Investor Presentation

September 2022

Alcoa

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 “aims,” “ambition,” “anticipates,” “believes,” “could,” “develop,” “endeavors,” “estimates,” “expects,” “forecasts,” “goal,” “intends,” “may,” “outlook,” “potential,” “plans,” “projects,” “reach,” “seeks,” “sees,” “should,” “strive,” “targets,” “will,” “working,” “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 (including our ability to execute on strategies related to environmental, social and governance matters); 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 to the global economy and our industry, business and financial condition caused by various worldwide or macroeconomic events, such as the COVID-19 pandemic and the ongoing conflict between Russia and Ukraine, and related regulatory developments; (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) changes in global economic and financial market conditions generally, such as inflation and interest rate increases, 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 or disruption to energy or raw materials supply, and to the supply chain including logistics; (g) the inability to execute on strategies related to or achieve improvement in profitability and margins, cost savings, cash generation, revenue growth, fiscal discipline, environmental- and social-related goals and targets (including due to delays in scientific and technological developments), or strengthening of competitiveness and operations anticipated from portfolio actions, operational and productivity improvements, 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, restructuring activities, facility closures, curtailments, restarts, expansions, or joint ventures; (i) political, economic, trade, legal, public health and safety, and regulatory risks in the countries in which Alcoa Corporation operates or sells products; (j) labor disputes and/or work stoppages and strikes; (k) the outcome of contingencies, including legal and tax proceedings, government or regulatory investigations, and environmental remediation; (l) the impact of cyberattacks and potential information technology or data security breaches; (m) risks associated with long-term debt obligations; (n) the timing and amount of future cash dividends and share repurchases; (o) 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; and, (p) 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, 2021, the Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, 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.

Any information contained in the following slides that has been previously publicly presented by Alcoa speaks as of the date that it was originally presented, as indicated. Alcoa is not updating or affirming any of such information as of today’s date. The provision of this information shall not imply that the information has not changed since it was originally presented.

Important information

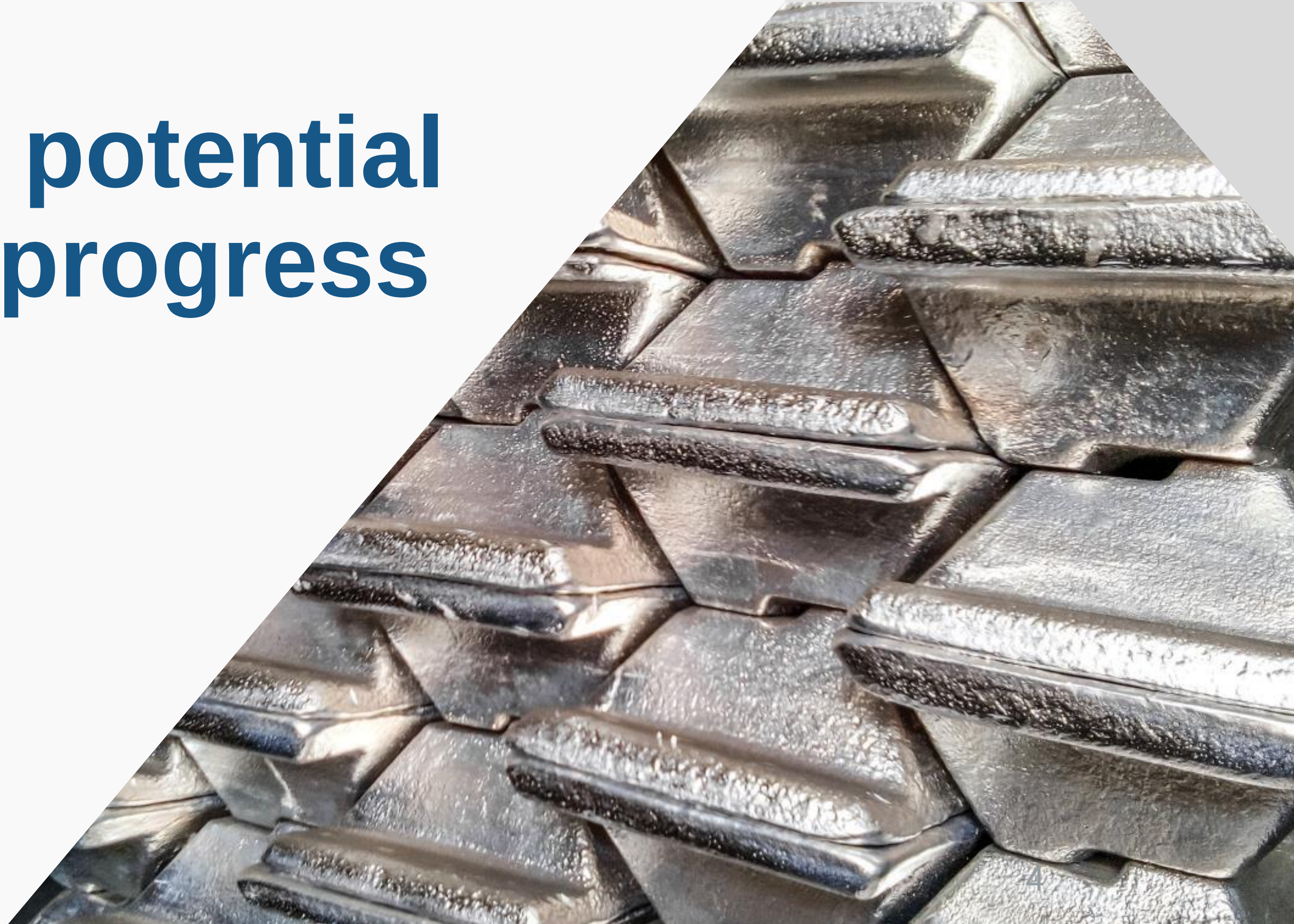
Non-GAAP Financial Measures

Some of the information included in this presentation is derived from Alcoa Corporation's consolidated financial information but is not presented in Alcoa Corporation'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 regulations. 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.

Resources

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

Turn raw potential into real progress

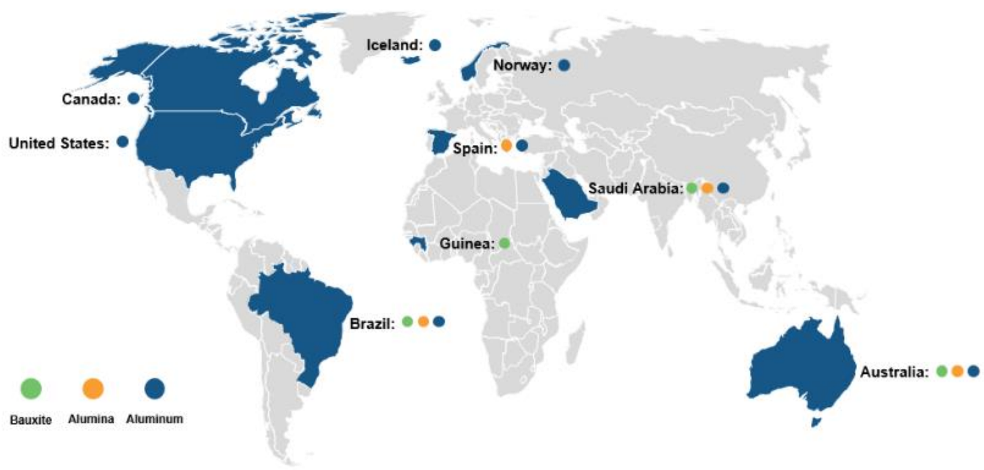


Alcoa

An upstream aluminum company built to perform in all cycles

Global operations and summary of business segments

Global operations by product



- ~12,200 global employees
- Ownership in 27 sites on six continents in nine countries
- Highly rated for corporate governance

Three business segments

- First quartile of bauxite cost curve
- 21.5Mdmt shipments YTD 2Q22
- 93% of shipments to Alcoa refineries YTD 2Q22
- World's second largest bauxite miner; using sustainable methods

- First quartile of alumina cost curve
- 6.6Mmt shipments YTD 2Q22
- 71% of shipments to third parties YTD 2Q22
- Offering EcoSource™ alumina, made with low carbon emitting processes

- Second quartile of cost curve
- 1.3Mmt shipments YTD 2Q22
- 81% renewable energy powering smelters, targeting 85%
- Offering Sustana™ brand EcoLum™ and EcoDura™ aluminum products

Executing on strategic priorities has led to transformation

Comparing Alcoa's key business information 2016 – 2Q22

Alcoa of 2016 – 2017

Operations:
- Strong safety culture
- Headquartered in New York, NY
- Six business units and six product segments
- 43 global operating locations

Financial (fiscal year end 2017):
- No capital return programs in place
- Proportional adjusted net debt of $3.8B
- Net pension/OPEB liability of $3.5B
- 3rd party realized aluminum price $2,224/mt
- FY17 Adjusted earnings per share of $3.34

ESG related innovations:
- Introduced some Sustana products in late 2016
- Developing inert anode technology
- 35% CO_2e emission intensity reduction by 2030, measured from 2005 baseline
- Zero locations ASI certified

