

# Specialty Minerals and Metals

Global Equity Research

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Company	Rating	Price	Target
<b>Base Metals - Producer</b>			
IGO-ASX	Buy↑	A\$6.60	A\$8.50↑
previous	Hold		A\$7.25
<b>Specialty Minerals and Metals</b>			
BCN-AIM	Buy	48p	85p
GXY-ASX	Buy	A\$2.59	A\$3.50↑
previous			A\$1.50
INR-ASX	Spec Buy	A\$0.45	A\$0.60↑
previous			A\$0.40
LAC-TSX	Spec Buy	C\$28.71	C\$31.00↑
previous			C\$20.00
LPI-ASX	Spec Buy	A\$0.29	A\$0.55↓
previous			A\$0.60
ORE-ASX	Buy	A\$4.87	A\$7.30↑
previous			A\$4.30
PLL-ASX	Spec Buy	A\$0.74	A\$0.80↑
previous			A\$0.60
PLS-ASX	Hold↑	A\$1.00	A\$1.00↑
previous	Sell		A\$0.65
SLL-TSXV	Spec Buy	C\$4.25	C\$4.50↑
previous			C\$4.30

Priced as of close of business 9 February 2021

## Lithium | 2021 supercharge?

**A lot has changed in a few short months:** In September 2020, we noted (see [Lithium | 2020 recharge - time to call the bottom?](#)) that surprisingly robust EV sales (in spite of a global pandemic), an unchanged, positive long-term demand outlook and significant capacity cuts/deferrals made for an unsustainable pricing environment. As a result, we called for a bottom in lithium pricing and possible inflection point for lithium equities. We have since witnessed a significant rally in lithium equities (i.e. listed lithium producers +135% on average, LIT-ETF +72% since September 2020), spurred by an emerging recovery in pricing and improved demand outlook.

**2020 EV sales surprise to the upside - re-basing demand expectations:** Global EV sales of 3.1m units in 2020 (+54% YoY) surpassed our expectations (see our EV monthly tracker in [Electron Mobility Monthly](#), Jed Dorsheimer), driven primarily by Europe (+143% YoY). We expect EV sales to continue to display high growth rates driven by both legislative changes (i.e. tighter emissions standards in Europe), increasing consumer choice (+400 new models by 2025), and lower costs (falling battery prices, government incentives). On this basis, we have revised our LCE demand forecasts with an average 12% increase out to 2025, resulting in total demand of +1Mt (+238% versus 2020; CAGR 27%).

### Supply - material response before 2024/25 still lacking incentive, in our view:

We estimate 2020 supply lifted 11% YoY to 340kt, noting lower capacity utilisation as largely a function of bottom-of-the-cycle pricing through 2020. We anticipate that a majority of the ~460kt of cumulative potential capacity that was delayed/deferred over the last ~18 months could remain suspended pending a recovery in pricing to higher levels. Recent consolidation among concentrate operations (i.e. Altura>Pilbara, Wodgina>Albemarle) now sees control of large scale, marginal cost production lies with a small number of established producers who, in our view, lack incentive to switch on large volumes of new supply.

We further note that long lead times to delivering new capacity means that the +US \$4.4bn in new equity raised by lithium companies since the start of 2020 is unlikely to lead to a meaningful supply response until the mid-2020s, by which point we expect the market to move into deficit. Our revised market balance forecasts now call for more modest market surpluses (5-7% over 2021-23), with our higher rates of demand growth now expected to outpace supply growth out to 2025. Beyond 2025, we continue to forecast significant market deficits, noting a ~7x increase in supply (i.e. ~240ktpa average increase in capacity) is required to meet our 2030 demand forecast.

**Pricing - signs of recovery:** The improving SxD outlook has seen a dramatic improvement in Chinese Li<sub>2</sub>CO<sub>3</sub> prices (+100% since September 2020 to ~US\$9,500/t), with a more modest improvement in concentrate prices (+18% to ~US\$500/t). The longer dated nature of contracts for international markets mean some pricing lag, but signs of a recovery are also clear in other product markets. Revisions to our price deck see material upgrades (~75%) for Li<sub>2</sub>CO<sub>3</sub> over 2021-2024, with average increases of 22% and 30% for LiOH and SC respectively. Our LT prices (2028) remain predicated on incentive levels of US\$13k-15k/t for both Li<sub>2</sub>CO<sub>3</sub> and LiOH.

**CG global sector coverage - ratings and target price changes:** Revised pricing forecasts resulted in an average 41% increase in target price across our global sector coverage (see sidebar), with rating changes including IGO-ASX upgraded to BUY (from HOLD) and PLS-ASX moving to HOLD (from Sell).

Overall, we continue to see upside potential in lithium equities subject to continued recovery in lithium prices (near term), and continue to highlight our positive medium-to-long term outlook for the sector. Top sector picks include ORE-ASX and IGO-ASX among producers, and LAC-TSX and INR-ASX among developers.

## Lithium | 2021 supercharge

Given recent market movements and final 2020 EV sales numbers, we have reviewed our S&D assumptions and price deck. In September 2020 we published our [2020 recharge](#) calling for the bottom of the lithium market, noting capacity cuts/deferrals, unsustainably low pricing environment and robust EV sales (driven by a strong performance in Europe). This trend continued into the DecQ'20, with Chinese lithium carbonate prices not only bottoming but moving strongly higher by the end of the year (+123% from lows).

### Price deck - key changes

We have updated our price deck and valuations/target prices for our Global Sector coverage (Figure 1; see [Sector wrap](#) section for detailed changes). On average our price targets have risen ~40%, driven primarily by higher pricing and earnings estimates, project remodelling and de-risking.

**Figure 1: Global sector coverage - summary of changes to our price targets and recommendations**

Company	Code	Analyst	Price	Mkt cap (m)	Rating	New TP	Old TP	% chg
Bacanora Lithium	BCN:LON	Alex Brooks	£0.46	£152.0	BUY	£0.85	£0.85	0%
Galaxy Resources	GXY:ASX	Reg Spencer	A\$2.59	A\$1158.0	BUY	A\$3.50	A\$1.50	133%
IGO Ltd	IGO:ASX	Tim Hoff	A\$6.60	A\$4304.0	BUY	A\$8.50	A\$7.25	17%
ioneer	INR:ASX	Tim Hoff	A\$0.45	A\$661.3	SPEC BUY	A\$0.60	A\$0.40	50%
Lithium Americas	LAC:TSX	Katie Lachapelle	C\$28.71	C\$3427.0	SPEC BUY	C\$31.00	C\$20.00	55%
Lithium Power Intl	LPI:ASX	Reg Spencer	A\$0.29	A\$88.4	SPEC BUY	A\$0.55	A\$0.60	-8%
Neo Lithium Corp	NLC:TSX	Katie Lachapelle	C\$3.25	C\$413.6	R	R	R	-
Orocobre	ORE:ASX	Reg Spencer	A\$4.87	A\$1675.5	BUY	A\$7.30	A\$4.30	70%
Piedmont Lithium	PLL:ASX	Reg Spencer	A\$0.74	A\$1039.3	SPEC BUY	A\$0.80	A\$0.60	33%
Pilbara Minerals	PLS:ASX	Tim Hoff	A\$1.00	A\$2911.3	HOLD	A\$1.00	A\$0.65	54%
Standard Lithium	SLL:TSX	Katie Lachapelle	C\$4.25	C\$554.0	SPEC BUY	C\$4.50	C\$4.30	5%

Source: Company reports, Canaccord Genuity estimates

### Demand

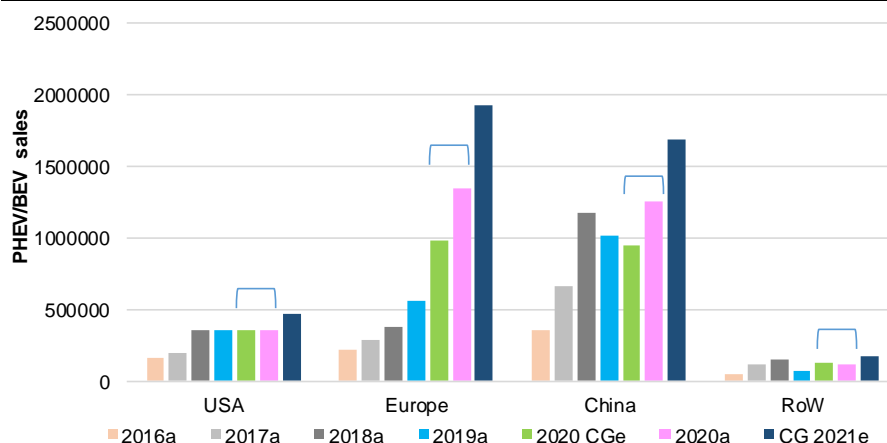
Our September 2020 sector update noted pick-up in European EV sales which continued through to the end of the year. The EU sold more EV's than China in 2020 and beat our expectations despite our September revisions.

Total BEV/PHEV sales for 2020 were 3.1m vehicles, up 54% YoY, with the EU (+143% YoY), China (+23% YoY) and the USA (+2% YoY) all lifting sales (Figure 2). Impacts from COVID-19 appear to be limited or may have even enhanced EV sales. With consumers unable to travel, funds have been flowing into luxury items and goods that improve people's perceived quality of life. We believe this may have accelerated the shift for EVs which generally sit at a higher price point.

The outlook for EV's continues to improve, between the thematic shift to electrified transportation and incentivisation by governments. The election of Joe Biden has placed additional focus on the transition to EVs, with all US government fleet cars slated for replacement with EVs by 2030. Multiple auto manufactures have come out over the last year announcing new targets for the electrification and even goals to end ICE production (i.e. GM, VW, Nissan).

Emissions standards are tightening for European auto manufacturers, and in 2021 all new vehicles will need to meet an average CO<sub>2</sub> fleet emission standard of 95g/km or face penalties. With subsidies (i.e. Germany up to €9,000 per EV and no sales tax; France up to €7,000) and the threat of fines we think the EU automotive industry will continue to aggressively promote EV/PHEVs to entice demand in 2021.

Figure 2: EV sales – 2016-21e



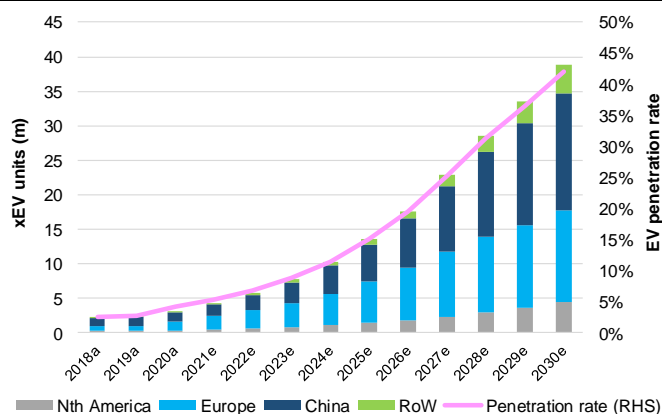
Source: EV-volumes, Rho Motion, Canaccord Genuity estimates

*Demand forecast revisions – No 2nd gear in an EV, just raw acceleration.*

We continue to track EV sales which has shown robust growth through 2020 despite economic conditions.

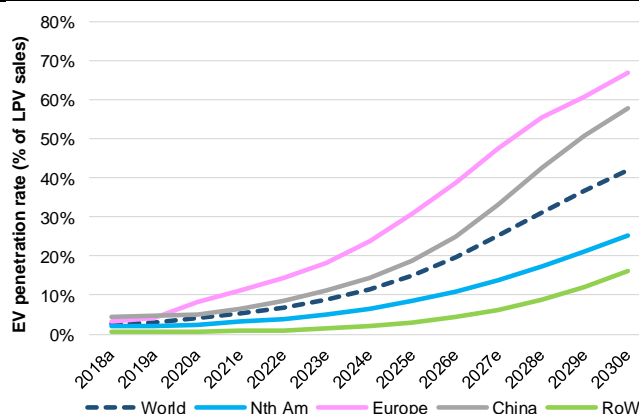
We have revised our EV sales assumptions on a rebased 2020 result, and continue to model a ~25% CAGR in EV sales out to 2030. Despite the increase in EV sales in 2020 we note that total vehicle sales fell 13% YoY, which resulted in a lift in the effective EV penetration rate, moving to 4.2% (2019 2.8%). We now target an EV penetration rate of 15% by 2025, with expectations for higher adoption rates in Europe and China resulting in an estimated 2030 global EV penetration rate of 42%.

Figure 3: EV sales forecasts – 2021-30e



Source: EV-volumes, Rho Motion, Canaccord Genuity estimates

Figure 4: EV penetration by market



Source: EV-volumes, Rho Motion, Canaccord Genuity estimates

Updated EV adoption forecasts result in an upward revision to our LCE demand forecasts by 12% on average over the next five years, with nearer term estimates lifting by 10% (36kt LCE) and 12% (58kt) in 2021 and 2022 respectively.

We believe that Higher European EV sales will not only drive demand from volume uplift but also via larger battery sizes. We anticipate these batteries will utilise nickel rich cathodes which use predominantly use lithium hydroxide, and as such see ex-China markets as the primary driver of LiOH demand. Previously we anticipated a general switch over time from Li<sub>2</sub>CO<sub>3</sub> to LiOH, however we are now revising these expectations noting strong demand for Li<sub>2</sub>CO<sub>3</sub> in China for use in LFP cathode precursors (both in EV's and ESS) over the last three months. This has resulted in China prices for Li<sub>2</sub>CO<sub>3</sub> rising above LiOH (Figure 9), and is a development we will continue to follow.

Overall, we remain bullish on total LCE demand growth prospects, with a modelled CAGR of 27% out to 2025 resulting in total LCE demand of 1Mt (+238% versus 2020e), rising to 2.7Mt in 2030.

### Supply

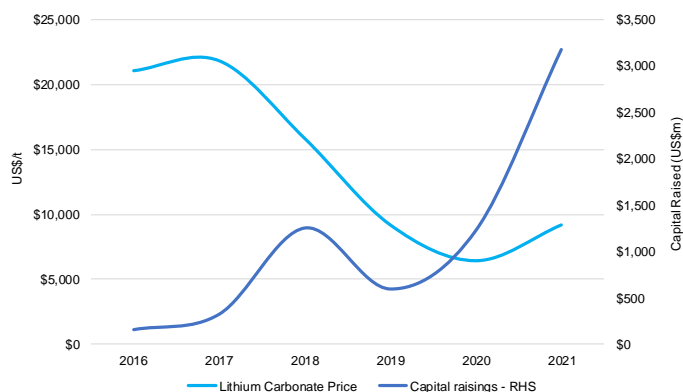
While most lithium producers started noting volume and price support in the DecQ'20, there was no material supply response (arguably prices were still too low). Altura was placed on care and maintenance removing c.40kt (c.5kt LCE) of spodumene concentrate from the market, further tightening supply. After Pilbara acquired the operation, it stated it would not be bringing supply on unless there were better price outcomes. The removal of Altura takes our estimate of cumulative capacity which was closed, curtailed or delayed from August 2019 to December 2020 to 460ktpa (134% of 2020 market supply estimates).

