Forest Hills

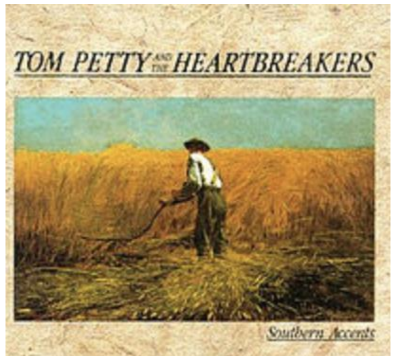
Mr. Market Scoreboard as of February 28, 2019: GO GREEN

Lithium-ion Rocks!

Company	USD Mkt ($m)	Share Price 12/30/18	Share Price 02/28/18	YTD Perf	Jurisdiction	Type	Comments
Big 7 Chemical Producers	**$ 20,436**				**Jurisdiction**	**Type**	**Comments**
SQM	$ 10,850	$ 38.16	$ 41.22	8%	Chile/Oz	Brine/Roxide	Corporate Governance. ChiNationaliztion.
Albemarle Corporation	$ 9,696	$ 76.74	$ 91.29	19%	Chile/Oz/China/USA	Brine/Roxide	49% GB. 750kt SC6; 110kt Oz LiOH. GS Sustain 50
Tianqi Lithium	$ 6,142	$ 29.32	$ 37.11	27%	China/Oz	Roxide/SQM	BIG DEBT. China SOE. STEEP DISCOUNT IPO
Ganfeng	$ 4,293	$ 22.08	$ 26.92	22%	China/Oz/Agentina	Roxide/Brine	
Ganfeng (HKSE)	$ 2,152	$ 12.34	$ 14.86	20%	China/Oz/Agentina	Roxide/Brine	6X 19 EV/EBITDA. 37kt new LCE growth in 2019!
Mineral Resources Limited	$ 2,029	$ 14.98	$ 15.05	0%	Oz	SC6/Roxide	**950kt SC6** + 50kt Hydroxide. 2H Divi. C Ellison
Livent	$ 1,869	$ 14.09	$ 12.80	-9%	Argentina/USA/China	Brine/LiOH	10X 19 EV/EBITDA. Future USA Proxy
Orocobre Limited	$ 713	$ 3.19	$ 3.84	20%	Argentina	Brine/LiOH	60% GM. $200M Cash. 10 yrs learning
SC6 Producers	**$ 2,217**						
Pilbara Minerals Limited	$ 923	$ 0.63	$ 0.75	19%	Oz	SC6	SC6 Gigamine. 12kt LiOH POSCO. Tier 1 Partners.
AMG	$ 916	$ 27.36	$ 34.08	25%	Brazil	SC6	SC6 price falling. Converters got power
Galaxy Resources Limited	$ 633	$ 2.23	$ 2.19	-2%	Oz/Argentina	SC6/Brine	spod prices falling. Converters got power
Altura Mining Limited	$ 207	$ 0.16	$ 0.16	3%	Oz	SC6	spod prices falling. Converters got power
Alliance Mineral (Tawana)	$ 184	$ 0.26	$ 0.19	-25%	Oz	SC6	spod prices falling. Converters got power
Emerging - Funded or Partnered	**$ 966**						
Kidman Resources Limited	$ 399	$ 1.07	$ 1.39	30%	Oz	SC6/Roxide	23kt hydroxide 2023. SQM's new flagship.
Lithium Americas (NYSE)	$ 325	$ 3.17	$ 3.70	17%	Argentina/Nevada	Brine/Clay	Get for free owning Ganfeng
Nemaska Lithium Inc.	$ 242	$ 0.64	$ 0.38	-41%	Quebec	SC6/Roxide	30kt LCE in 3 years > Livent today
Advanced Development/Exploration	**$ 1,255**						
Ioneer (Global Geo)	$ 172	$ 0.155	$ 0.17	6%	Nevada, USA	Boron/Carb	Unconventional. Not KISS
Millennial Lithium Corp.	$ 110	$ 1.12	$ 1.76	57%	Argentina	Conv. Brine	Like cash. Prefer NLC.
Sigma Lithium (Since May IPO)	$ 97	$ 1.85	$ 1.90	3%	Brazil	SC6	Lowest cost SC6 producer? Vale of Lithium?
Argosy Minerals Limited	$ 92	$ 0.14	$ 0.13	-7%	Argentina	Brine	Relative Value. Cash position
Critical Elements Corporation	$ 74	$ 0.73	$ 0.61	-16%	Quebec	Rock/Carb	On short list to evaluate
Advantage Lithium Corp.	$ 66	$ 0.46	$ 0.55	20%	Argentina	Conv. Brine	Get for free owning ORE
AVZ Minerals Ltd.	$ 59	$ 0.07	$ 0.04	-34%	Congo, central Africa	SC6	DRC. Transport to Port
Savannah Resources	$ 57	$ 5.30	$ 5.20	2%	Portugal	SC6	SC6 WA of Europe. EU Refinery location?
Standard Lithium Ltd.	$ 57	$ 0.89	$ 1.00	12%	Alabama, USA	Unconv. Brine	Unconventional. Not KISS
Neo Lithium Corp.	$ 52	$ 0.58	$ 0.70	21%	Argentina	Brine	Hi grade. Proven Management. $30M cash
Piedmont Lithium (NASDAQ)	$ 49	$ 6.13	$ 7.63	24%	North Carolina	SC6/Roxide	23kt LiOH. 5% of $888NPV. Lithium HQ USA
Lithium Power International Ltd.	$ 42	$ 0.25	$ 0.23	-8%	Chile	Brine	Rodney pick. PRIVATE in Chile, near NLC. DFS
Bacanora Lithium Plc	$ 39	$ 0.24	$ 0.19	-20%	Mexico	Clay/Rock	Sleeper worth revisiting. Also Zinwald
Plateau Energy Metals	$ 36	$ 0.68	$ 0.62	-9%	Peru	Soft Rock	Unconventional. Not KISS
European Lithium	$ 35	$ 0.08	$ 0.09	9%	Austria	SC6	No scale
Wealth Minerals Ltd.	$ 36	$ 0.43	$ 0.38	-12%	Chile	Conv. Brine	LPI much more advanced
Birimian Limited	$ 35	$ 0.16	$ 0.19	16%	Mali, West Africa	SC6	Africa. Transport to Port.
Galan Lithium	$ 34	$ 0.29	$ 0.50	75%	Argentina	Conv. Brine	Very early. About to start drilling. Hombre Muerto
European Metals Holdings Limited	$ 32	$ 0.16	$ 0.18	9%	Czech Republic	SC6	Don't Trust East Europe
Sayona Mining Ltd.	$ 29	$ 0.018	$ 0.024	33%	Quebec	SC6	First Nations
Core Lithium	$ 25	$ 0.05	$ 0.05	4%	Oz	SC6	Watching. Another Alliance/Tawana?
Lake Resources N.L.	$ 17	$ 0.08	$ 0.06	-17%	Argentina	Conv. Brine	How is it different?
Aggregate Lithium Market Cap	**$ 24,874**						