Reduce Complexity →

Drive Returns →

Advance Sustainably →

Alcoa of today

Operations:
- Strong safety culture
- Headquartered in Pittsburgh, PA
- Zero business units and three product segments
- 27 global operating locations

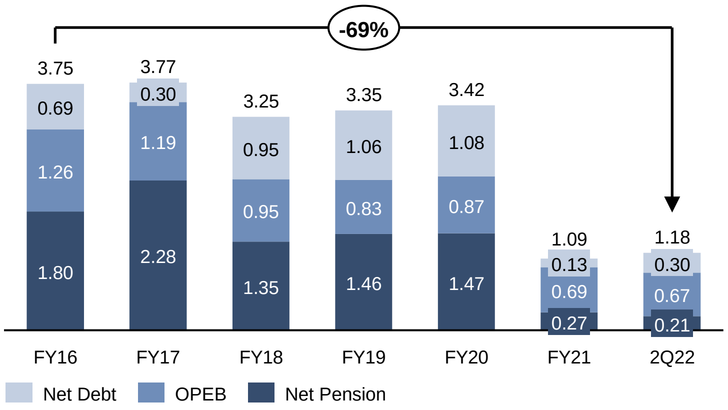
Financial (second quarter 2022):
- Quarterly cash dividend, share buyback programs
- Proportional adjusted net debt of $1.2B
- Net pension/OPEB liability $0.9B
- 3rd party realized aluminum price $3,864/mt
- 2Q22 Adjusted earnings per share of $2.67

ESG related innovations:
- Full line of Sustana alumina and aluminum products
- ELYSIS™ – inert anode technology joint venture
- Announced suite of R&D projects and ambition to achieve net zero carbon by 2050
- 17 locations ASI certified; Chain of Custody certification

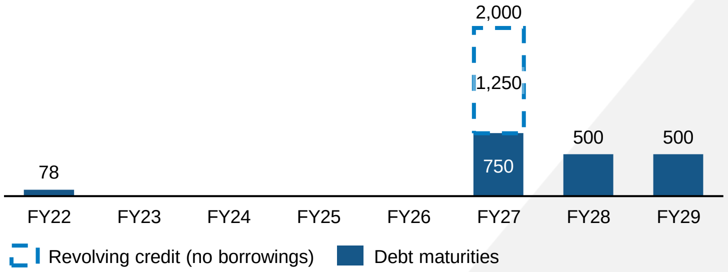
Strengthened balance sheet coincides with capital returns

Balance sheet and capital return metrics, FY16 – 2Q22 YTD

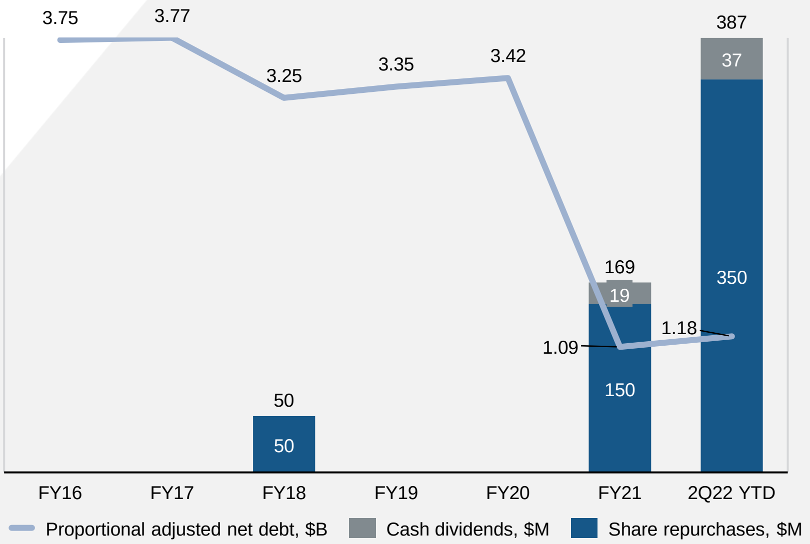
Proportional adjusted net debt, $B



Debt maturity profile, $M



Cash returns to stockholders ($M) and proportional adjusted net debt ($B)



- Authorized an additional $500 million share repurchase program in July of 2022.

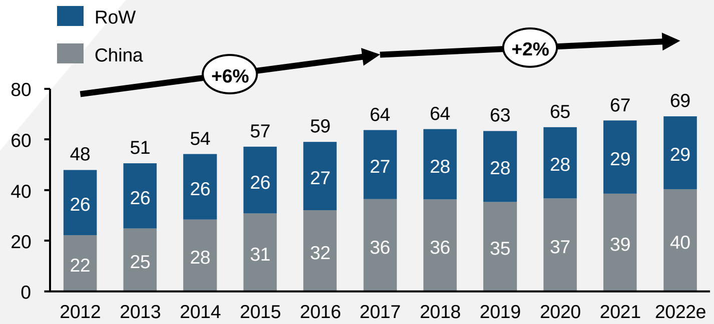
Reinvent the aluminum industry for a sustainable future

Spot LME off recent peak; supply, inventory, trends flattening

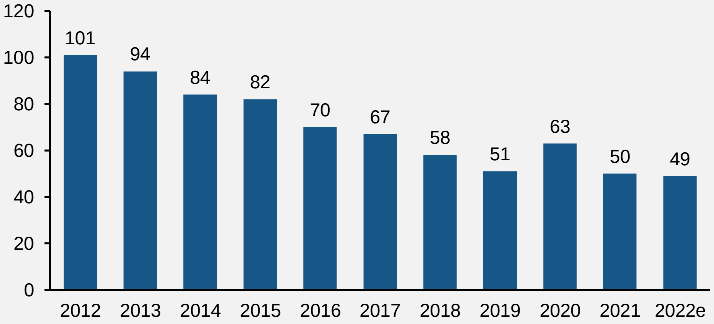
Primary aluminum pricing environment, supply and inventory levels

Aluminum prices ($/tonne)

Primary aluminum supply, Mmt



Global stocks, days of consumption[1]



Sources: LME, SHFE and CRU. 1. Estimate of year-end primary inventories, excluding fake semis.

Market, geopolitical trends drive promising long-term demand

Aluminum supply and demand market dynamics

Demand growth driven by green trends

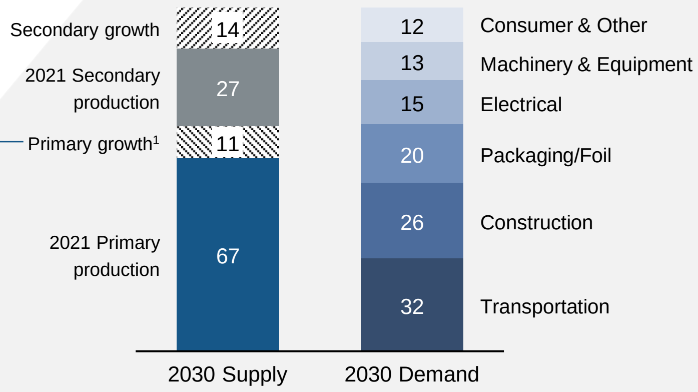
- Transportation, electrical and packaging sectors to lead aluminum demand growth through remainder of decade
  - New energy vehicles use more aluminum than typical internal combustion engine vehicles
  - Renewable energy generation requires more aluminum
- Construction, other sectors also expect continued growth

Supply constraints

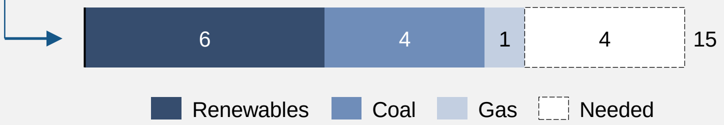
- China capping supply and targeting carbon emissions
  - Announced targets to achieve peak carbon emissions by 2030 and carbon neutrality by 2060
  - Continue to enforce capacity limitations
- RoW production remains at risk
  - Lower inventories, high transportation costs and supply disruptions continue
  - Persistent negative energy dynamics, most notably in Europe, and global supply chain challenges

Long term market outlook, 2022 – 2030

Global aluminum semis supply/demand, Mmt



Potential primary smelter projects by energy source, Mmt



Project pipeline could be insufficient to meet demand by 2030

Sources: CRU, Alcoa Analysis

1. Net of 4 Mmt needed to replace obsolete capacity

Offering full suite of Sustana products

Summary of Sustana products and position on carbon emissions curves

Alcoa Sustana product line

Sustana EcoSource
Alcoa | Low-carbon alumina

- Less than 0.6mt CO_2e emissions (scope 1 & 2) from bauxite and alumina
- Lowest CO_2e intensity product and refinery portfolio in the industry
- Available from all Alcoa smelter grade alumina refineries

