




Super Bowl Issue LIV Palindrome Lithium-ion Bull 02-02-2020

Mr Lithium Bull Market Scoreboard Feb 1, 2020	USD Mkt (\$m)	Share Price 01/31/20	1 Mo Perf	3 mo perf	
Chemical Producers	\$ 19,510				
Albemarle Corporation	\$ 8,512	\$ 80.28	10%	24%	No profit warning? Tesla & Western OEMs need ALB
SQM	\$ 7,396	\$ 28.10	5%	-2%	Lagging ALB LTHM 1772 - ripe for catch up? Javier upgrade?!
Tianqi Lithium	\$ 6,373	\$ 30.82	2%	20%	Bond vigilantes sniffing Bankruptcy blood. Gov't supporting equity?
Ganfeng (HKSE)	\$ 3,260	\$ 19.96	3%	42%	Losing steam with Coronavirus? Dip Buy?
Livent	\$ 1,374	\$ 9.41	10%	28%	Quick post Profit warning bounds = priced in/investor want pure play
Orocobre Limited	\$ 549	\$ 3.13	18%	19%	New BQ contract. Q4 price pain. Hi volume/quality growth potential
Spodumene Producers	\$ 1,812				
Mineral Resources Limited	\$ 2,141	\$ 17.06	3%	20%	Ganfeng JV profits + ALB \$800M cash +40% Kemerton free carry
AMG	\$ 654	\$ 20.60	-6%	-8%	Brazil "tech grade" LiOH to German "battery grade" LiOH refinery?
Pilbara Minerals Limited	\$ 440	\$ 0.30	5%	-14%	Cash burning. '18/'19 'sold out' 🐻 '20 seeking 'new' buyers
Galaxy Resources Limited	\$ 281	\$ 1.03	11%	5%	Go-slow flagship Sal d'Evita 98% "primary carbonate"
Altura Mining Limited	\$ 105	\$ 0.06	29%	11%	25kt sale to 1772. Extended halt. 🐻 debt refi
Emerging - Funded or Partnered	\$ 335				
Lithium Americas (NYSE)	\$ 335	\$ 3.75	18%	23%	In Ganfeng we Trust for 40kt greenfield. Thacker Pass Greenbushes?
Nemaska Lithium Inc.	\$ 108	NA	NA	NA	FOR SALE after \$30M bond make whole.
Advanced Development/Exploration	\$ 1,433				
Ioneer (Global Geo)	\$ 178	\$ 0.18	-5%	-28%	Awaiting DFS. 7% Centaurus.
Sigma Lithium	\$ 103	\$ 1.95	0%	8%	Brazil SC6 <\$500 'hi probability' Sustainable ESG finance? Bridge loan
Bacanora Lithium	\$ 96	\$ 0.33	-7%	11%	The best, the first. THE clay/softrock to watch. 20% M&G stake.
AVZ Minerals Ltd.	\$ 88	\$ 0.057	33%	24%	Welcome to the Jungle: CATL-affiliate Yibin Tianyi invests
Liontown Resources	\$ 86	\$ 0.084	-3%	-20%	PEA SC6 worth more than AJM, A40 or LiOH PLL? #RelativeValue
Piedmont Lithium (NASDAQ)	\$ 66	\$ 8.40	0%	6%	404 PERMITTED. \$15M Cash. Great new drill results 🐻 resource upside
Millennial Lithium	\$ 65	\$ 1.32	29%	16%	January ❤️ Argentina Velocity. DFS = \$450M capx.
Neo Lithium Corp.	\$ 61	\$ 0.670	34%	34%	January ❤️ Argentina Velocity. PFS = \$320M. Waiting out cycle.
Standard Lithium	\$ 59	\$ 0.88	4%	11%	Lanxess opens wallet: USD3.5M Secured Convert w/ bells & whistles
Argosy Minerals Limited	\$ 50	\$ 0.073	-4%	0%	Small Scale 2t Mitsubishi off-take
Lithium Power International	\$ 47	\$ 0.270	8%	2%	Awaiting Final EIA/CODELCO JV. Full DFS. WA exploration
Lepidico	\$ 40	\$ 0.013	-13%	-35%	Progress w/ LiOH from Lepidolite. \$4.5M cash
Critical Elements Corporation	\$ 56	\$ 0.33	-13%	-28%	January hates Quebec Velocity
Savannah Resources	\$ 64	\$ 2.33	3%	1%	USD5M. Portugal PM re-elected. Refinery tender 3-mo delay
Wealth Minerals	\$ 37	\$ 0.330	43%	10%	Velocity in sympathy w/ Argentina? Spinning copper, talking silver
Advantage Lithium Corp.	\$ 35	\$ 0.29	-21%	39%	Murky year-end uptick on small volume. TSX Games without Frontiers?
European Lithium	\$ 31	\$ 0.078	-7%	-15%	No scale. Cap structure reliant on dilutive \$10M convert
European Metals Holdings	\$ 31	\$ 0.151	-34%	-6%	Czechmate. USD 37M/51% -> Cinovec to advance w/ SOE Utility CEZ?
Frontier Lithium	\$ 29	\$ 0.24	-6%	2%	Premium grade spodumene for glass? ON, Canada
Prospect Resources	\$ 28	\$ 0.180	0%	29%	Zimbabwe. New DFS. Evaluating at Indaba
Galan Lithium	\$ 21	\$ 0.20	54%	8%	Ganfeng buys 10% open-market post hi grade intercepts. USD 2M cash.
Mali Lithium	\$ 21	\$ 0.097	28%	21%	USD3M from Rights offer. Hatch PEA for intermediate sulphate option?
Sayona Mining Ltd.	\$ 20	\$ 0.017	55%	89%	ASX more faith than TSX in Quebec. NAL bid deadline. Authier EIS
Core Lithium	\$ 18	\$ 0.035	0%	-15%	non-Core SC6 story. UnFinished Business: Yahua a reliable off-taker?
Lake Resources	\$ 17	\$ 0.05	81%	34%	Good Lilac DLE results. Tradaing halt to refi toxic convert
Plateau Energy Metals	\$ 15	\$ 0.24	-10%	7%	<USD2M cash. Not KISS. Tuff. Unconventional. Title questions. Peru.
E3 Metals Corp	\$ 8	\$ 0.400	14%	-6%	A Livent in Alberta. Disruptive DLE oil-field brine?
Infinity Lithium	\$ 8	\$ 0.060	2%	-12%	USD 1M cash. Encouraging noises re: EU Funding for LiOH in Spain?
Vulcan Energy Resources	\$ 6	\$ 0.190	19%	36%	New Kid in German Town. PEA Soon
Pure Energy	\$ 6	\$ 0.04	0%	-11%	Schlumberger took over. Little left for PE shareholders
Aggregate Lithium Market Cap	\$ 23,091				
Aggregate Lithium Market Cap 12/31/18	\$ 23,741				

