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Company	Rating	Price	Target
EV Materials			
AKE-ASX	Buy	A\$10.35	A\$15.00↑ <i>A\$12.00</i>
<i>previous</i>			
ALLA-AIM	Spec Buy	35p	60p ↑ <i>45p</i>
<i>previous</i>			
CXO-ASX	Spec Buy	A\$0.85	A\$1.00↑ <i>A\$0.70</i>
<i>previous</i>			
GLN-ASX	Spec Buy	A\$1.71	A\$3.40↑ <i>A\$2.80</i>
<i>previous</i>			
IGO-ASX	Buy	A\$12.80	A\$15.00↑ <i>A\$11.00</i>
<i>previous</i>			
INR-ASX	Hold↓ <i>Speculative Buy</i>	A\$0.74	A\$0.85↑ <i>A\$0.75</i>
<i>previous</i>			
LAC-TSX	Spec Buy	C\$31.56	C\$54.00↑ <i>C\$46.00</i>
<i>previous</i>			
LKE-ASX	Spec Buy	A\$0.94	A\$1.50↑ <i>A\$1.15</i>
<i>previous</i>			
LPI-ASX	Spec Buy	A\$0.67	A\$1.20↑ <i>A\$0.55</i>
<i>previous</i>			
LTR-ASX	Spec Buy	A\$1.62	A\$2.30↑ <i>A\$1.90</i>
<i>previous</i>			
NLC-TSXV	Hold	C\$6.42	C\$6.50
PLL-ASX	Spec Buy	A\$0.68	A\$1.55↑ <i>A\$1.35</i>
<i>previous</i>			
PLS-ASX	Hold↓ <i>Buy</i>	A\$3.56	A\$3.90↑ <i>A\$2.70</i>
<i>previous</i>			
PSC-ASX	Spec Buy	A\$0.86	A\$1.10↓ <i>A\$1.12</i>
<i>previous</i>			
RCK-TSXV	Spec Buy↑ <i>Hold</i>	C\$5.13	C\$7.00↓ <i>C\$7.50</i>
<i>previous</i>			
SGML-TSXV	Spec Buy	C\$11.97	C\$17.00↑ <i>C\$14.00</i>
<i>previous</i>			
SLI-TSXV	Spec Buy	C\$8.14	C\$14.00
VUL-ASX	Spec Buy	A\$9.42	A\$23.00↑ <i>A\$22.00</i>
<i>previous</i>			
Precious Metals - Producer			
FFX-ASX	Spec Buy	A\$0.75	A\$1.90↑ <i>A\$1.55</i>
<i>previous</i>			

Priced as of close of business 21 January 2022

Lithium | 1H'22 - higher for longer

Can 2022 eclipse 2021? 2022 is shaping up to be a stand out year in the lithium market, hard pressed given 2021 delivered impressive price rises across carbonate (431%), hydroxide (340%) and spodumene (532%). However, after refreshing our SxD model for EV sales and lithium production we do not see an easy route for the market to balance throughout the year. This is being reflected in spot pricing recently pushing over US\$50,000/t. We anticipate this pressure being maintained over at least the first six months of 2022 before additional supply reaches the market. In this report, we update our price forecasts and price targets for our global lithium coverage.

Equities can keep going higher, but we are starting to look for opportunities:

Lithium equities were strong performers in 2021, closing up on average +200% YoY. Into January the names continued to rally, following lithium pricing. We have upgraded our producer/near-term producers (NTP) 36% on average and developers 24% on average. Most equities are pricing in the recent moves with the producer/NTP trading at 0.82x P/NAV on average, vs developers trading at 0.66x P/NAV on average. We have downgraded PLS and INR to HOLD on valuation, both names remain topical however the equities are trading towards fair valuation. We are upgrading RCK to SPEC BUY (from Hold) due to the recent pullback in the shares. See our key picks below.

Market balance - tight, but supply response will come: Our update focussed on rebasing our EV sales for 2021 and expected growth profile (9.5m units in 2022) and updating our lithium project pipeline. At current pricing we are more than 3x incentive pricing and projects are now getting financed, rather than companies looking to progress studies. Our balance to 2024 remains largely unchanged, with demand more or less matching supply. We continue to point to 2025 as a potential surplus year before heading into deficits out to 2030. A noticeable difference from our September report is the scale of deficits from 2026, which are smaller due to incremental supply.

Key risks to our modelled deficits are lower EV sales driven by chip or raw material shortages and higher production from existing assets which are brought online faster to satisfy customer demand. Another consideration is if raw material (and energy) pricing results in demand destruction. Based on our estimates cathode raw material costs rose 138% for NMC 622 in 2022.

Price forecasts - tight market but ultimately eases back towards LT pricing: We have lifted our price forecasts for SC6/Li2CO3/LiOH out to 2030 (Figure 17). We have lifted our 2022 pricing by 125% to US\$3,425/t for SC6; 57% to US\$43,125/t for Li2CO3 (FOB Sth America); and 37% to US\$38,750/t for LiOH (Asia CIF). In response to rising capital intensities for lithium projects, our long term pricing (from 2026) has increased by 25% for SC6 to US\$1,000/t, and chemicals 17% to US\$17,500/t.

CG global lithium sector coverage - key picks

Producers - AKE-ASX, IGO-ASX

Developers - ALLA-AIM, SGML-TSXV, VUL-ASX, FFX-ASX (pending Leo Lithium demerger), LKE-ASX

A quick look in the rear-view mirror at 2021

2021 kicked off the lithium decade in an impressive way. Chemical and spodumene pricing 'melted up' over the year with spodumene 532% higher over the year, carbonate 431% higher and hydroxide 340% higher. Equities followed pricing with developers up 250% on average (albeit from lower bases) and the producers up 97%. PLS-ASX had a standout year and deservedly so. Introduction of its BMX auction platform has the potential to shift the balance of power in the lithium market. The first auctions have shown the level of desperation in the market by some participants, pushing pricing towards the point where, at spot, a converter would make no margins.

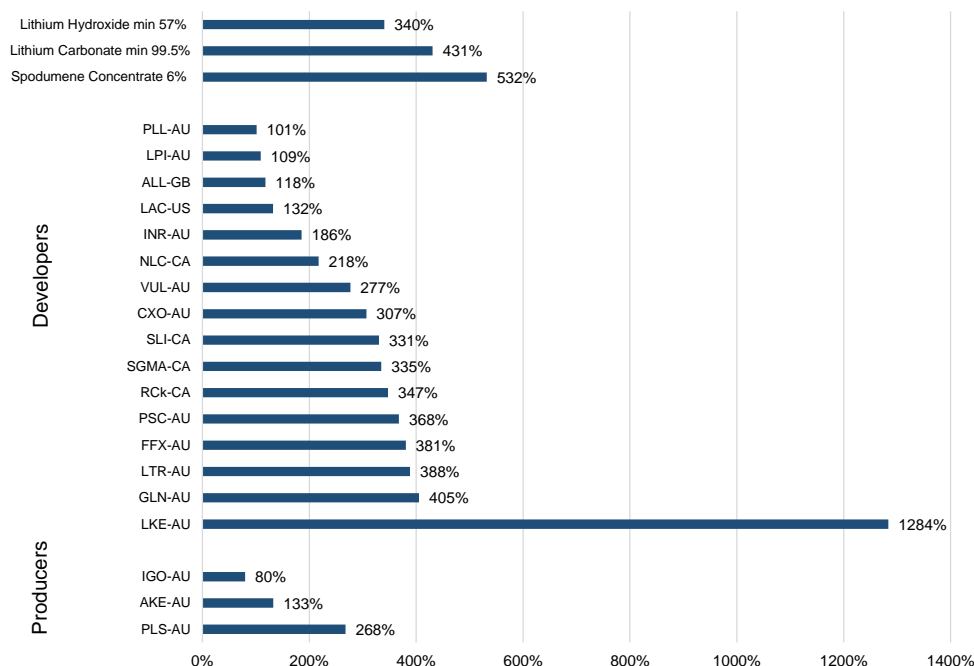
Driving demand was the EV sector, where we continually tried to play catch up as sales/deliveries consistently outdid our expectations. Although final numbers are not yet in, we anticipate sales of 6.2m units (+103% YoY) with 3.1m in China, 2.1m in Europe and 0.7m in the North America. On the supply front producers in Western Australia were able to lift production (Greenbushes, Pilbara) as did South American brine producers (Albemarle, SQM). However, with little available inventories and the majors not releasing volumes, those without captive supply were left to fight it out for feedstock tonnes.

While we witnessed some increase in sector consolidation during the first half of the year (Galaxy & Orocobre, IGO & Tianqi), it was the second half of the year where a 'scramble for resources' hit overdrive. Chinese companies Ganfeng and CATL were the most aggressive, taking out or buying into five projects in 2H'21, and spending a combined US\$2bn in the process. Overall, we estimate a total of US\$7bn was spent on M&A during 2021 up from US\$400m compared with 2020.

2021 also saw Automotive OEMs and battery producers invest in a pipeline of battery manufacturing capacity. A notable announcement was Volkswagen's commitment to build six 40GWh battery factories in Europe by 2030 (equates to ~350kt of LCE demand).

We published over 50 lithium-focussed notes including two S&D reviews and 12 initiations to take our coverage to 17 lithium focussed stocks globally.

Figure 1: Performance over 2021 for a selection of lithium products and CG covered lithium producers & developers



Source: Company reports, Canaccord Genuity estimates * Chemical prices (US\$/t China EXW), Spodumene (US\$/t Aus FOB).

Lithium | 1H'22 higher for longer

We have reviewed our SxD assumptions for 2021 and updated our price deck. In August 2021 we published [2H'21 recharge](#), where we brought forward expectations of market deficits and revised up our price forecasts, while in September 2021 an out of cycle price adjustment was required as pricing had increased by over 50% in a single month (see [Lithium prices go exponential](#)). This trend continued into the end of the year, with Chinese chemical prices up 200% and concentrate prices up 350% since our last update. Our key focus for this report was to rebase demand and assess the current supply response based on current pricing.

Price deck – key changes

Based on our revised modelling, we have lifted our peak pricing scenarios for both chemicals and concentrates. We have also lifted our long-term chemical price assumptions to US\$17.5k/t for LC/LiOH on account of higher capital intensities and what it means for incentive pricing, and we lift LT concentrate prices by 25% to US\$1,000/t align with our view on LT converter margins (Figure 17).

Revisions to modelled pricing see an average 27% increase in valuations/target prices for our lithium sector coverage, with changes outlined in Figure 2 below.

