

China / Hong Kong Company Guide

Ganfeng Lithium Co Ltd

Version 1 | Bloomberg: 1772 HK Equity | 002460 CH Equity | Reuters: 1772.HK | 002460.SZ

Refer to important disclosures at the end of this report

Group Research . Equity

27 Apr 2020

H: BUY (Initiating coverage)

Last Traded Price (H) (24 Apr 2020): HK\$24.80 (HSI : 23,831)

Price Target 12-mth (H): HK\$30.00 (21.0% upside)

A: HOLD (Initiating Coverage)

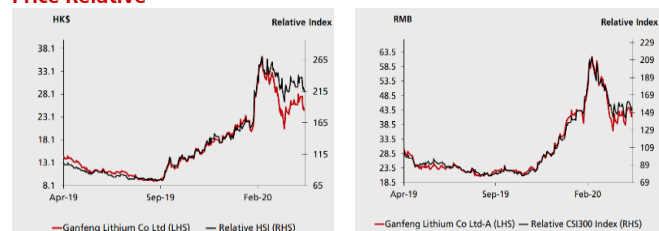
Last Traded Price (A) (24 Apr 2020): RMB42.30 (CSI300 Index : 3,797)

Price Target 12-mth (A): RMB45.00 (6.4% upside)

Analyst

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Price Relative



Forecasts and Valuation (H Shares)

FY Dec (RMBm)	2018A	2019A	2020F	2021F
Turnover	4,890	5,246	6,358	8,941
EBITDA	1,733	916	1,250	2,105
Pre-tax Profit	1,500	477	801	1,588
Net Profit	1,337	361	609	1,207
Net Profit Gth (Pre-ex) (%)	(36.2)	(73.0)	68.7	98.3
EPS (RMB)	1.18	0.28	0.47	0.93
EPS (HK\$)	1.29	0.31	0.52	1.02
EPS Gth (%)	(37.5)	(76.3)	68.7	98.3
Diluted EPS (HK\$)	1.29	0.31	0.52	1.02
DPS (HK\$)	0.38	0.33	0.15	0.31
BV Per Share (HK\$)	7.76	7.07	7.44	8.15
PE (X)	19.2	81.2	48.1	24.3
P/Cash Flow (X)	37.5	43.8	16.5	33.5
P/Free CF (X)	nm	nm	61.0	nm
EV/EBITDA (X)	14.4	34.7	25.2	15.2
Net Div Yield (%)	1.5	1.3	0.6	1.2
P/Book Value (X)	3.2	3.5	3.3	3.0
Net Debt/Equity (X)	CASH	0.3	0.2	0.3
ROAE (%)	22.1	4.4	7.1	13.1

Earnings Rev (%): New
Consensus EPS (RMB): 0.67
Other Broker Recs: B:5 S:2 H:2

Source of all data on this page: Company, DBS Bank (Hong Kong) Limited ("DBS HK"), Thomson Reuters

A front runner in China lithium industry

- Global top three lithium compound producer with integrated value chain that includes mining resources
- First-tier client base with long term sales agreements
- Projected net profit growth c.83% CAGR in 2019-2021 backed by new projects
- Initiating coverage with BUY H and TP of HK\$30.0

Initiating coverage on Ganfeng Lithium (GLI) H-share with BUY rating and target price (TP) of HK\$30.0. Riding on demand along China's coastal cities, Jiangxi-based GLI has been a first mover in the electric vehicle (EV) sector. Our BUY rating is premised on: (1) sales volume growth at c.34% compound annual growth rate (CAGR) during FY19-21F supported by its strong partnerships with major auto manufacturers such as Tesla and BMW, and strong off-take from blue chip battery suppliers such as LG Chemical (LG Chem), (2) GLI's sound earnings outlook of c.83% CAGR during FY19-FY21F with improving lithium metal and compound margin.

Where we differ: We are more positive than the street on GLI's gross profit margin (GPM) recovery, in view of its shift in product mix towards higher margin products, such as storage and TWS battery products, in response to new market trends. We forecast its blended GPM to rebound to 28% in FY21F from 23% in FY19.

Healthy balance sheet with improving free cash flow (FCF) to support the company's mid-term plan to increase its stake in overseas mines to secure supply of upstream resources.

Valuation:

GLI is trading at an attractive valuation at below 0.6x FY20F PE to FY19-FY21F EPS growth. Our target price (TP) of HK\$30.0 is based on 0.7x PEG, translating into price earnings ratio (P/E) of 57x FY20F and 29x FY21F. This represent a premium over its peers which is justified by its strong growth prospect and superior customers portfolio. Our TP for A-share is RMB45.0 on 0.9x PEG, initiate HOLD.

Key Risks to Our View:

Upside risks. Stronger than expected lithium battery sales recovery.

Downside. Collapse of metal price amid the slowing China economy.

At A Glance

Issued Capital - H shares (m shs)	200
- Non H shrs (m shs)	1,115
H shs as a % of Total	15
Total Mkt Cap (HK\$m/US\$m)	55,997 / 7,166
Major Shareholders (%)	
Li (Liang Bin)	24.7
Wang (Xiao Shen)	9.2
Major H Shareholders (As % of H shares)	
Rosefinch Fund Management Co., Ltd.	26.4
Samsung SDI Co Ltd	11.9
Dongfeng Motor Corporation	7.1
Pacific Asset Management Co., Ltd.	5.2
H Shares-Free Float (%)	49.5
3m Avg. Daily Val. (US\$m)	27.77
GLI Industry: Materials / Metals & Mining	



Live more, Bank less

Table of Contents

Investment Summary	3
Valuation & Peers Comparison	4
Key Risks	6
SWOT Analysis	7
Financials	8
CRITICAL FACTORS TO WATCH	10
Company Background	13
Environmental, Social & Governance (ESG)	15
Management & Strategy	16
Appendix: China’s Lithium Industry Overview	20

Ganfeng Lithium Co Ltd**Investment Summary****Initiate coverage on GFLi H with BUY rating and TP of HK\$30.0**

We initiate coverage on GFLi H with a BUY rating. We believe there is upside from: (1) bottoming out of lithium prices driving a better return on equity (ROE) recovery in FY20F/FY21F, (2) strong pipeline of volume expansion projects driving sales and revenue growth throughout FY20F/FY21F.

