The Element of **Possibility**™

Alcoa Corporation

Investor Presentation

September 2021



Important information

Cautionary statement regarding forward-looking statements

This presentation may contain 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 or sustainability performance; statements about strategies, outlook, and business and financial prospects; and statements about capital allocation and return of capital. 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) current and potential future impacts of the coronavirus (COVID-19) pandemic on the global economy and our business, financial condition, results of operations, or cash flows and judgments and assumptions used in our estimates; (b) 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; (c) deterioration in global economic and financial market conditions generally and which may also affect Alcoa Corporation’s ability to obtain credit or financing upon acceptable terms or at all; (d) unfavorable changes in the markets served by Alcoa Corporation; (e) the impact of changes in foreign currency exchange and tax rates on costs and results; (f) increases in energy or raw material costs or uncertainty of energy supply or raw materials; (g) declines in the discount rates used to measure pension and other postretirement benefit liabilities or lower-than-expected investment returns on pension assets, or unfavorable changes in laws or regulations that govern pension plan funding; (h) the inability to achieve improvement in profitability and margins, cost savings, cash generation, revenue growth, fiscal discipline, sustainability targets, or strengthening of competitiveness and operations anticipated from portfolio actions, operational and productivity improvements, technology advancements, and other initiatives; (i) the inability to realize expected benefits, in each case as planned and by targeted completion dates, from acquisitions, divestitures, restructuring activities, facility closures, curtailments, restarts, expansions, or joint ventures; (j) political, economic, trade, legal, public health and safety, and regulatory risks in the countries in which Alcoa Corporation operates or sells products; (k) labor disputes and/or work stoppages; (l) the outcome of contingencies, including legal and tax proceedings, government or regulatory investigations, and environmental remediation; (m) the impact of cyberattacks and potential information technology or data security breaches; (n) risks associated with long-term debt obligations; and (o) the other risk factors discussed in Part I Item 1A of Alcoa Corporation’s Annual Report on Form 10-K for the fiscal year ended December 31, 2020 and other reports filed by Alcoa Corporation with the U.S. Securities and Exchange Commission. 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 described above and other risks in the market.

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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. 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.

Glossary of terms

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

Resources

This presentation can be found under the "Events and Presentations" tab of the "Investors" section of the Company's website, www.alcoa.com.

A global, values-driven aluminum industry leader

Alcoa global operations by business segment



OUR VALUES

Act with Integrity

Operate with Excellence

Care for People

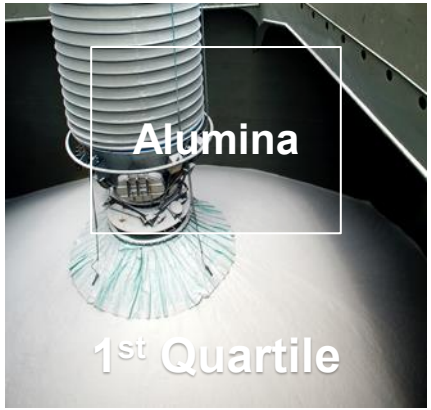


Well positioned across three product segments

Alcoa portfolio position



- World's second largest miner with assets across four continents
- World class mine rehabilitation
- Best-in-class mining methods in high biodiversity areas



- Largest third-party alumina producer
- Lowest CO_2e intensity refiner; sustainable residue management and press filtration
- EcoSource™ low carbon alumina



- Driving for 1st quartile through portfolio improvement
- Low CO_2e intensity producer, 78% of production from renewable energy (targeting 85%)
- EcoLum™ (low carbon), EcoDura™ (recycled content) products

Source: CRU and Alcoa analysis

Continual improvement since becoming standalone entity

Actions to improve Alcoa, 2017 – 2021

2017 – 2020

Operating Safely and Efficiently

- Revitalized safety program; maintained comprehensive COVID-19 preparedness and response plan
- Implemented new operating model and announced $60M annual savings starting in 2Q20
- Modernized labor contracts in Canada, U.S. and Australia

Advancing Financial Longevity

- Froze salaried pension plan as of Jan. 1, 2021; prefunded pension with $500M debt issue in July 2018
- Bolstered liquidity through July 2020 $750M debt issuance; renegotiated revolving credit for more favorable terms
- Reduced administrative locations across the globe; relocated headquarters to Pittsburgh

Optimizing the Portfolio

- Restarted Lake Charles, Portland, Bécancour, and Warrick facilities
- Sold Gum Springs treatment facility; finalized Point Comfort, Rockdale, and Suriname closures; curtailed Intalco
- Divested Avilés, La Coruña, and Portovesme facilities, and minority interest in Saudi rolling mill

Investing in Sustainable Growth

- Set annual, quarterly, location, and segment production records; initiated new smelter creep project
- Launched ELYSIS™ joint venture, joined International Council on Mining and Metals, ASI certified across value chain
- Expanded sales of Sustana™ low carbon products, introduced EcoSource™ world's first low carbon alumina

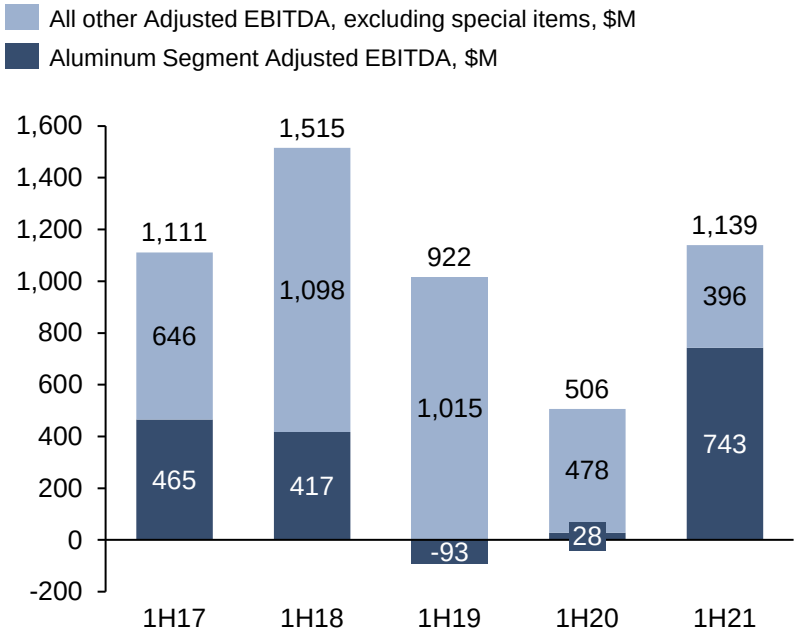
2021

- Issued $500 million aggregate principal amount of 4.125% senior notes due 2029
- Redeemed in full outstanding $750 million 6.75% senior notes due 2024
- Funded $500 million into U.S. pension plan
- Announced new 5-year power agreements for the Portland smelter, with local electric grid aiming to reach 50% renewables by 2030
- Completed sale of Warrick rolling mill for $670 million consideration
- Sold former Eastalco smelter site for $100 million
- Shipped first EcoSource™ low carbon alumina cargoes to third party
- Contracted to supply combination of ELYSIS™ zero-carbon aluminum and low-carbon EcoLum™ to RONAL GROUP for Audi e-tron; also announced agreement to supply EcoLum™ to WKW Extrusion's Erbslöh Aluminium

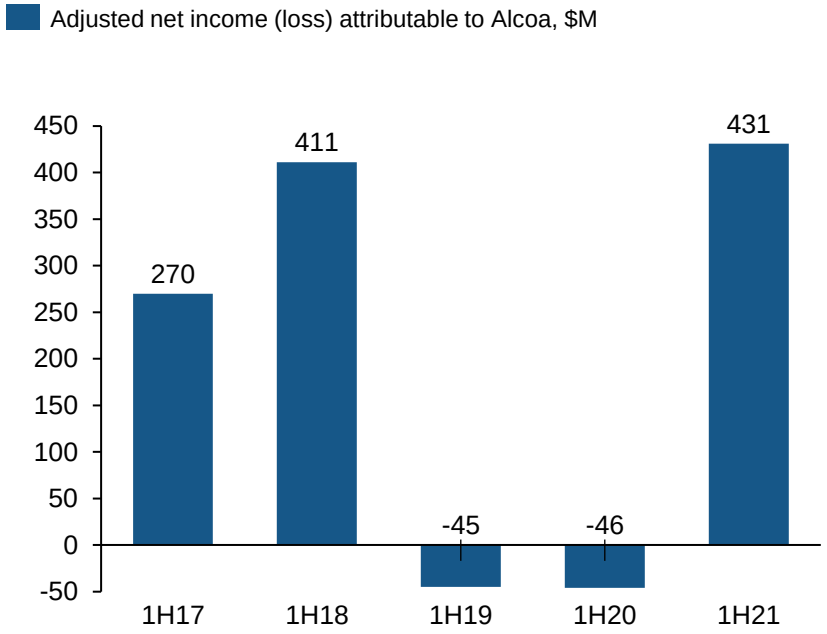
Aluminum segment propels bottom line

Aluminum Segment Adjusted EBITDA and Adjusted net income (loss) attributable to Alcoa

Aluminum segment provides 65% of total Adjusted EBITDA in 1H21…



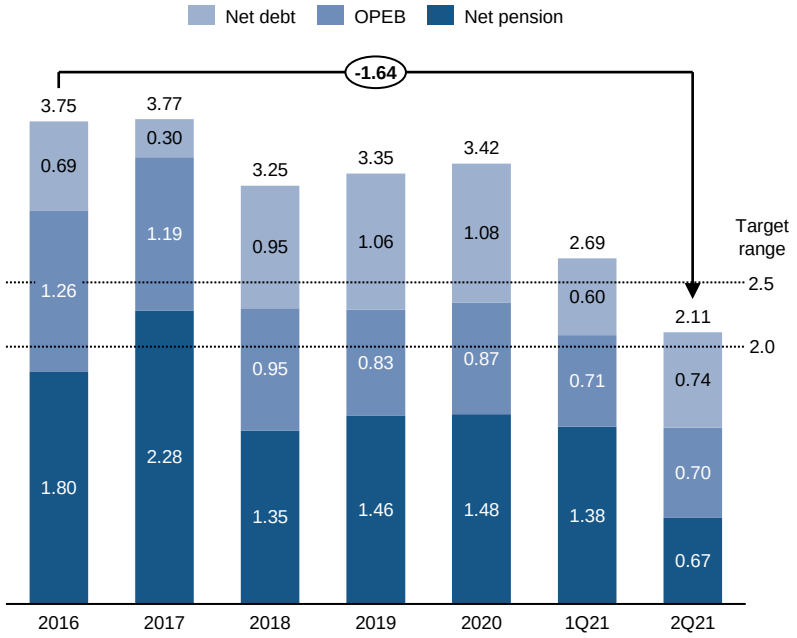
…increasing conversion of Adjusted EBITDA to Adjusted net income attributable to Alcoa



