



 ALBEMARLE

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BROCK STOCK PITCH COMPETITION 2018

Agenda

1. Investment Thesis
2. Company Overview
3. Industry Analysis
4. Drivers
5. Valuation
6. Recommendation



Prices are in \$MM of USD except for Share Price, Data as of March 7, 2018

Executive Summary



MACRO

Favourable Trends

INDUSTRY

Exponential Growth

COMPANY

Market Leader

VALUATION

Undervalued



Recommendation: Buy

Current price: \$100.14

Target Price (Current): \$124.74

Implied Upside: 24.56%

Target Price (1Y): \$138.01

Current Dividend Yield: 1.13%

Company Overview



Business Model

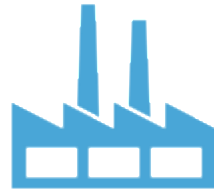
Research:
35 production
facilities



Develop:
2100 active
patents



Manufacture:
31 locations



Distribute:
3000+
customers



Lithium and Advanced Materials: (i.e. chemicals used for rechargeable batteries)

Bromine Specialties, including Bromine sourced from the dead sea

Refining Solutions: (i.e. Clean Fuel Technology, Heavy Oil Upgrading)

Manufacturer and Producer For:

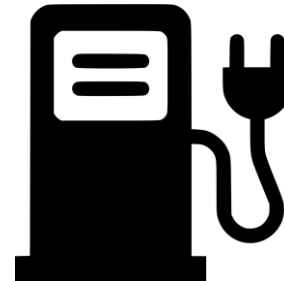
Food Safety



Consumer Electronics



Fuel



Chemistry Services



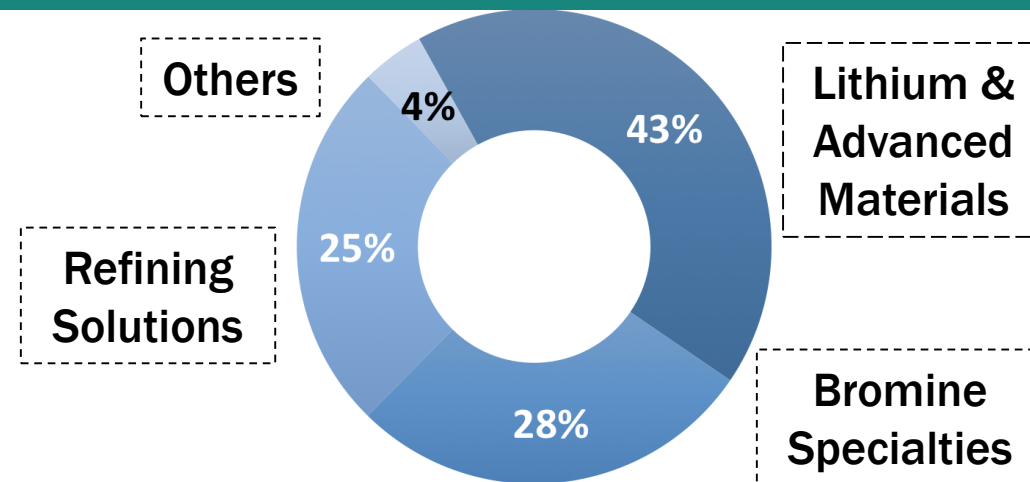
Company Overview



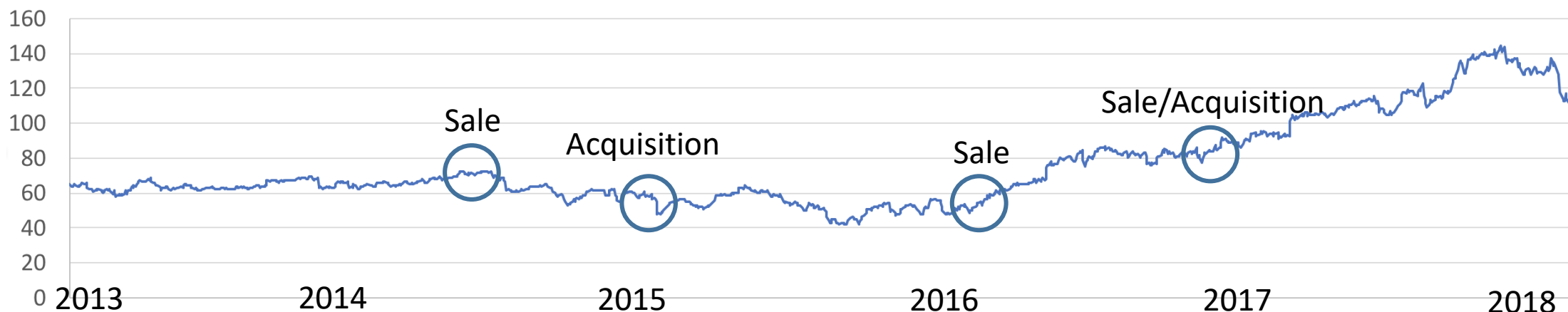
Key Stats

Capitalization		LTM Valuation	
Share Price	\$100.14	EV/Revenue	4.65x
Shares O/S	110.64	EV/EBITDA	15.83x
Market Capitalization	\$11 079.30	EV/EBIT	20.45x
Net Debt	\$843.22	P/E	64.10x
Enterprise Value	\$11 922.55	*As of: March 7 2018	

Revenue Breakdown by Segment (2017)



Historical Performance



Source: S&P Capital IQ

Sales and Acquisitions

(S) September 1, 2014

Sale of medical businesses and assets to SI Group, Inc. and received net proceeds of \$104.7 million

(A) 2015

Chemetall Surface Treatment completed acquisitions, including remaining shares of Shanghai Chemetall for \$57.6 million, Chemal GmbH & Co. for \$2.2 million, non-controlling interests' share of Nanjing Chemetall Surface Technologies Co., Ltd for \$4.8 million

(S) December 14, 2016

Sale of the Chemetall Surface Treatment business to BASF SE for \$3.1 billion



(A) January 12, 2015

Acquisition of Rockwood Holdings for a purchase price of approximately \$5.7 billion

(S) January 4, 2016 - February 1, 2016

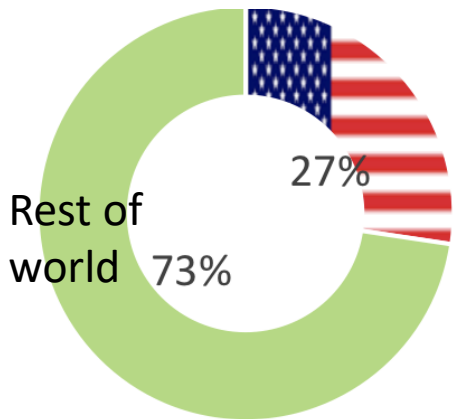
- Sale of metal sulfides business to Treibacher Industrie AG for net proceeds of \$137 million
- Sale of minerals-based flame retardants and specialty chemicals business to Huber and 3Engineered Materials, a division of J.M. Huber Corporation, for net proceeds of approximately \$187 million

(A) December 31, 2016

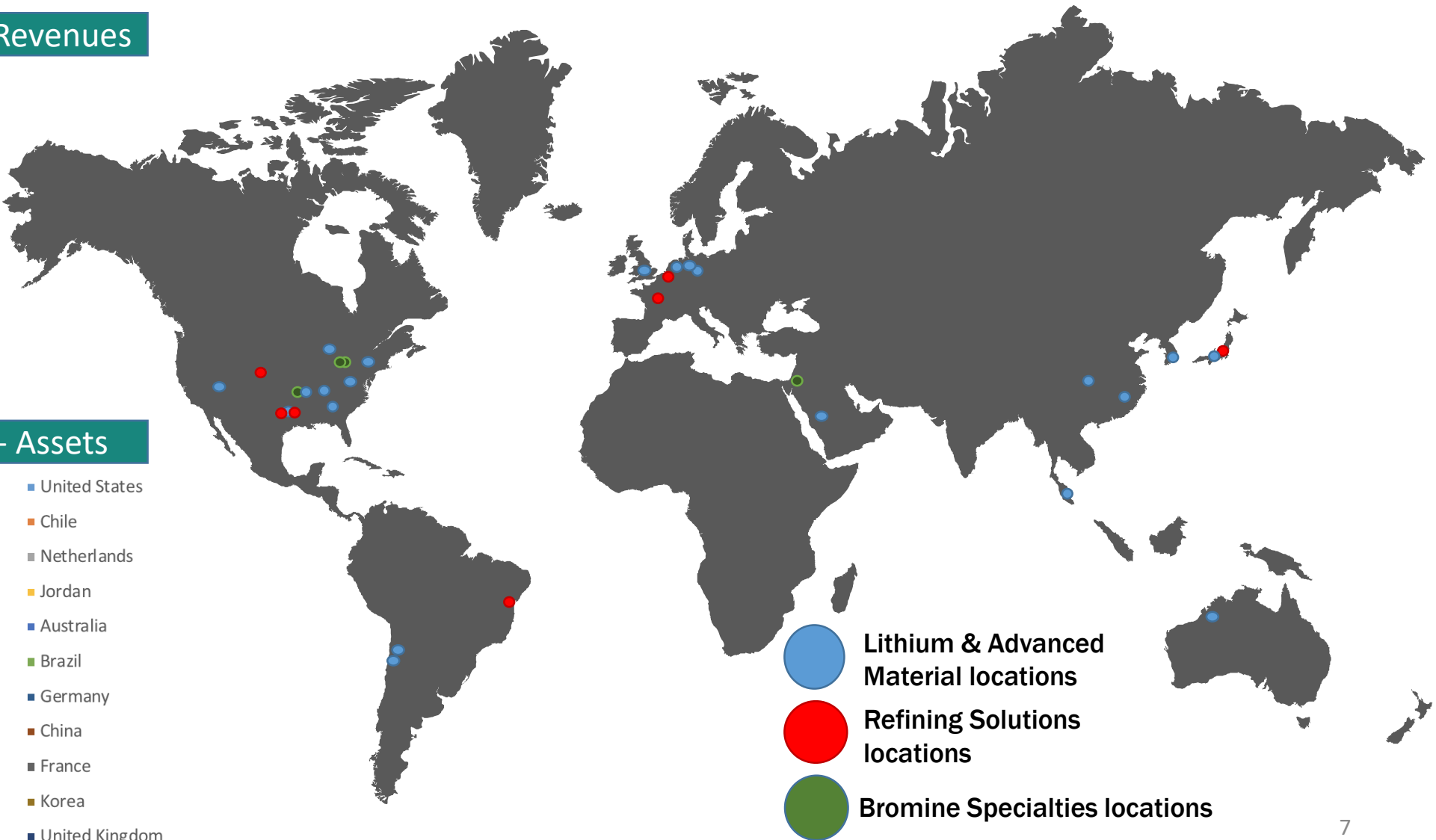
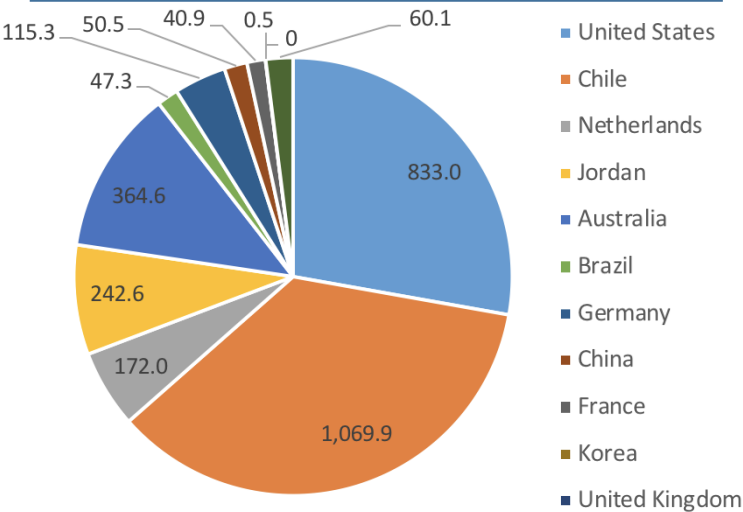
Acquisition of Jiangxi Jiangli New Materials Science and Technology Co. Ltd. for \$145 million