Figure 2: CG Global Lithium coverage - Summary of target price and recommendation changes

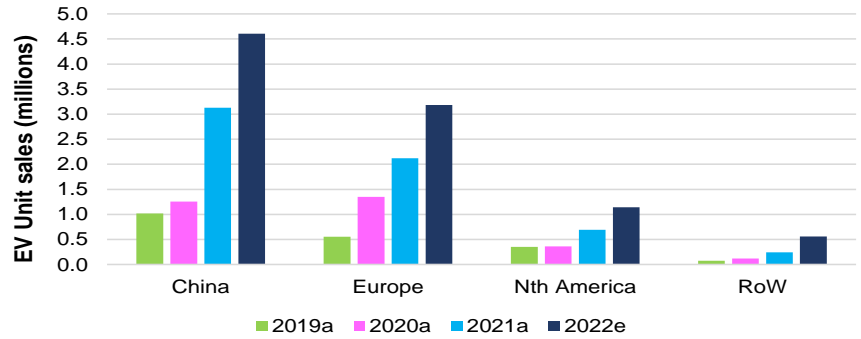
Company	Code	Analyst	Price	Mkt Cap (\$m)	Old TP	New TP	% Chng	P/NAV	New Rating	Prev. Rating
Pilbara Minerals	PLS-ASX	Tim Hoff	A\$3.56	A\$10,597	A\$2.70	A\$3.90	44%	0.91	Hold	Buy
IGO Limited	IGO-ASX	Tim Hoff	A\$12.80	A\$9,693	A\$11.00	A\$15.00	36%	0.85	Buy	Buy
Allkem Limited	AKE-ASX	Reg Spencer	A\$10.35	A\$6,598	A\$12.00	A\$15.00	25%	0.69	Buy	Buy
Lithium Americas	LAC-CA	Katie Lachapelle	C\$31.56	C\$3794	C\$46.00	C\$54.00	17%	0.58	Spec Buy	Spec Buy
Liontown Resources	LTR-ASX	Reg Spencer	A\$1.62	A\$3,539	A\$1.90	A\$2.30	21%	0.70	Spec Buy	Spec Buy
Ioneer Ltd	INR-ASX	Tim Hoff	A\$0.74	A\$1,507	A\$0.75	A\$0.85	13%	0.87	Hold	Spec Buy
Core Lithium Ltd	CXO-ASX	Tim Hoff	A\$0.85	A\$1,415	A\$0.70	A\$1.00	43%	0.85	Spec Buy	Spec Buy
Standard Lithium	SLI-CA	Katie Lachapelle	C\$8.14	C\$1311	C\$14.00	C\$14.00	0%	0.58	Spec Buy	Spec Buy
Vulcan Energy	VUL-ASX	Tim Hoff	A\$9.42	A\$1,240	A\$21.00	A\$23.00	10%	0.41	Spec Buy	Spec Buy
Piedmont Lithium	PLL-ASX	Reg Spencer	A\$0.68	A\$1,029	A\$1.35	A\$1.55	15%	0.44	Spec Buy	Spec Buy
Sigma Lithium	SGML-CA	Katie Lachapelle	C\$11.97	A\$1,046	C\$14.00	C\$17.00	21%	0.70	Spec Buy	Spec Buy
Lake Resources	LKE-ASX	Reg Spencer	A\$0.94	A\$1,149	A\$1.15	A\$1.50	30%	0.63	Spec Buy	Spec Buy
Neo Lithium	NLC-CA	Katie Lachapelle	C\$6.42	C\$907	C\$6.50	C\$6.50	0%	0.99	Hold	Hold
Firefinch Resources	FFX-ASX	Reg Spencer	A\$0.75	A\$884	A\$1.55	A\$1.90	23%	0.39	Spec Buy	Spec Buy
Galan Lithium	GLN-ASX	Reg Spencer	A\$1.71	A\$508	A\$2.80	A\$3.40	21%	0.50	Spec Buy	Spec Buy
RockTech Lithium	RCK-CA	Katie Lachapelle	C\$5.13	C\$367	C\$7.50	C\$7.00	-7%	0.73	Spec Buy	Hold
Prospect Resources	PSC-ASX	Tim Hoff	A\$0.86	A\$369	A\$1.12	A\$1.10	-2%	0.78	Spec Buy	Spec Buy
Lithium Power Intl	LPI-ASX	Reg Spencer	A\$0.67	A\$234	A\$0.55	A\$1.20	118%	0.56	Spec Buy	Spec Buy
Atlantic Lithium	ALL-LON	Sam Catalano	£0.35	£201	£0.45	£0.60	33%	0.58	Spec Buy	Spec Buy

Source: FactSet (prices as at 21 January 2022), Canaccord Genuity estimates

Demand

Final EU sales are pending but look like they will exceed 2m units for 2021, in line with our estimates (CGe 2.1m), while China sales of 3.1m exceeded our 2.9m estimate – in spite of our August revision. Overall, from major market data received to date, we estimate 2021 EV sales of 6.2m units (70% BEV), +103% YoY. Growth was driven by China (+149% YoY) and Europe (+57%), accounting for 85% of global deliveries.

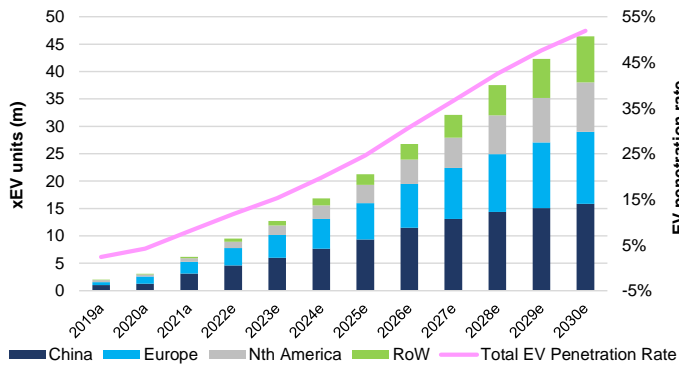
Figure 3: EV sales – 2019-22E



Source: Rho Motion, Canaccord Genuity estimates

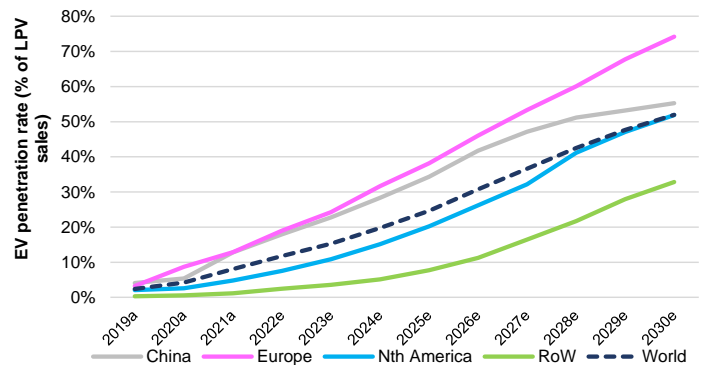
We have revised our EV sales assumptions on a rebased 2021 result (major markets) and now model a 20% CAGR out to 2030. Following stronger-than-expected 2021 EV sales, we have increased our 2022 estimates by 26% to 9.5m units, with our 2022-25 EV sales forecasts on average increasing by 22% against our prior estimates. We now forecast global sales to increase to 16.8m units by 2025 (+44% vs prior CGe), and by 2030 we forecast 46m units (representing an estimated EV penetration rate of 24% and 46%, respectively).

Figure 4: EV sales forecasts – 2019-30E



Source: Rho Motion, Canaccord Genuity estimates

Figure 5: Forecast EV penetration by market

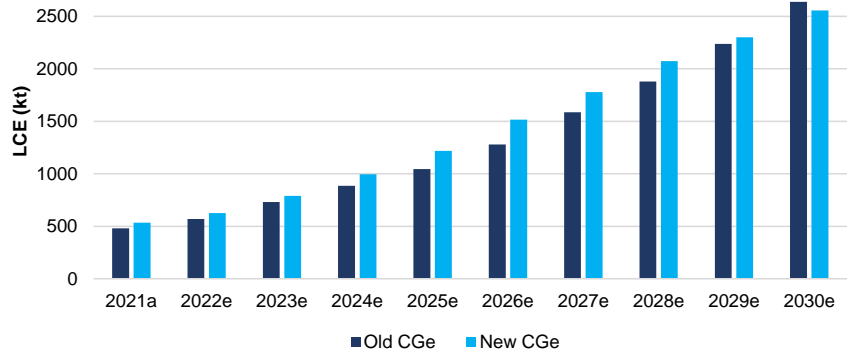


Source: Rho Motion, Canaccord Genuity estimates

Lithium demand revisions

Revisions to our EV sales forecasts result in an upward revision to our LCE demand forecasts by ~10% on average over the next five years, with nearer term estimates lifting by 10% (56kt LCE) and 8% (57kt) in 2022 and 2023, respectively. Our longer-term forecasts continue to call for LCE demand of ~1.2Mt in 2025 and ~2.5Mt by 2030, representing CAGR of 20% out to 2030.

Figure 6: LCE demand 2021-30E – old vs new

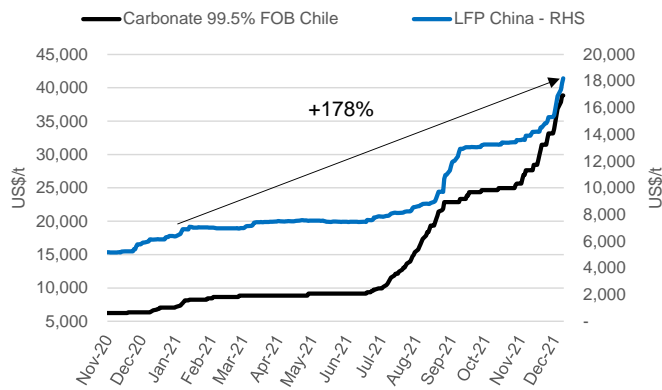


Source: Rho Motion, Canaccord Genuity estimates

Cathode costs a risk to demand

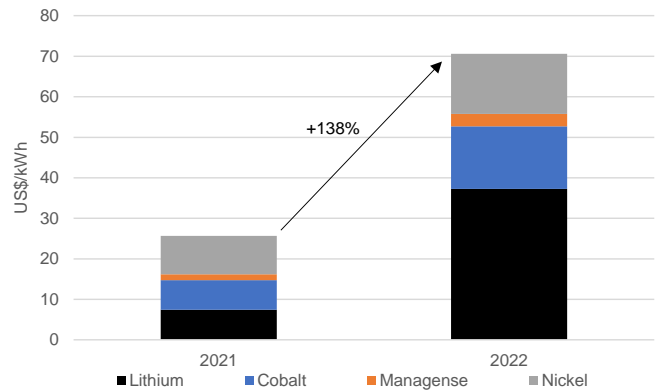
Across all battery materials raw material costs have been rising, not only lithium. Nickel was up 19% YoY, cobalt was up 106% YoY and manganese was also up 117% YoY. At current prices an NCM 622 cathode would be 138% more expensive based on the raw materials alone. LFP pricing has also risen strongly due to demand and lithium input costs (Figure 7) and is up 178% YoY. So even LFP cathodes, which there was a large positioning towards in 2021, will likely be facing cost pressures. It is worth noting that, on our calculations, LFP cathodes would have risen 199% in 2021 vs the 138% that NMC cathodes would have increased on a US\$/kWh basis. However, based on these calculations, LFP is still 58% cheaper on a US\$/kWh basis.