Not Advice. Read Disclaimer Below. Do Your Own Research

Albemarle - Southern Accents & The Amazing Spider-Man



Charlotte, North Carolina. United States of America.

Corporate Headquarters to the World's Largest Lithium Company.

S&P 500 constituent.

Goldman Sachs, **GS SUSTAIN 50** constituent:

> *"GS SUSTAIN is a global investment strategy focused on the generation of long-term alpha through identifying high quality industry leaders. The GS SUSTAIN 50 list includes leaders we believe to be well positioned to deliver long-term outperformance through superior returns on capital, sustainable competitive advantage and effective management of ESG risks vs. global industry peers. Candidates are selected largely on compination of quantifiable analysis of these three aspects of corporate performance."*

Albemarle today very much reflects the vision of the South Carolina-born man at the top.

Mr. Lithium Market should develop, as I have, a greater appreciation for this Southern American Rock Star – and his right hand Mr. Lithium Spider-Man - who have inspired issue #47 Lithium-ion Bull and a forthcoming segment of Lithium-ion Rocks!

ALB is the most heavily researched, heavily traded and institutionally-owned lithium equity, with a large Jane and Joe Battery Pack retail following, some who deploy covered call and other option strategies with ALB's relatively liquid put and call contracts. ALB, therefore, should NOT, in principle, be an inefficiently priced lithium stock. But it has been highly volatile.

I last wrote extensively about ALB in issue #4, nearly two years ago.

Lithium Bull - March 20, 2017 – ALB Investor Day Takeaways

Inefficient Market Hypothesis

I've been thinking a lot recently about my time at Columbia Business School in the mid 1990s – my 20th reunion is next month. I attended the Albemarle Investor Day last Thursday in New York, a setting akin to a business school class seminar with long rows of desks at the building of TIAA-CREF, one of the largest pension funds in the world. As reference, I estimate at least three times as many people attended this event, compared to September's SQM Investor Day in New York in an ornate room at the New York Palace Hotel.

Professor Kissam and his team of clean-cut corporate suits presented a highly polished 3.5 hour discussion providing a deluge of operational, financial and market data across a 134-page deck, prepared remarks and extensive Q&A, all available by webcast. A fine display of Big Cap corporate-speak, with a southern twang, articulating a very bullish outlook for lithium demand. I'd encourage everyone following lithium markets to have a listen.

http://seekingalpha.com/article/4055958-albemarle-alb-investor-presentation-slideshow
http://investors.albemarle.com/phoenix.zhtml?c=117031&p=irol-calendar

The event, and the announcement of a major expansion to double capacity of hard rock mine Greenbushes the morning of, reminded me a lot of my Economics 101 case studies of oligopolistic behavior and commodity markets economics. And various Finance classes, with repeated references to Shareholder Value, Capital Allocation, Risk Adjusted Returns, Return on Invested Capital, Investment Grade Rating. Dividends: 23 years. Share Buybacks: up to \$250M or 2M shares (= \$125 average price?)

Lithiumionbull @HowardKlein10 · Feb 20
42% Q4 #Lithium EBITDA margins, 11-19% bottom line 2019 EPS guidance looks BULLISH for World's Biggest Lithium Company and market proxy $ALB. IMO, can't have sustained #Lithium equity rally til #NYSE bellwether like @AlbemarleCorp show the way.

Following ALB's superior operating performance and upbeat call last week, the Bear drumbeat is increasingly discredited, IMO.