Projected net profit CAGR of c.83% in FY19 and FY21F.

GFLi's net earnings CAGR of c.83% FY19/FY21F will be driven by strong volume growth and stabilising average selling price (ASP) of lithium products. Its sales volume expanded 33% CAGR during FY17/FY19 with total sales of lithium products at 45,586 tonnes lithium carbonate equivalent (LCE) in 2019. Based on the company's expansion plan for its Basic Lithium Plant headquartered in Jiangxi province, GFLi has set an expansion target of total 80,000 tonnes lithium hydroxide capacity by the end of 2020. This should continue to drive the company's earnings growth.

Excellent clientele and strong volume growth prospects. GFLi has inked strong partnerships with major auto manufacturers and will benefit from stable off-take of its blue chip battery suppliers and leading auto original equipment manufacturers (OEMs) such as Tesla, BMW and LG Chem. We expect GFLi's sales volumes to grow by c.34% CAGR in FY19-21F, driving strong growth in lithium compound revenue. This is higher compared to our forecast of lithium demand in China expanding by c.20% CAGR in FY19-21F led by continuous demand recovery of EV sales in China.

Improving product margins outlook. We believe that lithium prices are key to GFLi's share price. After falling by >50% amid destocking in battery materials, China's lithium prices are showing signs of stabilisation. GFLi's long term supply contracts are mostly with customers (automakers and battery manufacturers) that are willing to be locked in at higher end

of market prices to secure raw material supply. In addition to contribution from higher margin products, we estimate GFLi's blended gross profit margin to reach 28% in the next two years (vs 23.6% in FY19).

Healthy balance sheet and improving FCF position. GFLi's gearing is expected to remain at around 30%, with positive FCF position driven by improving working capital and reduced capital expenditure (capex), enabling new development opportunities ahead.

Backward integration along the supply chain. GFLi invested in Reed Industrial Minerals (RIM) and Pilbara in 2015 and 2018 respectively. These deals are expected to increase its self-sufficiency in supply of input raw materials this year. Along with the long term offtake from Altura, we foresee sufficient supply for GFLi's lithium compound production capacity expansion plan by end-2020.

Apart from its huge capex, GFLi's equity stakes in upstream mines should benefit its procurement with greater flexibility and more competitive market terms. Based on the development schedule, its joint venture (JV) for the Cauchari-Olaroz salt lake project is expected to commence operations in 2021 which would lower cost of materials for production further. Compared to its peer Tianqi Lithium (TQLi), we believe that GFLi's investment at associates' level rather than wholly owned expansion strategy should enhance its position as an industry outperformer.

Geographical advantages. The Jiangxi province is a gateway to China's EV market. Major clusters of EV and battery manufacturers are located along the coastal cities. With its headquarters in the Jiangxi province in China, GFLi should benefit as a first mover as its proximity to downstream production market. GFLi is among the top three global lithium compound producers with a complete value chain from mines to end products.

Ganfeng Lithium Co Ltd**Valuation & Peers Comparison**

A solid ROE recovery story. We expect GFLi to deliver an appealing story on its continuous ROE expansion from the recent trough year. We adopt PEG as major valuation yardstick as considering GFLi's rapid earnings growth outlook. Back in the China EV boom in 2014-2018, the counter was trading at an average of 0.7-0.8x PEG. We think GFLi's current valuation has yet to fully reflect the company's earnings growth potential, and capability in inorganic acquisition

supported by its healthy balance sheet and good cash flow generation.

We think GFLi's trading at attractive level of below 0.6x FY20F PEG. Our TP of HK\$30.0 is pegged to an average of 0.7x PEG, in line with historical average. Our TP represents a FY20F/FY21F 57/ 29x PE and 4.0/3.7x P/B. Our TP for the company's A-share is pegged to RMB45.0 based on average of 0.9x PEG or 71x PE or 6x P/B, which corresponds to the average of its historical range during 2014-2018.