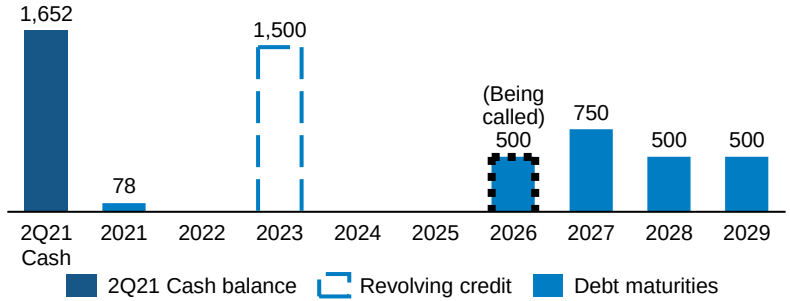
Strong balance sheet and clear runway for cash uses

Key financial metrics and components of proportional adjusted net debt through 2Q21

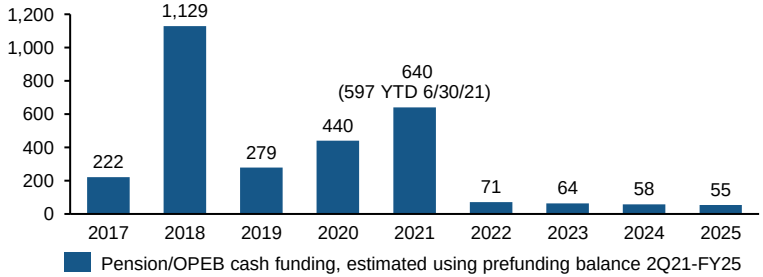
Components of proportional adj. net debt, $B



Cash balance and maturity profile ($M)



Global pension/OPEB funding ($M)

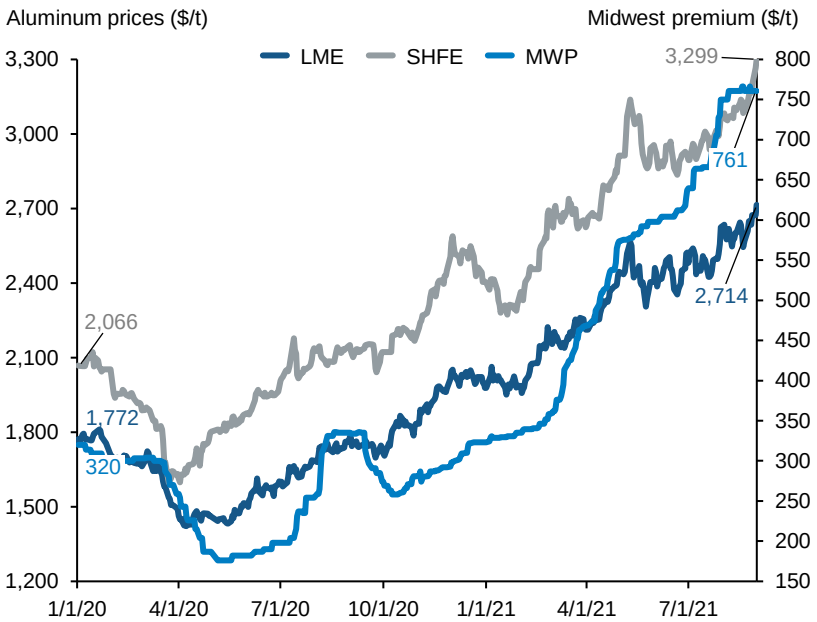


China industry reforms driving positive fundamentals

Key drivers of primary aluminum industry fundamentals

Aluminum prices improving

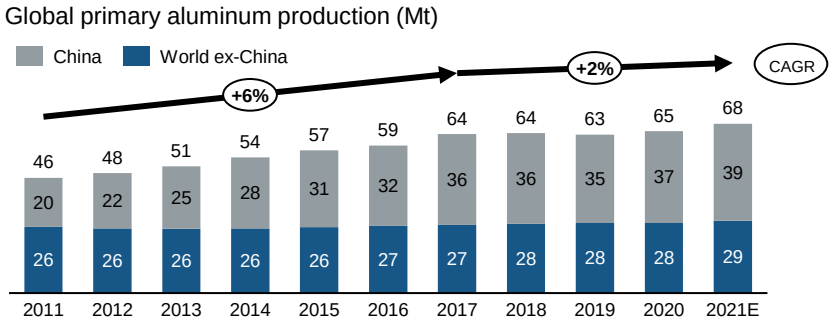
Prices 1/1/20 – 8/31/21



Source: CRU, CNIA, Chinese Ministry of Ecology and the Environment.

Global production growth slowing

Growth in Chinese annual production over the last decade, expected to slow with peak at 42 Mt in 2025.



China increasing efforts to reduce CO_2 emissions

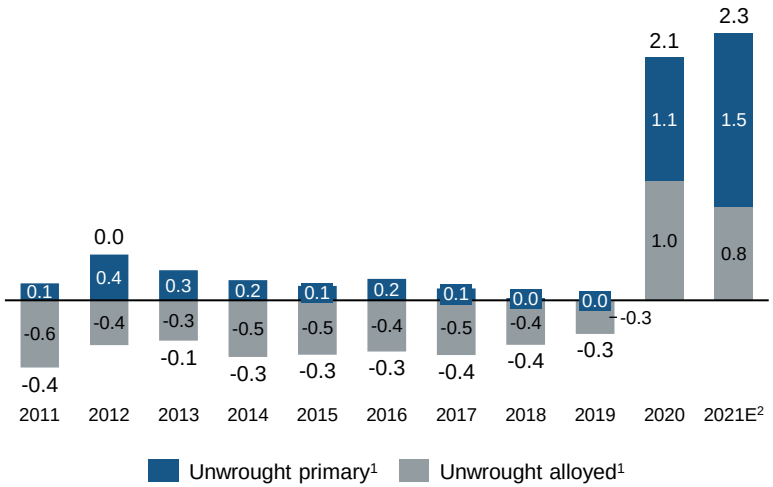
- 14th Five Year Plan (2021) targets an 18% reduction in carbon intensity per unit of GDP by 2025
- China Non-Ferrous Metals Industry Association announced in April 2021 draft target to peak aluminum emissions by 2025
- China launched national Emissions Trading Scheme in 2021

China importing aluminum amidst supply constraints

Recent developments in the Chinese market

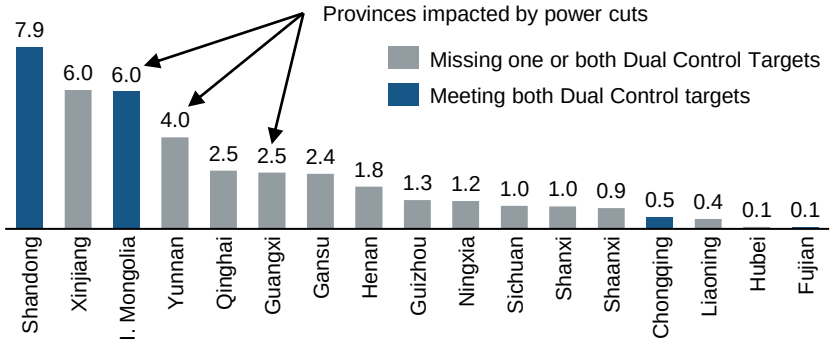
China becomes major aluminum importer

Chinese annual aluminum net imports (Mt)



Power cuts impacting Chinese smelters

2021 est. Chinese aluminum production by province (Mt)



- Yunnan, 700-800 ktpa curtailment reported as of July, as the 30% power cut starting in May has been extended
- Guangxi required 6 smelters (total capacity 1.4 Mtpa) to drop power load by up to 30% in early Aug.
- Inner Mongolia cut additional 20 ktpa in Baotou, the province had cut 200 ktpa in Q1 and 100 ktpa in 2Q due to China's NDRC "Dual Control" program
- Only 36% of production is in provinces meeting both NDRC energy targets

Source: CRU, Customs data. 1. Under HS code 76011 (unwrought primary) and 76012 (unwrought alloyed). 2. Annualized from Jan-Jun data.

Alcoa is built to lead in a more sustainable world

Foundational traits and environmental, social and governance (ESG) advantages

Strong business fundamentals

Commercial

- Industry's most comprehensive low-carbon product portfolio, Sustana™
- Long position in all three product segments: bauxite, alumina and aluminum
- LME-based power contracts; 78% of smelters powered by renewable energy, targeting 85%

Operational

- Values-based company; strong focus on EH&S
- Participate in full value chain from mine to metal
- Proven operator, setting recent production records
- Longstanding license to operate in all key markets

Financial

- Targeting first quartile cost position in all segments
- Nearing leverage target that optimizes WACC
- No near-term debt maturities or significant pension/OPEB cash funding requirements

Acknowledged ESG leadership

Environmental

- Clear pathway to achieve 30%/50% CO2e reductions by 2025/2030
- Lowest-carbon alumina system; aiming to be lowest in all segments
- Invented carbon-free smelting technology; commercializing ELYSIS™
- Strong biodiversity, water and impoundment management
- Certified to Aluminium Stewardship Initiative (ASI) standards

Social

- Supporting communities via Alcoa Foundation and volunteer efforts
- Implementing Social Management Performance System
- Alcoa Global Inclusion & Diversity Council
- Policies for Indigenous and Land-Connected Peoples; Human Rights

Governance

- Delaware incorporation; Annual election of directors
- Independent board chair; separate from President / CEO
- Proxy access