Figure 7: Carbonate prices are dragging LFP pricing higher



Source: Asian Metals, Canaccord Genuity estimates

Figure 8: The price of NMC chemistry is rising with lithium, cobalt and nickel all influencing price

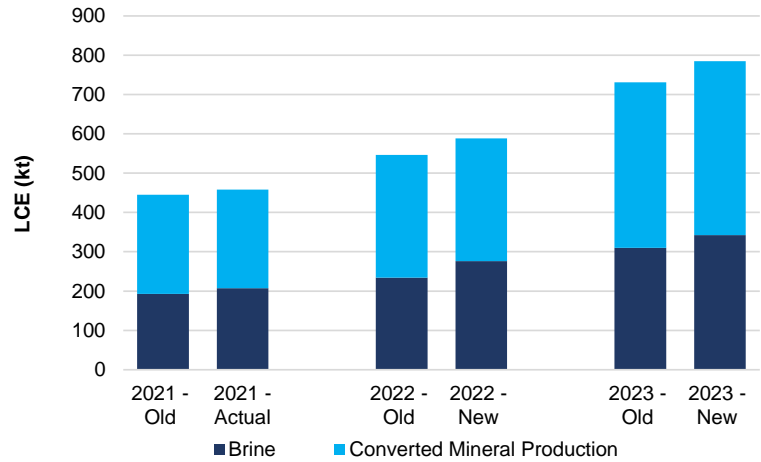


Source: Asian Metals, Canaccord Genuity estimates

Supply

While elevated prices resulted in notable increases in production rates across the Western Australian spodumene producers and South American brine producers over 2021, supply failed to keep up with demand. We anticipated incentive pricing to begin around US\$15k/t however prices did not hold there for long enough to test our thesis. We are now nearly 3x incentive pricing and on our estimates many marginal operations would be profitable at these levels. We anticipate a response from the major brine producers in the next two years which may help the market move towards balance. Only Core Lithium (CXO-ASX), Lithium Americas (LAC-CA), Sigma (SGML-TSX) and Argosy (AGY-ASX) are expected to add greenfields lithium units in 2022 (most of this will occur in Q4). We have updated our supply to include several Chinese brine operations which have been in the spotlight recently.

Figure 9: Near-term LCE supply forecast changes

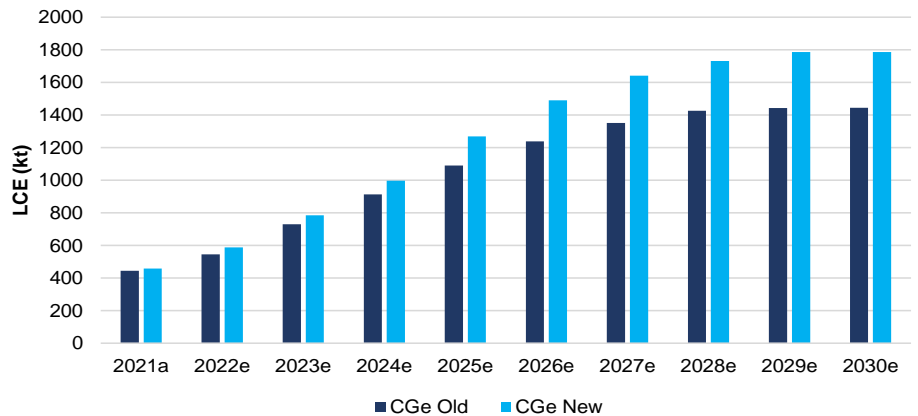


Source: Company reports, Canaccord Genuity estimates

In our last update we noted that the majority of the planned development projects were owned by single asset companies, which in our view presented risks to lithium supply through a likely lack of adequate capital investment. Since then, we have seen industry consolidation, with larger, better capitalised companies (i.e. major diversified miners, large chemical companies, OEMs) buying or taking ownership in a number or advanced developers. The spot price has also resulted in higher market capitalisation, enabling access to equity. We now take the view that financing these projects is less of a risk in the current environment and model them in our supply.

Despite the financing of several lithium projects, we highlight our previous work ([Plaid Acceleration](#)) where we assessed company guidance for first production and ultimate name plate capacity vs what was actually achieved. On average, projects are delayed 6-18 months for construction and ramp up generally take longer than expected. We have shaped our production forecasts to take delays into account given the pool of expertise is limited and jurisdictions such as Western Australia are experiencing labour issues due to COVID-19.

Figure 10: Market supply forecast revisions



Source: Company reports, Canaccord Genuity estimates

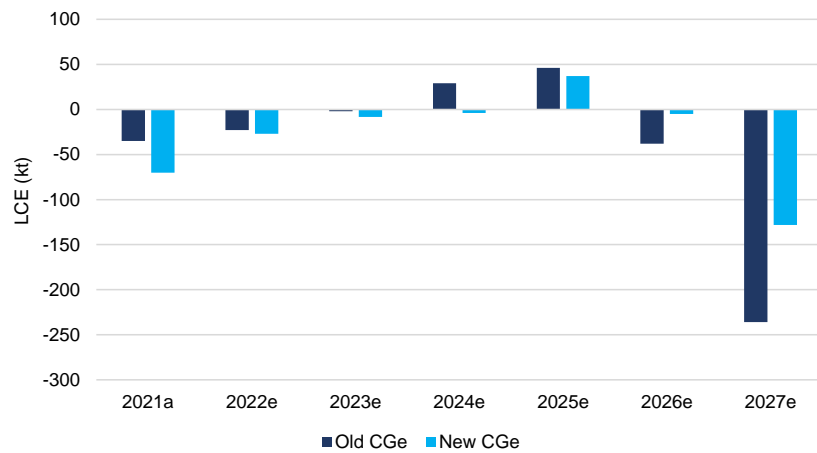
Market balance

Increasing our near-term market deficits

Based on our revised demand and supply forecasts, our market balance forecasts have largely moved in lock step. Overall, demand is higher, however, a supply response is also occurring, in our view. This ultimately leads us to have more certainty that 2025-26 will represent a period of a market more in balance/small surplus. Figure 11 demonstrates this, particularly post 2025 where our deficits have shrunk.

We expect 2022 and 2023 to remain in deficit despite increasing supply from the continued high pace of sales. While chip shortages have impacted the market, CRU expects to see these begin to reduce in 2022 and we believe these chips will ultimately end up in EVs. Over this time period we would expect to see some supply response by some of the majors or brownfields producers such as PLS who can more easily increase output vs greenfields developers.

Figure 11: Changes in market balance between forecasts



Source: Company reports, Canaccord Genuity estimates

In 2024 our previous market surplus has reverted to a deficit (albeit small). We could flex several assumptions to either develop small surpluses or deficits so currently it's a 'line ball' which will depend on the delivery of tonnes.

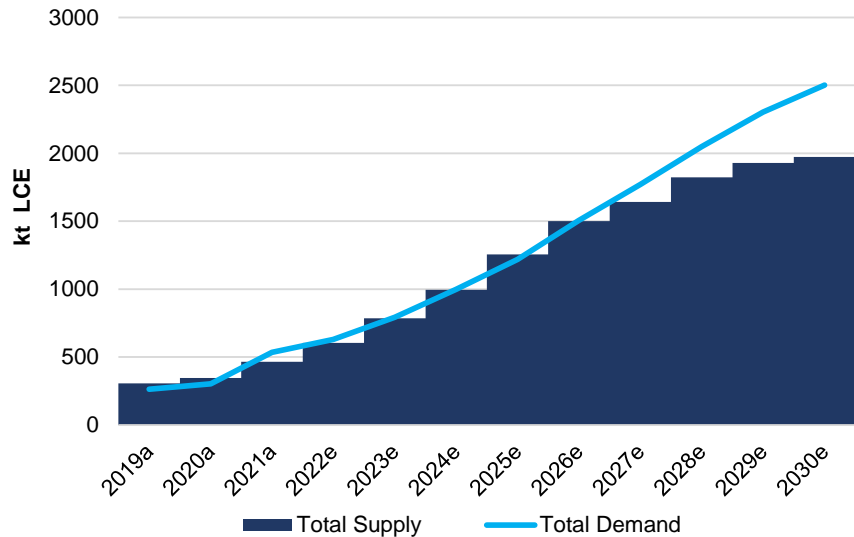
Perhaps the largest change in our forecasts comes post 2025. Previously we anticipated incentive pricing of US\$15k/t but there had not yet been the momentum in *project investment*. Given that we are now 3x our incentive price that and the fact we have seen increased investment being allocated to producing assets, we believe we can pencil in some of the expected production, although on delayed ramp-up timeframes.