Global Production

Geographic Segments - Revenues



Geographic Segments - Assets

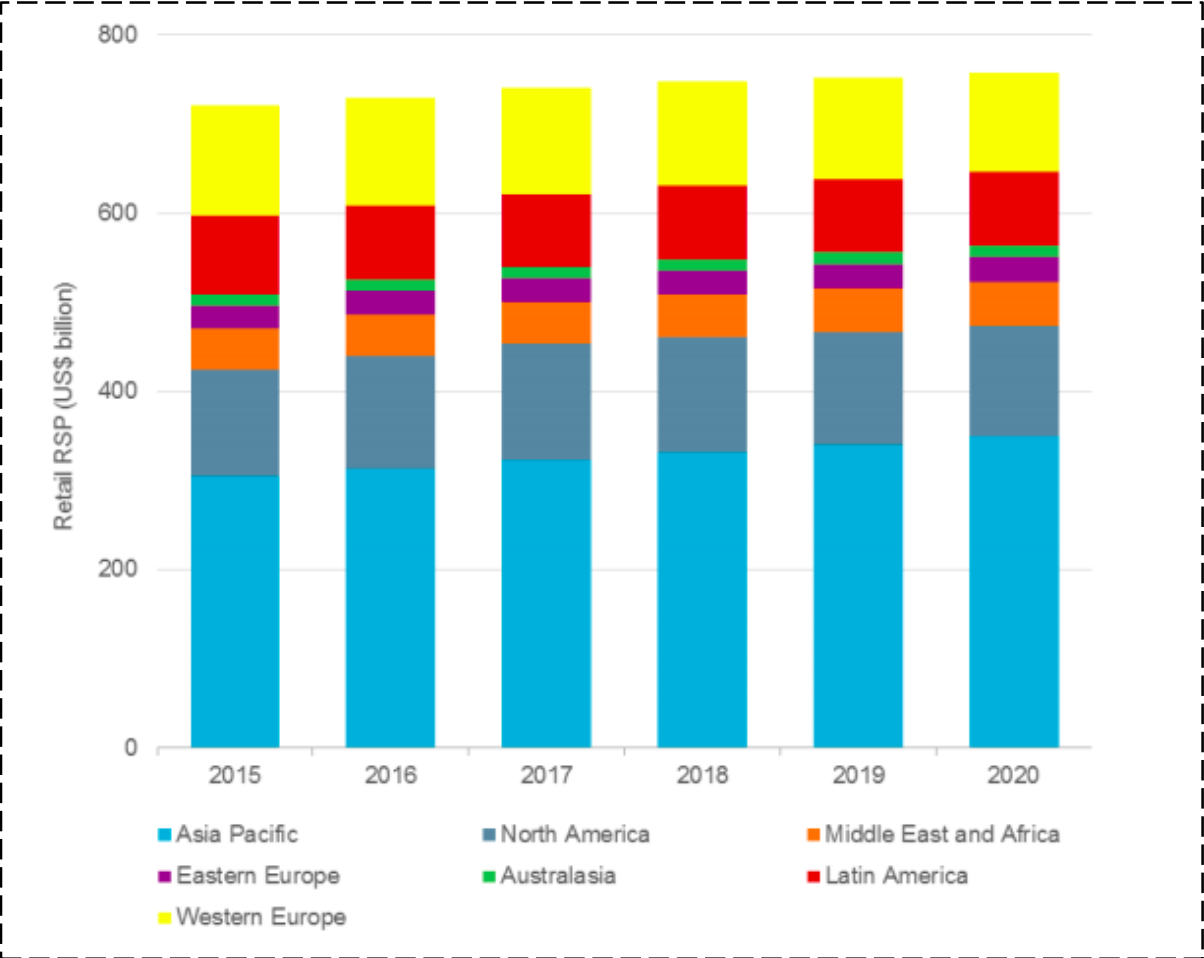


Source: S&P Capital IQ, Albemarle 10-K

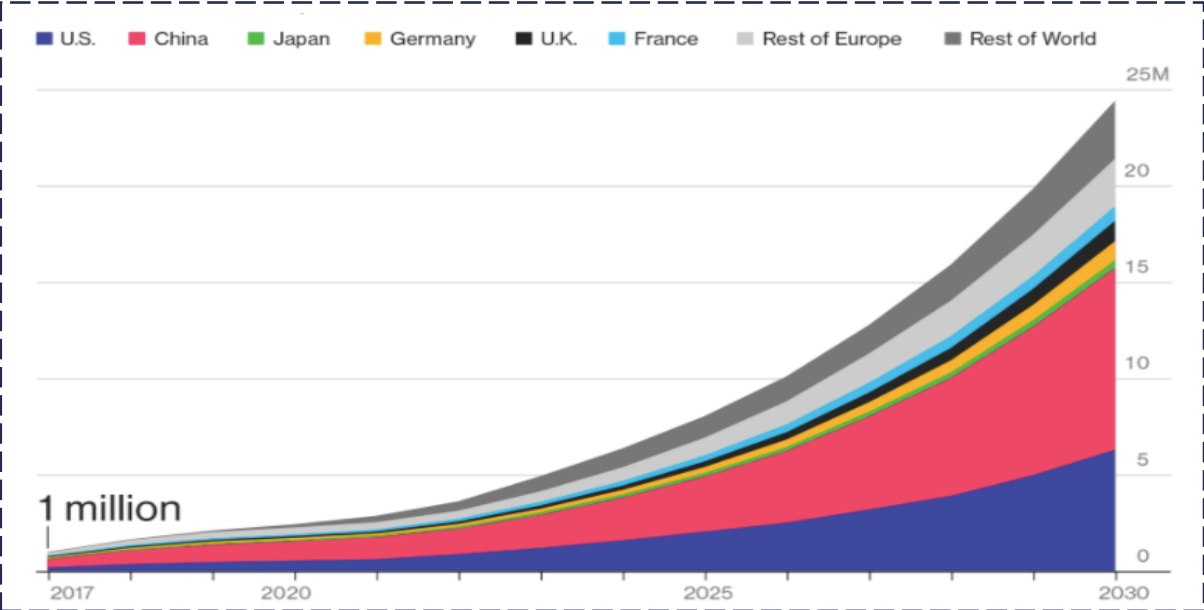
Industry Overview / Analysis



Projected Growth of Consumer Electronics



Sales of Electric Vehicles



Competitive Landscape



Source: Euromonitor, Bloomberg New Energy Finance

Comparable Companies



Albemarle trading at a discount to comparable companies in operational and equity ratios^[1]

Company Name	Ticker	Share Price	Market Cap	Enterprise Value	EV/Sales		EV/EBITDA		P/E	
					LTM	NTM	LTM	NTM	LTM	NTM
Eastman Chemical Company	NYSE:EMN	\$100.13	\$14,316	\$20,974	2.1x	2.1x	8.9x	8.9x	13.6x	11.7x
Celanese Corporation	NYSE:CE	\$103.11	\$14,004	\$17,362	3.1x	2.9x	13.3x	10.1x	18.3x	13.2x
First Quantum Minerals	TSX:FM	\$20.81	\$11,781	\$22,708	4.8x	4.0x	14.6x	9.9x	179.5x	21.7x
FMC Corporation	NYSE:FMC	\$83.35	\$11,445	\$14,093	4.2x	3.7x	19.2x	15.3x	45.1x	23.5x
International Flavors & Fragrances	NYSE:IFF	\$141.83	\$11,374	\$12,469	4.1x	3.8x	19.3x	16.2x	29.4x	24.7x
IDEX Corporation	NYSE:IEX	\$137.35	\$10,464	\$10,977	4.7x	4.4x	18.4x	16.8x	33.2x	28.5x
Min					2.1x	2.1x	8.9x	8.9x	13.6x	11.7x
25th Percentile					3.3x	3.1x	13.6x	9.9x	21.0x	15.3x
Median					4.1x	3.7x	16.5x	12.7x	31.3x	22.6x
75th Percentile					4.6x	3.9x	19.0x	15.9x	42.1x	24.4x
Max					4.8x	4.4x	19.3x	16.8x	179.5x	28.5x
Mean					3.8x	3.5x	15.6x	12.8x	53.2x	20.5x
Albemarle Corporation		\$114.61	\$12,664	\$13,549	5.0x	4.6x	17.4x	15.4x	15.0x	26.3x
Implied Valuation					\$108.76	\$111.91	\$123.66	\$126.49	\$15.52	\$167.30

[1] - *Except for P/E LTM due to an inconsistent event (large chunk of tax paid, greatly reducing Net income)

Drivers



Global Position

36 R&D and 18 lithium production facilities worldwide

Enables company to stay informed of global trends



Leader in Research and Development

Focus on innovation to meet current market demands

Ensures advantage over competitors

Expanding current operations for multi-usage



Strong Market Presence

Clientele of 3000+ customers spread across 100 countries

30% sales based in the USA, 70% globally (South America, Europe, Middle East, East Asia, Australia)