Aluminum is an integral element of a low carbon economy

Appendix 1:
2Q21 Financial and Other Information as presented on July 15, 2021



Most profitable quarter, first half since standalone company

Alcoa values, strategic priorities, and key takeaways for 2Q21



OUR VALUES

Act with Integrity

Operate with Excellence

Care for People

2Q21 Takeaways

- Continued focus on safety; two serious injuries in the quarter
- Highest ever profitability since 2016 inception
  - For both the quarter and six months, highest earnings per share and highest Aluminum segment Adjusted EBITDA, excluding special items
  - Profiting from operational stability during favorable market conditions
- Cash used to strengthen the balance sheet
  - Redeemed $750 million, 6.75%, 2024 maturity notes
  - Funded U.S. pension with $500 million; global funded status >90%
  - Sold former Eastalco smelter site for $100 million
- Strong aluminum fundamentals continuing
  - Historically high LME prices and regional premiums generating highest ever third party realized price since 2016 inception
  - Strong demand evidenced by returning value add volumes, prices
  - China supply constraints appear to continue
- At forefront of sustainable solutions
  - New sales of SUSTANA™ EcoSource™ and EcoLum™ low carbon products
  - Continued work on breakthrough carbon reduction research and development including ELYSIS™ zero-carbon smelting technology

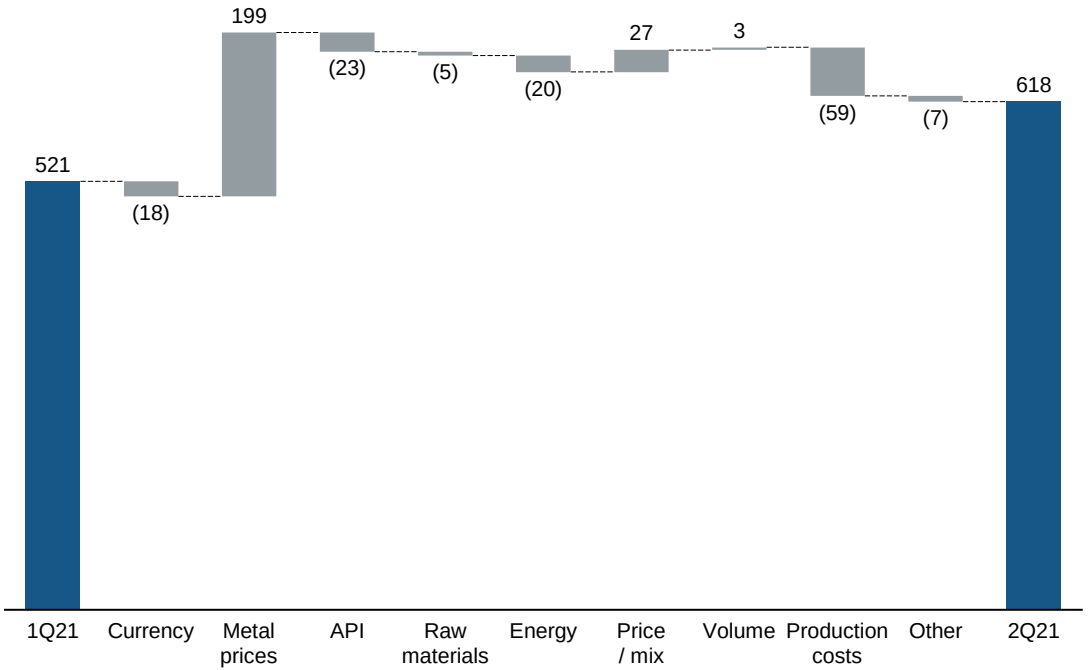
Second quarter nearly doubles first quarter adjusted EPS

Quarterly income statement highlights

M, Except per share amounts	2Q20	1Q21	2Q21	Prior year change	Sequential change
Income statement highlights					
Revenue	$2,148	$2,870	**$2,833**	$685	$(37)
Net (loss) income attributable to Alcoa Corporation	$(197)	$175	**$309**	506	$134
Diluted (loss) earnings per share	$(1.06)	$0.93	**$1.63**	$2.69	$0.70
Adjusted income statement highlights					
Adjusted EBITDA excluding special items	$185	$521	**$618**	$433	$97
Adjusted net (loss) income attributable to Alcoa Corporation	$(4)	$150	**$281**	$285	$131
Adjusted diluted (loss) earnings per share	$(0.02)	$0.79	**$1.49**	$1.51	$0.70

Higher metal prices drive higher Adjusted EBITDA

Adjusted EBITDA excluding special items sequential changes, $M

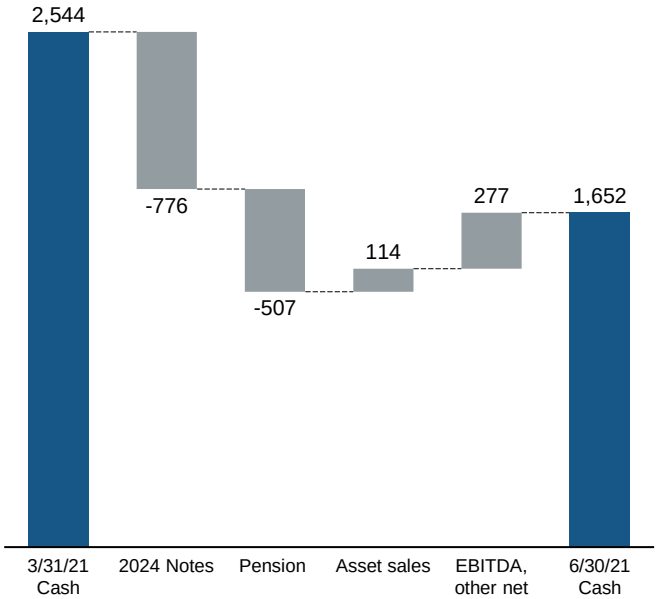


	1Q21	2Q21	Change
Bauxite	$59	$41	$(18)
Alumina	227	124	(103)
Aluminum	283	460	177
Segment total	569	625	56
Transformation	(11)	(13)	(2)
Intersegment eliminations	(7)	35	42
Other corporate	(30)	(29)	1
Total	$521	$618	$97

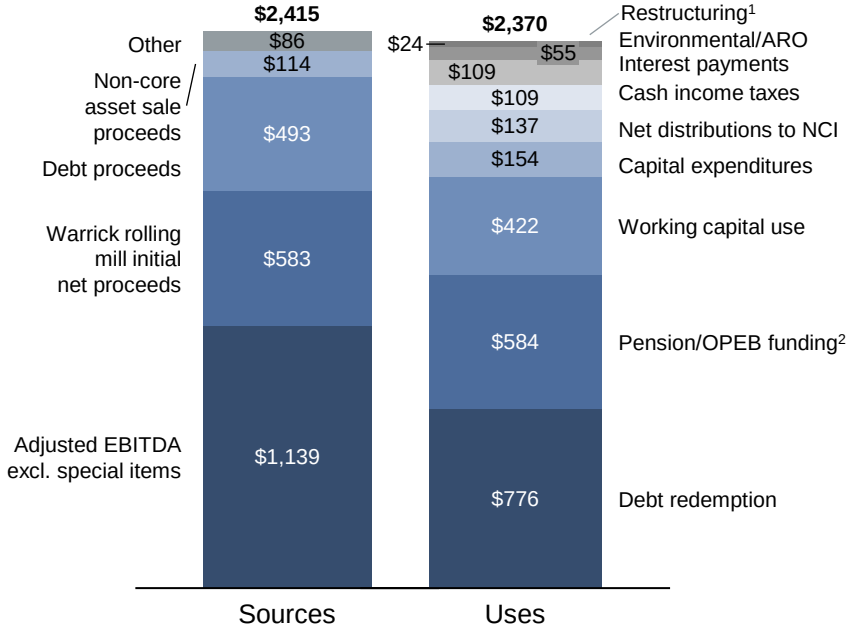
Strong Adj. EBITDA, corporate actions seen in cash flows

Sequential quarterly and YTD cash flow information

1Q21 to 2Q21 Cash changes, $M



YTD Cash flow information, $M



1. Restructuring includes payments related to divestiture of the Avilés and La Coruña facilities and payments related to various programs.
2. Pension/OPEB funding of $598 million is reflected net of $14 million related expenses within Adjusted EBITDA.

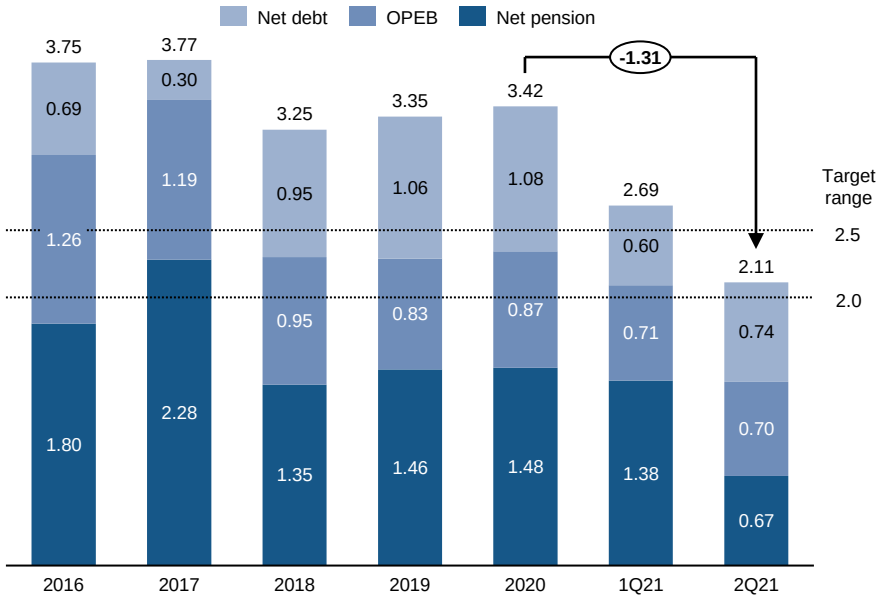
Net debt metric well into target range; 1H21 ROE 24.6%

Key financial metrics and components of proportional adjusted net debt through 2Q21

Key financial metrics

2Q21 Days working capital (DWC)	1H21 Return on equity
26 Days	**24.6%**
1H21 Capital expenditures	**Proportional adjusted net debt**
$154M	**$2.1B**
1H21 Free cash flow less net NCI distributions	**2Q21 Cash balance**
$(371)M	**$1.65B**

Components of proportional adj. net debt, $B



2021 Outlook

FY21 Key metrics

Income statement excl. special items impacts

	2Q21 YTD Actual	FY21 Outlook
Bauxite shipments (Mdmt)	23.9	50.0 – 51.0
Alumina shipments (Mmt)	7.0	14.1 – 14.2
Aluminum shipments (Mmt)	1.6	2.9 – 3.0
Transformation (adj. EBITDA impacts)	$(24)M	~ $(55)M
Intersegment elims. (adj. EBITDA impacts)	$28M	Varies
Other corporate (adj. EBITDA impacts)	$(59)M	~ $(120)M
Depreciation, depletion and amortization	$343M	~ $675M
Non-operating pension/OPEB expense	$24M	~ $50M
Interest expense	$77M	~ $150M
Operational tax expense[1]	$203M	Varies
Net income of noncontrolling interest	$84M	40% of AWAC NI