> *The fourth quarter marked our <u>ninth consecutive quarter of year-over-year EBITDA growth</u> ending what was <u>the most profitable year in the history of Albemarle</u>. In 2018, net sales were up 13%, adjusted EBITDA up 17% and adjusted EPS up 23% versus the prior year on a pro forma basis. All of our reported segments contributing with each delivering double-digit adjusted EBITDA growth on a percentage basis. 2018 was also another step forward in the four-pronged strategy that we laid out at our 2017 Investor Day… in 2018, we stayed committed to our disciplined capital allocation strategy. We increased our dividend to $145 million. We purchased a $500M worth of stock, invested $700 million in CapEx, primarily in pursuit of our lithium growth plan and still completed the year with a net debt to EBITDA ratio of 1.2 times.*
>
> – *February 22, 2019 ALB Q4 and year-end 2018 conference call*

It's Good to be King

Of the Queen City of the South

KISS Luther KISSam, IV
Chairman, President and CEO, Albemarle Corporation

Rebels

I was born a rebel
Down in Dixie on a Sunday morning
Yeah with one foot in the grave
And one foot on the pedal
I was born a rebel

On July 15, 2014, Albemarle, which traces its roots to 1884, but has largely grown as a spinout from Ethyl Corporation in 1994, entered the lithium business, with the announcement of its bold $6.2B cash and stock merger with Rockwood. Albemarle's stock was ~$63 at the time.

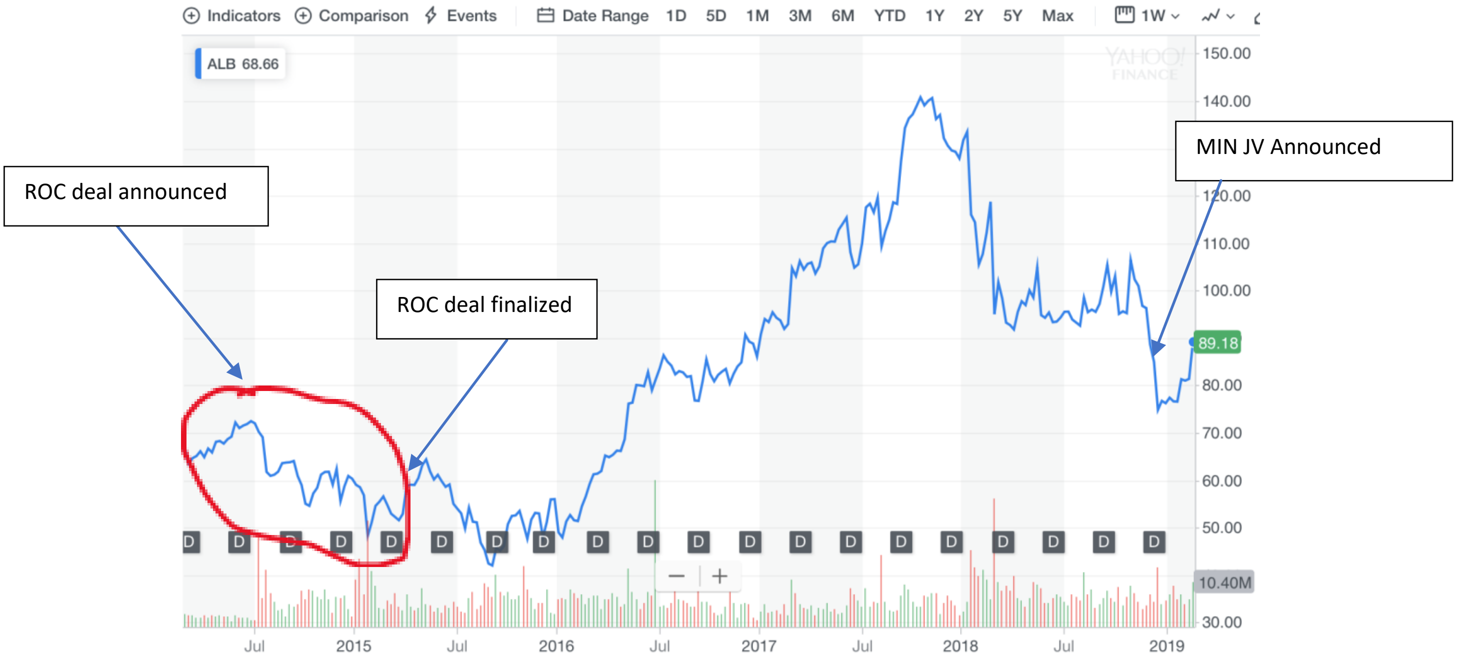
Transaction Overview

Key Terms	• $6.2 billion equity value • $50.65 in cash and 0.4803 of a share of Albemarle stock per Rockwood share • ~60% cash / ~40% stock • $85.53 per Rockwood share, a 13% premium to closing price on July 14 • ~70% Albemarle shareholders and ~30% Rockwood shareholders
Financial Impact	• Accretive to cash EPS in year one and adjusted EPS in year two • Substantially accretive to EPS thereafter • Approximately $100 million cost synergies • $500 million+ annual free cash flow
Governance	• Luke Kissam to lead combined company as president and CEO • Jim Nokes to continue as Non-Executive Chairman • 11 member Board: 8 Albemarle directors and 3 Rockwood directors
Financing	• Committed financing in place • Expect to maintain investment grade rating
Closing Conditions	• Closing expected in Q1 of 2015 • Subject to shareholder and regulatory approvals

14.4X LTM EV/EBITDA valuation raised eyebrows with some institutions as a very hefty multiple – though a class action lawsuit by Rockwood shareholders argued ALB was *underpaying* and ROC should have shopped it. When the deal closed six months later on January 12, 2015, ALB's stock had fallen 14% to $55.