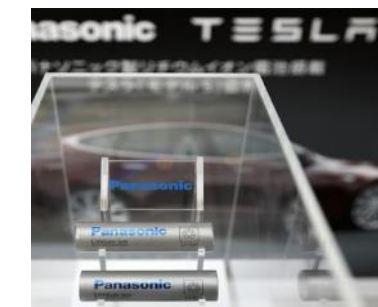
Leading Customers



Water Treatment Facilities

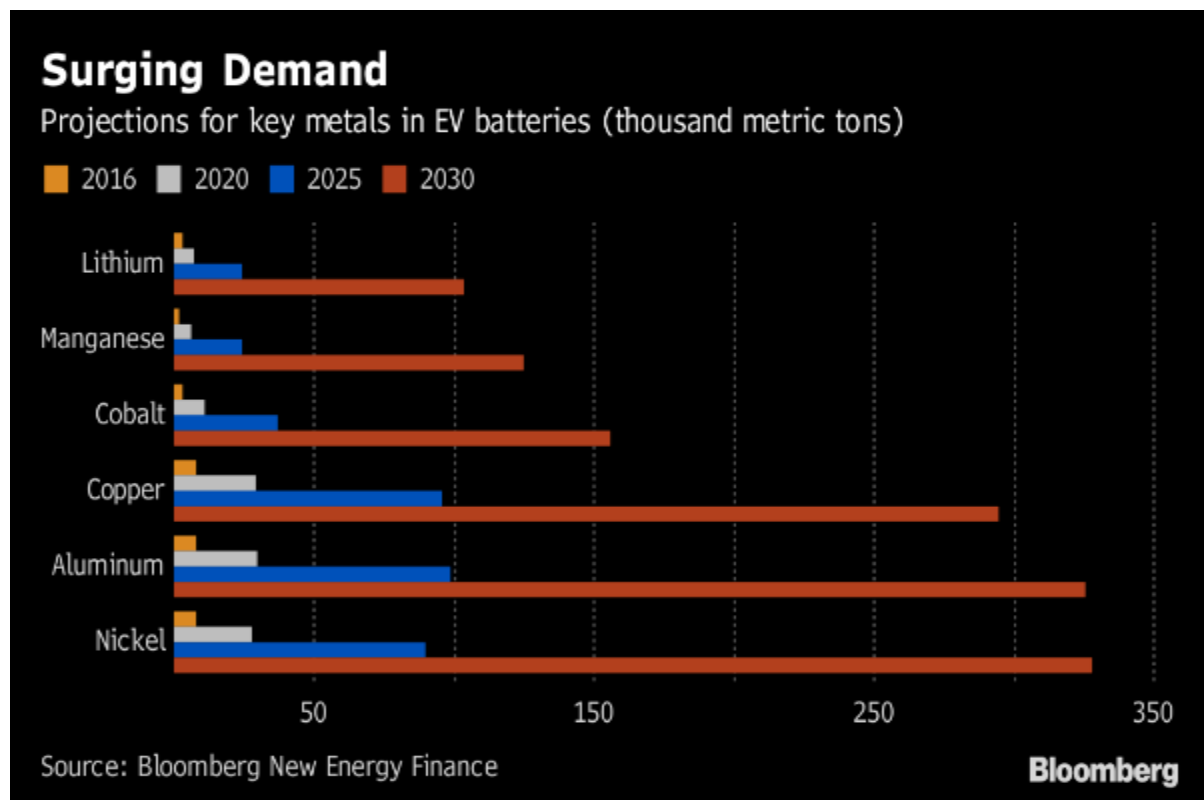
Energy Production Companies

Meat Processors



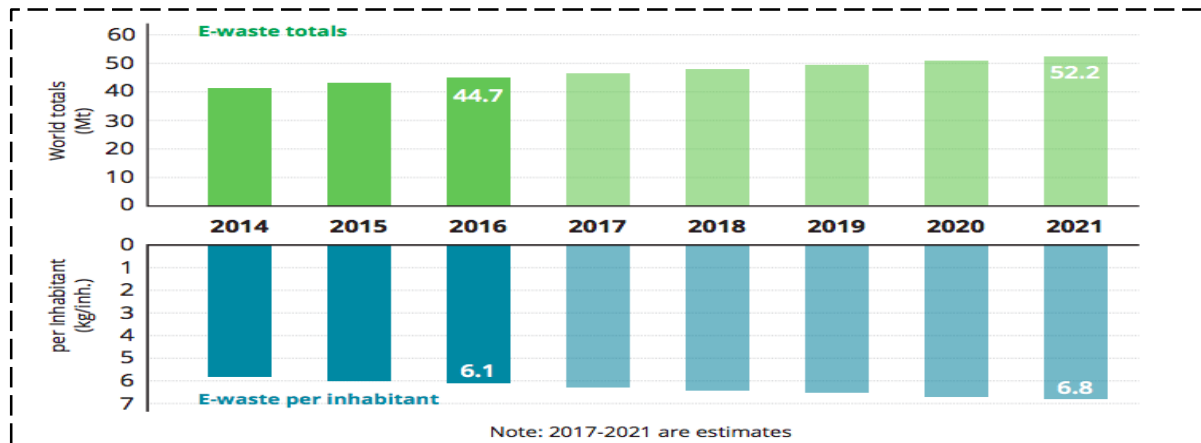
Associated Risks / Investment Risks

Surging Demand For Other Metals



Risks can be mitigated through recycling techniques rather than landfill deposits

Increasing Electronic Waste



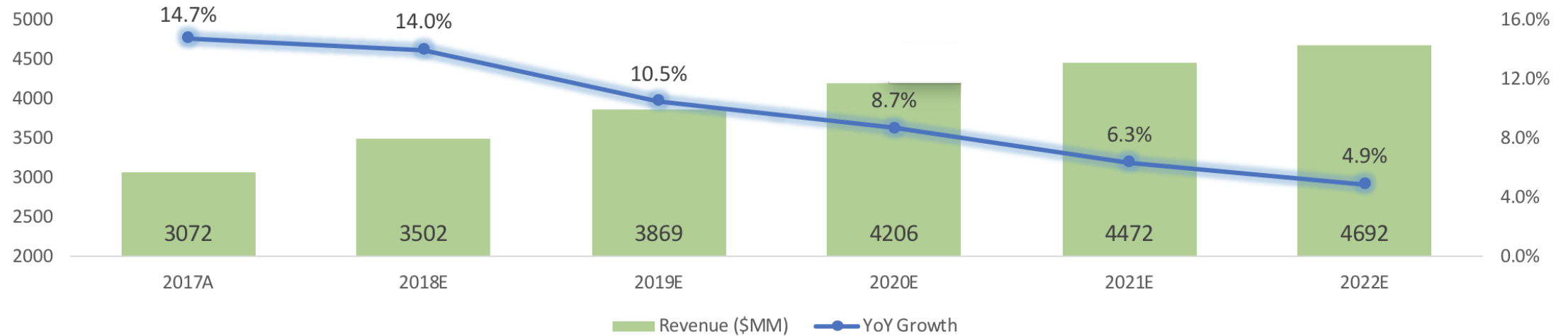
Environmental Impact



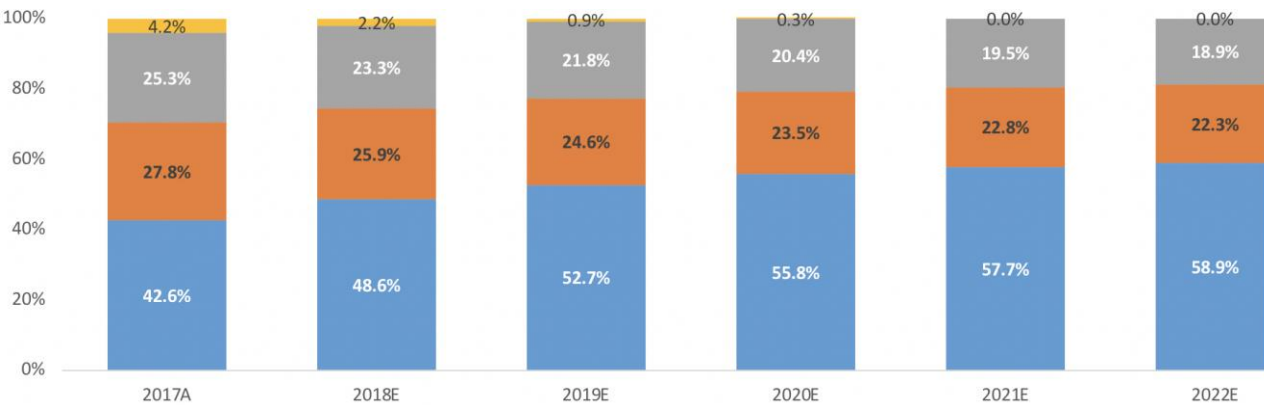
Valuation - Key Assumptions



Revenue Forecasts



Segmented Revenue Approach



Growth Assumptions

Lithium and Advanced Materials: 16.12% CAGR

Bromine Specialties: 4.09% CAGR

Refining Solutions: 2.59% CAGR

Reduced operations and sales of other segments

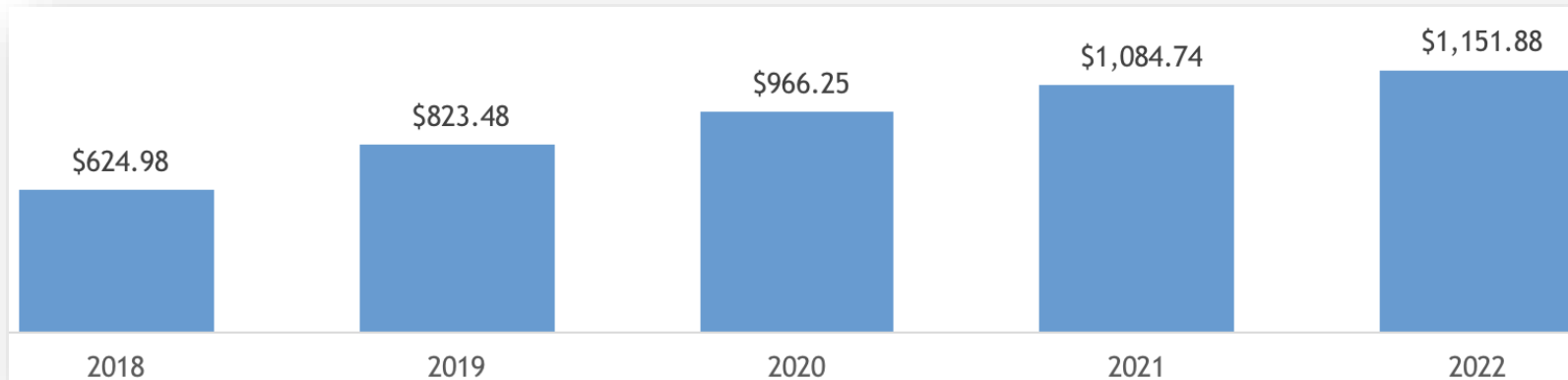
Valuation - Key Assumptions



Other Key Assumptions



FCF Projections



Cost of Capital Assumptions

Risk Free Rate (10Y Treasury)	2.88%
Market Risk Premium	5.50%
Beta (5Y)	1.65
Debt Rating	BBB
Debt Cost of Capital	3.32%
Tax Rate	19.00%
After Tax Debt Cost of Capital	2.69%
Equity Cost of Capital	11.96%
Debt (\$MM)	1,837.37
Market Cap Equity (\$MM)	11,079.30
WACC	10.64%

Improvements in Gross Margin due to improved technologies in gathering raw materials and production, catering to an increased demand

