point do we start to see — and we've seen EBITDA step up, but at what point do we start to see ATOI really move up?

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

No, you have to also keep in mind that we actually restructured the portfolio. We closed two mills in Australia. We sold the mill in Russia. And we sold the two mills in Spain, one mill in France. That all goes out as volume. That all goes out as volume. Have you to adjust it to volume.

And also you have to look at — you can't just look at the revenues there because they get massively impacted by the pass-through of metal. The real good indicator, to give you a feeling for what's going on in our midstream business, is to look at the conversion margins. So basically the EBITDA per metric ton. When you look at the EBITDA per metric ton, you actually see that there is a substantial uptick that we've seen over the last quarters.

And this shows you that our move with multiple actions, auto is just one. I know that auto is always on the mind. But those portfolio actions that we have taken also were much in light of doing the same thing, shifting to higher-value, shifting to higher-margin products. And that's what we will continue to do there.

Paul Massoud - Stifel Nicolaus - Analyst

Okay.

William Oplinger - Alcoa Inc. - EVP & CFO

And if you don't mind, one last comment on GRP. The guidance that we provided is flat year over year. Remember, that includes a negative impact from the cold-metal strategy that we are putting in place in Warrick. In part, that's part of the separation of the Company because we are putting the Warrick rolling mill in a position to be able to run without the smelter.

So exclusive of that impact, we would see ATOI growth year over year. And as Klaus alluded to, the really two things going on within GRP, aerospace and auto continuing to be strong, if not stronger, and the packaging business continuing to see pricing pressures.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Yes, exactly.

Paul Massoud - Stifel Nicolaus - Analyst

Thank you. One last question. It's a longer-term thought. You're qualifying the material at the micromill, 8 or 9 companies as of the last conference call that are looking at it, in addition to —

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

12 now.

Paul Massoud - Stifel Nicolaus - Analyst

12 companies, yes. Does the micromill imply that we're no longer going to see any more Tennessee-type conversions where you take an old packaging facility and convert? Is that what you're hoping will ultimately be the case? Or is there room for growth in both?

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

There's room — I would say there's room for a Tennessee scenario with a micromill. You can see some combinations of this where you put a micromill in front of something and use this. Or you could put a micromill behind a smelter, because the capabilities of the micromill, don't just think of micromill for automotive applications, think of it for other applications.

What the micromill really needs is a high-volume application. Other than that, it's highly, highly flexible. This time I actually decided not to talk so much about micromill.

That's the cool thing about micromill, it will clearly change the way the rolling world works. At the same time, it also allows — and that's probably the more interesting thing, it allows to attack steel in a more dramatic way. We believe now that the market size there is \$8.3 billion.

William Oplinger - Alcoa Inc. - EVP & CFO

\$8.3 billion of addressable market.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

That currently is not addressable with the aluminum materials that one can make. But with micromill, this is addressable.

Paul Massoud - Stifel Nicolaus - Analyst

Thanks for taking the questions, I appreciate it.

Operator

Your next question comes from the line of Josh Sullivan with Sterne Agee. Your line is open.

Josh Sullivan - Sterne, Agee & Leach, Inc. - Analyst

Good afternoon.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

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Hey, Josh, afternoon.

Josh Sullivan - Sterne, Agee & Leach, Inc. - Analyst

Can you just expand on the inventory overhang in aerospace with the one customer? Is it any specific area such as fasteners or aero structures or engines? And then what do you think the duration of that overhang is?

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

I think the duration is a relatively short duration. We are really seeing varying degrees of inventory adjustment. One is basically because — and that's mainly Boeing — the efforts of consolidating major OEMs in the air freight market. And then one other is basically the decreasing build rates of selected aircraft platforms. This will impact basically specific product lines there.

So as I said, that's nothing that we see as a mid- or longer-term worry. This is really something more for the next quarter to know when the total sales are out.

William Oplinger - Alcoa Inc. - EVP & CFO

Yes, keep in mind to put it in perspective of the strength of long-term growth of large commercial aircraft. It's a short-term phenomenon.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

I would say, asking for which products are more affected, it's probably fasteners and extrusions that are most affected by it.

Josh Sullivan - Sterne, Agee & Leach, Inc. - Analyst

Okay. That's typically seen as a build-up. One follow-up on GRP. At the Analyst Day you had mentioned potential for canned sheet imports to pressure the business. Have you seen any new import pressure in that market?

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Not really. I would say one should not over-estimate the import pressure. The general situation is an over-supply in the marketplace and therefore, price pressure. The import part, particularly when you think about China, is a small add-on to it. But Europe obviously also has an overhang, and we've seen some of that coming over. But the general problem is the over-supply in the market putting price pressure on.

The second issue I see there is lack of differentiation potential. Because in a way, it has become a very commoditized product. A lot of people can make it, which is clearly the indication that it is commoditized.

Josh Sullivan - Sterne, Agee & Leach, Inc. - Analyst

Okay, thank you.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Josh, that's the reason why we're trying to move further into differentiated products also on GRP. And that's the reason why we converted Tennessee successfully over from a one-trick packaging pony into this double-trick pony. And it's currently tricking more on the automotive side, and that's the good thing. We're ramping up and are sold out. You will see it coming through already in the next quarters. By the end of the year, you will see a very, very strong Tennessee impact also, much as we see the impact from Davenport automotive reflected in the earnings increase in the midstream.

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Josh Sullivan - Sterne, Agee & Leach, Inc. - Analyst

Okay, thank you for that.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Thank you, Josh. Next question.

Operator

Your next question comes from the line of Michael Gambardella with JPMorgan. Your line is open.

Michael Gambardella - JPMorgan - Analyst

Yes, good evening.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

Mike, hello, good evening.

Michael Gambardella - JPMorgan - Analyst

Just have a question with the separation. Have you been in talks with the PBGC, the Pension Benefit Guarantee Corporation? I would assume they guarantee all of the defined-benefit pension plans that you have in the United States and would have something to say about the capital structure of the Companies when they separated.

William Oplinger - Alcoa Inc. - EVP & CFO

Absolutely, Mike, and so I'll address that one. You hit on it exactly. That's one of the reasons why we can't necessarily give you definitive answers on the capital structures at this point, because we are in discussion with the PBGC. You understand, as you well alluded to, that is a requirement in this type of a transaction. And so, yes, we have initiated that discussion with the PBGC.

Michael Gambardella - JPMorgan - Analyst

So will the PBGC, at the end of the day, will they dictate what the capital structure will be of the split in the Companies?

William Oplinger - Alcoa Inc. - EVP & CFO

They won't dictate it, Mike, it will be a dialogue. But ultimately, we want to do the right thing for our pensioners and our employees. And so we will be working with the PBGC to ensure that we do that.

Michael Gambardella - JPMorgan - Analyst

Is it a fair statement to say that the majority of the US pension plans go with the upstream business?

William Oplinger - Alcoa Inc. - EVP & CFO

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Yes, I think it's fair to say at this point that we're in discussions with the PBGC and it's early in the process. So why don't you let us work through that and in the Form 10 we will make it clear.

Michael Gambardella - JPMorgan - Analyst

Okay, thanks, Bill.

William Oplinger - Alcoa Inc. - EVP & CFO

Sure.

Klaus Kleinfeld - Alcoa Inc. - Chairman & CEO

All right, okay, I think this is really all the time we have today and obviously, we have more time in the next weeks and separate discussions here. So let me characterize the quarter again. I think it's a solid quarter, reflects all the actions that we've taken.

We really have two different things here on the value-add, good things happening on the aerospace, record sales, major new contracts, midstream higher margin, profitability up, automotive deliveries up. And then at the same time on the upstream side, massive headwinds. We've reshaped the portfolio with the upstream is standing firm and remain profitable.

We have, and continue to have, strong productivity. You've seen \$1.2 billion last year, cash generation was excellent. One thing I can absolutely assure you, we are laser beam focused on controlling what we can control. And we are fully on track with the completion of our separation in the second half of 2016. So thank you very much for calling in, and have a great day.

Operator

This concludes today's conference call. You may now disconnect.