Figure 12: Lithium SxD model summary

		2019a	2020a	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
Supply													
Brines	kt LCE	150	150	207	276	342	430	533	600	658	734	784	809
Hard rock mine prod'n	kt LCE	240	225	296	385	498	721	1008	1102	1135	1162	1165	1180
Effective converter capacity	kt LCE	156	195	257	328	442	566	723	901	984	1089	1146	1164
Total market supply	kt LCE	306	346	465	604	785	995	1257	1501	1642	1823	1930	1973
YoY change	%	16%	13%	34%	30%	30%	27%	26%	19%	9%	11%	6%	2%
Demand													
Industrial use	kt LCE	108	104	107	109	111	113	115	118	120	122	125	127
Market share	%	41%	34%	20%	17%	14%	11%	9%	8%	7%	6%	5%	5%
Batteries - EV's	kt LCE	104	137	276	377	513	686	879	1122	1365	1614	1841	2015
Batteries - other (inc WIP)	kt LCE	16	28	117	109	132	162	185	225	243	270	293	313
Total batteries	kt LCE	156	199	428	522	682	886	1104	1388	1650	1927	2179	2375
Market share	%	59%	66%	80%	83%	86%	89%	91%	92%	93%	94%	95%	95%
Total demand	kt LCE	264	304	535	631	793	999	1220	1506	1770	2049	2304	2502
YOY change	%	6%	15%	76%	18%	26%	26%	22%	23%	18%	16%	12%	9%
Market surplus/(deficit)	kt LCE	43	42	-70	-27	-8	-4	37	-5	-128	-227	-374	-529
%		15%	14%	-13%	-4%	-1%	0%	3%	0%	-7%	-11%	-16%	-21%

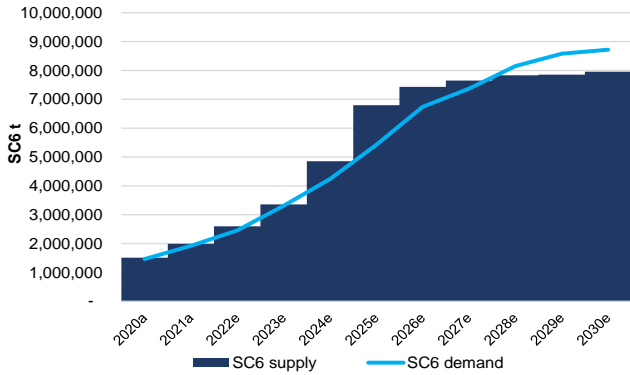
Source: Company reports, Canaccord Genuity estimates

Figure 13: The LCE market balance is close throughout the 2020's until demand outstrips supply. It is likely projects exist but will require higher incentive prices to bring into production



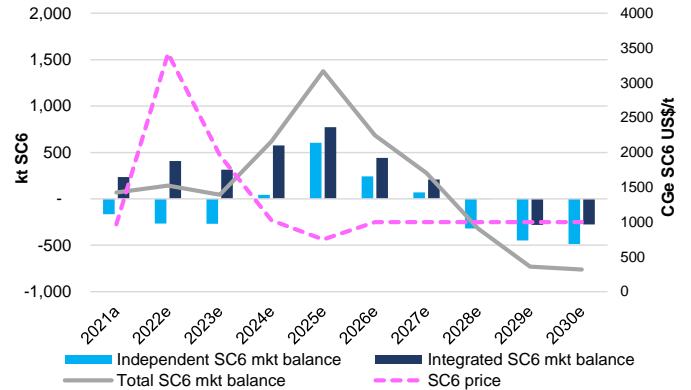
Source: Company reports, Canaccord Genuity estimates

Figure 14: SC6 SxD forecasts (SC production vs SC demand based on effective converter capacity)



Source: Company reports, Canaccord Genuity estimates

Figure 15: Spodumene supply and demand finds closer balance through the 2020's now with additional supply flagged by all major producers

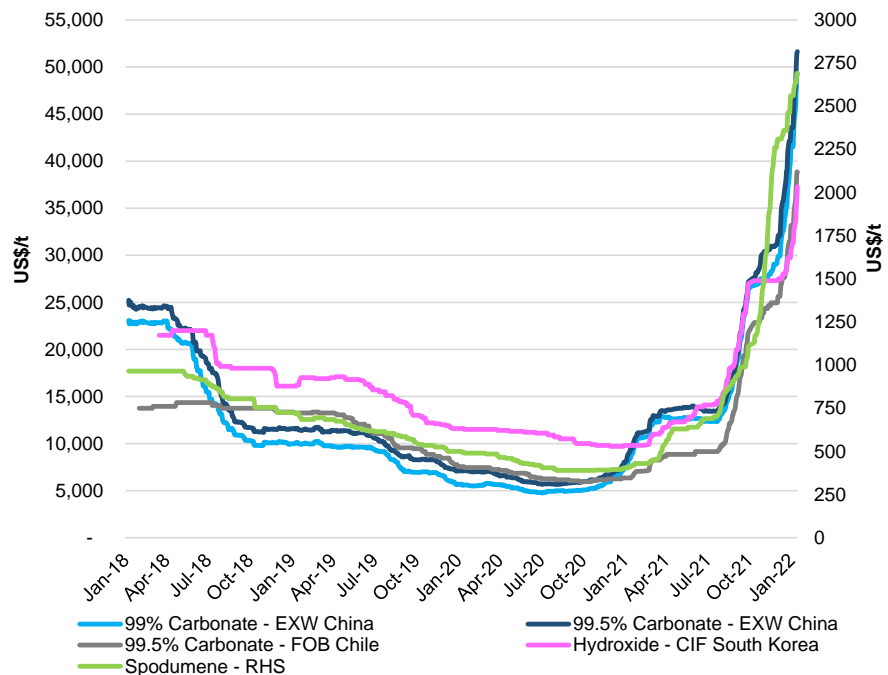


Source: Company reports, Canaccord Genuity estimates

Pricing – into the unknown

We adjusted pricing in September ([Lithium prices go exponential](#)) and were looking for all time high pricing. Since then, pricing has run even further than expected, with Chinese chemical pricing approaching US\$50k/t in early January. We are now well beyond the horizon of pricing, in uncharted territory. Our industry contacts suggest this pricing is not just for marginal fringe participants who are short lithium but (with a lag) by all customers. How long it stays this high and ultimately how high it goes is anyone's guess. We have heard of some auto makers talking of demand destruction at these levels and so how much more pain is able to be absorbed may be limited from here.

Figure 16: Price performance over the last three years (update)



Source: Asian Metals, Benchmark Mineral Intelligence, Canaccord Genuity estimates

Lithium price forecasts – records likely to be broken through 2022

We simply don't know where the ultimate top will be. All we can look for is when pressure relief valves may kick in and, in our view, from the supply side this is not likely until later in SepQ'22/DecQ'22. As a result, we expect pricing to remain elevated.

We have adjusted our near-term price deck higher across all products to match the current trajectory but stop short from pushing pricing beyond US\$55k/t. It may prove to be conservative (yet again), given we also forecast deficits in 2023 and 2024. We have taken the view, however, that as these deficits shrink and additional supply comes into the market fewer customers will 'bid up' pricing leading to a fall in pricing towards 2025. However, considering we are forecasting pricing of ~US\$30k/t (where we thought pricing would peak in 2022) in 2023 we don't think this will be overly impactful for our covered companies.

At US\$50k/t pricing is ~3x our assumed 'incentive price'. Ultimately this causes a supply response which we see hitting the market in 2025. The longer pricing stays at these levels the more likely our forecasted supply issues in 2026 and beyond will be solved. On our current forecast we expect a bottoming of prices in 2025 but have lifted our LT pricing from US\$15k/t to US\$17.5k/t on account of the rise in capital intensity we have seen for projects over the past two years. This follows that the best deposits are likely to be developed first with higher cost or new refining projects (which come with higher capex) developed later.

Figure 17: CGe previous vs new price deck

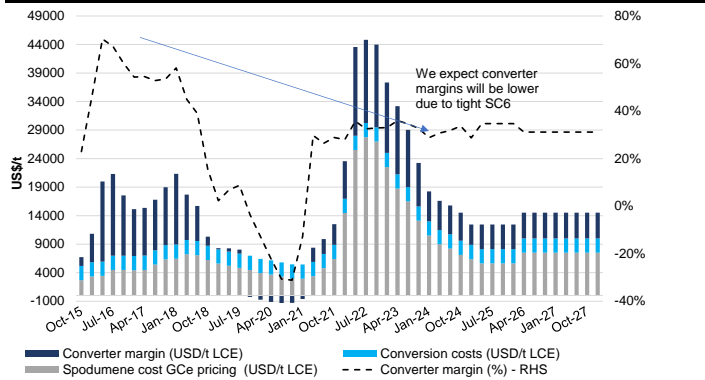
	2021a	2022e	Mar Q'22	Jun Q'22	Sep Q'22	Dec Q'22	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
NEW Spodumene Concentrate 6% Li2O (US\$/t FOB)	968	3425	3400	3700	3600	3000	1963	1025	750	1000	1000	1000	1000	1000
OLD Spodumene Concentrate 6% Li2O (US\$/t FOB)	860	1525	1600	1600	1500	1400	1188	794	669	700	800	800	800	800
	12%	125%	113%	131%	140%	114%	65%	29%	12%	43%	25%	25%	25%	25%
NEW Lithium Carbonate min 99.5% Li (US\$/t China EXW)	16365	51125	52500	54000	53000	45000	31250	17875	15000	17500	17500	17500	17500	17500
OLD Lithium Carbonate min 99.5% Li (US\$/t China EXW)	15768	26250	27000	27500	27500	23000	19688	15500	14375	15000	15000	15000	15000	15000
	4%	95%	94%	96%	93%	96%	59%	15%	4%	17%	17%	17%	17%	17%
NEW Lithium Carbonate min 99% Li (US\$/t China EXW)	15268	50375	52000	53500	52500	43500	29875	17125	14250	16750	16750	16750	16750	16750
OLD Lithium Carbonate min 99% Li (US\$/t China EXW)	14889	25000	25750	26250	26250	21750	18500	14750	13625	14250	14250	14250	14250	14250
	3%	102%	102%	104%	100%	100%	61%	16%	5%	18%	18%	18%	18%	18%
NEW Lithium Carbonate min 99% Li (US\$/t FOB SthAm)	13761	43125	42500	45000	43000	42000	30000	17375	14000	17500	17500	17500	17500	17500
OLD Lithium Carbonate min 99% Li (US\$/t FOB SthAm)	13842	27500	28000	28500	28500	25000	19625	14875	13250	14813	15000	15000	15000	15000
	-1%	57%	52%	59%	51%	68%	53%	17%	6%	18%	17%	17%	17%	17%
NEW Lithium Hydroxide min 57% Li (US\$/t China EXW)	14505	40250	42500	41500	40000	37000	29250	16813	14250	17500	17500	17500	17500	17500
OLD Lithium Hydroxide min 57% Li (US\$/t China EXW)	14680	27250	28000	28000	28000	25000	18000	12250	13250	14000	14000	14000	14000	14000
	-1%	48%	52%	46%	43%	48%	63%	37%	8%	25%	25%	25%	25%	25%
NEW Lithium Hydroxide min 57% Li (US\$/t Asia CIF)	17260	38750	41000	40000	38500	35500	28250	17750	15000	17500	17500	17500	17500	17500
OLD Lithium Hydroxide min 57% Li (US\$/t Asia CIF)	16829	28250	29000	29000	29000	26000	19000	13250	14250	15000	15000	15000	15000	15000
	3%	37%	41%	38%	33%	37%	49%	34%	5%	17%	17%	17%	17%	17%