Valuation - Scenario Analysis



Sensitivity Analysis

Growth Rate	WACC					
	\$ 122.5	8.6%	9.6%	10.6%	11.6%	12.6%
	3.0%	\$ 151.56	\$ 126.94	\$ 108.80	\$ 94.87	\$ 83.85
	3.5%	\$ 164.45	\$ 135.78	\$ 115.17	\$ 99.64	\$ 87.52
	4.0%	\$ 180.12	\$ 146.19	\$ 122.50	\$ 105.03	\$ 91.61
	4.5%	\$ 199.58	\$ 158.61	\$ 131.02	\$ 111.17	\$ 96.21
	5.0%	\$ 224.38	\$ 173.72	\$ 141.05	\$ 118.24	\$ 101.41

EV/EBITDA	WACC					
	\$ 154.6	8.6%	9.6%	10.6%	11.6%	12.6%
	13.4x	\$ 150.30	\$ 143.82	\$ 137.68	\$ 131.85	\$ 126.32
	14.4x	\$ 159.59	\$ 152.69	\$ 146.15	\$ 139.95	\$ 134.07
	15.4x	\$ 168.87	\$ 161.56	\$ 154.63	\$ 148.05	\$ 141.81
	16.4x	\$ 178.15	\$ 170.43	\$ 163.10	\$ 156.16	\$ 149.56
	17.4x	\$ 187.44	\$ 179.29	\$ 171.58	\$ 164.26	\$ 157.31

EV/Sales	WACC					
	\$ 140.8	9.6%	10.1%	10.6%	11.1%	11.6%
	4.16x	\$ 136.35	\$ 133.40	\$ 130.54	\$ 127.74	\$ 125.02
	4.36x	\$ 141.70	\$ 138.64	\$ 135.65	\$ 132.75	\$ 129.91
	4.56x	\$ 147.06	\$ 143.87	\$ 140.77	\$ 137.75	\$ 134.80
	4.76x	\$ 152.41	\$ 149.10	\$ 145.88	\$ 142.75	\$ 139.69
	4.96x	\$ 157.76	\$ 154.34	\$ 151.00	\$ 147.75	\$ 144.59

Scenario Target Price

Bear Case:
\$101.86 (+1.72%)

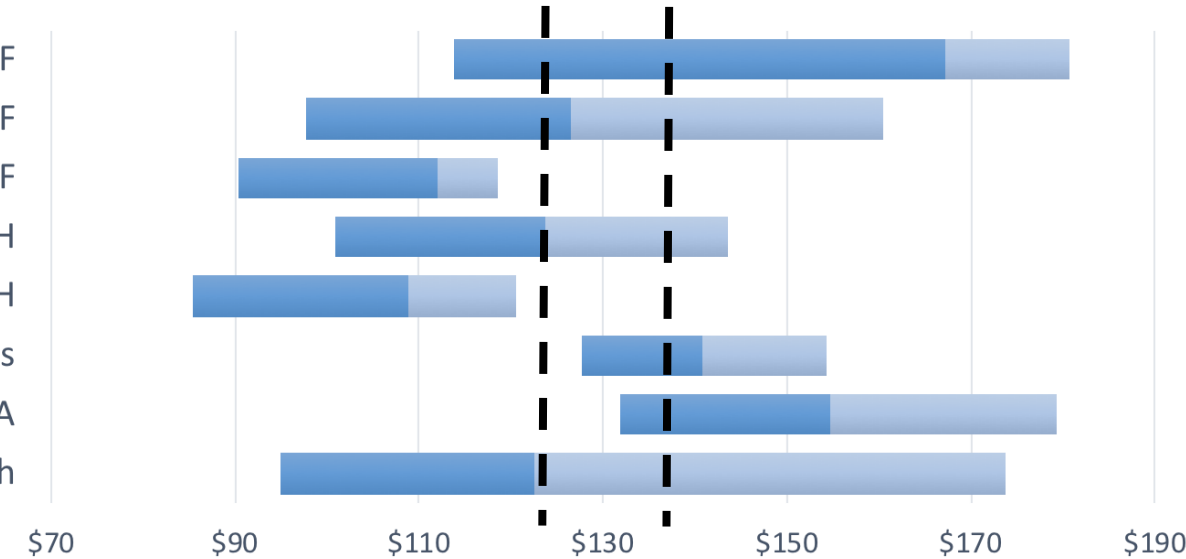
Base Case:
\$124.74 (+24.56%)

Bull Case:
\$147.89 (+47.69%)

Valuation Football Field

Current Price: \$100.14
Target Price: \$124.74 (+24.56%)

Comps - P/E F
Comps - EV/EBITDA F
Comps - EV/Sales F
Comps - EV/EBITDA H
Comps - EV/Sales H
DCF - EV/Sales
DCF - EV/EBITDA
DCF - Gordon Growth



* Base Case Line (Left), Price Target Line (Right)

Recommendation



MACRO

INDUSTRY

COMPANY

VALUATION

Favourable Trends

Exponential Growth

Market Leader

Undervalued



Recommendation: Buy

Current price: \$100.14

Target Price (Current): \$124.74

Implied Upside: 24.56%

Target Price (1Y): \$138.01

Current Dividend Yield: 1.13%

- [Balance Sheet](#)
- [Capitalization/WACC](#)
- [Income Statement](#)
- [Cash Flows](#)
- [Depreciation, CapEx Schedules](#)
- [NWC Schedule](#)
- [DCF](#)
- [DCF Exit Strategies](#)
- [Comparables](#)
- [Global Production](#)
- [Strong Demand Outlook](#)
- [Key Personnel](#)
- [Private Placements](#)
- [Chart of Manufacturing Facilities](#)
- [Public Stock Ownership](#)
- [5Y Historical Graphs](#)

Balance Sheet (1/2)



Balance Sheet						
Albemarle - NYSE: ALB						
As at December 31,						
(in millions of dollars, USD) except per share items	2012	2013	2014	Restated - 2015	2016	2017
ASSETS						
Cash And Equivalents	477.7	477.2	2,489.8	213.7	2,269.8	1,137.3
Total Cash & ST Investments	477.7	477.2	2,489.8	213.7	2,269.8	1,137.3
Accounts Receivable	379.0	446.9	385.2	397.9	486.0	534.3
Other Receivables	69.8	71.2	64.1	97.6	57.1	85.1
Total Receivables	448.7	518.1	449.3	495.6	543.1	619.4
Inventory	428.1	436.0	358.4	439.5	450.3	592.8
Prepaid Exp.	48.3	47.4	41.4	38.6	42.2	86.3
Deferred Tax Assets, Curr.	4.2	3.9	1.8	-	-	-
Other Current Assets	0.3	0.2	8.2	643.6	1.3	41.7
Total Current Assets	1,407.3	1,482.9	3,348.9	1,831.0	3,306.6	2,477.6
Gross Property, Plant & Equipment	2,818.6	2,972.1	2,620.7	3,700.5	3,910.5	4,124.3
Accumulated Depreciation	(1,522.0)	(1,615.0)	(1,388.8)	(1,379.4)	(1,550.4)	(1,631.0)
Net Property, Plant & Equipment	1,296.6	1,357.1	1,231.9	2,321.1	2,360.1	2,493.3
Long-term Investments	207.1	212.2	194.0	435.6	457.5	534.1
Goodwill	277.0	284.2	243.3	1,460.6	1,540.0	1,610.4
Other Intangibles	94.5	88.2	44.1	383.9	354.6	421.5
Deferred Tax Assets, LT	64.5	65.7	62.4	75.8	61.1	25.1
Deferred Charges, LT	-	4.2	23.6	-	-	-
Other Long-Term Assets	90.3	90.4	74.9	3,090.0	81.2	188.9
Total Assets	3,437.3	3,584.8	5,223.1	9,598.0	8,161.2	7,750.8

Balance Sheet (2/2)



Balance Sheet						
Albemarle - NYSE: ALB						
As at December 31,						
(in millions of dollars, USD) except per share items	2012	2013	2014	Restated - 2015	2016	2017
LIABILITIES & SHAREHOLDER'S EQUITY						
Accounts Payable	172.9	208.2	231.7	239.6	281.9	418.5
Accrued Exp.	149.2	116.6	166.2	184.4	275.1	268.3
Curr. Port. of LT Debt	12.7	24.6	711.1	675.0	247.5	422.0
Curr. Income Taxes Payable	4.4	8.0	9.5	27.0	254.4	54.9
Unearned Revenue, Current	14.0	17.9	-	-	-	-
Def. Tax Liability, Curr.	-	2.9	-	-	-	-
Other Current Liabilities	31.9	58.3	21.5	490.8	81.2	37.1
Total Current Liabilities	385.0	436.4	1,139.9	1,616.7	1,140.1	1,200.9
Long-Term Debt	686.6	1,054.3	2,223.0	3,142.2	2,121.7	1,415.4
Unearned Revenue, Non-Current	3.4	2.4	-	-	-	-
Pension & Other Post-Retire. Benefits	256.3	111.6	227.0	349.6	349.2	346.6
Def. Tax Liability, Non-Curr.	63.4	129.2	56.9	384.9	412.7	370.4
Other Non-Current Liabilities	110.7	108.2	87.7	703.3	194.8	599.8
Total Liabilities	1,505.3	1,842.0	3,734.5	6,196.6	4,218.6	3,933.1
Common Stock	0.9	0.8	0.8	1.1	1.1	1.1
Additional Paid In Capital	2.8	10.0	10.4	2,059.2	2,084.4	1,863.9
Retained Earnings	1,744.7	1,500.4	1,410.7	1,615.4	2,121.9	2,035.2
Treasury Stock	-	-	-	-	-	-
Comprehensive Inc. and Other	85.3	116.2	(62.4)	(421.3)	(412.4)	(225.7)
Total Common Equity	1,833.6	1,627.4	1,359.5	3,254.4	3,795.1	3,674.6
Minority Interest	98.4	115.4	129.2	146.9	147.5	143.1
Total Equity	1,932.0	1,742.8	1,488.6	3,401.3	3,942.6	3,817.7
Total Liabilities And Equity	3,437.3	3,584.8	5,223.1	9,598.0	8,161.2	7,750.8

Capitalization and WACC

Debt and Equity Metrics		Source
Risk Free Rate (10Y Treasury)	2.88%	Bloomberg
Market Risk Premium	5.50%	Finbox
Debt Rating	BBB	Reuters
[1] Debt Cost of Capital	3.32%	Reuters
Beta (5Y)	1.65	Reuters
Debt (\$MM)	1,837.37	S&P Cap IQ
Market Cap Equity (\$MM)	11,079.30	S&P Cap IQ
Debt % (D/(D+E))	14.22%	Calculation
Equity % (E/(D+E))	85.78%	Calculation
[2] Tax Rate	19.00%	Calculation
[3] Equity Cost of Capital	11.96%	Calculation

Weighted Avg Cost of Capital 10.64%

Notes:

[1] Uses the Reuters Corporate Spreads and Treasury Yields (10Y & Rating BBB)