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4th Quarter Earnings Conference

January 11, 2016

Important Information

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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). 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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

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 million¹ adjusted net income and **\$590M² 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 4th quarter adjusted EBITDA margin of 14.6%**
 - **Upstream**: ~\$2.4B³ 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 \$900 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

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

	4Q14	3Q15	4Q15	Prior Year Change	Sequential Change
Realized Aluminum Price (\$/MT)	\$2,578	\$1,901	\$1,799	(\$779)	(\$102)
Revenue	\$6,377	\$5,573	\$5,245	(\$1,132)	(\$328)
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.)
EBITDA	\$1,073	\$698	\$519*	(\$554)	(\$179)
Net (Loss) Income	\$159	\$44	(\$500)	(\$659)	(\$544)
Net (Loss) Income per Diluted Share	\$0.11	\$0.02	(\$0.39)	(\$0.50)	(\$0.41)
Income excl. Special Items	\$432	\$109	\$65	(\$367)	(\$44)
Income per Diluted Share excl. Special Items	\$0.33	\$0.07	\$0.04	(\$0.29)	(\$0.03)

*4Q15 EBITDA of \$519 million includes \$71 million of Special Items
See appendix for EBITDA and Adjusted Income reconciliations

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Special Items

\$ Millions, except per-share amounts

	4Q14	3Q15	4Q15	Income Statement Classification	Segment
Net (Loss) Income	\$159	\$44	(\$500)		
Net (Loss) Income per Diluted Share	\$0.11	\$0.02	(\$0.39)		
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
Special Items	(\$273)	(\$65)	(\$565)		
Net Income excl. Special Items	\$432	\$109	\$65		
Net Income per Diluted Share excl. Special Items	\$0.33	\$0.07	\$0.04		

See appendix for Adjusted Income reconciliation

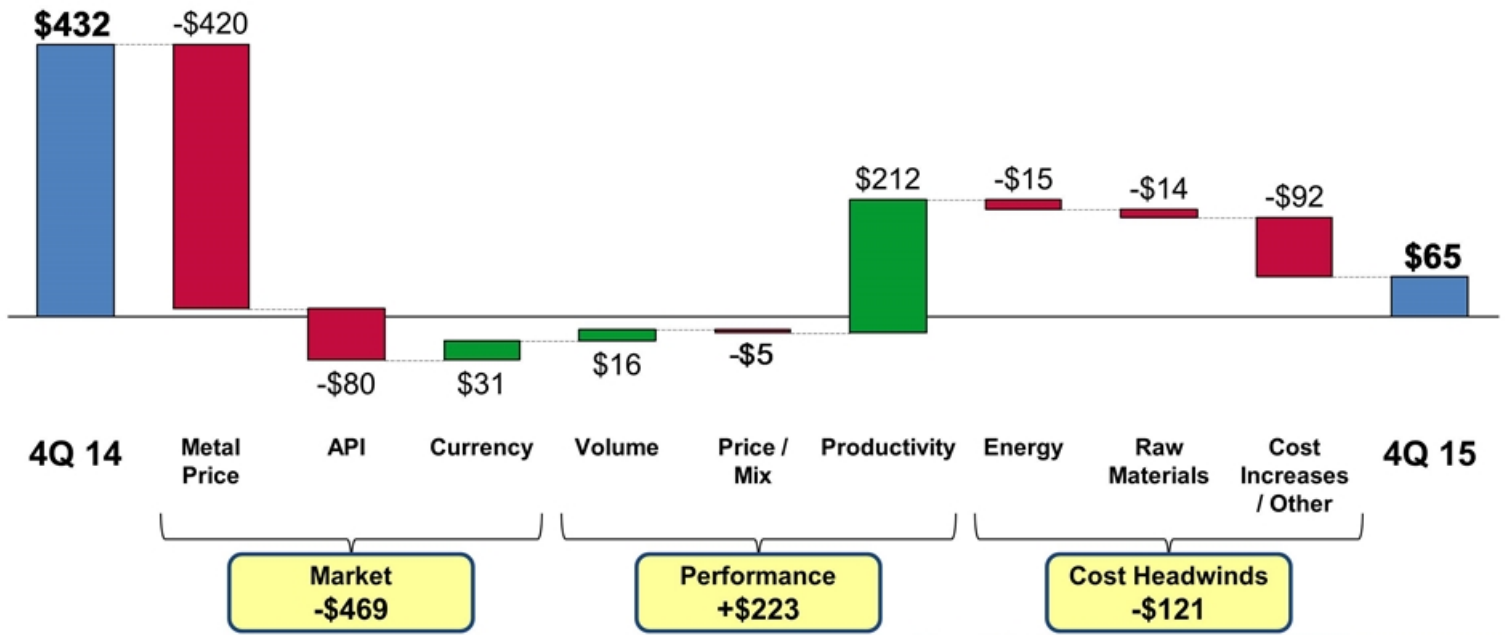
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Adjusted Earnings Down on Lower LME, API and Regional Premiums

Net Income excluding Special Items (\$ Millions)



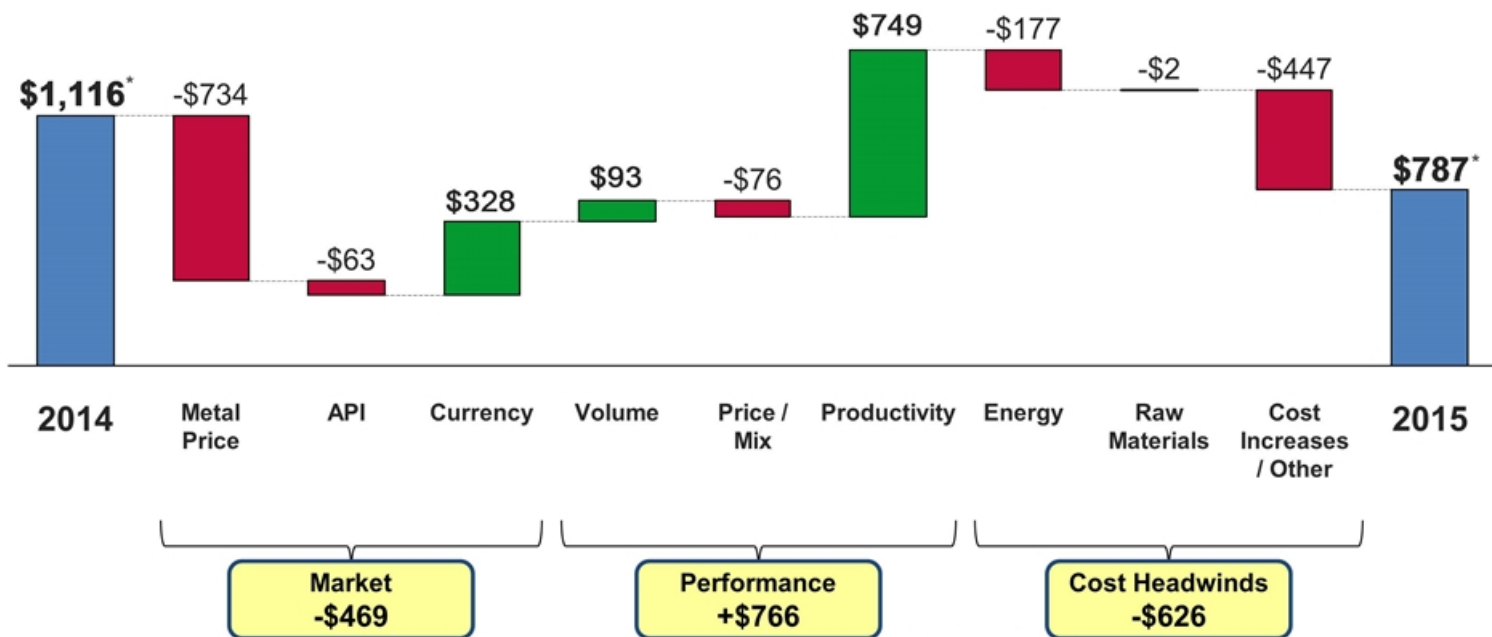
Note: Metal Price = LME + Regional Premium; Regional Premium previously reported in Price/Mix category
See appendix for Adjusted Income reconciliation

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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

4th Quarter ATOI Results

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

4th 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

4th Quarter ATOI Performance Bridge



1st 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**

¹The 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

4th Quarter ATOI Results

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

4th 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**

4th Quarter ATOI Performance Bridge



1st 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**

¹The 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

4th Quarter ATOI Results

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

4th 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

4th Quarter ATOI Performance Bridge



1st 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

¹The 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

4th Quarter ATOI Results

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

4th 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

4th Quarter ATOI Performance Bridge



1st Quarter Sequential Outlook

- Announced curtailments drive **Production down ~340 KMT**, further reductions in Q2'16
- **~85%** of 3rd 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

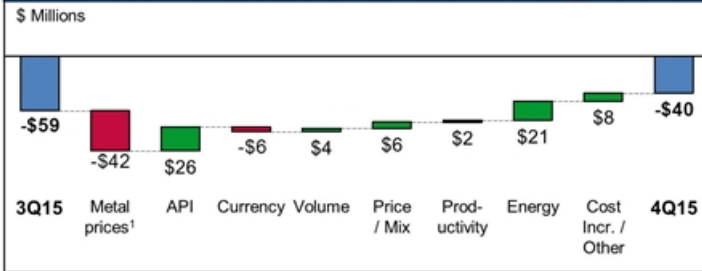
Primary Metals: Lower Cost Position Improving Performance