In 2021 there are two notable capacity additions expected to begin commissioning, the 50ktpa Kemerton conversion plant being built by Albemarle/Mineral Resources and Tianqi/IGO's Kwinana conversion plant (24ktpa). These are not expected to deliver large volumes into the market until 2022-23 when the assets reach nameplate capacity.

*Sector recapitalisation not likely to result in immediate supply response, in our view*

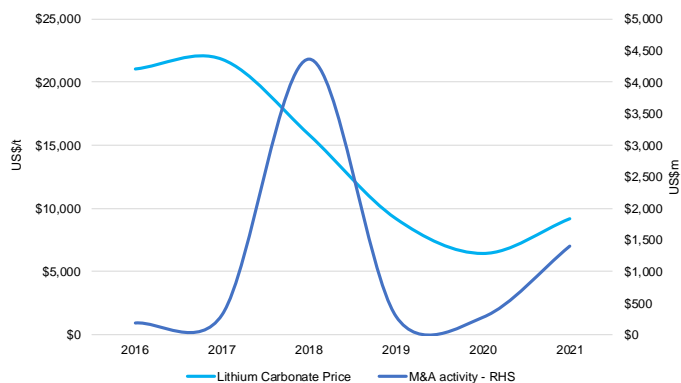
Since the start of 2020 approximately US\$4.4bn has been raised from new equity issuance by listed lithium companies. We expect capital raised to be committed to strengthening balance sheets, fund studies and acquisitions and progress projects/capacity expansion. Existing producers have raised most of the funds (US\$3.4bn), with SQM and ALB raising US\$2.3bn of this in early 2021. M&A activity has also picked up, with IGO's purchase of 25% of Greenbushes and 49% of the Kwinana lithium hydroxide refinery from Tianqi, and PLS' acquisition of the Altura Mining operations in December 2020.

Figure 5: Capital raisings and carbonate prices



Source: Company reports, Canaccord Genuity estimates

Figure 6: M&A activity increasing now prices have bottomed



Source: Company reports, Canaccord Genuity estimates

We believe some of this capital will flow into capacity additions, however the impact of this market balances may not be as severe as the previous cycle (2015-18/19), where we saw large scale incremental supply quickly enter the market. The last phase of the lithium build-out arguably developed the quickest to market assets (typically Australian spodumene); however, these operations are now largely controlled by a small number of established producers who, in our view, are not incentivised to bring existing/additional capacity on line in the absence of much higher prices.

For new entrants seeking to develop greenfield projects, we highlight a typical 3-5 year lead time for this potential supply to come into this market. Aside from LAC (which recently raised US\$400m for its Thacker Pass project in the US) most of the remaining capital raised to date has been to progress studies and pilot programs. New entrants to the market differ today versus three years ago, in our view, with most now targeting production from 2024/25 (a period when we expect supply deficits to emerge). This may arguably be attributed to the low pricing environment through 2019/20, but in any case, we are not concerned about the risk of a supply wave from new market participants in the near term.

*Supply forecast revisions – demand supply balance still difficult to achieve beyond a five-year time frame*

We have made revisions to our 2020-25 supply forecasts which sees average annual increases of 14% through 2023-25. This is driven by both increases in converted mineral production (predominantly from a revised Greenbushes expansion profile) as well as some modest increases in brine production (average +9% versus prior CGe over 2023-25).

Following the recent round of capital raisings in the sector, we now have more comfort on delivery of new capacity from 2024; however, our market balance forecasts (Figure 7) show that this is more than offset by our revised demand projections. Given delays in delivering historical greenfield projects and the projected growth in demand, we believe the market will need to incentivise 2026/27 production over the next three years in order to reach a balanced market.

We expect hard rock supply to continue to be an important circuit breaker in the lithium supply chain, being able to respond relatively quickly to demand and price shocks. However, with large scale, swing production now controlled by a small number of existing producers (i.e. PLS, ALB), and in the absence of a significant increase in prices, we do not expect an oversupplied market to take hold as it did in 2019.

While spodumene remains an important feedstock now and into the future, producers and converters are now having to increasingly consider the carbon intensity of their production, noting a broader supply chain push towards more sustainable LiB production. In our view, **this may limit sales to certain markets.**

The Li-ion industry is driven by the thematic shift to reduce carbon emissions. This will include on materials used within the sector so steps must be taken to minimise CO<sub>2</sub> throughout the supply chain. We see this manifesting already with spodumene producers increasingly looking to move downstream (i.e. Li<sub>2</sub>CO<sub>3</sub>/LiOH, LiSO<sub>4</sub>). This reduces emissions through reduced transportation and in some cases uses lower carbon energy in the spodumene conversion process.

Figure 7: SxD model summary

		2019a	2020a	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
<b>Supply</b>													
Brines	t LCE	150,059	150,222	166,348	207,587	280,325	325,119	354,274	428,024	508,935	532,665	532,665	532,665
% brines		49%	44%	40%	40%	43%	43%	40%	43%	47%	48%	48%	48%
Hard rock mine prod'n	t LCE	240157	225040	254304	308903	434500	506335	607715	634350	635377	632602	633276	634061
Converter capacity	t LCE	159138	193133	250878	313250	370624	435650	530840	573840	575940	575940	575940	575940
% converted mineral		51%	56%	60%	60%	57%	57%	60%	57%	53%	52%	52%	52%
<b>Total supply</b>	<b>t LCE</b>	<b>309197</b>	<b>343355</b>	<b>417226</b>	<b>520837</b>	<b>650948</b>	<b>760769</b>	<b>885114</b>	<b>1001864</b>	<b>1084875</b>	<b>1108605</b>	<b>1108605</b>	<b>1108605</b>
YoY chg %													
<b>Demand</b>													
Industrial applications	t LCE	108058	104496	106063	107654	109269	110908	112571	114260	115974	117713	119479	121271
% market share		44%	39%	31%	25%	20%	17%	13%	11%	9%	7%	6%	5%
LiB's - Evs	t LCE	73354	104859	185895	275617	401068	553353	756655	1002590	1313024	1660919	1964783	2280437
LiB's - other	t LCE	88620	89359	95043	103119	111999	125714	140892	158330	179930	209891	246438	294582
Total LiB's	t LCE	161974	194218	280938	378737	513066	679067	897547	1160920	1492954	1870810	2211220	2575019
% market share		56%	61%	69%	75%	80%	83%	87%	89%	91%	93%	94%	95%
<b>Total demand</b>	<b>t LCE</b>	<b>270033</b>	<b>298713</b>	<b>387001</b>	<b>486391</b>	<b>622335</b>	<b>789975</b>	<b>1010119</b>	<b>1275180</b>	<b>1608928</b>	<b>1988524</b>	<b>2330700</b>	<b>2696290</b>
YoY chg %													
<b>Surplus/(deficit)</b>	<b>t LCE</b>	<b>39164</b>	<b>44642</b>	<b>30225</b>	<b>34447</b>	<b>28613</b>	<b>-29206</b>	<b>-125005</b>	<b>-273316</b>	<b>-524053</b>	<b>-879918</b>	<b>-1222094</b>	<b>-1587685</b>
%		15%	15%	8%	7%	5%	-4%	-12%	-21%	-33%	-44%	-52%	-59%

Source: Canaccord Genuity estimates



## Market balance

As shown in Figure 7, we continue to see an oversupplied market in the near term, albeit we now forecast significantly more modest surpluses. However, we note that forward buying and inventory building ahead of rapidly expanding battery production capacity is likely driving expectations, and could see a move to balanced market conditions ahead of our 2024 projection.

Perhaps the clearest deficit we have seen develop over the last six months is in the spodumene market. While capacity still exists to put the market into a gross surplus (relative to effective converter capacity), the acquisition of Altura by PLS has led to 160ktpa (c.20ktpa LCE) spodumene concentrate being removed from the market. In our view, this has presented the operators of Pilgangoora (and to a degree, Wodgina) the opportunity to effectively control the market under certain conditions.

On this basis, we now believe that spodumene prices can rise towards above US\$700/t without eliciting a significant response from Wodgina or Greenbushes where much of the underutilised capacity sits. Over US\$800/t (>US\$15,000/t LiOH/Li<sub>2</sub>CO<sub>3</sub>) we believe we will see a supply response, either through incumbent producers to protect market position or through opportunistic marginal projects.

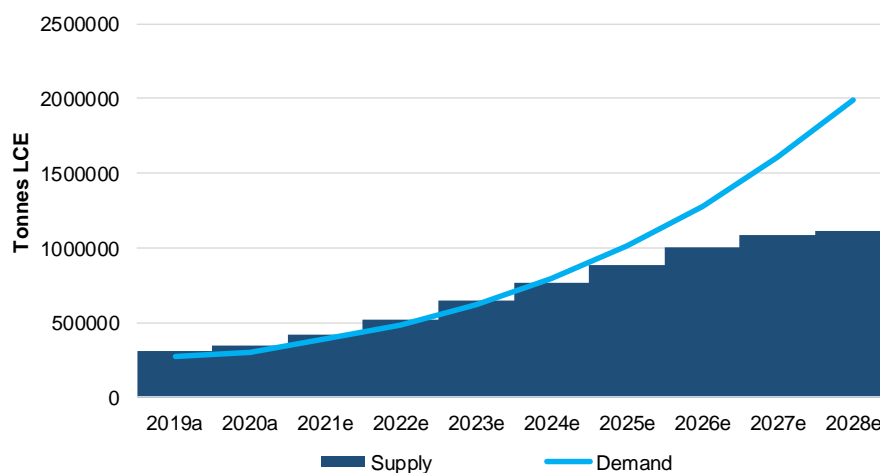
During 2020, producers reported a decline in inventories, implying demand and supply was in close balance. We still think there was a slight oversupply but forward loading of supply chains may have absorbed the additional units.

Our updated SxD model summary is shown in Figure 7, with our revised market balance forecasts. We continue to see small surpluses through the early 2020s; however, this may easily be absorbed by growing inventory in the supply chain.

We continue to forecast longer term deficits post 2025 growing into significant market deficits towards 2030. From 2025 we anticipate the market growing at 200-300kt LCE each year, which is >65% of the total current market size. We estimate that announced/possible capacity *may* be enough to meet 2025 demand estimates, but this requires investment and successful delivery of upstream supply. Pricing, in our view, will therefore need to continue to move higher to incentivise such investment.

We highlight that our estimates of average capital intensities of ~US\$16,000/t (for greenfield projects) suggests a required capital investment of >US\$20bn for supply to meet our modelled 2030 demand forecasts.

**Figure 8: Canaccord supply/demand curve**



Source: Company reports, Canaccord Genuity estimates

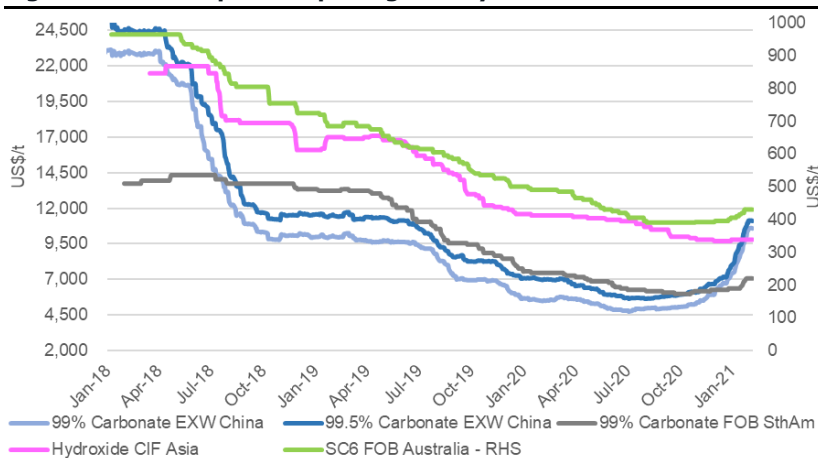
## Pricing

### First signs of a recovery

Current Chinese carbonate, hydroxide and spodumene prices are up 100%, 38% and 10% respectively since we published our report [Lithium I 2020 recharge – time to call the bottom?](#) The outsized response in Chinese pricing gives us an early indication of demand continuing to lift into 2021. The battery supply chain is currently concentrated within China so it is here we expect to see initial improvements in demand, reflected in pricing.

International prices have started to rise but many of these contracts are longer term in duration so we continue to expect pricing lag. Spodumene pricing has also started to rise and industry contacts indicate that prices are currently approaching US\$500/t.

**Figure 9: Lithium product pricing history**



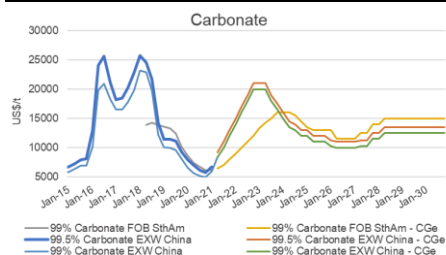
Source: Asia Metals, Company reports, Canaccord Genuity estimates

### How high could we go: price spike versus accelerated incentive pricing

We present two scenarios for pricing over the near term to show potential pricing outcomes for the market. Both show a cycle higher before prices revert to our LT forecast (incentive). Driving this is a demand/supply response which we have seen in the previous cycle (2016-19). The first scenario (super cycle) assumes pricing reaches levels seen during the last boom. This elicits a supply response and falling prices, before recovering to incentive levels.

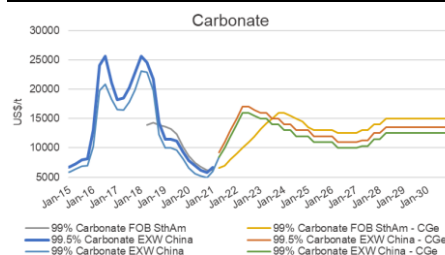
The second scenario (our new base case) assumes prices rise to US\$15,000/t (where we see incentive pricing) and at this point prices level off before reverting to our LT average.

**Figure 10: Super cycle**



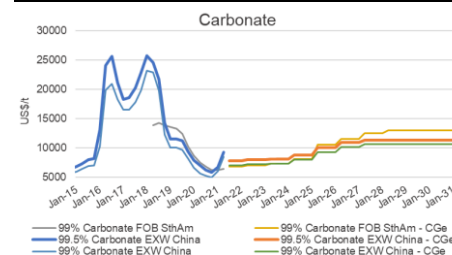
Source: Company reports, Canaccord Genuity estimates

**Figure 11: Base case**



Source: Company reports, Canaccord Genuity estimates

**Figure 12: Previous estimates**



Source: Company reports, Canaccord Genuity estimates

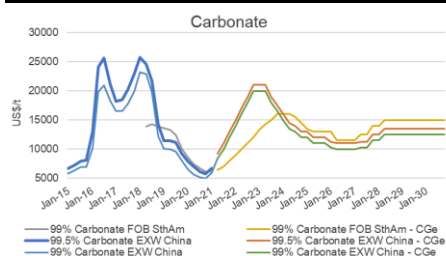
### Scenario 1: Super cycle

As seen during previous cycles, lithium can experience periods of extreme price volatility both higher and lower given its small market size. This can occur despite a reasonably well supplied market as observed in 2017. Previously we explained this as forward inventory stocking, product quality premiums and market speculation.