[2] Income Statement, retrieved from Reuters of March 2018

[3] $R_f + B^*(EMRP)$

Latest Capitalization (Millions of USD)	
Currency	USD
Share Price	\$100.14
Shares Out.	110.64
Market Capitalization	11,079.30
- Cash & Short Term Investments	1,137.30
+ Total Debt	1,837.37
+ Pref. Equity	-
+ Total Minority Interest	143.15
= Total Enterprise Value (TEV)	11,922.55
Book Value of Common Equity	3,674.55
+ Pref. Equity	-
+ Total Minority Interest	143.15
+ Total Debt	1,837.37
= Total Capital	5,655.07
Source: S&P Capital IQ, Retrieved March 7 2018	

Income Statement (in millions of USD)	For the Years Ended Dec 31										
For the Fiscal Period Ending	2012 ***	2013 ***	2014 ***	2015 ***	2016	2017	2018E	2019E	2020E	2021E	2022E
*** = Reclassified											
Revenues (by segment)											
Lithium and Advanced Materials	-	-	312.8	834.6	968.2	1308.15	1700.60	2040.72	2346.83	2581.51	2762.21
YoY Growth	n/a	n/a	n/a	166.8%	16.0%	35.1%	30.0%	20.0%	15.0%	10.0%	7.0%
Bromine Specialties	-	-	808.9	775.7	792.4	855.14	906.45	951.77	989.85	1019.54	1045.03
YoY Growth	n/a	n/a	n/a	-4.1%	2.2%	7.9%	6.0%	5.0%	4.0%	3.0%	2.5%
Refining Solutions	-	775.2	852.1	729.3	732.1	778.30	817.22	841.74	858.57	871.45	884.52
YoY Growth	n/a	n/a	9.9%	-14.4%	0.4%	6.3%	5.0%	3.0%	2.0%	1.5%	1.5%
Other	2,519.2	1,619.1	471.8	486.8	184.4	130.38	78.23	35.20	10.56	0.00	0.00
YoY Growth	n/a	-35.7%	-70.9%	3.2%	-62.1%	-29.3%	-40.0%	-55.0%	-70.0%	-100.0%	0.0%
Total Revenue	2,519.2	2,394.3	2,445.5	2,826.4	2,677.2	3,071.98	3,502.5	3,869.43	4,205.8	4,472.5	4,691.76
YoY Growth	n/a	-5.0%	2.1%	15.6%	-5.3%	14.7%	14.0%	10.5%	8.7%	6.3%	4.9%
Cost Of Goods Sold (includes Depr & Amort)	1,620.3	1,543.8	1,674.7	1,910.3	1,706.6	1907.60	2066.47	2128.19	2229.08	2325.70	2439.72
As a % of revenue	64.3%	64.5%	68.5%	67.6%	63.7%	62.1%	59.0%	55.0%	53.0%	52.0%	52.0%
Gross Profit	898.8	850.5	770.8	916.1	970.6	1,164.38	1,436.02	1,741.24	1,976.73	2,146.80	2,252.05
Selling General & Admin Exp.	316.6	158.2	355.1	300.4	380.5	407.60	420.30	464.33	504.70	536.70	563.01
As a % of revenue	12.6%	6.6%	14.5%	10.6%	14.2%	13.3%	12.0%	12.0%	12.0%	12.0%	12.0%
Research and Development	78.9	82.2	88.3	89.2	79.1	78.63	108.58	119.95	130.38	138.65	145.44
As a % of revenue	3.1%	3.4%	3.6%	3.2%	3.0%	2.6%	3.1%	3.1%	3.1%	3.1%	3.1%
Depreciation & Amort. (already incl. in COGS)	99.0	107.0	104.0	260.0	226.0	194.00					
As a % of revenue	3.9%	4.5%	4.3%	9.2%	8.4%	6.7%					
Operating Expenses (SG&A, R&D)	395.5	240.4	443.4	389.6	459.5	486.2	528.9	584.3	635.1	675.3	708.5
Operating Income (EBIT)	503.4	610.0	327.4	526.5	511.0	678.14	907.15	1,156.96	1,341.65	1,471.45	1,543.59
Net Interest Exp.	(32.8)	(31.6)	(41.4)	(76.3)	(65.2)	(62.50)	(66.55)	(73.52)	(79.91)	(84.98)	(89.14)
											1.9%
Non Operating Expenses:											
Income/(Loss) from Affiliates	38.1	31.7	35.7	28.0	59.6	84.49	59.54	65.78	71.50	76.03	79.76
											1.7%
Other Non-Operating Inc. (Exp.)	1.2	(6.7)	(0.1)	51.7	1.9	(26.90)	14.01	15.48	16.82	17.89	18.77
											0.4%
EBT Excl. Unusual Items	509.9	603.5	321.7	529.9	507.4	673.23	914.15	1,164.70	1,350.06	1,480.40	1,552.97
Unusual Items Gain (Loss):	(103.6)	(33.4)	(72.8)	(191.2)	67.5	(141.9)	Inconsistent Events, we have chosen to ignore, may need to revisit				
EBT Incl. Unusual Items	406.3	570.1	248.9	338.7	574.9	531.29	914.15	1,164.70	1,350.06	1,480.40	1,552.97
Income Tax Expense	80.4	134.4	18.5	11.1	96.3	431.82	94.57	104.47	113.56	120.76	126.68
											2.7%
Earnings from Cont. Ops.	325.8	435.6	230.4	327.6	478.6	99.47	819.58	1,060.22	1,236.51	1,359.64	1,426.30
Earnings of Discontinued Ops.	4.3	4.1	(69.5)	32.5	202.1	-	Inconsistent Events, we have chosen to ignore, may need to revisit				
Net Income to Company	330.1	439.8	160.9	360.1	680.8	99.47	819.58	1,060.22	1,236.51	1,359.64	1,426.30
Minority Int. in Earnings	(18.6)	(26.7)	(27.6)	(25.2)	(37.1)	(44.6)	Inconsistent Events, we have chosen to ignore, may need to revisit				
Net Income	311.5	413.2	133.3	334.9	643.7	54.85	819.58	1,060.22	1,236.51	1,359.64	1,426.30



Income Statement

Source: S&P Capital IQ

Cash Flow (1/2)



Cash Flow						
For the Fiscal Period Ending	Reclassified 12 months Dec-31-2012	Reclassified 12 months Dec-31-2013	12 months Dec-31-2014	Restated 12 months Dec-31-2015	Restated 12 months Dec-31-2016	12 months Dec-31-2017
Currency	USD	USD	USD	USD	USD	USD
Net Income	311.5	413.2	133.3	334.9	643.7	54.9
Depreciation & Amort.	79.6	90.7	95.6	164.3	171.9	171.8
Amort. of Goodwill and Intangibles	7.3	4.6	4.8	16.9	19.0	25.1
Depreciation & Amort., Total	86.9	95.3	100.4	181.2	191.0	196.9
(Gain) Loss From Sale Of Assets	-	-	-	-	(122.3)	-
(Gain) Loss On Sale Of Invest.	(1.9)	(3.7)	(0.8)	(1.2)	(3.7)	(3.1)
Asset Writedown & Restructuring Costs	61.8	-	6.3	(6.8)	-	(6.2)
(Income) Loss on Equity Invest.	(38.1)	(31.7)	(35.7)	(31.0)	(61.5)	(84.5)
Stock-Based Compensation	15.2	10.2	14.3	15.2	17.0	19.4
Tax Benefit from Stock Options	(14.8)	(3.3)	(0.8)	-	-	-
Net Cash From Discontinued Ops.	12.1	12.1	88.7	78.9	(352.8)	-
Other Operating Activities	103.6	(28.2)	129.8	(168.8)	184.9	518.9
Change in Acc. Receivable	(26.0)	(65.9)	36.2	(8.8)	(42.8)	(74.5)
Change In Inventories	7.4	(1.8)	(6.5)	27.6	26.0	(101.5)
Change in Acc. Payable	(11.5)	19.3	28.3	23.7	44.0	53.4
Change in Other Net Operating Assets	(17.6)	17.4	(0.9)	(84.1)	212.1	(269.6)
Cash from Ops.	488.8	432.9	492.6	360.8	735.5	304.0
Capital Expenditure	(280.9)	(155.3)	(110.6)	(227.6)	(196.7)	(317.7)
Cash Acquisitions	(3.4)	(2.6)	-	(2,100.5)	(208.7)	(44.4)
Divestitures	9.6	-	-	8.9	-	-
Invest. in Marketable & Equity Secur.	(26.6)	0.2	(6.9)	101.2	0.3	(2.6)
Net (Inc.) Dec. in Loans Originated/Sold	-	-	-	-	-	-
Other Investing Activities	-	-	71.3	57.6	3,325.6	6.9
Cash from Investing	(301.2)	(157.7)	(46.1)	(2,160.6)	2,920.5	(357.8)

Cash Flow (2/2)



Cash Flow						
For the Fiscal Period Ending	Reclassified 12 months Dec-31-2012	Reclassified 12 months Dec-31-2013	12 months Dec-31-2014	Restated 12 months Dec-31-2015	Restated 12 months Dec-31-2016	12 months Dec-31-2017
<i>Currency</i>	USD	USD	USD	USD	USD	USD
Short Term Debt Issued	-	-	-	-	-	-
Long-Term Debt Issued	-	515.5	1,888.2	2,304.6	-	165.8
Total Debt Issued	-	515.5	1,888.2	2,304.6	-	165.8
Short Term Debt Repaid	-	-	-	-	-	-
Long-Term Debt Repaid	(63.8)	(135.7)	(11.8)	(2,582.9)	(1,416.0)	(778.2)
Total Debt Repaid	(63.8)	(135.7)	(11.8)	(2,582.9)	(1,416.0)	(778.2)
Issuance of Common Stock	21.1	5.6	2.7	0.5	9.4	8.2
Repurchase of Common Stock	(63.6)	(582.3)	(150.0)	-	-	(250.0)
Common Dividends Paid	(69.1)	(78.1)	(84.1)	(119.3)	(135.4)	(140.6)
Total Dividends Paid	(69.1)	(78.1)	(84.1)	(119.3)	(135.4)	(140.6)
Special Dividend Paid	-	-	-	-	-	-
Other Financing Activities	(1.9)	(13.0)	(35.6)	(81.4)	(38.0)	(92.1)
Cash from Financing	(177.3)	(288.0)	1,609.3	(478.4)	(1,580.0)	(1,086.9)
Foreign Exchange Rate Adj.	(2.0)	12.5	(43.3)	2.2	(20.0)	8.2
Net Change in Cash	8.3	(0.5)	2,012.5	(2,276.0)	2,056.0	(1,132.5)
Supplemental Items						
Cash Interest Paid	31.1	29.6	33.6	153.3	96.9	61.2
Cash Taxes Paid	112.4	51.8	56.2	162.4	143.4	320.2
Levered Free Cash Flow	57.5	275.1	346.5	4.8	822.5	(133.7)
Unlevered Free Cash Flow	78.0	294.8	372.3	52.5	862.0	(94.6)
Change in Net Working Capital	57.9	36.6	(163.6)	245.3	(531.3)	417.0
Net Debt Issued	(63.8)	379.8	1,876.4	(278.3)	(1,416.0)	(612.5)
Net Cash From Discontinued Ops. - Investing	-	-	104.718	-	3325.571	6.857
Filing Date	Mar-02-2015	Feb-29-2016	Feb-28-2017	Feb-28-2018	Feb-28-2018	Feb-28-2018
Restatement Type	RD	RD	NC	RS	RS	O
Calculation Type	REP	REP	REP	REP	REP	REP