4Q15 Actual and 1Q16 Outlook – Primary Metals

4th Quarter ATOI Results

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

4th Quarter ATOI Performance Bridge



4th 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

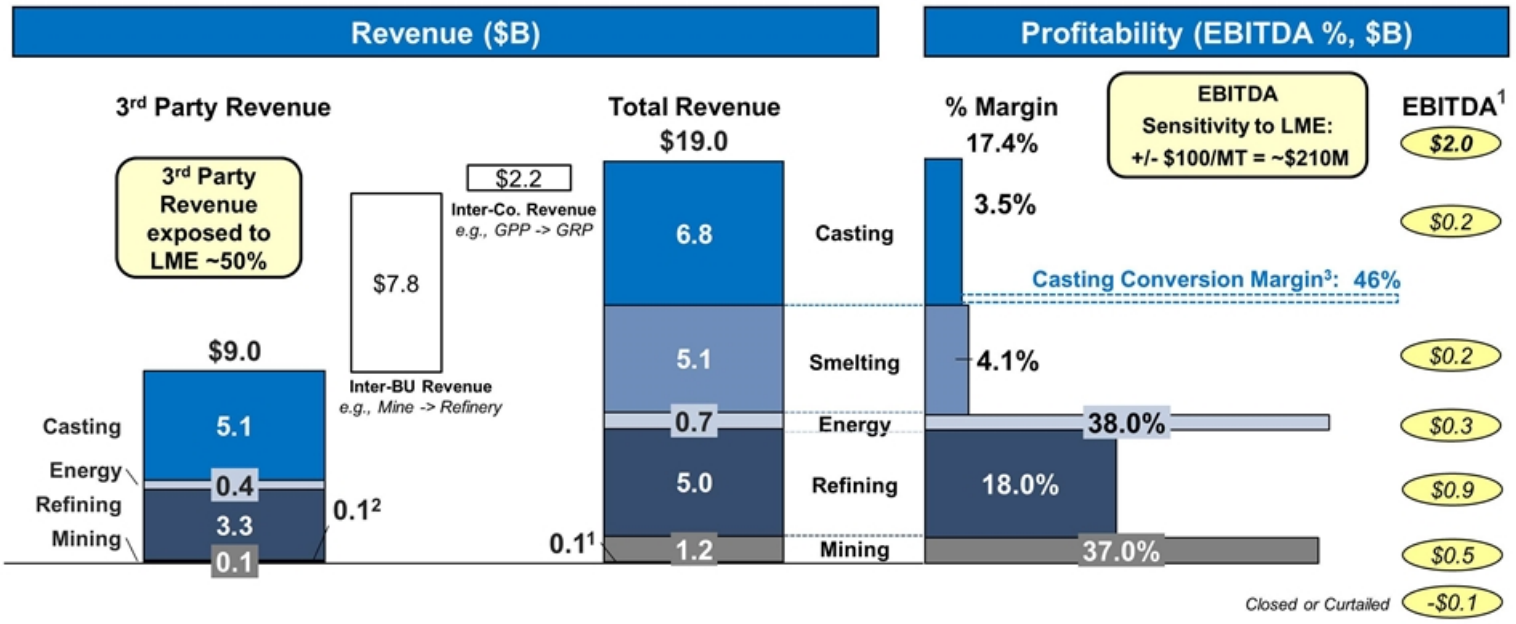
1st Quarter Sequential Outlook

- 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

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

Upstream: Five Business Units Diversify Revenue and EBITDA Sources

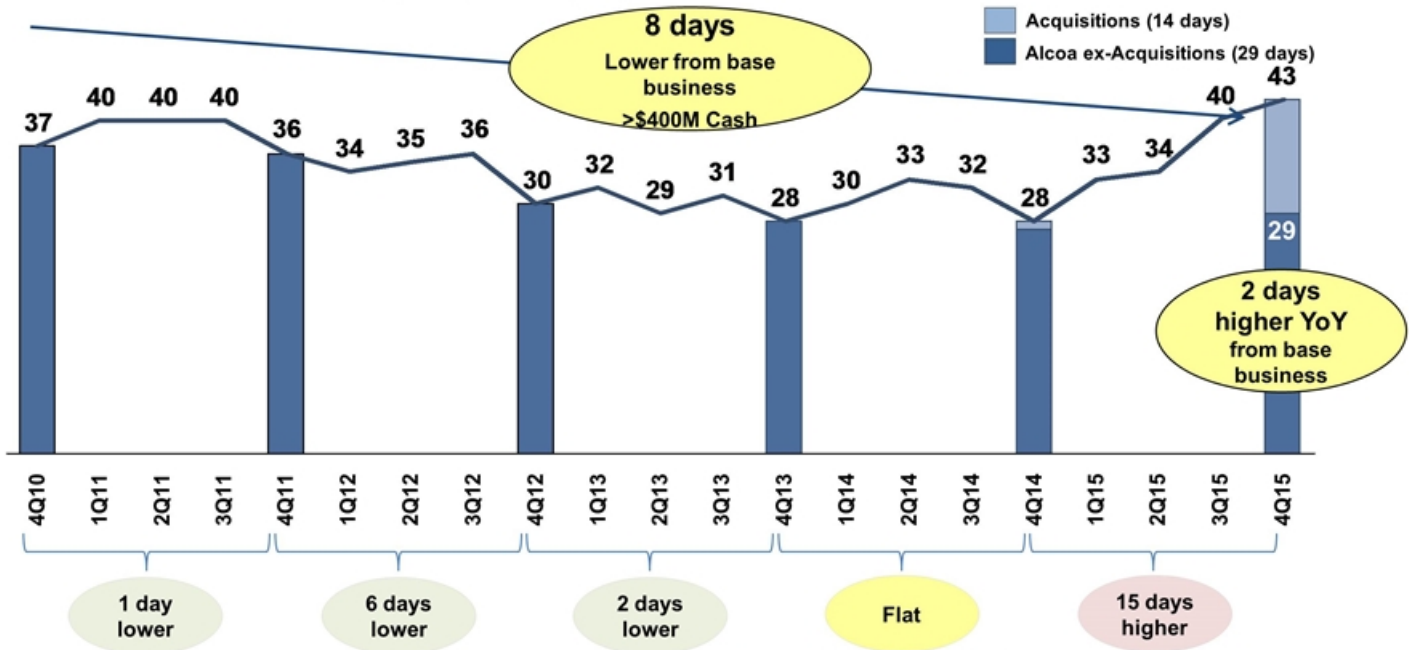
Upstream Revenues and EBITDA: Full year 2015 Actual



¹ 2015 ATOI of \$901M. See appendix for EBITDA reconciliations
² Closed or curtailed locations ³ 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



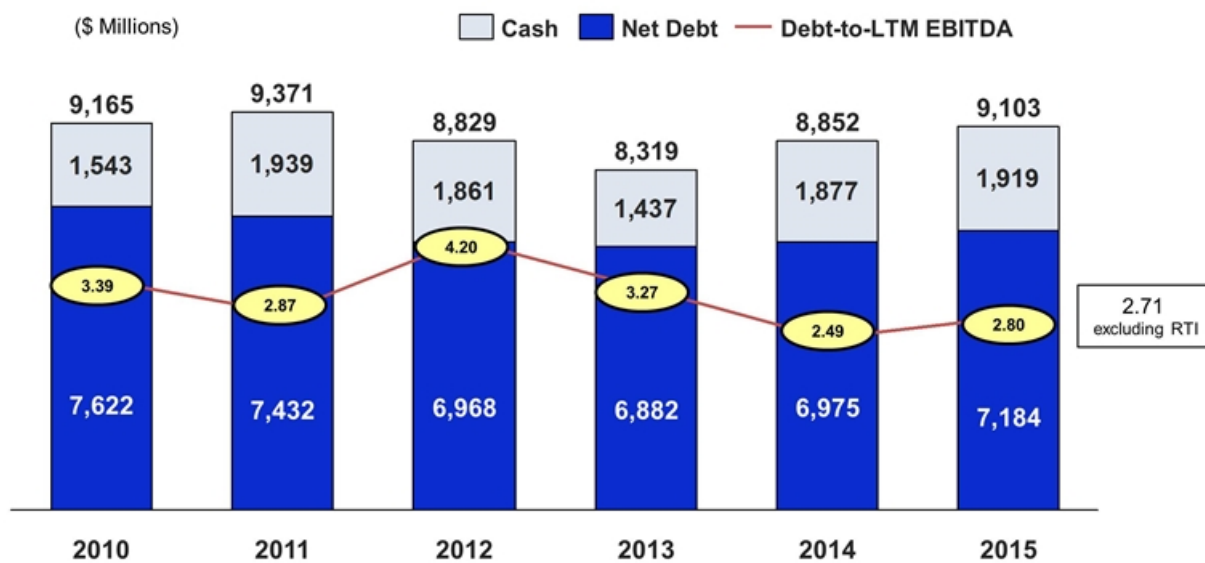
Strong Cash Generation; Cash Balance at \$1.9 Billion

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
Cash from Operations	\$1,458	\$420	\$865
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)
Cash from Financing Activities	(\$181)	(\$52)	(\$230)
Capital Expenditures	(\$469)	(\$268)	(\$398)
Acquisitions/Divestitures/Asset Sales	(\$2,138)	\$354	-
Other Investing Activities	(\$46)	(\$4)	(\$59)
Cash from Investing Activities	(\$2,653)	\$82	(\$457)
Free Cash Flow	\$989	\$152	\$467
Cash on Hand	\$1,877	\$1,739	\$1,919

