

Albemarle Corporation

Investor Presentation and
Non-GAAP Reconciliations

Investor Presentation Mar 2020



Forward-Looking Statements

Some of the information presented in this presentation including, without limitation, information related to outlook and guidance, conversion capacity, production volumes, joint ventures, market trends, pricing, expected growth, earnings and demand for our products, tax rates, dividends, cash flow generation, capital projects, electric vehicle demand, economic trends and all other information relating to matters that are not historical facts may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Actual results could differ materially from the views expressed.

Factors that could cause actual results to differ materially from the outlook expressed or implied in any forward-looking statement include, without limitation: changes in economic and business conditions; changes in financial and operating performance of our major customers and industries and markets served by us; the timing of orders received from customers; the gain or loss of significant customers; competition from other manufacturers; changes in the demand for our products or the end-user markets in which our products are sold; limitations or prohibitions on the manufacture and sale of our products; availability of raw materials; increases in the cost of raw materials and energy, and our ability to pass through such increases to our customers; changes in our markets in general; fluctuations in foreign currencies; changes in laws and government regulation impacting our operations or our products; the occurrence of regulatory actions, proceedings, claims or litigation; the occurrence of cyber-security breaches, terrorist attacks, industrial accidents, natural disasters or climate change; the inability to maintain current levels of product or premises liability insurance or the denial of such coverage; regulatory approvals and the satisfaction of other closing conditions with respect to pending acquisitions; political unrest affecting the global economy, including adverse effects from terrorism or hostilities; political instability affecting our manufacturing operations or joint ventures; changes in accounting standards; the inability to achieve results from our global manufacturing cost reduction initiatives as well as our ongoing continuous improvement and rationalization programs; changes in the jurisdictional mix of our earnings and changes in tax laws and rates; changes in monetary policies, inflation or interest rates that may impact our ability to raise capital or increase our cost of funds, impact the performance of our pension fund investments and increase our pension expense and funding obligations; volatility and uncertainties in the debt and equity markets; technology or intellectual property infringement, including cyber-security breaches, and other innovation risks; decisions we may make in the future; the ability to successfully execute, operate and integrate acquisitions and divestitures; uncertainties as to the duration and impact the coronavirus (COVID-19) pandemic may have; and the other factors detailed from time to time in the reports we file with the SEC, including those described under “Risk Factors” in our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q. These forward-looking statements speak only as of the date of this presentation. We assume no obligation to provide any revisions to any forward-looking statements should circumstances change, except as otherwise required by securities and other applicable laws.

Non-GAAP Financial Measures

It should be noted that Adjusted net income attributable to Albemarle Corporation (“Adjusted earnings”), Adjusted diluted earnings per share attributable to Albemarle Corporation, Adjusted effective income tax rates, segment operating profit, segment income, pro-forma net sales, net sales excluding the impact of foreign exchange translation (“ex FX”), EBITDA, Adj. EBITDA, Adj. EBITDA by operating segment, EBITDA margin, Adj. EBITDA margin, pro-forma Adj. EBITDA, pro-forma Adj. EBITDA margin, Adj. EBITDA excluding the impact of foreign exchange translation (“ex FX”), Adj. EBITDA margin excluding the impact of foreign exchange translation (“ex FX”), net debt to Adj. EBITDA, gross debt to Adj. EBITDA, free cash flow, and Adjusted free cash flow are financial measures that are not required by, or presented in accordance with, accounting principles generally accepted in the United States, or GAAP. These measures are presented here to provide additional useful measurements to review our operations, provide transparency to investors and enable period-to-period comparability of financial performance. The Company’s chief operating decision maker uses these measures to assess the ongoing performance of the Company and its segments, as well as for business and enterprise planning purposes.

A description of these and other non-GAAP financial measures that we use to evaluate our operations and financial performance, and reconciliation of these non-GAAP financial measures to the most directly comparable financial measures calculated and reported in accordance with GAAP, can be found in the Appendix to this presentation. The Company does not provide a reconciliation of forward looking non-GAAP financial measures to the most directly comparable financial measures calculated and reported in accordance with GAAP, as the Company is unable to estimate significant non-recurring or unusual items without unreasonable effort. The amounts and timing of these items are uncertain and could be material to the Company’s results calculated in accordance with GAAP.

An Industry Leader with Significant Opportunity Ahead

01 Industry-leading, competitively advantaged positions across our portfolio, which we believe will expand in the future

02 Strong secular trends support long-term growth

03 Focus on product quality, talent, low-cost operations, and effective management of our resources and assets

04 Product offerings are key enablers to a more sustainable world, and we are embedding sustainability into strategic decision making

05 Financial flexibility and balance sheet strength with significant free cash flow generation on the horizon

Diversified Portfolio with Above-Market Margin

KEY STATS

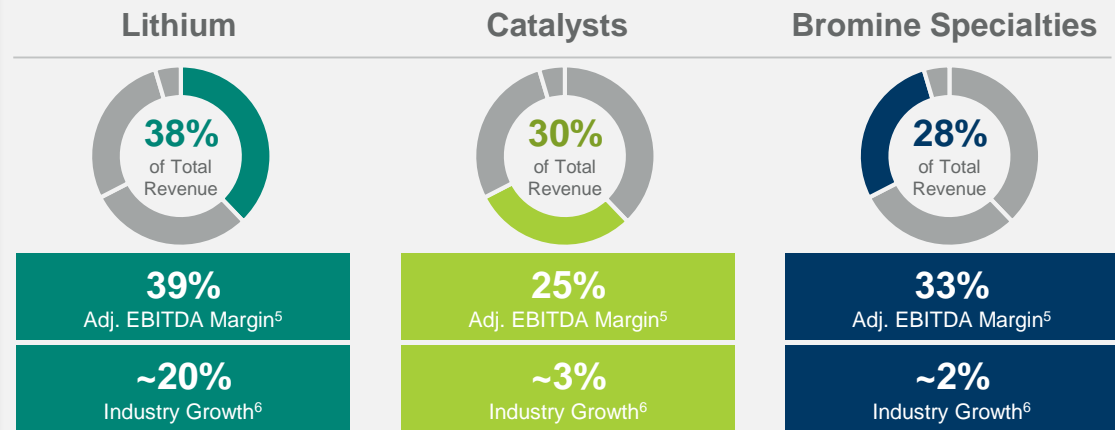
Founded	1887 132 years
Global Employees ¹	~5,600
Countries	~75
Dividend Payout Ratio ²	27%

FINANCIAL HIGHLIGHTS³

Net Sales	\$3.6B
Net Income ⁴	\$533M
Adj. EBITDA	\$1,037M
Adj. EBITDA Margin	29%

BUSINESS OVERVIEW

Making the World Safe and Sustainable by Powering the Potential of People



REVENUE BY GEOGRAPHY



Agile, Long-term Strategy that Responds to Changing Market Conditions

Grow	Invest in growth and focus on cash generation in Lithium
Maximize	Optimize the earnings and cash of Bromine and Catalysts
	Build on manufacturing excellence and optimized cost structure
Assess	Actively and continuously assess our portfolio
Invest	Maintain a disciplined approach to capital allocation while preserving financial flexibility