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Peers comparison

Company Name	Code	Currency	Price Local\$	Mkt Cap US\$m	Fiscal Yr	EPS growth		PE	PE	Yield	P/Bk	P/Bk	EV/EBITDA	ROE	Net	
						20F	21F	20F	21F	20F	20F	21F	20F	21F	20F	gearing
						%	%	x	x	%	x	x	x	x	%	%
Mine/ Major																
Sociedad Quimica Y Minera De (SQM US	USD	21.41	5,635	Dec	7.7	25.2	18.8	15.0	4.1	2.6	2.5	9.8	8.2	15.4	33.4
Albemarle	ALB US	USD	61.53	6,542	Dec	(12.3)	19.0	14.0	11.8	2.4	1.5	1.5	9.3	8.0	12.1	62.0
Fmc	FMC US	USD	88.2	11,417	Dec	76.3	14.6	13.9	12.1	2.2	4.1	3.9	10.7	9.7	28.9	115.3
Orocobre	ORE AU	AUD	2.07	367	Jun	(132.6)	n.a.	n.a.	n.a.	0.0	0.6	0.6	n.a.	27.1	(3.3)	Cash
Ganfeng Lithium 'H'*	1772 HK	HKD	24.8	7,088	Dec	68.7	98.3	48.1	24.3	0.6	3.3	3.0	25.4	15.3	7.1	Cash
Ganfeng Lithium 'A'*	002460 CH	CNY	42.3	7,170	Dec	68.7	98.3	89.8	45.3	0.3	6.2	5.7	45.0	27.0	7.1	Cash
Tianqi Lith.Inds.'A'	002466 CH	CNY	18.7	3,901	Dec	73.3	n.a.	23.5	n.a.	0.3	2.2	n.a.	18.6	n.a.	6.8	280.7
Qinghai Salt Lake Ind. 'A'	000792 CH	CNY	9.07	6,958	Dec	33	n.a.	14.7	n.a.	0.8	1.4	n.a.	8.8	n.a.	14.4	271.7
Western Mining 'A'	601168 CH	CNY	5.45	1,834	Dec	11.1	14.9	11.6	10.1	n.a.	1.2	1.0	n.a.	n.a.	10.1	176.4
Guangdong Dowstone 'A'	300409 CH	CNY	10.98	713	Dec	28.6	n.a.	15.3	n.a.	1.9	1.7	n.a.	n.a.	n.a.	10.8	49.7
Average						22.3	45.0	27.7	19.8	1.4	2.5	2.6	18.2	15.9	10.9	141.3
Materials																
Shenzhen Capchem Tech. 'A'	300037 CH	CNY	39.33	2,103	Dec	36.2	29.3	33.6	26.0	0.6	4.3	3.8	n.a.	n.a.	12.6	16.7
Beijing Easpring Mra. A	300073 CH	CNY	23.13	1,426	Dec	n.a.	36.2	27.3	20.1	0.7	3.0	2.6	21.7	15.1	10.0	Cash
Ningbo Shanshan 'A'	600884 CH	CNY	10.93	1,733	Dec	41.3	13.9	18.6	16.3	0.5	1.1	1.0	13.0	11.5	5.2	39.7
Shenzhen Senior Tech. Mra.'A'	300568 CH	CNY	28.27	988	Dec	52.2	n.a.	20.1	n.a.	1.0	2.4	n.a.	n.a.	n.a.	11.7	41.7
Nancal Technology 'A'	603859 CH	CNY	32.09	631	Dec	124.2	n.a.	19.6	n.a.	1.6	3.6	n.a.	n.a.	n.a.	19.6	Cash
Gem 'A'	002340 CH	CNY	4.58	2,684	Dec	25.7	n.a.	14.2	n.a.	1.2	1.5	n.a.	10.4	n.a.	10.9	91.1
Guangdong Dowstone 'A'	300409 CH	CNY	10.98	713	Dec	28.6	n.a.	15.3	n.a.	1.9	1.7	n.a.	n.a.	n.a.	10.8	49.7
Average						51.4	26.5	21.2	20.8	1.1	2.5	2.5	15.1	13.3	11.6	47.8
Battery																
Jiangsu Dongyuan Elect. 'A'	002074 CH	CNY	23.03	3,673	Dec	6.4	10.1	35.8	32.5	0.6	2.7	2.5	14.2	12.8	7.8	41.8
Eve Energy 'A'	300014 CH	CNY	62.81	8,596	Dec	24.6	27.3	30.7	24.1	0.6	6.7	5.4	29.4	22.1	22.8	Cash
Guangzhou Gt.Pwr.En 'A'	300438 CH	CNY	20.65	820	Dec	267.7	n.a.	9.4	n.a.	1.3	1.7	n.a.	n.a.	n.a.	17.9	19.6
Sunwoda Electronic 'A'	300207 CH	CNY	13.61	3,016	Dec	29.5	n.a.	14.4	n.a.	1.4	2.7	2.7	9.5	9.3	18.3	73.6
Shenzhen Desay Battery 'A'	000049 CH	CNY	36.99	1,082	Dec	(9.1)	36.0	16.7	12.2	0.7	2.9	2.4	9.6	7.3	19.1	20.7
Contemporary Amperex 'A'	300750 CH	CNY	131.7	41,068	Dec	23.6	24.1	45.1	36.3	0.2	5.6	6.1	20.3	15.5	12.9	Cash
Tianneng Power Intl.	819 HK	HKD	7.78	1,131	Dec	2.5	9.9	4.6	4.2	6.2	0.9	0.8	n.a.	n.a.	23.7	Cash
Chaowei Power Holdings	951 HK	HKD	2.3	328	Dec	15.2	(3.1)	3.6	3.7	4.0	0.4	0.4	2.7	2.9	12.6	51.0
Average						45.1	17.4	20.0	18.9	1.9	3.0	2.9	14.3	11.6	16.9	41.3
Equipment																
Han'S Laser Tech. 'A'	002008 CH	CNY	28.55	4,302	Dec	12.8	(4.5)	16.7	17.5	1.0	2.6	2.3	14.4	14.5	16.1	10.0
Wuxi Lead Intel. Equ.'A'	300450 CH	CNY	38	4,730	Dec	35.0	n.a.	20.5	n.a.	1.2	5.1	n.a.	20.9	n.a.	26.1	11.2
Jiangmen Kanhoo Ind.'A'	300340 CH	CNY	10.08	302	Dec	284.6	n.a.	18.3	n.a.	1.3	1.3	n.a.	n.a.	n.a.	7.3	57.1
Shenzhen Yinghe Tech.'A'	300457 CH	CNY	41.03	2,178	Dec	206.2	(0.1)	30.6	30.6	0.3	3.5	2.7	21.6	18.3	12.3	6.6
Fujian Nebula Eltn.'A'	300648 CH	CNY	14.3	273	Dec	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Cash
Average						134.6	(2.3)	21.5	24.1	1.0	3.1	2.5	19.0	16.4	15.5	21.2

FY20: FY21; FY21: FY22

Source: Thomson Reuters, *DBS HK

Ganfeng Lithium Co Ltd**Key Risks**

Upside risks. Better than expected demand for new energy vehicles (NEVs) could provide support for lithium products' consumption and prices. Any reduction in supply of lithium arising from the exit of high cost or debt laden producers could favour a lithium price rebound, driving better earnings for GFLi. A higher margin product mix and lower production costs would also benefit GFLi's profit margins.

Downside risks. (1) A collapse in lithium product prices amid the slowing economy, (2) demand shortfall for EV batteries due to changes in the government's subsidy and green energy policies, (3) production capacity expansion by upstream mines to increase market supply. The company's ability to secure or renew long term off-take sales contracts with customers is also a potential risk.

