Investor Presentation

November 2021

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 “anticipates,” “endeavors,” “working,” “potential,” “ambition,” “develop,” “reach,” “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 and related regulatory developments 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 and strikes; (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; (o) the timing and amount of future cash dividends and share repurchases; 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, 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.

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

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Resources

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Operations and ownership interests on six continents

OUR VALUES

Act with Integrity

Operate with Excellence

Care for People

Lead with Courage

Well positioned across three product segments

Alcoa portfolio cost curve position and key factors, 2021

1st Quartile

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

1st Quartile

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

2nd Quartile

- 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

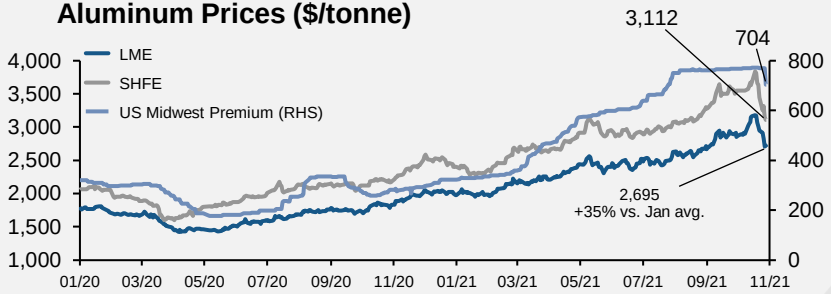
Source: CRU and Alcoa analysis

Prices higher on solid demand, supply constraints

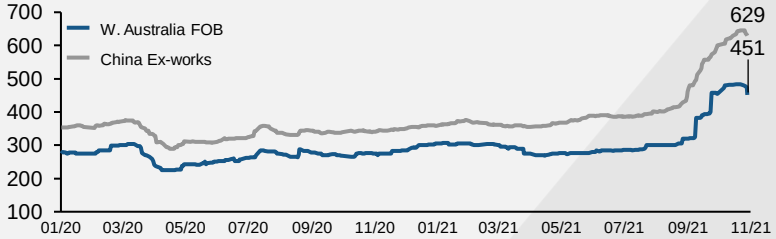
Aluminum and alumina price environment and market commentary

3Q21 Aluminum, alumina prices up

Aluminum Prices ($/tonne)



Alumina Prices ($/tonne)



Favorable markets, commercial position

Aluminum

- **Market:** Continued strength in LME and regional premiums, China continues to import primary aluminum; supply disruptions due to power cuts and environmental regulations continue; no ex-China restart announcements outside Alumar; transportation costs remain elevated
- **Commercial:** Value-add products (VAP) premiums increased in 3Q (vs. 2Q) with strong demand supporting high spot premiums for open VAP volume; entering into contract negotiations for 2022

Alumina

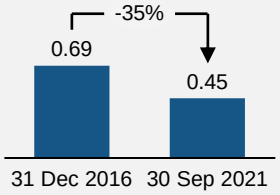
- **Market:** Price support from instability in production in the market (Atlantic production issues, various China cuts)
- **Commercial:** Alcoa long alumina position benefits from run-ups in alumina pricing; alumina sales prices closely linked to spot prices with 30 day lag

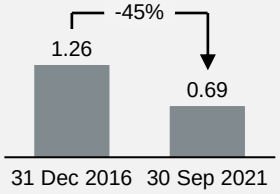
Source: LME, SHFE, Platts. SHFE and China Ex-Works prices include value-add tax (VAT). Prices updated through the end of October 2021.

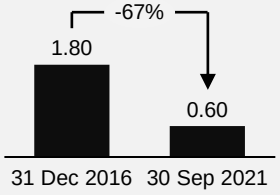
Improved the balance sheet, announced capital returns

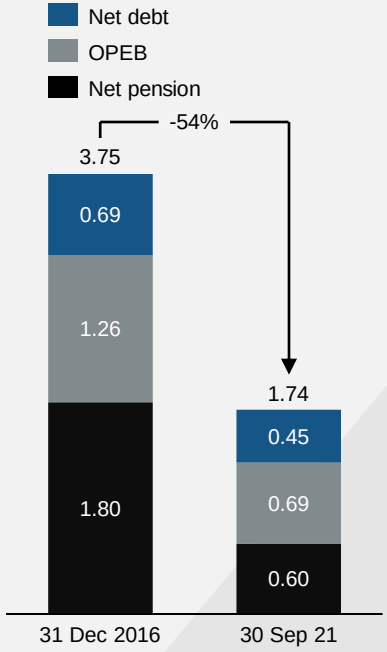
Balance sheet and return metrics, summary of authorized capital returns

PROPORTIONAL ADJUSTED NET DEBT[1], $B

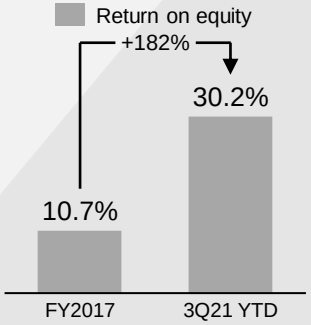


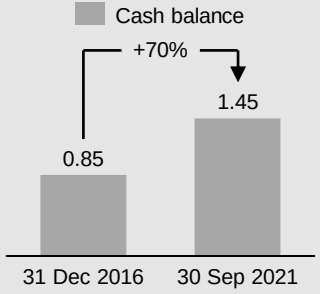






OTHER KEY METRICS AND CAPITAL RETURNS





- In October 2018:
  - Authorized $200 million share repurchase; $150 million remaining
- In October 2021:
  - Authorized additional share repurchase $500 million; combined total repurchase available of $650 million
  - Authorized new cash quarterly dividend program; $0.10/share payable November 19, 2021

1. See attached reconciliation

R&D program focused on upstream aluminum value chain

Technology solutions roadmap for Alcoa system

Alcoa's **Refinery of the Future** project provides solutions for all direct refinery emissions

Need: decarbonized grid

ELYSIS™ inert-anode solution eliminates all Scope 1&3 emissions associated with aluminum smelting

ASTRAEA™ technology creating high purity aluminum from post-consumer scrap

Alcoa will partner with customers to provide alloy development to support further recycling; especially post-consumer

INNOVATIONS TARGETED BY ALCOA R&D PROGRAMS

MINING → TRANSPORT → REFINING → TRANSPORT → SMELTING → CASTING → POST CONSUMER RECYCLING → TRANSPORT → CUSTOMERS

Mining emissions sources: diesel & electricity

Need: OEM solution for battery or green hydrogen power + decarbonized grid

Scope 3 transportation emissions sources: bunker fuel & diesel

Need: renewable energy solution for maritime and land-based solutions

ALCOA WILL WORK WITH INNOVATORS AND GOVERNMENTS TO ADOPT SOLUTIONS

Refreshed capital allocation framework

Capital allocation framework and considerations, as of November 2021

Maintain strong balance sheet through the cycle

Capital expenditures to sustain existing operations

Maximize value creation

Return cash to stockholders

Transform portfolio

Position for growth

Strong balance sheet:
- Keep cash balance and net debt at comfortable levels
- Redeemed 2026 notes ($500 million) on September 30, 2021

Capital expenditures:
- Sustaining capital expenditures of $375 million in 2021, $450 million in 2022

Return cash to stockholders:
- Existing $200 million buyback program has $150 million available
- In October 2021:
  - Announced quarterly cash dividend program, $0.10/share quarterly dividend payable 4Q21
  - Authorized additional $500 million share buyback program