However, in the last cycle we saw two market forces which resulted in a rapid expansion of supply which ultimately drove prices lower. These being: 1) the rapid development of spodumene feedstock from Australia; and 2) the scale of Chinese conversion capacity. Today that capacity still exists but is now controlled by a small number of incumbent producers. These producers find themselves in a position of power regarding the supply of raw lithium units. Our super cycle case assumes these producers do not provide additional supply into the market and prices move high enough to incentivise additional marginal/high cost lithium units, which results in prices correcting from the highs.

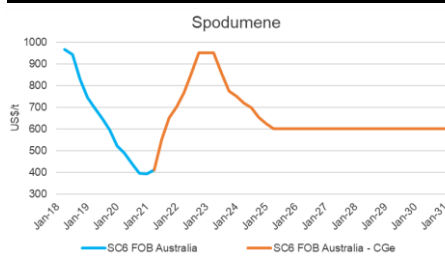
Our super cycle case considers a rapid price rise in lithium chemicals towards US\$20,000/t. We believe this would incentivise an outsized supply response, which ultimately drives a steep price decline into the mid-2020s. Ultimately prices revert to our LT forecast of US\$15,000/t in order to incentivise late 2020's production.

Figure 13: Carbonate – Scenario 1



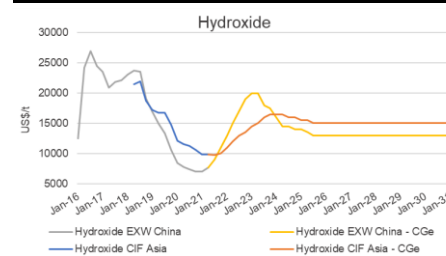
Source: Company reports, Canaccord Genuity estimates

Figure 14: Spodumene – Scenario 1



Source: Company reports, Canaccord Genuity estimates

Figure 15: Hydroxide – Scenario 1



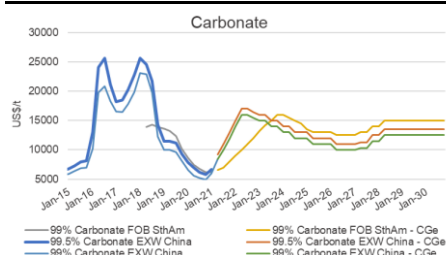
Source: Company reports, Canaccord Genuity estimates

### Scenario 2: Incentive pricing (new CGe base case)

Our new base case takes elements of our super cycle scenario into consideration (rapid price moves and a pull back before LT prices); however, we assume that once product prices reach US\$15,000/t, existing producers respond with supply in order to maintain market share and restrict new/over investment in the sector. This results in pricing levelling off before tapering towards 2025 and settling at US\$15,000/t.

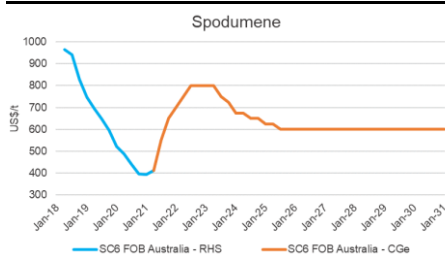
We believe the key assets to watch for this scenario are the large, Australian hard rock mines (Wodgina, Pilgangoora and Greenbushes). These mines control the incremental lithium supply and currently have ~1.5Mtpa of idle spodumene capacity. Wodgina and Greenbushes are now controlled by downstream producers which flagged those assets for internal conversion plants, and therefore have little incentive in supplying low value lithium units (i.e. concentrates) to the market. As pricing moves higher, these producers may consider their market share rather than allowing the incentivisation of other marginal assets. Any supply to external markets in this scenario would likely be measured in our view, to control pricing but not crash it.

Figure 16: Carbonate – Scenario 2



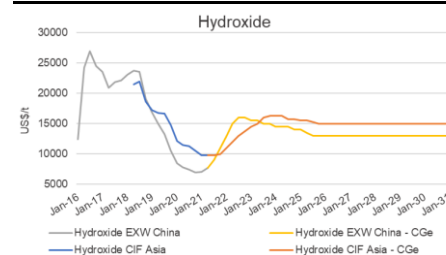
Source: Company reports, Canaccord Genuity estimates

Figure 17: Spodumene – Scenario 2



Source: Company reports, Canaccord Genuity estimates

Figure 18: Hydroxide – Scenario 1



Source: Company reports, Canaccord Genuity estimates



### Pricing forecast revisions

Our updated lithium product price deck is shown in Figure 19. The most material near-term revisions (Figure 20) relate to Chinese carbonate pricing (2021-23 +85%) and spodumene concentrate (2021-23 +36%). We have moderated hydroxide pricing increases given additional supply likely to come online during 2021-22 from Australian and Chinese conversion operations.

**Figure 19: CG Lithium price deck**

	2019a	2020a	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e
										LT>>>
Spodumene Concentrate 6% Li <sub>2</sub> O (US\$/t FOB)	595	429	578	788	738	650	606	600	600	600
Lithium Carbonate min 99.5% Li (US\$/t China EXW)	9,729	6,400	12,049	16,625	15,000	13,250	12,000	11,000	11,875	13,500
Lithium Carbonate min 99% Li (US\$/t China EXW)	8,768	5,429	11,108	15,625	14,000	12,250	11,000	10,000	10,875	12,500
Lithium Carbonate min 99% Li (US\$/t FOB SthAm)	11,019	6,630	7,644	11,562	15,312	14,625	13,000	12,500	13,500	15,000
Lithium Hydroxide min 57% Li (US\$/t China EXW)	11,556	7,300	10,175	15,625	15,000	14,250	13,125	13,000	13,000	13,000
Lithium Hydroxide min 57% Li (US\$/t Asia CIF)	14,008	10,788	10,137	13,312	15,875	15,812	15,187	15,000	15,000	15,000

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

**Figure 20: Pricing forecast revisions**

	2020a	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
OLD SC 6% (US\$/t FOB)	425	465	525	550	570	600	600	600	600	600	600
NEW SC 6% (US\$/t FOB)	429	578	788	738	650	606	600	600	600	600	600
	1%	24%	50%	34%	14%	1%	0%	0%	0%	0%	0%
OLD Lithium Carbonate min 99.5% Li (US\$/t China EXW)	5700	5800	6500	7250	8500	11500	12500	13000	13000	13000	13000
NEW Lithium Carbonate min 99.5% Li (US\$/t China EXW)	6400	12049	16625	15000	13250	12000	11000	11875	13500	13500	13500
	12%	108%	156%	107%	56%	4%	-12%	-9%	4%	4%	4%
OLD Lithium Carbonate min 99% Li (US\$/t China EXW)	5100	5400	5400	5800	6500	7500	9000	10000	10000	10000	10000
NEW Lithium Carbonate min 99% Li (US\$/t China EXW)	5429	11109	15625	14000	12250	11000	10000	10875	12500	12500	12500
	6%	106%	189%	141%	88%	47%	11%	9%	25%	25%	25%
OLD Lithium Carbonate min 99% Li (US\$/t FOB SthAm)	7000	6750	7000	7250	8000	10500	11500	12500	13000	13000	13000
NEW Lithium Carbonate min 99% Li (US\$/t FOB SthAm)	6630	7644	11563	15313	14625	13000	12500	13500	15000	15000	15000
	-5%	13%	65%	111%	83%	24%	9%	8%	15%	15%	15%
OLD Lithium Hydroxide min 57% Li (US\$/t China EXW)	7200	7500	8750	9000	9500	11500	13000	15000	15000	15000	15000
NEW Lithium Hydroxide min 57% Li (US\$/t China EXW)	7300	10175	15625	15000	14250	13125	13000	13000	13000	13000	13000
	1%	36%	79%	67%	50%	14%	0%	-13%	-13%	-13%	-13%
OLD Lithium Hydroxide min 57% Li (US\$/t Asia CIF)	9500	9750	10750	11550	13000	14750	15000	15000	15000	15000	15000
NEW Lithium Hydroxide min 57% Li (US\$/t Asia CIF)	10788	10138	13313	15875	15813	15188	15000	15000	15000	15000	15000
	14%	4%	24%	37%	22%	3%	0%	0%	0%	0%	0%

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

### Lithium carbonate

We have updated our near-term forecasts for carbonate. Assuming momentum in pricing continues to US\$15,000/t, at this stage we assume established market participants expand capacity and pricing cycles lower before returning to our LT assumption.

Our long-term pricing remains predicated on an incentive price base at US\$13,000-15,000/t, where we see prices required to increase supply and meet our longer-term demand estimates.

*Spodumene concentrate*

With the consolidation of operations at Pilgangoora, we believe the market balance has shifted and now pricing power sits with the producers. Given most producers will have a chemical link in the pricing structures we believe this could see prices move toward US\$800/t. This linkage remains as prices pull back and we continue to forecast US\$600/t as a LT assumption.

*Lithium hydroxide*

We continue to see strong demand for hydroxide from 2023 however in the near term, carbonate pricing will likely reflect increasing demand within China and lead chemical prices. Our price curve is more graduated with additional Australian supply likely to ramp up in 2021-2023 at Kemerton and Kwinana. Additional conversion capacity has also been installed in China which could see moderate prices. Our LT assumption does not see as larger pullback in hydroxide prices with demand sustaining higher prices. We continue to set long term pricing at US\$15,000/t.

## CG Lithium sector coverage wrap

**IGO Limited: (IGO-ASX: A\$6.52, mkt cap A\$4,937m | BUY (from Hold), TP A\$8.50 (from A\$7.25), Tim Hoff)**

IGO entered into an agreement with Tianqi in the DecQ'20 to purchase 25% of the Greenbushes mine, in Western Australia and 49% of the Kwinana lithium hydroxide facility for US\$1.3bn. The acquisition marked the first real disclosure of capacities and forecasts for production from the assets, with CY21 guidance of 850-900kt SC6 and Train 1 currently awaiting commissioning with capacity of 24ktpa lithium hydroxide (expected to complete ramp-up by Q4 2024). The JV has indicated the possibility of expanding capacity to 2.5Mtpa of SC6 however this would largely be allocated for use at JV owned processing facilities.

Running the super cycle scenario, IGO offers good leverage to lithium prices with increases in FY22-25 EBITDA of 20% off our previous estimates. Given current EBITDA is largely generated through its Nova and Tropicana assets the impact is relatively muted versus other pure play lithium businesses.

We have remodelled the business and updated price assumptions leading to an average 16% increase in EBITDA in FY23-25. Our price target has lifted 17% to A\$8.50. We set our price target for IGO using a 50:50 NPV:EV/five-year average multiple. We note IGO's EBITDA profile shows strong growth over the next five years, effectively doubling from A\$457m to A\$1,000m in FY25.

We upgrade the stock to BUY (from Hold).

**Lithium Americas Corp: (LAC-TSX: C\$28.71, mkt cap C\$3,427m | SPECULATIVE BUY, TP C\$31.00 (from C\$20.00), Katie Lachapelle)**

Lithium Americas continues to advance construction at its flagship Cauchari-Olaroz project in Jujuy, Argentina. With construction >50% complete and over 80% of the capital costs already committed to date, the project remains fully funded and on track for first production in early 2022. With the development of Cauchari-Olaroz now substantially de-risked, efforts are shifting towards the advancement of LAC's second development project, Thacker Pass.

In January, the Thacker Pass project received a positive Record of Decision from the United States BLM, signalling the end of the Federal permitting process. On the back of this announcement, LAC completed a US\$400m public offering priced at US\$22.00/share. In our view, the recent financing provides LAC with the option to either develop Thacker Pass independently (Phase 1 capex US\$581m) or alongside a strategic partner. Financing discussions are ongoing, including discussions with potential strategic partners. We assume that project construction begins early next year, with first production in 2024.

We have updated our estimates to reflect the US\$400m raise, our new lithium price deck, and revised financing assumptions for Thacker Pass. Our estimates now assume that LAC finances Thacker Pass via a mix of debt financing, cash on hand, and free cash flow. At this time, we do not forecast the need to secure a partner or raise additional equity. To reflect de-risking from a permitting and financing standpoint, we have decreased our discount rate on Thacker Pass to 11%, from 13% previously.

As a result of these changes, our NAVPS has increased to C\$30.66, and we are increasing our target price to C\$31.00 (from C\$20.00). Our target price remains based on 1.0x NAV, measured as at 1 January 2022.

**Pilbara Minerals Ltd: (PLS-ASX: A\$1.00, mkt cap A\$2,911m | HOLD (from Sell), TP A\$1.00 (from A\$0.65), Tim Hoff)**

Pilbara consolidated the Pilgangoora operations during the DecQ'20, acquiring the Altura assets from administrators. The company will now study restart options however does not intend to bring additional supply online unless longer term pricing moves higher.

PLS now finds itself in a position of relative power, in our view. Large scale supply exists at Wodgina and Greenbushes however owners of both operations have stated an intention to use this internally. We believe these operations may be used to maintain market position/stability if pricing moves too high. PLS stands to benefit from this as the main uncommitted incremental supplier.

Our EBITDA has risen lifted 21% in FY21 and +140% in FY22/23 due to higher spodumene prices. In our super cycle scenario, our FY22/23 EBITDA would lift 185% off our previous base case, showing the flex PLS has on SC6 prices.

We have updated our production and commodity price assumptions leading to an 54% increase in our price target to A\$1.00 (from A\$0.65). PLS shows some of the highest leverage to lithium prices in our scenarios. With the stock trading at our price target and with PLS's increased bargaining power we upgrade to HOLD (from Sell).

**Orocobre Limited: (ORE-ASX: A\$4.87, mkt cap A\$1,675m | BUY, TP A\$7.30 (from A\$4.30), Reg Spencer)**

The Stage 2 expansion of operations at Olaroz to 42.5ktpa capacity is 50% complete, with commissioning remaining scheduled for 2H CY22. Similarly, construction of the 10ktpa LiOH facility in Naraha in Japan remains on track for commissioning in the 2H'21 with construction activities now 89% complete.

We highlight that ORE will shortly commence studies for a potential Stage 3 expansion of upstream operations at Olaroz, including options for increases in capacity of 25-50ktpa (taking total capacity to 68-93ktpa LCE). In addition, ORE is also expected to assess further expansions of downstream LiOH conversion either in Japan or elsewhere.

As noted in [DecQ'20 – first look](#), ORE's MoU with the Toyota-Panasonic battery production JV Prime Planet Energy Solutions (PPES) for the supply of up to 30ktpa (Li<sub>2</sub>CO<sub>3</sub> and/or LiOH) by 2025, suggests that ORE could be near "sold out", relative to our prior estimates for peak production of 36ktpa (inc. 20ktpa LiOH). Given the large scale Resources that ORE control (12.7Mt LCE including 6.3Mt at 100% owned Cauchari property), existing infrastructure, and customer relationships, we see ORE as well placed to further expand capacity to meet our expectations of ongoing lithium demand growth.