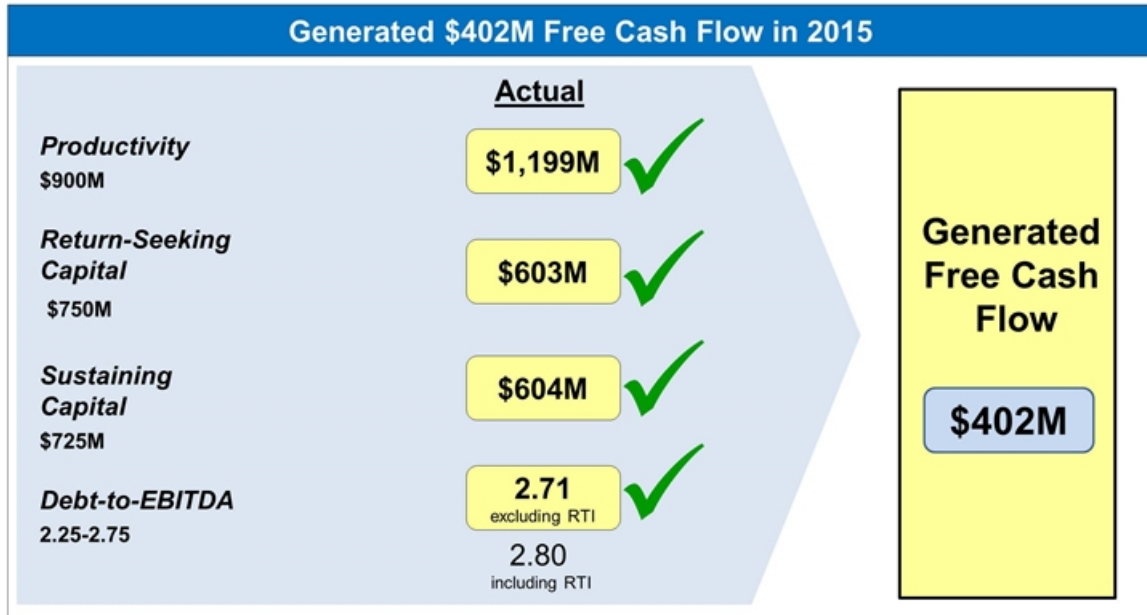
Leverage Within Target Range of 2.25x to 2.75x Excluding RTI

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



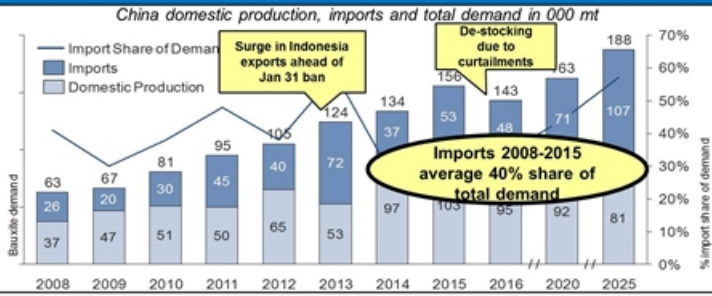
Delivered Strong Results in 2015

2015 full year results against Targets

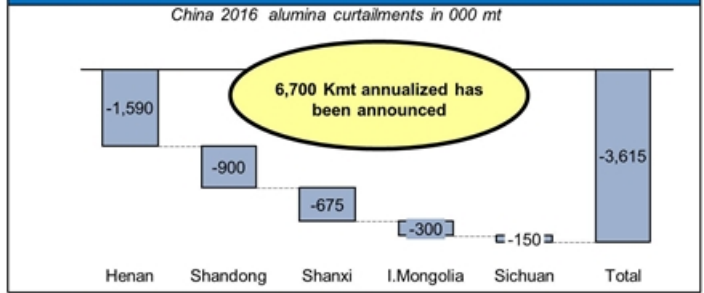


China Aluminum Dynamic Improving, But More Action Still Required

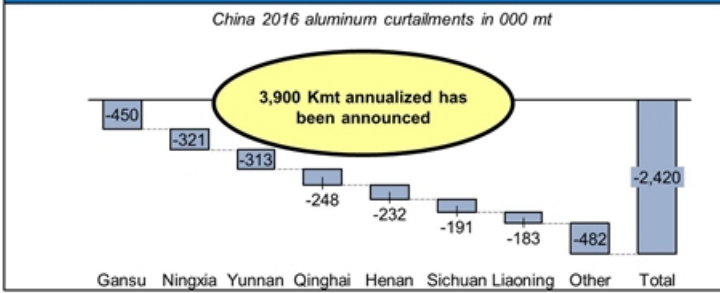
China's dependency on import bauxite is rising



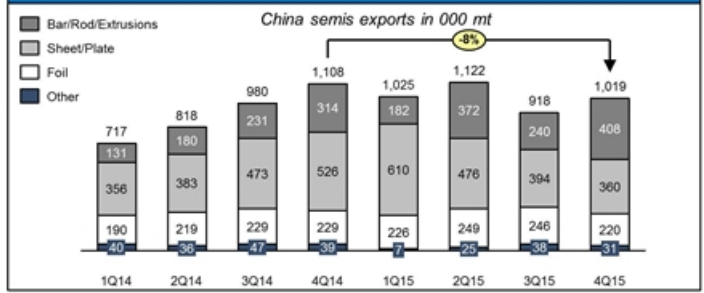
Alumina curtailments response is substantial



Aluminum curtailments equally substantial



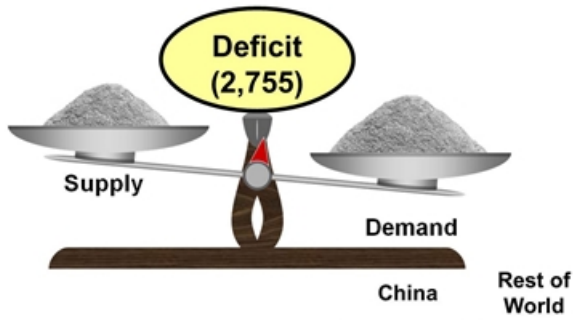
Semis exports are higher, but fake share down



Chinese Refining Curtailments Contribute To A 2016 Alumina Deficit

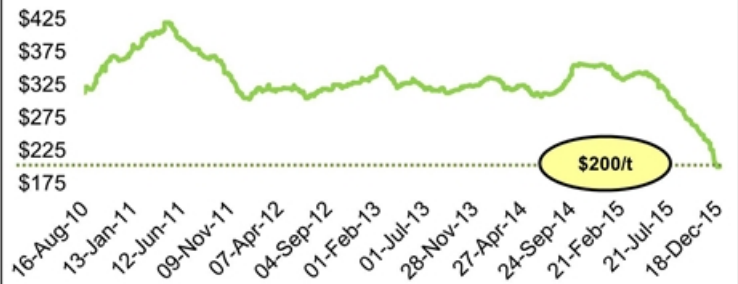
Alumina fundamentals overview

2016 Alumina Forecast (as of Q42015)

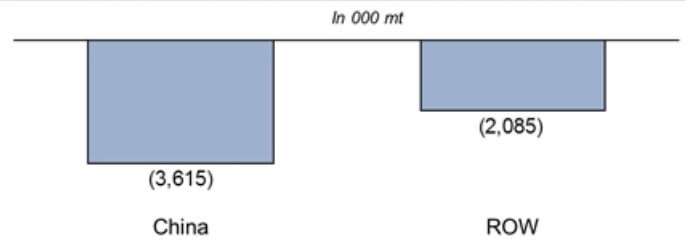


	China	Rest of World
2016 Prod. at Beginning Run Rate	56,807	56,900
2016 Prod. to be Added/Restarted	3,993	1,610
2016 Prod. to be Closed/Curtailed	(3,615)	(2,085)
Imports/(Exports) – Full Year	<u>4,400</u>	<u>(4,400)</u>
Total 2016 Production	61,585	52,025
2016 Demand	<u>(62,805)</u>	<u>(53,560)</u>
Net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

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

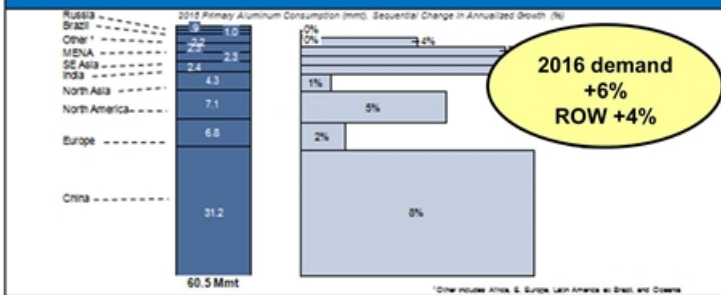


Major curtailments in response to price action

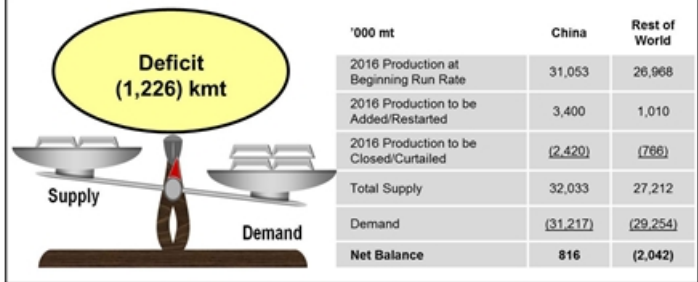


Aluminum Market Fundamentals Are Solid

6% 2016E Demand Growth



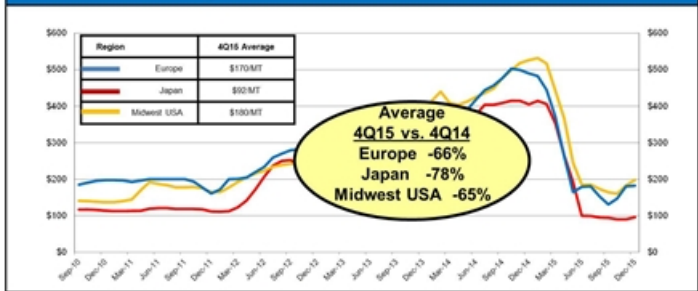
Aluminum deficit increasing



Global Inventories at 60 days; -4 days YoY



Regional Premiums Stable





Advancing each generation.