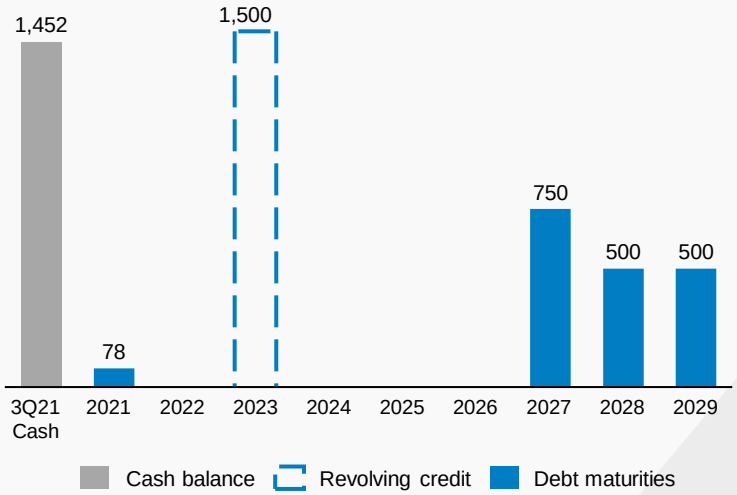
Continue portfolio transformation through 2023

Position for value creating growth; key timeframe ~2024
- Expansions and/or breakthrough technology implementations

Open debt profile, reduced pension cash requirements

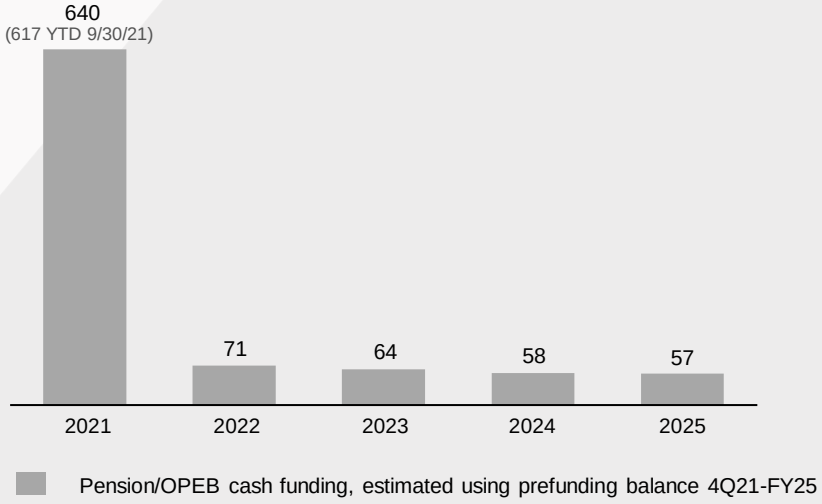
Debt maturity outlook to 2029; pension/OPEB funding expectations through 2025

Cash balance and maturity profile, $M



- $750M 2027 senior note: 5.50% coupon, callable 2023
- $500M 2028 senior note: 6.125% coupon, callable 2023
- $500M 2029 senior note: 4.125% coupon, callable 2024
- Average coupon rate: 5.25%
- Annual interest expense: ~$95 million

Estimated global pension/OPEB funding, $M

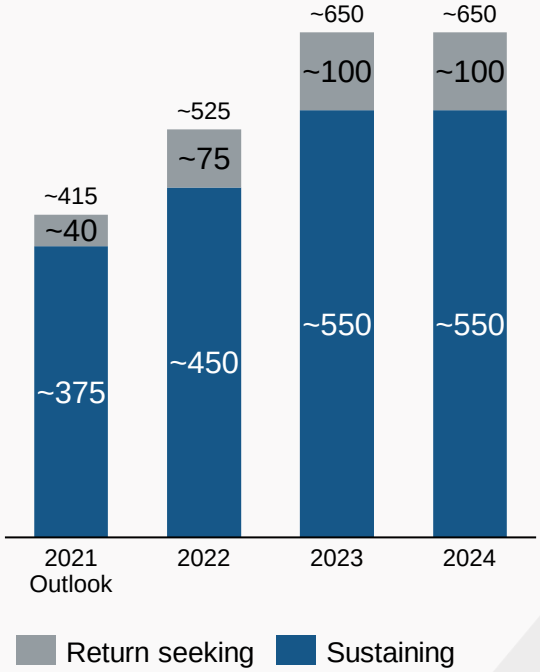


- Global funded status of >90%, U.S. funded status ~100%
- U.S. pension prefunding balance of ~$1 billion
- Expected cash funding does not include risk transfer costs not funded by prefunding balance, if any

Increased capital spending expected in next three years

Capital expenditure expectations, 2021-2024, excluding innovation projects

Expected future capital expenditures, $M[1]



Return-seeking examples
- Well defined production creep
- Cast house product improvements

Sustaining examples
- Mine moves
- Impoundments

Major innovation development projects not included

ELYSIS™ carbon free smelting
- In scale-up construction and trials; 2024 commercialization target

Mechanical vapor recompression (MVR)
- In feasibility studies; targeting late 2023 for scale technology tests

High purity alumina (HPA)
- In first phase of three phase, multi-year development project

ASTRAEA™ process post consumer scrap to purity
- In developmental phase; if viable, preparing for pilot plant investment decision in 2024

1. AWAC portion of capex outlook: ~50% of return-seeking capital expenditures and ~65% of sustaining capital expenditures

Optionality of key innovation project cash flows

Key decision points and expected funding levels for major innovation projects, $M

Conditional investment	2022	2023	2024	2025	2026+
ELYSIS carbon free smelting process	~50	~10	As ELYSIS owner, 150-200 in 2024-2025 for customer raw materials production facility and engineering; As adopter, first opportunity beginning in 2024; scale TBD		
Mechanical vapor recompression	~2	~20	~30	Additional projects to be based upon results of first trials	
Refinery electric calcination	~2	~2	~10	Additional projects to be based upon results of first trials	
ASTRAEA™ scrap metal purification	~5	~20	Scale pilot/demonstration facility 150-200 in 2024-2025; Full scale implementation facility 500-600 in 2025-2026+		
High purity alumina process	~50 Phase 2	~200 Phase 3			

Strong, focused, and ready for tomorrow

Key elements defining today's Alcoa

Values – simple guide to all our actions, especially our safety culture

Operations – excellence in all segments, setting production records

Financial – balance sheet strengthened and cash flowing

Portfolio – fix/curtail/close/sell has been a major focus in refining and smelting

Technology – transformative technology development programs underway

Organization – leaner, more connected operating model

Capital allocation – conservative and balanced approach

Environmental and Social – low carbon intensity, socially responsible

Governance – strong corporate governance profile

Reconciliations

Alcoa

Net debt reconciliation

	FY16			FY17			FY18			FY19			FY20			3Q21		
$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.
Short-term borrowings	$1	$-	$1	$8	$-	$8	$-	$-	$-	$-	$-	$-	$77	$31	$46	$77	$31	$46
Long-term debt due within one year	21	-	21	16	-	16	1	-	1	1	-	1	2	-	2	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	1,724	-	1,724
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	31	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	1,452	124	1,328
Net debt	**593**	**(99)**	**692**	**54**	**(245)**	**299**	**689**	**(262)**	**951**	**921**	**(136)**	**1,057**	**935**	**(145)**	**1,080**	**350**	**(93)**	**443**
Plus: Net pension liability	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	606	6	600
Plus: OPEB liability	1,286	30	1,256	1,218	27	1,191	973	23	950	848	22	826	892[1]	24	868[1]	717	24	693
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**	**$1,673**	**$(63)**	**$1,736**

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.