"Today is a great day for Albemarle as we welcome our new employees and join forces to create a premier specialty chemicals company," commented Albemarle's president and CEO, Luke Kissam. "Our combined world-class team, expanded customer reach and increased diversity across end markets, technologies and geographies positions Albemarle to drive long-term growth and produce great results for our employees, customers, shareholders and the communities in which we operate. We look forward to the future."

ALB 5-year Chart



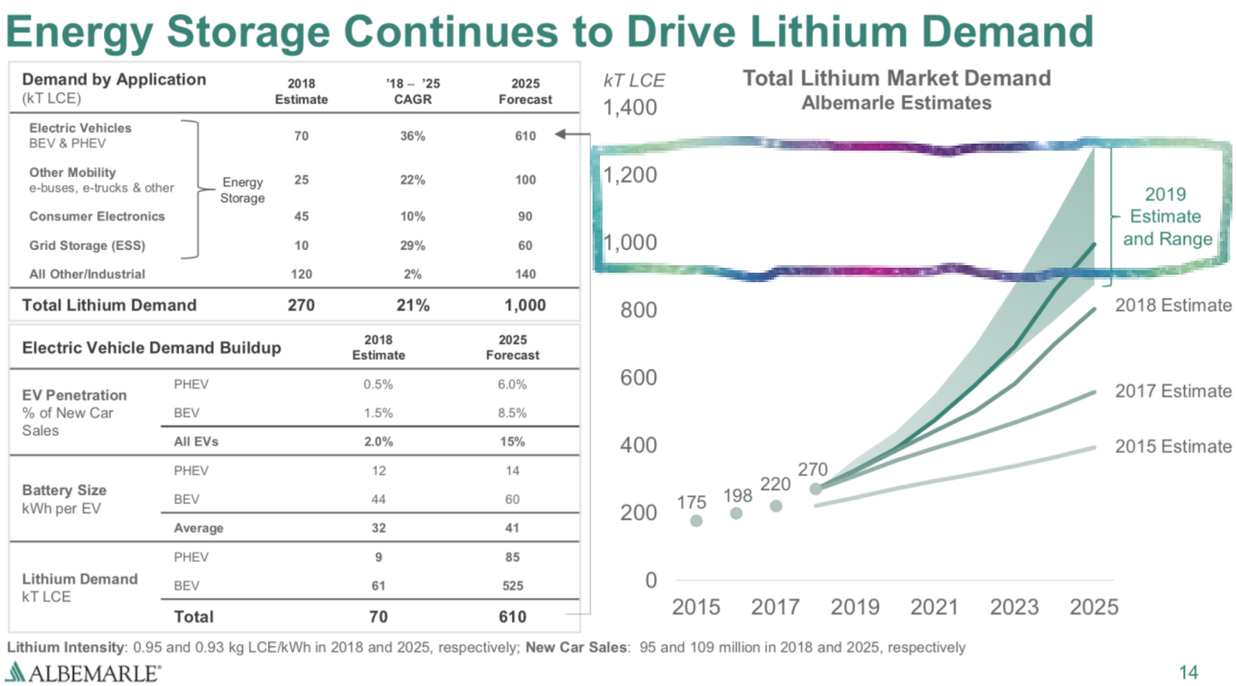
Albemarle is a reliable dividend payer – consistent and rising dividend every quarter/year since the Rockwood acquisition. In total $5.55 per share.

	Dividend
12/13/18	0.335
9/13/18	0.335
6/14/18	0.335
3/14/18	0.335
12/14/17	0.32
9/14/17	0.32
6/13/17	0.32
3/13/17	0.32
12/13/16	0.305
9/13/16	0.305
6/13/16	0.305
3/14/16	0.305
12/11/15	0.29
9/14/15	0.29
6/12/15	0.29
3/12/15	0.29
12/11/14	0.275
9/11/14	0.275
Total	5.55

At February 22, 2019's closing price of $89 and including these $5.55 dividends, an ALB shareholder for 4+ years around the time of the Rockwood deal is up some 50-70%, ~11-17% annual return. Not bad. But a lot better for a good market timing seller at the $140 top this time last year – 3 years, 100%+ = nearly 40% annual return:

> **Note to Jane and Joe Battery Pack:** if you more than double your money in a relatively big cap industrial stock like ALB in 3 years it's probably a good idea to take some off the table.

King Luke speaks about ALB's various business lines with a "portfolio of assets" approach. But with skill and gumption superior to most active mutual or hedge funds, has positioned ALB with a smart "directional bet" on lithium which in 2014 was forecast to grow at 2-3X GDP. It is in fact now growing 20%+ per year, or 5-7X GDP.