Cash flow impacts

	2Q21 YTD Actual	FY21 Outlook
Pension / OPEB required cash funding	$98M	~ $140M
Additional pension funding ($500M April 2021)	$500M	Will vary based on market conditions and cash availability
Early debt repayment ($750M April 2021)	$750M	
Stock repurchases	$0M	
Return-seeking capital expenditures[2]	$10M	~ $50M
Sustaining capital expenditures[2]	$144M	~ $375M
Payment of prior year income taxes[3]	$29M	~ $25M
Current period cash taxes[1]	$80M	Varies
Environmental and ARO payments[4]	$55M	~ $140M
Impact of restructuring and other charges	$24M	TBD

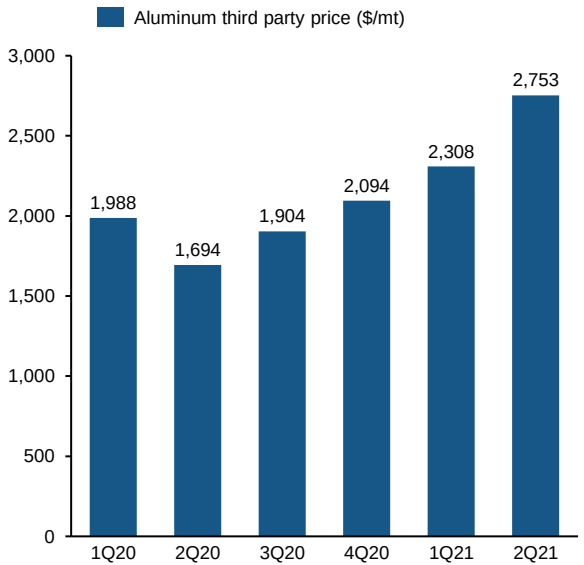
Note: The COVID-19 pandemic has increased the potential for variance of actual results compared to our outlook.
Additional market sensitivities and business information are included in appendix.

1. Estimate will vary with market conditions and jurisdictional profitability.
2. AWAC portion of FY21 outlook: ~50% of return-seeking capital expenditures and ~65% of sustaining capital expenditures.
3. Net of pending tax refunds.
4. As of June 30, 2021, the environmental remediation reserve balance was $298M and the ARO liability was $719M.

Aluminum realized price up 63% year-over-year

Aluminum segment quarterly realized prices and market commentary

Third party realized pricing



Aluminum market and commercial commentary

Market factors

- Strong global demand driving higher LME and regional premiums; broad recovery across key sectors
- China constraining supply growth in alignment with energy targets to meet long term carbon reduction goals

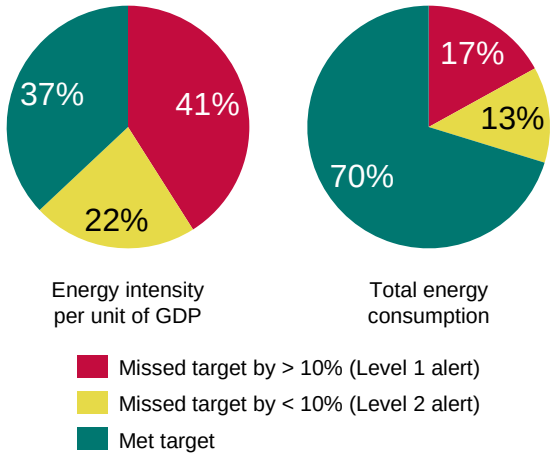
Alcoa commercial impacts

- Value-add product shipments improved 2% vs 1Q21 and ~40% vs 2Q20; premiums starting to rise
- In FY21, value-add product sales volume expected to see double digit growth on strong end markets

China aluminum actions support energy, carbon goals

Estimated provincial 2021 aluminum production and 1Q21 Dual Control target attainment[1]

Percentages of estimated FY21 Chinese total primary aluminum production, grouped by provincial performance against 1Q21 Dual Control targets, per China National Development and Reform Commission (NDRC)

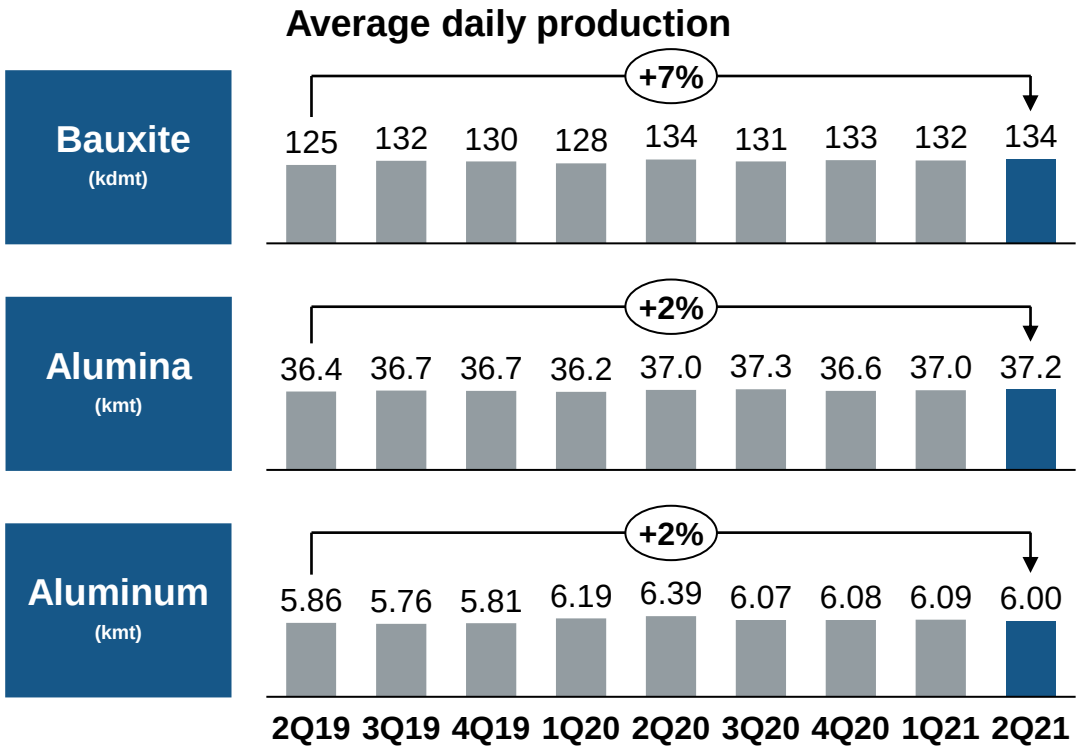


- China's 14th Five Year Plan targets an 18% and 13.5% reduction in carbon intensity and energy consumption per unit of GDP respectively by 2025
- The Chinese NDRC Dual Control program tracks energy intensity per unit of GDP and total energy consumption with a traffic light system
- 14 out of China's 17 aluminum-producing provinces – representing ~65% of China's aluminum production – missed at least one target for 1Q21
- "Areas with the first and second warning levels must...take effective measures to quickly reverse the situation" – China NDRC
- As a result of Chinese policies, including Dual Control, provinces such as Inner Mongolia, Shandong and Gansu have acted to restrict new or existing aluminum production or to cancel preferential smelter power tariffs

1. China National Development and Reform Commission (NDRC) Notice on Issuing the "Barometer of the Completion of the Energy Consumption Dual Control Targets in the First Quarter of 2021 in Each Region", June 3, 2021

Improved production stability continuing in all segments

Quarterly production update, 2Q19 – 2Q21



- Bauxite segment continuously increasing production, creeping wholly-owned assets and higher JV tonnes
- Alumina continuing production at or near record levels through operating stability and creep projects
- Aluminum production benefiting from ABI restart with partial offset from Intalco curtailment

Numerous accomplishments in 2021; progress continues

Actions to continue to strengthen the company in 2021

January – June achievements

Asset sales and portfolio review:

- Sales of Warrick rolling mill, Eastalco site, and other non-core assets for $705 net cash proceeds
- Repowered Portland with 5-year agreements

Financial:

- Issued $500 million 4.125% senior notes due 2029
- Redeemed $750 million 6.75% senior notes due 2024
- Funded $500 million into U.S. pension plan

Sustainability progress:

- Shipped first EcoSource™ low carbon alumina shipments
- Announced metal supply deals for low-carbon EcoLum™ and from the ELYSIS™ zero-carbon process
- ELYSIS™ starts construction on commercial-sized prototype inert anode cells
- Exploring technology to reduce greenhouse gases in refining via Mechanical Vapor Recompression (MVR)

July – December focus areas

Asset sales and portfolio review:

- San Ciprián smelter sale process
- Rockdale land listed for sale

Financial:

- Capital allocation focus

Sustainability progress:

- Increase Sustana™ product sales
- Advance breakthrough technologies: ELYSIS™ and MVR
- Continue with ASI certifications; 13 sites currently certified
- Start construction on Poços de Caldas press filtration

Operational excellence:

- Maintain operational stability; drive production improvements
- Execute on capital expenditures, including smelting production creep at Deschambault

An excellent first half of 2021; positioned for more success

2Q21 Summary

OUR VALUES

Act with Integrity

Operate with Excellence

Care for People

- **Profiting from long position in all three segments**
  Made record profits from Aluminum segment while upstream segments retained stability and profitability
- **Continuing to strengthen the company**
  Reduced adjusted net debt, eliminated near-term debt maturities until 2026, de-risked U.S. pension, and sold non-core assets
- **Positioning to succeed in a sustainable world**
  Continued to transform portfolio and sell sustainable products to leverage industry-leading environmental and social standards for sustainable future