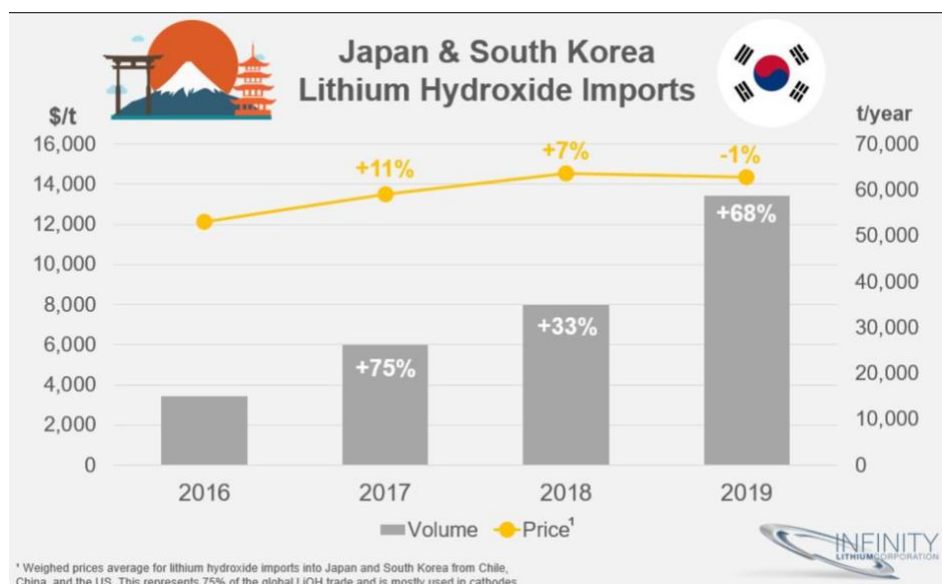


The new decade's first month Mr. Lithium Bull Market Scoreboard has some deletions (Kidman, Alita) and additions (Vulcan Energy, Prospect Resources) and new comments which if I were to sum up January in one word would be: "Stargentina".

As we transition from Lithium 2.0 to the Roaring 20's Lithium 3.0 it is essential that investors big and small learn the correct lessons from the 2015-2019 boom/bust and parse through prolific and not unbiased narratives, both blatant and subtle, from banks big and small, retired industry advisors, and other equity promoters. Today's heavily touted 'oversupply' narrative and Western Australia/Quebec 'cutback/bankruptcy' cheering, is, in my opinion, a lingering 2019 China carbonate under-demand problem that few predicted; and is the primary root cause of Mr. Lithium Bull Market 2018-19 pain. 41kt 2019 LCE growth in aggregate by Rodney Hooper's estimate - about 14% - while not bad by the standards of any industry, was meaningfully lower than the upsized 17-20% forecast from most majors – and has greatly impacted the only price lithium equity investors trade on – China spot carbonate.