Demand by Application (kT LCE)	2018 Estimate	'18 – '25 CAGR	2025 Forecast
Electric Vehicles BEV & PHEV	70	36%	610
Other Mobility e-buses, e-trucks & other	25	22%	100
Consumer Electronics	45	10%	90
Grid Storage (ESS)	10	29%	60
All Other/Industrial	120	2%	140
Total Lithium Demand	**270**	**21%**	**1,000**

Electric Vehicle Demand Buildup		2018 Estimate	2025 Forecast
EV Penetration % of New Car Sales	PHEV	0.5%	6.0%
	BEV	1.5%	8.5%
	All EVs	2.0%	15%
Battery Size kWh per EV	PHEV	12	14
	BEV	44	60
	Average	32	41
Lithium Demand kT LCE	PHEV	9	85
	BEV	61	525
	Total	70	610

As I wrote in December, I see ALB/MIN as another Rockwood-like master stroke…

ALB/MIN: Lithium Blue Sky at Wodgina

…Doubling down with proven operator and money maker Chris Ellison in super stable Australia. Hydroxide from hard rock, and the swing SC6 supplier in the interim. Albemarle is aggressively affirming its Oligopolistic position while ensuring it remains the largest and most reliable lithium supplier, in particular for Korea, Japan and other non-China battery grade consumers.

De-worseification? Bad Company?

Another Southern Accents' hit:

Don't Come Round Here No More

Rambling Man: ALB Investment Highlights

- A "Specialty Chemicals" Incumbent Oligopolist. Seemingly – and justifiably - uninterested in being sandwiched into a 'green metals track' and adjacent to the low EBITDA multiple, cyclical peer group of the BMO "Metals and Mining" Conference – otherwise the most important gathering of the most important mining focused investors on the planet.

Tuesday, February 26

BALLROOM C	BALLROOM D	BALLROOM E
7:00 AM - Breakfast - Ballroom Foyer 7:00 - 7:55 AM - Uranium Fireside Discussion Ballroom C Featuring Cameco & KazAtomProm		
Nutrien	Franco-Nevada	BYD's take on the Electric Vehicle Revolution
PhosAgro	Wheaton Precious Metals	Driving To the Future: Beyond Lithium-Ion Battery Technologies
Peabody	Royal Gold	Lithium, Cobalt, Nickel Supply & Demand
Arch Coal	Osisko Gold Royalties	Galaxy Resources Nemaska Lithium
Whitehaven Coal	Sandstorm Gold	Lithium Americas Pilbara Minerals
Coronado Coal	Zijin Mining Group	Kidman Resources Rincon
Alcoa	Ero Copper	Syrah Resources Clean TeQ
Independence Group	Ivanhoe Mines	Cobalt 27 Capital Bushveld Minerals
PICK-UP LUNCH - 12:00 - 12:30 PM		
BREAKOUT SESSION Ballroom A Investing in ESG	BREAKOUT SESSION Ballroom C Demystifying Cost Curves and Credit Ratings in the Global Metals and Mining Sector, presented by	BREAKOUT SESSION Ballroom B Power Lunch: Batteries & New Age Metals

- Substantial economic interests in the largest and lowest cost lithium assets.
  - The only way to play the most important and reliable lithium mine in the world – Greenbushes – as Tianqi is largely untradeable.
  - Exposure to non-Oligarch, non-China influenced Salar da Atacama. But -- RISK FACTOR – the Heavy Hand of the Chilean State is omni-present.
    - Kudos to ALB for astute diplomacy and creative lithium metal solution to CORFO angst. But IMO Pinera's bread is buttered more with China Belt and Road than its free-trade agreement with the USA, again reflected by recent FT article
- One of only a handful of companies with battery hydroxide processing capabilities
  - From both hard rock (in China) and brine (in North Carolina).
- The only producer of lithum raw material in the USA - Silverpeak, Nevada
- High grade, plain vanilla, brownfield Kings Mountain spodumene mine, North Carolina.
- Mature Bromine & Catalyst businesses provide stability, cash flow and help underpin investment grade credit, while in a free-cash-flow-negative, aggressive growth lithium investment period.
- Wodgina de-risks lithium portfolio from a sovereign and technical risk perspective while positioning for the fastest growing battery hydroxide lithium segment.
- Capex further de-risked/underpinned by "sold out" tonnage with reliable price floors from the most reliable and credit-worthy customers in the most reliable countries – eg, Japan and Korea.
- Undemanding valuation relative to history and lithium industry's super rapid growth.
- Substantial price leverage in event of potential shortages/price spikes in a few years.

MIN Math

Macquarie led a masterful process for MIN, but ALB's adviser BAML also helped Albemarle secure 50%, rather than 49% originally offered, and, as important, the market power from 100% of all marketing rights for hydroxide and SC6 tons.

ALB's valuation for the Mineral Resources JV equates to a total acquisition cost equivalent of $40,000 per ton of LiOH capacity ($800M investment + $1.2B 50% project interest = $2B/50kt).

ALB projects the MIN JV will return "more than 2x their cost of capital," which I estimate as 15-20% assuming investment grade debt funding of ~5% and cost of equity in the mid- to high-single digits.

ALB has suggested 45% EBITDA margins for Wodgina LiOH tons.