In the interim, our updated price deck leads to a significant increase in EBITDA estimates, with an average 75% increase over FY22-24, with other model revisions including the addition of an assumed Stage 3 expansion at Olaroz (taking installed capacity to 68ktpa) from 2026, and a further expansion of downstream LiOH conversion to 30ktpa from 2027. Model assumptions include similar capital intensities as Stage 2 Olaroz/Stage 1 Naraha.

We have revised our target price methodology to a 50:50 blend of our NPV based NAV (A\$2.58bn, A\$5.33/share) and 15x multiple applied to our estimated five-year forward attributable EBITDA, with our target increasing 70% to A\$7.30 (from A\$4.30).

**Galaxy Resources Limited: (GXY-ASX: A\$2.64, mkt cap A\$1,330m | BUY, TP A\$3.50 (from A\$1.50), Reg Spencer)**

GXY completed a A\$161m capital raising in December 2020, which we expect will likely now see the company sufficiently funded for the development of the Sal de Vida brine project in Argentina. GXY expects feasibility study outcomes expected to be released in early JunQ'21, with our current model assumptions including capex of US\$160m for an initial capacity of 9ktpa Li<sub>2</sub>CO<sub>3</sub>, with cash costs of ~US\$4,000/t. Our longer term estimates assume GXY increase overall capacity to 18ktpa (CGe late 2025) at similar capital intensity. Current project timelines are targeting initial Stage 1 commissioning in late 2022.

At Mt Cattlin, concentrate production is expected to increase YoY into 2021 (see [DecQ'20 report – first look](#)) commensurate with increasing demand and improved market conditions. CY21 production guidance of 162-175kt at US\$360-390/t cash costs was better than our prior forecasts, with our revised estimates calling for 159kt at US\$359/t cash costs. Increased production volumes and revised concentrate pricing forecasts see a material increase in operating cashflow expectations over 2021-23E (+250%) to US\$65m.

GXY is expected to release the outcomes of a PEA into the development of the James Bay hard rock project in Quebec, Canada, which currently hosts Resources of 40Mt at 1.4% Li<sub>2</sub>O. Details around production capacity (initial focus on spodumene concentrate production) and costs are pending the release of the PEA, but given the scale Resource, we expect potential production rates of >250ktpa SC (based on ~2mtpa process plant throughput rate).

Our target price increases to \$3.50 (from \$1.50), with changes including revised lithium pricing forecasts, lowering of our project valuation risk factor for Sal de Vida given reduction in funding risk, and the application of a nominal value for James Bay (A\$250m) pending release of studies.

**Piedmont Lithium Ltd: (PLL-ASX: A\$0.74, mkt cap A\$1,039m | SPECULATIVE BUY, TP A\$0.80 (from A\$0.60), Reg Spencer)**

PLL has commenced a DFS for a 160ktpa SC operation for its Piedmont project in North Carolina, US. The lithium concentrate aspect of the project forms part of a broader, +20 year, integrated 22ktpa LiOH project on which a DFS is expected to commence in Q1'21. Our assumed development scenario assumes total capex of US\$570m and cash costs of US\$5,100/t, with commissioning in early 2023 (to meet timeline conditions of the Tesla concentrate offtake agreement).

As we noted in [Accelerating...](#), the Tesla concentrate offtake (~50ktpa for five years from 2022/23) means that to maintain a 22ktpa LiOH production rate, PLL would require (at least initially) additional concentrate feedstocks. PLL has sought to address this potential shortfall through an investment in Sayona Mining (SYA:ASX | Not Rated), whose primary asset is the Authier Project, located in Quebec Canada. The investment totals US\$12m and includes equity and convertible notes in SYA (potentially delivering a 19.9% equity interest), and a 25% interest at the asset level. In addition, PLL and SYA have also entered into a concentrate offtake agreement for up to 60ktpa concentrate at market prices on a LOM basis. SYA completed a DFS for Authier in November 2019, which outlined a 14-year project producing 114ktpa of SC<sub>6</sub>, with capex and opex of C\$120m and C\$469/t FOB (Montreal). Total project Reserves comprise 12Mt at 1.0% Li<sub>2</sub>O.

In the interim, we anticipate a high level of news flow from PLL in 2021, including Resource/Reserve updates (Q1'21; potentially supporting a targeted 25-year project life versus our modelled 16 years), DFS results, permitting, and financing/FID. We also highlight the potential for LiOH offtake agreements (TSLA or others) to support project financing.

Given the lead time to production, our revised pricing assumptions have little impact on our valuation, with a reduction in our project risk weighting owing to PLL's larger EV and therefore reduced financing risk. Net of the changes, our target price increases to A\$0.80 (from A\$0.60).



**Inioneer Ltd: (INR-ASX: A\$0.45, mkt cap A\$785m | SPECULATIVE BUY, TP A\$0.60 (from A\$0.40), Tim Hoff)**

INR progressed its Rhyolite Ridge project in Nevada during 2020, advancing engineering, permitting, offtake discussions, awarding equipment contracts for the acid plant and generating samples of lithium hydroxide from pilot plant carbonate material. Key milestones the company is aiming to achieve in 2021 include signing of offtake agreements, attaining NOI and ROD approvals from the BLM, progressing strategic partnering discussions and refining estimates for the project.

We believe INR has two high probability events which may result in the stock re-rating towards a de-risked valuation, being signing of offtake agreements with a known battery supply chain participant and a sell down or strategic partnership to develop the asset. We have updated our commodity and currency price assumptions and changed our NAV risking from 50% to 80%. Our price target has risen 50% to A\$0.60 (from A\$0.40). Maintain SPECULATIVE BUY.

**Standard Lithium Ltd: (SLL-TSXV: C\$4.25, mkt cap C\$544m | SPECULATIVE BUY, TP C\$4.50 (from C\$4.30), Katie Lachapelle)**

SLL continues to advance work on the Lanxess Project in South Arkansas. With the completion of an oversubscribed C\$34.5m raise in late December 2020 (at C\$2.20/share), the company is well funded to advance ongoing test and optimisation work at its LiSTR direct lithium extraction demonstration plant in South Arkansas, and its SiFT lithium carbonate crystallisation pilot plant currently located in British Columbia. The combination of these proprietary processes successfully produced >99.9% lithium carbonate in early December, achieving proof of concept at a pre-commercial scale.

The next major potential catalyst for SLL, in our view, is the announcement of a formal joint venture agreement with LANXESS AG (LXS-ETR | Not Rated). We believe an announcement could be imminent as the joint venture was largely contingent on proof of concept, which has now been achieved.

We have revised our estimates to reflect our updated lithium price deck. As a result, our NAV has increased modestly (+5%) and we are increasing our target price to C\$4.50 (from C\$4.30). We maintain our SPECULATIVE BUY rating.

**Bacanora Lithium: (BCN-AIM: 46.2p, mkt cap £152m | BUY, TP 85p, Alex Brooks)**

Bacanora Lithium announced on 3 February the successful raise of \$65mn in new equity from institutional and retail investors, allowing it to fully fund its 50% share of Phase 1 of its flagship Sonora Lithium project JV in northern Mexico. On 5 February, JV partner Ganfeng (1772.HK | Not Rated) announced that it would invest an additional \$31mn into Bacanora, offsetting the dilution from the transaction and providing a valuable cash cushion for Bacanora.

The remaining cost of the Sonora project development, including project JV, is currently estimated at \$416mn net of existing cash within the JV. Bacanora now has sufficient cash and credit to fully fund its \$208mn share, and we believe that the support by the JV partner Ganfeng for Bacanora's equity strong suggests that Ganfeng is likely to fully fund its \$208mn share, which we expect to be announced within the next few weeks. Ganfeng continues to provide critical engineering support for the project including procurement from Chinese suppliers of key capital items.

The Sonora Project remains a highly attractive one, designed to produce battery-grade lithium concentrate directly, at prospective all-in costs that put it close to the bottom of the cost curve in the industry; its all-in sustaining cost is estimated below \$4250/ton. In addition, its location is attractive for numerous planned gigafactories in Mexico and Texas for the existing automotive industry there, and we expect Sonora could benefit from a local price premium compared with suppliers from further afield. First production from Phase 1 is intended to be in 2023, at a design rate of 17.5ktpa. At this rate of production resource life is above 250 years, and we expect a further expansion to be announced around initial production, bringing total production above 35ktpa.

Our price target of 85p is based on net asset value at a 10% real cost of equity. Each \$1000/ton on the LCE price affects our fair value by around 8p/share. We believe that given the fully funded status of Phase 1 of the project that this cost of capital is appropriate for the current stage of development; as the project matures and expands into later phases we expect this cost of capital to drop further.

**Lithium Power International: (LPI-ASX: A\$0.30, mkt cap A\$88m | SPECULATIVE BUY, TP A\$0.55 (from A\$0.60), Reg Spencer)**

As a recap, LPI holds a 51% interest (Borda Group 31%, Bearing Lithium 18%) in the Maricunga lithium brine project, located in the Atacama region of Chile. The project hosts one of the highest grade undeveloped lithium brine resources (2.15Mt LCE at 1,153ppm Li) in South America. A DFS on the project was completed in 2018, which assessed a 20-year, 20ktpa conventional lithium brine operation. Capex was estimated at US\$563m and cash costs of US\$3,772/tonne.

The 2019 DFS was predicated on the exploitation of both Old Code (grandfathered from current Chilean lithium legislation) and New Code (requires issuance of a CEOL permit) concessions. All major permits for the Old Code concessions (CCHEN/export permit, EIA) have been granted. In 2019, LPI entered into an MoU with Chilean state-owned copper company CODELCO, with the objective of forming a JV to jointly develop concessions both groups hold on the Maricunga salar. Given the delays in progressing toward a definitive agreement with Codelco, LPI are now targeting an initial, standalone, staged development option for Maricunga.

The staged development is expected to be based initially on the permitted Old Code concessions, targeting capacity of 15ktpa over an initial 20-year life. LPI has commenced a review of the project's technical design and economic parameters (capex/opex) as part of the Stage 1 starter project, including additional Resource drilling within the Old Code concessions beyond the current 200m depth. LPI have flagged the release of an updated Resource/Reserves for the project in late SepQ/early DecQ'21.

We have revised our modelled development scenario for Maricunga to align with LPI's staged development plan. The most material changes relate to annual production capacity (lowered to 15ktpa from 20ktpa), capex (CGe reduced to US\$505m), and assumed commencement of commissioning in 2025 (from late 2023). The revisions offset a pull forward of pricing in our revised deck, with our target price (project NPV10%, risked to 60% to account for financing, development risk) reducing to A\$0.55 (from A\$0.60).

## Non-covered companies

*Listed in order of market capitalisation*

### **Rio Tinto Limited: (RIO-ASX: A\$111.65, mkt cap A\$43,272m | Not Rated)**

In December 2020, Rio Tinto declared a maiden Reserve of 16.6Mt at 1.81% Li<sub>2</sub>O and updated the Resource of 139.2Mt at 1.78% Li<sub>2</sub>O at its Jadar lithium project. In July 2020, it flagged investment of US\$200m in progressing studies at the deposit and expects to complete a feasibility study by the end of 2021.

### **Albemarle Corporation: (ALB-NYSE: US\$161.56, mkt cap US\$18,843m | Not Rated)**

ALB launched a US\$1.3bn share offering in February 2021 to fund growth and pay down debt. As of SepQ'20 the company had US\$2.9bn in debt. ALB expects lithium use in EV's to increase four-fold over the next five years. In January 2021 ALB flagged the doubling of its 6ktpa Silver Peak operation in Nevada.

### **SQM (SQM-NYSE: US\$55.67, mkt cap US\$13,817m | Not Rated)**

In early 2021 SQM signed a nine-year offtake agreement to supply lithium carbonate and hydroxide to LG Energy Solutions, and expects the size of the contract to be c.55ktpa. In January 2021 SQM raised US\$1.1bn through an equity offering. It intends to make a FID on the Mt Holland lithium JV in MarQ'21. SQM expects lithium demand to reach 900kt in 2025 vs 300kt in 2020.

### **Mineral Resources Limited: (MIN-ASX: A\$37.00, mkt cap A\$6,978m | Not Rated)**

The Wodgina JV (ALB 60%: MIN 40%) has the project on care and maintenance and continues to monitor market conditions with a view to restart spodumene concentrate production when required or driven by market demand. The Kemerton JV (ALB 60%: MIN 40%) consists of two 25ktpa lithium hydroxide processing trains based in Kemerton, Western Australia. Construction is on track for completion in the first half of FY22.

### **Livent Corporation: (LTHM-NYSE: US\$21.80, mkt cap US\$3,189m | Not Rated)**

In late 2020 Livent was granted court approval to acquire certain assets of Nemaska Lithium located in Quebec, Canada. It plans to participate in a JV with The Pallinhurst group for 50% of the assets, with Investissement Quebec owning the remaining 50%. Livent signed an extended offtake with Tesla in 2020 for additional volumes throughout 2021.

### **Vulcan Energy: (VUL-ASX: A\$9.00, mkt cap A\$806m | Not Rated)**

*Canaccord Genuity (Australia) Limited received a fee as Joint Lead Manager to the Vulcan Energy Resources Ltd Capital Raising announced 4 February 2021.*

Vulcan Energy released a PFS for its 100% owned Zero Carbon Lithium project in the Rhein Valley, Germany. The DFS outlines a two-stage development of a 40ktpa LiOH with an OPEX of US\$3,142/t. The project uses geothermal brine to generate power and then uses Direct Lithium Extraction to produce lithium hydroxide. The process is expected to produce lithium with carbon dioxide credits (vs hard rock which producer >14kgCO<sub>2</sub>/t LCE). In late January the company raised A\$120m to progress studies for the project and fund a pilot plant. The company controls the largest lithium Resource in Europe with over 15Mt LCE.

**Liontown Resources: (LTR-ASX: A\$0.40, mkt cap A\$743m | Not Rated)**

LTR has released a PFS for its Kathleen Valley project, a potential underground spodumene mine which aims to produce 350ktpa of SC6 and 430tpa of Ta2O5(30%) over a 40-year life at operating costs of US\$377/t. In addition, LTR have released a scoping study on an integrated downstream facility which outlines the potential for either a 58ktpa of LiOH.H2O or 88ktpa of Li2SO4.H2O operation with initial capex of A\$1.1B or A\$0.9b respectively. LTR is now completing a DFS on the project planned for release in Q4'2021.

**AVZ Minerals Limited: (AVZ-ASX: A\$0.19, mkt cap A\$549m | Not Rated)**

*Canaccord Genuity (Australia) Limited received a fee as Lead Manager to the AVZ Minerals Limited Capital Raising announced 2 April 2020.*

Manono Lithium and Tin project (AVZ:60%). The project is located in the south of the Democratic of Congo (DRC) in central Africa and is host to a 400Mt resource grading a 1.65% Li2O (spodumene). In April 2020, AVZ released a DFS on the project which outlines a 20+ year 700ktpa of SC6 and 45ktpa of Li2SO4 with operating costs of US\$371/t and US\$2,662/t respectively. The initial capital expenditure of the project is expected to be US\$545m with first production of SC6 targeted for Q1'2023 with Li2SO4 targeted for Q3'2023.