D&A, CapEx Schedule



Figures in \$MM except for Share Prices	Historical						Forecast				
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Property, plant and equipment as a margin of revenue											
Depreciation and amortization	99	107	104	260	226	194	252	261	273	290	304
Property, plant and equipment (net)	1,297	1,357	1,232	2,321	2,360	2,493	2,802	2,902	3,028	3,220	3,378
Margin	7.6%	7.9%	8.4%	11.2%	9.6%	7.8%	9.0%	9.0%	9.0%	9.0%	9.0%
Property, plant and equipment	1,297	1,357	1,232	2,321	2,360	2,493	2,802	2,902	3,028	3,220	3,378
Revenue	2,519	2,394	2,446	2,826	2,677	3,072	3,502	3,869	4,206	4,472	4,692
Margin	51.5%	56.7%	50.4%	82.1%	88.2%	81.2%	80.0%	75.0%	72.0%	72.0%	72.0%
Beginning property, plant and equipment							- 2,493	- 2,802	- 2,902	- 3,028	- 3,220
Ending property, plant and equipment							2,802	2,902	3,028	3,220	3,378
Depreciation and amortization							252	261	273	290	304
Capital expenditures	281	155	111	228	197	327	561	361	399	482	462
Capital expenditure as a margin of revenue											
Capital expenditure	281	155	111	228	197	246	263	290	315	335	352
Revenue	2,519	2,394	2,446	2,826	2,677	3,072	3,502	3,869	4,206	4,472	4,692
Margin	11.2%	6.5%	4.5%	8.1%	7.4%	8.0%	7.5%	7.5%	7.5%	7.5%	7.5%
Beginning property, plant and equipment							2,412	2,422	2,451	2,494	2,540
Depreciation and amortization							(252)	(261)	(273)	(290)	(304)
Capital expenditures							263	290	315	335	352
Ending property, plant and equipment							2,422	2,451	2,494	2,540	2,588

NWC Schedule



Figures in \$MM except for Share Prices	Historical						Forecast					
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
A/R, A/P, and Inventory												
Accounts receivable	379	447	385	398	486	534	609	673	732	778	816	17.39%
Accounts payable	173	208	232	240	282	419	477	527	573	609	639	13.62%
Inventory	428	436	358	440	450	593	676	747	812	863	905	19.30%
Change in net working capital		40 -	163	86	57	54	99	85	78	62	51	
A/R, A/P, and Inventory as a margin of revenue												
Revenue	2,519	2,394	2,446	2,826	2,677	3,072	3,502	3,869	4,206	4,472	4,692	
Accounts receivable	0.15	0.19	0.16	0.14	0.18	0.17	0.17	0.17	0.17	0.17	0.17	17.39%
Accounts payable	0.07	0.09	0.09	0.08	0.11	0.14	0.14	0.14	0.14	0.14	0.14	13.62%
Inventory	0.17	0.18	0.15	0.16	0.17	0.19	0.19	0.19	0.19	0.19	0.19	19.30%

Valuation - DCF



Discounted Cash Flow

Albemarle. - NYSE: ALB

Figures in \$MM's of USD

	2017	2018	2019	2020	2021	2022
Revenue	3,071.98	3,502.50	3,869.43	4,205.80	4,472.50	4,691.76
Cost of Goods Sold	1,907.60	2,066.47	2,128.19	2,229.08	2,325.70	2,439.72
Gross Profit	1,164.38	1,436.02	1,741.24	1,976.73	2,146.80	2,252.05
SG&A Expense	407.60	420.30	464.33	504.70	536.70	563.01
R&D Expense	78.63	108.58	119.95	130.38	138.65	145.44
Operating Expenses	486.23	528.88	584.28	635.08	675.35	708.46
EBIT	678	907	1,157	1,342	1,471	1,544
Tax rate	19.0%	19.0%	19.0%	19.0%	19.0%	19.0%
Tax effected EBIT (Unlevered Net Income)	549	735	937	1,087	1,192	1,250
Add back: Depreciation	194	252	261	273	290	304
Less: Capital expenditures	- 246 -	263 -	290 -	315 -	335 -	352
Less: Change in net working capital	- 54 -	99 -	85 -	78 -	62 -	51
Free cash flow	443	625	823	966	1,085	1,152
Present value	443	565	673	713	724	695

Valuation - DCF Exit Strategies



Method 1: Exit Value - Perpetuity Growth			Method 2: Exit Value - EV/EBITDA			Method 3: Exit Value - EV/Sales		
NPV of FCF	14,252.79		NPV of FCF	17,807.96		NPV of FCF	16,274	
Enterprise Value	14,253		Enterprise Value	17,808		Enterprise Value	16,274	
Less: Total Debt	- 1,837		Less: Total Debt	- 1,837		Less: Total Debt	- 1,837	
Plus: Cash	1,137		Plus: Cash	1,137		Plus: Cash	1,137	
Equity Value	13,553		Equity Value	17,108		Equity Value	15,574	
Shares Outstanding	110.64		Shares Outstanding	110.64		Shares Outstanding	110.64	
Implied Per Share Value	\$ 122.50		Implied Per Share Value	\$ 154.63		Implied Per Share Value	\$ 140.77	
Current Price	\$ 100.14		Current Price	\$ 100.14		Current Price	\$ 100.14	
Premium/(Discount) to Current Price	-18.25%		Premium/(Discount) to Current Price	-35.24%		Premium/(Discount) to Current Price	-28.86%	
1 Year Target Price	\$ 135.53		1 Year Target Price	\$ 171.08		1 Year Target Price	\$ 155.75	

Terminal Value (Growing Perpetuity)

18,043

EBITDA - for Terminal Value

1,554

Terminal Value (Terminal Multiple) - EV/EBITDA

23,937

Sales - for Terminal Value

4,692

Terminal Value (Terminal Multiple) - EV/Sales

21,394

(Average past 10Y)

EV/EBITDA

15.4x

EV/Sales

4.56x

Growth rate

4.00%

Comparables - Calculations (1/2)



LTM EV/Sales		Bear	Bull
Sales	3,072		
Multiple	4.1x	3.3x	4.6x
Enterprise Value	12,733	10,137.52	14,038.93
- Debt	(1,837)		
+ Cash	1,137		
Net Debt	(700)		
Equity Value (Market Cap)	12,033	9,437.45	13,338.86
Shares outstanding	111		
Implied Share Price	\$108.76	85.30	120.56
Current Share Price	\$114.61		
Implied Upside	-5%		
1-Yr Target	\$120.33		

NTM EV/Sales		Bear	Bull
Sales	3,502		
Multiple	3.7x	3.1x	3.9x
Enterprise Value	13,082	10,700.12	13,808.59
- Debt	(1,837)		
+ Cash	1,137		
Net Debt	(700)		
Equity Value (Market Cap)	12,382	10,000.05	13,108.52
Shares outstanding	111		
Implied Share Price	\$111.91	90.38	118.48
Current Share Price	\$114.61		
Implied Upside	-2%		
1-Yr Target	\$123.82		

LTM EV/EBITDA		Bear	Bull
EBITDA	872		
Multiple	16.5x	13.6x	19.0x
Enterprise Value	14,382	11,865.52	16,583.82
- Debt	(1,837)		
+ Cash	1,137		
Net Debt	(700)		
Equity Value (Market Cap)	13,682	11,165.45	15,883.75
Shares outstanding	111		
Implied Share Price	\$123.66	100.92	143.56
Current Share Price	\$114.61		
Implied Upside	8%		
1-Yr Target	\$136.82		

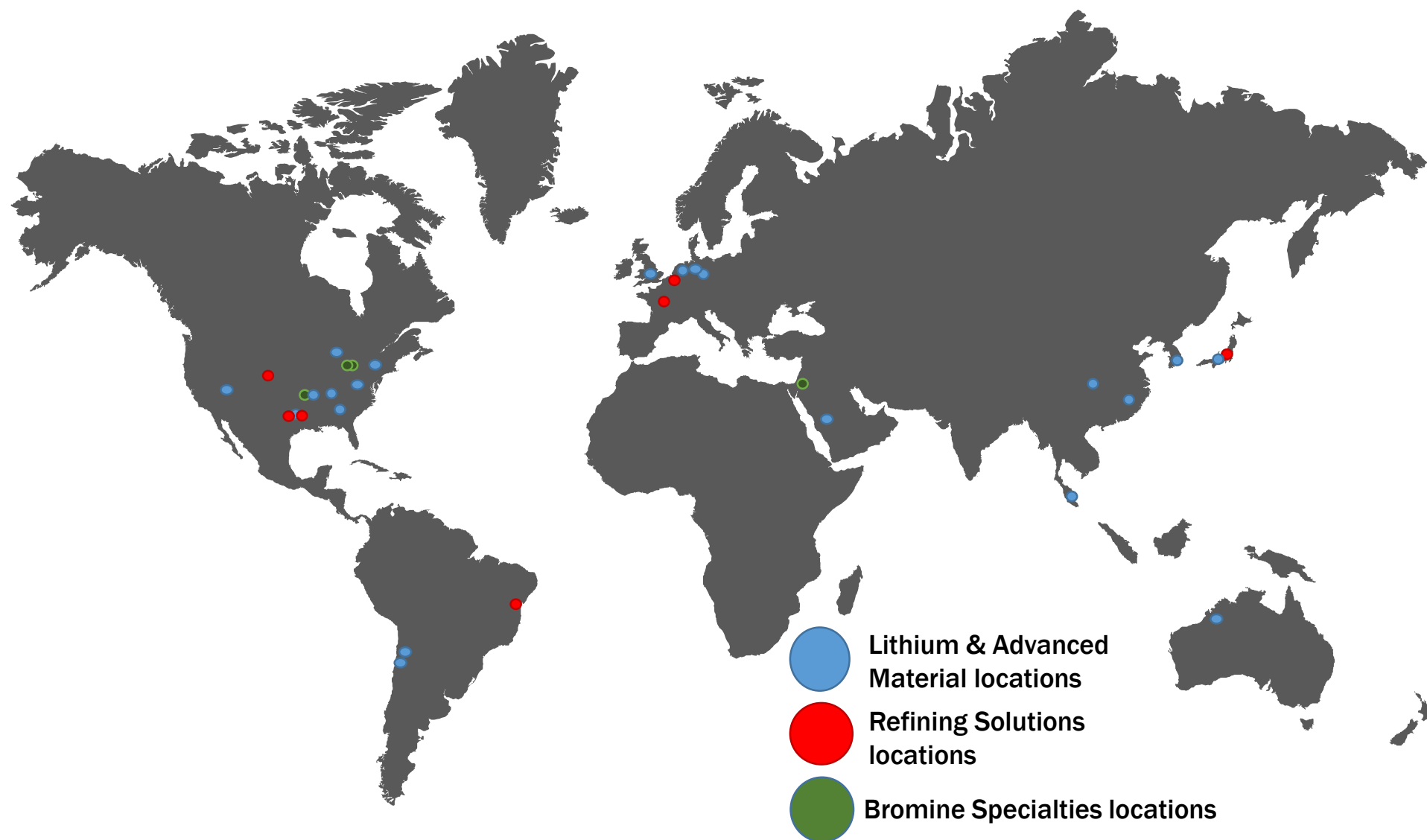
NTM EV/EBITDA		Bear	Bull
EBITDA	1,159		
Multiple	12.7x	9.9x	15.9x
Enterprise Value	14,694	11,509.21	18,462.27
- Debt	(1,837)		
+ Cash	1,137		
Net Debt	(700)		
Equity Value (Market Cap)	13,994	10,809.14	17,762.20
Shares outstanding	111		
Implied Share Price	\$126.49	97.70	160.54
Current Share Price	\$114.61		
Implied Upside	10%		
1-Yr Target	\$139.95		