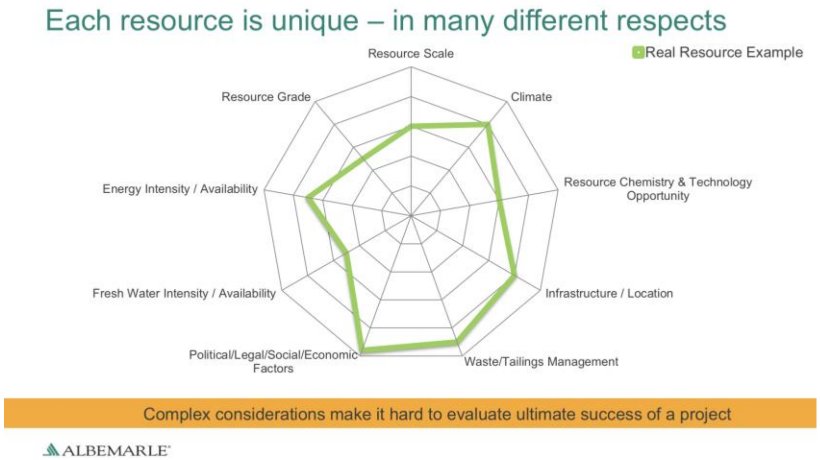
ALB and MIN don't need to publish feasibility study economics, so we must guess at expected operating cost. Wodgina's relatively low grade and remote location means it will likely be 2nd and perhaps 3rd quartile on the cost curve. I'm conservatively guessimating ~$6,000 opex, which, to get to 45% EBITDA margin, would translate to ALB forecasting a ~$13,000 long-term hydroxide price.

Who knows better, ALB or sell-side analysts projecting $10-11K or lower long term prices?

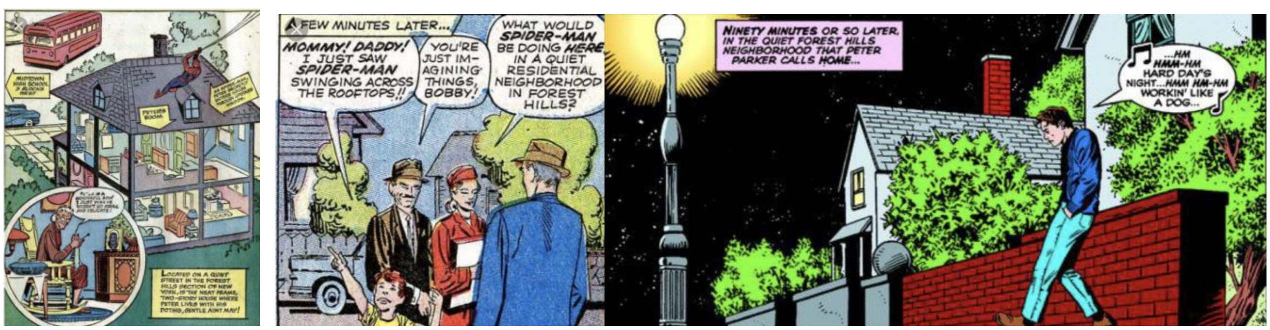
The aM&Azing Spider-Man

Eric Norris became an important public face and voice for ALB's Lithium division as keynote at the Benchmark Minerals CATHODES conference last October and again at Citi's November Materials Conference.

The following slide is of great relevance:



Like Jerry Seinfeld, I've always been more a Superman guy, and never really a big fan of Spider-Man. Though with Stan Lee's passing I learned that Peter Parker resided on Ingram Street, Forest Hills, Queens, NY, one block away from my home.



ALB's spider-web has nine sides - a nonagon - and 5 levels.

Note the above is a "Real Resource Example". I'm guessing Altura (or maybe Silver Peak)

To simplify for you non-arachnids:

9 Investment Factors	Rank
Political/Legal/Social/Economic Factors	5
Waste/Tailings Management	4.5
Infrastructure/Location	4
Climate	4
Energy Intensity/Availability	3.5
Resource Scale	3
Resource Chemistry & Technology Opportunity	3
Resource Grade	2.5
Fresh Water Intensity/Availability	2.5

Mineral Resources' Wodgina has similar attributes to the above – but is much greater scale and mine life which is critical for an ALB that is now calling for 1 – 1.2Mt LCE by 2025.

Much as I believe Big Oil or Big Chemical or Big Mining will enter the lithium space, I'm increasingly of the view that such companies will do so by buying a company like ALB – another bull ALB attribute. But I think this won't happen for a few years at least and will likely be at much higher valuations.

I do believe we will see companies in need of security of supply – auto, battery OEMs, eg – opening up their check books to a greater degree to help finance juniors, but even these companies, will get much of their supply from companies like ALB.

> *The way both this year and in prior years and in future years we see the growth being met, knowing that growth is largely EV growth and increasingly for higher quality batteries, hydroxide, high nickel-based chemistries. It's coming from, what we call, the **integrated majors**. There's about five of us: Albemarle, Livent, SQM and in China, Ganfeng and Tianqi.*
>
> *These companies benefit not only from an **integrated resource** in **most cases**, but also secondarily from a **processing know-how** over time in terms of how to tune their conversion assets to their specific resources.*
>
> *And then finally, they have the **financial capabilities to fund** whatever significant capital expansions required to meet and use markets.*
>
> *So, these are the companies that are meeting that demand. And we see likely being the ones that will provide that increasing demand into the future.*
>
> *-- Eric Norris, Q4 2018 ALB Conference Call*

ALB's Skill Set and Future M&A

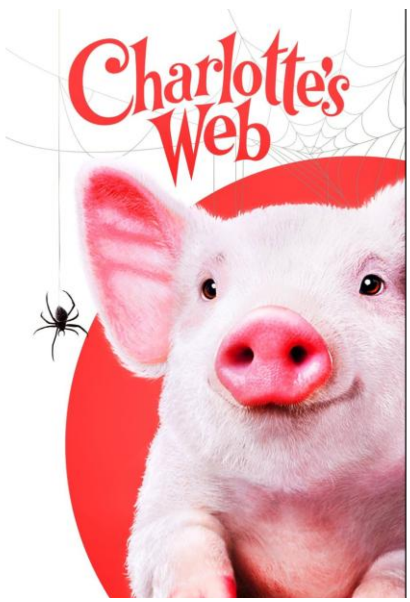
In their MIN JV call, Albemarle highlighted the fact that they don't currently have mining expertise – they own 49%, but don't control Talison/Greenbushes. But through the relationship with MIN such expertise could be brought to bear, for example, at their King's Mountain mine in North Carolina.