**Lake Resources: (LKE-ASX: A\$0.26, mkt cap A\$387m | Not Rated)**

Kachi Lithium project (LKE:100%). In April 2020, LKE released a PFS on the Kachi project which highlighted a 25-year 25.5kt battery grade Li2CO3 operation with initial capital expenditure US\$544m and operating costs of US\$4,178/t. LKE has now formally commenced a DFS, and expects to deliver the study by Q1'22.

**Rock Tech Lithium Inc. (RCK-TSX: C\$5.24, mkt cap C\$255m | Not Rated)**

RCK is developing its 100%-owned Georgia Lake spodumene project in northern Ontario with the goal of becoming a fully integrated producer of battery-grade lithium hydroxide (~24ktpa). The company intends to build its own conversion plant in Germany to position itself as one of the first lithium hydroxide producers outside of China, and as a supplier to the EV market in Europe

**European Metal Holdings: (EMH-ASX: A\$1.50, mkt cap A\$190m | Not Rated)**

In partnership with CEZ (the largest utility company in Central and Eastern Europe), EMH is focussed on advancing the Cinovec lithium project (EMH:49%: CEZ:51%) located in The Czech Republic which has a resource of 372.4Mt at 0.45% Li2O. In June 2019, EMH released a PFS with results highlighting the potential for a 25ktpa LiOH operation over 21 years with operating costs of US\$4,786/t and initial capital costs of US\$482m. EMH is now undertaking necessary work to complete a DFS on the project due later this year.

**Argosy Minerals Limited: (AGY-ASX: A\$0.16, mkt cap A\$163m | Not Rated)**

AGY is currently producing lithium sulphate from its pilot plant in Argentina and a ~2ktpa production operation currently under construction. AGY plans to expand this to 10ktpa. AGY anticipates the release of a DFS for the expanded facility in Q4'2021 and expect first production from its 2ktpa operation in Q2'2022.

**Galan Lithium Limited: (GLN-ASX: A\$0.55, mkt cap A\$130m | Not Rated)**

GLN recently released a PEA for the Hombre Muerto West (GLN:100%) project which outlined a 40 year 20ktpa Li<sub>2</sub>CO<sub>3</sub> operation with initial capital expenditure of US\$338m and operating costs of US\$3,518/t. GLN has entered into an agreement with Lithium Australia (LIT-ASX: A\$0.16 | Not Rated) to acquire 80% of the Greenbushes South Lithium project in Western Australia.

**Infinity Lithium Corporation: (INF-ASX: A\$0.21, mkt cap A\$70m | Not Rated)**

*Canaccord Genuity (Australia) Limited received a fee as Lead Manager to the Infinity Lithium Corporation Ltd Capital Raising announced 8 September 2020.*

INF completed a pre-feasibility study for its 75% San Jose LiOH project in Spain in Aug'2019. The study outlined a 30-year operation, targeting the production 15ktpa LiOH with capex and opex at US\$309m and US\$5,434/t respectively. The company received a \$1.3m funding package from the EU funded EIT InnoEnergy (public-private partnership mandated to support the European Battery Alliance) in 2020 as part funding for Phase 1 pilot work. Process test work is underway with product test work, feasibility and permitting work planned for 2021.



## Appendix

### **ASX company financial summaries**

Figure 21: GXY financial summary

## FINANCIAL SUMMARY

Galaxy Resources Ltd

ASX:GXY

Analyst : Reg Spencer  
Date: 10/02/2021  
Year End: December

Rating:  
Target Price: **BUY**  
**A\$3.50**

### Market Information

Share Price	A\$	2.59
Market Capitalisation	A\$m	1,305.8
12 Month Hi	A\$	3.29
12 Month Lo	A\$	0.68
Issued Capital	m	504.2
Options	m	3.3
Fully Diluted	m	507.5

Valuation	A\$m	A\$/share
Mt Cattlin	NPV10% 186.0	0.37
Sal de Vida	NPV10%(risked) 1,066.9	2.12
Projects	250.0	0.50
Corporate	(46.4)	(0.09)
Cash (est.)	277.2	0.55
Investments	8.8	0.02
Debt	(0.0)	(0.00)
<b>TOTAL NAV</b>	<b>1,742.4</b>	<b>3.46</b>
<b>Target Price</b>		<b>3.50</b>
P/NAV		0.74x

Assumptions	2019a	2020e	2021e	2022e
Lithium carbonate	11,110	6,630	7,607	11,563
Spod. Conc. (US\$/t)	540	448	596	790
Tantalum (US\$/lb)	70	70	70	70
AUD:USD	0.69	0.77	0.77	0.77

Production Metrics	2019a	2020e	2021e	2022e
<b>Mt Cattlin (100%)</b>				
Spodumene concentrate (kt)	192	109	159	180
LCE (kt)	28	16	24	27
Total Costs (US\$/tonne)	430	519	459	509

<b>Sal de Vida (100%)</b>				
Lithium Carbonate (kt)	0	0	0	0
AISC (US\$/tonne LCE)	0	0	0	0

<b>James Bay (100%)</b>				
Spodumene concentrate (kt)	0	0	0	0
LCE (kt)	0	0	0	0
Total Costs (US\$/tonne)	0	0	0	0

Reserves & Resources	Mt	Grade (Li2O)	Mt LCE	Ta2O5 (Mlbs)
<b>Mt Cattlin</b>				
Resources	16.7	1.28%	0.528	5.854
Reserves	10.8	1.15%	0.307	3.548

<b>James Bay</b>				
Resources	40.8	1.40%	1.413	

<b>Sal de Vida</b>				
Resources			753	7.29
Reserves			489	1.14

### Directors & Management

**Name**  
Martin Rowley  
Simon Hay  
Anthony Tse  
Jian-Nan Zhang  
Peter Bacchus  
John Turner  
Florescia Heredia

Major Shareholders	%
Ausbil	7%
Board & Management	2%

### Company Description

Galaxy Resources Limited (ASX:GXY) is an Australian based, globally diversified lithium development and production company. Its primary assets are Mt Cattlin spodumene operation in WA, the Sal de Vida lithium brine development project in Argentina (100%) and the James Bay spodumene exploration project in Canada.

Profit & Loss (US\$m)	2019a	2020e	2021e	2022e
Revenue	69.5	68.4	108.2	157.2
Operating Costs	-52.4	-56.1	-76.8	-115.5
Corporate & O'heads	-11.5	-7.5	-7.2	-7.2
Exploration (Expensed)	0.0	-0.1	-0.1	-0.3
<b>EBITDA</b>	<b>5.6</b>	<b>4.8</b>	<b>24.1</b>	<b>34.2</b>
Dep'n	6.7	-3.8	-3.0	-3.5
Net Interest	9.4	6.4	4.1	2.7
Other/abnormals	-212.5	-24.7	0.0	0.0
Tax	-54.2	-4.6	-7.6	-10.0
<b>NPAT (reported)</b>	<b>-245.1</b>	<b>-18.0</b>	<b>17.7</b>	<b>23.3</b>
Other/minorities	-30.1	0.0	0.0	0.0
<b>NPAT (comprehensive)</b>	<b>-275.2</b>	<b>-18.0</b>	<b>17.7</b>	<b>23.3</b>

EBITDA Margin	8%	7%	22%	22%
EV/EBITDA	nm	nm	27.0x	6.6x
EPS	\$0.00	\$0.00	\$0.00	\$0.02
EPS Growth	nm	-180%	32%	259%
PER	nm	nm	nm	119.8x
Dividend Per Share	\$0.00	\$0.00	\$0.00	\$0.00
Dividend Yield	0%	0%	0%	0%

Cash Flow (US\$m)	2019a	2020e	2021e	2022e
Cash Receipts	63.6	62.6	108.2	157.2
Cash paid to suppliers & employee:	-77.5	-65.8	-84.0	-122.7
Tax Paid	-61.9	-7.3	0.0	0.0
Net Interest	10.7	9.1	4.1	2.7
Other	-21.5	-4.6	0.0	0.0
<b>Operating Cash Flow</b>	<b>-86.5</b>	<b>-6.0</b>	<b>28.3</b>	<b>37.2</b>
Exploration and Evaluation	-17.5	-0.3	-0.6	-3.2
Capex	-12.6	-21.5	-71.1	-115.8
Other	204.0	32.0	0.0	0.0
<b>Investing Cash Flow</b>	<b>173.9</b>	<b>10.2</b>	<b>-71.7</b>	<b>-119.0</b>
Debt Drawdown (repayment)	0.0	0.0	0.0	0.0
Share capital	0.0	117.7	0.0	0.0
Dividends	0.0	0.0	0.0	0.0
Financing Expenses	-9.7	-6.9	0.0	0.0
<b>Financing Cash Flow</b>	<b>-9.7</b>	<b>110.8</b>	<b>0.0</b>	<b>0.0</b>
Opening Cash	24.8	100.9	214.5	171.1
Increase / (Decrease) in cash	77.7	115.1	-43.4	-81.9
FX Impact	-1.5	-1.1	0.0	0.0
<b>Closing Cash</b>	<b>100.9</b>	<b>214.9</b>	<b>171.1</b>	<b>89.3</b>

Op. Cashflow/Share	-\$0.21	-\$0.01	\$0.06	\$0.07
P/CF	-12.3x	-219.2x	46.2x	35.1x
EV/FCF	nm	nm	nm	0.0x
FCF Yield	10%	0%	-4%	-8%

Balance Sheet (US\$m)	2019a	2020e	2021e	2022e
Cash + S/Term Deposits	100.9	214.5	171.1	89.3
Other current assets	44.2	13.1	19.8	28.2
<b>Current Assets</b>	<b>145.1</b>	<b>227.6</b>	<b>191.0</b>	<b>117.4</b>
Property, Plant & Equip.	88.5	106.3	174.4	286.7
Exploration & Develop.	81.3	57.2	57.7	60.6
Other Non-current Assets	76.5	74.5	75.5	70.5
Payables	13.9	13.7	21.6	23.6
Short Term Debt	6.4	0.0	0.0	0.0
Long Term Debt	-6.4	0.0	0.0	0.0
Other Liabilities	31.8	6.4	13.8	25.2
<b>Net Assets</b>	<b>345.8</b>	<b>445.5</b>	<b>463.2</b>	<b>486.5</b>
Shareholders Funds	445.5	463.2	486.5	570.3
Reserves	-9.1	-9.1	-9.1	-9.1
Retained Earnings	-288.9	-306.9	-289.3	-265.9
<b>Total Equity</b>	<b>345.8</b>	<b>445.5</b>	<b>463.2</b>	<b>486.5</b>

Debt/Equity	-2%	0%	0%	0%
Net Interest Cover	-0.5x	5.0x	nm	nm
ROE	-80%	-4%	4%	5%
ROIC	-90%	-7%	5%	5%
Book Value/share	\$0.84	\$1.09	\$0.92	\$0.96

Source: Company Reports, Canaccord Genuity estimates

Figure 22: IGO financial summary

# FINANCIAL SUMMARY

IGO Ltd

ASX:IGO

Analyst :

Tim Hoff

Date:

10/02/2021

Year End:

June

Rating:  
Target Price:

BUY  
AS\$8.50

## Market Information

Share Price	A\$	6.60
Market Capitalisation	A\$m	4,916.7
12 Month Hi	A\$	7.04
12 Month Lo	A\$	3.24
Issued Capital	m	745.0
Options	m	0.0
Fully Diluted	m	745.0

## Valuation

Tropicana	NPV @ 5%	796	100%	1.05
Greenbushes	NPV @ 7%	1,782	100%	2.35
Kwinana	NPV @ 7%	1,636	100%	2.16
Nova	NPV @ 7%	1,428	100%	1.89
Expansion option		100		
Exploration		200		0.26
Corporate		(282)		(0.37)
Investments		107		0.14
Net Cash		(266)		(0.35)
<b>TOTAL</b>				<b>7.25</b>
<b>TOTAL</b>		<b>5,501</b>		<b>7.25</b>

## 5 yr ave EBITDA Multiple

Tropicana	176	7	1,231	
Nova	296	6	1,777	
LithiumHold Co	303	15	4,549	
Total	775	10	7,557	
Add net cash			7,291	9.63

## Assumptions

	2020a	2021e	2022e	2023e
Gold Price (US\$/oz)	1,563	1,922	1,965	1,986
Nickel Price (US\$/lb)	6.21	7.38	7.93	8.00
Copper Price (US\$/lb)	2.52	3.28	3.38	3.25
Spodumene Price (US\$/t)	614	540	725	788
Lithium Hydroxide	9111	9038	11500	14813
AUD:USD	0.67	0.75	0.77	0.77

## Production Metrics

	2020a	2021e	2022e	2023e
<b>Tropicana (100%)</b>				
Gold (koz)	141	121	118	132
AISC (A\$/oz Au)	1,263	1,831	1,504	1,315
<b>Nova (in conc.)</b>				
Nickel (kt)	30.44	27.99	26.98	26.75
Copper (kt)	13.77	11.89	10.88	10.88
Cash cost (A\$/lb Ni payable)	1.54	0.13	0.00	0.00
<b>Greenbushes</b>				
Spodumene Concentrate 100%	658.0	638.9	790.8	1182.6
Spodumene Concentrate 24.99%	164.4	159.7	197.6	295.5
Cash cost (A\$/t)	294.8	296.2	290.2	366.2
<b>Kwinana</b>				
Lithium Hydroxide 100%	0.0	0.0	11.4	20.8
Lithium Hydroxide IGO 49%	0.0	0.0	5.6	10.2
Cash cost (US\$/t)	0.0	0.0	11885	9644

## Reserves & Resources

	Mt	Grade	Moz
<b>Tropicana (100%)</b>			
Resources	129	1.7 g/t Au	7.1 Moz
Reserves	57	1.7 g/t Au	3.0 Moz
<b>Nova</b>			
Resources	11.6	2.0 % nickel	234kt
Reserves	9.5	1.9 % nickel	177kt
<b>Greenbushes</b>			
Resources	133.1	2.1 % Li2O	
Reserves	178.5	2.0 % Li2O	

## Company Description

IGO is an Australian based S&P/ASX200 diversified miner which produces circa 130-150kozpa Au (attributable) from its 30% owned Tropicana mine and 25-30ktpa Ni & 10-12ktpa Cu from its Nova mine. IGO will acquire a stake in the Greenbushes lithium mine and Kwinana lithium hydroxide plant giving it exposure to lithium production.