[Alcoa logo]


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
<p>Aerospace</p> 	<p>↑ 8% to 9% Global sales growth</p>	<ul style="list-style-type: none"> • 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 1.25¹ • Strong Commercial Jet Order Book: >9 Years of Production at 2015 delivery rates • Solid Airline Fundamentals²: +6.9% Passenger and +2.8% Cargo Demand; all-time record for Airline Profitability expected (\$36B in 2016)
<p>Automotive</p> 	<p>↑ 1% to 4% Global production growth</p> <p>↑ N.A. 1% to 5%</p> <p>↑ E.U. 1% to 4%</p> <p>↑ China 2% to 5%</p>	<ul style="list-style-type: none"> • Record Sales: U.S. sales +5.8% YTD_{Dec'15}; 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 2020³ • Production Up: N.A. production +3.1% YTD_{Nov'15} (16.2M vehicles) • Stable Inventory: 61 days, Flat YoY (Dec'15 vs. Dec'14) (industry target is 60-65 days) • Incentives Up: +4.2% YoY (Dec'15 vs. Dec'14) (\$3,073/unit), driven by Passenger Cars +7.2% YoY • Production Up: +2.7% YTD_{Nov'15}; W. Eur. continues to improve, offsetting decline in East • Strong Registrations: +8.6% YTD_{Nov'15}; Exports to increase 8.7% in 2016 after +2.3% in 2015 • Recovering Production: +3.1% YTD_{Nov'15} and 18.8% YoY (Nov'15 vs. Nov'14) • Sales +4.7% YTD_{Nov'15} and 21.3% YoY (Nov'15 vs. Nov'14) propelled by tax incentives • Growth driven by increasing middle class, exports, and evolving emissions policies

Source: Alcoa analysis 1) As of November 2015 2) International Air Transport Association 2016 Expectations 3) IHS (Jul 2015)

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

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
<p>Building and Construction</p> 	<p>4% to 6% Global sales growth</p> <p>↑</p>	<p>Leading Indicators Positive but volatile:</p> <ul style="list-style-type: none"> • 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). <p>N.A. 4% to 6% ↑</p> <ul style="list-style-type: none"> • Flat to slight decline as E.U. economies continue to stabilize, outlook varies by country <p>E.U. 0% to -2% ↓</p> <p>China 3% to 5% ↑</p> <ul style="list-style-type: none"> • Drivers – industrial & manufacturing sectors – 2015 softening will impact 2016 growth
<p>Industrial Gas Turbines</p> 	<p>2% to 4% Global airfoil market growth</p> <p>↑</p>	<ul style="list-style-type: none"> • 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; 3rd Party bauxite demand projected to double by 2025
- > **Attractive Portfolio:**
 - World's largest, low cost bauxite miner at the 1st quartile¹ on the cost curve (47M BDMT²)
 - World's largest, most attractive alumina business in the 1st quartile³ of the cost curve (17.3 MMT)
 - Substantial energy assets with operational flexibility (Power production capacity of ~1,550 MW)
 - Optimized smelting capacity (3.1 MMT) continuing to improve its 2nd quartile³ cost curve position
 - 17 casthouses⁴ 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 miner¹

REFINING



1st quartile³ cost curve refiner

ENERGY



Flexibility to profit from market cycles

SMELTING



Strategic global footprint

CASTING

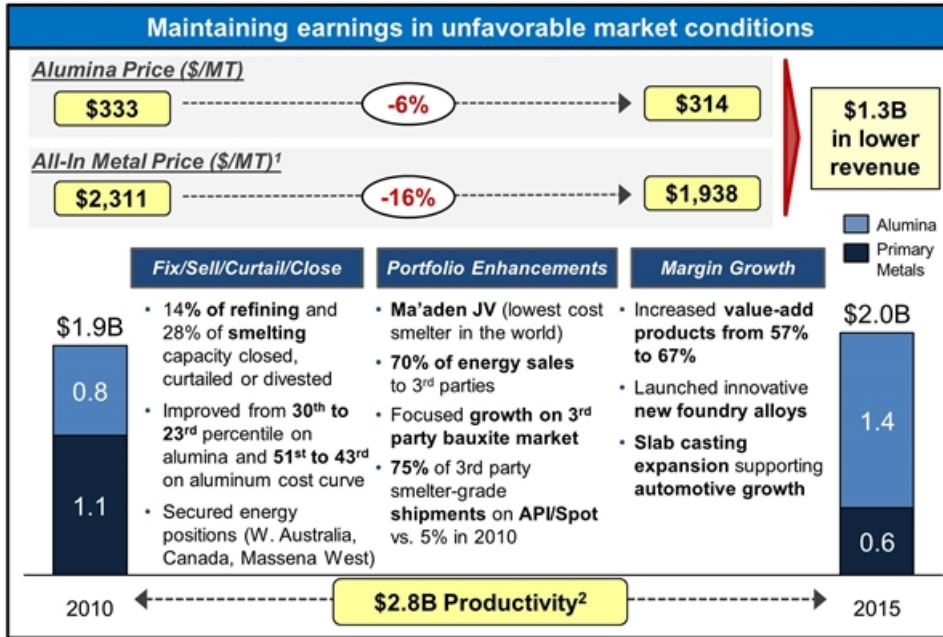


Value-add products in key markets

1) CRU analysis 2) Mined in 2015, including equity interests 3) CRU and Alcoa analysis 4) Includes Saudi Arabia Joint Venture BDMT = Bone Dry Metric Ton

Upstream: Track Record to Drive Profitability

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



- ### 2015 Portfolio Improvements
- Curtailed Sao Luis smelter: 74 kmt³
 - Closed Pocos smelter: 96 kmt
 - Curtailed Wenatchee smelter: 143 kmt³
 - 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 mmt³
 - Closing Warrick smelter: 269 kmt
 - Curtailing Intalco smelter: 230 kmt³
 - Curtailing Pt. Comfort refinery: 2.0 mmt³
 - Curtailed Lake Charles Anode Plant
- Expected to meet or exceed 2016 global cost curve targets of 38th (smelting) & 21st (refining) percentiles

¹Represents combined annual averages of the LME aluminum price + Midwest premium (as published by Platts). ²2011-2015 represent gross productivity. ³Capacity 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

\$600M Program: \$550M of Productivity Plus \$50M of Margin Improvement Actions			
Productivity Improvement			Margin Improvement
Business Programs	Procurement	Overhead	
\$100M	\$400M	\$50M	\$50M
<ul style="list-style-type: none"> ▪ Drive labor productivity improvements ▪ Invest in top tier facilities to maximize profitability ▪ Develop and deploy product innovations ▪ Improve operating performance via core operating standards 	<ul style="list-style-type: none"> ▪ Reduce raw materials prices ▪ Negotiate lower cost energy contracts ▪ Reduce price and usage of maintenance and contracted services ▪ Lower transportation costs 	<ul style="list-style-type: none"> ▪ Simplify management reporting ▪ Streamline decision making ▪ Redesign IT infrastructure ▪ Right size business unit and new corporate overhead structure 	<ul style="list-style-type: none"> ▪ Flex capacity to match market conditions ▪ Grow bauxite sales ▪ Optimize casting throughput and technology upgrades ▪ Reduce spend at curtailed locations