Source: Asian Metals, Canaccord Genuity estimates

Spodumene has been linked much closer to chemical pricing since the start of 2021 with the deficit in available supply. We base our forecasts for SC6 based on our view on converters maintaining a c.30% margin over the longer term. Figure 18:

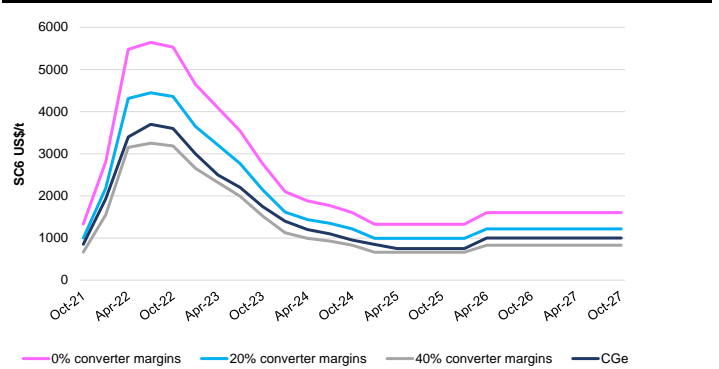
Converter margins unlikely to peak as high as the 2017 price excursion due to a lack of available SC6. In our view, the power ultimately captured by SC6 producers shows what spodumene pricing could be achieved at differing converter margins. **Of note is the potential for converters to pay over US\$5,000/t throughout 2022 if they accept 0% margins!**

Figure 18: Converter margins unlikely to peak as high as the 2017 price excursion due to a lack of available SC6. In our view, the power ultimately captured by SC6 producers



Source: Asian Metals, Canaccord Genuity estimates

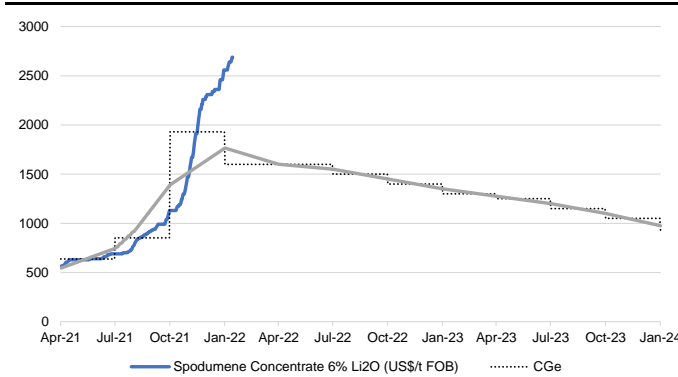
Figure 19: Potential for converters to pay higher pricing for SC6 will depend on views



Source: Asian Metals, Canaccord Genuity estimates

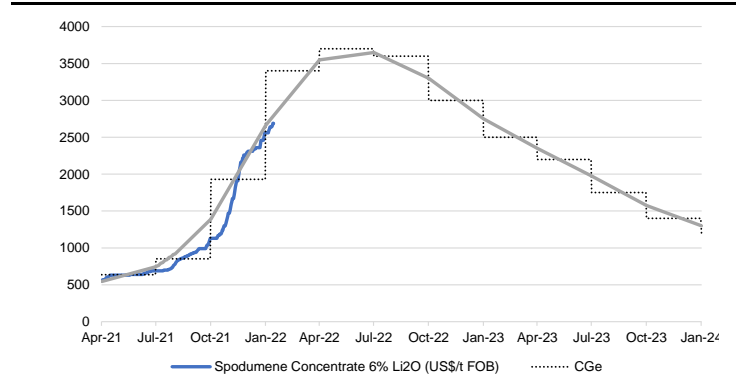
Our price forecast in September 2021 was quickly exceeded as pricing continued to push higher. As highlighted above we may be too conservative again if chemical prices are maintained at spot for any period of time.

Figure 20: Spodumene pricing and previous CGe forecasts



Source: Asian Metals, Canaccord Genuity estimates

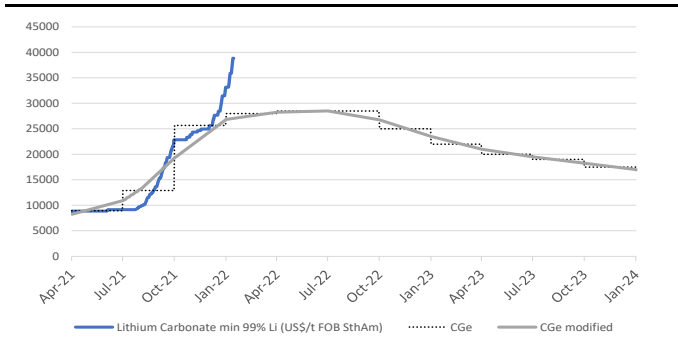
Figure 21: Spodumene pricing and updated CGe forecasts



Source: Asian Metals, Canaccord Genuity estimates

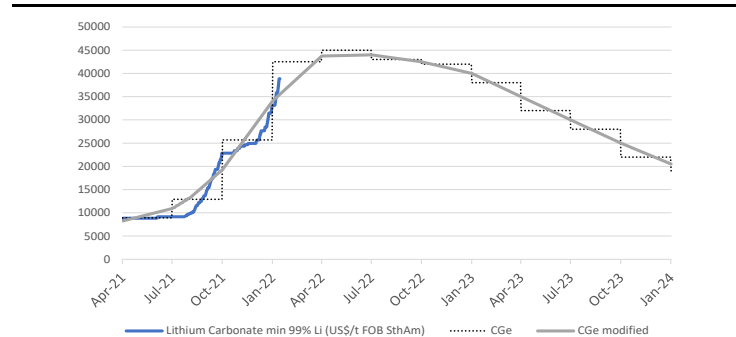
Carbonate prices rallied in September/October before pausing into the end of the year before running again to catch up to Chinese chemical pricing.

Figure 22: South American lithium carbonate pricing and previous CGe forecasts



Source: Asian Metals, Canaccord Genuity estimates

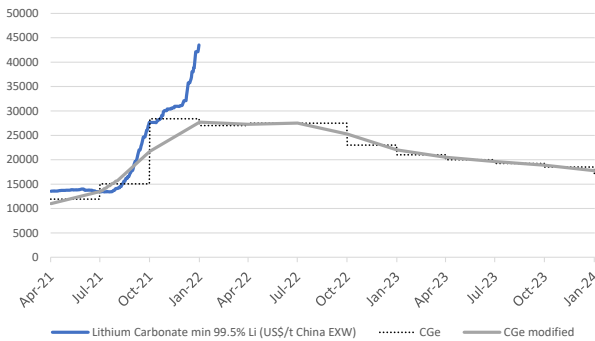
Figure 23: South American lithium carbonate pricing and updated CGe forecasts



Source: Asian Metals, Canaccord Genuity estimates

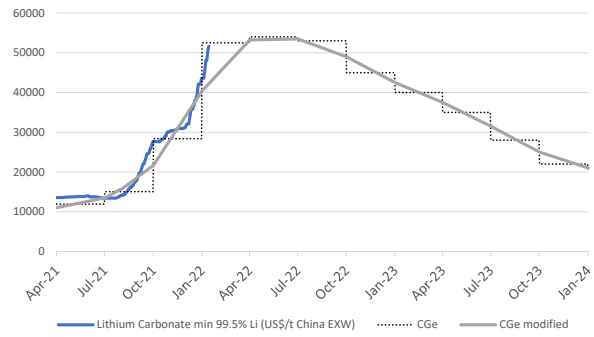
Chinese pricing has set the price trend over the last four months driven, we believe, by high demand for LFP batteries. During the 2017 run up there was a large expectation for NMC chemistries to dominate the cathode. Over the past three years we have seen LFP arguably grow in market share which has likely resulted in stronger demand growth for carbonate over hydroxide. We think this persists while consumers seek lower cost cathodes.

Figure 24: Lithium carbonate ex-works China pricing and previous CGe forecasts



Source: Company reports, Canaccord Genuity estimates

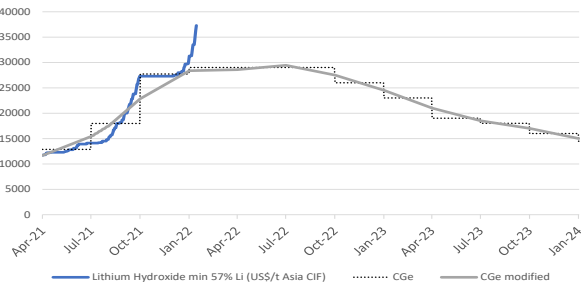
Figure 25: Lithium carbonate ex-works China pricing and updated CGe forecasts



Source: Company reports, Canaccord Genuity estimates

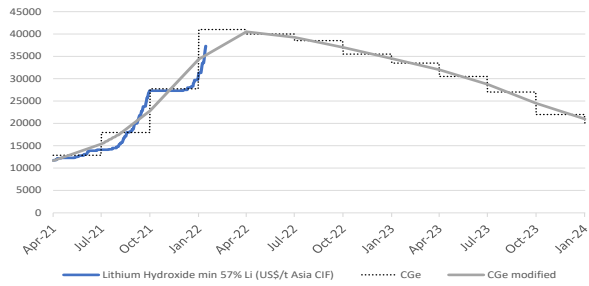
Lithium hydroxide rose steadily through the DecQ'21 and then rallied strongly in January with the other lithium commodities. We anticipate this pricing series to lag the spodumene and Chinese carbonate pricing as it is largely influenced by longer term contracts.

Figure 26: South Korean lithium hydroxide pricing and previous CGe forecasts



Source: Asian Metals, Canaccord Genuity estimates

Figure 27: South Korean lithium hydroxide pricing and updated CGe forecasts



Source: Asian Metals, Canaccord Genuity estimates

CG Lithium sector coverage

Figure 28 outlines estimate revisions for producers on our updated lithium pricing assumptions. See Figure 2 for target price and rating changes. PLS and IGO both stand out in near-term earnings with both companies likely to lift EBITDA towards A\$2bn in FY23. However, FY24 demonstrates IGO's more diversified base with EBITDA of A\$1.2bn while PLS's EBITDA falls to A\$0.9bn on our forecasts.