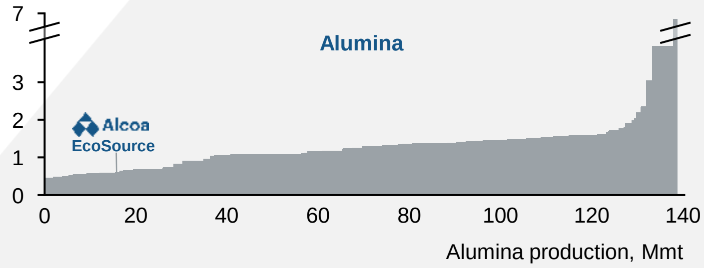
Sustana EcoLum
Alcoa | Low-carbon aluminum

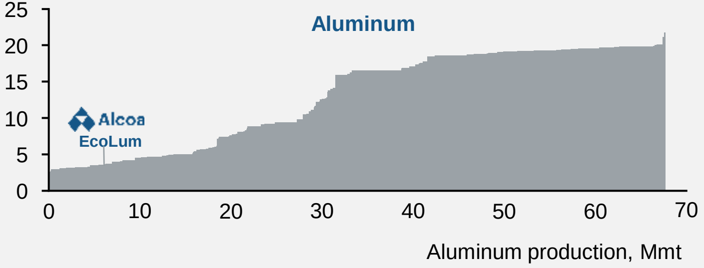
- Less than 4.0mt CO_2e emissions (scope 1 & 2) from bauxite, alumina, smelting and casting
- Available globally in all cast shapes

Sustana EcoDura
Alcoa | Aluminum with recycled content

- Minimum 50% recycled content
- Available globally

Metric tonne of CO_2e/mt





asi CERTIFIED PERFORMANCE

ASI certifications available for all products and 17 sites

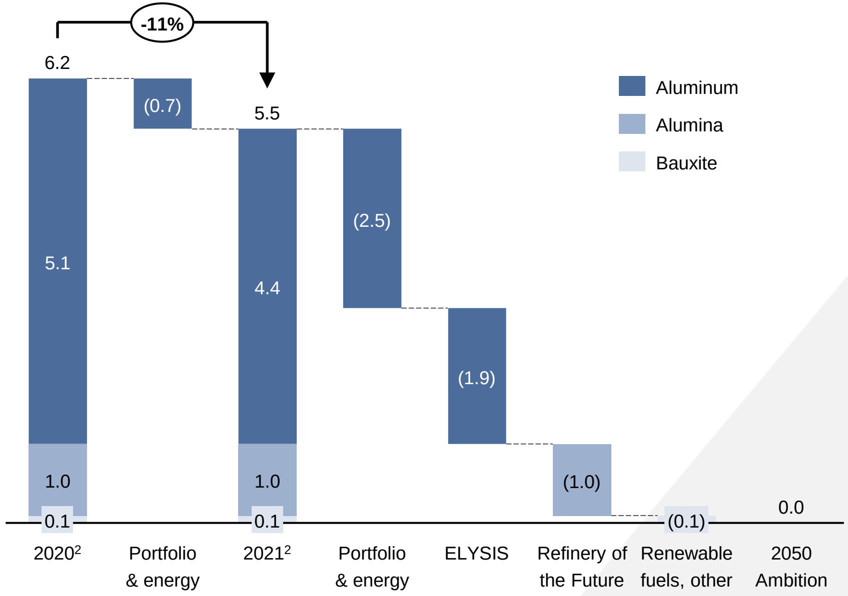
Learn more at www.Alcoa.com/sustana

Sources: IAI, CRU, Alcoa analysis

Expected pathways to support net zero ambition

Potential impact of select R&D programs and strategic actions on Alcoa's carbon emissions

Estimated Alcoa scope 1+2 emissions reductions by segment, CO_2e/tonne[1]



- **Portfolio review and energy transformation** – deploy renewable energy solutions and fix, curtail, close or sell remaining assets under review
- **ELYSIS –** inert anode solution to eliminate carbon emissions from aluminum smelting process
- **Refinery of the Future –** alumina production using technology that limits energy emissions and freshwater usage, minimizes bauxite residue, and uses renewable energy
- **Renewable fuels –** transition from fossil fuels to electric vehicles for transport and major equipment

1. Reductions in CO_2e/tonne depend on various factors, including access to cost effective renewable energy, successful deployment of R&D projects under development with acceptable returns, and ability to complete portfolio review. See also the 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, 2021.
2. Source: 2020 and 2021 Alcoa Sustainability Reports

The right company

The right industry

The right time

The world is decarbonizing, and aluminum is part of the solution

Alcoa's significant progress over nearly six years leaves it well positioned to prosper in a world that demands more aluminum, constrains carbon-based energy and rewards aluminum producers already low on the carbon curve

As importantly, Alcoa has technologies under development that could completely change the industry by lowering costs, improving efficiencies, removing carbon from production processes and increasing recyclability

With our progress to date and our aspirations for the future we believe that Alcoa is the right company, in the right industry, at the right time

2Q22 Financial and other information as presented on July 20, 2022

Alcoa

Strong financials and continued progress

Alcoa values, strategic priorities, and key takeaways for 2Q22

OUR VALUES

Act with Integrity

Operate with Excellence

Care for People

Lead with Courage

2Q22 Takeaways

- No fatal or serious injuries (FSI-As) in the quarter
- Strong financial performance and returns to stockholders
  - Net income attributable to Alcoa of $549 million; Adj. net income of $496 million
  - Adjusted EBITDA excluding special items of $913 million
  - FCF less NCI of $0.4 billion, proportional adjusted net debt at $1.2 billion
  - Paid quarterly cash dividend and repurchased $275 million of shares
  - Amended revolving credit agreement and increased buyback authorization
- Operating level adjustments including restarts and curtailments
  - Alumar and Portland smelter restarts progressing
  - San Ciprián refinery production decrease, Warrick smelter partial curtailment
- Announced new investments and contracts
  - Investments to increase production at Mosjøen smelter and add casting capacity at Deschambault smelter
  - Two new low carbon EcoLum™ aluminum sales contracts, as well as long term power contract for 45 percent of future San Ciprián smelter requirements

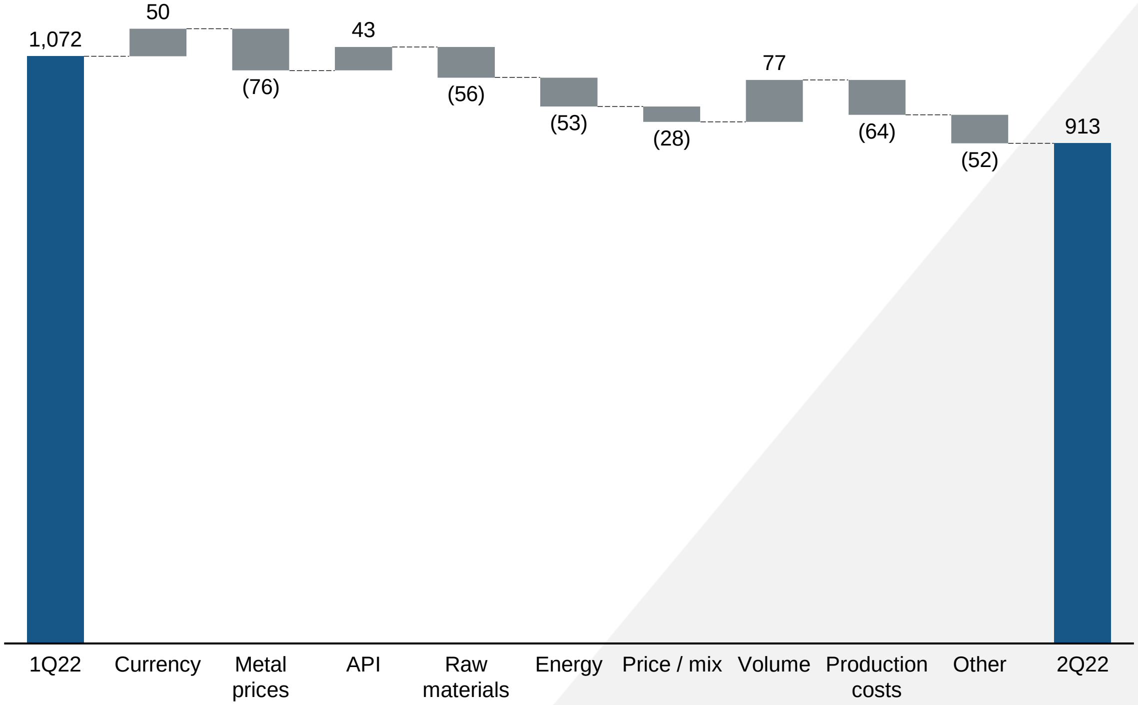
Adjusted EBITDA excluding special items nearly $2 billion YTD

Quarterly income statement highlights

M, Except per share amounts	2Q21	1Q22	**2Q22**	Prior year change	Sequential change
Income statement highlights					
Revenue	$2,833	$3,293	**$3,644**	$811	$351
Net income attributable to Alcoa Corporation	$309	$469	**$549**	$240	$80
Diluted earnings per share	$1.63	$2.49	**$2.95**	$1.32	$0.46
Adjusted income statement highlights					
Adjusted EBITDA excluding special items	$618	$1,072	**$913**	$295	$(159)
Adjusted net income attributable to Alcoa Corporation	$281	$577	**$496**	$215	$(81)
Adjusted diluted earnings per share	$1.49	$3.06	**$2.67**	$1.18	$(0.39)