Drive results and **deliver returns** to stockholders over the long term

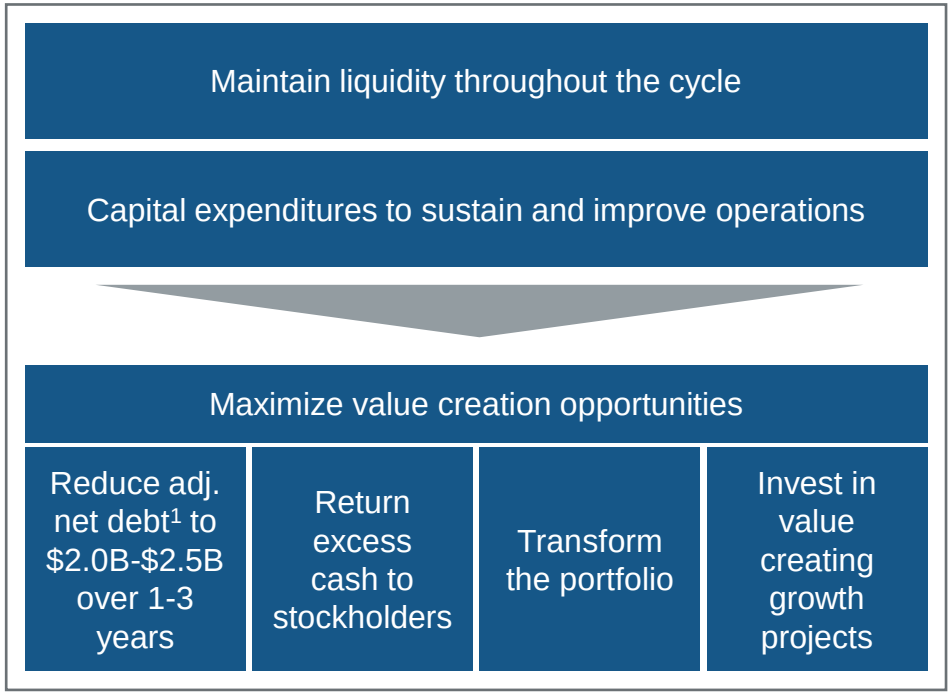
2Q21 Summary

2Q21 Financial results and business review

2Q21 Financial results	▪ Net income of $309 million, or $1.63 per share; excluding special items, adjusted net income of $281 million, or $1.49 per share ▪ Adjusted EBITDA excluding special items of $618 million ▪ Cash balance at $1,652 million on June 30
Business review	▪ Two serious injuries in quarter; continuing to strengthen safety programs ▪ Record Aluminum segment profitability, quarterly and year-to-date ▪ Redeemed in full outstanding 6.75% senior notes due 2024 ▪ Funded $500 million into U.S. pension plan ▪ Sold former Eastalco smelter site for $100 million ▪ Completed first EcoSource™ low carbon alumina third party sales ▪ Strong aluminum fundamentals underpinned by China supply constraints

Capital allocation framework

Capital allocation framework and considerations



- $1 billion target for minimum cash balance
- Sustaining capital expenditures of ~$375 million, return seeking capital of ~$50 million, per 2021 outlook

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- Based on net debt and pension/OPEB net liability totaling $2.1 billion as of 2Q21, within target range of proportional adjusted net debt
- $150 million available of existing $200 million buyback authorization
- Portfolio review and transformation over the next 3+ years
- Invest in major value creating projects

1. Adjusted net debt defined as the Alcoa proportional share of net debt plus net pension and OPEB liability.

Quarterly income statement

Quarterly income statement

M, Except realized prices and per share amounts	2Q20	1Q21	2Q21	Prior Year Change	Sequential Change
Realized primary aluminum price ($/mt)	$1,694	$2,308	**$2,753**	$1,059	$445
Realized alumina price ($/mt)	$250	$308	**$282**	$32	$(26)
Revenue	$2,148	$2,870	**$2,833**	$685	$(37)
Cost of goods sold	1,932	2,292	**2,156**	224	(136)
SG&A and R&D expenses	49	59	**60**	11	1
Adjusted EBITDA	167	519	**617**	450	98
Depreciation, depletion and amortization	152	182	**161**	9	(21)
Other expenses (income), net	51	(24)	**(105)**	(156)	(81)
Interest expense	32	42	**67**	35	25
Restructuring and other charges, net	37	7	**33**	(4)	26
Provision for income taxes	45	93	**111**	66	18
Net (loss) income	(150)	219	**350**	500	131
Less: Net income attributable to noncontrolling interest	47	44	**41**	(6)	(3)
Net (loss) income attributable to Alcoa Corporation	$(197)	$175	**$309**	$506	$134
Diluted (loss) earnings per share	$(1.06)	$0.93	**$1.63**	$2.69	$0.70
Diluted average shares[1]	185.9	188.8	**190.2**	4.3	1.4

1. For 2Q20, share equivalents related to employee stock-based compensation were excluded from Diluted average shares as the impact was anti-dilutive given an adjusted net loss attributable to Alcoa Corporation.

Special items

Breakdown of special items by income statement classification – gross basis

M, Except per share amounts	2Q20	1Q21	2Q21	Description of significant 2Q21 special items
Net (loss) income attributable to Alcoa Corporation	$(197)	$175	**$309**	
Diluted (loss) earnings per share	($1.06)	$0.93	**$1.63**	
Special items	$193	$(25)	**$(28)**	
Cost of goods sold	*17*	*1*	***-***	
SG&A and R&D expenses	*1*	*1*	***1***	
Restructuring and other charges, net	*37*	*7*	***33***	Pension related actions
Interest	*-*	*-*	***32***	Debt redemption premium
Other income, net	*(3)*	*(32)*	***(98)***	Gain on asset sales
Provision for income taxes	*141*	*(2)*	***3***	
Noncontrolling interest	*-*	*-*	***1***	
Adjusted net (loss) income attributable to Alcoa Corporation	$(4)	$150	**$281**	
Adjusted diluted (loss) earnings per share	$(0.02)	$0.79	**$1.49**	

Quarterly income statement excluding special items

Quarterly income statement excluding special items

M, Except realized prices and per share amounts	2Q20	1Q21	2Q21	Prior Year Change	Sequential Change
Realized primary aluminum price ($/mt)	$1,694	$2,308	**$2,753**	$1,059	$445
Realized alumina price ($/mt)	$250	$308	**$282**	$32	$(26)
Revenue	$2,148	$2,870	**$2,833**	$685	$(37)
Cost of goods sold	1,915	2,291	**2,156**	241	(135)
COGS % of Revenue	89.2%	79.8%	**76.1%**	(13.1)% pts.	(3.7)% pts.
SG&A and R&D expenses	48	58	**59**	11	1
SG&A and R&D % of Revenue	2.2%	2.0%	**2.1%**	(0.1)% pts.	0.1% pts.
Adjusted EBITDA	185	521	**618**	433	97
Depreciation, depletion and amortization	152	182	**161**	9	(21)
Other expenses (income), net	54	8	**(7)**	(61)	(15)
Interest expense	32	42	**35**	3	(7)
Provision for income taxes	(96)	95	**108**	204	13
Operational tax rate	178.3%	32.8%	**25.1%**	(153.2)% pts.	(7.7)% pts.
Adjusted net income	43	194	**321**	278	127
Less: Adjusted net income attributable to noncontrolling interest	47	44	**40**	(7)	(4)
Adjusted net (loss) income attributable to Alcoa Corporation	$(4)	$150	**$281**	$285	$131
Adjusted diluted (loss) earnings per share	$(0.02)	$0.79	**$1.49**	$1.51	$0.70
Diluted average shares[1]	185.9	188.8	**190.2**	4.3	1.4

1. For 2Q20, share equivalents related to employee stock-based compensation were excluded from Diluted average shares as the impact was anti-dilutive given an adjusted net loss attributable to Alcoa Corporation.

2Q21 Financial summary

Three months ending June 30, 2021, excluding special items

$M	Bauxite	Alumina	Aluminum[3]	Transformation	Intersegment eliminations	Other corporate	Alcoa Corporation
Total revenue	$218	$1,031	$2,105	3	$(525)	1	$2,833
Third-party revenue	$39	$688	$2,102	3	-	1	$2,833
Adjusted EBITDA[1]	$41	$124	$460	$(13)	$35	$(29)	$618
Adjusted EBITDA margin %	*18.8%*	*12.0%*	*21.9%*				*21.8%*
Depreciation, depletion and amortization	$32	$50	$73	-	-	$6	$161
Other expenses (income), net[2]	-	$1	$(28)	-	-	$20	$(7)
Interest expense							$35
Provision for income taxes							$108
Adjusted net income							$321
Net income attributable to noncontrolling interest							$40
Adjusted net income attributable to Alcoa Corporation							$281

1. 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.
2. Amounts for Alumina and Aluminum represent the Company's proportionate share of earnings from its equity investment in the Saudi Arabian joint venture.
3. Third-party energy sales volume, revenue and adjusted EBITDA in Brazil were 869GWh, $31M and $19M, respectively.

2Q21 Adjusted EBITDA drivers by segment

Adjusted EBITDA excluding special items sequential changes by segment, $M

Segment	Adj. EBITDA 1Q21	Currency	Metal prices	API	Raw materials	Energy	Price/mix	Volume	Production costs	Other	Adj. EBITDA 2Q21
Bauxite	$59	(2)	0	0	0	(1)	0	4	(6)	(13)	$41
Alumina	$227	(15)	0	(59)	6	(11)	11	(1)	(35)	1	$124
Aluminum	$283	(1)	202	0	(11)	(8)	16	0	(18)	(3)	$460
Segment Total	**$569**	**(18)**	**202**	**(59)**	**(5)**	**(20)**	**27**	**3**	**(59)**	**(15)**	**$625**