Profit & Loss (A\$m)	2020a	2021e	2022e	2023e
Revenue	888.9	393.2	1,517.3	1,823.6
Other Income	3.5	0.0	0.0	0.0
Operating Costs	-364.7	-204.1	-672.0	-757.1
Exploration expensed/written off	-72.7	-35.4	-92.2	-92.4
Corporate/Other expenses	-19.0	-14.1	-38.2	-38.4
<b>EBITDA</b>	<b>436.0</b>	<b>458.2</b>	<b>586.8</b>	<b>778.9</b>
Dep'n	-243.6	-71.9	-318.1	-326.6
Net Interest	-5.1	17.3	-37.9	-25.1
Other	32.2	0.0	0.0	0.0
Tax	-64.4	-25.5	-107.6	-175.2
NPAT (reported)	155.1	378.2	123.1	252.0
Abnormals	0.0	0.0	0.0	1.0
<b>NPAT</b>	<b>155.1</b>	<b>121.4</b>	<b>227.1</b>	<b>346.3</b>

## EBITDA Margin

	49%	117%	39%	43%
<b>EV/EBITDA</b>	<b>7.9x</b>	<b>12.4x</b>	<b>9.1x</b>	<b>6.3x</b>
EPS	\$0.26	\$0.18	\$0.30	\$0.46
EPS Growth	104%	-62%	231%	63%
PER	25.1x	36.3x	21.6x	14.2x
Dividend Per Share	\$0.11	\$0.06	\$0.10	\$0.17
Dividend Yield	1.5%	0.9%	1.5%	1.5%

## Cash Flow (A\$m)

	2020a	2021e	2022e	2023e
Cash Receipts	888.9	405.2	1,517.3	1,823.6
Cash paid to suppliers & employee	-422.8	-218.2	-710.3	-795.4
Tax Paid	0.0	0.0	-64.5	-175.2
Exploration and growth	-68.6	-75.6	-145.7	-145.7
+/- Working cap change	0.0	1.0	2.0	3.0
<b>Operating Cash Flow</b>	<b>397.5</b>	<b>112.4</b>	<b>598.8</b>	<b>710.2</b>
Exploration evaluation	-3.1	-2.4	-2.4	-2.4
Capex	-84.6	-32.9	-167.4	-183.2
Other	-27.7	-1,909.9	0.0	0.0
<b>Investing Cash Flow</b>	<b>-115.3</b>	<b>-1,945.2</b>	<b>-169.8</b>	<b>-185.6</b>
Debt Drawdown (repayment)	-34.2	1210.9	0.0	0.0
Share capital	0.0	766.0	0.0	0.0
Dividends	-82.7	-74.9	-30.3	-106.0
Net interest	0.0	6.0	-37.9	-25.1
<b>Financing Cash Flow</b>	<b>-117.0</b>	<b>1907.9</b>	<b>-68.2</b>	<b>-131.1</b>
Opening Cash	348.2	510.3	584.3	943.1
Increase / (Decrease) in cash	165.2	75.0	360.7	393.5
FX Impact	-3.1	0.0	0.0	0.0
<b>Closing Cash</b>	<b>510.3</b>	<b>585.3</b>	<b>945.1</b>	<b>1336.6</b>

## Op. Cashflow/Share

P/CF	\$0.53	\$0.15	\$0.80	\$0.95
FCF	12.4x	43.8x	8.2x	6.9x
<b>FCF</b>	<b>\$282</b>	<b>(\$1,833)</b>	<b>\$429</b>	<b>\$525</b>
EV/FCF	12.2x	-3.1x	12.4x	9.4x
FCF Yield	6%	-37%	9%	11%

## Balance Sheet (A\$m)

	2020a	2021e	2022e	2023e
Cash + S/Term Deposits	510.3	584.3	943.1	1,333.6
Other current assets	252.6	206.1	306.1	324.4
<b>Current Assets</b>	<b>762.9</b>	<b>790.5</b>	<b>1,249.2</b>	<b>1,658.0</b>
Property, Plant & Equip.	48.6	81.5	249.0	432.1
Exploration & Develop.	1,159.6	3,046.7	2,896.0	2,752.5
Other Non-current Assets	226.9	200.1	180.0	165.0
Payables	53.0	39.3	151.7	182.4
Short Term Debt	56.9	0.0	0.0	0.0
Long Term Debt	33.6	1,268.0	1,268.0	1,268.0
Other Liabilities	223.7	245.5	470.8	645.4
<b>Net Assets</b>	<b>1,925.8</b>	<b>2,705.8</b>	<b>2,881.2</b>	<b>3,161.3</b>
Shareholders Funds	1,897.1	2,663.1	2,663.1	2,663.1
Reserves	18.9	18.9	18.9	18.9
Retained Earnings	9.8	23.8	199.2	479.3
<b>Total Equity</b>	<b>1,925.8</b>	<b>2,705.8</b>	<b>2,881.2</b>	<b>3,161.3</b>

## Debt/Equity

Net Debt/EBITDA	2%	47%	44%	40%
Net Interest Cover	-1.1x	6.1x	0.5x	-0.1x
ROE	37.9x	nm	7.1x	18.0x
ROIC	8%	4%	8%	11%
Book Value/share	4%	1%	5%	6%
	2.59	3.63	3.87	4.24

Source: Company Reports, Canaccord Genuity estimates

Figure 23: INR financial summary

## FINANCIAL SUMMARY

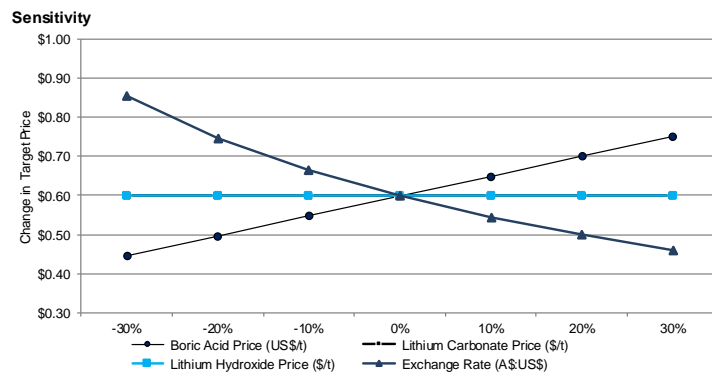
**Ioneer Ltd** ASX:INR  
Analyst : Tim Hoff  
Date: 10/02/2021  
Year End: June

Rating: BUY  
Target Price: A\$0.60

Market Information		
Share Price	A\$	0.45
Market Capitalisation	A\$m	786
12 Month Hi	A\$	0.46
12 Month Lo	A\$	0.07
Issued Capital	m	1747
ITM Options	m	66
Fully Diluted	m	1813

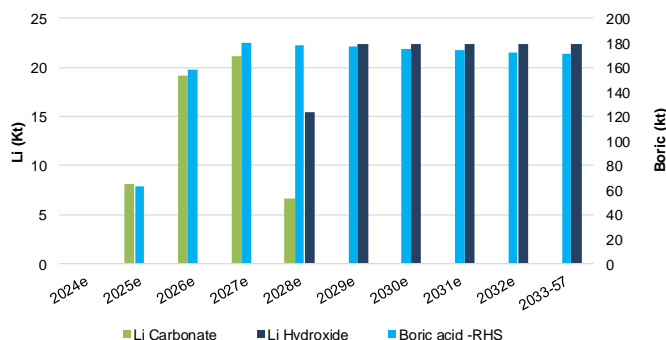
Valuation		A\$m	Equity	A\$/share
Rhyolite Ridge	NPV <sub>7%</sub>	1,083.3		0.60
Corporate		(33.4)		(0.02)
Net Debt		34.9		0.02
TOTAL		1,084.8		0.60
Target Price				0.60
P/NAV				0.75x

Assumptions	2020a	2021e	2022e	2023e
Lithium Carbonate (US\$/t)	9,537	8,350	9,500	13,625
Lithium Hydroxide (US\$/t)	0	9,375	11,500	14,813
Boric Acid (US\$/t)	0	710	710	710
AUD:USD	0.67	0.75	0.77	0.77



Production Metrics	2020a	2021e	2022e	2023e
<b>Rhyolite Ridge</b>				
Lithium Carbonate	0.0	0.0	0.0	0.0
Lithium Hydroxide (kt)	0.0	0.0	0.0	0.0
Boric Acid	0.0	0.0	0.0	0.0
AISC (US\$/t)	0.0	0.0	0.0	0.0

Reserves & Resources	Mt	Li grade (ppm)	B grade (ppm)	LCE (kt)
<b>Rhyolite Ridge</b>				
Resources	147.0	1,600	14,200	1,250
Reserves	60.0	1,797	15,418	573



Source: Company Reports, Canaccord Genuity Estimates

## Company Description

Ioneer (ASX:INR) is an Australian based sedimentary lithium-boron development company. Its primary asset is the Rhyolite Ridge project located in Nevada, USA. Rhyolite Ridge is expected to produce 22ktpa of battery quality lithium hydroxide and 170ktpa of boric acid.

Profit & Loss (A\$m)	2020a	2021e	2022e	2023e
Revenue	0.1	0.0	0.0	0.0
Operating Costs	0.0	0.0	0.0	0.0
Royalty	0.0	0.0	0.0	0.0
Corporate & O'heads	-5.1	-4.0	-4.0	-4.0
Exploration (Expensed)	-0.1	0.0	0.0	0.0
<b>EBITDA</b>	<b>-8.4</b>	<b>-4.0</b>	<b>-4.0</b>	<b>-4.0</b>
Dep'n	-0.1	0.0	0.0	0.0
Net Interest	2.8	0.8	0.9	-4.6
Other	0.0	0.0	0.0	0.0
Tax	0.0	0.0	0.0	-0.6
NPAT (reported)	-5.6	-3.2	-3.1	-9.3
Abnormals	0.0	0.0	0.0	0.0
<b>NPAT</b>	<b>-5.6</b>	<b>-3.2</b>	<b>-3.1</b>	<b>-9.3</b>
<b>EBITDA Margin</b>	<b>nm</b>	<b>nm</b>	<b>nm</b>	<b>nm</b>
<b>EV/EBITDA</b>	<b>nm</b>	<b>nm</b>	<b>nm</b>	<b>nm</b>
EPS	\$0.00	\$0.00	\$0.00	\$0.00
EPS Growth	nm	nm	nm	nm
PER	nm	nm	nm	nm
Dividend Per Share	\$0.00	\$0.00	\$0.00	\$0.00
Dividend Yield	0%	0%	0%	0%
Cash Flow (A\$m)	2020a	2021e	2022e	2023e
Cash Receipts	0.0	0.0	0.0	0.0
Cash paid to suppliers & employee:	-6.8	-4.0	-4.0	-4.0
Exploration and Evaluation	0.0	0.0	0.0	0.0
Tax Paid	0.0	0.0	0.0	-0.6
+/- Other -working cap change	0.0	0.0	0.0	0.0
<b>Operating Cash Flow</b>	<b>-6.8</b>	<b>-4.0</b>	<b>-4.0</b>	<b>-4.6</b>
Capex	-45.1	-19.2	-18.2	-332.0
Other	0.0	0.0	0.0	0.0
<b>Investing Cash Flow</b>	<b>-45.1</b>	<b>-19.2</b>	<b>-18.2</b>	<b>-332.0</b>
Debt Drawdown (repayment)	0.0	0.0	0.0	500.0
Net interest expense	0.7	0.8	0.9	-4.6
Equity Issue	40.6	20.0	0.0	500.0
Dividends	0.0	0.0	0.0	0.0
Financing Expenses	-1.8	-1.0	0.0	-25.0
<b>Financing Cash Flow</b>	<b>39.5</b>	<b>19.8</b>	<b>0.9</b>	<b>970.4</b>
Opening Cash	48.6	38.3	34.9	13.5
Increase / (Decrease) in cash	-12.5	-3.4	-21.3	633.7
FX Impact	2.1	0.0	0.0	0.0
<b>Closing Cash</b>	<b>38.3</b>	<b>34.9</b>	<b>13.5</b>	<b>647.3</b>
Op. Cashflow/Share	\$0.00	\$0.00	\$0.00	\$0.00
P/CF	-110.4x	-196.5x	-196.5x	-169.6x
<b>EV/FCF</b>	<b>nm</b>	<b>nm</b>	<b>nm</b>	<b>nm</b>
<b>FCF Yield</b>	<b>-7%</b>	<b>-3%</b>	<b>-3%</b>	<b>-43%</b>
Balance Sheet (A\$m)	2020a	2021e	2022e	2023e
Cash + S/Term Deposits	38.3	34.9	13.5	647.3
Other current assets	0.1	0.1	0.1	0.1
<b>Current Assets</b>	<b>38.3</b>	<b>34.9</b>	<b>13.6</b>	<b>647.3</b>
Property, Plant & Equip.	0.0	19.2	37.4	369.4
Exploration & Develop.	94.8	94.8	94.8	94.8
Other Non-current Assets	0.7	0.7	0.7	0.7
Payables	3.1	3.1	3.1	3.1
Short Term Debt	0.0	0.0	0.0	500.0
Long Term Debt	0.0	0.0	0.0	0.0
Other Liabilities	0.7	0.7	0.7	0.7
<b>Net Assets</b>	<b>130.0</b>	<b>145.8</b>	<b>142.7</b>	<b>608.4</b>
Shareholders Funds	153.3	172.3	172.3	672.3
Reserves	9.8	9.8	9.8	9.8
Retained Earnings	-33.1	-36.3	-39.4	-48.7
<b>Total Equity</b>	<b>130.0</b>	<b>145.8</b>	<b>142.7</b>	<b>633.4</b>
Debt/Equity	0%	0%	0%	0%
Net Debt/EBITDA	5.6x	8.7x	3.4x	31.8x
Net Interest Cover	-301.1x	nm	nm	nm
ROE	-4%	-2%	-2%	-1%
ROIC	-6%	-3%	-2%	-2%
Book Value/share	\$0.08	\$0.08	\$0.08	\$0.35
Net Debt	-38.3	-34.9	-13.5	-147.3

Source: Company Reports, Canaccord Genuity estimates

Figure 24: LPI financial summary

## FINANCIAL SUMMARY

Lithium Power International

LPI:ASX

Analyst : Reg Spencer  
Date: 10/02/2021  
Year End: June

Rating: **SPEC BUY**  
Target Price: **\$0.55**

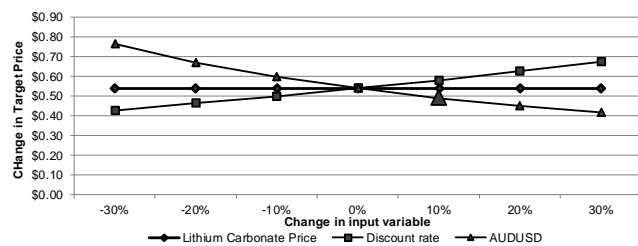
### Market Information

Share Price	A\$	0.30
Market Capitalisation	A\$m	78.8
12 Month Hi	A\$	0.39
12 Month Lo	A\$	0.10
Issued Capital	m	262.5
Options	m	65.8
Fully Diluted	m	328.3

Valuation	\$m	Risk adj	Equity	A\$m	A\$/share
Maricunga	390.5	60%	51%	155.4	0.53
Exploration	-			-	-
Corporate	(15.1)			(15.1)	(0.05)
Cash	11.1			11.1	0.04
ITM options	6.2			6.2	0.02
<b>TOTAL</b>	<b>392.7</b>			<b>157.6</b>	<b>0.54</b>
P/NAV					0.56x
Price Target					0.55

Assumptions	2020a	2021e	2022e	2023e
Lithium carbonate min 99% Li (US\$/t)	8,248	6,437	9,500	13,625
AUD:USD	0.67	0.75	0.77	0.77

### Sensitivity



Production Metrics	2020a	2021e	2022e	2023e
<b>Maricunga (100%)</b>				
Lithium Carbonate (kt)	0.0	0.0	0.0	1.9
Cash Costs (US\$/t)	0	0	0	14,853

Reserves & Resources	Area km <sup>2</sup>	Thickness metres	Volume km <sup>3</sup>	Grade ppm Li	LCE(Mt)
<b>Maricunga (100%)</b>					
Measured	18.9	158.3	0.15	1,174	0.94
Indicated	6.8	194.5	0.14	1,071	0.80
Inferred	0.0	0.0	0.00	0	0.00
<b>TOTAL</b>	<b>25.6</b>	<b>176.4</b>	<b>0.29</b>	<b>1,124</b>	<b>1.74</b>

### Directors & Management

Name	Position
D Hannan	NE Chairman
C Garcia-Huidobro	CEO & MD
R Crookes	Exec Director
M Borda	NE Director
R Barwick	NE Director
R Fertig	NE Director
A Phillips	Co Sec

### Substantial Shareholders

	%
Board & Management	15.4%
Republic Investment Mgt	7.2%
Minera Salar Blanco SpA	6.1%

### Company Description

Lithium Power International is an Australian company focused on the exploration and development of lithium projects. Its key asset is a 50% interest in the Maricunga JV, owner of the Maricunga lithium brine project in Chile. The project features a high grade resource, with studies are underway to assess the potential for 20ktpa LCE project.