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SWOT Analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> The world's top three and China's largest lithium compound producer. The world's largest ($\geq 25\%$ of global market) lithium metal manufacturer. A vertically integrated industrial chain covering upstream lithium extraction, mid-stream lithium compounds and metal lithium processing, as well as downstream lithium battery production and recycling. Only Chinese producer that possesses industrial technology using both brine extraction and ore extraction. Multiple lithium resources available from Mount Marion and Pilgangoora (Western Australia), Mariana and Cauchari-Olaroz (Argentina), Avalonia (Ireland). Experienced management team led by Chairman and Founder Mr. Li Liangbin and Vice Chairman Mr. Wang Xiaoshen. 	<ul style="list-style-type: none"> Strong partnerships with battery/ anode material and auto OEM/electric vehicle manufacturers but not as much with new energy materials producers compared to Tianqi Lithium. Battery business has low margins. The solid-state battery business takes a long time to achieve significant economic returns. Off-take agreements could lead to higher than required raw material inventory. Price risks could affect production cost.
Opportunities	Threats
<ul style="list-style-type: none"> The 43.1%-owned Mount Marion open-pit mine is the world's second largest spodumene mine. New lithium ore production project with annual designed capacity of 100k tonnes LCE by 2025. Long term strategic co-operation agreements: (i) Tesla appointed GFLi its battery supplier for 2018-2020 for battery-grade lithium hydroxide products, which accounts for 20% of GFLi's total annual production capacity. (ii) German's BMW appointed GFLi to supply lithium and chemical products to its designated battery and cathode material suppliers for a period of five years. (iii) GFLi has signed a supply contract with LG Chem of South Korea for lithium hydroxide products from 2019 to 2025. 	<ul style="list-style-type: none"> Slowing macroeconomic conditions may dampen supply-demand dynamics as well as metal prices. Potential geopolitical uncertainties in countries where its mines are located.

Source: DBS HK

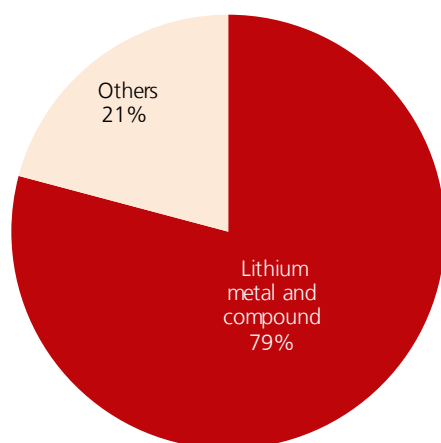
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Financials

Revenue and volume

We expect revenue to continue to increase during FY19-2021F, mainly due to volume expansion from new capacities in; (1) lithium compound products (i.e. hydroxide and carbonate), (2) metal lithium, (3) lithium batteries. Lithium carbonate has been contributing a higher proportion to total revenue since 2017-19 and is expected continue to be the main revenue driver in FY19-FY21F.

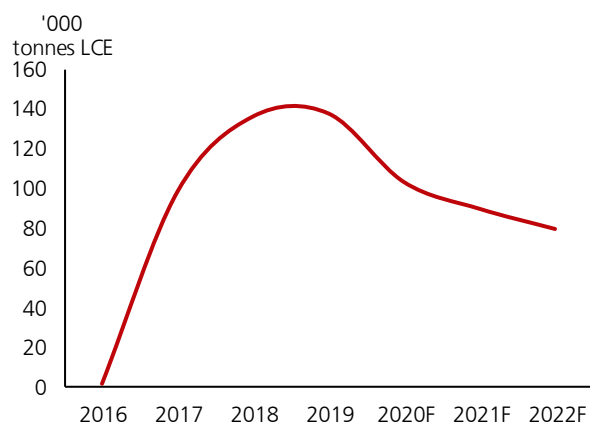
Revenue breakdown (FY19)



Source: Company, DBS HK

Prices. We expect lithium carbonate prices to rebound from 2020/2021 onwards, in anticipation of slowing production growth and rebound of EV demand in China. Our supply-demand analysis indicates that China's lithium market surplus is narrowing further (see page 21 Appendix: China lithium market overview, 2016-2022F). For 2020F/2021F, we forecast China lithium hydroxide product prices reaching an average of RMB55,500 per tonne and RMB57,000 per tonne, up from RMB54,900 per tonne in 2019.

China lithium market surplus to reduce

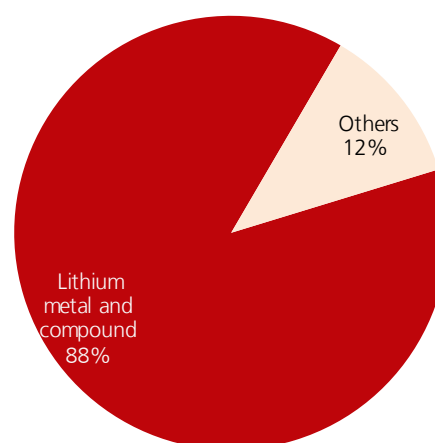


Source: SMM, DBS HK

Gross profit. Raw materials are the major cost component for GFLi's lithium compounds production. Spodumene accounts for c.60% of total raw material cost and was the largest cost component for production in FY19. Overall, we foresee certain catalysts for margin improvements ahead: (1) price rebound in lithium > spodumene price leading to margin expansion, (2) flexibility in spodumene procurement at lower cost, (3) lithium battery margin widened 9.9ppt to 13.1% in FY19 and continued support from high margin products such as wireless bluetooth headset batteries with TWS technology. We forecast GFLi gross profit margins to recover from FY19's 23.6% to the 28% range in FY21F.

On raw material self-sufficiency, GFLi relied on Reed Industrial Minerals (RIM) to supply the bulk of spodumene for lithium compound production in FY19. GFLi has expanded its supply sources to Pilbara and Altura from 2020 onwards to cope with its hydroxide capacity expansion of 80,000 tonnes targeted by end-2020. Moreover, GFLi has taken over the Cauchari Olaroz brine project in Argentina from Sociedad Quimica y Minera de Chile (SQM). The other Mariana brine mines are undergoing exploration with development scheduled to commence in 2021 and 2023/2024 correspondingly. This should further enhance the company's production feasibility.

Gross profit breakdown (FY19F)



Source: Company, DBS HK

Investment income. It acquired a 19.9% stake in 2017 in Minera Exar (Cauchari-Olaroz Project) and increased its shareholdings in RIM (Mt Marion) to c.43% in 2015. RIM's equipment upgrade will also increase lithium concentrate grading with higher ASP. We expect associate and joint venture income to increase in FY20F.

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Capex. According to GFLi's development plan, its capex requirement is RMB1.3bn and RMB1.0bn respectively for FY20F and FY21F (vs RMB2.8bn in FY19) mainly to expand the capacity of its lithium compound and battery businesses, including the final stage construction of the Cauchari-Olaroz Project.