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).

3Q21 Financial and other information as presented on October 14, 2021

Alcoa

The Element of **Possibility**™

3rd Quarter Earnings

Alcoa Corporation

October 14, 2021

Alcoa

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Glossary of terms

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

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Roy Harvey

President and Chief Executive Officer

Alcoa

Decisive actions, strong markets: another record quarter

Alcoa values, strategic priorities, and key takeaways for 3Q21

OUR VALUES

Act with Integrity

Operate with Excellence

Care for People

3Q21 Takeaways

- Continued focus on safety; one serious injury in the quarter
- Highest profitability since 2016 inception
  - For both the quarter and nine months, highest Adjusted diluted earnings per share
  - Highest Aluminum Segment Adjusted EBITDA
- Cash for capital returns, strengthening balance sheet
  - Announced quarterly cash dividend and share repurchase authorizations
  - Redeemed $500 million, 7.0%, 2026 maturity notes
  - Proportional adjusted net debt of $1.7 billion
- Advancing sustainability across portfolio
  - Announced restart of Alumar (São Luís) smelter with competitively priced 100% renewable energy solution by 2024
  - Announced term sheet for high purity alumina development project
  - Announced ambition for net zero by 2050 and two new ASI certifications
- Strong aluminum fundamentals continuing
  - LME aluminum price at 13 year high and upward trending alumina price
  - Supply constraints overwhelming transitory demand impacts

William Oplinger

Executive Vice President and Chief Financial Officer

Alcoa

Quarterly earnings per share record for Alcoa Corporation

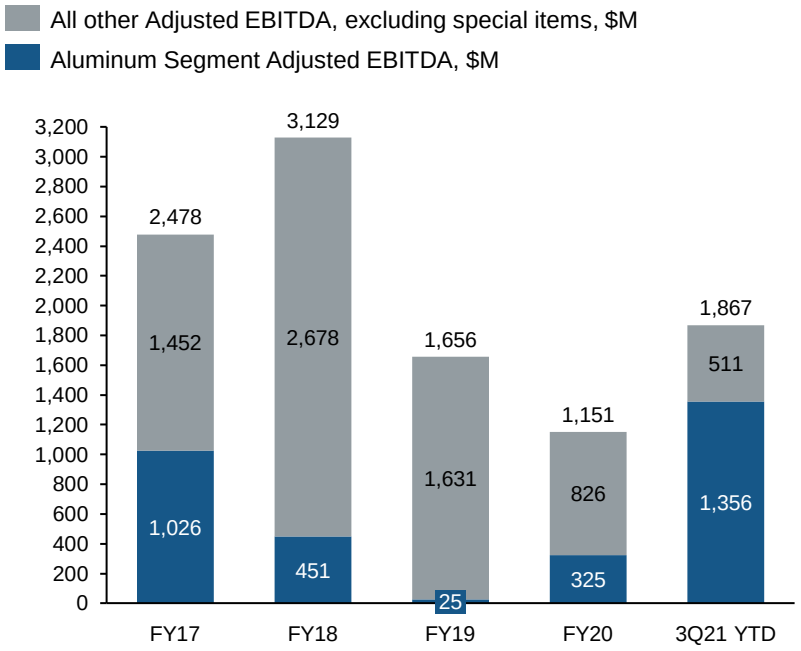
Quarterly income statement highlights

M, Except per share amounts	3Q20	2Q21	3Q21	Prior year change	Sequential change
Income statement highlights					
Revenue	$2,365	$2,833	**$3,109**	$744	$276
Net (loss) income attributable to Alcoa Corporation	$(49)	$309	**$337**	$386	$28
Diluted (loss) earnings per share	$(0.26)	$1.63	**$1.76**	$2.02	$0.13
Adjusted income statement highlights					
Adjusted EBITDA excluding special items	$284	$618	**$728**	$444	$110
Adjusted net (loss) income attributable to Alcoa Corporation	$(218)	$281	**$391**	$609	$110
Adjusted diluted (loss) earnings per share	$(1.17)	$1.49	**$2.05**	$3.22	$0.56

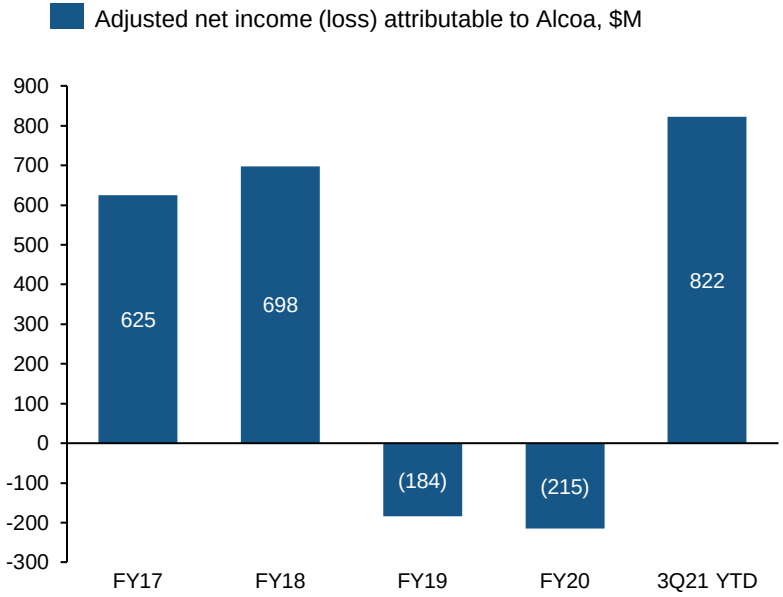
Aluminum segment again drives record Adj. net income

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

Aluminum segment provides 73% of Adjusted EBITDA in 3Q21 YTD…

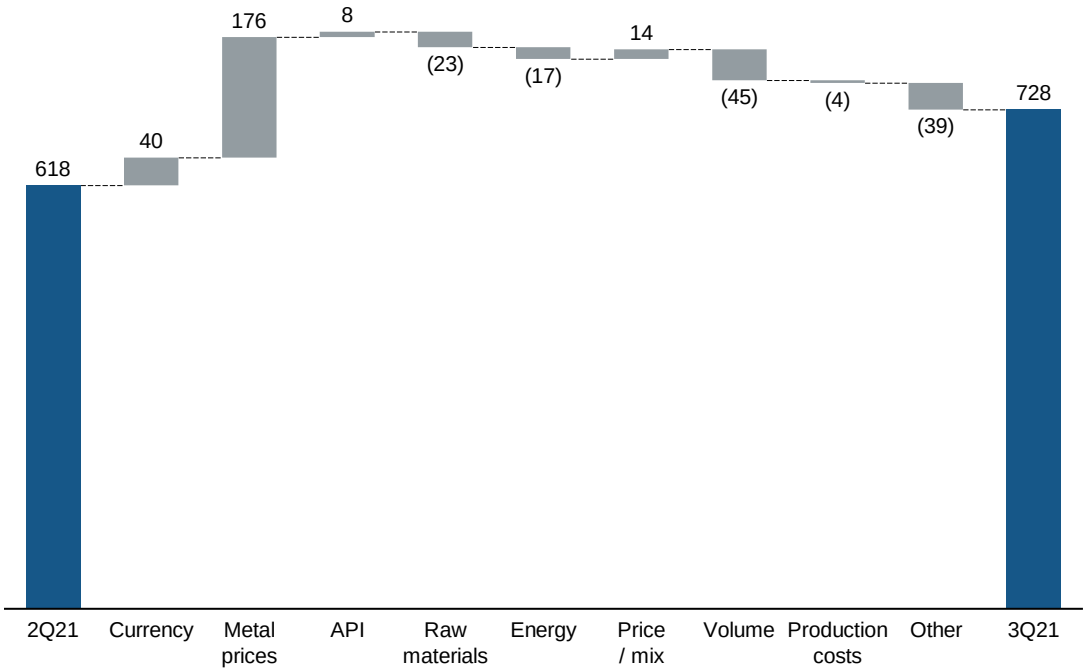


…increasing conversion of Adjusted EBITDA to Adjusted net income attributable to Alcoa