Higher shipments, U.S. dollar, alumina prices are positives

Adjusted EBITDA excluding special items sequential changes, $M



	1Q22	2Q22	Change
Bauxite	$38	$5	$(33)
Alumina	262	343	81
Aluminum	713	596	(117)
Segment total	1,013	944	(69)
Transformation	(14)	(11)	3
Intersegment eliminations	102	20	(82)
Other corporate	(29)	(40)	(11)
Total	$1,072	$913	$(159)

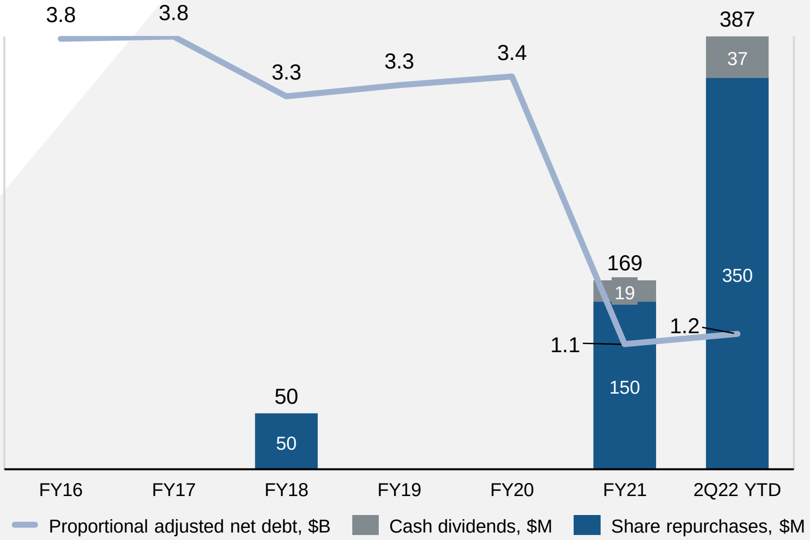
Cash returns to stockholders of $387 million 2022 YTD

Key metrics and cash returned to stockholders, 2016 – 2Q22 YTD

Key financial metrics

2Q22 Days working capital (DWC)	2Q22 YTD Return on equity
43 Days	**41.9%**
2Q22 YTD Capital Returns to stockholders	**2Q22 Proportional adjusted net debt**
$387M	**$1.18B**
2Q22 YTD Free cash flow less net NCI distributions	**2Q22 Cash balance**
$227M	**$1.64B[1]**

Cash returns to stockholders ($M) and proportional adjusted net debt ($B)



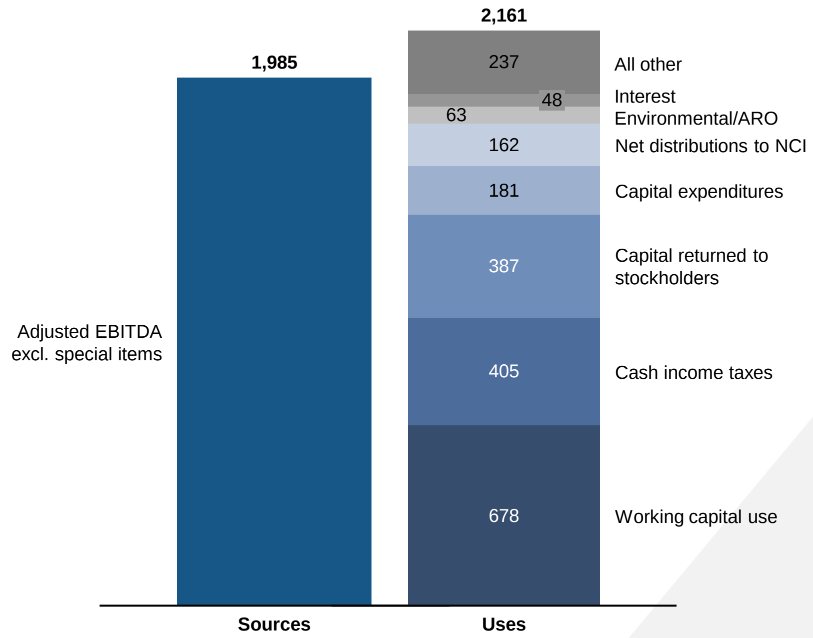
- Authorized an additional $500 million share repurchase program; $150 million remains from previous authorization

1. Excludes $110 million in restricted cash

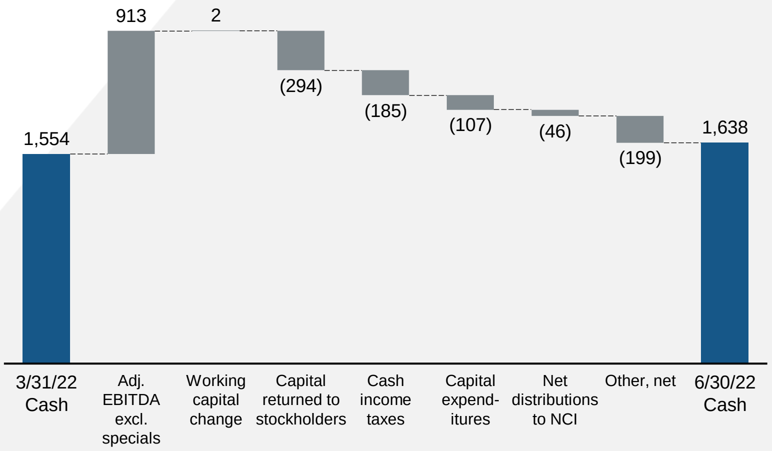
Strong cash flows enabled increased capital returns

1H22 and sequential quarter cash flow information

YTD Cash flow information, $M



3/31/22 to 6/30/22 Cash changes, $M



- Capital returns to stockholders of $294 million include $275 million of buybacks and $19 million dividends
- Working capital change was a small source of cash in 2Q22
- Cash income taxes and capital expenditures totaled $292 million

Improved revolving credit terms allow greater flexibility

Summary of revolver amendment key terms and benefits; impact on debt maturity profile

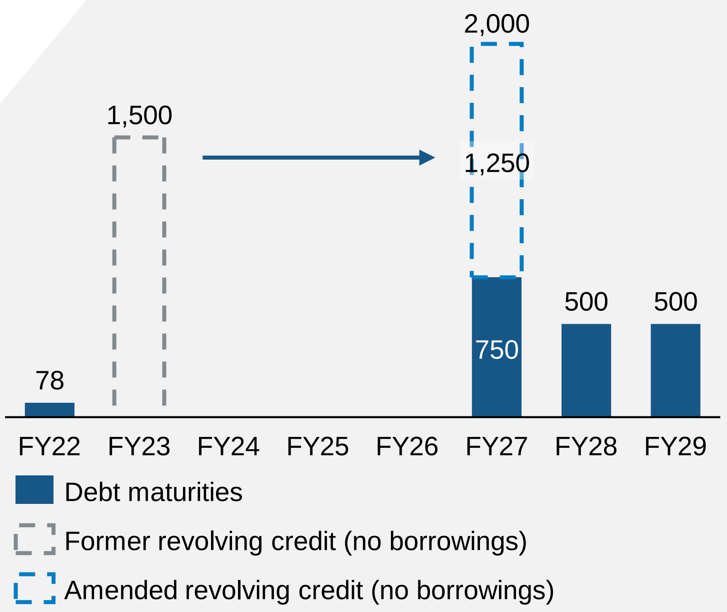
Amended key terms

- Maturity date extended from November 2023 to June 2027
- Facility size reduced from $1.5 billion to $1.25 billion
- Limitations removed[1] on share buybacks, dividends, unsecured debt and investments
- Existing collateral package released by lenders[2]
- Sustainability linked KPIs added:
  - Greenhouse gas emissions intensity
  - Renewable energy consumption

Benefits of improved terms

- Greater flexibility to execute on long term strategies
- Greater freedom to determine capital returns to stockholders
- Reaffirms commitment to advance sustainably

Debt maturity profile, $M, as of 6/30/2022



1. Subject to pro forma compliance with leverage ratio and no event of default. Pro forma compliance with leverage ratio will not be required if Alcoa is upgraded to Investment Grade by Moody's or S&P.
2. Release of the collateral package will continue so long as certain credit ratings are maintained.

