

The Element of **Possibility**™

2nd Quarter Earnings

Alcoa Corporation

July 18, 2018



Update 7/19/18: This presentation originally **reported** \$(12)M for the 1H18 Actual Corporate inventory EBITDA impacts on slide 15; the correct amount is \$(1)M.

Cautionary statement regarding forward-looking statements

This presentation contains statements that relate to future events and expectations and as such constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include those containing such words as “anticipates,” “believes,” “could,” “estimates,” “expects,” “forecasts,” “goal,” “intends,” “may,” “outlook,” “plans,” “projects,” “seeks,” “sees,” “should,” “targets,” “will,” “would,” or other words of similar meaning. All statements by Alcoa Corporation that reflect 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 bauxite, alumina, and aluminum, and supply/demand balances; statements, projections or forecasts of future or targeted financial results or operating performance; and statements about strategies, outlook, and business and financial prospects. These statements reflect beliefs and assumptions that are based on Alcoa Corporation’s perception of historical trends, current conditions, and expected future developments, as well as other factors that management believes are appropriate in the circumstances. Forward-looking statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and changes in circumstances that are difficult to predict. Although Alcoa Corporation 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) material adverse changes in aluminum industry conditions, including global supply and demand conditions and fluctuations in London Metal Exchange-based prices and premiums, as applicable, for primary aluminum and other products, and fluctuations in indexed-based and spot prices for alumina; (b) deterioration in global economic and financial market conditions generally; (c) unfavorable changes in the markets served by Alcoa Corporation; (d) the impact of changes in foreign currency exchange rates on costs and results; (e) increases in energy costs; (f) declines in the discount rates used to measure pension liabilities or lower-than-expected investment returns on pension assets, or unfavorable changes in laws or regulations that govern pension plan funding; (g) the inability to achieve improvement in profitability and margins, cost savings, cash generation, revenue growth, fiscal discipline, or strengthening of competitiveness and operations anticipated from operational and productivity improvements, cash sustainability, technology advancements, and other initiatives; (h) the inability to realize expected benefits, in each case as planned and by targeted completion dates, from acquisitions, divestitures, facility closures, curtailments, restarts, expansions, or joint ventures; (i) political, economic, trade, and regulatory risks in the countries in which Alcoa Corporation operates or sells products; (j) labor disputes or work stoppages; (k) the outcome of contingencies, including legal proceedings, government or regulatory investigations, and environmental remediation; (l) the impact of cyberattacks and potential information technology or data security breaches; and (m) the other risk factors discussed in Item 1A of Alcoa Corporation’s Form 10-K for the fiscal year ended December 31, 2017 and other reports filed by Alcoa Corporation with the U.S. Securities and Exchange Commission (SEC). Alcoa Corporation disclaims any obligation to update publicly any forward-looking statements, whether in response to new information, future events or otherwise, except as required by applicable law. Market projections are subject to the risks discussed above and other risks in the market.

Important information (continued)



Non-GAAP financial measures

Some of the information included in this presentation is derived from Alcoa's consolidated financial information but is not presented in Alcoa's financial statements prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). Certain of these data are considered "non-GAAP financial measures" under SEC rules. Alcoa Corporation believes that the presentation of non-GAAP financial measures is useful to investors because such measures provide both additional information about the operating performance of Alcoa Corporation and insight on the ability of Alcoa Corporation to meet its financial obligations by adjusting the most directly comparable GAAP financial measure for the impact of, among others, "special items" as defined by the Company, non-cash items in nature, and/or nonoperating expense or income items. The presentation of non-GAAP financial measures is not intended to be a substitute for, and should not be considered in isolation from, the financial measures reported in accordance with GAAP. 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.

This presentation includes a range of forecasted 2018 Adjusted EBITDA for the Company. Alcoa Corporation has not provided a reconciliation of this forward-looking non-GAAP financial measure to the most directly comparable GAAP financial measure for the following reasons. The Company's financial results are heavily dependent on market-driven factors, such as LME-based prices for aluminum, index- and spot-based prices for alumina, and foreign currency exchange rates. As such, the Company may experience significant volatility on a daily basis related to its forecasted Adjusted EBITDA. Management applies estimated sensitivities, such as those relating to aluminum and alumina prices and foreign currency exchange rates, to the components that comprise Adjusted EBITDA. However, a similar analysis cannot be performed relating to the components necessary to reconcile Adjusted EBITDA to the most directly comparable GAAP financial measure without unreasonable effort due to the additional variability and complexity associated with forecasting such items. Consequently, management believes such reconciliation would imply a degree of precision that would be confusing and/or potentially misleading to investors.

Financial presentation information

On January 1, 2018, Alcoa Corporation adopted guidance issued by the Financial Accounting Standards Board to the presentation of net periodic benefit cost related to pension and other postretirement benefit plans. This guidance requires the non-service cost components of net periodic benefit cost to be reported separately from the service cost component in an entity's income statement. Additionally, this guidance is required to be applied retrospectively. Accordingly, previously reported amounts for Cost of goods sold, Selling, general administrative, and other expenses, and Other expenses (income), net on Alcoa Corporation's consolidated income statement have been recast to reflect these changes. As a result, previously reported amounts for Adjusted EBITDA on both a consolidated basis and for each of the Company's three segments have been updated to reflect these changes. See the appendix for additional information.

Glossary of terms

A glossary of abbreviations and defined terms used throughout this presentation can be found in the appendix.

Roy Harvey

President and Chief Executive Officer



Results driven by market factors; executing priorities



2Q18 Financial results and business update

2Q18 Financial results

- Net income of \$75 million, or \$0.39 per share; excluding special items, adjusted net income of \$286 million, or \$1.52 per share
- Adjusted EBITDA excluding special items of \$904 million
- Cash balance at \$1.1 billion on June 30, 2018

Business update

- One serious injury in 2Q18; continue to focus on fatality and injury prevention
- Reduced net pension liability by over \$600 million, through additional Canadian pension funding and \$500 million debt offering
- Warrick: two potlines restarted; third potline to complete restart by year-end
- Wenatchee: made \$62.4 million energy contract payment; closed one potline
- Launched Elysis joint venture to advance carbon-free aluminum smelting process
- For 2018, projecting global alumina, aluminum deficits and bauxite stockpile build
- Based on current market prices, tariff impacts and other factors, revised outlook for FY18 adjusted EBITDA excluding special items to \$3.0 to \$3.2 billion¹