Profit & Loss (A\$m)	2020a	2021e	2022e	2023e
Revenue	-3.8	0.0	0.0	0.0
Operating Costs	0.0	0.0	0.0	0.0
Corporate & O'heads	-2.8	-1.3	-2.0	-2.4
Exploration (Expensed)	0.0	0.0	0.0	0.0
<b>EBITDA</b>	<b>-6.6</b>	<b>-1.3</b>	<b>-2.0</b>	<b>-2.4</b>
Dep'n	0.0	0.0	0.0	0.0
Net Interest	0.2	0.1	0.2	0.1
Tax	0.0	0.0	0.0	0.0
NPAT (reported)	-13.0	-8.0	-8.9	-3.6
Abnormals	-6.6	0.0	0.0	0.0
<b>NPAT</b>	<b>-19.6</b>	<b>-8.0</b>	<b>-8.9</b>	<b>-3.6</b>

EBITDA Margin	nm	nm	nm	nm
EV/EBITDA	nm	nm	nm	nm
EPS	-\$0.05	-\$0.03	-\$0.03	-\$0.01
EPS Growth	nm	nm	nm	nm
PER	nm	nm	nm	nm
Dividend Per Share	\$0.00	\$0.00	\$0.00	\$0.00
Dividend Yield	0%	0%	0%	0%

Cash Flow (A\$m)	2020a	2021e	2022e	2023e
Cash Receipts	0.0	0.0	0.0	0.0
Cash paid to suppliers & employees	-2.2	-1.3	-2.0	-2.4
Tax Paid	0.0	0.0	0.0	0.0
Net Interest	0.2	0.1	0.2	0.1
+/- Working cap change	0.1	0.0	0.0	0.0
<b>Operating Cash Flow</b>	<b>-1.9</b>	<b>-1.2</b>	<b>-1.8</b>	<b>-2.3</b>
Exploration and Evaluation	-1.2	-1.6	-4.5	-0.8
Capex	0.0	0.0	0.0	0.0
JV Divs & Other	-5.2	-2.4	0.0	0.0
<b>Investing Cash Flow</b>	<b>-6.4</b>	<b>-3.9</b>	<b>-4.5</b>	<b>-0.8</b>
Debt Drawdown (repayment)	0.0	0.0	0.0	0.0
Share capital	0.1	13.9	0.0	0.0
Dividends	0.0	0.0	0.0	0.0
Financing Expenses	0.0	-0.6	0.0	0.0
<b>Financing Cash Flow</b>	<b>0.1</b>	<b>13.4</b>	<b>0.0</b>	<b>0.0</b>
Opening Cash	15.3	7.1	15.3	9.1
Increase / (Decrease) in cash	-8.2	8.3	-6.3	-3.1
FX Impact	0.0	-0.1	0.0	0.0
<b>Closing Cash</b>	<b>7.1</b>	<b>15.3</b>	<b>9.1</b>	<b>6.0</b>

Op. Cashflow/Share	-\$0.01	\$0.00	-\$0.01	-\$0.01
P/CF	-41.3x	-76.9x	-50.8x	-39.2x
EV/FCF	nm	nm	nm	nm
FCF Yield	-11%	-6%	-8%	-4%

Balance Sheet (A\$m)	2020a	2021e	2022e	2023e
Cash + S/Term Deposits	7.1	15.3	9.1	6.0
Other current assets	0.3	0.0	0.0	0.0
<b>Current Assets</b>	<b>7.4</b>	<b>15.3</b>	<b>9.1</b>	<b>6.0</b>
Property, Plant & Equip.	0.0	0.0	0.0	0.0
Exploration & Develop.	4.2	5.8	10.3	11.1
Other Non-current Assets	25.1	25.1	25.1	25.1
Payables	0.3	2.0	2.0	2.0
Short Term Debt	0.0	0.0	0.0	0.0
Long Term Debt	0.0	0.0	0.0	0.0
Other Liabilities	0.1	1.9	9.1	10.4
<b>Net Assets</b>	<b>36.4</b>	<b>42.3</b>	<b>33.3</b>	<b>29.7</b>
Shareholders Funds	69.6	83.5	83.5	83.5
Reserves	7.2	8.0	8.0	8.0
Retained Earnings	-41.0	-49.0	-58.0	-61.6
<b>Total Equity</b>	<b>36.4</b>	<b>42.3</b>	<b>33.3</b>	<b>29.7</b>

Debt/Equity	0%	0%	0%	0%
Net Debt/EBITDA	3.7x	13.2x	5.2x	2.6x
Net Interest Cover	nm	nm	nm	nm
ROE	-54%	-19%	-27%	-12%
ROIC	-66%	-24%	-24%	-9%
Book Value/share	\$0.14	\$0.14	\$0.11	\$0.10

Source: Company Reports, Canaccord Genuity estimates



Figure 25: ORE financial summary

## FINANCIAL SUMMARY

Orocobre Limited ORE:ASX; ORL:TSX

Analyst : Reg Spencer  
Date: 10/02/2021  
Year End: June

Rating: BUY  
Target Price: A\$7.30

### Market Information

Share Price	A\$	4.95
Market Capitalisation	A\$m	1,672.9
12 Month Hi	A\$	6.06
12 Month Lo	A\$	1.83
Issued Capital	m	338.0
Options	m	0.0
Fully Diluted	m	338.0

### Valuation

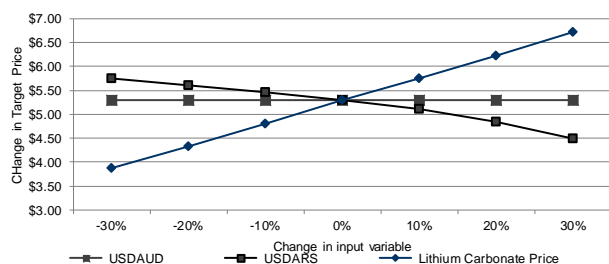
	Equity	A\$m	A\$/share
Olaroz NPV10%	67%	1,227	3.63
Borax Argentina	100%	38	0.11
Naraha LiOH NPV	75%	492	1.45
Projects	-	-	-
Corporate	(82)	(0.24)	
Cash (attrib)	319	0.94	
Debt (attrib)	(207)	(0.61)	
<b>TOTAL</b>		<b>1,786</b>	<b>5.29</b>
P/NAV			0.94x

### Target price

60:40 blend NAV, avg 5 yr fwd attrib EBITDA 7.30

Assumptions	2020a	2021e	2022e	2023e	2024e
LCE rec'd (US\$/t)	5,313	4,350	9,500	13,625	15,625
Boric Acid (US\$/t)	448	397	400	400	400
AUD:USD	0.67	0.74	0.77	0.77	0.77
ARS:USD	61.50	75.25	78.00	78.00	78.00

### Sensitivity



Production Metrics	2020a	2021e	2022e	2023e	2024e
<b>Olaroz (100%)</b>					
Lithium Carbonate (kt)	11.9	11.4	14.4	21.7	36.6
Cash Costs (US\$/t)	3,707	4,264	3,510	3,476	3,304
<b>Borax Argentina</b>					
Boric Acid Equiv (kt)	40.8	37.5	36.8	36.8	36.8
Cash costs (US\$/t)	249	213	205	205	205

Reserves & Resources	Area km <sup>2</sup>	Thickness metres	Volume km <sup>3</sup>	Conc. (mg/L)	Li (Mt)
<b>Olaroz (100%)</b>					
Reserves					
Measured	93	54	0.42	632	0.27
Indicated	93	143	1.33	708	0.94
<b>Total</b>	<b>93</b>	<b>197</b>	<b>1.75</b>	<b>690</b>	<b>1.21</b>

### Directors & Management

Name	Position
R Hubbard	NE Chairman
M Perez de Solay	MD & CEO
R Seville	NE Director
J Gibson	NE Director
F Oris de Roa	NE Director
F Nicholson	NE Director
L Heywood	NE Director
M Katayama	NE Director
N Kaplan	CFO

Major Shareholders	Shares (m)	%
Toyota Tshusho Corp	39.11	11.6%

### Company Description

Orocobre Ltd (ORE:ASX, ORL:TSX) is a lithium chemicals production and development company. Its primary asset is a 66.5% interest in the 17.5ktpa Salar de Olaroz lithium brine project, located in the Jujuy Province of Argentina. Other assets include 100% ownership of Borax Argentina, a borate minerals and chemicals operations which produces approximately 40ktpa of borate mineral products.

Profit & Loss (US\$m)	2020a	2021e	2022e	2023e	2024e
Revenue	77.1	72.0	217.7	416.7	717.6
Operating Costs	60.6	67.1	114.4	191.2	319.4
Corporate & O'heads	20.4	7.4	8.0	8.0	8.0
Exploration (Expensed)	0.0	0.0	0.0	0.0	0.0
<b>EBITDA</b>	<b>-3.9</b>	<b>-2.5</b>	<b>95.3</b>	<b>217.5</b>	<b>390.2</b>
Dep'n	13.9	9.6	14.0	21.9	37.2
Net Interest	-12.9	-5.6	-9.0	-8.1	-8.8
Pre Tax Profit	-30.7	-17.7	72.3	187.6	344.2
Tax	9.9	0.0	-21.7	-56.3	-103.3
Abnormals	-46.9	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0
<b>NPAT</b>	<b>-67.7</b>	<b>-17.7</b>	<b>50.6</b>	<b>131.3</b>	<b>240.9</b>

EBITDA Margin	nm	nm	44%	52%	54%
EV/EBITDA	nm	nm	15.1x	6.2x	3.2x
EPS	-\$0.26	-\$0.05	\$0.15	\$0.39	\$0.71
EPS Growth	nm	nm	nm	159%	84%
PER	nm	nm	33.1x	12.7x	6.9x
Dividend Per Share	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Dividend Yield	0%	0%	0%	0%	0%

Cash Flow (US\$m)	2020a	2021e	2022e	2023e	2024e
Cash Receipts	81.0	72.0	217.7	416.7	717.6
Cash paid to supp's & emp'ees	-90.6	-74.5	-122.4	-199.2	-327.4
Tax Paid	0.0	0.0	-15.5	-56.3	-103.3
Net Interest	-6.6	-5.6	-9.0	-8.1	-8.8
+/- Working cap change	0.0	23.6	0.0	0.0	0.0
<b>Operating Cash Flow</b>	<b>-16.2</b>	<b>15.6</b>	<b>70.8</b>	<b>153.2</b>	<b>278.1</b>
Exploration and Evaluation	-4.6	0.0	-0.6	-0.8	-0.8
Capex	-111.6	-78.0	-147.4	-107.0	-97.6
Other	-15.4	-16.8	-40.0	0.0	0.0
<b>Investing Cash Flow</b>	<b>-131.6</b>	<b>-94.8</b>	<b>-188.0</b>	<b>-107.8</b>	<b>-98.4</b>
Other financing cashflow	0.0	0.0	0.0	0.0	0.0
Debt Drawdown (repayment)	39.2	87.4	18.0	-7.0	138.0
Share capital	0.0	121.0	0.0	0.0	0.0
Dividends	0.0	0.0	0.0	0.0	0.0
Financing Expenses	0.0	-2.7	0.0	0.0	0.0
<b>Financing Cash Flow</b>	<b>39.2</b>	<b>205.7</b>	<b>18.0</b>	<b>-7.0</b>	<b>138.0</b>
Opening Cash	279.8	171.8	298.2	199.0	237.4
Increase / (Decrease) in cash	-108.6	126.4	-99.2	38.4	317.7
FX Impact	0.6	0.0	0.0	0.0	0.0
<b>Closing Cash</b>	<b>171.8</b>	<b>298.2</b>	<b>199.0</b>	<b>237.4</b>	<b>555.1</b>

Op. Cashflow/Share	-\$0.06	\$0.05	\$0.21	\$0.45	\$0.82
P/CF	nm	107.4x	23.6x	10.9x	6.0x
FCF	-147.8	-79.2	-117.2	45.4	179.7
EV/FCF	nm	nm	-12.3x	29.8x	6.9x
FCF Yield	-13%	-6%	-9%	4%	14%

Balance Sheet (US\$m)	2020a	2021e	2022e	2023e	2024e
Cash	171.8	298.3	199.1	237.5	555.2
Other current assets	55.1	53.1	82.2	122.0	182.2
<b>Current Assets</b>	<b>226.9</b>	<b>351.3</b>	<b>281.3</b>	<b>359.5</b>	<b>737.3</b>
Property, Plant & Equip.	762.0	830.4	963.8	1,048.9	1,109.4
Exploration & Develop.	44.8	44.8	45.4	46.2	47.0
Other Non-current Assets	112.0	112.0	205.6	356.6	356.6
Payables	37.0	32.4	98.0	187.5	322.9
Short Term Debt	62.4	32.0	57.0	62.0	62.0
Long Term Debt	157.6	279.8	272.8	260.8	398.8
Other Liabilities	39.6	40.2	48.9	130.2	54.1
<b>Net Assets</b>	<b>690.6</b>	<b>793.9</b>	<b>844.5</b>	<b>975.8</b>	<b>1,216.8</b>
Shareholders Funds	548.5	669.5	669.5	669.5	669.5
Reserves	-16.6	-16.6	-16.6	-16.6	-16.6
Retained Earnings	70.5	58.8	92.4	179.7	340.0
Minority interests	88.2	82.3	99.3	143.2	224.0
<b>Total Equity</b>	<b>690.6</b>	<b>793.9</b>	<b>844.5</b>	<b>975.8</b>	<b>1,216.8</b>