Net gearing (debt-to-equity). Investment capex for projects is expected to substantially decrease. Cash position is expected to improve amid the continuously improving working capital, as commencement of new capacity at its Basic Lithium plant would drawdown spodumene inventory which has been off-taken in advance. We forecast net gearing would remain at around 30% in FY20F/FY21F. We believe GFLi is capable to accommodate more new overseas investments for upstream assets in future.

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CRITICAL FACTORS TO WATCH

Critical Factors

Lithium compound prices. GFLi's earnings are most sensitive to changes in lithium prices. We forecast China's domestic lithium production growth to remain insufficient and will require imports to satisfy consumption. We estimate that every 1% change in lithium price will swing FY20F earnings by 5%.

New projects and sales volume growth. The company has ten manufacturing plants based in the Jiangxi and Guangdong provinces. As at end-2019, GFLi's effective annual production capacity for lithium compound products was 49,750 tonnes, and 1,600 tonnes for lithium metal. According to the company's development plan, GFLi plans to increase lithium hydroxide capacity to 80,000 tonnes per annum by end-2020 while lithium metal production will remain unchanged.

We assume that GFLi's effective lithium compound capacity utilisation rate will stay at 80-90%, higher than the industry average of below 50% and focus on lower-end market. We estimate that every 1% change in lithium sales volume will swing earnings by 1%.

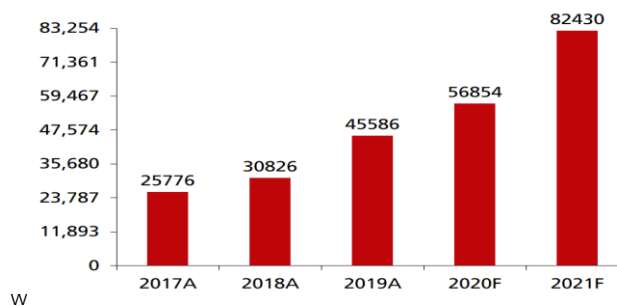
Long term strategic relationships. (1) The company has signed a strategic cooperation agreement with Tesla to supply battery-grade lithium hydroxide products from 2018 to 2020. The annual purchase volume is about 20% of its total hydroxide capacity. (2) The company has signed a strategic cooperation agreement with Germany's BMW to supply lithium and chemical products to its designated battery or cathode material suppliers for five years i.e. FY20-24. (3) The company has signed a supply contract with LG Chem of Korea for lithium hydroxide products from 2019 to 2025. Overall, we estimate that off-take contracts will utilise at least 35% of the company's total lithium compound production.

GFLi's split of hydroxide products exported overseas and for carbonate products in the domestic market was 40:60 in FY19. It is steadily growing its export sales which are mainly long term off-take contracts. This is expected to continue and drive its sales and revenue growth going forward.

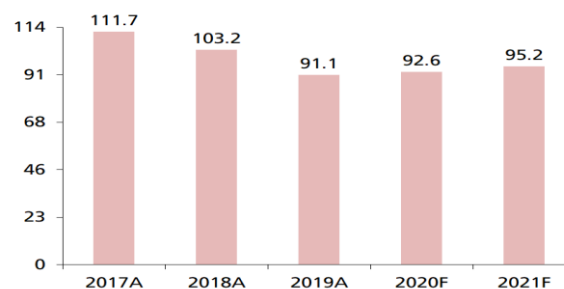
Production cost and self-sufficiency in spodumene materials.

The largest cost component of lithium compound production is spodumene. In its spodumene supply agreements, GFLi's spodumene prices are benchmarked to domestic lithium carbonate and hydroxide prices on a quarterly basis. As such, it would benefit from a cost hike delay when market prices increase, and vice versa. Overall, in view of almost total self-sufficiency in raw materials expected in 2020, it would benefit from a lower production cost going forward.

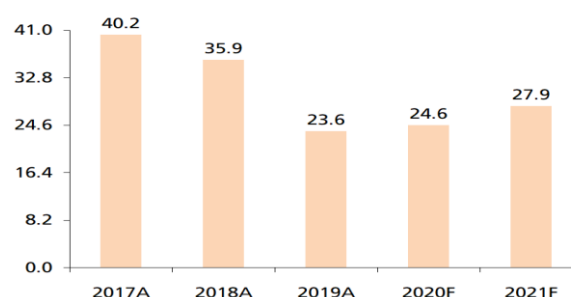
Sales Volume for Lithium metal and compound (LCE tonne)



ASP for Lithium metal and compound (Rmb/tonne)



GPM for Lithium metal and compound (%)

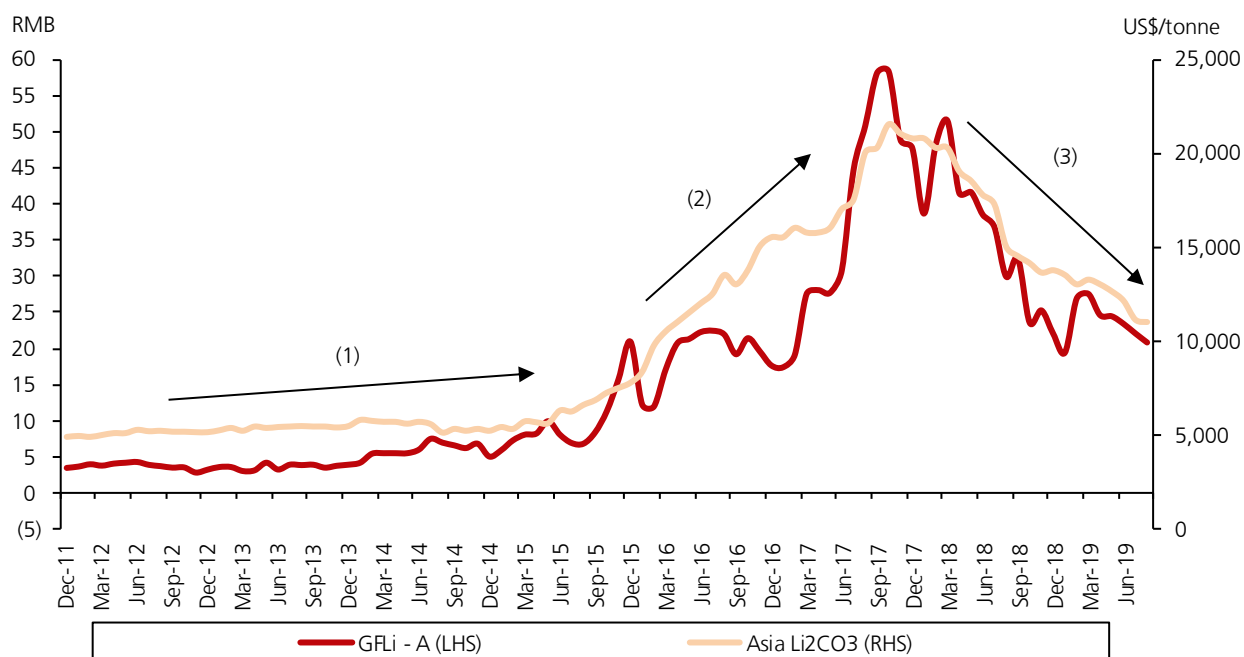


Source: Company, DBS HK

Ganfeng Lithium Co Ltd

Appendix 1: A look at Company's listed history – what drives its share price?