William Oplinger

Executive Vice President and Chief Financial Officer



Revenue up 16% sequentially on higher market prices



Quarterly income statement

M, Except realized prices and per share amounts

	2Q17	1Q18	2Q18	Prior Year Change	Sequential Change
Realized primary aluminum price (\$/mt)	\$2,199	\$2,483	\$2,623	\$424	\$140
Realized alumina price (\$/mt)	\$314	\$385	\$467	\$153	\$82
Revenue	\$2,859	\$3,090	\$3,579	\$720	\$489
Cost of goods sold	\$2,289	\$2,381	\$2,632	\$343	\$251
SG&A and R&D expenses	\$78	\$75	\$73	\$(5)	\$(2)
Adjusted EBITDA	\$492	\$634	\$874	\$382	\$240
Depreciation, depletion and amortization	\$190	\$194	\$192	\$2	\$(2)
Other expenses, net	\$28	\$21	\$9	\$(19)	\$(12)
Interest expense	\$25	\$26	\$32	\$7	\$6
Restructuring and other charges	\$12	\$(19)	\$231	\$219	\$250
Tax provision	\$99	\$138	\$180	\$81	\$42
Net income	\$138	\$274	\$230	\$92	\$(44)
Less: Net income attributable to noncontrolling interest	\$63	\$124	\$155	\$92	\$31
Net income attributable to Alcoa Corporation	\$75	\$150	\$75	\$-	\$(75)
Diluted earnings per share	\$0.40	\$0.80	\$0.39	\$(0.01)	\$(0.41)
Diluted shares outstanding	186.4	188.5	188.7	2.3	0.2

Special items total \$211M



Breakdown of special items by income statement classification – gross basis

<i>M, Except per share amounts</i>	2Q17	1Q18	2Q18	Description of significant <u>2Q18</u> special items
Net income attributable to Alcoa Corporation	\$75	\$150	\$75	
Diluted earnings per share	\$0.40	\$0.80	\$0.39	
Special items	\$41	\$(5)	\$211	
<i>Cost of goods sold</i>	\$13	\$19	\$30	<i>Contractor arbitration loss</i>
<i>Restructuring and other charges</i>	\$12	\$(19)	\$231	<i>Pension annuitization in Canada, Wenatchee payment</i>
<i>Interest expense</i>	-	-	\$3	<i>Interest on contractor arbitration loss</i>
<i>Other expenses / (income), net</i>	\$18	\$(17)	\$6	<i>Mark-to-market energy contracts</i>
<i>Tax provision</i>	\$7	\$12	\$(46)	<i>Taxes on special items</i>
<i>Noncontrolling interest</i>	\$(9)	-	\$(13)	<i>Partner share of special items</i>
Adjusted net income attributable to Alcoa Corporation	\$116	\$145	\$286	
Adjusted diluted earnings per share	\$0.62	\$0.77	\$1.52	

Adjusted net earnings \$286 million; adjusted EPS \$1.52



Quarterly income statement excluding special items

M, Except realized prices and per share amounts

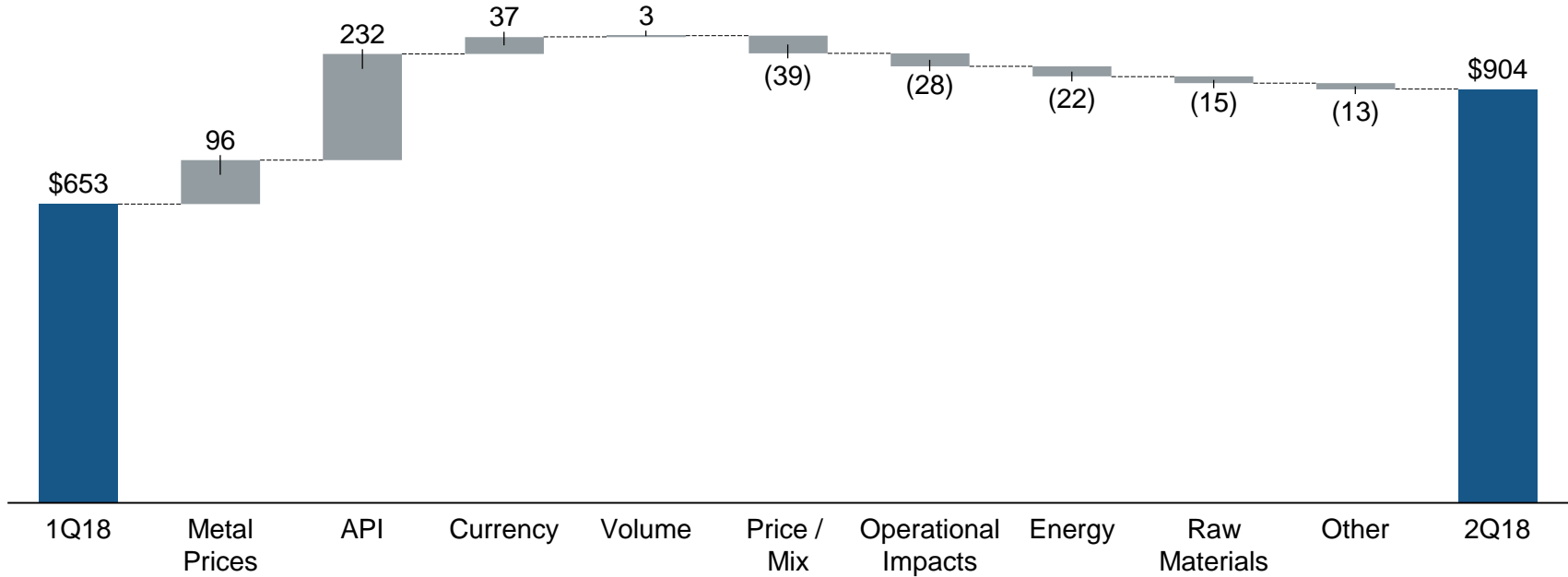
	2Q17	1Q18	2Q18
Realized primary aluminum price (\$/mt)	\$2,199	\$2,483	\$2,623
Realized alumina price (\$/mt)	\$314	\$385	\$467
Revenue	\$2,859	\$3,090	\$3,579
Cost of goods sold	\$2,276	\$2,362	\$2,602
COGS % of Revenue	79.6%	76.4%	72.7%
SG&A and R&D expenses	\$78	\$75	\$73
SG&A and R&D % of Revenue	2.7%	2.4%	2.0%
Adjusted EBITDA	\$505	\$653	\$904
Depreciation, depletion and amortization	\$190	\$194	\$192
Other expenses, net	\$10	\$38	\$3
Interest expense	\$25	\$26	\$29
Tax provision	\$92	\$126	\$226
Operational tax rate	32.8%	31.9%	33.3%
Adjusted net income	\$188	\$269	\$454
Less: Net income attributable to noncontrolling interest	\$72	\$124	\$168
Adjusted net income attributable to Alcoa Corporation	\$116	\$145	\$286
Adjusted diluted earnings per share	\$0.62	\$0.77	\$1.52
Diluted shares outstanding	186.4	188.5	188.7