- Demand outlook remains robust for Lithium
- Continue to strengthen balance sheet to provide capacity for future options for lithium conversion assets needed to meet customer demand (build vs. buy)
- Generate cash, maintain Adj. EBITDA margin and levels; invest in high-return opportunities
- New ERP provides catalyst for more effective and efficient operations
- Reduce overall spend by \$100M+ by 2021 in a sustainable manner
- Continue to actively evaluate portfolio; track record of decisive, value-added decision making
- Look to acquire existing lithium conversion assets if the economics make sense and it yields a higher ROIC than building
- Maintain Investment Grade credit rating and support continued dividend growth
- Invest to accelerate productivity improvements and to build or buy lithium conversion assets; current board authorization to repurchase up to 7M shares

Results of Our Materiality Assessment Led to Our Sustainability Framework

Sustainable Business Model

Foster a sustainable business model that creates long-term value for all stakeholders

Community Engagement

Actively collaborate and engage in the communities in which we work and live



Our People & Workplace

Promote an inclusive and diverse workplace for all employees with a focus on safety, mutual respect, development and wellbeing

Natural Resource Management

Responsibly manage our use of resources and materials

2020 Cost Savings Initiative Underway

Transforming Our Business Model

- Identified **100+ discrete projects**, assigned project ownership, and instituted a tracking dashboard
- Top projects include **Lithium site operational excellence** and company-wide **reductions in consulting and outside service costs**

Three Buckets of Identified Cost Savings

Factory Spend and Operational Efficiency

- Raw material yield and cost
- Energy and waste

Supply Chain

- Logistics optimization
- Indirect spend outsourcing
- Facility reduction

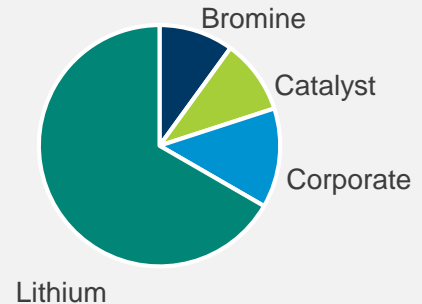
Sales & Administration and IBO

- 3rd-party consulting
- IT efficiencies investments and global systems

2020 Expected Cost Savings by Business Unit

\$50M+
(in 2020)

\$100M+
(run rate YE 2021)



Leveraging Culture of Operational Excellence to Enhance Our Low-cost Position

Coronavirus Update

As of March 23, 2020

Business Area	Current Assessment
General	<ul style="list-style-type: none">• To date, sites are operating without a material impact• Actively managing situation to protect employees and communities; established protocols for site entries; suspended all non-essential travel (international & local); work from home in many locations for non-essential personnel• Expecting Q1/20 EBITDA to be down around 25% YoY; FY 2020 guidance to be updated as situation unfolds• Actively monitoring our balance sheet to maintain financial flexibility
Lithium	<ul style="list-style-type: none">• Chinese production assets are back at full capacity• Continuing to monitor potential impacts due to logistics disruption• Global EV production impacted temporarily due to reduced OEM auto production• Position in auto OEM supply chains may delay the impact on our business• Managing delays in capital purchases from China for Kemerton project
Bromine Specialties	<ul style="list-style-type: none">• Limited impact on order pattern and backlog• Continued logistics issues from shortage of drivers and equipment
Catalysts	<ul style="list-style-type: none">• Incrementally lower FCC volumes due to reduction in fuel demand; starting to observe refineries pushing out HPC turnarounds• Monitoring supply of raw materials from China; we have sufficient inventory into Q2

Exploring options to accelerate cost saving initiative; planning for various economic scenarios well underway

Bromine Specialties Snapshot

Financials | TTM 2019

\$1.0B

Net Sales

\$328M

Adj. EBITDA¹

33%

Adj. EBITDA Margin¹

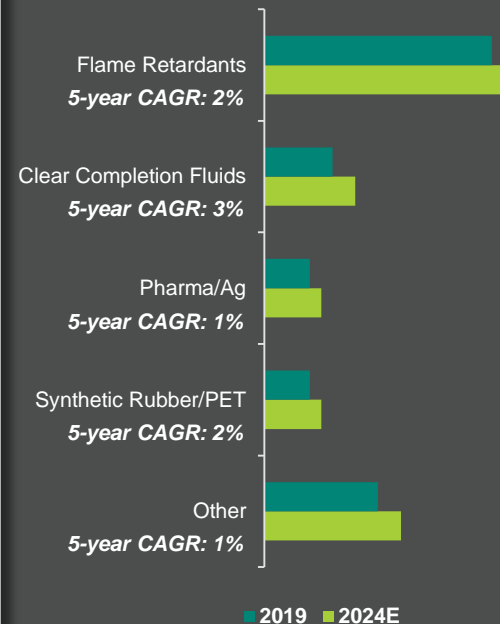
Segment Characteristics

- Mineral extraction and processing
- Low-cost position on global cost curve and access to world-class natural resources
- Vertically integrated
- Consistent and sustainable margins and cash flow
- High initial capital for world-scale plants, requiring strong technical and application expertise

Strong Applications Demand

- Stable flame retardants demand across electronics, construction, and automotive
- Continued completion fluid demand from long-term oil industry growth
- Textiles and packaging fuels polyester (PET) growth
- Urbanization in developing countries driving tire demand growth

Business Environment²



Advantaged Position | Stable End Markets | Strong Sustainable Cash Flow

Bromine Specialties: Stable Outlook with Industry-leading Margins

Key Takeaways

- **Market leader** with proven ability to deliver results
 - ✓ Access to highest quality Bromine resources in the world
 - ✓ Low-cost position with diversified market portfolio to maintain industry-leading margins
 - ✓ Operational excellence and superior service
- Core competencies provide the foundation for **continued growth** by unlocking new opportunities and **solving customer's most complex challenges**
- **Stable and strong cash flow** generating business to power the growth potential of Albemarle
- **Proven record of outperforming competition** at any point in the economic cycle

	FLAME RETARDANTS	OILFIELD CLEAR BRINE FLUIDS	OPERATIONAL EFFICIENCIES / LEAN
5-YEAR OUTLOOK			
BUSINESS ENVIRONMENT	Expect mature, stable market that will continue to base load and generate cash for the business	Expect to see incremental growth over the next five years driven by new resource discovery and expansion of the offshore drilling market	Continue to work on efficiencies to provide higher yield and lower cost processes that maintain a constant, superior product
MARKET ASSUMPTIONS	Emerging and GDP-type Growth Economies		Cost Discipline and Selective Investment for Growth

Catalysts Snapshot

Financials | TTM 2019 including PCS

\$1.1B

Net Sales

\$271M

Adj. EBITDA¹

25%

Adj. EBITDA Margin¹

Segment Characteristics

- Strong free cash flow generation with growth
- Long-term, collaborative customer relationships
- High initial capital for world-scale plants, requiring strong technical and application expertise
- Focused on value creation for refiners
- Leading positions in FCC and HPC catalysts

Fluid Cracking Catalysts (FCC)



FCC Catalysts

- Cracks oil feedstock into gasoline and chemicals
- FCC market leadership in 1) bottoms cracking; 2) olefins output; and 3) emerging markets

Clean Fuels Technology (CFT)



HPC (Hydroprocessing) Catalysts



- Removes sulfur and contaminants to produce clean diesel and clean oil-feedstock
- HPC market leadership in 1) middle distillates; 2) bio-based oil and hydro-cracker oil pretreatment; and 3) deep hydrotreating catalysis