Favorable metal prices, currency, outweigh other factors

Adjusted EBITDA excluding special items sequential changes, $M

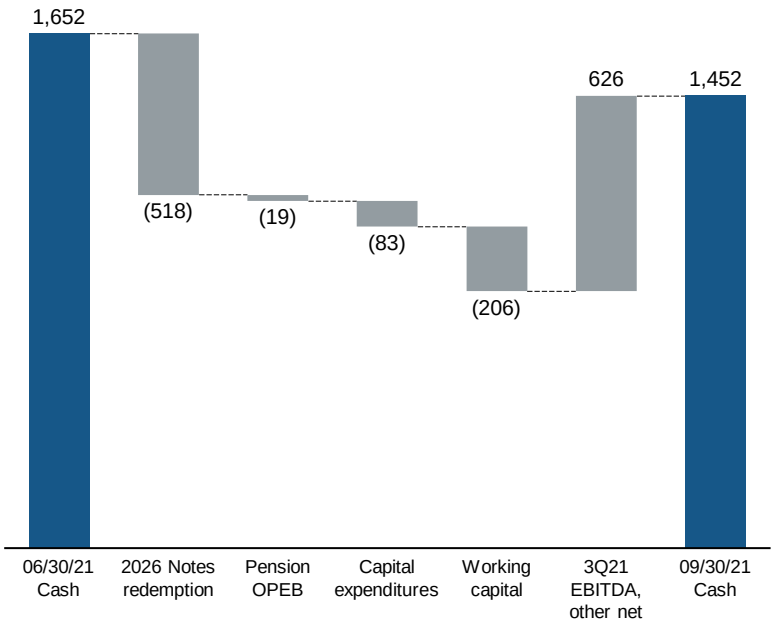


	2Q21	3Q21	Change
Bauxite	$41	$23	$(18)
Alumina	124	148	24
Aluminum	460	613	153
Segment total	625	784	159
Transformation	(13)	(10)	3
Intersegment eliminations	35	(8)	(43)
Other corporate	(29)	(38)	(9)
Total	$618	$728	$110

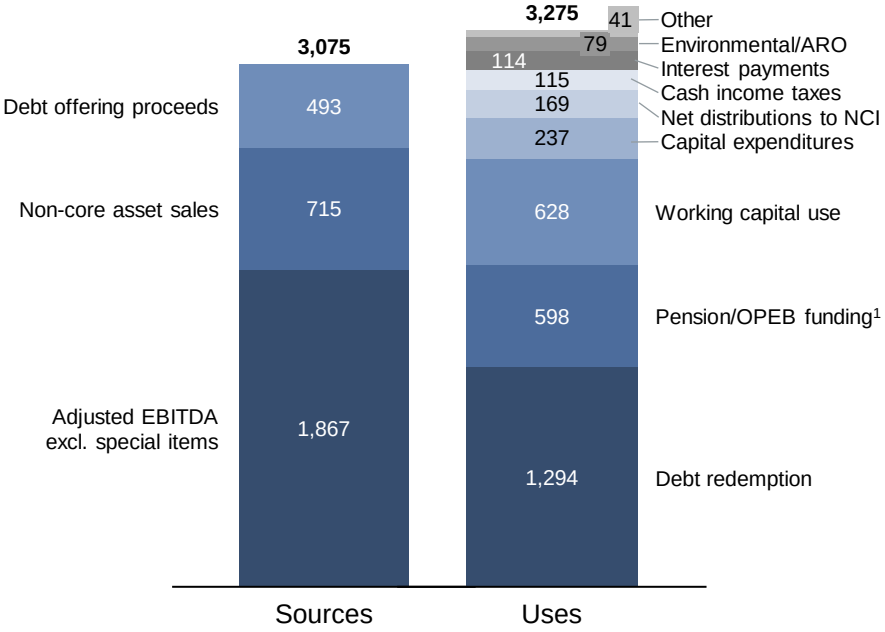
Strong Adj. EBITDA, debt redemption, seen in cash flows

Sequential quarterly and September 30, 2021 YTD cash flow information

6/30/21 to 9/30/21 Cash changes, $M



YTD Cash flow information, $M



1. Pension/OPEB funding of $617 million is reflected net of $19 million related expenses within Adjusted EBITDA.

Return on equity 30.2%, Proportional adj. net debt $1.7B

Sequential quarterly and YTD financial information

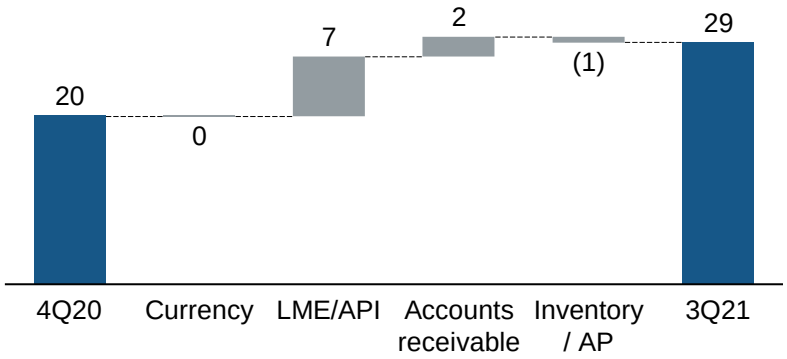
Key financial metrics

3Q21 Days working capital (DWC)	2021 YTD Return on equity
29 Days	**30.2%**

2021 YTD Capital expenditures	3Q21 Proportional adjusted net debt
$237M	**$1.7B**

2021 YTD Free cash flow less net NCI distributions	3Q21 Cash balance
$(51)M[1]	**$1.45B**

Days working capital – YTD impacts



- Metal and alumina prices driving YTD increase in Days working capital
- Accounts receivable performance is driven by changes in volume, product premiums and terms

1. Includes $500 million pension funding in 2Q21

2021 Outlook

FY21 Key metrics as of September 30, 2021

Income statement excl. special items impacts

	2021 YTD Actual	FY21 Outlook
Bauxite shipments (Mdmt)	35.9	49.0 – 50.0
Alumina shipments (Mmt)	10.5	14.1 – 14.2
Aluminum shipments (Mmt)	2.3	2.9 – 3.0
Transformation (adj. EBITDA impacts)	$(34)M	~ $(55)M
Intersegment elims. (adj. EBITDA impacts)	$20M	Varies
Other corporate (adj. EBITDA impacts)	$(97)M	~ $(120)M
Depreciation, depletion and amortization	$499M	~ $665M
Non-operating pension/OPEB expense	$37M	~ $50M
Interest expense	$113M	~ $140M
Operational tax expense[1]	$331M	Varies
Net income of noncontrolling interest	$121M	40% of AWAC NI

Cash flow impacts

	2021 YTD Actual	FY21 Outlook
Pension / OPEB required cash funding	$117M	~ $140M
Additional pension funding (April 2021)	$500M	Will vary based on market conditions and cash availability
Early debt repayment (April, September 2021)	$1,250M	
Stock repurchases	$0M	
Return-seeking capital expenditures[2]	$23M	~ $40M
Sustaining capital expenditures[2]	$214M	~ $375M
Payment of prior year income taxes[3]	$27M	~ $30M
Current period cash taxes[1]	$88M	Varies
Environmental and ARO payments[4]	$79M	~ $120M
Impact of restructuring and other charges	$28M	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 September 30, 2021, the environmental remediation reserve balance was $297M and the ARO liability was $702M.