Prior Year Change	Sequential Change
\$424	\$140
\$153	\$82
\$720	\$489
\$326	\$240
(6.9)% pts.	(3.7)% pts.
\$(5)	\$(2)
(0.7)% pts.	(0.4)% pts.
\$399	\$251
\$2	\$(2)
\$(7)	\$(35)
\$4	\$3
\$134	\$100
0.5% pts.	1.4% pts.
\$266	\$185
\$96	\$44
\$170	\$141
\$0.90	\$0.75
2.3	0.2

Adjusted EBITDA increase led by favorable market factors



Adjusted EBITDA excluding special items sequential changes, \$M

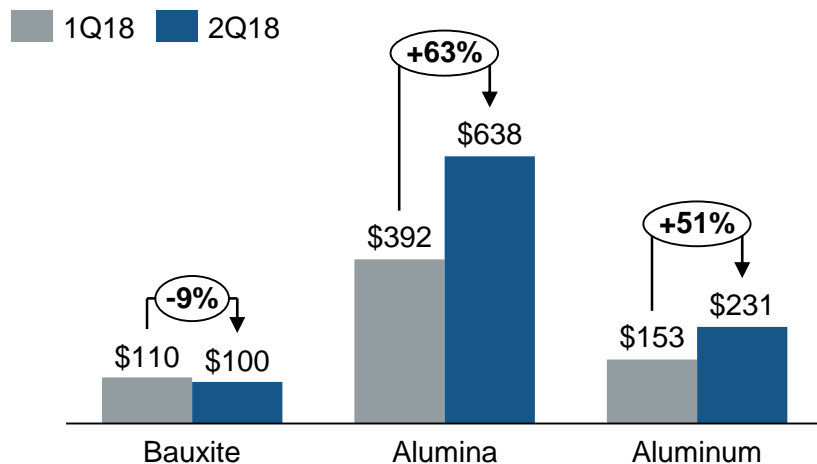


Alumina, Aluminum segments see gains on higher prices



Adjusted EBITDA excluding special items breakdown

Segment information, \$M



2Q18 Segment Adj. EBITDA Margin %

Bauxite 33.0% Alumina 39.8% Aluminum 9.6%

Change vs. 1Q18, Margin %

Bauxite -4.2% pts. Alumina 11.1% pts. Aluminum 2.4% pts.

Total Adjusted EBITDA information, \$M

	1Q18	2Q18	Change
Segment total	\$655	\$969	\$314
Transformation	(2)	(1)	1
Corporate inventory accounting ¹	31	(32)	(63)
Other corporate	(31)	(32)	(1)
Total Adjusted EBITDA	\$653	\$904	\$251

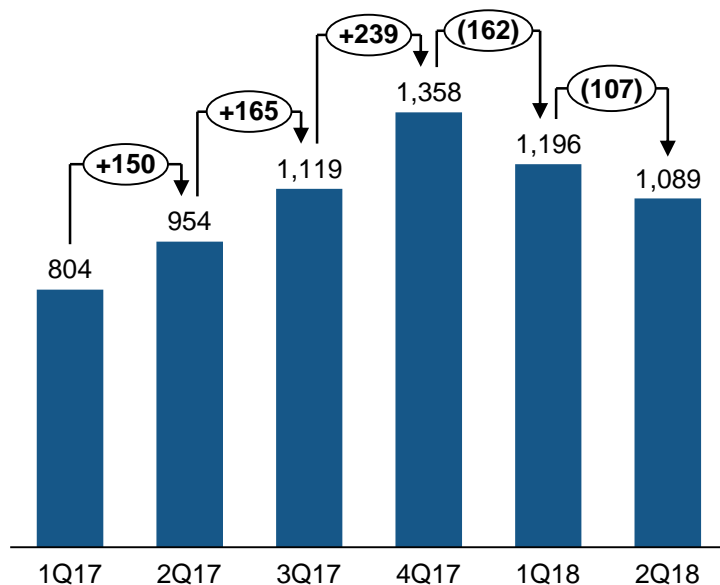
1. Includes intercompany eliminations, and impact from both LIFO and metal price lag.

Cash at \$1.1 billion after pension, Wenatchee payments



Quarterly cash comparison and cash flows, \$M

Quarter ending cash balance



Free cash flow and change in cash

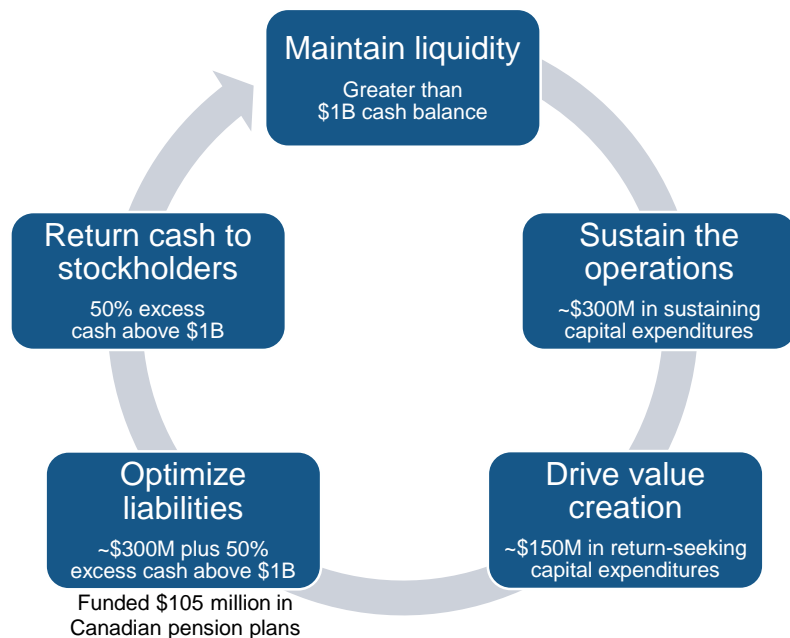
	2Q17	3Q17	4Q17	1Q18	2Q18
Cash from (used for) operations	\$311	\$384	\$455	\$55	\$(430)
Capital expenditures	(88)	(96)	(150)	(74)	(95)
Free cash flow	\$223	\$288	\$305	\$(19)	\$(525)

	2Q17	3Q17	4Q17	1Q18	2Q18
Cash from (used for) operations	\$311	\$384	\$455	\$55	\$(430)
Cash from (used for) financing	(78)	(115)	(53)	(147)	433
Cash from (used for) investing	(94)	(104)	(170)	(74)	(100)
Effect of exchange rate changes on cash	4	(4)	7	4	(11)
Net change in restricted cash	7	4	-	-	1
Net change in cash	\$150	\$165	\$239	\$(162)	\$(107)