Aluminum value chain

1H21 Alcoa product shipments by segment



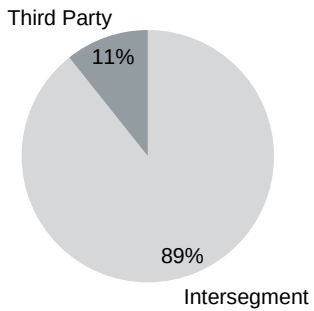
23.9 Mdmt shipments

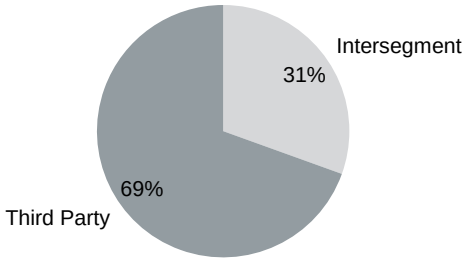


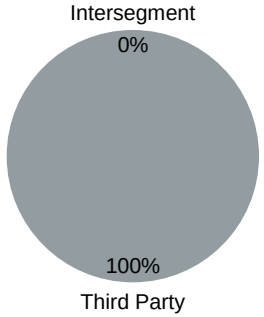
7.0 Mmt shipments



1.6 Mmt shipments



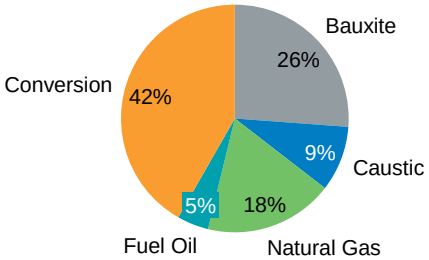




Composition of alumina and aluminum production costs

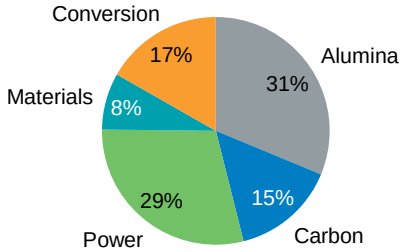
Alcoa 2Q21 production cash costs

Alumina refining



Input Cost	Inventory Flow	Pricing Convention	FY21 Annual Cost Sensitivity
Caustic Soda	5 - 6 Months	Quarterly, Spot	$10M per $10/dmt
Natural Gas	1 Month	Quarterly, 85% with CPI adjustment	$11M per $0.10/GJ
Fuel Oil	1 - 2 Months	Prior Month	$3M per $1/barrel

Aluminum smelting



Input Cost	Inventory Flow	Pricing Convention	FY21 Annual Cost Sensitivity
Alumina	~2 Months	API on a 6 to 8 month average	$42M per $10/mt
Petroleum Coke	1 - 2 Months	Quarterly	$7M per $10/mt
Coal Tar Pitch	1 - 2 Months	Quarterly	$1.8M per $10/mt

2021 Business information

Estimated annual Adjusted EBITDA sensitivities

$M Segment	LME + $100/mt	API + $10/mt	Midwest + $100/mt	Europe + $100/mt	Japan + $100/mt	AUD + 0.01 0.77[1]	BRL + 0.10 5.31[1]	CAD + 0.01 1.23[1]	EUR + 0.01 1.20[1]	ISK + 10 123.74[1]	NOK + 0.10 8.38[1]
Bauxite						(4)	2				
Alumina		120				(16)	4		(1)		
Aluminum	195	(42)	122	82	31	(1)	(1)	2	(3)	7	2
Total	195	78	122	82	31	(21)	5	2	(4)	7	2

Pricing conventions

Segment	Third party revenue
Bauxite	• Negotiated prices
Alumina	• ~95% of third party smelter grade alumina priced on API/spot • API based on prior month average of spot prices
Aluminum	• 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 2021 Primary aluminum shipments
Midwest	~50%
Rotterdam Duty Paid	~40%
CIF Japan	~10%

1. Average 2Q21 exchange rates

Currency impacts on Adjusted EBITDA

Currency balance sheet revaluation and EBITDA sensitivities ($M, except currencies)

Balance sheet revaluation impact

	AUD	BRL	CAD	EUR	ISK	NOK	Total
9/30/20 currencies	0.71	5.65	1.34	1.17	138.66	9.47	
3Q20 revaluation	(4.7)	3.6	(0.8)	(1.1)	1.4	0.0	(1.7)
3Q20 sequential impact	15.4	1.8	0.8	(0.6)	0.8	1.0	19.1
12/31/20 currencies	**0.77**	**5.19**	**1.28**	**1.23**	**127.22**	**8.58**	
4Q20 revaluation	(10.6)	(2.1)	(3.6)	1.7	(0.1)	3.3	(11.4)
4Q20 sequential impact	(5.9)	(5.7)	(2.7)	2.9	(1.5)	3.2	(9.7)
3/31/21 currencies	**0.76**	**5.76**	**1.26**	**1.17**	**126.68**	**8.56**	
1Q21 revaluation	4.5	4.6	(0.3)	0.3	(0.8)	(2.0)	6.2
1Q21 sequential impact	15.1	6.7	3.3	(1.4)	(0.7)	(5.3)	17.7
6/30/21 currencies	**0.75**	**4.95**	**1.24**	**1.19**	**123.79**	**8.58**	
2Q21 revaluation	3.0	(8.4)	0.5	(0.8)	(0.0)	0.3	(5.4)
2Q21 revaluation sequential impact	**(1.5)**	**(13.0)**	**0.8**	**(1.1)**	**0.8**	**2.3**	**(11.7)**

Currency annual sensitivity and actual impact

	+0.01 AUD	+0.10 BRL	+0.01 CAD	+0.01 EUR	+ 10 ISK	+0.10 NOK	Total
EBITDA sensitivity	(22)	9	2	(4)	11	2	
2Q20 currency avg.	0.66	5.38	1.39	1.10	141.37	10.04	
3Q20 currency avg.	**0.71**	**5.38**	**1.33**	**1.17**	**137.70**	**9.14**	
3Q20 currency impact	(32.6)	(0.1)	(3.7)	(8.1)	(1.2)	(3.9)	(49.6)
4Q20 currency avg.	0.73	5.40	1.31	1.19	134.72	9.05	
4Q20 currency impact	(8.6)	0.1	(1.5)	(2.3)	0.7	(0.4)	(11.9)
1Q21 currency avg.	0.77	5.46	1.27	1.21	128.02	8.51	
1Q21 currency impact	(22.1)	1.2	(1.7)	(1.0)	(0.7)	(1.7)	(25.9)
2Q21 currency avg.	0.77	5.31	1.23	1.20	123.74	8.38	
2Q21 currency impact	**1.3**	**(2.1)**	**(3.4)**	**0.3**	**(1.2)**	**(0.9)**	**(6.0)**
Total 2Q21 EBITDA currency impact[1]	**(0.2)**	**(15.1)**	**(2.6)**	**(0.8)**	**(0.4)**	**1.4**	**(17.7)**

Totals may not tie due to rounding

1. Total EBITDA currency impact includes balance sheet revaluation (based on June end values) and currency impacts (based on quarterly averages)

Additional business considerations

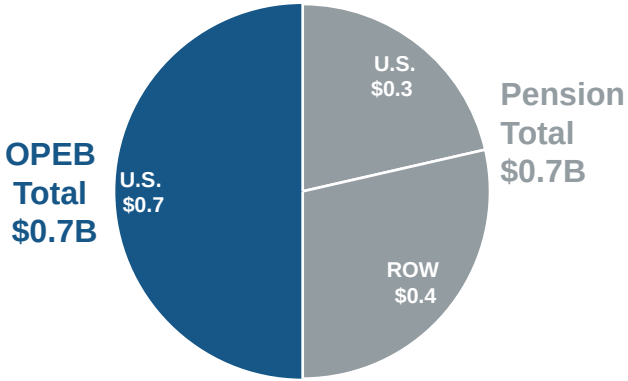
Items expected to impact Adjusted EBITDA for 3Q21

- Sequentially, Adjusted EBITDA in the Bauxite segment is expected to be in line with 2Q21
- In 3Q21, the Alumina segment is expected to see $10 million impact from higher raw materials prices and higher energy costs
- In the Aluminum segment:
  - Alumina costs are estimated to be flat sequentially,
  - Higher raw materials, transportation and other costs are expected to be a sequential impact of $25 million
  - While Brazil hydro sales are expected to improve, they are almost entirely offset by higher energy costs in Spain
- Due to volatility in quarter end exchange rates, 2Q21 Adjusted EBITDA included an unfavorable balance sheet revaluation impact of -$5 million ($12 million unfavorable sequentially compared to 1Q20); impacts related to balance sheet revaluation are not incorporated into the currency sensitivities provided for Adjusted EBITDA
- Estimate intersegment profit elimination for every $10/mt decrease in API prices to be a $7 to $9 million favorable impact based on comparison of the average prices of the last two months of each quarter; consider intersegment eliminations as component of minority interest calculation
- In addition, the Company expects 3Q21 operational tax expense to be over $100 million based on recent pricing

Pension and OPEB summary

Net pension and OPEB liability and financial impacts

Net liability as of June 30, 2021[1]



Estimated GAAP pension funding status as of June 30, 2021

- U.S. greater than 95%
- Worldwide greater than 90%

U.S. pension contributions currently not tax deductible

Estimated financial impacts, $M

Expense impact	2021
Segment pension	$20
Segment OPEB	5
Corporate pension & OPEB	-
Total adj. EBITDA impact	**25**
Non-operating	50
Special items[2] (curtailment/settlement)	48
Total expense impact	**$123**

Cash flow impact	2021
Minimum required pension funding[3]	$80
Additional pension funding	500
OPEB payments	60
Total cash impact	**$640**

1. The impact on the combined pension and OPEB liability of a 25 basis point change in the weighted average discount rate is approximately $205 million. In 2Q21, the asset allocation for the U.S. pension plans transitioned to an 80% hedge of U.S. Treasury interest rate risk for the U.S. gross pension liability, limiting the net exposure to changes in pension discount rates.
2. U.S. hourly OPEB plan was remeasured as of March 31, 2021 due to the sale of the Warrick rolling mill. U.S. salaried pension was remeasured as of June 30, 2021 due to lump sum settlements.
3. U.S. minimum required pension cash funding for the remainder of 2021 is $0 as it is Alcoa's intention to use prefunding balance.

Investments summary

Investments listing and income statement location

Investee	Country	Nature of Investment[4]	Ownership Interest	Carrying Value as of June 30, 2021	Income Statement Location of Equity Earnings
ELYSIS™ Limited Partnership	Canada	Aluminum smelting technology	48.235%		
Ma'aden Aluminium 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]		
Subtotal Ma'aden and ELYSIS™				***$598M***	***Other expenses, net***
Consorcio 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	45.0%[5]		
Manicouagan Power Limited Partnership	Canada	Hydroelectric generation facility	40.0%		
Mineração Rio do Norte S.A. (MRN)	Brazil	Bauxite mine	18.2%[5]		
Pechiney Reynolds Quebec, Inc.[3]	Canada	Aluminum smelter	50.0%		
Subtotal other				***$515M***	***COGS***
Total investments				**$1,113M**	

1. Alcoa Corporation has an investment in a joint venture related to the ownership and operation of an integrated aluminum complex (bauxite mine, alumina refinery, and aluminum smelter) 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.
2. Halco Mining, Inc. owns 100% of Boké Investment Company, which owns 51% of Compagnie des Bauxites de Guinée (CBG).
3. 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.
4. Each of the investees either owns the facility listed or has an ownership interest in an entity that owns the facility listed.
5. A portion or all of each of these ownership interests are held by majority-owned subsidiaries that are part of AWAC.