Roy Harvey

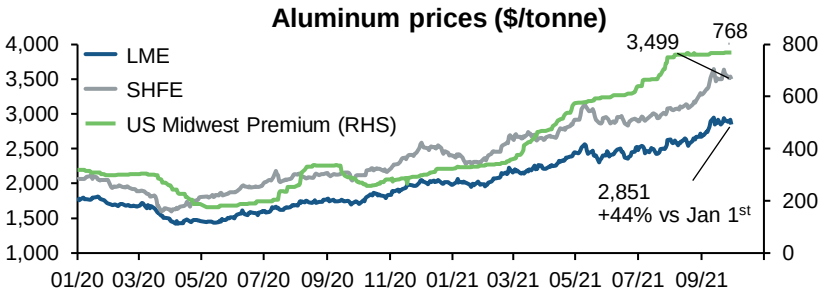
President and Chief Executive Officer

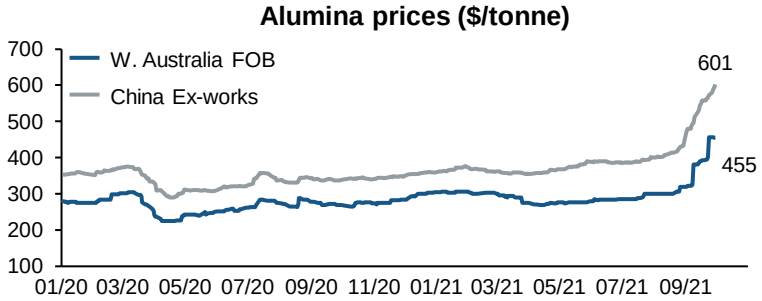
Alcoa

Prices march higher on solid demand, supply constraints

Aluminum and alumina price environment and market commentary

3Q21 Aluminum, alumina prices up





Favorable markets, commercial position

Aluminum

- Market: Continued strength in LME and regional premiums, China continues to import primary aluminum; supply disruptions due to power cuts and environmental regulations continue; no ex-China restart announcements outside Alumar; transportation costs remain elevated
- Commercial: Value-add products (VAP) premiums increased in 3Q (vs. 2Q) with strong demand supporting high spot premiums for open VAP volume; entering contract negotiations for 2022

Alumina

- Market: Price support from instability in production in the market (Atlantic production issues, various China cuts)
- Commercial: Alcoa long alumina position benefits from run-ups in alumina pricing; alumina sales prices closely linked to spot prices with 30 day lag

Source: LME, SHFE, Platts. SHFE and China Ex-Works prices include value-add tax (VAT). Prices updated through September 30, 2021.

An even stronger, more sustainable aluminum producer

Update on key strategic actions; other major announcements/activities in 3Q21

Key strategic actions going well

New operating model – met target
Created a leaner, more integrated, operator-centric Alcoa

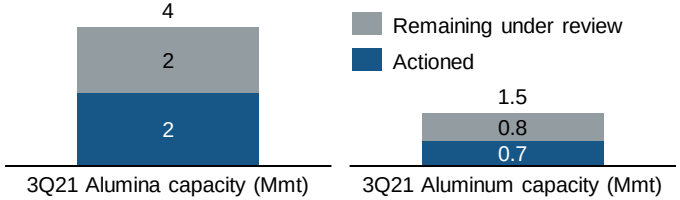
Non-core asset sales – met target
Generated ~$1 billion cash through non-core asset sales

Portfolio review – on target
Positioning to lead in an evolving sustainable world

Progress to fix, curtail, close or sell (date announced)

- Closure of Point Comfort refinery (December 2019)
- Curtailment of Intalco smelter (April 2020)
- Repowered Portland smelter (March 2021)
- Restart of Alumar smelter (September 2021)
  - 268kmt/yr with 100% renewable energy by 2024
  - First metal 2Q22, full restart 4Q22

Asset reviews actioned since October 2019 announcement



Other recent major activities

- $500 million debt redemption
  - Repurchased 7% debt due in 2026 to strengthen balance sheet
  - Notes redeemed on September 30, 2021 using cash on hand
- Further ASI certifications
  - Additional certifications for responsibly sourced aluminum value chain
  - All three Canadian smelters are now ASI certified as Deschambault and ABI earn certification in 3Q21
- High Purity Alumina (HPA) development project
  - Potentially expands supply of non-metallurgical alumina
  - HPA market applications include, but not limited to, LED lighting and displays, as well as lithium-ion batteries for electric vehicles
- Net zero greenhouse gases statement
  - Ambition to reach net zero greenhouse gas emissions across global operations by 2050, 50% reduction by 2030
  - Developing breakthrough innovations such as ELYSIS™ and mechanical vapor recompression

New buyback, dividend authorizations fit current framework

Capital allocation framework and considerations

Maintain liquidity throughout the cycle

Capital expenditures to sustain and improve operations

Maximize value creation opportunities

Reduce adj. net debt[1] to $2.0B-$2.5B over 1-3 years	Return excess cash to stockholders	Transform the portfolio	Invest in value creating growth projects

- $1 billion target for minimum cash balance; $1.4 billion at Sept. 30, 2021
- Sustaining capital expenditures of ~$375 million, return seeking capital of ~$40 million, per 2021 outlook

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- At $1.7 billion, below target range of proportional adjusted net debt
- $150 million available of existing $200 million buyback authorization; **new buyback authorization of $500 million; new quarterly cash dividend program, $0.10/share payable in 4Q21**
- Portfolio review and transformation over the next 3 years; remaining capacity: 2 Mmt refining and 0.8 Mmt smelting
- Major refining growth projects on hold

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

An excellent nine months; positioned for more success

3Q21 Summary

OUR VALUES

Act with Integrity

Operate with Excellence

Care for People

- **Profiting from long position in all three segments**
  Made record Adj. EBITDA in Aluminum segment; spot price now over $470 per tonne in Alumina segment
- **Continuing to strengthen the company**
  Reduced adjusted net debt, redeemed 2026 bonds to eliminate major debt maturities until 2027, authorized additional capital returns
- **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