Capital allocation plan in process; reducing net leverage



Capital allocation and key financial metrics as of June 30, 2018



Cash
\$1,089M

2Q18 Days working capital
24 Days

1H18 Capital expenditures ¹
\$169M

1H18 Annualized return on capital
11.5%

Net debt-to-LTM adjusted EBITDA
0.30x

Pension & OPEB net liability ²
\$2.7B

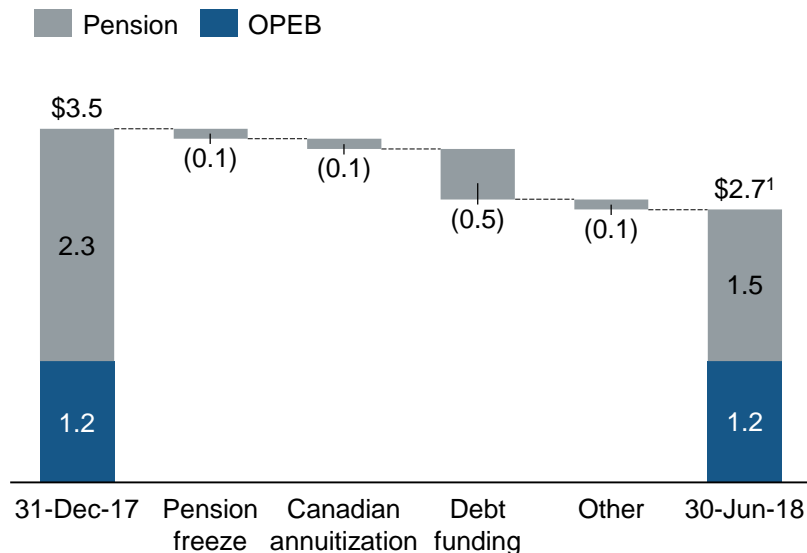
- \$39M in return-seeking capital expenditures and \$130M in sustaining capital expenditures
- U.S. salaried pension and OPEB plans remeasured as of January 31, 2018 due to retirement benefit changes. Certain Canadian pension plans remeasured as of March 31, 2018 due to annuitization.

Several actions address pension net liability in 1H18



1H18 Pension & OPEB net liability overview

Net liability bridge, \$B



Actions

- Pension freeze for U.S. and Canadian salaried employees announced in January, effective January 1, 2021
- Announced elimination of contribution toward U.S. salaried pre-Medicare retirees in January, also effective January 1, 2021
- Annuitization of certain Canadian pension benefits, and transfer of \$560 million in gross liability in April; contributed an additional \$105 million
- Additional contribution of \$500 million to U.S. pension plans in May (gross proceeds of recent debt offering)

1. Does not include upcoming 2018 year-end remeasurements for demographic changes, discount rate impacts or asset performance.

FY18 Key metrics

Total shipments		
	1H18 Actual	FY18 Outlook
Bauxite (Mdmt)	23.1	47.5 – 48.5
Alumina (Mmt)	6.8	13.7 – 13.9
Aluminum (Mmt)	1.6	3.1 – 3.3

Cash flow impacts		
	1H18 Actual	FY18 Outlook
Minimum required pension/OPEB funding	\$143M	~ \$425M
Additional pension funding	\$605M	~ \$700M
Return-seeking capital expenditures ²	\$39M	~ \$120M
Sustaining capital expenditures ²	\$130M	~ \$300M
DOJ / SEC (final payment January 2018)	\$74M	\$74M
Environmental and ARO payments ³	\$53M	\$110M – \$130M

Adjusted EBITDA excl. special items impacts		
	1H18 Actual	FY18 Outlook
Adjusted EBITDA excl. special items	\$1.6B	\$3.0 – \$3.2B ¹
Transformation EBITDA impacts	\$(3)M	~ \$(30)M
Corporate inventory EBITDA impacts	\$(1)M*	~ \$0M
Other corporate EBITDA impacts	\$(63)M	~ \$(140)M

Other income statement excl. special items impacts		
	1H18 Actual	FY18 Outlook
Non-operating pension/OPEB expense	\$77M	~ \$150M
Depreciation, depletion and amortization	\$386M	~ \$775M
Interest expense	\$55M	~ \$120M
Operational tax rate	32.8%	~ 35%
Net income of noncontrolling interest	\$292M	40% of AWAC NI

1. Based on actual YTD 2018 results; outlook for unpriced sales at \$2,100 LME, \$465 API, \$0.20 Midwest premium and updated regional premiums and currencies. Includes approximately \$0.1B of impact from U.S. tariffs for last seven months of 2018.
2. AWAC portion of FY18 Outlook: ~45% of return-seeking capital expenditures, and ~60% of sustaining capital expenditures
3. As of June 30, 2018, the environmental remediation reserve balance was \$291M and the ARO liability was \$663M.

*This presentation originally reported \$(12)M for the 1H18 Actual Corporate inventory EBITDA impacts; the correct amount is \$(1)M, as stated on this slide.

Roy Harvey

President and Chief Executive Officer



Increasing aluminum deficit projection for 2018



Projected 2018 market balances

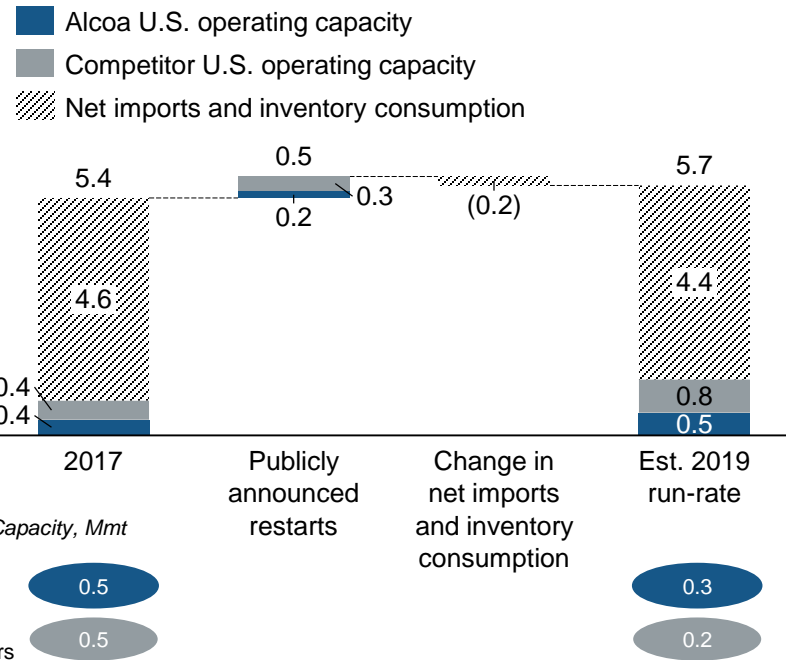
	Bauxite (3 rd -party seaborne)	Alumina (smelter grade)	Aluminum (primary)
2018 Outlook	Surplus	Deficit	Deficit
2018 Supply/Demand Balance, Mmt			
Global	3 to 11; stockpile growth	-1.0 to -0.2; deficit	-1.5 to -1.1; deficit
China	-70 to -68; deficit	-1.2 to -0.8; deficit	0.7 to 0.9; surplus
World ex-China	73 to 79; surplus	0.2 to 0.6; surplus	-2.2 to -2.0; deficit
2018 Notes	Guinea supply growth	Balances before Chinese alumina imports of 0.5 Mmt	Demand growth, 2018 vs. 2017 <ul style="list-style-type: none"> • Global = 4.25 to 5.25% • China = 5.75 to 6.25% • World ex-China = 3.25 to 3.75%