Figure 28: CG lithium producer estimate revisions

		2022E			2023E			2024E		
EBITDA CHANGES		New	Previous	Δ	New	Previous	Δ	New	Previous	Δ
IGO	A\$M	\$1,232	\$706	75%	\$1,922	\$957	101%	\$1,248	\$781	60%
PLS	A\$M	\$977	\$676	45%	\$1,891	\$830	128%	\$898	\$552	63%
AKE	US\$M	\$484	\$317	53%	\$765	\$488	57%	\$747	\$589	27%

		2022E			2023E			2024E		
NPAT CHANGES		New	Previous	Δ	New	Previous	Δ	New	Previous	Δ
IGO	A\$M	716	\$372	92%	1120	\$516	117%	639	\$387	65%
PLS	A\$M	654	\$438	49%	1298	\$542	140%	627	\$365	72%
AKE	US\$M	344	\$42	720%	528	\$119	343%	493	NA	28%

		2022E			2023E			2024E		
FCF CHANGES		New	Previous	Δ	New	Previous	Δ	New	Previous	Δ
IGO	A\$M	-491	\$345	-242%	1193	\$570	109%	670	\$349	92%
PLS	A\$M	572	\$374	53%	1098	\$392	180%	343	\$220	56%
AKE	US\$M	301	\$93	423%	152	\$15	888%	318	-\$176	280%

Source: Canaccord Genuity estimates

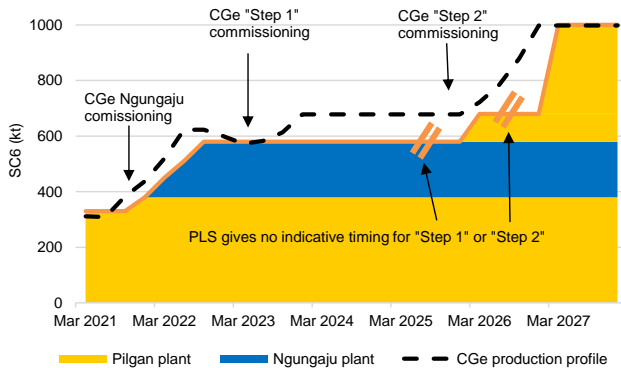
Pilbara Minerals Ltd (PLS-ASX: A\$3.56, mkt cap A\$11,282m | HOLD (from Buy), TP A\$3.90 (from A\$2.70), Tim Hoff)

We have updated our model for our pricing scenario and accelerated our expansion scenario at the Pilgangoora operations. We have also updated our EV/EBITDA multiple to 13x from 15x on account of our view that we are closer to the top of pricing than the bottom. This has led to a 39% increase in our price target to A\$3.90. PLS is arguably the most levered name to the current lithium market, with EBITDA and FCF growth, but arguably the equity is now pricing in much of this in. It is also the most concentrated exposures with one operation in one jurisdiction. WA is now facing cost pressures and will likely be impacted over the next six months from the spread of COVID-19, in our view.

Figure 29 and Figure 30 below show our previous production profile and our updated profile. PLS has the resource base to expand and *should* be expanding to capture market share, especially since new production will compete for its current marginal buyers. On our accelerated forecast PLS's EBITDA still peaks in 2023E at A\$1.9bn before falling in 2025E to A\$531m.

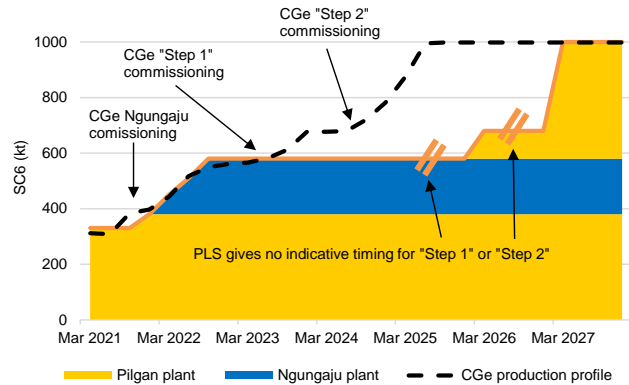
As mentioned in the pricing section current spot pricing could encourage spodumene buyers to bid up pricing towards US\$5,000/t which will likely result in further rallies in the stock price. Given the stock has rallied 76% over the last three months vs peers AKE (+20%) and IGO (+32%) we see the stock trading at fair value (0.95x P/NAV) but seek value in other names or entry points on pull-backs.0020

Figure 29: Previous CGe ramp-up forecast to 1Mtpa



Source: Company reports, Canaccord Genuity estimates

Figure 30: Updated CGe ramp-up profile to 1Mtpa



Source: Company reports, Canaccord Genuity estimates

IGO Limited (IGO-ASX: A\$12.80, mkt cap A\$10,110m | BUY, TP A\$15.00 (from A\$11.00), Tim Hoff)

We have updated our model for our pricing scenario for lithium and nickel and have integrated the WSA assets on our view that the WSA deal proceeds. Like with PLS we have derated our lithium business multiple from 15x to 13x. This has led to a 36% increase in our price target to A\$15.00. While less levered to lithium than PLS or AKE, we view IGO's diversification and strategy as a strength to lever into battery materials and eventually downstream chemicals rather than simply lithium.

In December 2021, IGO announced that it had entered into a scheme of implementation with WSA to acquire all WSA all shares for A\$3.36/share, which the WSA Board has recommended. On our updated price deck the acquisition appears well timed. IGO's focus will be on the Odysseus mine; however, we believe there is optionality that may be unlocked by an owner with a larger balance sheet than WSA. Options in our view include expansion of the primary sulphide operation, potential large scale bulk underground mining to mine the Mt Goode and disseminated deposits and ultimately this to feed a downstream facility. For a business which previously lacked a pipeline of projects (other than early-stage exploration and Silver Knight), acquiring WSA gives IGO assets to optimise.

Figure 31: Our SOTP valuation for IGO

DecQ '22	A\$m	RISK ADJ.	EQUITY	A\$m	PER SHARE
Greenbushes	17340	100%	25%	4333	\$5.72
Kwinana	3617	100%	49%	1772	\$2.34
Nova	1390	100%	100%	1390	\$1.84
Forrestania	63	100%	100%	63	\$0.08
Odysseus	1086	100%	100%	1086	\$1.43
Exploration	200			200	\$0.26
Corporate	-463			-463	\$0.61
Investments minus JV debt - A\$600*24%	112			112	\$0.15
Net Cash	554			554	\$0.73
TOTAL				9048	\$11.95
		5 yr ave EBITDA	Multiple		
Nickel business		530	6	3179	
LithiumHold Co		775	13	10077	
Total		1305	10	13257	
Add net cash				13810	\$18.24
				NAV 50%	\$5.97
				EV/EBITDA 50%	\$9.12
Blended price target					\$15.00

Source: Canaccord Genuity estimates

Allkem Limited (AKE-ASX: A\$10.35, mkt cap A\$7,070m | BUY, TP A\$15.00 (from A\$12.00), Reg Spencer)

AKE delivered a strong DecQ production result (see [DecQ report – first look](#)), with QoQ increases in carbonate output at Olaroz, and better than expected concentrate production from Mt Cattlin (including a CY21 production guidance beat). The outlook remains positive, with AKE pointing to continued pricing momentum in 2022, with prices for chemicals set to increase by 60% over DecQ averages in 1H'CY22, and 51% for concentrate, to US\$2,500/t in the MarQ'22.

We expect the focus to begin to shift to delivery of AKE's various growth projects, with Naraha LiOH scheduled for commissioning in 1H'22, Olaroz II expansion (2H CY22), FID for James Bay in 2H'CY22, while extended timelines for Sal De Vida (commissioning now expected 2HCY23 from 1HCY23) potentially offset by a possible increase in Stage 1 capacity to 15ktpa. AKE are expected to release a detailed plan for their growth projects (we expect this to include updated project timelines, additional capacity expansions such as Cauchari/Olaroz III/Sal de Vida II/Naraha II, and capital cost requirements) in the MarQ'22.

Specific model revisions relate primarily to Sal de Vida (increased stage 1 capacity to 15ktpa and pushed commissioning out to 2HCY23) and James Bay (minor changes to model assumptions following the feasibility study in December 2021, including revisions to our assumed downstream converter in Quebec – see [James Bay feasibility study – first look](#)).

Estimate revisions (outlined in Figure 28) relate primarily to our updated lithium price deck, with an average 41% increase in modelled EBITDA over FY21E-23E. Our target price (blended NPV9% and 13x five-year forward average EBITDA) increases to A\$15.00 from \$12.00.

Lithium Americas Corp: (LAC-TSX: C\$31.56, mkt cap C\$4,028 | SPEC BUY, TP C\$54.00 (from C\$46.00), Katie Lachapelle)

Lithium Americas made considerable progress over the last 12 months. Construction continued at Cauchari-Olaroz, and the project remains on track for first production in mid-2022. We look forward to further details on a Stage 2 expansion to 60ktpa (+20ktpa, Stage 1 40ktpa LCE), which are expected in Q1 2022.

At Thacker Pass, LAC announced an updated M&I resource (+128%), and an increase in Phase 1 production capacity to 40kt LCE in the upcoming Feasibility Study. The FS is also expected to incorporate a potential Phase 2 expansion, which would double capacity to 80ktpa. The final design of the project will depend on the outcome of the strategic partnership process, which is ongoing. With respect to project permits, a court hearing on the appeal of the ROD is scheduled to take place in Q1 2022. We expect the appeal ruling to go in LAC's favour. Early-works construction could start shortly thereafter. We forecast first production in 2025.

Another major potential catalyst for LAC, in our view, will be the completion of the acquisition of Millennial Lithium which is expected to close on 25 January. After the transaction closes, LAC plans to release more details on their development plan for Pastos Grandes. We expect this plan to be materially different than Millennial's given the proximity of Pastos Grandes to Cauchari-Olaroz (~100km), and potential regional synergies.

We have updated our estimates to reflect our revised lithium price deck. As a result, our 12-month NAVPS has increased to C\$53.88 (previously C\$38.51), and we are increasing our target price to C\$54.00, from C\$46.00 previously. Our target price is based on 1.0x NAV, now measured as at 1 January 2023. Given the 61% implied return to our target, we maintain our SPEC BUY rating.

Liontown Resources (LTR-ASX: A\$1.62, mkt cap A\$3,801m | SPEC BUY, TP A\$2.30 (from A\$1.90), Reg Spencer)

LTR completed a DFS for Kathleen Valley in November 2021 (see [Kathleen Valley DFS recap](#)), and completed an A\$450m placement (plus SPP) to fund initial Stage 1 development costs. Detailed engineering and design work is underway for the project, with LTR targeting the award of all key equipment packages over the next six months. First production from Stage 1 is scheduled for 2024.