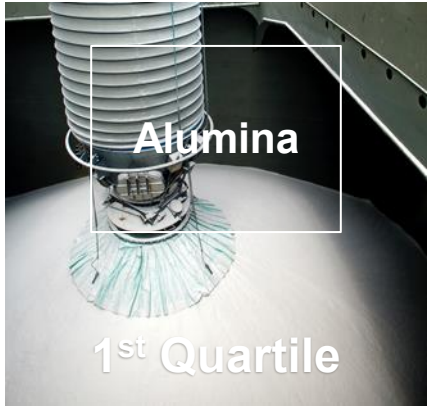
Drive results and **deliver returns** to stockholders over the long term

Appendix

Well positioned across three product segments

Alcoa portfolio cost curve position and key factors, 2021

- World's second largest bauxite 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

Strengthening the Company

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 $60 million 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 $500 million debt issue in July 2018
- Bolstered liquidity through July 2020 $750 million 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 and $500 million 7.00% senior notes due 2026
- 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 or announced contracts for EcoSource™ low carbon alumina, ELYSIS™ zero-carbon aluminum, and low-carbon EcoLum™ sustainable products
- Announced restart of Alumar (São Luís) smelter
- Announced quarterly cash dividend payable in 4Q21; announced new share repurchase authorization
- Ambition to reach net zero greenhouse gas emissions across global operations by 2050

Quarterly income statement

Quarterly income statement

M, Except realized prices and per share amounts	3Q20	2Q21	**3Q21**	**Prior Year Change**	**Sequential Change**
Realized primary aluminum price ($/mt)	$1,904	$2,753	**$3,124**	$1,220	$371
Realized alumina price ($/mt)	$274	$282	**$312**	$38	$30
Revenue	$2,365	$2,833	**$3,109**	$744	$276
Cost of goods sold	2,038	2,156	**2,322**	284	166
SG&A and R&D expenses	53	60	**61**	8	1
Adjusted EBITDA	274	617	**726**	452	109
Depreciation, depletion and amortization	161	161	**156**	(5)	(5)
Other expenses (income), net	45	(105)	**(18)**	(63)	87
Interest expense	41	67	**58**	17	(9)
Restructuring and other charges, net	5	33	**33**	28	-
Provision for income taxes	42	111	**127**	85	16
Net (loss) income	(20)	350	**370**	390	20
Less: Net income attributable to noncontrolling interest	29	41	**33**	4	(8)
Net (loss) income attributable to Alcoa Corporation	$(49)	$309	**$337**	$386	$28
Diluted (loss) earnings per share	$(0.26)	$1.63	**$1.76**	$2.02	$0.13
Diluted average shares[1]	185.9	190.2	**190.8**	4.9	0.6

1. For 3Q20, 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	3Q20	2Q21	**3Q21**	**Description of significant 3Q21 special items**
Net (loss) income attributable to Alcoa Corporation	$(49)	$309	**$337**	
Diluted (loss) earnings per share	($0.26)	$1.63	**$1.76**	
Special items	$(169)	$(28)	**$54**	
Cost of goods sold	*7*	*-*	***1***	
SG&A and R&D expenses	*3*	*1*	***1***	
Restructuring and other charges, net	*5*	*33*	***33***	Lake Charles anode plant closure, pension-related actions
Interest	*-*	*32*	***22***	Debt redemption expense
Other expenses (income), net	*4*	*(98)*	***2***	Gain on asset sales
Provision for income taxes	*(187)*	*3*	***(1)***	
Noncontrolling interest	*(1)*	*1*	***(4)***	
Adjusted net (loss) income attributable to Alcoa Corporation	$(218)	$281	**$391**	
Adjusted diluted (loss) earnings per share	$(1.17)	$1.49	**$2.05**	

Quarterly income statement excluding special items

Quarterly income statement excluding special items

M, Except realized prices and per share amounts	3Q20	2Q21	**3Q21**	**Prior Year Change**	**Sequential Change**
Realized primary aluminum price ($/mt)	$1,904	$2,753	**$3,124**	$1,220	$371
Realized alumina price ($/mt)	$274	$282	**$312**	$38	$30
Revenue	$2,365	$2,833	**$3,109**	$744	$276
Cost of goods sold	2,031	2,156	**2,321**	290	165
COGS % of Revenue	85.9%	76.1%	**74.7%**	(11.2)% pts.	(1.4)% pts.
SG&A and R&D expenses	50	59	**60**	10	1
SG&A and R&D % of Revenue	2.1%	2.1%	**1.9%**	(0.2)% pts.	(0.2)% pts.
Adjusted EBITDA	284	618	**728**	444	110
Depreciation, depletion and amortization	161	161	**156**	(5)	(5)
Other expenses (income), net	41	(7)	**(20)**	(61)	(13)
Interest expense	41	35	**36**	(5)	1
Provision for income taxes	229	108	**128**	(101)	20
Operational tax rate	540.6%	25.1%	**23.1%**	(517.5)% pts.	(2.0)% pts.
Adjusted net (loss) income	(188)	321	**428**	616	107
Less: Adjusted net income attributable to noncontrolling interest	30	40	**37**	7	(3)
Adjusted net (loss) income attributable to Alcoa Corporation	$(218)	$281	**$391**	$609	$110
Adjusted diluted (loss) earnings per share	$(1.17)	$1.49	**$2.05**	$3.22	$0.56
Diluted average shares[1]	185.9	190.2	**190.8**	4.9	0.6

1. For 3Q20, 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.

3Q21 Financial summary

Three months ending September 30, 2021, excluding special items

$M	Bauxite	Alumina	Aluminum[3]	Transformation	Intersegment eliminations	Other corporate	Alcoa Corporation
Total revenue	$228	$1,105	$2,303	$2	$(529)	-	$3,109
Third-party revenue	$56	$756	$2,295	$2	-	-	$3,109
Adjusted EBITDA[1]	$23	$148	$613	$(10)	$(8)	$(38)	$728
Adjusted EBITDA margin %	*10.1%*	*13.4%*	*26.6%*				*23.4%*
Depreciation, depletion and amortization	$30	$47	$72	-	-	$7	$156
Other expenses (income), net[2]	-	$1	$(38)	-	-	$17	$(20)
Interest expense							$36
Provision for income taxes							$128
Adjusted net income							$428
Net income attributable to noncontrolling interest							$37
Adjusted net income attributable to Alcoa Corporation							$391

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 1,021GWh, $95M and $72M, respectively.

3Q21 Adjusted EBITDA drivers by segment

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

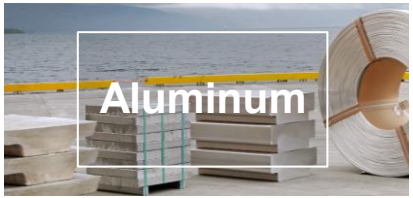
Segment	Adj. EBITDA 2Q21	Currency	Metal prices	API	Raw materials	Energy	Price/mix	Volume	Production costs	Other	Adj. EBITDA 3Q21
Bauxite	$41	5	0	0	0	0	1	(11)	(6)	(7)	$23
Alumina	$124	26	0	36	(13)	(17)	9	(8)	(2)	(7)	$148
Aluminum	$460	10	179	2	(10)	0	4	(26)	4	(10)	$613
Segment Total	**$625**	**41**	**179**	**38**	**(23)**	**(17)**	**14**	**(45)**	**(4)**	**(24)**	**$784**

Aluminum value chain

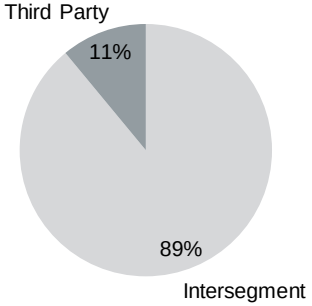
2021 YTD Alcoa product shipments by segment