Tariffs drive limited smelter restarts, imports remain vital



U.S. Primary aluminum market estimates and update

Est. U.S. Primary aluminum supply, Mmt



Challenges and solutions for U.S. smelting

U.S. remains an import market

- 232 tariffs supported restart of 0.3 Mmtpa of curtailed U.S. competitors' capacity in 5.7 Mmtpa U.S. market
- Alcoa's Warrick restart based on integrated site cost efficiencies; Alcoa has remaining curtailed capacity at Wenatchee, Warrick and Intalco
- If all remaining curtailed U.S. capacity restarts, U.S. will still import ~4 Mmtpa, ~60% from Canada

232 tariffs yield mixed results

- U.S. aluminum producers benefit from higher premiums
- Distorts market by bringing aged, inefficient capacity on line; newest U.S. smelter is ~40 years old
- Increases costs for U.S. downstream manufacturers

What would make aluminum investment attractive

- Lower capital investment requirements, long-term energy solutions and competitive regulatory environment

New R&D joint venture focused on carbon-free aluminum



Overview of Elysis

Joint venture description

- Alcoa, Rio Tinto, the Government of Canada, the Government of Quebec and Apple agree to provide a combined investment of \$188 million (CAD) into the joint venture
- Patent-protected technology eliminates all direct greenhouse gas emissions from the traditional smelting process
- Elysis will drive larger scale development and commercialization of the process, with a technology package planned for sale beginning in 2024

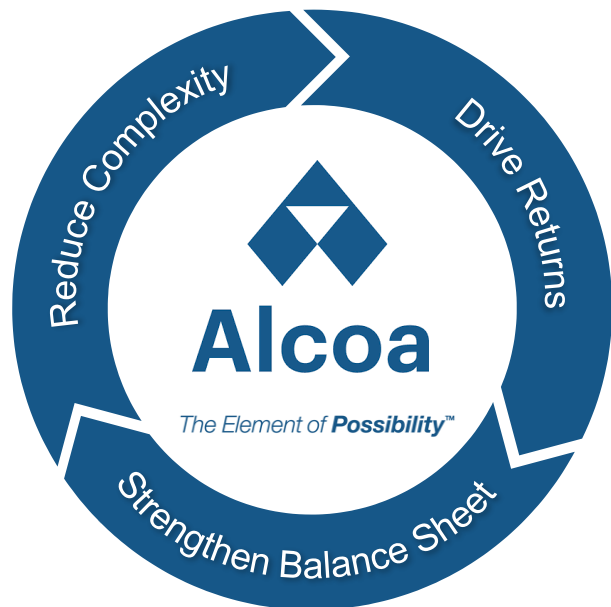


Focused on executing priorities and capital allocation plan



2Q18 Summary

Strategic priorities



2Q18 Review

Constructive market factors drove over \$250 million in adj. EBITDA growth

FY18 adjusted EBITDA outlook excluding special items of \$3.0 to \$3.2B¹

De-risking balance sheet; pension and OPEB actions aligned to capital allocation framework

1. Based on actual YTD 2018 results; outlook for unpriced sales at \$2,100 LME, \$465 API, \$0.20 Midwest premium and updated regional premiums and currencies.

Questions?

Alcoa Corporation



Appendix



2Q18 Financial summary



Three months ending June 30, 2018, excluding special items

\$M	Bauxite	Alumina	Aluminum ^{4,5}	Transformation	Corporate inventory accounting	Other corporate	Alcoa Corporation
Total revenue ¹	\$303	\$1,604	\$2,417	\$23	\$(768)	-	\$3,579
Third-party revenue	\$77	\$1,068	\$2,413	\$21	-	-	\$3,579
Adjusted EBITDA ²	\$100	\$638	\$231	\$(1)	\$(32)	\$(32)	\$904
<i>Adjusted EBITDA margin %</i>	<i>33.0%</i>	<i>39.8%</i>	<i>9.6%</i>				<i>25.3%</i>
Depreciation, depletion and amortization	\$27	\$49	\$108	\$1	-	\$7	\$192
Other expenses / (income), net ³	-	\$(14)	\$8	-	-	\$9	\$3
Interest expense							\$29
Provision for income taxes							\$226
Adjusted net income							\$454
Net income attributable to noncontrolling interest							\$168
Adjusted net income attributable to Alcoa Corp.							\$286

1. Intersegment eliminations included in Corporate inventory accounting.
2. Includes the Company's proportionate share of earnings from equity investments in certain bauxite mines, hydroelectric generation facilities, and an aluminum smelter located in Brazil, Canada, and/or Guinea.
3. Amounts for Alumina and Aluminum represent the Company's proportionate share of earnings from its equity investment in the Saudi Arabian joint venture.
4. Flat-rolled aluminum shipments, revenue and adjusted EBITDA were 0.14 Mmt, \$516M and \$0M, respectively.
5. Third-party energy sales volume, revenue and adjusted EBITDA in Brazil were 872 GWh, \$49M and \$25M, respectively.