Alcoa sustainability goals

Alcoa strategic long-term sustainability goals, baseline and progress

Goal	Description	2015 Baseline	2020 Progress
Safety	Zero fatalities and serious injuries (life-threatening, life-altering injury or illness)	5 fatal or serious injuries/illnesses	1 fatal or serious injury/illness
Diversity and inclusion	Attain an inclusive 'everyone culture' that reflects the diversity of the communities in which we operate	N/A	15.6% global women
Mine rehabilitation	Maintain a corporate-wide running 5-year average ratio of 1:1 or better for active mining disturbance (excluding long-term infrastructure) to mine rehabilitation	N/A	0.97:1
Bauxite residue	From a 2015 baseline, reduce bauxite residue land requirements per metric ton of alumina produced by 15% by 2030	53.2 m2/kmt Ala	12.8% reduction
Waste	From a 2015 baseline, reduce landfilled waste 15% by 2025 and 25% by 2030	146.6 mt	14.4% reduction
Water	From a 2015 baseline, reduce the intensity of our total water use from Alcoa-defined water-scarce locations by 5% by 2025 and 10% by 2030	3.37 m3/mt	3% reduction
Greenhouse gas emissions	Align our greenhouse gas (direct + indirect) emissions reduction targets with the 2ºC decarbonization path by reducing greenhouse gas intensity by 30% by 2025, and 50% by 2030 from a 2015 baseline	7.10 mt CO_2e/mt	14.6% reduction
Sustainable value chain	By 2022, implement a social management system at all locations, including the definition of performance metrics and long-term goals to be accomplished by 2025 and 2030	N/A	New indigenous peoples policy

1. Source: 2020 Sustainability Report

Production and capacity information

Alcoa Corporation annual consolidated amounts as of June 30, 2021

Bauxite production, Mdmt

Mine	Country	2020 Production
Darling Range	Australia	34.8
Juruti	Brazil	6.1
Poços de Caldas	Brazil	0.2
Trombetas (MRN)	Brazil	2.1
Boké (CBG)	Guinea	3.6
Al Ba'itha[1]	Saudi Arabia	1.2
Total		**48.0**

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	-
Total		**12,759**	**214**
Ras Al Khair[1]	*Saudi Arabia*	*452*	-

Aluminum smelting, kmt

Facility	Country	Capacity	Curtailed
Portland	Australia	197	30
São Luís (Alumar)	Brazil	268	268
Baie Comeau	Canada	280	-
Bécancour	Canada	310	-
Deschambault	Canada	260	-
Fjarðaál	Iceland	344	-
Lista	Norway	94	-
Mosjøen	Norway	188	-
San Ciprián	Spain	228	-
Intalco	U.S.	279	279
Massena West	U.S.	130	-
Warrick	U.S.	269	108
Wenatchee	U.S.	146	146
Total		**2,993**	**831**
Ras Al Khair[1]	*Saudi Arabia*	*186*	-

1. The Company's proportionate share of earnings from its equity investment in the Saudi Arabian joint venture does not impact adjusted EBITDA.

Valuation framework

Valuation framework key considerations

				LTM ending 6/30/2021 Adj. EBITDA excl. special items
Business Operations	+	Bauxite	Economic value using market multiple of: i. AWAC joint venture, minus small portions of AWAC JV in Aluminum and Transformation ii. Ownership in certain mines and refineries outside the JV	$344M
	+	Alumina		$567M
	+	Aluminum	Economic value using market multiple of: i. Smelters, casthouses, rolling mill, and energy assets ii. Smelters and casthouses restart optionality	$1,040M
	-	Non-segment expenses (income)	Economic value using market multiple of: i. Net corporate expenses and Transformation	$167M
	=	Enterprise value		
Financial Considerations	-	Noncontrolling interest	Implied value of noncontrolling interest in AWAC JV, based on Alumina Limited's observed enterprise value	
	-	Debt & debt-like items[1]	Book value of debt of $2.2B ($2.2B, >95% Alcoa), pension & OPEB net liabilities of $1.4B ($1.4B, >95% Alcoa; U.S. contributions not tax deductible), environmental & ARO liabilities of $0.8B ($1B, ~75% Alcoa)	
	+	Cash & equity investments[1]	Cash position of $1.5B ($1.65B, ~90% Alcoa) plus carrying value of investments in the Ma´aden joint venture and ELYSIS™ of $0.5B ($0.6B, ~85% Alcoa)	
	=	Equity value		

1. Dollar amounts reflect Alcoa Corporation's consolidated balance sheet values as of June 30, 2021. The "Alcoa" percentages exclude amounts attributable to Alcoa Corporation's partner in the AWAC JV.

Adjusted EBITDA reconciliation

$M	2Q20	3Q20	4Q20	FY20	1Q21	2Q21
Net income (loss) attributable to Alcoa	**$(197)**	**$(49)**	**$(4)**	**$(170)**	**$175**	**$309**
Add:						
Net income attributable to noncontrolling interest	47	29	21	156	44	41
Provision for income taxes	45	42	20	187	93	111
Other (income) expenses, net	51	45	44	8	(24)	(105)
Interest expense	32	41	43	146	42	67
Restructuring and other charges, net	37	5	60	104	7	33
Depreciation, depletion and amortization	152	161	170	653	182	161
Adjusted EBITDA	**167**	**274**	**354**	**1,084**	**519**	**617**
Special items before tax and noncontrolling interest	18	10	7	67	2	1
Adjusted EBITDA excl. special items	**$185**	**$284**	**$361**	**$1,151**	**$521**	**$618**

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.

Operational tax reconciliation

$M	2Q20	3Q20	4Q20	FY20	1Q21	2Q21
Provision for income taxes	$45	$42	$20	$187	$93	$111
Tax on special items	1	3	1	13	-	(3)
Discrete tax items	-	2	25	26	2	-
Interim tax impacts[1]	(142)	182	(19)	-	-	-
Operational tax provision	**($96)**	**$229**	**$27**	**$226**	**$95**	**108**
Operational tax rate	**178.3%**	**540.6%**	**25.3%**	**129.7%**	**32.8%**	**25.1%**

The Company's non-GAAP financial measures are adjusted for applicable income tax impacts. The non-GAAP income tax provision, which we refer to as our operational tax, is calculated on a full year basis in a manner consistent with our GAAP tax provision except for exclusion of the following items:

- Tax cost or benefit attributable to special items based on the applicable statutory rates in the jurisdictions where the special items occurred; and
- Discrete tax items (generally unusual or infrequently occurring items, changes in law, items associated with uncertain tax positions, or effects of measurement-period adjustments).

[1] Beginning in the first quarter of 2021, the Company revised the way our operational tax provision is calculated on an interim basis. The operational tax provision now includes the interim tax impacts required under GAAP, which have the effect of smoothing tax provisioned across quarters, that had previously been excluded from our operational tax provision calculation. In periods of volatility when profit before tax by jurisdiction moves considerably between periods, inclusion of the GAAP interim tax impacts can reduce the fluctuations in the interim operational tax provision. This change will have no impact on our full year forecasted operational tax provision and will be used in all future periods.

Free cash flow reconciliation

$M	2Q20	3Q20	4Q20	FY20	1Q21	2Q21
Cash (used for) provided from operations	$288	$158	$38	$394	$6	($86)[1]
Capital expenditures	(77)	(74)	(111)	(353)	(75)	(79)
Free cash flow	**211**	**84**	**(73)**	**41**	**(69)**	**(165)**
Contributions from noncontrolling interest	16	8	-	24	-	-
Distributions to noncontrolling interest	(75)	(46)	(55)	(207)	(62)	(75)
Free cash flow less net distributions to noncontrolling interest	**$152**	**$46**	**$(128)**	**$(142)**	**$(131)**	**$(240)**

Free cash flow and Free cash flow less net distributions to noncontrolling interest are non-GAAP financial measures. Management believes that these measures are meaningful to investors because management reviews cash flows generated from operations after taking into consideration capital expenditures and net distributions to noncontrolling interest. Capital expenditures are necessary to maintain and expand Alcoa Corporation's asset base and are expected to generate future cash flows from operations, while net distributions to noncontrolling interest are necessary to fulfill our obligations to our joint venture partners. It is important to note that Free cash flow and Free cash flow less net distributions to noncontrolling interest do not represent the residual cash flows available for discretionary expenditures since other non-discretionary expenditures, such as mandatory debt service requirements, are not deducted from the measure.

1. Cash used for operations in 2Q21 includes discretionary pension funding of $500 million.

Net debt reconciliation

	2Q20			1Q21			2Q21		
$M	**Cons.**	**NCI**	**Alcoa Prop.**	**Cons.**	**NCI**	**Alcoa Prop.**	**Cons.**	**NCI**	**Alcoa Prop.**
Short-term borrowings	$-	$-	$-	$77	$31	$46	$77	$31	$46
Long-term debt due within one year	1	-	1	745	-	745	1	-	1
Long-term debt, less amount due within one year	1,800	31	1,769	2,214	-	2,214	2,216	-	2,216
Total debt	1,801	31	1,770	3,036	31	3,005	2,294	31	2,263
Less: Cash and cash equivalents	965	157	808	2,544	134	2,410	1,652	128	1,524
Net debt	**836**	**(126)**	**962**	**492**	**(103)**	**595**	**642**	**(97)**	**739**
Plus: Net pension / OPEB liability	2,393	38	2,355	2,139	49	2,090	1,417	46	1,371
Adjusted net debt	**$3,229**	**$(88)**	**$3,317**	**$2,631**	**$(54)**	**$2,685**	**$2,059**	**$(51)**	**$2,110**

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.

Adjusted net debt and proportional adjusted net debt are also non-GAAP financial measures. Management believes that these additional measures are meaningful to investors because management also assesses Alcoa Corporation's leverage position after considering available cash that could be used to repay outstanding debt and net pension/OPEB liability, net of the portion of those items attributable to noncontrolling interest (NCI).