GFLi's share price vs lithium price



(1) GFLi's share price surged by 150% during the quarter ended December 2015. Catalysts included the third batch of new energy vehicles that qualified for subsidies. Car companies had also expanded production capacity.

(2) The stock price jumped by 376% between January 2016 and October 2017. The major driver was new energy automobile companies and upstream cathode material manufacturers increasing their purchases of lithium carbonate. Another reason was national wastewater and waste gas treatment actions affecting the production of lithium carbonate in Jiangxi, Sichuan and Qinghai leading to supply shortages in the market.

(3) GFLi's share price had corrected by over 64% from its peak in October 2017 into 2019 due to lithium concentrate supply and smelting capacity that increased overall supply.

Source: Bloomberg Finance L.P.

Ganfeng Lithium Co Ltd

Balance Sheet:

Op-CF and free cash flow position to remain healthy. FY20F operating cash flow (op-CF) is expected to improve to RMB1.7bn. We forecast 2020 capex would reduce to RMB1,300m and level off to RMB1,000m in 2021. The budgeted capex is to primarily fund its existing lithium compound expansion projects, including lithium hydroxide expansion in its basic lithium plant headquarters in Jiangxi. We project FCF to return to positive at RMB480m in 2020 and further improve from 2022 onwards.

Net gearing (debt-to-equity). We forecast the company's net gearing to remain at around 30% in 2020 and 2021.

Share Price Drivers:

Developments in the NEV industry and lithium prices are some of the main drivers.

Key Risks:

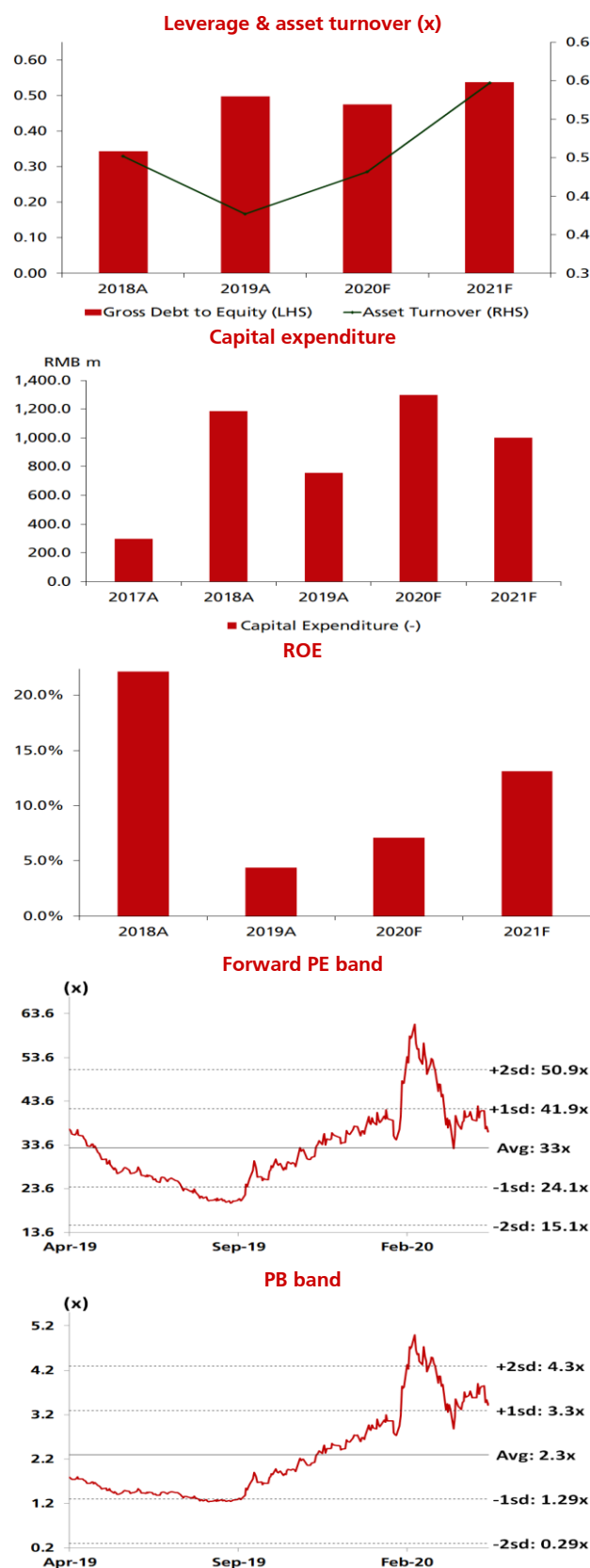
Commodity price risks. The company's earnings are most sensitive to changes in lithium prices.

Environmental, Social, Governance (ESG):

GFLi strives to achieve sustainable development. It has complied with the relevant laws and regulations in China and other countries it operates in. GFLi supports the development of a circular economy and the national strategy of revitalising emerging industries. GFLi is continuously improving its development quality, striving to build a vertical industrial chain integrating upstream and downstream. This will contribute to the healthy and sustainable development of the global lithium industry.

Company Background

Ganfeng Lithium (GFLi) is the world's third largest and China's largest lithium compound producer. It is also the world's largest lithium metals supplier. In 2019, the company's sales volumes of lithium compound and lithium metal were 44,151 tonnes and 1,435 tonnes, based on lithium carbonate equivalent (LCE) tonne. Its shares are dual-listed on the Hong Kong Stock Exchange (October 2018) and Shenzhen Stock Exchange (August 2010).