2Q18 Adjusted EBITDA drivers by segment



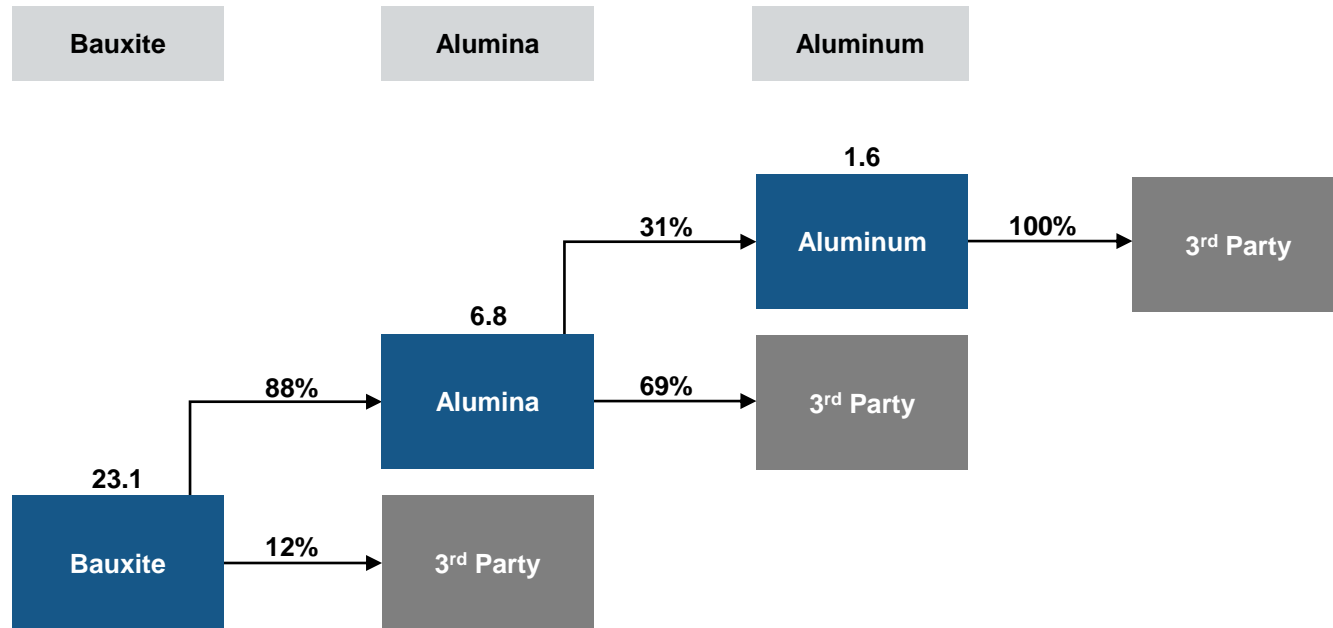
Adjusted EBITDA excl. special items sequential changes by segment, \$M

Segment	Adj. EBITDA 1Q18	Metal Prices	API	Currency	Volume	Price/Mix	Op. Impacts	Energy	Raw Materials	Other	Adj. EBITDA 2Q18
Bauxite	\$110	-	-	6	4	(6)	(8)	-	-	(6)	\$100
Alumina	\$392	-	292	28	(17)	(30)	(14)	(5)	(5)	(3)	\$638
Aluminum	\$153	96	20	3	16	(3)	(6)	(17)	(10)	(21)	\$231
Segment Total	\$655	96	312	37	3	(39)	(28)	(22)	(15)	(30)	\$969

Aluminum value chain



1H18 Alcoa product shipments by segment, Mmt

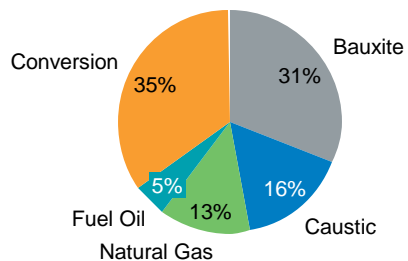


Composition of alumina and aluminum production costs



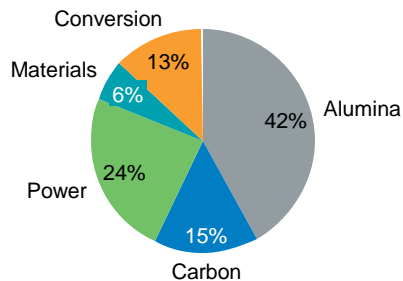
Alcoa 2Q18 production cash costs

Alumina refining



Input Cost	Inventory Flow	Pricing Convention	Estimated Annual Cost Sensitivity
Caustic Soda	5 - 6 Months	Quarterly	\$9M per \$10/dmt
Natural Gas ¹	N/A	N/A	N/A
Fuel Oil	1 - 2 Months	Prior Month	\$3M per \$1/bbl

Aluminum smelting



Input Cost	Inventory Flow	Pricing Convention	Estimated Annual Cost Sensitivity
Alumina	~2 Months	30-day lag to API	\$43M per \$10/mt
Petroleum Coke	1 - 2 Months	Spot, Quarterly & Semi-annual	\$7M per \$10/mt
Coal Tar Pitch	1 - 2 Months	Spot, Quarterly & Semi-annual	\$1.5M per \$10/mt

1. Australia is priced on a rolling 16 quarter average.

Estimated annual Adjusted EBITDA sensitivities

<i>\$M</i>	LME	API	Midwest	Europe	Japan	AUD + 0.01 USD/AUD	BRL + 0.10 BRL/USD	CAD + 0.01 CAD/USD	EUR + 0.01 USD/EUR	ISK + 10 ISK/USD	NOK + 0.10 NOK/USD
Segment	+ \$100/mt	+ \$10/mt	+ \$100/mt	+ \$100/mt	+ \$100/mt						
Bauxite						(3)	4				
Alumina		119				(16)	6		(1)		
Aluminum	203	(39)	106	102	24	(1)	(3)	3	(4)	6	3
Total	203	80	106	102	24	(20)	7	3	(5)	6	3

Pricing conventions

Segment	3 rd -Party Revenue
Bauxite	<ul style="list-style-type: none"> Negotiated prices
Alumina	<ul style="list-style-type: none"> ~95% of third-party smelter grade alumina priced on API/spot API based on prior month average of spot prices
Aluminum	<ul style="list-style-type: none"> LME + Regional Premium + Product Premium Primary aluminum 15-day lag; flat rolled aluminum 30-day lag Brazilian hydroelectric sales at market prices

Regional premium breakdown

Regional premiums	% of 2018 Primary aluminum shipments
Midwest ¹	~45%
Rotterdam Duty Paid	~45%
CIF Japan	~10%

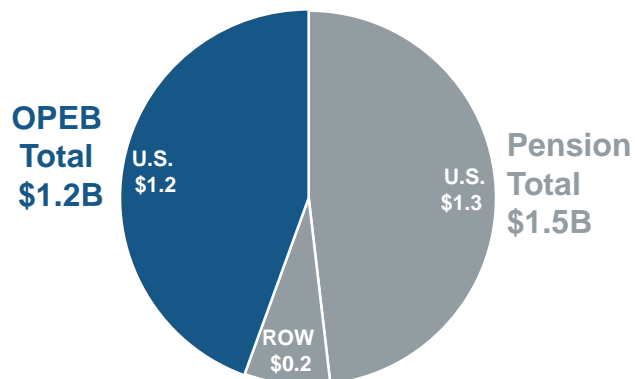
1. ~90% of non-U.S. sourced Midwest sales are subject to U.S. tariffs or sold duty unpaid.