Days Working Capital

$M	2Q20	3Q20	4Q20	1Q21	2Q21
Receivables from customers	$402	$516	$471	$587	$644
Add: Inventories	1,419	1,398	1,398	1,417	1,547
Add: Net DWC working capital held for sale[2]	–	–	129	-	-
Less: Accounts payable, trade	1,253	1,360	1,403	1,284	1,392
DWC working capital	$568	$554	$595	$720	$799
Sales	$2,148	$2,365	$2,392	$2,551[3]	$2,833
Number of days in the quarter	91	92	92	90	91
Days Working Capital[1]	**24**	**22**	**23**	**25**	**26**

1. Days Working Capital = DWC working capital divided by (Sales / number of days in the quarter).
2. Includes net working capital related to the Warrick rolling mill sale. Recorded in Assets and Liabilities held for sale as of December 31, 2020.
3. Excludes Warrick rolling mill sales in 1Q21.

Annualized Return on Equity (ROE)

Reconciliation and calculation information

$M	1H20	1H21
Numerator:		
Net (loss) income attributable to Alcoa Corporation	$(117)	$484
Add: Special items[1]	71	(53)
ROE Adjusted Net (loss) income YTD	**$(46)**	**$431**
ROE Adj. Net income multiplied by two	**$(92)**	**$862**
Denominator[2]:		
Total assets	$13,475	$14,685
Less: Total Liabilities	7,908	9,539
Less: Noncontrolling Interest	1,578	1,637
Shareholders' Equity	**$3,989**	**$3,509**
ROE	**-2.3%**	**24.6%**

$$\text{ROE \%} = \frac{\text{(Net Loss/Income Attributable to Alcoa + Special Items)}}{\text{(Total Assets – Total Liabilities – Noncontrolling Interest)}^2} \times 100$$

$$\text{1H20 YTD ROE \%} = \frac{\text{(-\$117 + \$71) x 2}}{\text{(\$13,475 – \$7,908 – \$1,578)}} \times 100 = -2.3\%$$

$$\text{1H21 YTD ROE \%} = \frac{\text{(\$484 – \$53) x 2}}{\text{(\$14,685 – \$9,539 – \$1,637)}} \times 100 = 24.6\%$$

1. Special items include provisions for interest expense, income taxes, and noncontrolling interest.
2. Denominator calculated using quarter ending balances.

Annualized Return on Capital (ROC)

Reconciliation and calculation information

$M	1H20	1H21
Numerator:		
Net (loss) income attributable to Alcoa Corporation	$(117)	$484
Add: Net income attributable to noncontrolling interest	106	85
Add: Provision for income taxes	125	204
Profit before taxes (PBT)	**114**	**773**
Add: Interest expense	62	109
Less: Interest income	4	2
Add: Special items[1]	(83)	(55)
ROC earnings before taxes	**$89**	**$825**
ROC earnings before taxes multiplied by two	**$178**	**$1,650**
ROC earnings after fixed tax rate of 35%	**$116**	**$1,073**
Denominator[2]:		
Total assets	$13,475	$14,685
Less: Cash, cash equivalents, restricted cash and short-term investments	901	2,101
Less: Current liabilities	2,232	2,946
Add: Long-term debt due within one year and short-term borrowings	1	450
Capital Base	**$10,343**	**$10,088**
ROC	**1.1%**	**10.6%**

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

$$\text{1H20 YTD ROC \%} = \frac{\text{(\$114 + \$58 – \$83) x 2) x (1 – 0.35)}}{\text{(\$13,475 – \$901 – \$2,232 + \$1)}} \times 100 = 1.1\%$$

$$\text{1H21 YTD ROC \%} = \frac{\text{(\$773 + \$107 – \$55) x 2) x (1 – 0.35)}}{\text{(\$14,685 – \$2,101 – \$2,946 + \$450)}} \times 100 = 10.6\%$$

1. Special items exclude interest expense, income 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.

Glossary of terms

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
BRL	Brazilian real
CAD	Canadian dollar
CIF	Cost, insurance and freight
CO_2e	Carbon dioxide equivalent
COGS	Cost of goods sold
Cons.	Consolidated
CPI	Consumer Price Index
dmt	Dry metric ton
DWC	Days working capital
EBITDA	Earnings before interest, taxes, depreciation and amortization
Elims.	Eliminations
EPS	Earnings per share
ERISA	Employee Retirement Income Security Act of 1974
EUR	Euro
Est.	Estimated
excl. or ex.	Excluding

Abbreviation	Description
FOB WA	Freight on board Western Australia
FY##	Twelve months ending December 31
GAAP	Accounting principles generally accepted in the United States of America
GJ	Gigajoule
GWh	Gigawatt hour
ISK	Icelandic krona
JV	Joint venture
kmt/kdmt	Thousand metric tonnes/Thousand dry metric tonnes
LME	London Metal Exchange
LTM	Last twelve months
M	Million
Mdmt	Million dry metric tons
Mmt	Million metric tons
mt	Metric ton
NCI	Noncontrolling interest
NI	Net income
NOK	Norwegian krone
OPEB	Other postretirement employee benefits
PBT	Profit before taxes
Prop.	Proportional
R&D	Research and development
RoW	Rest of world
SEC	Securities and Exchange Commission
SG&A	Selling, general administrative and other
SHFE	Shanghai Futures Exchange
TBD	To be determined
U.S.	United States of America
USD	United States dollar
YTD	Year to date

Appendix 2:
Reconciliations for slides 7, 8

Alcoa

Segment Adjusted EBITDA reconciliation

$M	1H17	1H18	1H19	1H20	1H21
Net income (loss) attributable to Alcoa	**$337**	**$205**	**$(601)**	**$(117)**	**$484**
Add:					
Net income attributable to noncontrolling interest	155	266	250	106	85
Provision for income taxes	215	309	266	125	204
Other (income) expenses, net	(51)	30	91	(81)	(129)
Interest expense	51	58	60	62	109
Restructuring and other charges, net	22	212	483	39	40
Depreciation, depletion and amortization	369	386	346	322	343
Adjusted EBITDA	**1,098**	**1,466**	**895**	**456**	**1,136**
Special items before tax and noncontrolling interest	13	49	27	50	3
Adjusted EBITDA excl. special items	**$1,111**	**$1,515**	**$922**	**$506**	**$1,139**
Aluminum Segment Adjusted EBITDA	**$465**	**$417**	**$(93)**	**$28**	**$743**
Alumina Segment Adjusted EBITDA	524	1,030	741	281	351
Bauxite Segment Adjusted EBITDA	207	210	238	251	100
Unallocated Adjusted EBITDA[1]	(98)	(191)	9	(104)	(58)
Special items before tax and noncontrolling interest	13	49	27	50	3
All Other Adjusted EBITDA, excluding special items	**$646**	**$1,098**	**$1,015**	**$478**	**$396**

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.

1. Includes Transformation, Intersegment eliminations, Corporate expenses, and Other (unallocated items not in Adjusted EBITDA of the reportable segments).

Adj. net income (loss) attributable to Alcoa reconciliation

$M	1H17	1H18	1H19	1H20	1H21
Net income (loss) attributable to Alcoa	**$337**	**$205**	**$(601)**	**$(117)**	**$484**
Special items:					
Restructuring and other charges, net	22	212	483	39	40
Other special items	(94)	41	18	(122)	(95)
Discrete tax items and interim tax impacts	16	11	66	164	(2)
Tax impact on special items	(6)	(45)	(11)	(9)	3
Noncontrolling interest impact	(5)	(13)	-	(1)	1
Subtotal	**(67)**	**206**	**556**	**71**	**(53)**
Adjusted net income (loss) attributable to Alcoa	**$270**	**$411**	**$(45)**	**$(46)**	**$431**

Adjusted net income (loss) attributable to Alcoa Corporation is a non-GAAP financial measure. Management believes this measure is meaningful to investors because management reviews the operating results of Alcoa Corporation excluding the impacts of restructuring and other charges, various 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 it is appropriate to consider both Net income (loss) attributable to Alcoa Corporation determined under GAAP as well as Adjusted net income (loss) attributable to Alcoa Corporation.

Net debt reconciliation

$M	2016 Cons.	2016 NCI	2016 Alcoa Prop.	2017 Cons.	2017 NCI	2017 Alcoa Prop.	2018 Cons.	2018 NCI	2018 Alcoa Prop.	2019 Cons.	2019 NCI	2019 Alcoa Prop.	2020 Cons.	2020 NCI	2020 Alcoa Prop.	1Q21 Cons.	1Q21 NCI	1Q21 Alcoa Prop.	2Q21 Cons.	2Q21 NCI	2Q21 Alcoa Prop.
Short-term borrowings	$1	$ -	$1	$8	$ -	$8	$ -	$ -	$ -	$ -	$ -	$ -	$77	$31	$46	$77	$31	$46	$77	$31	$46
Long-term debt due within one year	21	-	21	16	-	16	1	-	1	1	-	1	2	-	2	745	-	745	1	-	1
Long-term debt, less amount due within one year	1,424	1	1,423	1,388	7	1,381	1,801	34	1,767	1,799	31	1,768	2,463	-	2,463	2,214	-	2,214	2,216	-	2,216
Total debt	1,446	1	1,445	1,412	7	1,405	1,802	34	1,768	1,800	31	1,769	2,542	31	2,511	3,036	31	3,005	2,294	31	2,263
Less: Cash and cash equivalents	853	100	753	1,358	252	1,106	1,113	296	817	879	167	712	1,607	176	1,431	2,544	134	2,410	1,652	128	1,524
Net debt	**593**	**(99)**	**692**	**54**	**(245)**	**299**	**689**	**(262)**	**951**	921	**(136)**	1,057	**935**	**(145)**	**1,080**	**492**	**(103)**	**595**	**642**	**(97)**	**739**
Plus: Net pension / OPEB liability	3,104	44	3,060	3,498	26	3,472	2,327	28	2,299	2,330	40	2,290	2,395[1]	52	2,343	2,139	49	2,090	1,417	46	1,371
Adjusted net debt	**$3,697**	**$(55)**	**$3,752**	**$3,552**	**$(219)**	**$3,771**	**$3,016**	**$(234)**	**$3,250**	**$3,251**	**$(96)**	**$3,347**	**$3,330**	**$(93)**	**$3,423**	**$2,631**	**$(54)**	**$2,685**	**$2,059**	**$(51)**	**$2,110**

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.

Adjusted net debt and proportional adjusted net debt are also non-GAAP financial measures. Management believes that these additional measures are meaningful to investors because management also assesses Alcoa Corporation's leverage position after considering available cash that could be used to repay outstanding debt and net pension/OPEB liability, net of the portion of those items attributable to noncontrolling interest (NCI).

1. Includes OPEB liabilities of approximately $83 million related to the Warrick rolling mill sale. Recorded in Liabilities held for sale.

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