Debt/Equity	23%	35%	32%	27%	33%
Net Debt/EBITDA	-3.0x	0.9x	1.8x	0.6x	-0.3x
Net Interest Cover	-0.9x	-1.5x	7.1x	19.2x	28.9x
ROE	-10%	-2%	6%	13%	20%
ROIC	-7%	-2%	4%	7%	12%
Book Value/share	\$2.50	\$2.35	\$2.50	\$2.89	\$3.60

Source: Company Reports, Canaccord Genuity estimates

Figure 26: PLL financial summary

## FINANCIAL SUMMARY

Piedmont Lithium Ltd

PLL:ASX

Analyst : Reg Spencer  
Date: 10/02/2021  
Year End: June

Rating:  
Target Price:

SPEC BUY  
A\$0.80

### Market Information

Share Price	A\$	0.80
Market Capitalisation	A\$m	1,068.0
12 Month Hi	A\$	0.82
12 Month Lo	A\$	0.06
Issued Capital	m	1343.4
Options	m	43.8
Fully Diluted	m	1387.1

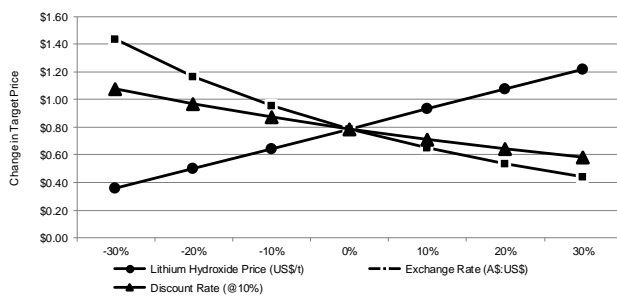
### Valuation

	A\$m	A\$/share
Piedmont project NPV - risked	963.1	0.69
Projects & Investments	68.1	0.05
Corporate	(31.2)	(0.02)
Cash	73.0	0.05
Debt	-	-
ITM options	7.0	0.01
<b>TOTAL</b>	<b>1,080.1</b>	<b>\$0.78</b>
P/NAV		1.02x
<b>Target Price</b>		<b>\$0.80</b>

### Assumptions

	2020a	2021e	2022e	2023e
Lithium Hydroxide (US\$/t)	11,521	9,388	11,500	14,813
Spodumene Concentrate (US\$/t)	508	467	725	680
AUD:USD	0.67	0.75	0.77	0.77

### Sensitivity



### Production Metrics

	2020a	2021e	2022e	2023e
<b>Piedmont Lithium Project</b>				
Lithium Hydroxide Sales	0	0	0	0
Cash costs (US\$/t)	0	0	0	0

### Reserves & Resources

	Mt	Grade (Li2O)	Mt Li2O
Indicated	13.9	1.16%	0.16
Inferred	14.0	1.06%	0.15
<b>Total</b>	<b>27.9</b>	<b>1.11%</b>	<b>0.31</b>

### Directors & Management

Name	Position
Ian Middlemas	Non-Executive Chairman
Keith Phillips	President and CEO
Anastasios Arima	Executive Director
Jeff Armstrong	Non-Executive Director
Jorge Beristain	Non-Executive Director
Levi Mochkin	Non-Executive Director

### Company Description

Piedmont Lithium (PLL:ASX) is developing the 100% owned Piedmont Lithium project, located in the USA. The project is being assessed through feasibilities for the development of an integrated hard rock lithium hydroxide project, with potential capacity of +20ktpa.

### Profit & Loss (US\$m)

	2020a	2021e	2022e	2023e
Revenue	0.0	0.0	0.0	17.4
Operating Costs	0.0	0.0	0.0	-21.0
Corporate, O'heads & Royalties	-3.1	-5.7	-7.0	-4.0
Exploration (Expensed)	-3.6	-1.1	-0.7	-0.3
<b>EBITDA</b>	<b>-6.6</b>	<b>-6.9</b>	<b>-7.7</b>	<b>-7.9</b>
Dep'n	0.0	0.0	0.0	-2.6
Net Interest	0.2	0.3	0.9	2.6
Other	0.0	0.0	1.0	2.0
Tax	0.0	0.0	0.0	-0.0
<b>NPAT (statutory)</b>	<b>-6.4</b>	<b>-6.5</b>	<b>-5.7</b>	<b>-5.9</b>
Abnormals	0.0	-0.1	0.0	0.0
NPAT	-6.4	-6.6	-5.7	-5.9

### EBITDA Margin

EV/EBITDA	nm	nm	nm	nm
EPS	-\$0.01	-\$0.01	\$0.00	\$0.01
EPS Growth	nm	nm	nm	-338%
PER	nm	-126.9x	-246.5x	103.5x
Dividend Per Share	\$0.00	\$0.00	\$0.00	\$0.00
<b>Dividend Yield</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>

### Cash Flow (US\$m)

	2020a	2021e	2022e	2023e
Cash Receipts	0.0	0.0	0.0	17.4
Cash paid to suppliers & employees	-7.2	-5.7	-7.0	-25.0
Tax Paid	0.0	0.0	0.0	0.0
Net Interest	0.1	0.3	0.9	2.6
Other	0.1	-0.5	0.0	0.0
<b>Operating Cash Flow</b>	<b>-7.0</b>	<b>-5.9</b>	<b>-6.1</b>	<b>-5.0</b>
Exploration and Evaluation	0.0	-2.3	-2.0	-2.0
Capex	-0.7	0.0	-170.0	-401.0
Other	-2.8	-17.3	0.0	0.0
<b>Investing Cash Flow</b>	<b>-3.4</b>	<b>-19.6</b>	<b>-172.0</b>	<b>-403.0</b>
Debt Drawdown (repayment)	-0.4	0.0	350.0	0.0
Share capital	27.4	65.4	220.0	0.0
Dividends	0.0	0.0	0.0	0.0
Financing Expenses	-2.3	-4.7	-8.8	0.0
<b>Financing Cash Flow</b>	<b>24.8</b>	<b>60.7</b>	<b>561.2</b>	<b>0.0</b>
Opening Cash	4.4	18.9	54.2	437.3
Increase / (Decrease) in cash	14.3	35.2	383.1	-407.9
FX Impact	0.1	0.1	0.0	0.0
<b>Closing Cash</b>	<b>18.9</b>	<b>54.2</b>	<b>437.3</b>	<b>29.3</b>

### Op. Cashflow/Share

P/CF	-125.8x	-182.2x	-215.7x	-262.5x
<b>EV/FCF</b>	<b>nm</b>	<b>nm</b>	<b>nm</b>	<b>nm</b>
<b>FCF Yield</b>	<b>-1%</b>	<b>-2%</b>	<b>-17%</b>	<b>-38%</b>

### Balance Sheet (US\$m)

	2020a	2021e	2022e	2023e
Cash + S/Term Deposits	18.9	54.2	437.3	29.3
Other current assets	0.2	0.2	0.3	4.1
<b>Current Assets</b>	<b>19.0</b>	<b>54.3</b>	<b>437.6</b>	<b>33.5</b>
Property, Plant & Equip.	0.8	0.8	170.8	569.1
Exploration & Develop.	7.7	8.8	10.1	11.8
Other Non-current Assets	0.2	5.0	12.1	32.0
Payables	1.0	1.0	2.0	6.0
Short Term Debt	0.0	0.0	0.0	25.0
Long Term Debt	0.0	0.0	350.0	325.0
Other Liabilities	2.6	1.9	1.9	2.2
<b>Net Assets</b>	<b>24.0</b>	<b>66.0</b>	<b>276.7</b>	<b>288.2</b>
Shareholders Funds	74.9	140.3	360.3	360.3
Reserves	0.5	0.5	0.5	0.5
Retained Earnings	-51.4	-58.0	-64.7	-72.6
<b>Total Equity</b>	<b>24.0</b>	<b>82.8</b>	<b>296.1</b>	<b>288.2</b>

### Debt/Equity

Net Debt/EBITDA	2.7x	9.2x	14.4x	-64.1x
Net Interest Cover	nm	nm	nm	nm
ROE	-0.3x	-0.1x	0.0x	0.0x
ROIC	-9%	-5%	-1%	-2%
Book Value/share	\$0.02	\$0.05	\$0.17	\$0.17

Source: Company Reports, Canaccord Genuity estimates

Figure 27: PLS financial summary

## FINANCIAL SUMMARY

Pilbara Minerals Limited

ASX:PLS

Analyst: Tim Hoff  
Date: 10/02/2021  
Year End: June

Rating: HOLD  
Target Price: A\$1.00

### Market Information

Share Price	A\$	1.00
Market Capitalisation	A\$m	2,908.6
12 Month Hi	A\$	1.47
12 Month Lo	A\$	0.14
Issued Capital	m	2908.6
ITM Options	m	0.0
Fully Diluted	m	2911.6
Trading Volume - 90 Day Average	m	28.0

Valuation		A\$m	Equity	A\$/share
Pilgangoora Mine	NPV8%	2,177.2		0.75
POSCO JV	NPV6%	256.1	21%	0.09
Corporate		(50.1)		(0.02)
Cash		244.5		0.08
Debt (Senior Facility)		(193.5)		(0.07)
TOTAL		2,734.1		0.94

PLS	5yr ave EBITDA	Multiple	2,893	
Add net cash	193	15	2,944	1.01
		NAV 50%		0.47
		EV/EBITDA 50%		0.51
Blended price target		Target		1.00

Assumptions	2020a	2021e	2022e	2023e
Spodumene Concentrate (US\$/t)	498	445	725	788
Tantalum (US\$/lb)	48	48	50	50
AUD:USD	0.67	0.74	0.77	0.77

Production Metrics	2020a	2021e	2022e	2023e
Pilgangoora				
Spodumene concentrate (kt)	90.8	267.9	362.1	554.0
LCE production (kt)	17.2	39.0	53.7	82.2
Tantalum concentrate (klb)	56.7	128.9	181.3	285.5
AISC (US\$/t)	515	375	382	377

Reserves & Resources	Mt	Grade (Li2O)	LCE (Mt)	Ta2O5 (Mlbs)
Pilgangoora				
Resources	226.0	1.27%	7.083	63.77
Reserves	108.0	1.25%	3.363	28.50

### Directors & Management

Name	Position
Tony Kiernan	Non-Exec Chairman
Ken Brinsden	MD and CEO
Sally-Anne Layman	NED
Nick Cernotta	NED
Steve Scudamore	NED

### Key Ratios

Debt/Equity	32%	23%	19%	33%
Net Debt/EBITDA	-4.5x	7.4x	0.3x	-0.3x
Net Interest Cover	-1.8x	0.0x	19.8x	28.8x
ROE	-26%	-2%	16%	20%
ROIC	-18%	-1%	14%	20%
Book Value/share	\$0.17	\$0.19	\$0.22	\$0.27
Net Debt	90.2	158.3	51.3	-60.4

### Company Description

Pilbara Minerals (ASX:PLS) is an Australian based hard rock lithium development company with assets in the Pilbara Region of Western Australia. Pilgangoora is expected to produce ~300ktpa of 6% Li2O product as well as +330klbs of Ta2O5 concentrate product. PLS is also expected to reach a final investment decision on a 30% interest in a 40ktpa LiOH facility with project partner POSCO in 2020

Profit & Loss (A\$m)	2020a	2021e	2022e	2023e
Revenue	91.6	166.7	383.1	574.5
Operating Costs	-98.7	-108.5	-153.1	-242.0
Royalty	-5.2	-10.4	-23.9	-35.9
Corporate & O'heads	-15.1	-16.0	-10.0	-8.0
Exploration (Expensed)	-6.5	-4.0	-4.0	-4.0
EBITDA	-33.9	27.7	192.1	284.5

Dep'n	-16.4	-27.7	-41.1	-51.8
Net Interest	-27.6	-6.5	-5.4	-1.7
Other	0.0	0.0	0.0	0.0
Tax	0.0	-4.1	-43.7	-69.3
NPAT (reported)	-77.9	-10.6	101.9	161.7
Abnormals	-21.3	0.0	0.0	0.0
NPAT	-99.3	-10.6	101.9	161.7

EBITDA Margin	nm	17%	50%	50%
EV/EBITDA	nm	83.7x	16.0x	10.4x
EPS	-\$0.02	-\$0.01	\$0.04	\$0.06
EPS Growth	nm	nm	nm	-708%
PER	nm	nm	28.6x	18.1x
Dividend Per Share	\$0.00	\$0.00	\$0.00	\$0.00
Dividend Yield	0%	0%	0%	0%

Cash Flow (A\$m)	2020a	2021e	2022e	2023e
Cash Receipts	86.2	166.7	383.1	574.5
Cash paid to suppliers & employees	-99.3	-134.9	-187.1	-285.9
Exploration and Evaluation	-7.4	-4.0	-4.0	-4.0
Tax Paid	0.0	-4.1	-43.7	-69.3
+/- Other -working cap change	0.6	-2.2	0.0	0.0
Operating Cash Flow	-20.0	21.5	148.4	215.2
Capex	-22.6	-27.6	-8.9	-101.9
Other	0.0	-220.4	-27.0	0.0
Investing Cash Flow	-22.6	-248.0	-35.9	-101.9
Debt Drawdown (repayment)	0.0	17.1	0.0	67.6
Net interest expense	-21.0	-6.5	-5.4	-1.7
Share capital	111.5	173.6	0.0	0.0
Dividends	0.0	0.0	0.0	0.0
Financing Expenses	-23.7	-8.7	0.0	0.0
Financing Cash Flow	66.8	175.5	-5.4	65.9
Opening Cash	63.6	86.3	35.2	142.3
Increase / (Decrease) in cash	24.3	-51.0	107.1	179.2
FX Impact	-1.6	0.0	0.0	0.0
Closing Cash	86.3	35.2	142.3	321.5

Op. Cashflow/Share	-\$0.01	\$0.01	\$0.05	\$0.07
P/CF	-111.7x	135.5x	19.7x	13.6x
EV/FCF	nm	nm	nm	nm
FCF Yield	-1%	-8%	4%	4%

Balance Sheet (A\$m)	2020a	2021e	2022e	2023e
Cash + S/Term Deposits	86.3	35.2	142.3	321.5
Other current assets	27.4	27.4	27.4	27.4
Current Assets	113.6	62.6	169.7	348.9
Property, Plant & Equip.	482.4	704.9	699.7	749.7
Exploration & Develop.	6.4	6.4	6.4	6.4
Other Non-current Assets	0.0	0.0	0.0	0.0
Payables	20.6	20.6	20.6	20.6
Short Term Debt	53.3	70.4	70.4	-2.0
Long Term Debt	123.1	123.1	123.1	263.1
Other Liabilities	18.4	18.4	18.4	18.4
Net Assets	387.0	541.3	643.2	804.9
Shareholders Funds	587.3	752.2	752.2	752.2
Reserves	3.9	3.9	3.9	3.9
Retained Earnings	-204.2	-214.8	-112.9	48.8
Total Equity	387.0	541.3	643.2	804.9

Source: Company Reports, Canaccord Genuity estimates

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	911*	100.0%	

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