LTR announced its first offtake agreement in January 2022 with major Li-ion battery producer LG Energy Solutions. Terms of the offtake include an initial five years (with option for additional five years), covering 100ktpa concentrate in Year 1, increasing to 150ktpa in subsequent years (vs Stage 1 capacity of >500ktpa SC). Pricing under the offtake is linked to LiOH chemical prices.

Our target price (risked NPV9%) for LTR increases to A\$2.30 from A\$1.90, reflecting updated lithium pricing assumptions, net of the and the impact of the capital raising and share issue.

Ioneer: (INR-ASX: A\$0.74, mkt cap A\$1,661m | HOLD (from Spec Buy), TP A\$0.85 (from A\$0.75), Tim Hoff)

We have updated our price target for INR after its successful placement to Sibanye-Stillwater and have normalised our discount rate to 8% (previously 7%), in line with our sector coverage.

2021 closed out a successful year for INR, signing an offtake agreement with EcoPro, securing a US\$490m investment commitment from Sibanye-Stillwater for 50% of the project and raising c.A\$175m in new equity. This leaves INR in a strong position to secure the remaining capital it requires to fund the plant. INR was invited to submit an application for a US DOE Loans Program which along with additional debt, we expect to fully fund the project.

Looking to 2022 INR will have a busy year of project preparation with the awarding of work modules, further offtake agreements and a listing on the US stock exchange. A key to the project timing remains permitting of the project by the BLM. This is likely to be delivered in the middle of the year and we expect there to be a strong focus on the Thiem's Buckwheat. We believe INR has taken mitigating actions to avoid disturbance and enhance the protection of the (likely, in our view) potentially endangered plant. However, timing for the permits has been extended and while delays are likely to be used to further preparatory work, it ultimately pushes back cash flows.

With the stock performing well throughout 2021 and trading at 0.93x P/NAV we downgrade to a HOLD and look for better opportunities to enter the stock once permitting and timeline risks are resolved.

Standard Lithium Corp: (SLI-TSX: C\$8.14, mkt cap C\$1,311 | SPEC BUY, TP C\$14.00 (unchanged), Katie Lachapelle)

SLI continues to advance work on its 20.9ktpa LCE direct lithium extraction project in South Arkansas. We anticipate a final investment decision on the project in Q4 2022, following the release of a Definitive Feasibility Study. The FS is already well underway. All resource data is complete, and management is now focused on optimization of the commercial scale plant using data from its demonstration plant (which has been operating on a 24/7 basis since May 2020).

The next major milestone will be the renegotiation and finalization of the terms of the joint venture with LANXESS. In our view, SLI is in a far better negotiating position than it was in 2018 when the JV Term Sheet was first signed. Lithium prices have improved dramatically and the company recently announced a US\$100 million direct investment from Koch Strategic Platforms (note [here](#)). These funds (and Koch's backing) could be used as negotiating tools to help increase SLI's stake in the project – 70% LANXESS/30% SLI was previously proposed. Discussions are already underway, and management expects to provide an update in January 2022.

We view the recent pullback in SLI's shares (-30% MoM) as a good buying opportunity ahead of a catalyst rich 2022. In addition to updated JV terms, we expect additional news on SLI's development plans, Koch's involvement in the project, and SLI's strategy for its South-West Arkansas (SWA) project.

Our model has been revised to reflect our updated lithium price deck and recent share price performance. We've also assumed that SLI is successful in achieving all milestones required to increase its interest in the project to 40% (based on the previous non-binding JV terms). The company is now trading at 0.7x NAV, despite having historically traded at a premium to peers. Given recent volatility we have reduced our target multiple to 1.0x NAV to align with peers. As a result, our target price remains unchanged at C\$14.00 and we maintain our SPEC BUY rating.

Canaccord Genuity (Australia) Limited has received a fee as Joint Lead Manager to the Vulcan Energy Resources Limited Capital Raisings announced 2 February 2021 and 14 September 2021.

Vulcan Energy Resources (VUL-ASX: A\$9.42, mkt cap A\$1,316m | SPEC BUY, TP A\$23.00 (from A\$22.00), Tim Hoff)

We think Vulcan remains one of the most compelling stories in the lithium sector from a valuation point of view and thematically, exposed to the European battery supply chain. We have updated our price deck and increased our discount rate to 9% to better align with our coverage universe. Vulcan is well funded to deliver its near-term ambitions of delivering the pilot plant, progressing engineering of the Central Lithium Plant and delivering a DFS. Our price target has increased by 5% to A\$23.00 (0.42x P/NAV).

Vulcan had an outstanding 2021, delivering a PFS for its Zero Carbon Lithium project; aligning with DuPont to progress its DLE tech: signing five offtakes with LG Energy Solutions, Umicore, Renault, Stellantis and Volkswagen; raising c.A\$320m in equity, and in early 2022 expanding its tenement holdings and signing an agreement with Nobian to study a joint development of the Central Lithium Plant amongst a few.

In 2022 Vulcan plans to progress geological studies on over the project areas, deliver its Phase 1 DFS and updated Phase 2 study, progress Phase 1 financing (a full offtake book will likely benefit VUL in our view), construct and commission a demonstration DLE plant and advance licence and permitting.

Canaccord Genuity (Australia) Limited has received a fee as Joint Lead Manager to the Core Lithium Limited Capital Raising announced 9 August 2021.

Core Lithium (CXO-ASX: A\$0.85, mkt cap A\$1,532m | SPEC BUY, TP A\$1.00 (from A\$0.70), Tim Hoff)

Core remains on track to progress the Finnis Lithium project in the Northern Territory in 2H'22. This represents one of the few greenfield sources of lithium (spodumene concentrate) available to the market in 2022. As outlined in our [initiation](#), the DFS envisions a 175ktpa of SC6 operation mined over eight years at an AISC of US\$441/t SC6. We have updated our pricing assumption and, given incentive pricing is in place, expanded production by 50% throughout the mine at a capex cost of A\$30m leading to a 42% increase in our NAV to A\$1.00/share (0.88x P/NAV).

CXO is fully financed to deliver the project and will continue its exploration program to delineate additional resources in 2022. We take the view that the Bynoe Pegmatite field has further upside for resource expansion and believe this is one of the keys to unlocking further value at CXO ([Drills Ah Hoy!](#)). Once a larger resource is delivered CXO has optionality to double capacity or develop a downstream processing facility which have previously flagged by management.

Sigma Lithium Corp: (SGML-TSX: C\$11.97, mkt cap C\$1,121 | SPEC BUY, TP C\$17.00 (from C\$14.00), Katie Lachapelle)

Sigma Lithium performed extremely well in 2021, returning 335%. Significant advancements were made on the company's flagship project, Grota do Cirilo, including the commencement of early works and civil works construction on site. Initial production is on track for Q4 2022. Phase 1 and Phase 2 production are well supported by offtake agreements with Mitsui and LG Chem, the latter of which was signed in October 2021 (see our note [here](#)).

Before year-end the company successfully completed an upsized private placement of 11.6 million common shares priced at C\$11.75/share. Gross proceeds of the transaction were C\$136.7 million, C\$64.2 million of which was invested by funds and accounts managed by BlackRock. The proceeds from the offering will fully-fund construction of Phase 1 and should help advance Phase 2 and Phase 3 of the project.

Sigma remains our [top pick](#) among North American listed peers. In our view, the company is uniquely positioned to capitalise on higher prices (spot SC6 \$2,700/t vs. Phase 1 cash cost \$342/t), as one of few developers that can actually reach production in 2022. We also see substantial exploration upside on Sigma's property. The company is currently completing a ~12,000m drill program with the goal of increasing mineral resources by at least 50%. We apply a nominal in-situ valuation for existing mineral resources that are not currently included in SGML's mine plan.

Some key potential catalysts to look out in 2022 include the release of a Pre-Feasibility Study in Q1, exploration program results and additional offtake and/or financing agreements for Phase 2 and 3.

We have revised our estimates to reflect our updated lithium price deck and rolled forward our target NAV to 1 January 2023. As a result, our target price has increased 21% to C\$17.00. Our revised target price is based on 1.0x NAV. SGML currently trades at 0.7x NAV; we anticipate a re-rate as the company defines additional resources on its property and transitions from a developer to a producer generating free cash flow. Given the 33% implied return to our target, we maintain our SPEC BUY rating.

Lake Resources (LKE-ASX: A\$0.94, mkt cap A\$1,228 | SPEC BUY, TP A\$1.50 (from A\$1.15), Reg Spencer)

Following the release of our initiation report in October (see [Some fine Argentinian brine](#)), LKE commenced Resource drilling at its Kachi lithium project in Argentina. Drilling at Kachi is targeting both infill (current Resource comprises 77% Inferred) to support the DFS (due 1H'22, now to include assessment of expansion of capacity to 50ktpa, in line with our base case assumptions), as well as target Resource increases to support the expanded production capacity. In addition to the work currently being completed at Kachi, LKE have also commenced drilling at its other 100% Olaroz, Cauchari and Paso projects to assess resource potential with results expected over 1H'22.

Looking into 2022 we expect project financing and offtake discussions to progress, with plenty of additional news flow on the horizon (drilling, updated studies). We also highlight the recent increase in M&A activity in the sector and point out that Kachi is one of the last few, independent (no offtake committed) brine projects left globally. In our view, this makes the project highly strategic.

We have updated our estimates to reflect our revised price deck and rolled forward our valuation. As a result, our target price increases to A\$1.50 (from A\$1.15), 55% above the current share price. Our SPEC BUY rating is maintained.

Piedmont Lithium (PLL-ASX: A\$0.68, mkt cap A\$1093m | SPEC BUY, TP A\$1.55 (from A\$1.35), Reg Spencer)

Piedmont has continued to make solid progress over recent months, releasing a DFS for its Carolina lithium project, while also advancing key permits. While the LiOH production profile of 30kt outlined in the DFS remains unchanged, the source of the spodumene fed to the Carolina convertor has been revised. The DFS now envisages an initial SC6 production target of 242kt over 11 years which will be sourced entirely from Ore reserves (18Mt) at the Carolina spodumene mine (prior 248kt over 20 years from inventory of 37Mt). The study incorporates additional LiOH production (+19 years) to be sourced from offtake rights of over >200ktpa SC6 through the JV with Atlantic Lithium on the Ewoya Project in Ghana, and the JV with Sayona Mining's (SYA-ASX | Not Rated) Authier/NAL development projects in Quebec, Canada. Over the 30-year life of the project, production is expected to average 30kt LiOH, which would see Piedmont rank as the largest LiOH project in North America.