Source: Company, DBS HK

Ganfeng Lithium Co Ltd

Company Background

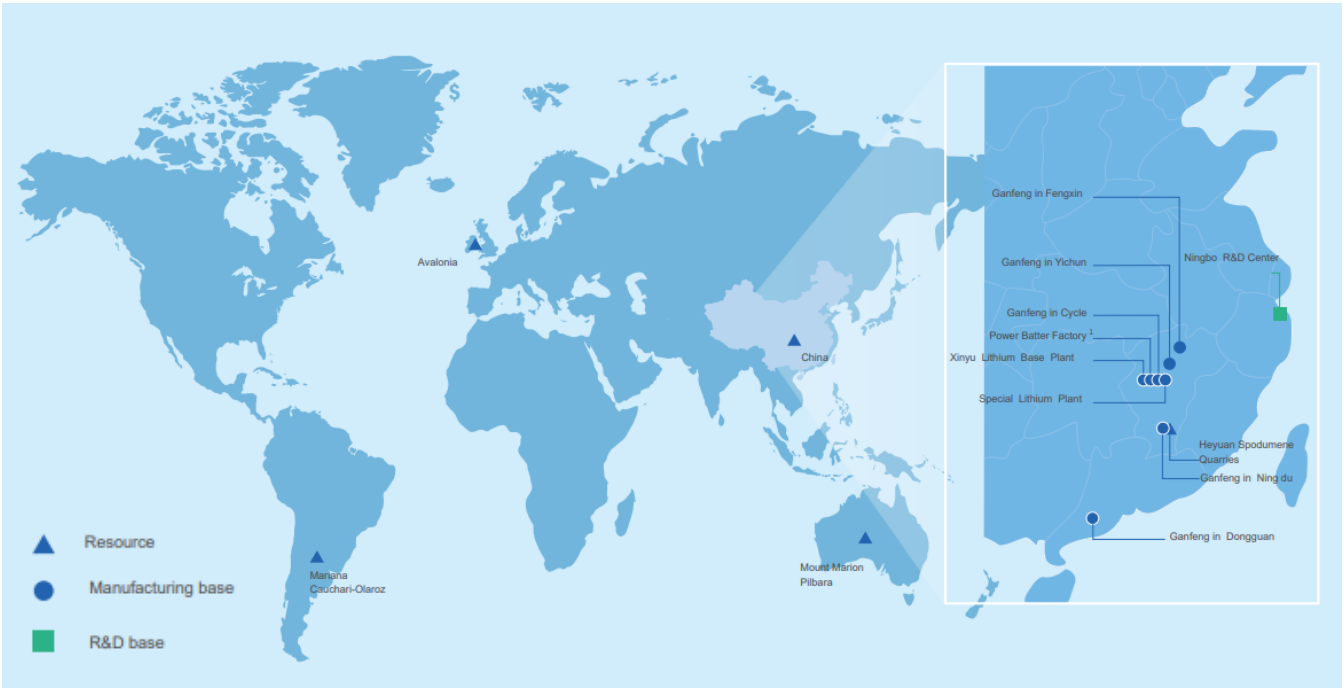
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Corporate development path

2000	Established in Xinyu, Jiangxi Province engaging in the processing of lithium metals and lithium chloride.
2007	Launched production line for the extraction of lithium chloride from salt lake brines.
2010	Listed on the Shenzhen Stock Exchange.
2011	Acquired 9.9% stake in International Lithium and expanded upstream in the lithium industry value chain.
2014	Acquired 51% stake in Blackstair Lithium which owns the Avalonia project, a spodumene ore in Ireland. Launched a battery grade lithium hydroxide production line.
2015	Acquired total 43.1% stake in RIM which holds 100% interest in the Mount Marion spodumene project located in Australia. Started to expand into downstream lithium battery production.
2016	Established research and development center for solidstate lithium batteries. Started to build lithium-ion motive power battery plant in Jiangxi.
2017	Acquired 19.9% stake in Lithium Americas which holds Caucharí-Olaroz project in Argentina and Lithium Nevada project in Northwestern Nevada in the US. Acquired 4.84% stake in Pilbara Minerals, which holds Pilgangoora lithium-tantalum project in Western Australia. Acquired 15.8% stake in Explore Resources in Eastern Canada.
2018	Listed on Hong Kong Stock Exchange.

Source: Company website

Ganfeng Lithium’s market presence



Source: Company

Ganfeng Lithium Co Ltd**Environmental, Social & Governance (ESG)**

GFLi strives to achieve sustainable development. It has complied with the relevant laws and regulations in China and other countries it operates in. GFLi supports the development of a circular economy and the national strategy of revitalising emerging industries. GFLi is continuously improving its development quality, striving to build a vertical industrial chain integrating upstream and downstream. This will contribute to the healthy and sustainable development of the global lithium industry.

Environmental: Striving for green development to address climate change. In 2019, the company received no environmental complaints nor penalties. 100% of its solid waste was classified storage and harmless treatment according to relevant regulations. For its “annual production of 15,000 tonnes of battery grade lithium carbonate” and “annual production of 20,000 tonnes of lithium hydroxide monohydrate” at the Xinyu basic lithium plant, the company comprehensively upgraded its evaporation process and emission control technology, and greatly reduced coal consumption, nitrogen oxides and sulphur dioxide emissions by optimising waste heat utilisation.

Social: Safety first. GFLi attaches great importance to safety in the production process and occupational health of its employees. In 2019, there were no casualties from safety related accidents. Also, there were no occupational diseases among employees. All of its employees underwent physical examination for occupational disease.

Governance: Strict corporate governance structure to promote effective operations of the company's risk management. In 2019, an integrated evaluation across the company was carried out on risk management based on four main dimensions (including 11 sub-dimensions) of risk and opportunity balancing, organisation and culture of risk control, foundation management consolidation, and material risk control. The company's overall competitiveness in risk management was analysed and a risk management evaluation mechanism was established to effectively steer the fulfilment of risk management responsibilities.