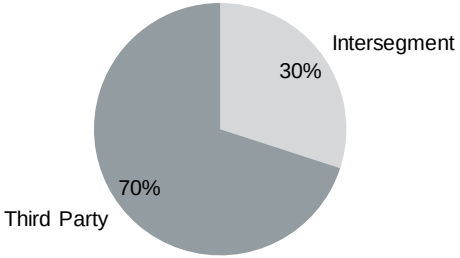
35.9 Mdmt shipments

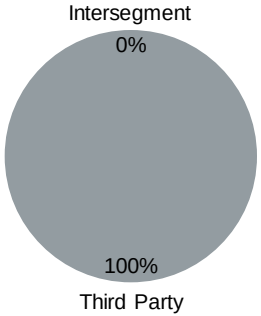
10.5 Mmt shipments



2.3 Mmt shipments



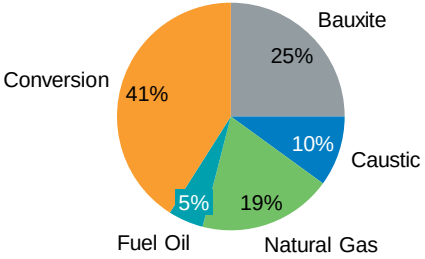




Composition of alumina and aluminum production costs

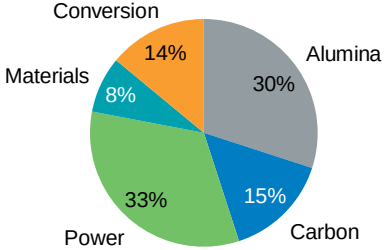
Alcoa 3Q21 production cash costs

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 0.73[1]	BRL + 0.10 5.22[1]	CAD + 0.01 1.26[1]	EUR + 0.01 1.18[1]	ISK + 10 126.04[1]	NOK + 0.10 8.75[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 • 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 3Q21 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
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 sequential impact	(1.5)	(13.0)	0.8	(1.1)	0.8	2.3	(11.7)
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 revaluation sequential impact	**3.2**	**12.1**	**(0.2)**	**1.2**	**0.0**	**(1.6)**	**14.7**

Currency annual sensitivity and actual impact

	+0.01 AUD	+0.10 BRL	+0.01 CAD	+0.01 EUR	+ 10 ISK	+0.10 NOK	Total
2021 EBITDA sensitivity	**(21)**	**5**	**2**	**(4)**	**7**	**2**	
3Q20 currency avg.	0.71	5.38	1.33	1.17	137.70	9.14	
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)
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**
Total 3Q21 EBITDA currency impact[1]	**24.3**	**11.1**	**1.4**	**3.5**	**0.4**	**(0.1)**	**40.6**

Totals may not tie due to rounding

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

Additional business considerations

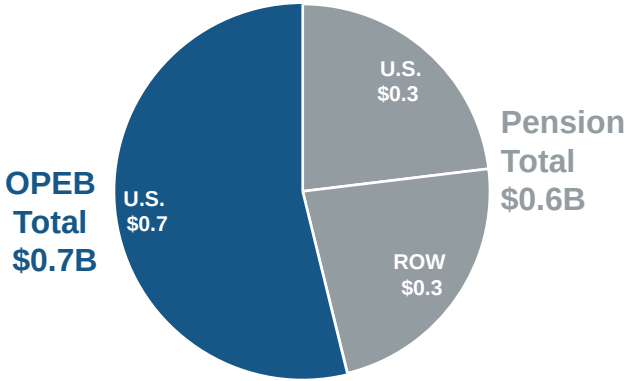
Items expected to impact Adjusted EBITDA for 4Q21

- At the San Ciprián refinery and smelter, we expect higher energy costs and the strike (if both persist through quarter end) to decrease Adjusted EBITDA ~$100 million sequentially and increase working capital sequentially $120 million
  - Refining: Sequentially lower shipments of 86kmt, unfavorable EBITDA impact of ~$15 million
  - Smelting: Sequentially lower shipments of 52kmt, unfavorable EBITDA impact of ~$85 million
- Adjusted EBITDA in the Bauxite segment is expected to improve ~$10 million sequentially, primarily due to recovery from the Alumar unloader outage in 3Q21
- Aside from index pricing, currency, and San Ciprián impacts, Alumina segment Adjusted EBITDA is expected to be flat sequentially; higher shipments, cost improvements and higher Alumar production are expected to offset raw materials and energy cost increases
- In the Aluminum segment, excluding San Ciprián, index pricing and currency impacts:
  - Alumina costs are estimated to increase $100 million assuming today's alumina prices persist
  - Higher shipments are expected to offset increases in raw materials and production costs
  - Energy impacts are expected as hydro sales seasonally decline ~$30 million and smelter energy costs increase ~$20 million
- Computed using quarter end exchange rates, 3Q21 Adjusted EBITDA included a favorable balance sheet revaluation impact of $9 million ($15 million favorable sequentially compared to 2Q21); 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 4Q21 operational tax expense to approximate $230 million based on recent pricing

Pension and OPEB summary

Net pension and OPEB liability and financial impacts

Net liability as of September 30, 2021[1]



Estimated GAAP pension funding status as of September 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)	56
Total expense impact	**$131**

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. Australian and U.S. salaried pension plans were remeasured as of September 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 September 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™				***$636M***	***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				***$510M***	***COGS***
Total investments				**$1,146M**	

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

Source: 2020 Sustainability Report

Production and capacity information

Alcoa Corporation annual consolidated amounts as of September 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 9/30/2021 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	$243M
	+	Alumina		$596M
	+	Aluminum	Economic value using market multiple of: i. Smelters, casthouses, rolling mill, and energy assets ii. Smelters and casthouses restart optionality	$1,537M
	-	Non-segment expenses (income)	Economic value using market multiple of: i. Net corporate expenses and Transformation	$148M
	=	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 $1.3B ($1.3B, >95% Alcoa; U.S. contributions not tax deductible), environmental & ARO liabilities of $0.7B ($1B, ~75% Alcoa)	
	+	Cash & equity investments[1]	Cash position of $1.3B ($1.5B, ~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 September 30, 2021. The "Alcoa" percentages exclude amounts attributable to Alcoa Corporation's partner in the AWAC JV.

Adjusted EBITDA reconciliation

$M	3Q20	4Q20	FY20	1Q21	2Q21	3Q21
Net income (loss) attributable to Alcoa	**$(49)**	**$(4)**	**$(170)**	**$175**	**$309**	**$337**
Add:						
Net income attributable to noncontrolling interest	29	21	156	44	41	33
Provision for income taxes	42	20	187	93	111	127
Other (income) expenses, net	45	44	8	(24)	(105)	(18)
Interest expense	41	43	146	42	67	58
Restructuring and other charges, net	5	60	104	7	33	33
Depreciation, depletion and amortization	161	170	653	182	161	156
Adjusted EBITDA	**274**	**354**	**1,084**	**519**	**617**	**726**
Special items before tax and noncontrolling interest	10	7	67	2	1	2
Adjusted EBITDA excl. special items	**$284**	**$361**	**$1,151**	**$521**	**$618**	**$728**

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.