High Margin | Strong Cash Flow Generator

Catalysts: Sustained Growth in Strong Markets

Key Takeaways

- Catalysts business upgrades oils into clean transportation fuels and high-value chemicals via **differentiated services, technologies and partnerships**
- Well positioned to benefit from **continued growth in demand for transportation fuels and chemicals**, enhanced by tightening fuel specifications and growing prosperity in developing geographies
- Core strengths and solid strategy to leverage growth opportunities and to **continue to profitably generate attractive free cash flow**

	FCC		HPC	
5-YEAR OUTLOOK				
BUSINESS ENVIRONMENT	<ul style="list-style-type: none"> • Increasing mobility in non-OECD countries drives gasoline demand • Global FCC-sourced propylene demand growth in emerging markets • Fuel efficiency standards creating additional needs for higher octane gasoline 		<ul style="list-style-type: none"> • Increasing transportation fuels demand in developing areas as well as tightening sulfur regulations globally • Implementation of stronger environmental standards 	
MARKET ASSUMPTIONS	Continued adoption of lower sulfur fuel standards globally	Shift toward higher chemicals output from refineries	No significant changes in catalyst production capacities	Rare earth, energy, and metals pricing stability

Lithium Snapshot

Financials | TTM 2019

\$1.4B

Net Sales

\$525M

Adj. EBITDA¹

39%

Adj. EBITDA Margin¹

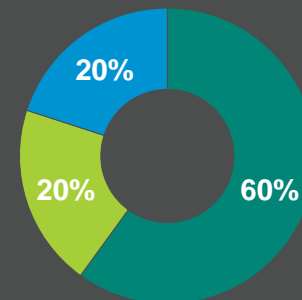
Segment Characteristics

- Leading market positions in Hydroxide, Carbonate, Lithium Metal, and Organometallics
- Mining and specialty chemicals capability
- Vertically integrated from natural resource to specialty performance products
- High-quality product portfolio / low-cost position

Business Environment

- Volume growth driven by energy storage
- Highly dynamic, emerging supply chain
- Public policy accelerating e-mobility / renewables
- Battery cost declining + performance improving = need for higher-quality lithium and innovation
- Security of supply essential to underwrite global auto OEM investment in vehicle electrification

Applications



- Energy Storage**
EVs, Grid, Phones, Wearables
- Industrial**
Glass, Grease, Aerospace
- Specialties**
Synthetic Rubber, Pharma, Ag

Well Positioned to Remain a Market Leader as Growth Continues

Recent Lithium Mining and Conversion Delays

Covalent Lithium JV: SQM & Wesfarmers deferred investment decision to 2021¹

Galaxy Lithium: Announced slowdown of mining operations and lower output²

Tianqi: Announced slower ramp of Kwinana Stage 1 and deferred spend on Stage 2³

SQM: Announced completion date for 50 kTa LCE expansion is 2H 2021 vs. 2H 2020⁴

Pilbara Minerals: Announced slowdown of mining operations and lower output⁵

ALiTa: Defaulted on loan and mine placed on Care & Maintenance⁶

¹http://s1.q4cdn.com/793210788/files/doc_news/2020/1/PR_MtHollandUpdate_23jan2020_eng.pdf

²<http://www.gxy.com/media/announcements/44dg93tsk2fpkt.pdf>

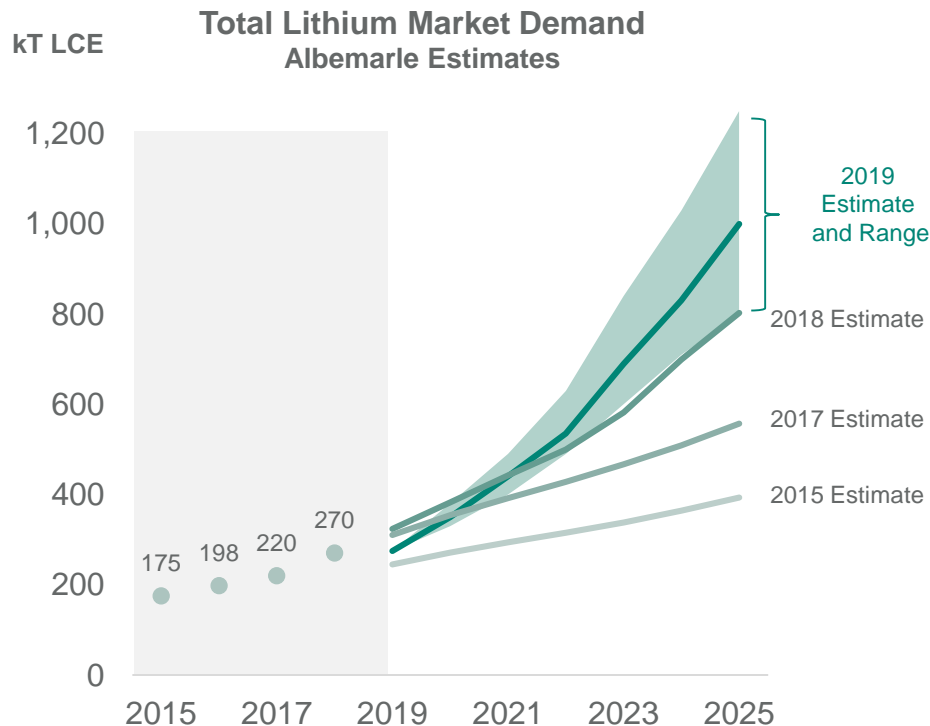
³<https://www.smh.com.au/business/companies/world-s-biggest-lithium-plant-switched-on-south-of-perth-20190910-p52pvm.html>

⁴http://s1.q4cdn.com/793210788/files/doc_news/2019/May/PR_1Q19_ing_FINAL.pdf

⁵http://www.pilbaraminerals.com.au/site/PDF/2603_0/QuarterlyActivitiesReport

⁶<https://www.allianceminerals.com.au/investor/sgx-asx-announcements/>

Energy Storage Continues to Drive Lithium Demand



Lithium Intensity of Energy Storage Demand: 0.95, 0.76, and 0.78 kg LCE/kWh in 2018, 2019, and 2025, respectively; calculated from demand model output of total lithium demand (total real consumption and YOY inventory change), which accounts for lithium consumption of different technologies and applications
New Car Sales: 95, 89, and 102 million in 2018, 2019, and 2025, respectively

Demand by Application (kT LCE)	2018 Estimate	2019 Estimate	'19 – '25 CAGR	2025 Forecast
Electric Vehicles	59	93	38%	650
Other Mobility	25	26	7%	40
Consumer Electronics	36	38	11%	70
Grid Storage	6	9	37%	60
All Other/Industrial	114	119	3%	140
Total Real Consumption	240	285	22%	960
YOY Inventory Change	+30	-10		+40
Total Lithium Demand	270	275	24%	1,000

EV Consumption Buildup	2018 Estimate	2019 Estimate	2025 Forecast
EV Penetration			
PHEV	0.5%	0.9%	6%
BEV	1.5%	2.3%	12%
All EVs	2.0%	3.2%	18%
Battery Size			
kWh per EV			
PHEV	12	12	14
BEV	44	53	65
Average	32	41	48
Lithium Consumption			
kT LCE			
PHEV	5	8	65
BEV	54	85	585
Total	59	93	650

Lithium Strategy: Strong Foundation / Resilient to Market Dynamics

Manage World's Best Resources

- 270 kTa LCE of spodumene capacity
- 110 kTa LCE of brine capacity
- Sustainable resource management
- Geographically diverse
- High concentrations and low cost

Expand Capacity with Discipline

- Reduced capital intensity
- Build to meet market demand
- Strong return economics