Comparables - Calculations (2/2)



LTM P/E		Bear	Bull
Net Income	55		
Multiple	31.3x	21.0x	42.1x
Equity Value (Market Cap)	1,717	1,153.91	2,309.60
Shares outstanding	111		
Implied Share Price	\$15.52	10.43	20.88
Current Share Price	\$114.61		
Implied Upside	-86%		
1-Yr Target	\$17.17		
NTM P/E		Bear	Bull
Net Income	820		
Multiple	22.6x	15.3x	24.4x
Equity Value (Market Cap)	18,510	12,578.56	19,991.70
Shares outstanding	111		
Implied Share Price	\$167.30	113.69	180.69
Current Share Price	\$114.61		
Implied Upside	46%		
1-Yr Target	\$185.10		

Global Production



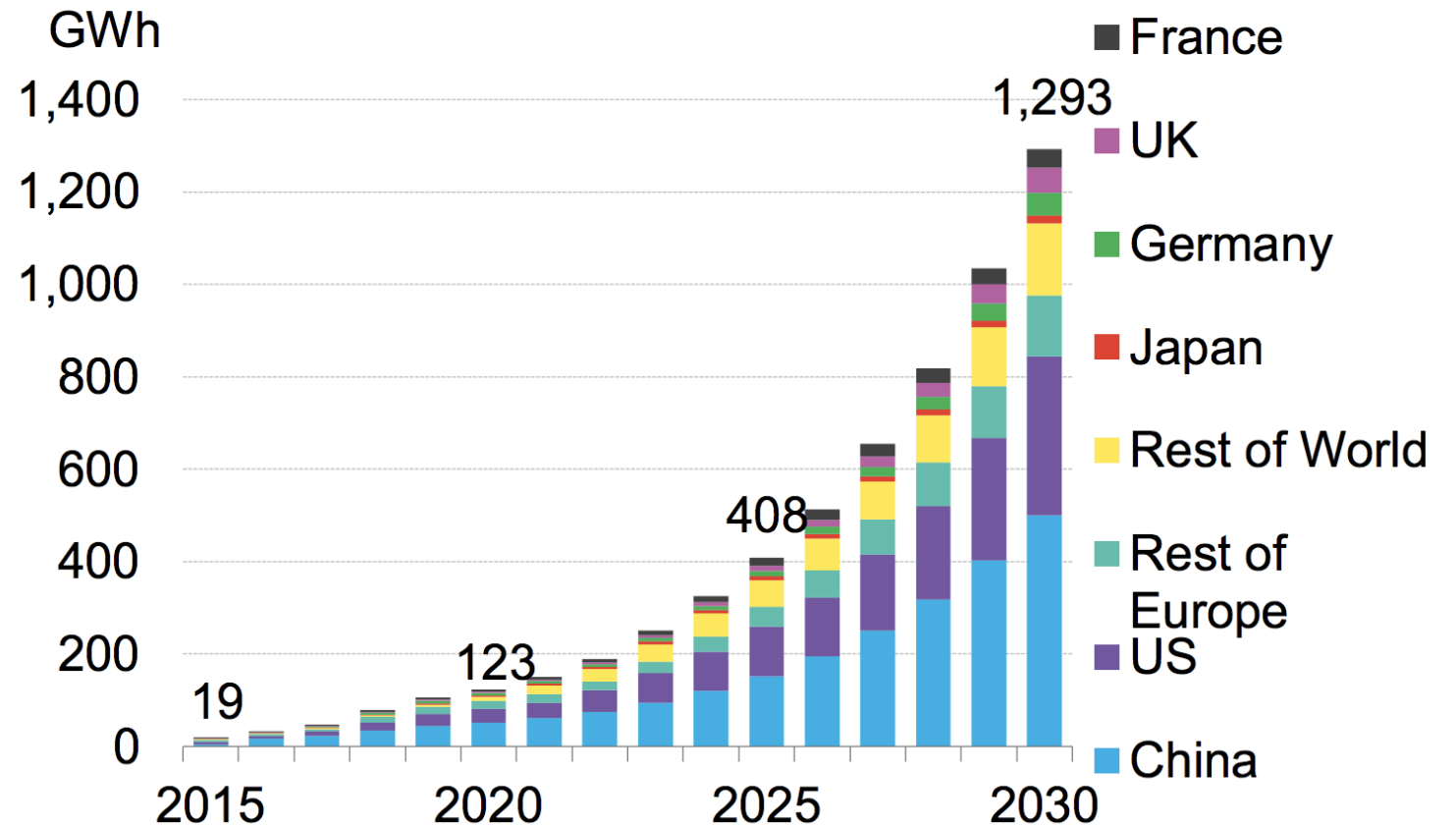
Strong Demand Outlook

Forecasted strong growth in Passenger Electric Vehicles (EV) and Lithium-Ion Battery market globally, in the next decade

2x the demand for lithium-ion batteries by 2019

4x the demand for lithium-ion batteries by 2022

Forecasted demand for lithium-ion batteries from EVs, 2010-30 (GWh)



Key Personnel



Summary Compensation		
<u>Name</u>	<u>Title</u>	<u>2016 Total Calculated Compensation</u>
Kissam, Luther C.	Chairman, Chief Executive Officer and President	8,434,150
Narwold, Karen G.	Chief Administrative Officer, Executive Vice President, General Counsel and Corporate Secretary	3,719,925
Tozier, Scott A.	Chief Financial Officer and Executive Vice President	2,476,741
Juneau, Matthew K.	Executive Vice President of Corporate Strategy & Investor Relations	2,025,637
Kelliher, Susan M.	Former Senior Vice President of Human Resources	1,834,320
LaBauve, Donald J.	Chief Accounting Officer, Vice President and Corporate Controller	778,621
Nokes, Jimmy W.	Lead Independent Director	321,980
Hernandez, William H.	Independent Director	241,980
Sherman, John	Former Independent Director	236,980
O'Brien, James J.	Independent Director	231,980
Perry, Barry W.	Independent Director	231,980
Maine, Douglas L.	Director	221,980
Masters, Jerry Kent	Independent Director	221,980
Steiner, Gerald A.	Independent Director	221,980
Taggart, Harriett Tee	Independent Director	221,980
Wolff, Alejandro D.	Independent Director	221,980

Private Placements



Transaction Summary - Private Placements

Announced Date	Closed Date	Role	Target	Buyer/Investors	Sellers	Size (\$mm)
Dec-14-2017	-	Seller	Polyolefin Catalysts Business of Albemarle Corporation	W. R. Grace & Co. (NYSE:GRA)	Albemarle Corporation (NYSE:ALB)	416.0
Jun-27-2017	-	Seller	Albemarle Corporation, La Borita Brine Lithium Property	Ultra Lithium Inc (TSXV:ULI)	Albemarle Corporation (NYSE:ALB)	1.3
Aug-23-2016	Jan-03-2017	Buyer	Jiangxi Jiangli New Materials Science and Technology Co. Ltd.	Albemarle Corporation (NYSE:ALB)	Sichuan Ni&Co Guorun New Materials Co.,Ltd.	145.0
Jun-17-2016	Dec-14-2016	Seller	Chemetall GmbH	BASF SE (DB:BAS)	Albemarle Corporation (NYSE:ALB)	3,200.0
Dec-16-2015	Feb-01-2016	Seller	Martinswerk GmbH, Manufacturing Facility in Bergheim and 50% Stake in MAGNIFIN Magnesiaprodukte GmbH	Huber Engineered Materials	Albemarle Corporation (NYSE:ALB)	-
Nov-05-2015	Jan-04-2016	Seller	Albemarle Corporation, Tribotec Metal Sulfides Business, Synthesis Process and Sites	Treibacher Industrie AG	Albemarle Corporation (NYSE:ALB)	-
Aug-29-2014	Aug-28-2014	Buyer	Israel Chemicals Ltd., Two Bromine	Albemarle Corporation (NYSE:ALB)	Israel Chemicals Ltd. (TASE:ICL)	-
Jul-15-2014	Jan-12-2015	Buyer	Rockwood Holdings, Inc.	Albemarle Corporation (NYSE:ALB)	OZ Management L.P.	7,637.9
Apr-16-2014	Sep-01-2014	Seller	Albemarle Corporation, Antioxidant, Ibuprofen And Propofol Businesses And Assets	SI Group, Inc.	Albemarle Corporation (NYSE:ALB)	113.2
Oct-08-2013	Oct-08-2013	Buyer	Cambridge Chemical Company Ltd	Albemarle Corporation (NYSE:ALB)		3.6
May-11-2011	May-11-2011	Buyer	Catlin, Inc.	Albemarle Corporation (NYSE:ALB)	Leader Ventures; Mohr Davidow Ventures	-
Aug-02-2010	Jul-30-2010	Seller	Albemarle UK Ltd.	Kemira Chemicals (UK) Ltd	Albemarle Corporation (NYSE:ALB)	8.6
Jul-14-2008	Jun-30-2008	Buyer	Remaining 25% stake in Ningbo Jinhai and 25% stake in Shanghai Jinhai	Albemarle Corporation (NYSE:ALB)	Jinhai Chemical & Industry Co., Ltd.	19.9
Apr-11-2008	Jul-31-2008	Buyer	Sorbent Technologies Corporation	Albemarle Corporation (NYSE:ALB)		22.37

Chart of Manufacturing Facilities



Set forth below is information regarding our significant production facilities operated by us and our affiliates:

Location	Business Segment in 2017	Principal Use	Owned/Leased
Amsterdam, the Netherlands	Refining Solutions(a)	Production of refinery catalysts, research and product development activities	Owned
Baton Rouge, Louisiana	Lithium and Advanced Materials(b); Bromine Specialties	Research and product development activities, and production of flame retardants, catalysts and additives	Owned; on leased land
Bitterfeld, Germany	Refining Solutions(a)	Refinery catalyst regeneration, rejuvenation, and sulfiding	Owned by Eurecat S.A., a joint venture owned 50% by each of Axens Group and us

Chart of Manufacturing Facilities

Location	Business Segment in 2017	Principal Use	Owned/Leased
Pasadena, Texas	Refining Solutions(a)	Refinery catalysts regeneration services	Owned by Eurecat U.S. Incorporated, a joint venture in which we own a 57.5% interest and a consortium of entities in various proportions owns the remaining interest
Safi, Jordan	Bromine Specialties	Production of bromine and derivatives and flame retardants	Owned and leased by JBC, a joint venture owned 50% by each of Arab Potash Company Limited and us
Salar de Atacama, Chile	Lithium and Advanced Materials	Production of lithium brine and potash	Owned; however ownership will revert to the Chilean government once we have sold all remaining amounts under our contract with the Chilean government pursuant to which we obtain lithium brine in Chile
Santa Cruz, Brazil	Refining Solutions(a)	Production of catalysts, research and product development activities	Owned by Fábrica Carioca de Catalisadores S.A, a joint venture owned 50% by each of Petrobras Química S.A. —PETROQUISA and us
Silver Peak, Nevada	Lithium and Advanced Materials	Production of lithium brine and lithium carbonate	Owned
South Haven, Michigan	All Other	Production of custom fine chemistry products including pharmaceutical actives	Owned
Taichung, Taiwan	Lithium and Advanced Materials	Production of butyllithium	Owned
Takaishi City, Osaka, Japan	Lithium and Advanced Materials(a)	Production of aluminum alkyls	Owned by Nippon Aluminum Alkyls, a joint venture owned 50% by each of Mitsui Chemicals, Inc. and us
Twinsburg, Ohio	Bromine Specialties	Production of bromine-activated carbon	Leased
Tyrone, Pennsylvania	All Other	Production of custom fine chemistry products, agricultural intermediates, performance polymer products and research and development activities	Owned
Xinyu, China	Lithium and Advanced Materials	Production of lithium carbonate and lithium hydroxide	Owned
Yeosu, South Korea	Lithium and Advanced Materials(b)	Research and product development activities/small scale production of catalysts and catalyst components	Owned

(a) During the first quarter of 2018, the PCS product category will merge with the Refining Solutions reportable segment to form the Catalysts reportable segment, a global business focused on catalysts. These significant production facilities will be part of the Catalysts reportable segment beginning in 2018.

(b) Facility included in the sale of the polyolefin catalysts and components portion of the PCS business, which is expected to close in the first quarter of 2018.

Chart of Manufacturing Facilities

Location	Business Segment in 2017	Principal Use	Owned/Leased
Cambridge, U.K.	Lithium and Advanced Materials(a)	Production of performance catalysts	Leased
Greenbushes, Australia	Lithium and Advanced Materials	Production of lithium spodumene minerals and lithium concentrate	Owned by Windfield Holdings Pty Ltd, a joint venture in which we own 49%, and Sichuan Tianqi Lithium Industries Inc. which owns the remaining interest
Jubail, Saudi Arabia	Lithium and Advanced Materials(a)	Manufacturing and marketing of organometallics	Owned by Saudi Organometallic Chemicals Company LLC, a joint venture owned 50% by each of Saudi Specialty Chemicals Company (a SABIC affiliate) and us
Kings Mountain, North Carolina	Lithium and Advanced Materials	Production of technical and battery grade lithium hydroxide, lithium salts and battery grade lithium metal products	Owned
La Negra, Chile	Lithium and Advanced Materials	Production of lithium carbonate and lithium chloride	Owned
Langelsheim, Germany	Lithium and Advanced Materials	Production of butyllithium, lithium chloride, specialty products, lithium hydrides, cesium and special metals	Owned
Louvain-la-Neuve, Belgium	Lithium and Advanced Materials; Bromine Specialties; Refining Solutions(a); All Other	Regional offices and research and customer technical service activities	Owned
La Voulte, France	Refining Solutions(a)	Refinery catalysts regeneration and treatment, research and development activities	Owned by Eurecat S.A., a joint venture owned 50% by each of Axens Group and us
Magnolia, Arkansas	Bromine Specialties	Production of flame retardants, bromine, inorganic bromides, agricultural intermediates and tertiary amines	Owned
McAlester, Oklahoma	Refining Solutions(a)	Refinery catalyst regeneration, rejuvenation, pre-reclaim burn off, as well as specialty zeolites and additives marketing activities	Owned by Eurecat S.A., a joint venture owned 50% by each of Axens Group and us
Meishan, China	Lithium and Advanced Materials	Production of lithium carbonate and lithium hydroxide	Owned
Mobile, Alabama	Lithium and Advanced Materials(a)	Production of tin stabilizers	Owned by PMC Group, Inc. which operates the plant for Stannica LLC, a joint venture owned 50% by each of PMC Group Inc. and us
New Johnsonville, Tennessee	Lithium and Advanced Materials	Production of specialty products	Owned
Niihama, Japan	Refining Solutions(a)	Production of refinery catalysts	Leased by Nippon Ketjen Company Limited, a joint venture owned 50% by each of Sumitomo Metal Mining Company Limited and us
Pasadena, Texas	Lithium and Advanced Materials(a); All Other	Production of aluminum alkyls, alkenyl succinic anhydride, orthoalkylated anilines, and other specialty chemicals	Owned
Pasadena, Texas	Refining Solutions(a)	Production of refinery catalysts, research and development activities	Owned

Public Stock Ownership



Direct Holders (Forms 3 and 4)

Name	Shares	Date Reported
KISSAM LUTHER C IV	224,503	Dec 31, 2017
TOZIER SCOTT	38,053	Dec 31, 2017
NARWOLD KAREN G	28,853	Dec 31, 2017
MAINE DOUGLAS L	25,300	Jul 2, 2017
NOKES JIM W	16,811	Jul 2, 2017
MASTERS J KENT	13,804	Jul 2, 2017
SHERMAN JOHN JR	1,500	Aug 4, 2016
TAGGART HARRIETT TEE	10,436	Nov 20, 2017
KELLIHER SUSAN M.	6,200	Feb 25, 2016
JUNEAU MATTHEW	4,127	Dec 31, 2017

Top Institutional Holders

Holder	Shares	Date Reported	% Out	Value
Vanguard Group, Inc. (The)	13,061,549	Dec 30, 2017	11.82%	1,677,755,929
Franklin Resources, Inc	9,035,398	Dec 30, 2017	8.18%	1,160,596,845
Blackrock Inc.	8,061,848	Dec 30, 2017	7.30%	1,035,544,350
Jennison Associates LLC	7,876,682	Dec 30, 2017	7.13%	1,011,759,778
State Street Corporation	5,525,388	Dec 30, 2017	5.00%	709,736,071
Bank Of New York Mellon Corporation	4,286,051	Dec 30, 2017	3.88%	550,543,237
TIAA-CREF Investment Management, LLC	1,747,128	Dec 30, 2017	1.58%	224,418,586

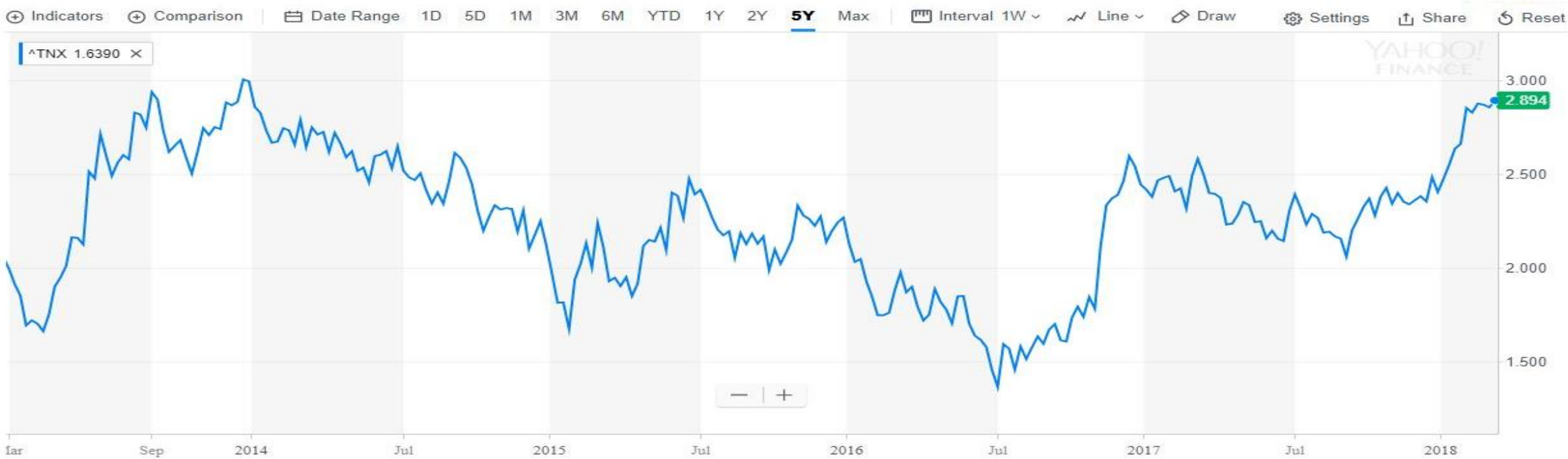
Major Holders

Currency in USD

Breakdown

0.39%	% of Shares Held by All Insider
88.95%	% of Shares Held by Institutions
89.30%	% of Float Held by Institutions
847	Number of Institutions Holding Shares

Interest Rates (5Y Graph)



5Y Historical Price



Lithium and Advanced Materials

Lithium and Advanced Materials segment net sales for the year ended December 31, 2017 were \$1.3 billion, up \$339.9 million, or 35%, compared to the corresponding period of 2016. The increase was primarily driven by \$163.2 million of favorable Lithium sales volumes, largely from battery grade applications, due to market demand and \$186.3 million of favorable Lithium price impacts due primarily to price increases in our battery grade lithium salts. The increase was partially offset by \$10.2 million of unfavorable PCS volumes and price impacts, primarily due to weakness in the organometallics product family and the bankruptcy filing of one of our customers. Adjusted EBITDA for Lithium and Advanced Materials increased 43%, or \$155.2 million, to \$518.5 million for the year ended December 31, 2017, compared to the corresponding period of 2016, primarily due to favorable pricing and higher overall sales volumes, partially offset by Lithium growth spending, a \$3.5 million negative impact from hurricane Harvey on PCS and \$0.6 million of unfavorable currency translation impacts.