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

MENA = Middle East and North Africa

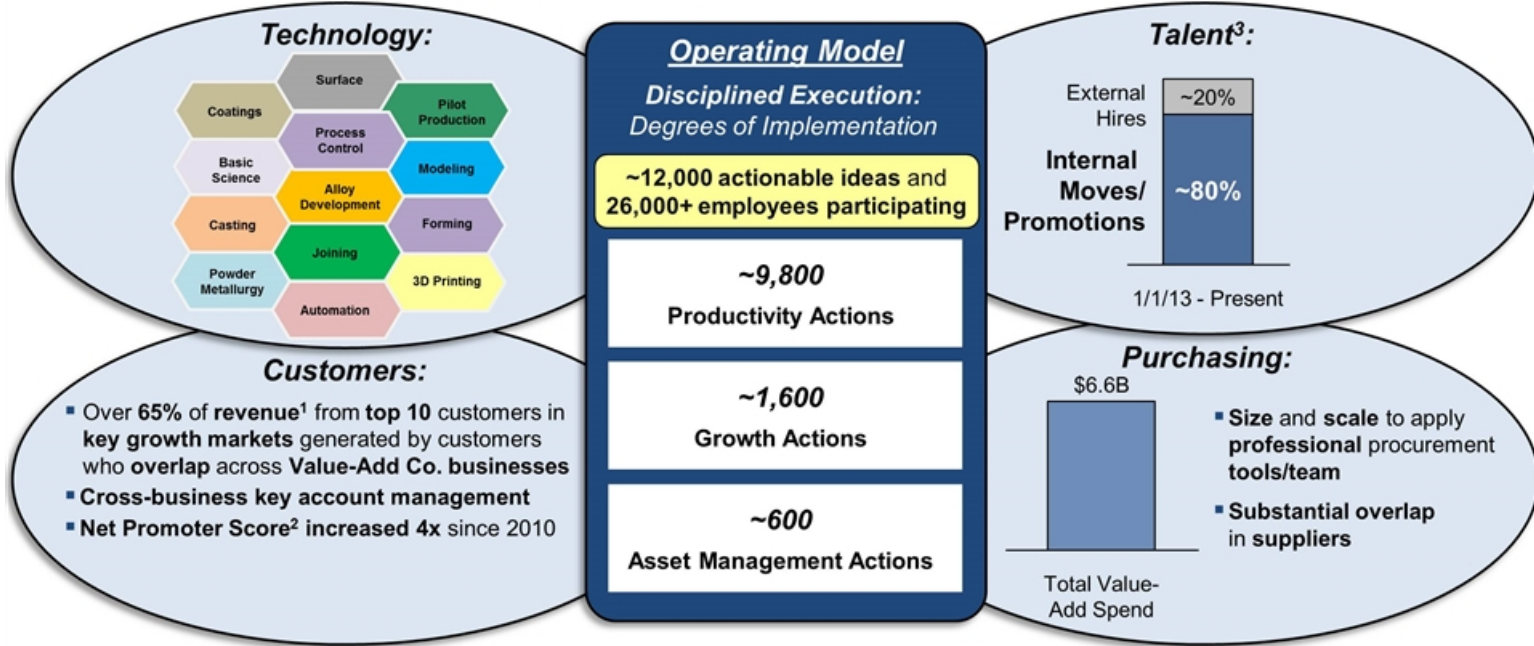
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31

Value-Add Co: Meaningful Synergies Create Value

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



1) 2015 Revenues 2) Alcoa Customer Experience Survey 2015 3) Mid-level positions and above


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: Engineered Products & Solutions; GRP: Alcoa Global Rolled Products

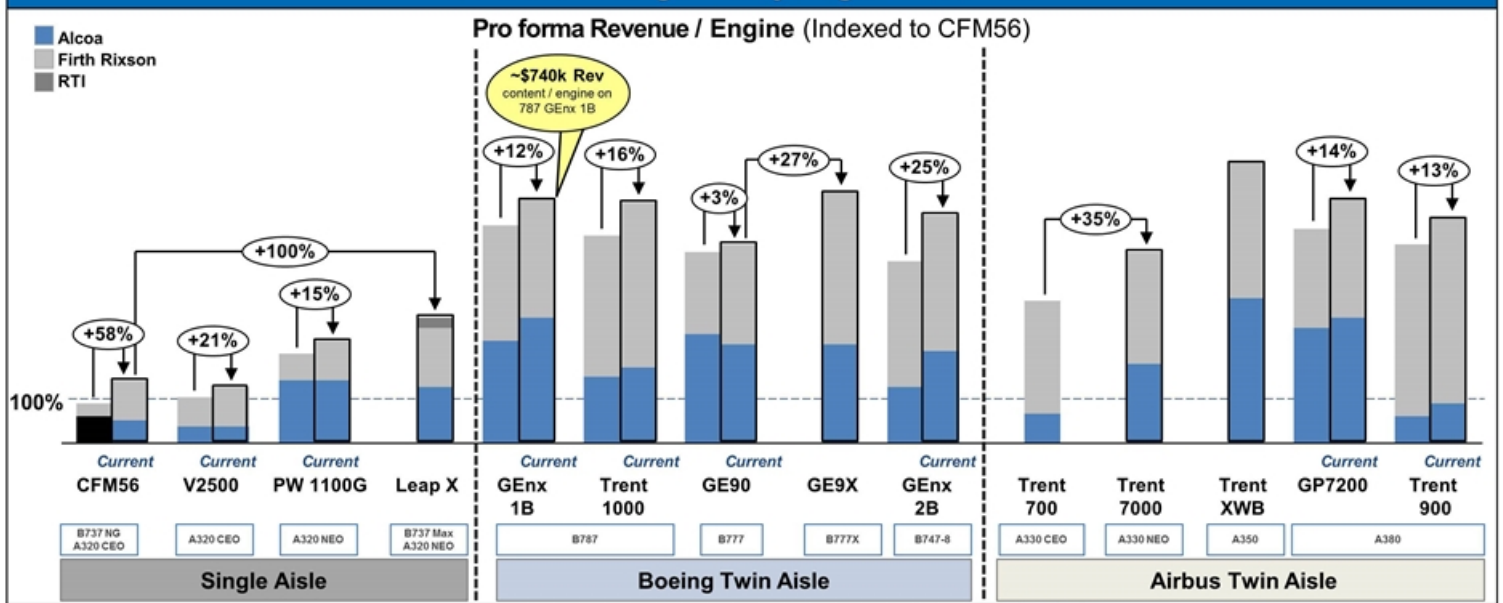
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...Increasing Content on Every High Growth Jet Engine...

Indexed Revenue by Key Engine Type

Better Coverage of Key Engine Platforms



CFRP = Carbon Fiber Reinforced Polymer.

Advancing each generation.

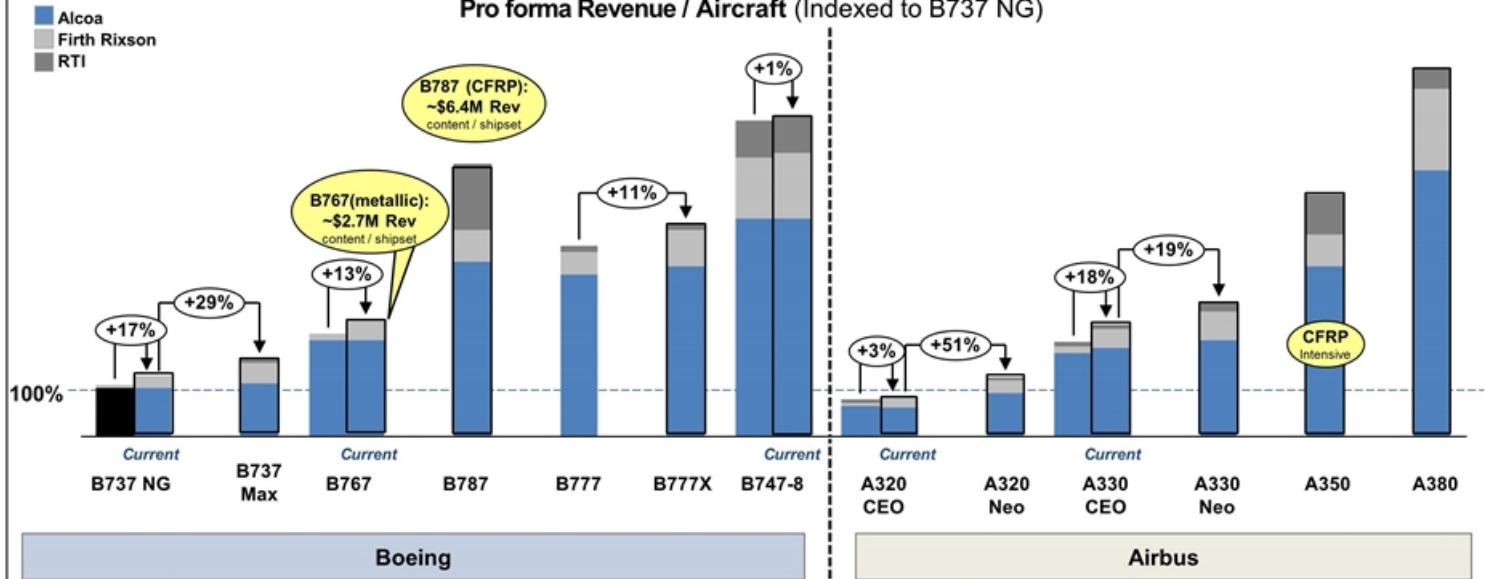
[Alcoa logo]

...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.