2022 Outlook

FY22 Key metrics as of June 30, 2022

Income statement excl. special items impacts

	2Q22 YTD Actual	FY22 Outlook
Bauxite shipments (Mdmt)	21.5	44.0 – 45.0
Alumina shipments (Mmt)	6.6	13.6 – 13.8
Aluminum shipments (Mmt)	1.3	2.5 – 2.6
Transformation (adj. EBITDA impacts)	$(25)M	~ $(75)M
Intersegment elims. (adj. EBITDA impacts)	$122M	Varies
Other corporate (adj. EBITDA impacts)	$(69)M	~ $(140)M
Depreciation, depletion and amortization	$321M	~ $645M
Non-operating pension/OPEB expense	$31M	~ $65M
Interest expense	$55M	~ $105M
Operational tax expense[1]	$398M	Varies
Net income of noncontrolling interest	$172M	40% of AWAC NI

Cash flow impacts

	2Q22 YTD Actual	FY22 Outlook
Pension / OPEB required cash funding	$36M	~ $75M
Additional pension funding	-	Will vary based on market conditions and cash availability
Early debt repayment	-	
Stock repurchases and dividends	$387M	
Return-seeking capital expenditures[2]	$17M	~ $75M
Sustaining capital expenditures[2]	$164M	~ $450M
Payment of prior year income taxes[3]	$299M	~ $325M
Current period cash taxes[1]	$106M	Varies
Environmental and ARO payments[4]	$63M	~ $160M
Impact of restructuring and other charges	$16M	TBD

Additional market sensitivities and business information are included in the appendix.

1. Estimate will vary with market conditions and jurisdictional profitability.
2. AWAC portion of FY22 outlook: ~50% of return-seeking capital expenditures and ~65% of sustaining capital expenditures.
3. Net of pending tax refunds.
4. As of June 30, 2022, the environmental remediation reserve balance was $302M and the ARO liability was $746M.

Current market volatile, long term trends remain positive

Current market dynamics and long term market trends

Current aluminum market conditions

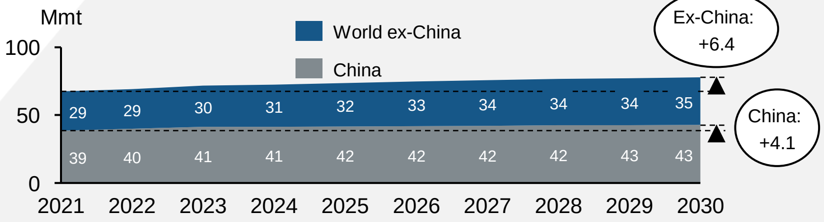
- 2022 market expected to be in deficit
  - Supply: China increased production following 2021 cuts and delayed ramp ups, European cuts being made due to energy issues
  - Demand: expected to be positive year on year, uncertainty in near term outlook
  - Uncertainties include impacts of China stimulus program, exports from Russia, near term economic growth, and further energy-driven curtailments
- Capacity at risk due to high global energy prices

June 2022 average (approximate ranges)	Alumina		Aluminum	
	China	RoW	China	RoW
Cash Negative	20-30%	10-20%	10-20%	10-20%

- Regional suppliers advantaged in deficit markets (NA, EUR)

Long term market trends

- 2021-2030 production CAGR 1.6%; growth from ex-China as China approaches 45 Mmtpa capacity cap[1]



- CapEx for new projects in ex-China higher than in China, preference for renewable power

Smelter growth by energy source[2], 2011-20 and 2021-30, Mmtpa

- Demand to continue to grow for low carbon aluminum at a premium in key markets (NA, EUR)

Alcoa analysis
1. Source: CRU
2. Excluding creep and additional capacity to replace obsolete smelters.

Portfolio optimization and investments continue

Recent changes to operational levels and announced investments

Actions across operating assets

Restarts

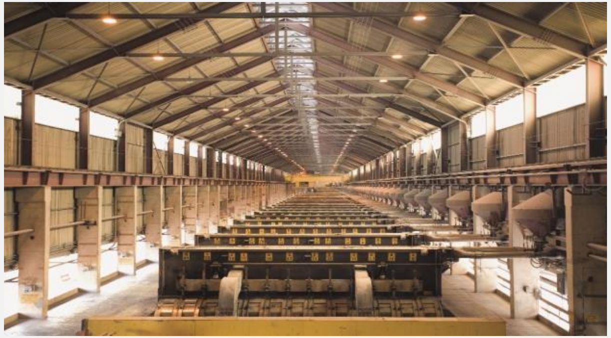
- Alumar smelter – restarting 268 kmt/year; 29 kmt/year energized in 2Q22; 100% renewable energy; 1Q23 completion
- Portland smelter – restarting 19 kmt/year; metal production expected to start in 3Q22

Curtailments and reductions

- San Ciprián smelter – two-year curtailment with restart planned for 1Q24; signed long term power contract in 2Q22 for 45 percent of future requirements
- San Ciprián refinery – reduced production ~15%
- Warrick smelter – 54 kmt/year capacity curtailment

Investments

- Mosjøen smelter – announced project to increase production by 14 kmt/year by end of 2026
- Deschambault smelter – completed $47 million capital project to increase production in 1Q22; announced project to add standard ingot casting capacity



Offering full suite of Sustana™ products

Sustainability oriented product offerings and key sustainability metrics

Sustana family of products

Sustana EcoSource — Alcoa | Low-carbon alumina

Smelter grade alumina with carbon emissions that are better than 90 percent of the industry

Sustana EcoLum — Alcoa | Low-carbon aluminum

Primary aluminum with a low carbon footprint 3.5 times better than the industry average

Sustana EcoDura — Alcoa | Aluminum with recycled content

Aluminum with at least 50 percent recycled content, supporting the circular economy

Key sustainability metrics

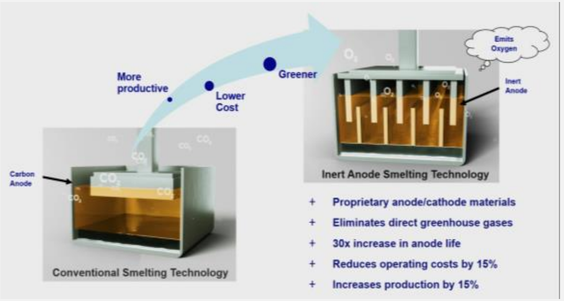
- Sustana product line is the industry's broadest suite of green products, seeing growth in green premiums
- Industry's lowest carbon intensity alumina refiner, one of lowest carbon intensity primary aluminum producers (scope 1 and 2)
- Renewable energy sources provided 81 percent of electricity consumed by Alcoa smelters in 2021
- Total Alcoa scope 1 and 2 greenhouse gas emissions intensity reduced by 11 percent from 2020 to 2021, 23 percent from 2015 baseline and nearing 2030 target of 30 percent

Transformative R&D project pipeline

Highlighting our breakthrough technologies under development

Breakthrough technologies

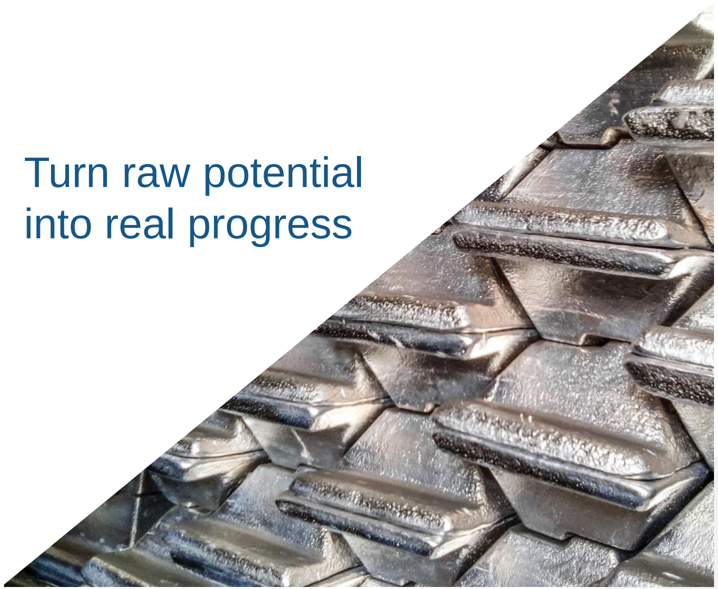
- **ELYSIS™** – inert anode solution
  - Working on scale-up towards 2023 demonstration of commercial sized 450kA cells; detailed planning to scale-up supply chain
- **Refinery of the Future** – sustainable alumina production
  - Received funding from Australian government for electric calcination pilot
- **ASTRAEA™** – post-consumer scrap recycling
  - At the bench to small pilot level; plans for pilot demonstration in 2023
- **High Purity Alumina** – entering a specialty alumina market
  - In stage one of three: production trials and detailed design of demonstration facility



Realizing potential and continuing to progress

2Q22 Summary

Turn raw potential
into real progress



- **Delivered strong financial performance**
  - Adjusted EBITDA excluding special items of $913 million
  - Free cash flow less noncontrolling interest of $0.4B
  - Proportional adjusted net debt at $1.2 billion with cash of $1.6B
- **Provided substantial capital returns**
  - Repurchased $275 million of common stock
  - Paid third consecutive quarterly cash dividend of $0.10 per share
- **Progressed strategic actions**
  - Continued restart activities at Alumar and Portland smelters
  - Announced power contract for 2024 restart of San Ciprián smelter
  - Completed MRN bauxite mine sale
- **Positioned to succeed in a sustainable world**
  - Announced new contracts for sales of Sustana products
  - Investing in technologies leveraging industry-leading environmental and social standards