Pension and OPEB summary



Pension and OPEB net liability and financial impacts

Net liability as of June 30, 2018¹



Pension funding status as of December 31, 2017

- U.S. ERISA ~83%
- GAAP Worldwide ~70%

U.S. pension contributions currently not tax deductible

Estimated financial impacts, \$M

Expense impact	2018
Segment pension	\$55
Segment OPEB	\$5
Corporate pension & OPEB	\$5
Total adj. EBITDA impact	\$65
Non-operating	\$150
Special items ² (curtailment/settlement)	\$144
Total expense impact	\$359

Cash flow impact	2018
Minimum required pension funding	\$300
Additional pension funding	\$700
OPEB payments	\$125
Total cash impact	\$1,125

1. U.S. salaried pension and OPEB plans remeasured as of January 31, 2018 due to plan changes. Certain Canadian pension plans remeasured as of March 31, 2018 due to annuitization. All other pension and OPEB valuations as of December 31, 2017.
2. Includes impacts from U.S. and Canadian pension and OPEB plan changes announced in January, and impact from annuitization of certain Canadian pension plan obligations completed in April.

Investments summary



Investee	Country	Nature of Investment ⁴	Ownership Interest	Carrying Value as of June 30, 2018	P&L Location of Equity Earnings
Elysis Limited Partnership	Canada	Aluminum smelting technology	48.235%		
Ma'aden Aluminum Company ¹	Saudi Arabia	Aluminum smelter	25.1%		
Ma'aden Bauxite and Alumina Company ¹	Saudi Arabia	Bauxite mine and Alumina refinery	25.1% ⁵		
Ma'aden Rolling Company ¹	Saudi Arabia	Aluminum rolling mill	25.1%		
Subtotal Ma'aden and Elysis				\$893M	Other expenses / (income), net
Consortio Serra do Facão	Brazil	Hydroelectric generation facility	34.97%		
Energetica Barra Grande S.A.	Brazil	Hydroelectric generation facility	42.18%		
Halco Mining, Inc. ²	Guinea	Bauxite mine	45% ⁵		
Manicouagan Power Limited Partnership	Canada	Hydroelectric generation facility	40%		
Mineração Rio do Norte S.A. (MRN)	Brazil	Bauxite mine	18.2% ⁵		
Pechiney Reynolds Quebec, Inc. ³	Canada	Aluminum smelter	50%		
Subtotal other				\$497M	COGS
Total investments				\$1,390M	

- Alcoa Corporation has an investment in a joint venture related to the ownership and operation of an integrated aluminum complex (bauxite mine, alumina refinery, aluminum smelter, and rolling mill) in Saudi Arabia. The joint venture is owned 74.9% by the Saudi Arabian Mining Company (known as "Ma'aden") and 25.1% by Alcoa Corporation.
- Halco Mining, Inc. owns 100% of Boké Investment Company, which owns 51% of Compagnie des Bauxites de Guinée (CBG).
- Pechiney Reynolds Quebec, Inc. owns a 50.1% interest in the Bécancour smelter in Quebec, Canada thereby entitling Alcoa Corporation to a 25.05% interest in the smelter. Through two wholly-owned Canadian subsidiaries, Alcoa Corporation also owns 49.9% of the Bécancour smelter.
- Each of the investees either owns the facility listed or has an ownership interest in an entity that owns the facility listed.
- A portion or all of each of these ownership interests are held by majority-owned subsidiaries that are part of AWAC.

Production and capacity information



Alcoa Corporation annual consolidated amounts

Bauxite production, Mdmt

Mine	Country	2017 Production
Darling Range	Australia	33.2
Juruti	Brazil	5.6
Poços de Caldas	Brazil	0.2
Trombetas (MRN)	Brazil	2.7
Boké (CBG)	Guinea	3.2
Al Ba'itha ¹	Saudi Arabia	0.9
Total		45.8

Alumina refining, kmt

Facility	Country	Capacity	Curtailed
Kwinana	Australia	2,190	-
Pinjarra	Australia	4,234	-
Wagerup	Australia	2,555	-
Poços de Caldas	Brazil	390	214
São Luís (Alumar)	Brazil	1,890	-
San Ciprián	Spain	1,500	-
Point Comfort	U.S.	2,305	2,305
Total		15,064	2,519
<i>Ras Al Khair¹</i>	<i>Saudi Arabia</i>	<i>452</i>	<i>-</i>

Aluminum smelting, kmt

Facility	Country	Capacity	Curtailed
Portland	Australia	197	30
São Luís (Alumar)	Brazil	268	268
Baie Comeau	Canada	280	-
Bécancour	Canada	310	207
Deschambault	Canada	260	-
Fjarðaál	Iceland	344	-
Lista	Norway	94	-
Mosjøen	Norway	188	-
Avilés	Spain	93	32
La Coruña	Spain	87	24
San Ciprián	Spain	228	-
Intalco	U.S.	279	49
Massena West	U.S.	130	-
Warrick ²	U.S.	269	161
Wenatchee ³	U.S.	146	146
Total		3,173	917
<i>Ras Al Khair¹</i>	<i>Saudi Arabia</i>	<i>186</i>	<i>-</i>

1. The Company's proportionate share of earnings from its equity investment in the Saudi Arabian joint venture does not impact adjusted EBITDA.
2. In second quarter 2018, Alcoa completed the restart of two (108 kmt) of the three potlines included in the partial restart plan for the Warrick smelter. On May 28, the Company announced that the third (53 kmt) line scheduled for restart had been shut down due to a temporary power outage. The Company expects to complete the restart of the third potline by the end of 2018.
3. In June 2018, the Company announced that it was permanently closing one (38 kmt) of four potlines at the Wenatchee smelter.

Adjusted EBITDA reconciliation



<i>\$M</i>	2Q17	1Q18	2Q18	LTM
Net income attributable to Alcoa Corporation	\$75	\$150	\$75	\$142
Add:				
Net income attributable to noncontrolling interest	63	124	155	475
Provision for income taxes	99	138	180	709
Other expenses, net	28	21	9	108
Interest expense	25	26	32	111
Restructuring and other charges	12	(19)	231	499
Depreciation, depletion and amortization	190	194	192	767
Adjusted EBITDA	492	634	874	2,811
Special items before tax and noncontrolling interest	13	19	30	124
Adjusted EBITDA excl. special items	\$505	\$653	\$904	\$2,935

Alcoa Corporation's definition of Adjusted EBITDA 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 Corporation'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.