Drive Cost and Operational Excellence

- Lean, low-cost manufacturing
- One world class global standard
- Leader in quality, reliability, and sustainability

Sustain Premium Value Proposition

- Long-term customer partnerships
- Differentiated customer offerings
- Innovative lithium materials

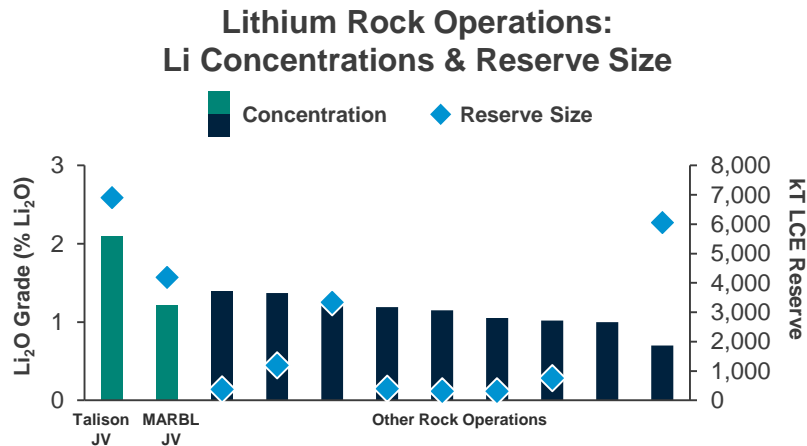
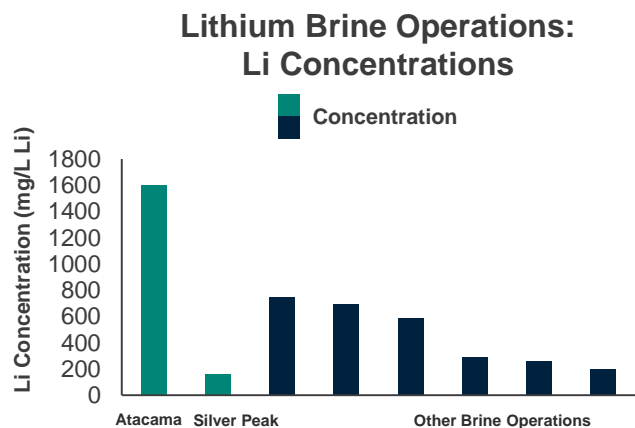
Our Strategy is Guided by the Albemarle Values and Rooted in Safety and Sustainability

Integrated Global Footprint for Lithium Chemical Conversion



Enables Production of 100+ Products for the Varied Needs of Our Global Customer Base

Albemarle has Access to the World's Most Highly Concentrated Resources



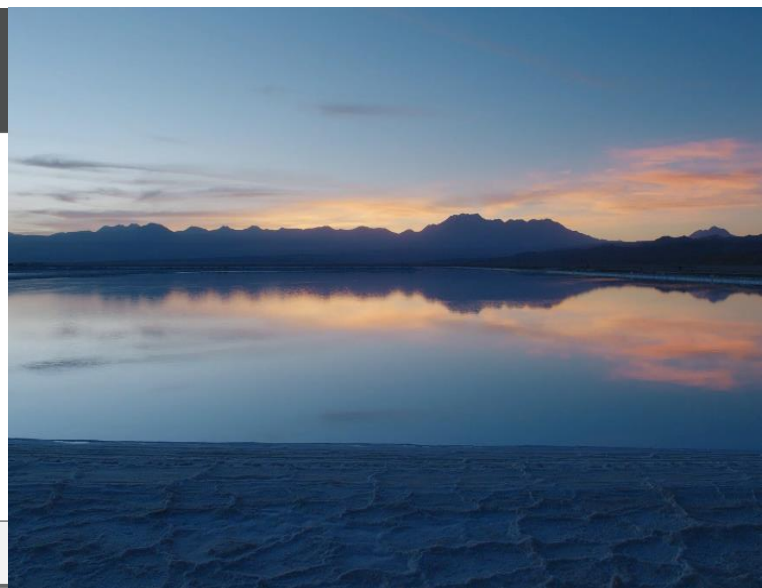
Albemarle Resources Benefit from Numerous Other Factors that Drive Low-cost Operations

- ✓ Chemical composition
- ✓ Hydrogeology
- ✓ Climate
- ✓ Utility requirements
- ✓ Environmental / regulatory
- ✓ Social responsibility
- ✓ Mine scale
- ✓ Reserve size
- ✓ Infrastructure

The Largest, Lowest-cost, and Most Diversified Base to Support our Customers' Growth

Large and Diverse Resources Positioned for at Least the Next Decade

Albemarle Resource	2019 Operating Capacity (kTa LCE)	Available Resource Capability (kTa LCE)	% Utilization
Atacama CORFO Lease	40	100	40%
50% Greenbushes Interest ¹	40	120	33%
Wodgina ²	0	100	0%
Silver Peak	5	10	50%
Kings Mountain	-	50	0%
Antofalla	-	TBD	0%
Total ³	85	> 380	< 25%

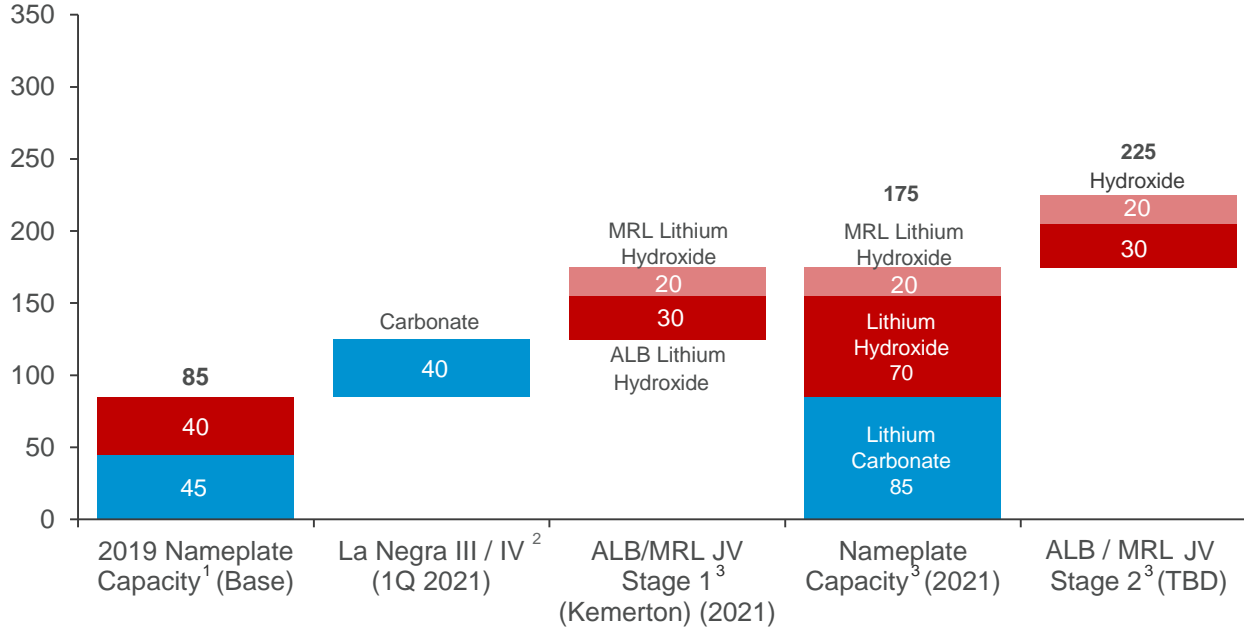


Sufficient Resources to Meet the Growth Targets of our Customers

Disciplined and Measured Plan to Expanding Conversion Capacity

Our plan through 2024 only utilize ~60% of available resources

All figures in kt LCE and represent estimates of lithium nameplate conversion capacity