Stars Aligning to One World

It's early days, but I believe ALB/MIN – like American Airlines and Qantas in the One World Alliance -- is now more relevant for Mineral Resources than its other 50/50 partner Ganfeng. When 49% of Mt. Marion off-take goes back to MIN next February, will they allocate to Ganfeng? Albemarle? Seek to market it themselves? My bet's on ALB.

Meantime, Mr. Market should continue to take note of the impressive valuation paid by ALB relative to the way most undeveloped lithium assets are currently trading in public markets. It is an exceptionally positive M&A data point for strategic projects that tick the right boxes.

For a Jane and Joe Battery Pack investor trying to evaluate which high risk/reward "lithium junior" in this Year of the Pig or in future might get bought, rather than build, their projects, I suggest taking cues from the Amazing Spider-Man checklist/charts above and try to assess which might be captured by…



…or one of the other lithium producing brethren

Forest Hills

ALB - Mr. Lithium Bull vs. Mr. Lithium Bear

I, Mr. Lithium Bull, am now firmly in the ALB Bull Camp **(Not Advice. DYOR).** The bear ALB arguments looks far less likely IMO.

Bullish Chris Kapsch, Loop Captial

CHEMICALS & ADVANCED MATERIALS

Albemarle Corporation (ALB - $82.81)

Encouraging Nuances; Boosting Price Target

Summary

There were several aspects of ALB's 4Q results, F2019 guidance, and strategic narrative that we liked, and that give us increased conviction regarding our Buy recommendation on the stock. First, Albemarle did not exhibit susceptibility to fading spodumene prices. Second, the company essentially endorsed the Street's F2019 EBITDA expectations of ~$1.1 billion, in spite of the loss of at least 3kMT of LCE production in Chile (owing to heavy rains in the Atacama) and the associated margin drag that will come with replacing that lost volume via greater reliance on toll converters this year. Moreover, implied in ALB's F2019 guidance is flat-to-slightly-higher aggregate Lithium pricing, which underscores ALB's strong belief that its long-term supply agreements – with floor pricing – will indeed hold. As a reminder, the vast majority of ALB's tonnage is committed to strategic customers under long-term agreements, and ALB emphasized it does not have much direct exposure to Chinese cathode or battery customers, which have exhibited more flakiness (witness Livent's recent disclosures) in the context of contractual relationships with key suppliers. Albemarle also increased, once again, its long-term lithium industry demand growth expectations, which now imply a 21% CAGR through 2025. As we have expressed ad nauseam, we view the lithium industry story, driven by the secular adoption of EVs, as the single-most compelling growth story in the broader material space, and would continue to want to have long exposure to this theme. We are adjusting our F2019 estimates, introducing F2020 projections, and increasing our price target to $119 from $112, after rolling forward our SOTP analysis to 2020 numbers.

Key Points

- **Weather Impact Apparently Manageable, Despite the Loss of 3kMT of Atacama Production This Quarter.** Based on demand forecasts from its customers, ALB anticipates ~20kMT of incremental LCE sales in 2019, which could represent 25% higher volumes or more, compared to 2018 levels. With the heavy rains diluting the concentration of its ponds in Chile, ALB indicated it will have lost 3kMT of production in the current 1Q and 2Q. Accordingly, ALB will have to rely more on toll manufacturers for its carbonate (as much as 5-10kMT of the aforementioned 20kMT increment this year), which will in turn weigh on Lithium segment margins. Considering this dynamic, ALB's full year 2019 guidance (for aggregate EBITDA to increase ~10%+) is that much more impressive, in our view.
- **The Next Positive Catalyst? Impending Clarity From China on EV Incentives.** While timing is uncertain, ALB conveyed its intelligence continues to suggest that China will soon provide clarity on EV incentives that favor vehicles that have greater range, and therefore larger batteries and/or those with greater energy density. There has been scuttlebutt that some supply chain customers have been hesitant, regarding buying patterns, awaiting greater clarity on this inevitability. Once this uncertainty is cleared up, we surmise EV-related demand activity will hasten.