Maximizing value creation through balanced uses of cash

Capital allocation framework considerations

Capital allocation framework

Maintain strong balance sheet through the cycle

Capital expenditures to sustain and improve existing operations

Maximize value creation

Return cash to stockholders

Transform portfolio

Position for growth

Maximize value creation

Return cash to stockholders:

- Paid third straight quarterly cash dividend of $0.10/share in 2Q22
- Repurchased 4.5 million shares in 2Q22

Transform portfolio:

- Restarting Alumar smelter production based on renewable energy
- Curtailed San Ciprián smelter, obtained power contract for 45 percent of future requirements
- Restarting portion of Portland smelter, exploring renewable energy options

Position for value creating growth; key timeframe 2024 - 2025

- Implement breakthrough technologies, when proven, with potential to transform the industry
- Fund projects that are expected to provide returns to stockholders greater than cost of capital

Quarterly income statement

Quarterly income statement

M, Except realized prices and per share amounts	2Q21	1Q22	**2Q22**	Prior Year Change	Sequential Change
Realized primary aluminum price ($/mt)	$2,753	$3,861	**$3,864**	$1,111	$3
Realized alumina price ($/mt)	$282	$375	**$442**	$160	$67
Revenue	$2,833	$3,293	**$3,644**	$811	$351
Cost of goods sold	2,156	2,181	**2,767**	611	586
SG&A and R&D expenses	60	53	**59**	(1)	6
Adjusted EBITDA	617	1,059	**818**	201	(241)
Depreciation, depletion and amortization	161	160	**161**	0	1
Other income, net	(105)	(14)	**(206)**	(101)	(192)
Interest expense	67	25	**30**	(37)	5
Restructuring and other charges, net	33	125	**(75)**	(108)	(200)
Provision for income taxes	111	210	**234**	123	24
Net income	350	553	**674**	324	121
Less: Net income attributable to noncontrolling interest	41	84	**125**	84	41
Net income attributable to Alcoa Corporation	$309	$469	**$549**	$240	$80
Diluted earnings per share	$1.63	$2.49	**$2.95**	$1.32	$0.46
Diluted average shares	190.2	188.5	**186.1**	(4.1)	(2.4)

Special items

Breakdown of special items by income statement classification – gross basis

M, Except per share amounts	2Q21	1Q22	**2Q22**	**Description of significant 2Q22 special items**
Net income attributable to Alcoa Corporation	$309	$469	**$549**	
Diluted earnings per share	$1.63	$2.49	**$2.95**	
Special items	$(28)	$108	**$(53)**	
Cost of goods sold	-	*12*	***95***	Portland energy contract reclass $70[1], Alumar smelter restart $22, Portland smelter restart $3
SG&A and R&D expenses	*1*	*1*	**-**	
Restructuring and other charges, net	*33*	*125*	***(75)***	Brazil VAT valuation allowance reversal $(83), other $8
Interest	*32*	-	**-**	
Other income, net	*(98)*	*(15)*	***(171)***	Portland energy contract reclass $(70)[1], mark to market energy contracts $(106), gain on asset sale adjustment $5
Provision for income taxes	*3*	*(6)*	***52***	Tax on special items
Noncontrolling interest	*1*	*(9)*	***46***	Partner's share of special items
Adjusted net income attributable to Alcoa Corporation	$281	$577	**$496**	
Adjusted diluted earnings per share	$1.49	$3.06	**$2.67**	

1. The mark-to-market contracts associated with the Portland smelter generated settled gains recorded within Other income, net during the second quarter which economically offset a portion of the cost of power recorded in Cost of goods sold. This reclass presents the net cost of power within Cost of goods sold.

Quarterly income statement excluding special items

Quarterly income statement excluding special items

M, Except realized prices and per share amounts	2Q21	1Q22	**2Q22**	Prior Year Change	Sequential Change
Realized primary aluminum price ($/mt)	$2,753	$3,861	**$3,864**	$1,111	$3
Realized alumina price ($/mt)	$282	$375	**$442**	$160	$67
Revenue	$2,833	$3,293	**$3,644**	$811	$351
Cost of goods sold	2,156	2,169	**2,672**	516	503
COGS % of Revenue	76.1%	65.9%	**73.3%**	(2.8)% pts.	7.4% pts.
SG&A and R&D expenses	59	52	**59**	0	7
SG&A and R&D % of Revenue	2.1%	1.6%	**1.6%**	(0.5)% pts.	0.0% pts.
Adjusted EBITDA	618	1,072	**913**	295	(159)
Depreciation, depletion and amortization	161	160	**161**	0	1
Other (income) expenses, net	(7)	1	**(35)**	(28)	(36)
Interest expense	35	25	**30**	(5)	5
Provision for income taxes	108	216	**182**	74	(34)
Operational tax rate	25.1%	24.4%	**24.1%**	(1.0)% pts.	(0.3)% pts.
Adjusted net income	321	670	**575**	254	(95)
Less: Adjusted net income attributable to noncontrolling interest	40	93	**79**	39	(14)
Adjusted net income attributable to Alcoa Corporation	$281	$577	**$496**	$215	$(81)
Adjusted diluted earnings per share	$1.49	$3.06	**$2.67**	$1.18	$(0.39)
Diluted average shares	190.2	188.5	**186.1**	(4.1)	(2.4)

2Q22 Financial summary

Three months ending June 30, 2022, excluding special items

$M	Bauxite	Alumina	Aluminum[3]	Transformation	Intersegment eliminations	Other corporate	Alcoa Corporation
Total revenue	$199	$1,566	$2,547	$9	$(669)	$(8)	$3,644
Third-party revenue	$34	$1,077	$2,539	$2	-	$(8)	$3,644
Adjusted EBITDA[1]	$5	$343	$596	$(11)	$20	$(40)	$913
Adjusted EBITDA margin %	*2.5%*	*21.9%*	*23.4%*				*25.1%*
Depreciation, depletion and amortization	$35	$49	$71	-	-	$6	$161
Other expenses (income) , net[2]	-	$5	$(40)	-	-	-	$(35)
Interest expense							$30
Provision for income taxes							$182
Adjusted net income							$575
Net income attributable to noncontrolling interest							$79
Adjusted net income attributable to Alcoa Corporation							$496

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 904GWh, $13M and $(5)M, respectively.

2Q22 Adjusted EBITDA drivers by segment

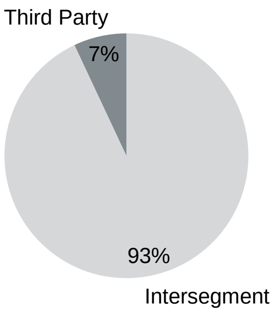
Adjusted EBITDA excluding special items sequential changes by segment, $M

Segment	Adjusted EBITDA 1Q22	Currency	Metal prices	API	Raw materials	Energy	Price/mix	Volume	Production costs	Other	Adjusted EBITDA 2Q22
Bauxite	$38	0	0	0	0	(3)	1	(1)	(9)	(21)	$5
Alumina	$262	36	0	132	(27)	(54)	(11)	18	(27)	14	$343
Aluminum	$713	21	(76)	(32)	(29)	4	(18)	60	(28)	(19)	$596
Segment Total	**$1,013**	**57**	**(76)**	**100**	**(56)**	**(53)**	**(28)**	**77**	**(64)**	**(26)**	**$944**

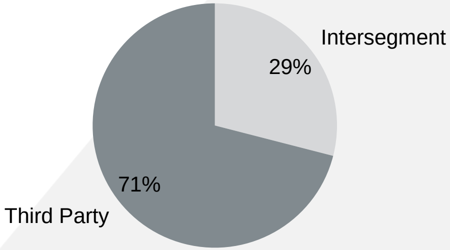
Aluminum value chain

2022 YTD Alcoa product shipments by segment

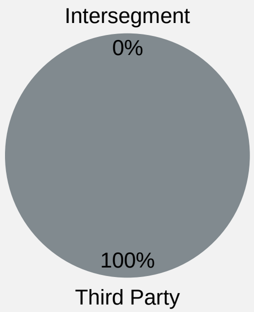
21.5 Mdmt shipments



6.6 Mmt shipments



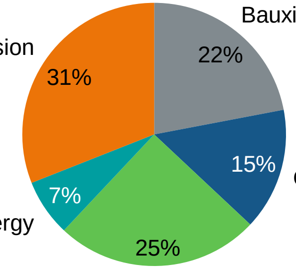
1.3 Mmt shipments



Composition of alumina and aluminum production costs

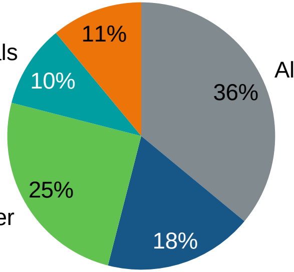
Alcoa 2Q22 production cash costs

Alumina refining



Input Cost	Inventory Flow	Pricing Convention	FY22 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	\$2M per \$1/barrel