Reducing Capital Intensity




- Deploying standard process flow and equipment in each expansion
- Process technology to gain 10-20% capacity increase (debottleneck) in existing plants
- Technology improvement at existing plants becomes the standard for new plants
- China-focused expansion at significantly lower CapEx/MT
- Potential acquisition of Chinese converters vs. Greenfield expansion

Conversion Capacity that is Built to Customer Commitments with Lower Capital Intensity

Our Growth Engine

Key Takeaways

- **ALB has the broadest range** of resources, manufacturing capabilities, products, and customer relationships in the Lithium industry
- Global Lithium demand is on track to reach **1 million MT LCE by 2025**, a 20%+ CAGR driven by EV penetration of new car sales
- We anticipate that the **current excess supply will diminish** in the mid-term as demand increases, particularly for hydroxide
- Projected growth in lithium demand cannot be met without leveraging **the largest and most highly concentrated resources in the world**, and we have access to the Top 3
- **ALB has a disciplined plan** to build battery grade conversion capacity that provide attractive returns to meet the significant growth demand from our customers

	ENERGY STORAGE	INDUSTRIAL	SPECIALTIES
5-YEAR OUTLOOK			
BUSINESS ENVIRONMENT	<ul style="list-style-type: none"> • Pricing environment expected to improve as supply becomes more balanced in the mid-term; expected strong EV growth over next 5 years • Volume driven by capacity additions in a rapidly growing market 	<ul style="list-style-type: none"> • Remains a GDP market and prices driven by Energy Storage 	<ul style="list-style-type: none"> • Pricing based on value in use • Growth above GDP due to favorable macro-economics trend of aging population
MARKET ASSUMPTIONS	Accelerating adoption of EVs driven by China and Europe	GDP Industrial Growth	GDP plus growth driven largely by pharma and niche automotive applications

Balanced Approach to Capital Allocation

1 Grow Dividend

- 25 years of consecutive dividend increases
- Targeting median specialty chemical payout ratio

5 Repurchase Shares

- Return excess cash to shareholders
- Board authorization up to 7M additional shares



4 Growth via M&A and / or JVs

- Improved capital efficiency
- Low-cost resources and operations

2 Maintain Financial Flexibility

- Maintain Investment Grade rating
- Shorter-term Net Debt to Adj. EBITDA Target: 1.0x - 1.5x to increase growth flexibility
- Long-term Net Debt to Adj. EBITDA Target: 2.0x - 2.5x

3 Invest to Grow Profitably

- Strategically grow lithium capacity
- Accelerate productivity projects
- Build or buy conversion

Committed to Driving Shareholder Value Over the Long Term

Strong Financial Position Results in Strategic Flexibility

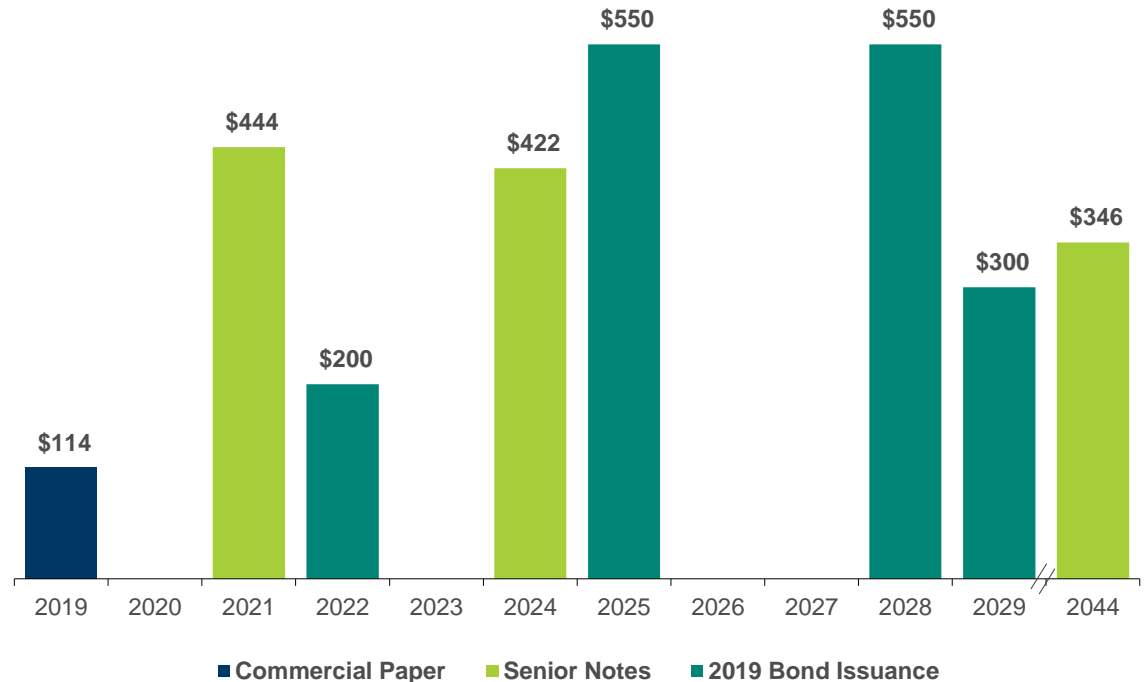


Credit Ratings¹

S&P	Baa2 Stable
Moody's	BBB Stable
Fitch	BBB Stable

- Committed to maintaining midpoint Investment Grade credit rating
- ~\$1.3B liquidity
- 2019 Net Debt to Adj. EBITDA of 2.6x
- New bond issuance reduces weighted average interest cost by 70 bps to 2.7%

Maturity Profile (\$M) (Estimated Y/E 2019)



Cash Flow and Net Debt

Twelve Months Ended 12/31/19

(\$ in millions)

	<u>2019</u>	<u>2018</u>
Net Cash from Operations	\$719	\$546
Less: Capital Expenditures	(852)	(700)
Add Back: Pension Contributions	16	15
Free Cash Flow	(\$117)	(\$139)

- Net Cash from operations benefited from reduced inventory in Bromine and Catalyst and increased earnings of our businesses.
- Focus on maintaining investment grade rating
- Increased borrowing in October to close MARBL JV

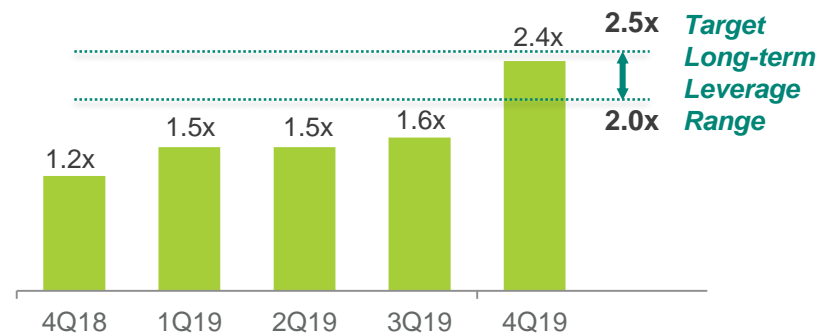
Selected Financial Metrics

(\$ in millions)