Special items detail, net of tax and noncontrolling interest



<i>\$M</i>	2Q17	1Q18	2Q18	P&L classification
Special items	\$41	\$(5)	\$211	
Contractor arbitration loss	-	-	15	Cost of goods sold
Warrick smelter restart costs	-	16	2	Cost of goods sold
Bécancour lockout related costs	-	2	2	Cost of goods sold
Portland restart power exposure	6	-	-	Cost of goods sold
Contractor arbitration loss	-	-	2	Interest
Mark-to-market energy contracts	6	(17)	6	Other expenses / (income), net
Restructuring-related items	11	(20)	187	Restructuring and other charges
Income tax items	18	14	(3)	Tax provision

Free Cash Flow reconciliation



<i>\$M</i>	2Q17	3Q17	4Q17	1Q18	2Q18
Cash from operations	\$311	\$384	\$455	\$55	\$(430) ¹
Capital expenditures	(88)	(96)	(150)	(74)	(95)
Free cash flow	\$223	\$288	\$305	\$(19)	\$(525)

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, which are both considered necessary to maintain and expand Alcoa Corporation's asset base, and 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.

1. Cash from operations for the quarter ended June 30, 2018 includes a \$500 million cash outflow for discretionary contributions made to three of Alcoa Corporation's U.S. defined benefit pension plans. The \$500 million was funded with the gross proceeds of 6.125% Senior notes due 2028 issued in May 2018.

Net Debt reconciliation



<i>\$M</i>	1Q18	2Q18
Long-term debt due within one year	\$15	\$13
Long-term debt, less amount due within one year	1,445	1,916
Total debt ¹	1,460	1,929
Less: Cash and cash equivalents	1,196	1,089
Net debt	\$264	\$840

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

1. Total debt as of June 30, 2018 includes \$500 million aggregate principal amount of 6.125% senior notes due 2028 issued in May 2018, the gross proceeds of which were used to make discretionary contributions to three of Alcoa Corporation's U.S. defined benefit pension plans.

Days Working Capital



<i>\$M</i>	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18
Receivables from customers	\$708	\$789	\$840	\$811	\$814	\$1,025
Add: Inventories	1,294	1,287	1,323	1,453	1,630	1,668
Less: Accounts payable, trade	1,434	1,508	1,618	1,898	1,813	1,752
DWC working capital	\$568	\$568	\$545	\$366	\$631	\$941
Sales	\$2,655	\$2,859	\$2,964	\$3,174	\$3,090	\$3,579
Number of days in the quarter	90	91	92	92	90	91
Days Working Capital ¹	19	18	17	11	18	24

1. Days Working Capital = DWC working capital divided by (sales / number of days in the quarter).

Annualized Return on Capital



Reconciliation and calculation information

<i>\$M</i>	1H17	1H18
<i>Numerator:</i>		
Net income attributable to Alcoa Corporation	300	225
Add: Net income attributable to noncontrolling interest	146	279
Add: Provision for income taxes	209	318
Profit before taxes (PBT)	655	822
Add: Interest expense	51	58
Less: Interest income	5	7
Add: Special items ¹	(71)	250
ROC earnings before taxes	630	1,123
ROC earnings before taxes multiplied by two	1,260	2,246
ROC earnings after fixed tax rate of 35%	819	1,460
<i>Denominator²:</i>		
Total assets	17,003	16,807
Less: Cash, cash equivalents, restricted cash and short-term investments	896	1,150
Less: Current liabilities	2,616	2,995
Add: Long-term debt due within one year and short-term borrowings	23	14
Average capital base²	13,514	12,676
ROC	6.1%	11.5%

$$\text{ROC \%} = \frac{(\text{PBT} + \text{net interest}^3 + \text{special items}) \times 2 \times (1 - \text{fixed tax rate}^4)}{(\text{Total assets} - \text{cash}^5 - \text{current liabilities} + \text{short-term debt})} \times 100$$

$$\text{1H17 ROC \%} = \frac{(\$655 + \$46 - \$71) \times 2 \times (1 - 0.35)}{(\$17,003 - \$896 - \$2,616 + \$23)} \times 100 = 6.1\%$$

$$\text{1H18 ROC \%} = \frac{(\$822 + \$51 + \$250) \times 2 \times (1 - 0.35)}{(\$16,807 - \$1,150 - \$2,995 + \$14)} \times 100 = 11.5\%$$

1. Special items are before taxes and noncontrolling interest.
2. Denominator calculated using quarter ending balances.
3. Interest expense less interest income.
4. Fixed tax rate of 35%.
5. Defined as cash, cash equivalents, restricted cash and short-term investments.

Abbreviations listed in alphanumeric order

Abbreviation	Description
% pts	Percentage points
1H##	Six months ending June 30
1Q##	Three months ending March 31
2H##	Six months ending December 31
2Q##	Three months ending June 30
3Q##	Three months ending September 30
4Q##	Three months ending December 31
Adj.	Adjusted
API	Alumina Price Index
ARO	Asset retirement obligations
AUD	Australian dollar
AWAC	Alcoa World Alumina and Chemicals
B	Billion
bbl	Barrel
BRL	Brazilian real
CAD	Canadian dollar
CIF	Cost, insurance and freight
COGS	Cost of goods sold
dmt	Dry metric ton
DOJ	Department of Justice
DWC	Days working capital
EBITDA	Earnings before interest, taxes, depreciation and amortization
EPS	Earnings per share
ERISA	Employee Retirement Income Security Act of 1974
EUR	Euro
Est.	Estimated
excl. or ex.	Excluding
FOB	Free on board
FY##	Twelve months ending December 31

Abbreviation	Description
GAAP	Accounting principles generally accepted in the United States of America
GWh	Gigawatt hour
ISK	Icelandic krona
kmt	Thousand metric tons
LIFO	Last in first out method of inventory accounting
LME	London Metal Exchange
LTM	Last twelve months
M	Million
Mdmt	Million dry metric tons
Mmt	Million metric tons
Mmtpa	Million metric tons per annum
Mt	Metric ton
MWP	Midwest premium
N/A	Not applicable
NCI	Noncontrolling interest
NI	Net income
NOK	Norwegian krone
Op.	Operational
OPEB	Other postretirement employee benefits
P&L	Profit and loss
PBT	Profit before taxes
R&D	Research and development
ROC	Return on capital
ROW	Rest of world
SEC	Securities and Exchange Commission
SG&A	Selling, general administrative and other
U.S.	United States of America
USD	United States dollar
YTD	Year-to-date

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