- **Could The Weather Disruptions Spur An Inflection In Spot Lithium Prices? It Doesn't Seem To Matter To ALB, Which Is Resolutely Sticking With Narrative That Contractual Floor Pricing Will Hold.** For perspective, total annual lithium industry demand was ~270kMT in 2018, which might imply 67.5kMT of demand quarterly (ignoring growth, for the sake simplicity). With all the major brine producers in Latin America having issues owing to the heavy rains (Orocobre, Livent, and Albemarle have already acknowledged disruption; expect a similar disclosure from SQM next week), it appears as much as ~10% of the industry 1Q capacity/production may have been impacted. ALB acknowledges this dynamic could result in the excess "rock" capacity (currently weighing on spot spodumene market prices) being absorbed. We believe this could, in turn, spur an inflection in the lithium industry pricing within China more generally, and create improved sentiment regarding the lithium space (and ALB in particular), a good thing. Regardless, ALB was somewhat dismissive of the dynamics driving spot lithium prices, given that 80% (and increasing) of its anticipated production through 2021 is spoken for through supply agreements with floor pricing. Assuming the demand growth does indeed materialize (a copious proliferation of new EV model introductions seems to help ensure that reality), then we agree with management's assessment – for Albemarle to benefit, it has now become simply more of an execution story.

February 21, 2019 | **Baird Equity Research**
Energy Technology & Resource Management

Albemarle Corporation (ALB)

Underpriced Leader in Midst of Secular Growth

Reiterate Outperform rating. ALB's long-term contracts with blue-chip customers should be a differentiating factor for the company moving forward, enabling stable pricing as additional capacity is brought online. We think the flexibility in ALB's business model (healthy balance sheet, strong cash flow from Bromine and Catalysts, and scale) should enable the company to maintain its lithium leadership position and drive long-term growth. While the name remains controversial and it may take time for sentiment to improve, we continue to see upside to the stock.

- **We think ALB's long-term contracts with blue-chip customers could be a differentiating factor, as highlighted by divergent outlooks between the company and peers.** Most of ALB's lithium contracts are with top tier cathode manufacturers outside of China, which mitigates some exposure to demand softness/uncertainty, particularly in China. We think the company has long-term visibility on demand and think contract pricing will remain relatively stable as ALB brings additional volumes online. While increased capacity from Chinese converters could bring excess supply to the market in 2019 (although incremental supply requires feedstock and may not be EV grade), we do not expect transitory oversupply periods to impact ALB volumes or price.
- **Higher lithium volumes will likely be the main driver of adj. EBITDA growth moving forward, and we think expansion projects are on track.** While adverse weather conditions in Atacama (heavy rainfall diluting evaporation pond systems) could be a ~3k MT headwind in 1H:19, ALB expects to grow volumes by ~20k MT in 2019, including 10k -15k from internal capacity and the balance from tolling (which could be lower margin). Importantly, the company expects to produce ~40k MT of carbonate from La Negra in 2019, commenced commissioning activities for the 20k MT lithium hydroxide expansion in Xinyu, and other capital projects appear on track.
- **We continue to think valuation is extremely attractive, on both a historical and sum-of-the-parts basis; please reach out for our sum-of-the-parts analysis.** ALB is currently trading at ~8.8x 2020 EBITDA, which is ~12% below the one-year average and ~30% below the three-year average. Even assuming a commodity-type multiple for lithium (which we believe is overly conservative), we believe there is upside to the stock.

Forest Hills

Vince Andrews, Morgan Stanley

Morgan Stanley | RESEARCH

February 20, 2019 11:52 PM GMT

Albemarle Corporation | North America

4Q18 Lithium EBITDA Below Consensus; 2019 EBITDA Midpoint Below Consensus

Stock Rating	Industry View	Price Target
Underweight	Attractive	$65.00

Impact on our views: We expect a mixed response to Albemarle's results and outlook. While EPS in 4Q18 was ahead of both MSe and consensus, we note that lithium segment EBITDA came in below consensus, but inline with MSe. Further, while the midpoint of 2019 EPS guidance is ahead of both MSe and consensus, the mid-point of EBITDA guidance ($1.105B) is below consensus ($1.122). Further, the company's slide deck notes that 1Q earnings will be flat year-over-year (i.e., $1.30 versus consensus of $1.46), and that the second half will be stronger than the first half. Clearly, it will be important to understand how this drills down at the segment level (i.e., is lithium up in 1Q, but the other segments are down offsetting it, vice-versa, or something in between?) and the answer here will likely have an impact on the stock. To this end, we note that unlike other lithium producers who have reported to date, Albemarle indicates that it has not seen a decline in customer demand forecasts. We assume that this statement is meant to include lithium, and therefore that Albemarle will have both lithium volume and EBITDA growth in 1Q. Nonetheless, beyond tomorrow's reactionary share price response, we expect the ultimate direction of the stock to remain a function of the overall prospects for the lithium industry which, in our view, continue to move in the direction of our lithium thesis (i.e., more supply than demand and the need for lower prices to hold back further production growth).

All Other: Sales were $36M versus MSe of $44M, while adjusted EBITDA was $6M versus MSe of $3M.

Our Underweight rating on Albemarle shares continues to be based on our view that new supply in 2019+ will result in lower lithium prices and downward out-year estimate revisions. While medium/long-term consensus expectations have declined in recent months (i.e., the debate has shifted more towards how much prices could decline), we still believe that consensus is too optimistic about demand growth and too pessimistic about supply growth, particularly given all of the recent capacity announcements in Chile. A year ago, the bull argument was that the supply would not come online on time and/or at all because it was coming from new entrants who wouldn't get financing and/or lacked the "know how" to produce EV battery grade product. A year later, the very best at doing just that have announced substantial incremental low cost capacity, thus making the maintenance of the status quo increasingly reliant on further demand forecast increases (which we thought were high a year ago). As such, we still see a negative risk/reward to shares.

Disclaimer

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