(as of 12/31/2019)

Dividends Paid (YTD)	\$152
Dividend Growth (Y/Y)¹	10%
Cash Balance	\$613
Gross Debt²	\$3,050

Net Debt to Adj. EBITDA³



Upcoming Investor Events

First Quarter 2020 Investor Relations Events

Date	Event	Location
March 10 th	J.P. Morgan Industrials Conference	New York City
March 24 th	2020 Goldman Sachs Chemicals Intensity Days Conference	New Orleans
March 26 th	New York Non-Deal Roadshow	New York City
March 27 th	Boston Non-Deal Roadshow	Boston

Meredith Bandy

VP, Investor Relations & Sustainability
meredith.bandy@albemarle.com

Sharon McGee

VP, Investor Relations & Corporate Development
+1 980.299.5601
sharon.mcgee@albemarle.com

Mark de Boer

Director Corporate Sustainability
+31 20.634.7060
mark.deboer@albemarle.com

Appendix A

Non-GAAP Reconciliations and
Supplemental Information

Adjusted Net Income

(\$ in thousands)

	Three Months Ended		Year Ended	
	December 31,		December 31,	
	2019	2018	2019	2018
Net income attributable to Albemarle Corporation	\$ 90,391	\$ 129,596	\$ 533,228	\$ 693,562
Add back:				
Non-operating pension and OPEB items (net of tax)	20,453	8,829	18,648	3,234
Non-recurring and other unusual items (net of tax)	73,430	25,291	90,669	(96,440)
Adjusted net income attributable to Albemarle Corporation	184,274	163,716	642,545	600,356
Adjusted diluted earnings per share	\$ 1.73	\$ 1.53	\$ 6.04	\$ 5.48
Weighted-average common shares outstanding – diluted	106,314	107,005	106,321	109,458

See above for a reconciliation of adjusted net income, the non-GAAP financial measures, to Net income attributable to Albemarle Corporation, the most directly comparable financial measure calculated and reported in accordance with GAAP.

EBITDA and Adjusted EBITDA

(\$ in thousands)

	Three Months Ended		Year Ended	
	December 31,		December 31,	
	2019	2018	2019	2018
Net income attributable to Albemarle Corporation	\$ 90,391	\$ 129,596	\$ 533,228	\$ 693,562
Add back:				
Interest and financing expenses	22,400	12,571	57,695	52,405
Income tax (benefit) expense	(5,105)	11,196	88,161	144,826
Depreciation and amortization	56,766	50,187	213,484	200,698
EBITDA	164,452	203,550	892,568	1,091,491
Non-operating pension and OPEB items	28,780	11,881	26,970	5,285
Non-recurring and other unusual items (excluding items associated with interest expense)	101,431	48,871	117,243	(90,112)
Adjusted EBITDA	\$ 294,663	\$ 264,302	\$ 1,036,781	\$ 1,006,664
Net sales	\$ 992,564	\$ 921,699	\$ 3,589,427	\$ 3,374,950
EBITDA margin	16.6%	22.1%	24.9%	32.3%
Adjusted EBITDA margin	29.7%	28.7%	28.9%	29.8%

See above for a reconciliation of EBITDA, adjusted EBITDA and the non-GAAP financial measures, to Net income attributable to Albemarle Corporation, the most directly comparable financial measure calculated and reported in accordance with GAAP.

Adjusted EBITDA - by Segment *(three months ended Dec 31)*

(\$ in thousands)

	Lithium	Bromine Specialties	Catalysts	Reportable Segments Total	All Other	Corporate	Consolidated Total
Three months ended December 31, 2019:							
Net income (loss) attributable to Albemarle Corporation	\$ 29,158	\$ 67,625	\$ 63,358	\$ 160,141	\$ 18,559	\$ (88,309)	\$ 90,391
Depreciation and amortization	27,755	12,330	12,582	52,667	2,138	1,961	56,766
Non-recurring and other unusual items (excluding items associated with interest expense)	83,167	(241)	794	83,720	—	17,711	101,431
Interest and financing expenses	—	—	—	—	—	22,400	22,400
Income tax expense	—	—	—	—	—	(5,105)	(5,105)
Non-operating pension and OPEB items	—	—	—	—	—	28,780	28,780
Adjusted EBITDA	\$ 140,080	\$ 79,714	\$ 76,734	\$ 296,528	\$ 20,697	\$ (22,562)	\$ 294,663
Three months ended December 31, 2018:							
Net income (loss) attributable to Albemarle Corporation	\$ 112,273	\$ 59,333	\$ 58,566	\$ 230,172	\$ 4,359	\$ (104,935)	\$ 129,596
Depreciation and amortization	23,433	10,862	11,930	46,225	2,003	1,959	50,187
Non-recurring and other unusual items	8,807	—	8,277	17,084	—	31,787	48,871
Interest and financing expenses	—	—	—	—	—	12,571	12,571
Income tax expense	—	—	—	—	—	11,196	11,196
Non-operating pension and OPEB items	—	—	—	—	—	11,881	11,881
Adjusted EBITDA	\$ 144,513	\$ 70,195	\$ 78,773	\$ 293,481	\$ 6,362	\$ (35,541)	\$ 264,302

See above for a reconciliation of adjusted EBITDA on a segment basis, the non-GAAP financial measure, to Net income attributable to Albemarle Corporation ("earnings"), the most directly comparable financial measure calculated and reporting in accordance with GAAP.

Adjusted EBITDA - Margin by Segment *(three months ended Dec 31)*

(\$ in thousands)

	Lithium	Bromine Specialties	Catalysts	Reportable Segments Total	All Other	Consolidated Total
Three months ended December 31, 2019:						
Net sales	\$ 411,140	\$ 243,464	\$ 282,522	\$ 937,126	\$ 55,438	\$ 992,564
Net income (loss) attributable to Albemarle Corporation	7.1%	27.8%	22.4%	17.1%	33.5%	9.1%
Depreciation and amortization	6.8%	5.1%	4.5%	5.6%	3.9%	5.7%
Non-recurring and other unusual items (excluding items associated with interest expense)	20.2%	(0.1)%	0.3%	8.9%	—%	10.2%
Interest and financing expenses	—%	—%	—%	—%	—%	2.3%
Income tax expense	—%	—%	—%	—%	—%	(0.5)%
Non-operating pension and OPEB items	—%	—%	—%	—%	—%	2.9%
Adjusted EBITDA Margin	34.1%	32.7%	27.2%	31.6%	37.3%	29.7%
Three months ended December 31, 2018:						
Net sales	\$ 341,648	\$ 239,111	\$ 304,732	\$ 885,491	\$ 36,208	\$ 921,699
Net income (loss) attributable to Albemarle Corporation	32.9%	24.8%	19.2%	26.0%	12.0%	14.1%
Depreciation and amortization	6.9%	4.5%	3.9%	5.2%	5.5%	5.4%
Non-recurring and other unusual items	2.6%	—%	2.7%	1.9%	—%	5.3%
Interest and financing expenses	—%	—%	—%	—%	—%	1.4%
Income tax expense	—%	—%	—%	—%	—%	1.2%
Non-operating pension and OPEB items	—%	—%	—%	—%	—%	1.3%
Adjusted EBITDA Margin	42.3%	29.4%	25.8%	33.1%	17.6%	28.7%

See above for adjusted EBITDA margin, a non-GAAP financial measure defined as adjusted EBITDA divided by net sales. See slide 32 for the related reconciliation of adjusted EBITDA on a segment basis, the non-GAAP financial measure, to Net income attributable to Albemarle Corporation ("earnings"), the most directly comparable financial measure calculated and reporting in accordance with GAAP.