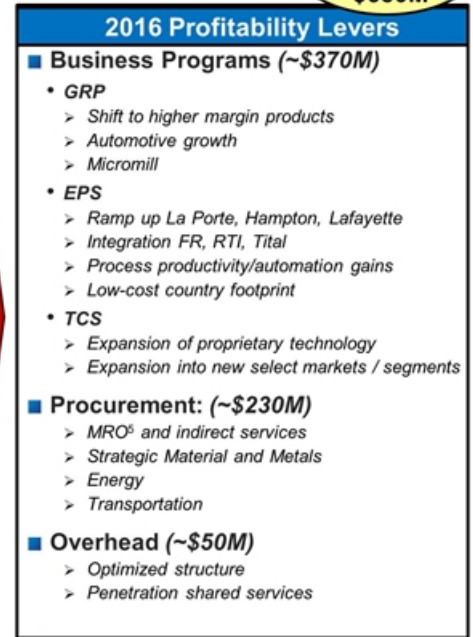
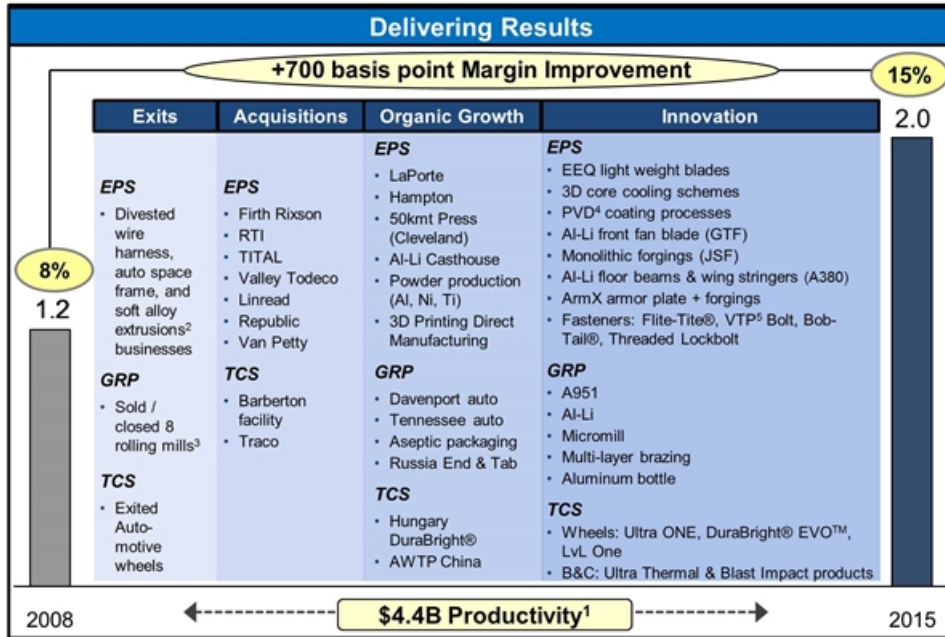
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Innovation, Investments and Productivity Drive Past and Future Growth

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

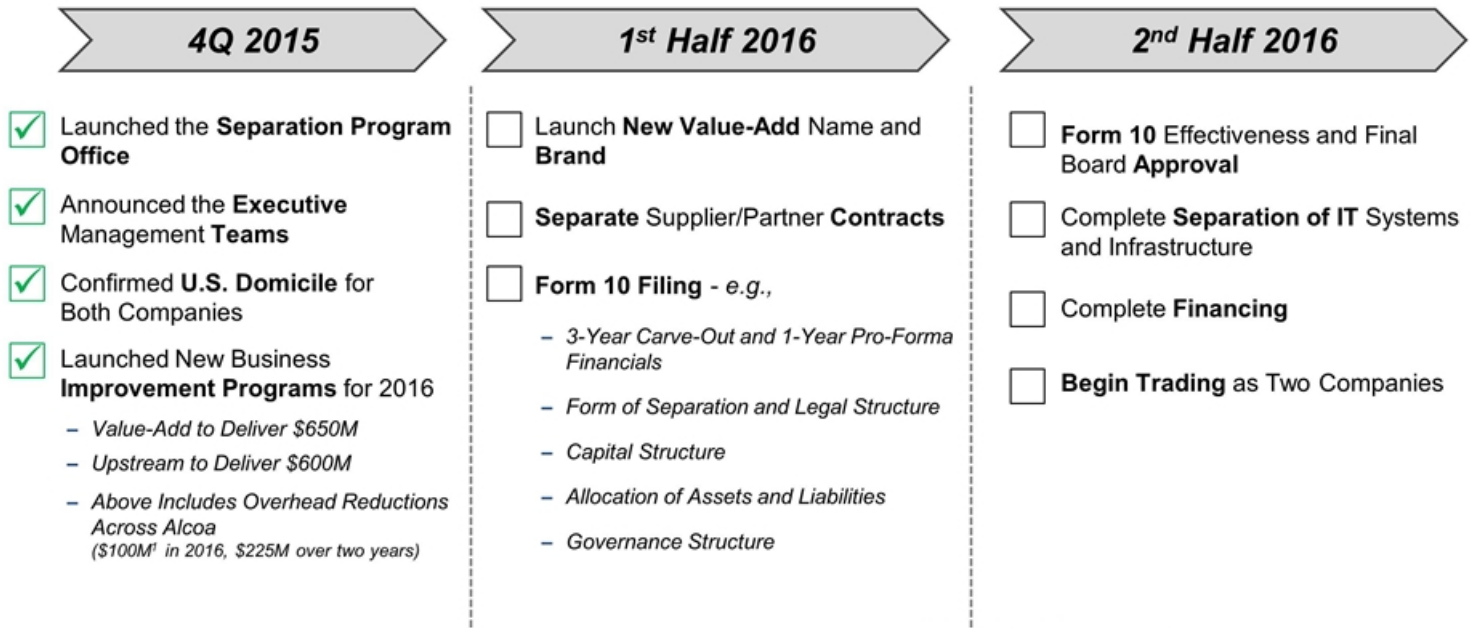
Business Improvement Program: **~\$650M**



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



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 2nd Half of 2016

Nahla Azmy

Vice President, Investor Relations

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Operational, Investment, and Financial

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

Net Income Sensitivities¹

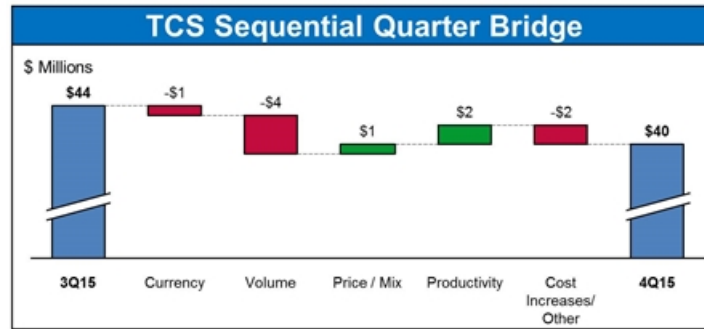
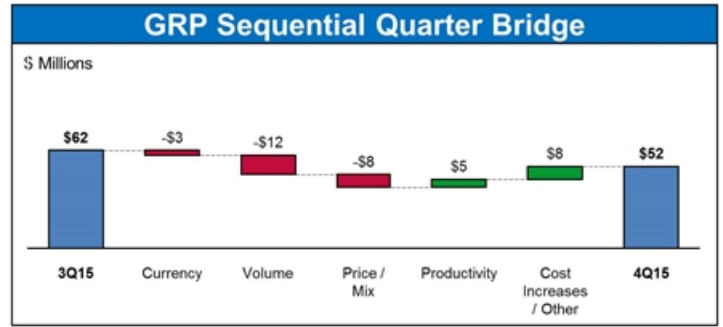
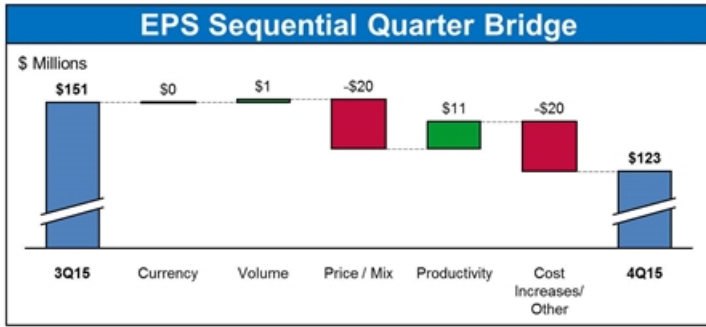
	Commodity Prices		Currencies				
	LME Aluminum	API Spot / Alumina	Australian \$	Brazilian Real	Euro €	Canadian \$	Norwegian Kroner
Change	+/- \$100/MT	+/- \$10/MT	0.01 change in USD / AUD	0.01 change in BRL / USD	0.01 change in USD / EUR	0.01 change in CAD/ USD	0.01 change in NOK / USD
Impact to Net Income	+/- \$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



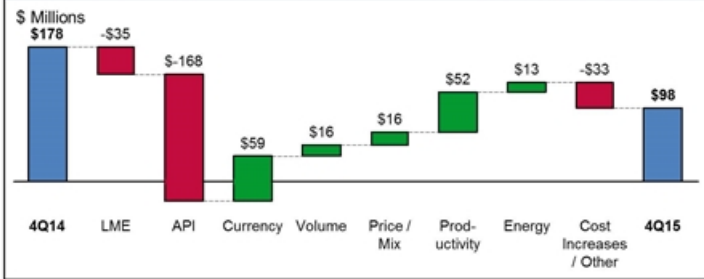
EPS = Engineered Products and Solutions GRP = Global Rolled Products
 TCS = Transportation and Construction Solutions

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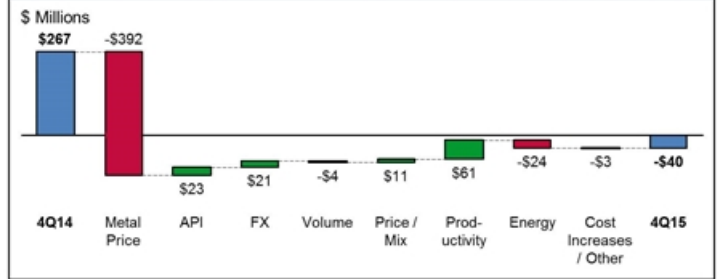
[Alcoa logo]