Meantime, for anyone whose interest in lithium is most keenly focused on new suppliers to the sexiest Western-OEM-quality EVs, the market for lithium is materially smaller than 315kt LCE. Korea/Japan hydroxide demand approached 60kt, as per Infinity Lithium's Vincent Ledoux Pedailles' monthly reporting:

Japan and South Korea annual lithium hydroxide imports show a strong growth \uparrow 68% yoy whilst prices are \downarrow 1% at $>\$14,300/t$ according to custom statistics. This represents $>75%$ of the global LiOH trade and is mostly used in cathodes \square for lithium-ion batteries





The China carbonate 'under-demand' hitting WA spodumene producers most acutely is underpinned by bankrupt battery makers (e.g. ex-Altura partner JR Optimum Nano) and half built converters (e.g. Alita partner Jiangtse and several others) suffering under the weight of tight financial liquidity that Rodney and I flagged last January; which, in turn, is due to slowing GDP impacting durable goods auto purchases, exacerbated by sharply reduced 2H NEV 2019 subsidies — likely some or all of which was induced by the unexpected vigor & length of US trade war demands. The upshot: negative (-4%) 2019 EV growth in China 👉 heavily promoted 'sold out' Pilbara - previously planning stage 2 & 3 to meet a Great Wall of POSCO, Ganfeng and General Lithium Demand - disclosing this week it is now searching for **NEW** customers while POSCO delays downstream JV FID by 6 months. The Q3 2019 denouement of Macquarie's 'Who Can It Be Now' auction was CATL shrewdly bottom-fishing into Pilbara capital structure and potential off-take, while its great partner Ganfeng passed on exercising its rights, got diluted, and are preferring to buy Altura ore instead.

Meanwhile, also unpredicted by most, has been SQM - which few realize makes and sells virtually ZERO of the BQ hydroxide that Korea/Japan want and pay premium for - choosing to dump inconsistent carbonate quality to gain low-end China market share and opaque and bankrupt 'potash-king' Qinghai Salt Lake similarly dumping its junk technical grade. The combined effect: straight line 'new normal' low-to-mid teen 'specialty chemical' price predictions have been displaced by 'cyclical specialty commodity' China carbonate spot price Velocity; and the current, temporary, unsustainable, below-marginal-cost pricing that only Javier Martinez of Morgan Stanley [eloquently articulated](#).



I love and own Ganfeng but have been disappointed by post-IPO Sounds of Silence investor engagement which contrasts sharply with increasingly transparent ALB Southern Accents and Peter Parker quarterly calls and Investor Days. I'm confused by those who lament on the one hand too little investment in lithium development, but jeer as 'overpayment' blue-chip non-Chinese groups like Wesfarmers & Albemarle who write [Whole Lotta Love](#) hard rock checks but avoid [The Rain Song](#) brines. What's better for Jane or George Battery Pack investors: to monetize at full and fair value the hard yards of juniors finding & advancing projects in 2-4 years when capital market windows open and close every two years? Attempting to go the distance alone? Or waiting in a non-control JV position hoping for senior partners to deliver value from technically challenging [Ten Years Gone](#) projects?

Recall Lithium 2.0 lesson: high coupon, secured debt and reliance on China kills equity.

China is famous for supporting heavily indebted corporate "Zombies," but a new paradigm and risk is underway as Western-style bankruptcy is becoming a real possibility across the country. Will this impact Panda Bear Tianqi and its '[She's Not There](#)' CEO? Bond vigilantes trading \$400M Tianqi paper at 66 cents and Moody's downgrades are suggesting it might. Watch this space.

Recall while most others sat silent in 2018 or goaded CORFO and Chile in its defense against the ChiNationalization of the People's Lithium, [Me & Julio](#) strangely bedfellowed with Dr. Eduardo Bitran down by the Atacama Schoolyard to prevent such Belt & Road encroachment. I didn't realize at the time my efforts would actually be doing *Tianqi* the favor.

I'm hopeful and rooting for China/Tianqi to behave like its over-levered US oil & gas peers and ask its banker Morgan Stanley to sell down their SQM stake in a syndicated book build to pay down their huge mistake. It would be great for SQM's governance and free-float/trading liquidity and would reflect well with ESG-focused global institutions both companies need to finance their Big 5 lithium stature and long-term ambitions.



I'm excited for my partner Rodney Hooper to be Chairing Benchmark Minerals flagship Berlin Battery conference in June. Rodney has been among the first to identify and promote the growing relevance of EU regulatory changes/penalties and continues to produce pioneering work in this regard. Will 2020 see the advent of a carbon border tax impacting pricing of, say, coal-roasted China hydroxide?

He and I look forward to continuing sharing our collective #LithiumEquityIntelligence with our growing audience, which, as the Roaring 20's roll on, will increasingly be distributed in new, proprietary formats, to our Patreon patrons and other clients.

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Or otherwise get in touch with Rodney and me by email, twitter DM or LinkedIn message.

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