EBITDA - by Segment *(twelve months ended Dec 31)*

(\$ in thousands)

	Lithium	Bromine Specialties	Catalysts	Reportable Segments Total	All Other	Corporate	Consolidated Total
Year ended December 31, 2019:							
Net income (loss) attributable to Albemarle Corporation	\$ 341,767	\$ 279,945	\$ 219,686	\$ 841,398	\$ 41,188	\$ (349,358)	\$ 533,228
Depreciation and amortization	99,424	47,611	50,144	197,179	8,440	7,865	213,484
Non-recurring and other unusual items (excluding items associated with interest expense)	83,743	901	794	85,438	—	31,805	117,243
Interest and financing expenses	—	—	—	—	—	57,695	57,695
Income tax expense	—	—	—	—	—	88,161	88,161
Non-operating pension and OPEB items	—	—	—	—	—	26,970	26,970
Adjusted EBITDA	\$ 524,934	\$ 328,457	\$ 270,624	\$ 1,124,015	\$ 49,628	\$ (136,862)	\$ 1,036,781
Year ended December 31, 2018:							
Net income (loss) attributable to Albemarle Corporation	\$ 428,212	\$ 246,509	\$ 445,604	\$ 1,120,325	\$ 6,018	\$ (432,781)	\$ 693,562
Depreciation and amortization	95,193	41,607	49,131	185,931	8,073	6,694	200,698
Non-recurring and other unusual items	7,368	—	(210,428)	(203,060)	—	112,948	(90,112)
Interest and financing expenses	—	—	—	—	—	52,405	52,405
Income tax expense	—	—	—	—	—	144,826	144,826
Non-operating pension and OPEB items	—	—	—	—	—	5,285	5,285
Adjusted EBITDA	\$ 530,773	\$ 288,116	\$ 284,307	\$ 1,103,196	\$ 14,091	\$ (110,623)	\$ 1,006,664
Pro-forma: Net impact of adjusted EBITDA from divested business	—	—	(10,872)	(10,872)	—	—	(10,872)
Pro-forma adjusted EBITDA	\$ 530,773	\$ 288,116	\$ 273,435	\$ 1,092,324	\$ 14,091	\$ (110,623)	\$ 995,792

See above for a reconciliation of adjusted EBITDA on a segment basis, the non-GAAP financial measure, to net income attributable to Albemarle Corporation ("earnings"), the most directly comparable financial measure calculated and reporting in accordance with GAAP.

EBITDA - Margin by Segment (twelve months ended Dec 31)

(\$ in thousands)

Year ended December 31, 2019:

	Lithium	Bromine Specialties	Catalysts	Reportable Segments Total	All Other	Consolidated Total
Net sales	\$ 1,358,170	\$ 1,004,216	\$ 1,061,817	\$ 3,424,203	\$ 165,224	\$ 3,589,427
Net income (loss) attributable to Albemarle Corporation	25.2%	27.9%	20.7%	24.6%	24.9%	14.9%
Depreciation and amortization	7.3%	4.7%	4.7%	5.8%	5.1%	5.9%
Non-recurring and other unusual items (excluding items associated with interest expense)	6.2%	0.1%	0.1%	2.5%	—%	3.3%
Interest and financing expenses	—%	—%	—%	—%	—%	1.6%
Income tax expense	—%	—%	—%	—%	—%	2.5%
Non-operating pension and OPEB items	—%	—%	—%	—%	—%	0.8%
Adjusted EBITDA Margin	38.7%	32.7%	25.5%	32.8%	30.0%	28.9%

Year ended December 31, 2018:

Net sales	\$ 1,228,171	\$ 917,880	\$ 1,101,554	\$ 3,247,605	\$ 127,186	\$ 3,374,950
Net income (loss) attributable to Albemarle Corporation	34.9%	26.9%	40.5%	34.5%	4.7%	20.6%
Depreciation and amortization	7.8%	4.5%	4.5%	5.7%	6.3%	5.9%
Non-recurring and other unusual items	0.6%	—%	(19.1)%	(6.3)%	—%	(2.7)%
Interest and financing expenses	—%	—%	—%	—%	—%	1.5%
Income tax expense	—%	—%	—%	—%	—%	4.3%
Non-operating pension and OPEB items	—%	—%	—%	—%	—%	0.2%
Adjusted EBITDA Margin	43.2%	31.4%	25.8%	34.0%	11.1%	29.8%

See above for adjusted EBITDA margin, a non-GAAP financial measure defined as adjusted EBITDA divided by net sales. See previous slide for the related reconciliation of adjusted EBITDA on a segment basis, the non-GAAP financial measure, to net income attributable to Albemarle Corporation ("earnings"), the most directly comparable financial measure calculated and reporting in accordance with GAAP.

Consolidated Total includes net sales from Corporate (not shown) of \$159 in the twelve months ended December 31, 2018.

Adjusted EBITDA - (twelve months ended)

(\$ in thousands)

	Twelve Months Ended				
	Dec 31, 2019	Sep 30, 2019	Jun 30, 2019	Mar 31, 2019	Dec 31, 2018
Net income attributable to Albemarle Corporation	\$ 533,228	\$ 572,433	\$ 547,108	\$ 695,371	\$ 693,562
Depreciation and amortization	213,484	206,905	202,125	199,651	200,698
Non-recurring and other unusual items (excluding items associated with interest expense)	117,243	64,683	67,457	(131,540)	(90,112)
Interest and financing expenses	57,695	47,866	49,746	51,453	52,405
Income tax expense	88,161	104,462	112,288	161,979	144,826
Non-operating pension and OPEB items	26,970	10,071	8,427	6,899	5,285
Adjusted EBITDA	\$ 1,036,781	\$ 1,006,420	\$ 987,151	\$ 983,813	\$ 1,006,664
Pro-forma: Net impact of adjusted EBITDA from divested businesses	—	—	—	—	(10,872)
Pro-forma Adjusted EBITDA	\$ 1,036,781	\$ 1,006,420	\$ 987,151	\$ 983,813	\$ 995,792
Net Sales	\$ 3,589,427	\$ 3,518,562	\$ 3,416,563	\$ 3,385,385	\$ 3,374,950
Pro-forma: Net impact of adjusted EBITDA from divested businesses	—	—	—	—	(27,082)
Pro-forma Net Sales	\$ 3,589,427	\$ 3,518,562	\$ 3,416,563	\$ 3,385,385	\$ 3,347,868
Pro-forma Adjusted EBITDA Margin	29%	29%	29%	29%	30%

See above for a reconciliation of adjusted EBITDA and pro-forma adjusted EBITDA, the non-GAAP financial measures, to Net income attributable to Albemarle Corporation, the most directly comparable financial measure calculated and reported in accordance with GAAP.

See above for a reconciliation of pro-forma net sales, the non-GAAP financial measure, to net sales, the most directly comparable financial measure calculated and reported in accordance with GAAP.