While the project's capital intensity of US \$33k/t is considerably higher than the US\$28k/t peer average, we suspect inflationary pressures will likely see average industry capital intensities increase, with a 'catch-up' in capex/opex among peer projects (specifically those with older/outdated studies).

Looking in to 2022 we expect permitting and approvals to be a key theme (mid-2022), with offtake and financing discussions to ramp up shortly after. We have revised our development scenario to align with that outlined with the DFS, and have updated our model to include the new price deck. As a result, our price target increased to A\$1.55 with our SPEC BUY rating maintained.

Neo Lithium Corp: (NLC-TSX: C\$6.42, mkt cap C\$907 | HOLD, TP C\$6.50, Katie Lachapelle)

In October 2021, Neo Lithium announced that it had received an all-cash offer from Chinese mining giant, Zijin Mining (2899.HK | Not rated), to acquire all outstanding shares of NLC at a price of C\$6.50/share, for total consideration of C\$960 million.

The transaction is expected to close the week of 27 January 2022. All approvals from the mining and environmental authorities of Catamarca Province, Argentina have been received. The company is waiting on final regulatory approval from China (one approval is pending). We maintain our HOLD rating and C\$6.50 target price, which is in line with the acquisition price.

Canaccord Genuity (Australia) Limited has received a fee as Joint Lead Manager to the Firefinch Ltd Capital Raisings announced 28 June 2021 and 13 December 2021.

Firefinch Resources (FFX-ASX: A\$0.75, mkt cap A\$931m | SPEC BUY, TP A\$1.90 (from A\$1.55), Reg Spencer / Paul Howard)

Since the release of our [initiation](#) report in Sep'21, FFX has delivered an updated DFS for the Goulamina lithium project (which now sees an expanded production scenario up to 800ktpa SC6 from ~430ktpa - see [DFS recap](#)) and in early January 2022 committed to project development with an FID (see [Goulamina FID](#)).

At Morilla, gold production is expected to ramp up over CY22 with mining was achieved during the DecQ (see [here](#)), and exploration drilling has uncovered a new high-grade zone on the eastern side of the Morilla Super Pit in Mal, which we believe will add additional ounces outside the current resource.

FFX also recently completed a placement and SPP at A\$0.67/share. Gross proceeds of the transaction were A\$100m with proceeds committed to lifting gold production at Morilla and accelerate exploration at Goulamina.

We have revised our estimates to reflect our updated lithium price deck and have rolled forward our model. As a result, our price target increases to A\$1.90. We note the recent ECOWAS sanctions placed on Mali which has put downward pressure on the stock over the last week, however operations at Morilla remains unaffected, while the Leo Lithium (Goulamina) demerger remains scheduled for MarQ'22. We maintain our SPEC BUY rating.

Canaccord Genuity (Australia) Limited has received a fee as Lead Manager to the Galan Lithium Limited Capital Raising announced 12 August 2021.

Galan Lithium Limited: (GLN-ASX: A\$1.71, mkt cap A\$546m | SPEC BUY, TP A\$3.40 (from A\$2.80), Reg Spencer)

Galan continues to make progress at both its Hombre Muerto West and Candelas Lithium projects. As a recap, GLN completed a PEA for HMW in 2020 which outlined a 40-year 20ktpa Li2CO3 operation with capex/opex of US\$439m and ~US\$4,000/t respectively (see recent [initiation here](#)). Resource drilling, brine flow testing and permitting discussions (potential for LiCl concentrate production) are underway, with results expected in the 1H'2022.

At Candelas, GLN recently released the outcomes of a PEA (see [Candelas recap](#)) which combined with HMW represents possible combined production capacity of ~35ktpa LCE across both projects. Work at Candelas to optimise areas of the project are currently underway, with a focus on the location of the evaporation ponds. Results received over the coming months will likely put GLN in a position to firm up a development strategy for Candelas and HMW, which in our view presents as a potential re-rating event.

After updating our model to incorporate our most recent price deck, and rolling forward our model, our target price increases by 21% to A\$3.40.

Rock Tech Lithium: (RCK-TSX: C\$5.13, mkt cap C\$367 | SPEC BUY (from Hold), TP C\$7.00 (from C\$7.50), Katie Lachapelle)

We initiated coverage of Rock Tech in October 2021. Since our launch, the company completed an engineering study on the construction and operation of its proposed lithium hydroxide converter in Germany. The study outlined an initial capital cost of €462 million for a 24kt per annum converter that is expected to produce lithium hydroxide at an average LOM operating cost of ~US\$8,427/t. A site has already been secured for the converter in Brandenburg Germany, a 90-minute drive from Tesla's Berlin Gigafactory. The company's long-term goal is to build and operate four of these conversion plants in Germany by 2030, to capitalise on booming EV sales in Europe. We view this buildout as ambitious, and only model one conversion plant at this time.

Several project development milestones need to be achieved in 2022, to meet management's projected timeline of first production in 2024. These include: a Pre-Feasibility Study (Q1 2022), awarding of an EPCM contract, ordering of long lead time items, a strategic partnership agreement (H1 2022), and a complete project financing package (H1 2022). To be conservative, our model continues to assume a one-year delay with first production in 2025.

We have revised our model to reflect our updated lithium price deck and recent share price performance (-25% since our last update). Our future equity raises now occur at the current share price, which offsets the rise in our price deck. As a result, we are modestly reducing our target price to C\$7.00 (previously C\$7.50). Our target price is based on 1.0x NAV measured as at 1 January 2023. Given the recent pullback in the shares, and the 36% implied return to our target we are upgrading RCK to SPEC BUY (from Hold).

Canaccord Genuity (Australia) Limited has received a fee as Lead Manager to the Prospect Resources Limited Capital Raisings announced 14 April 2021 and 29 October 2021.

Canaccord Genuity (Asia) Beijing Limited is acting as Zhejiang Huayou Cobalt's exclusive financial adviser in its acquisition of Prospect Resources Ltd's stake in Prospect Lithium Zimbabwe and expects to be paid a fee for this role.

Prospect Resources (PSC-ASX: A\$0.86, mkt cap A\$369m | SPEC BUY, TP A\$1.10 (from A\$1.12) Tim Hoff)

In December 2021, PSC announced that it had received an all-cash offer from Chinese mining company, Huayou cobalt (603799.SHA | Not rated), to acquire 100% of the Arcadia project from PSC and its minority shareholder for US\$422m (A\$590m). PSC has highlighted it intends to retain up to US\$50m for investment in other projects and return the remainder (c.A\$0.90/share on our estimates) to shareholders.

PSC anticipates the transaction to close in late MarQ/early JunQ 2022, pending the successful completion of conditions precedent (see [Lithium Santa has one more gift for 2021](#) for list of conditions).

The company has released that it will settle an offtake break fee for US\$8m. We have now taken this into account and forecast US\$30m in capital gains tax and A\$20m in selling costs in our valuation. This has led to a minor revision of our price target down to A\$1.10, see Figure 32 for our SOTP. Maintain SPEC BUY, 0.77x P/NAV (17.5% below cash backing!).

Figure 32: Our basic SOTP

DecQ '22	A\$m	RISK ADJ. EQUITY	A\$m PER SHARE
Exploration	30		\$0.06
Cash distribution	422		\$0.90
Net Cash	62		\$0.13
TOTAL		514	\$1.10
Price target			\$1.10

Source: Company reports, Canaccord Genuity estimates

Canaccord Genuity (Australia) Limited has received a fee as Lead Manager to the Lithium Power International Ltd Capital Raising announced 16 August 2021.

Lithium Power International (LPI-ASX: A\$0.67, mkt cap A\$255m | SPEC BUY, TP A\$1.20 (from A\$0.55), Reg Spencer)

LPI is nearing an FID for the 52% owned Maricunga brine project in Chile after recently releasing an updated DFS (see [Updated Maricunga DFS – first look](#)). The DFS outlined an initial, 20-year, 15.2ktpa brine project, with capex/opex of US\$626m (inc. US\$62m contingency) and US\$3,718/t, respectively. The study is based on Resources hosted within the permitted 'Old Code' concessions (1.9Mt at 951ppm Li); however, we note an additional 1Mt are hosted within 'New Code' defined to depths of only 200m. Additionally, LPI has outlined an exploration target of 1.2-2.1Mt LCE within the project area. Subject to further drilling, increased Resources could ultimately support a 'Stage 2' expansion of planned production/capacity to ~30ktpa LCE, in our view.

Looking forward, LPI will update EPC proposals (Q1'22) ahead of the FID expected at the back end of 2022. Subject to funding, LPI could commence construction in 2022 and achieve first production in late 2024.

We have increased our project capex and made minor revisions to our production model to align with the recent DFS. Updated lithium pricing assumptions and adjusted project risk weighting (80% from 55%, reflecting de-risking on completion of the updated DFS) sees our target price (risked NPV10%) increase to A\$1.20.

Atlantic Lithium (ALL-AIM: 35p, mkt cap £201m | SPEC BUY, TP 60p (from 45p), Sam Catalano)

Based on scoping study outcomes for a ~300ktpa SC6 operation, we estimate that Ewoyaa is both the lowest opex (~US\$230/t, plus ~US\$18/t in SIB) and lowest capex intensity (~US\$238/t) spodumene project available for development globally. We see the next key potential catalyst as the release of a PFS study, expected ~end-1Q22. Further we note that Atlantic has ~US\$20m of cash (and no debt), in addition to being fully-funded to production through its agreement with Piedmont Lithium (Piedmont has agreed to an earn-in agreement which will see it fully fund regional exploration, feasibility studies and construction of Ewoyaa in a total commitment of ~US\$102m).

In addition to PLL's group level holding (~10%), it will also take a 50% interest in both the project and spodumene offtake. We believe a key point of differentiation to many peers will be the release of a positive PFS during 1H22, but with no subsequent capital call required for further study or development. We expect ongoing positive exploration news flow (we note the recent ~50% increase to the resource base, which supports a ~11-12-year mine life). Within the context of a very active M&A backdrop within the Lithium sector, we note that ALLA retains control over 50% of offtake, maintains control and operatorship of the asset, and PLL holds no pre-emptive options over ALLA's 50% of the asset and offtake.

With the European market less familiar with primary Lithium producers than some other regional markets, we believe that ALLA trades at a discount to peers on a consistent P/NAV basis, accordingly our TP is reached by aligning with trading levels of global peers. Today's lithium deck changes see us upgrade our ALLA NPV to 45p/share (from 35p/share) and target price to 60p (based on a consistent 1.3x NPV to align with global peers – see [initiation](#) for further details on target price methodology).

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