Segment Adjusted EBITDA reconciliation

$M	FY17	FY18	FY19	FY20	3Q21 YTD
Net income (loss) attributable to Alcoa	**$279**	**$250**	**$(1,125)**	**$(170)**	**$821**
Add:					
Net income attributable to noncontrolling interest	329	643	272	156	118
Provision for income taxes	592	732	415	187	331
Other expenses (income), net	27	64	162	8	(147)
Interest expense	104	122	121	146	167
Restructuring and other charges, net	309	527	1,031	104	73
Depreciation, depletion and amortization	750	733	713	653	499
Adjusted EBITDA	**2,390**	**3,071**	**1,589**	**1,084**	**1,862**
Special items before tax and noncontrolling interest	88	58	67	67	5
Adjusted EBITDA excl. special items	**$2,478**	**$3,129**	**$1,656**	**$1,151**	**$1,867**
Aluminum Segment Adjusted EBITDA	**$1,026**	**$451**	**$25**	**$325**	**$1,356**
Alumina Segment Adjusted EBITDA	1,289	2,373	1,097	497	499
Bauxite Segment Adjusted EBITDA	424	426	504	495	123
Unallocated Adjusted EBITDA[1]	(349)	(179)	(37)	(233)	(116)
Special items before tax and noncontrolling interest	88	58	67	67	5
All Other Adjusted EBITDA, excluding special items	**$1,452**	**$2,678**	**$1,631**	**$826**	**$511**

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	FY17	FY18	FY19	FY20	3Q21 YTD
Net income (loss) attributable to Alcoa	**$279**	**$250**	**$(1,125)**	**$(170)**	**$821**
Special items:					
Restructuring and other charges, net	309	527	1,031	104	73
Other special items	(9)	39	50	(103)	(69)
Discrete tax items and interim tax impacts	93	2	11	(26)	(1)
Tax impact on special items	(24)	(89)	(32)	(13)	1
Noncontrolling interest impact	(23)	(31)	(119)	(7)	(3)
Subtotal	**346**	**448**	**941**	**(45)**	**1**
Adjusted net income (loss) attributable to Alcoa	**$625**	**$698**	**$(184)**	**$(215)**	**$822**

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.

Operational tax reconciliation

$M	3Q20	4Q20	FY20	1Q21	2Q21	3Q21
Provision for income taxes	$42	$20	$187	$93	$111	$127
Tax on special items	3	1	13	-	(3)	3
Discrete tax items	2	25	26	2	-	(2)
Interim tax impacts[1]	182	(19)	-	-	-	-
Operational tax provision	**$229**	**$27**	**$226**	**$95**	**108**	**128**
Operational tax rate	**540.6%**	**25.3%**	**129.7%**	**32.8%**	**25.1%**	**23.1%**

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	3Q20	4Q20	FY20	1Q21	2Q21	3Q21
Cash (used for) provided from operations	$158	$38	$394	$6	($86)[1]	435
Capital expenditures	(74)	(111)	(353)	(75)	(79)	(83)
Free cash flow	**84**	**(73)**	**41**	**(69)**	**(165)**	**352**
Contributions from noncontrolling interest	8	-	24	-	-	8
Distributions to noncontrolling interest	(46)	(55)	(207)	(62)	(75)	(40)
Free cash flow less net distributions to noncontrolling interest	**$46**	**$(128)**	**$(142)**	**$(131)**	**$(240)**	**$320**

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

	3Q20			2Q21			3Q21		
$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	2	-	2	1	-	1	1	-	1
Long-term debt, less amount due within one year	2,538	31	2,507	2,216	-	2,216	1,724	-	1,724
Total debt	2,540	31	2,509	2,294	31	2,263	1,802	31	1,771
Less: Cash and cash equivalents	1,736	173	1,563	1,652	128	1,524	1,452	124	1,328
Net debt	**804**	**(142)**	**946**	**642**	**(97)**	**739**	**350**	**(93)**	**443**
Plus: Net pension / OPEB liability	2,432	43	2,389	1,417	46	1,371	1,323	30	1,293
Adjusted net debt	**$3,236**	**$(99)**	**$3,335**	**$2,059**	**$(51)**	**$2,110**	**$1,673**	**$(63)**	**$1,736**

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	3Q20	4Q20	1Q21	2Q21	3Q21
Receivables from customers	$516	$471	$587	$644	$769
Add: Inventories	1,398	1,398	1,417	1,547	1,702
Add: Net DWC working capital held for sale[2]	–	129	-	-	-
Less: Accounts payable, trade	1,360	1,403	1,284	1,392	1,482
DWC working capital	$554	$595	$720	$799	$989
Sales	$2,365	$2,392	$2,551[3]	$2,833	$3,109
Number of days in the quarter	92	92	90	91	92
Days Working Capital[1]	**22**	**23**	**25**	**26**	**29**

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)

ROE Reconciliation and calculation information as of September 30, 2021

$M	2020 YTD	2021 YTD
Numerator:		
Net (loss) income attributable to Alcoa Corporation	$(166)	$821
Add: Special items[1]	(98)	1
ROE Adjusted Net (loss) income YTD	**$(264)**	**$822**
ROE Adj. Net income multiplied by four divided by three	**$(352)**	**$1,096**
Denominator[2]:		
Total assets	$13,725	$14,522
Less: Total Liabilities	8,340	9,271
Less: Noncontrolling Interest	1,593	1,619
Shareholders' Equity	**$3,792**	**$3,632**
ROE	**-9.3%**	**30.2%**

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

$$\text{2020 YTD ROE \%} = \frac{(-\$166 - \$98) \times 4/3}{(\$13{,}725 - \$8{,}340 - \$1{,}593)} \times 100 = -9.3\%$$

$$\text{2021 YTD ROE \%} = \frac{(\$821 + \$1) \times 4/3}{(\$14{,}522 - \$9{,}271 - \$1{,}619)} \times 100 = 30.2\%$$

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)

ROC Reconciliation and calculation information as of September 30, 2021

$M	2020 YTD	2021 YTD
Numerator:		
Net (loss) income attributable to Alcoa Corporation	$(166)	$821
Add: Net income attributable to noncontrolling interest	135	118
Add: Provision for income taxes	167	331
Profit before taxes (PBT)	**136**	**1,270**
Add: Interest expense	103	167
Less: Interest income	5	3
Add: Special items[1]	(64)	4
ROC earnings before taxes	**$170**	**$1,438**
ROC earnings before taxes multiplied by four divided by three	**$227**	**$1,917**
ROC earnings after fixed tax rate of 35%	**$147**	**$1,246**
Denominator[2]:		
Total assets	$13,725	$14,522
Less: Cash, cash equivalents, restricted cash and short-term investments	1,180	1,886
Less: Current liabilities	2,247	2,940
Add: Long-term debt due within one year and short-term borrowings	1	326
Capital Base	**$10,299**	**$10,022**
ROC	**1.4%**	**12.4%**

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

$$\text{2020 YTD ROC \%} = \frac{\text{(\$136 + \$98 – \$64) x 4/3) x (1 – 0.35)}}{\text{(\$13,725 – \$1,180 – \$2,247 + \$1)}} \text{ X 100 = 1.4\%}$$

$$\text{2021 YTD ROC \%} = \frac{\text{(\$1,270 + \$164 + \$4) x 4/3) x (1 – 0.35)}}{\text{(\$14,522 – \$1,886 – \$2,940 + \$326)}} \text{ X 100 = 12.4\%}$$

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

The Element of ***Possibility***™

Alcoa