Adjusted EBITDA - by Segment (twelve months ended)

(\$ in thousands)	Twelve Months Ended				
	Dec 31, 2019	Sep 30, 2019	Jun 30, 2019	Mar 31, 2019	Dec 31, 2018
Lithium					
Net income attributable to Albemarle Corporation	\$ 341,766	\$ 424,881	\$ 413,058	\$ 413,047	\$ 428,212
Depreciation and amortization	99,424	95,102	93,260	93,220	95,193
Non-recurring and other unusual items	83,744	9,384	9,219	9,108	7,368
Adjusted EBITDA	524,934	529,367	515,537	515,375	530,773
Net sales	1,358,170	1,288,678	1,229,220	1,222,025	1,228,171
Adjusted EBITDA Margin	39%	41%	42%	42%	43%
Bromine Specialties					
Net income attributable to Albemarle Corporation	\$ 279,945	\$ 271,653	\$ 264,396	\$ 254,453	\$ 246,509
Depreciation and amortization	47,611	46,143	44,313	42,291	41,607
Non-recurring and other unusual items	901	1,142	—	—	—
Adjusted EBITDA	328,457	318,938	308,709	296,744	288,116
Net sales	1,004,216	999,863	976,212	941,293	917,880
Adjusted EBITDA Margin	33%	32%	32%	32%	31%
Catalysts					
Net income attributable to Albemarle Corporation	\$ 219,686	\$ 214,894	\$ 211,040	\$ 437,803	\$ 445,604
Depreciation and amortization	50,144	49,492	49,004	49,173	49,131
Non-recurring and other unusual items	794	8,277	8,277	(210,428)	(210,428)
Adjusted EBITDA	270,624	272,663	268,321	276,548	284,307
Pro-forma: Net impact of adjusted EBITDA from divested businesses	—	—	—	—	(10,872)
Pro-forma Adjusted EBITDA	270,624	272,663	268,321	276,548	273,435
Net sales	1,061,817	1,084,027	1,073,820	1,092,485	1,101,554
Pro-forma: Net impact of Net sales from divested businesses	—	—	—	—	(27,082)
Pro-forma Net sales	1,061,817	1,084,027	1,073,820	1,092,485	1,074,472
Pro-forma Adjusted EBITDA Margin	25%	25%	25%	25%	25%

See above for a reconciliation of adjusted EBITDA and pro-forma adjusted EBITDA on a segment basis, the non-GAAP financial measure, to Net income attributable to Albemarle Corporation (“earnings”), the most directly comparable financial measure calculated and reporting in accordance with GAAP.

See above for a reconciliation of pro-forma net sales on a segment basis, the non-GAAP financial measure, to net sales, the most directly comparable financial measure calculated and reported in accordance with GAAP.

Adjusted EBITDA supplemental¹

(\$ in thousands)

	Twelve Months Ended	Three Months Ended			
	Dec 31, 2019	Dec 31, 2019	Sep 30, 2019	Jun 30, 2019	Mar 31, 2019
Adjusted EBITDA	\$ 1,036,781	\$ 294,663	\$ 254,351	\$ 261,900	\$ 225,867
Net income attributable to noncontrolling interests	71,129	15,852	16,548	20,772	17,957
Equity in net income of unconsolidated investments (net of tax)	(129,568)	(22,841)	(33,236)	(38,310)	(35,181)
Dividends received from unconsolidated investments	71,746	8,764	2,691	57,257	3,034
Consolidated EBITDA	\$ 1,050,088	\$ 296,438	\$ 240,354	\$ 301,619	\$ 211,677
Total Long Term Debt (as reported)	\$ 3,050,257				
Off balance sheet obligations and other	82,300				
Consolidated Funded Debt	\$ 3,132,557				
Less Cash	613,110				
Consolidated Funded Net Debt	\$ 2,519,447				
Consolidated Funded Debt to Consolidated EBITDA Ratio	3.0				
Consolidated Funded Net Debt to Consolidated EBITDA Ratio	2.4				

¹ This supplemental is for net-debt-to-adjusted EBITDA ratio based on the bank covenant definition.

Diluted EPS

	Three Months Ended		Year Ended	
	December 31,		December 31,	
	2019	2018	2019	2018
Diluted earnings per share	\$ 0.85	\$ 1.21	\$ 5.02	\$ 6.34
Add back:				
Non-operating pension and OPEB items (net of tax)	0.19	0.08	0.18	0.03
Non-recurring and other unusual items (net of tax)				
Restructuring and other	—	—	0.05	0.03
Acquisition and integration related costs	0.05	0.05	0.15	0.14
Albemarle Foundation contribution	—	—	—	0.11
Gain on sale of business	—	0.06	—	(1.55)
Gain on sale of property	(0.02)	—	(0.10)	—
Stamp duty	0.61	—	0.61	—
Windfield tax settlement	0.16	—	0.16	—
Legal accrual	—	—	—	0.21
Environmental accrual	—	—	—	0.11
Loss on extinguishment of debt	0.04	—	0.04	—
Indemnification adjustments	—	0.23	—	0.23
Other	0.13	0.07	0.20	0.11
Discrete tax items	(0.28)	(0.17)	(0.26)	(0.27)
Total non-recurring and other unusual items	0.69	0.24	0.85	(0.88)
Adjusted diluted earnings per share ¹	\$ 1.73	\$ 1.53	\$ 6.04	\$ 5.48

¹Totals may not add due to rounding

Effective Tax Rate

(\$ in thousands)

Three months ended December 31, 2019:

	Income before income taxes and equity in net income of unconsolidated investments	Income tax (benefit) expense	Effective income tax rate
As reported	\$ 78,297	\$ (5,105)	(6.5)%
Non-recurring, other unusual and non-operating pension and OPEB items	117,748	41,157	
As adjusted	<u>\$ 196,045</u>	<u>\$ 36,052</u>	18.4%

Three months ended December 31, 2018:

As reported	\$ 129,708	\$ 11,196	8.6%
Non-recurring, other unusual and non-operating pension and OPEB items	60,752	26,632	
As adjusted	<u>\$ 190,460</u>	<u>\$ 37,828</u>	19.9%

Year ended December 31, 2019:

As reported	\$ 562,950	\$ 88,161	15.7%
Non-recurring, other unusual and non-operating pension and OPEB items	131,750	39,725	
As adjusted	<u>\$ 694,700</u>	<u>\$ 127,886</u>	18.4%

Year ended December 31, 2018:

As reported	\$ 794,701	\$ 144,826	18.2%
Non-recurring, other unusual and non-operating pension and OPEB items	(84,827)	8,379	
As adjusted	<u>\$ 709,874</u>	<u>\$ 153,205</u>	21.6%

See above for a reconciliation of the adjusted effective income tax rate, the non-GAAP financial measure, to the effective income tax rate, the most directly comparable financial measure calculated and reporting in accordance with GAAP.

Equity Income and Noncontrolling Interest

	Three Months Ended December 31,				Year Ended December 31,			
	2019		2018		2019		2018	
	Equity Income	Noncontrolling Interest	Equity Income	Noncontrolling Interest	Equity Income	Noncontrolling Interest	Equity Income	Noncontrolling Interest
<i>(\$ in thousands)</i>								
Lithium	\$ 14,976	\$ —	\$ 22,580	\$ —	\$ 108,152	\$ —	\$ 71,399	\$ —
Bromine Specialties	—	(15,901)	—	(16,451)	—	(71,107)	—	(45,524)
Catalysts	7,865	—	4,957	—	21,416	—	17,865	—
All Other	—	—	—	—	—	—	—	—
Corporate	—	49	—	(2)	—	(22)	—	(53)
Total Company	\$ 22,841	\$ (15,852)	\$ 27,537	\$ (16,453)	\$ 129,568	\$ (71,129)	\$ 89,264	\$ (45,577)

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