Upstream Co. Segment Bridges – 4Q 2015

Alumina Year-over-Year Bridge



Primary Metals Year-over-Year Bridge



Special Items

	Pre-tax, Before NCI		After-tax, After NCI		Income Statement Classification	Segment
	3Q15	4Q15	3Q15	4Q15		
\$ Millions, except per-share amounts						
Income from Continuing Operations	\$206	(\$520)	\$44	(\$500)		
Income per Diluted Share	-	-	\$0.02	(\$0.39)		
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
Special Items	(\$98)	(\$640)	(\$65)	(\$565)		
Income from Continuing Ops excl. Special Items	\$304	\$120	\$109	\$65		
Income per Diluted Share excl. Special Items	-	-	\$0.07	\$0.04		

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

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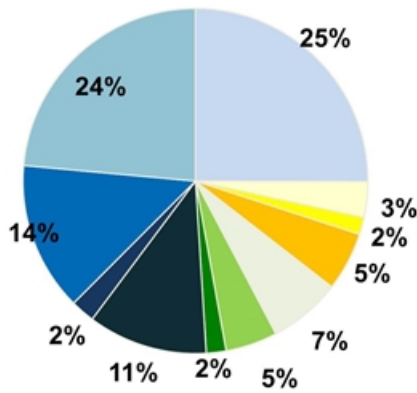
44

Revenue Change by Market - 4Q 2015

4Q15 Third-Party Revenue

Sequential Change

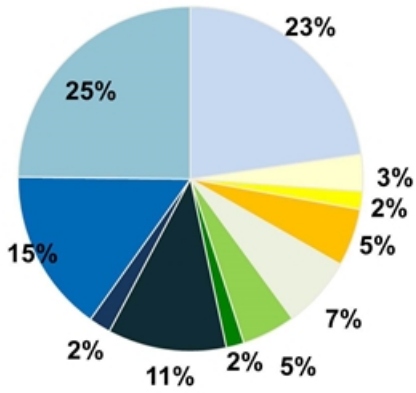
Year-Over-Year Change



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

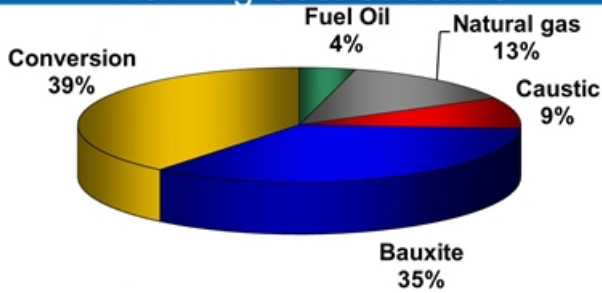


Year-Over-Year Change

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%)

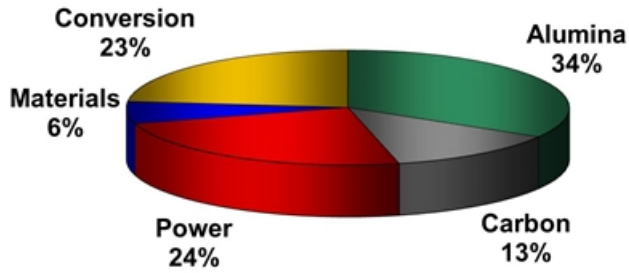
Composition of Upstream Production Costs

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 ¹	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

¹Natural 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 Capacity¹

Closed/sold since December 2007			Idled	
Facility	Year	kmt	Facility	kmt
Baie Comeau	2008	53	Rockdale	191
Eastalco	2010	195	Sao Luis	268
Badin	2010	60	Intalco	49
Warrick	2010	40	Wenatchee	184
Tennessee	2011	215	Aviles	32
Rockdale	2011	76	Portland	30
Baie Comeau	2013	105	La Coruna	24
Fusina	2013	44	Total	778
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		
Total		1,464		

Refining Capacity¹

Closed/sold since December 2007			Idled	
Facility	Year	kmt	Facility	kmt
Jamalco (sale of 55% interest)	2014	779	Suriname	2,207
Total		779	Point Comfort	670
			Total	2,877

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.

RECONCILIATIONS

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Reconciliation of ATOI to Consolidated Net (Loss) Income Attributable to Alcoa⁽¹⁾

(in millions)	1Q14	2Q14	3Q14	4Q14	2014	1Q15	2Q15	3Q15	4Q15	2015
Total segment ATOI ⁽²⁾	\$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 ⁽²⁾	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)

⁽¹⁾ In the third quarter of 2015, management approved a realignment of Alcoa's Engineered Products and Solutions segment due to the expansion of this part of Alcoa's business portfolio through both organic and inorganic growth. A portion of this realignment consisted of moving the Latin American 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.

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

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

(in millions)	1Q14	2Q14	3Q14	4Q14	2014	1Q15	2Q15	3Q15	4Q15	2015
Total segment ATOI ⁽²⁾	\$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 ⁽²⁾	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 ⁽³⁾	(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.

⁽¹⁾ In the third quarter of 2015, management approved a realignment of Alcoa's Engineered Products and Solutions segment due to the expansion of this part of Alcoa's business portfolio through both organic and inorganic growth. A portion of this realignment consisted of moving the Latin American 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.

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

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

Reconciliation of Adjusted Income (Loss)

(in millions, except per-share amounts)	Income (Loss)			Diluted EPS ⁽³⁾		
	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 ⁽¹⁾	16	4	187			
Other special items ⁽²⁾	57	31	72			
Net income attributable to Alcoa – as adjusted	\$432	\$109	\$65	0.33	0.07	0.04

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.

⁽¹⁾ 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).

⁽²⁾ 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).

⁽³⁾ 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 ⁽³⁾	
	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 ⁽¹⁾	33	186		
Other special items ⁽²⁾	112	87		
Net income attributable to Alcoa – as adjusted	\$1,116	\$787	0.92	0.56

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.

⁽¹⁾ 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).

⁽²⁾ 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).

⁽³⁾ 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
Adjusted EBITDA	\$3,362	\$5,422	\$4,795	\$3,313	\$359	\$2,704	\$3,260	\$2,105	\$2,546	\$3,556	\$3,248	\$1,073	\$698	\$519
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	\$1,092	\$1,666	\$1,564	\$1,239	\$282	\$752	\$1,161	\$505	\$749	\$911	\$1,384	\$355	\$376	\$218
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	\$1,413	\$2,786	\$2,313	\$1,572	\$(567)	\$1,147	\$1,138	\$552	\$475	\$1,319	\$566	\$460	\$3	\$21
Production (thousand metric tons) (kmt)	3,554	3,552	3,693	4,007	3,564	3,586	3,775	3,742	3,550	3,125	2,811	731	700	699
Adjusted EBITDA / Production (\$ per metric ton)	\$398	\$784	\$626	\$392	\$(159)	\$320	\$301	\$148	\$134	\$422	\$201	\$629	\$4	\$30

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

Reconciliation of Upstream⁽¹⁾ Adjusted EBITDA

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

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

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

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

Reconciliation of Global Rolled Products Adjusted EBITDA⁽¹⁾

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

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

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

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

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

(\$ in millions)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	4Q14	3Q15	4Q15
After-tax operating income (ATOI)	\$183	\$237	\$351	\$465	\$321	\$355	\$436	\$484	\$569	\$579	\$595	\$124	\$151	\$123
Add:														
Depreciation, depletion, and amortization	114	111	114	118	118	114	120	122	124	137	233	42	61	67
Income taxes	86	128	186	225	159	182	224	248	286	298	282	64	71	54
Other	(12)	2	2	2	2	—	—	—	—	—	—	(1)	—	—
Adjusted EBITDA	\$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%

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

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

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

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

(\$ in millions)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	4Q14	3Q15	4Q15
After-tax operating income (ATOI)	\$94	\$129	\$94	\$82	\$5	\$73	\$109	\$126	\$167	\$180	\$166	\$38	\$44	\$40
Add:														
Depreciation, depletion, and amortization	50	45	55	53	65	48	45	42	42	42	43	11	11	11
Equity loss (income)	–	6	–	–	(2)	(2)	(1)	–	–	–	–	–	–	–
Income taxes	30	27	7	–	(21)	18	38	49	67	69	63	14	18	14
Other	1	(4)	(10)	–	–	–	(1)	(9)	(2)	–	(1)	–	(1)	–
Adjusted EBITDA	\$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%

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

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

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

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

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

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

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

Reconciliation of Free Cash Flow

(in millions)	Year ended						Quarter ended		
	December 31, 2010	December 31, 2011	December 31, 2012	December 31, 2013	December 31, 2014	December 31, 2015	December 31, 2014	September 30, 2015	December 31, 2015
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 ⁽¹⁾	30-Jun-15 ⁽²⁾	30-Sep-15 ⁽²⁾	31-Dec-15 ⁽³⁾
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 ⁽¹⁾	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 ⁽²⁾	\$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).

⁽¹⁾ 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.

⁽²⁾ 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.

⁽³⁾ 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)

	December 31,					
	2010	2011	2012	2013	2014	2015
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	\$7,622	\$7,432	\$6,968	\$6,882	\$6,975	\$7,184

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

* 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.

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