Aluminum smelting



Input Cost	Inventory Flow	Pricing Convention	FY22 Annual Cost Sensitivity
Alumina	~2 Months	API on a 6 to 8 month average	\$44M per \$10/mt
Petroleum Coke	1 - 2 Months	Quarterly	\$8M per \$10/mt
Coal Tar Pitch	1 - 2 Months	Quarterly	\$2M per \$10/mt

2022 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 0.72[1]	BRL + 0.10 4.90[1]	CAD + 0.01 1.27[1]	EUR + 0.01 1.07[1]	ISK + 10 130.25[1]	NOK + 0.10 9.38[1]
Bauxite						(4)	2				
Alumina		123				(16)	5		(1)		
Aluminum	189	(42)	124	69	17	(3)	(1)	4	1	10	3
Total	189	81	124	69	17	(23)	6	4	0	10	3

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 ▪ Brazilian hydroelectric sales at market prices

Regional premium breakdown

Regional premiums	% of 2022 Primary aluminum shipments
Midwest	~50%
Rotterdam Duty Paid	~40%
CIF Japan	~10%

1. Average 2Q22 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
2Q21 revaluation	3.0	(8.4)	0.5	(0.8)	0.0	0.3	(5.4)
9/30/21 currencies	0.72	5.42	1.27	1.17	129.24	8.70	
3Q21 revaluation	6.2	3.7	0.3	0.4	0.0	(1.3)	9.3
3Q21 sequential impact	3.2	12.1	(0.2)	1.2	0.0	(1.6)	14.7
12/31/21 currencies	0.73	5.63	1.26	1.14	129.79	8.76	
4Q21 revaluation	(0.9)	1.1	0.5	(1.8)	(1.2)	(1.7)	(4.0)
4Q21 sequential impact	(7.1)	(2.6)	0.2	(2.2)	(1.2)	(0.4)	(13.3)
3/31/22 currencies	0.75	4.75	1.25	1.11	127.86	8.67	
1Q22 revaluation	(1.1)	(11.0)	(2.6)	(3.3)	(0.9)	(2.5)	(21.4)
1Q22 sequential impact	(0.2)	(12.1)	(3.1)	(1.5)	0.3	(0.7)	(17.4)
6/30/22 currencies	0.69	5.22	1.29	1.05	132.90	9.80	
2Q22 revaluation	18.4	14.8	(0.9)	(1.3)	(2.4)	(2.1)	26.5
2Q22 revaluation sequential impact	**19.5**	**25.8**	**1.7**	**2.0**	**(1.5)**	**0.4**	**47.9**

Currency annual sensitivity and actual impact

	+0.01 AUD	+0.10 BRL	+0.01 CAD	+0.01 EUR	+ 10 ISK	+0.10 NOK	Total
2022 EBITDA sensitivity	**(23)**	**6**	**4**	**0**	**10**	**3**	
2Q21 currency avg.	0.77	5.31	1.23	1.20	123.74	8.38	
3Q21 currency avg.	0.73	5.22	1.26	1.18	126.04	8.75	
3Q21 currency impact	21.1	(1.0)	1.6	2.3	0.4	1.5	25.9
4Q21 currency avg.	0.73	5.58	1.26	1.14	129.94	8.73	
4Q21 currency impact	3.1	3.9	0.0	2.9	0.3	(0.5)	9.7
1Q22 currency avg.	0.72	5.25	1.27	1.12	128.18	8.85	
1Q22 currency impact	1.9	(5.0)	0.6	0.1	(0.4)	0.8	(2.0)
2Q22 currency avg.	0.72	4.90	1.27	1.07	130.25	9.38	
2Q22 currency impact	**1.9**	**(5.1)**	**0.6**	**0.1**	**0.5**	**3.6**	**1.6**
Total 2Q22 EBITDA currency impact[1]	**21.4**	**20.7**	**2.3**	**2.1**	**(1.0)**	**4.0**	**49.5**

Totals may not tie due to rounding

1. Total EBITDA currency impact includes balance sheet revaluation based on change in quarter end currency rates and income statement currency impacts based on change in quarterly average currency rates

Additional business considerations

Items expected to impact Adjusted EBITDA for 3Q22

- Expected sequential impacts on Adjusted EBITDA excluding special items, excluding indexed sales prices or currency impacts:
  - In Bauxite, we expect Adjusted EBITDA to improve approximately $10 million, as growing refinery demand improves volume on a sequential basis. Increased production costs are expected to be offset with higher intercompany prices.
  - In Alumina, we expect approximately $30 million in higher energy and raw materials costs, with one third related to San Ciprián refinery energy costs. We also expect higher shipments to offset higher bauxite prices and the non-recurrence of one-time items.
  - In the Aluminum segment, we expect alumina costs to be favorable by $30 million. We also expect approximately $30 million impact from higher energy and raw material costs not fully offset with production cost savings. Additionally, the Warrick potline curtailment is expected to be an unfavorable impact of $20 million.

- Estimate intersegment profit elimination for every $10/mt decrease in API prices to be a $7 million to $9 million favorable impact based on comparison of the average API of the last two months of each quarter (API is based on average of prior month spot prices); consider intersegment eliminations as component of minority interest calculation.

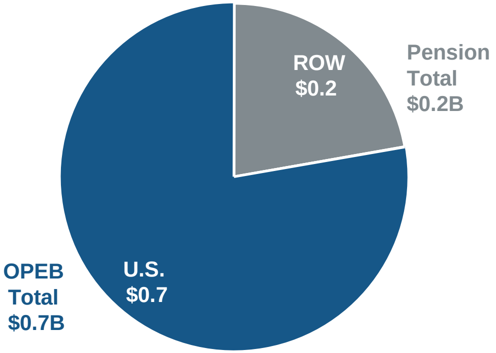
- Computed using quarter end exchange rates, 2Q22 Adjusted EBITDA included a favorable balance sheet revaluation impact of $27 million ($48 million favorable sequentially compared to 1Q22); impacts related to balance sheet revaluation are not incorporated into the currency sensitivities provided for Adjusted EBITDA.

- Below the Adjusted EBITDA line:
  - Other income is expected to decline sequentially by $35 million as equity income declines on additional funding to ELYSIS and sequentially lower alumina and aluminum prices at Ma'aden joint ventures.
  - Based on recent pricing, the Company expects 3Q22 operational tax expense to approximate $100 million to $110 million.

Pension and OPEB summary

Net pension and OPEB liability and financial impacts

Net liability as of June 30, 2022[1]



Estimated GAAP pension funding status as of June 30, 2022

- U.S. greater than 100%
- Worldwide greater than 100%

U.S. pension contributions currently not tax deductible

Estimated financial impacts, $M

Expense impact	2022
Segment pension	$15
Segment OPEB	5
Corporate pension & OPEB	-
Total adj. EBITDA impact	**20**
Non-operating	65
Special items (curtailment/settlement)	-
Total expense impact	**$85**

Cash flow impact	2022
Minimum required pension funding[2]	$15
OPEB payments	60
Total cash impact	**$75**

1. In 4Q21, the asset allocation for the U.S. pension plans transitioned to a 90% 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. minimum required pension cash funding for 2022 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, 2022	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™				***$775M***	***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%		
Pechiney Reynolds Quebec, Inc.[3]	Canada	Aluminum smelter	50.0%		
Subtotal other[6]				***$463M***	***COGS***
Total investments				**$1,238M**	

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.
6. Alcoa Corporation completed the sale of its 18.2% ownership interest in Mineração Rio do Norte S.A. (MRN) to South32 in April 2022.

Alcoa sustainability goals

Alcoa strategic long-term sustainability goals, baseline and progress

Goal	Description	2015 Baseline	2021 Progress
Safety	Zero fatalities and serious injuries (life-threatening, life-altering injury or illness)	5 fatal or serious injuries/illnesses	0 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	17.2% 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	0.82:1
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	14.8% reduction
Waste	From a 2015 baseline, reduce landfilled waste 15% by 2025 and 25% by 2030. Baseline restated to reflect divestiture of Warrick Rolling.	131.7 mt	36.0% 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	0.8% 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	23.9% 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	Launched SP360 – Alcoa Social Management System that will be implemented through 2022

Source: 2021 Sustainability Report

Production and capacity information

Alcoa Corporation annual consolidated amounts as of June 30, 2022

Bauxite production, Mdmt

Mine	Country	2021 Production
Darling Range	Australia	34.7
Juruti	Brazil	5.8
Poços de Caldas	Brazil	0.4
Trombetas (MRN)	Brazil	2.0
Boké (CBG)	Guinea	3.5
Al Ba'itha[1]	Saudi Arabia	1.2
Total		**47.6**

Alumina refining, kmt

Facility	Country	Capacity	Curtailed
Kwinana	Australia	2,190	-
Pinjarra	Australia	4,700	-
Wagerup	Australia	2,879	-
Poços de Caldas	Brazil	390	214
São Luís (Alumar)	Brazil	2,084	-
San Ciprián	Spain	1,600	-
Total		**13,843**	**214**
Ras Al Khair[1]	*Saudi Arabia*	*452*	-

Aluminum smelting, kmt

Facility	Country	Capacity	Curtailed
Portland[2]	Australia	197	30
São Luís (Alumar)[3]	Brazil	268	239
Baie Comeau	Canada	312	-
Bécancour	Canada	347	-
Deschambault	Canada	287	-
Fjarðaál	Iceland	351	-
Lista	Norway	94	-
Mosjøen	Norway	200	-
San Ciprián[4]	Spain	228	228
Intalco	U.S.	279	279
Massena West	U.S.	130	-
Warrick[5]	U.S.	269	108
Total		**2,962**	**884**
Ras Al Khair[1]	*Saudi Arabia*	*202*	-

1. The Company's proportionate share of earnings from its equity investment in the Saudi Arabian joint venture does not impact adjusted EBITDA.
2. On November 7, 2021, the Company announced that the Portland Aluminium joint venture plans to restart a portion of the curtailed capacity at its aluminum smelter in the State of Victoria in Australia, with metal production expected to start in the third quarter of 2022. Once the restart is complete, Portland Aluminium will operate at approximately 95 percent of total capacity and Alcoa Corporation will have approximately 186,000 mtpy of its consolidated capacity at Portland operating.
3. On September 20, 2021, the Company announced plans to restart 268,000 metric tons per year (mtpy) of aluminum capacity at the Alumar smelter in São Luís, Brazil. Production began in the second quarter of 2022 and the Company expects full capacity to be operational in the first quarter of 2023.
4. On December 29, 2021, the Company announced a two-year curtailment of the San Ciprián smelter's 228,000 metric tons of annual capacity, and a commitment by the Company to begin the restart of the smelter in January 2024. In January 2022, the smelter curtailment was completed.
5. On July 1, 2022, the Company announced curtailment of approximately 54,000 mtpy of its Warrick smelter.

Valuation framework

Valuation framework key considerations

				LTM ending 6/30/22 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	$115M
	+	Alumina		$1,256M
	+	Aluminum	Economic value using market multiple of: i. Smelters, casthouses, and energy assets ii. Smelters and casthouses restart optionality	$2,445M
	-	Non-segment expenses (income)	Economic value using market multiple of: i. Net corporate expenses and Transformation	$207M
	=	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 $1.8B ($1.8B, >95% Alcoa), pension & OPEB net liabilities of $0.9B ($0.9B, >95% Alcoa; U.S. contributions not tax deductible), environmental & ARO liabilities of $1.0B ($0.8B, ~75% Alcoa)	
	+	Cash & equity investments[1]	Cash position of $1.5B ($1.6B, ~90% Alcoa) plus carrying value of investments in the Ma´aden joint venture and ELYSIS of $0.7B ($0.8B, ~90% Alcoa)	
	=	Equity value		

1. Dollar amounts reflect Alcoa Corporation’s consolidated balance sheet values as of June 30, 2022. The “Alcoa” percentages exclude amounts attributable to Alcoa Corporation’s partner in the AWAC JV.

Adjusted EBITDA reconciliation

$M	2Q21	3Q21	4Q21	FY21	1Q22	2Q22
Net income (loss) attributable to Alcoa	**$309**	**$337**	**$(392)**	**$429**	**$469**	**$549**
Add:						
Net income attributable to noncontrolling interest	41	33	23	141	84	125
Provision for income taxes	111	127	298	629	210	234
Other income, net	(105)	(18)	(298)	(445)	(14)	(206)
Interest expense	67	58	28	195	25	30
Restructuring and other charges, net	33	33	1,055	1,128	125	(75)
Depreciation, depletion and amortization	161	156	165	664	160	161
Adjusted EBITDA	**617**	**726**	**879**	**2,741**	**1,059**	**818**
Special items before tax and noncontrolling interest	1	2	17	22	13	95
Adjusted EBITDA excl. special items	**$618**	**$728**	**$896**	**$2,763**	**$1,072**	**$913**

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.

Free cash flow reconciliation

$M	2Q21	3Q21	4Q21	FY21	1Q22	2Q22
Cash (used for) provided from operations	$(86)[1]	$435	$565	$920	$34	$536
Capital expenditures	(79)	(83)	(153)	(390)	(74)	(107)
Free cash flow	**(165)**	**352**	**412**	**530**	**(40)**	**429**
Contributions from noncontrolling interest	-	8	13	21	46	37
Distributions to noncontrolling interest	(75)	(40)	(38)	(215)	(162)	(83)
Free cash flow less net distributions to noncontrolling interest	**$(240)**	**$320**	**$387**	**$336**	**$(156)**	**$383**

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

$M	Cons. (2Q21)	NCI (2Q21)	Alcoa Prop. (2Q21)	Cons. (1Q22)	NCI (1Q22)	Alcoa Prop. (1Q22)	Cons. (2Q22)	NCI (2Q22)	Alcoa Prop. (2Q22)
Short-term borrowings	$77	$31	$46	$75	$30	$45	$75	$30	$45
Long-term debt due within one year	1	-	1	1	-	1	1	-	1
Long-term debt, less amount due within one year	2,216	-	2,216	1,727	-	1,727	1,725	-	1,725
Total debt	2,294	31	2,263	1,803	30	1,773	1,801	30	1,771
Less: Cash and cash equivalents	1,652	128	1,524	1,554	152	1,402	1,638	166	1,472
Net debt (net cash)	**642**	**(97)**	**739**	**249**	**(122)**	**371**	**163**	**(136)**	**299**
Plus: Net pension / OPEB liability	1,417	46	1,371	950	15	935	893	16	877
Adjusted net debt	**$2,059**	**$(51)**	**$2,110**	**$1,199**	**$(107)**	**$1,306**	**$1,056**	**$(120)**	**$1,176**

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. When cash exceeds total debt, the measure is expressed as net cash.

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).

Net debt reconciliation

	FY16			FY17			FY18			FY19			FY20			FY21			2Q22		
$M	Cons.	NCI	Alcoa Prop.	Cons.	NCI	Alcoa Prop.	Cons.	NCI	Alcoa Prop.	Cons.	NCI	Alcoa Prop.	Cons.	NCI	Alcoa Prop.	Cons.	NCI	Alcoa Prop.	Cons.	NCI	Alcoa Prop.
Short-term borrowings	$1	$-	$1	$8	$-	$8	$-	$-	$-	$-	$-	$-	$77	$31	$46	$75	$30	$45	$75	$30	$45
Long-term debt due within one year	21	-	21	16	-	16	1	-	1	1	-	1	2	-	2	1	-	1	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	1,726	-	1,726	1,725	-	1,725
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	1,802	30	1,772	1,801	30	1,771
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	1,814	177	1,637	1,638	166	1,472
Net debt (net cash)	**593**	**(99)**	**692**	**54**	**(245)**	**299**	**689**	**(262)**	**951**	**921**	**(136)**	**1,057**	**935**	**(145)**	**1,080**	**(12)**	**(147)**	**135**	**163**	**(136)**	**299**
Plus: Net pension	1,818	14	1,804	2,280	(1)	2,281	1,354	5	1,349	1,482	18	1,464	1,503	28	1,475	263	(7)	270	207	(5)	212
Plus: OPEB Liability	1,286	30	1,256	1,218	27	1,191	973	23	950	848	22	826	892[1]	24	868[1]	710	22	688	686	21	665
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**	**$961**	**$(132)**	**$1,093**	**$1,056**	**$(120)**	**$1,176**

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. When cash exceeds total debt, the measure is expressed as net cash.

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 which was a negotiated estimate used at December 31, 2020 and subsequently trued up in 2021. Recorded in Liabilities held for sale.

Days working capital reconciliation

$M	**2Q21**	**3Q21**	**4Q21**	**1Q22**	**2Q22**
Receivables from customers	$644	$769	$757	$952	$898
Add: Inventories	1,547	1,702	1,956	2,495	2,556
Less: Accounts payable, trade	1,392	1,482	1,674	1,645	1,752
DWC working capital	$799	$989	$1,039	$1,802	$1,702
Sales	$2,833	$3,109	$3,340	$3,293	$3,644
Number of days in the quarter	91	92	92	90	91
Days Working Capital[1]	**26**	**29**	**29**	**49**	**43**

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

Annualized Return on Equity (ROE)

ROE Reconciliation and calculation information as of June 30, 2022

$M	**1H21**	**1H22**
Numerator:		
Net (loss) income attributable to Alcoa Corporation	$484	$1,018
Add: Special items[1]	(53)	55
ROE Adjusted Net income YTD	**$431**	**$1,073**
ROE Adjusted Net income multiplied by two	**$862**	**$2,146**
Denominator[2]:		
Total assets	$14,685	$15,848
Less: Total Liabilities	9,539	9,074
Less: Noncontrolling Interest	1,637	1,652
Shareholders' Equity	**$3,509**	**$5,122**
ROE	**24.6%**	**41.9%**

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

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

$$\textbf{1H22 YTD ROE \% =} \frac{(\$1,018 + \$55) \times 2}{(\$15,848 - \$9,074 - \$1,652)} \times 100 = 41.9\%$$

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

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, YoY	Year to date, year over year

Alcoa