Ganfeng Lithium Co Ltd

Management & Strategy

GFLi has 10 Directors, comprising 5 Executive Directors, 1 Non-Executive Director and 4 Independent Non-Executive Directors. Founder and President Mr. Li Liangbin and Vice-Chairman Mr. Wang Xiaoshen has over 25 years of experience in the lithium industry. Most of its senior managers are very experienced after working for many years in GFLi. And there is performance-based Incentive Scheme and share options as rewarded for the senior management and core technical and personnel as to align interests with shareholders.

Key Management Team

Name	Position	Experience
Mr. Li Liangbin (李良彬) aged 52	Founder and President	Mr. Li is the company's largest shareholder. He is primarily responsible for the overall management of the company's business strategies and operations. He has almost 30 years of experience in the lithium industry. He worked at the scientific research institution of Jiangxi Lithium Plant, a state-owned enterprise. He has been serving as Vice President of the China Nonferrous Metal Industry Association, Lithium Branch. He obtained an Associate Degree in Chemistry from Yichun University in 1988.
Mr. Wang Xiaoshen (王晓申) aged 50	Vice-Chairman	Mr. Wang is primarily responsible for marketing, investment and overseas business and has over 25 years of experience in sales and marketing of lithium products. He joined in 2006 as a general manager. He has been a director of GFL International, Mariana Lithium, RIM and Lithium Americas. He obtained an EMBA from the China Europe International Business School in 2002.
Mr. Shen Haibo (沈海博) aged 51	Executive Director	Mr. Shen holds 1.2% of A-Shares in the company. He joined in 2005 as a marketing controller. He is primarily responsible for overseeing the sales and promotion of products in China. He has over 20 years of experience in sales and marketing of lithium products. He obtained his Bachelor's Degree in Industrial Engineering Management from North China University of Technology in 1991.
Ms. Deng Zhaonan (邓招男) aged 51	Executive Director	Ms. Deng has been the company's Vice President since 2011. She is primarily responsible for overseeing the quality control of products, production and daily operations. She has over 10 years of experience in the lithium industry. She graduated from the College of Chemical Engineering of Xiangtan University and obtained a Bachelor's Degree in Food Engineering in 1992.
Mr. Xu Xiaoxiong (许晓雄) aged 39	Executive Director	Mr. Xu joined in 2017 as Chief Scientist. He is primarily responsible for overseeing the research and development of solid-state lithium batteries products. He obtained a Doctorate Degree in Science from Shanghai Institute of Ceramics of Chinese Academy of Sciences in 2007.

Source: Company, DBS HK

Ganfeng Lithium Co Ltd

Key Assumptions

FY Dec	2017A	2018A	2019A	2020F	2021F
Sales Volume for Lithium metal and compound (LCE tonne)	25,775.8	30,826.3	45,586.5	56,853.7	82,429.7
ASP for Lithium metal and compound (Rmb/tonne)	111.7	103.2	91.1	92.6	95.2
GPM for Lithium metal and compound (%)	40.2	35.9	23.6	24.6	27.9

Source: Company, DBS HK

Segmental Breakdown (RMB m)

FY Dec	2017A	2018A	2019A	2020F	2021F
Revenues (RMB m)					
Lithium compound	3,698	4,153	4,152	5,263	7,846
Others	473	737	1,095	1,095	1,095
Total	4,171	4,890	5,246	6,358	8,941
Gross profit (RMB m)					
Lithium compound	1,664	1,643	1,092	1,421	2,354
Others	11	111	147	142	142
Total	1,675	1,754	1,239	1,563	2,496
Gross profit Margins (%)					
Lithium compound	45.0	39.6	26.3	27.0	30.0
Others	2.4	15.1	13.4	13.0	13.0
Total	40.2	35.9	23.6	24.6	27.9

Source: Company, DBS HK

Ganfeng Lithium Co Ltd

Income Statement (RMB m)

FY Dec	2017A	2018A	2019A	2020F	2021F
Revenue	4,171	4,890	5,246	6,358	8,941
Cost of Goods Sold	(2,496)	(3,136)	(4,009)	(4,795)	(6,445)
Gross Profit	1,675	1,754	1,238	1,563	2,496
Other Opng (Exp)/Inc	(246)	(443)	(432)	(523)	(736)
Operating Profit	1,429	1,311	806	1,040	1,760
Other Non Opg (Exp)/Inc	969	156	(277)	(284)	(201)
Associates & JV Inc	26	123	153	153	153
Net Interest (Exp)/Inc	(57)	(90)	(205)	(108)	(124)
Dividend Income	0	0	0	0	0
Exceptional Gain/(Loss)	0	0	0	0	0
Pre-tax Profit	2,367	1,500	477	801	1,588
Tax	(272)	(163)	(121)	(200)	(397)
Minority Interest	0	(1)	5	8	16
Preference Dividend	0	0	0	0	0
Net Profit	2,096	1,337	361	609	1,207
Net Profit before Except.	2,096	1,337	361	609	1,207
EBITDA	2,532	1,733	916	1,250	2,105
Growth					
Revenue Gth (%)	N/A	17.2	7.3	21.2	40.6
EBITDA Gth (%)	N/A	(31.6)	(47.1)	36.4	68.4
Opg Profit Gth (%)	N/A	(8.3)	(38.5)	29.1	69.2
Net Profit Gth (%)	N/A	(36.2)	(73.0)	68.7	98.3
Margins & Ratio					
Gross Margins (%)	40.2	35.9	23.6	24.6	27.9
Opg Profit Margin (%)	34.3	26.8	15.4	16.4	19.7
Net Profit Margin (%)	50.2	27.3	6.9	9.6	13.5
ROAE (%)	N/A	22.1	4.4	7.1	13.1
ROA (%)	N/A	12.4	2.6	4.1	7.4
ROCE (%)	N/A	13.3	5.0	5.9	9.3
Div Payout Ratio (%)	14.2	29.5	107.5	30.0	30.0
Net Interest Cover (x)	25.1	14.5	3.9	9.6	14.2

Source: Company, DBS HK

Ganfeng Lithium Co Ltd

Balance Sheet (RMB m)

FY Dec	2017A	2018A	2019A	2020F	2021F
Net Fixed Assets	1,620	2,620	3,008	3,967	4,574
Invt in Associates & JVs	795	1,854	3,680	3,680	3,680
Other LT Assets	1,016	1,251	1,809	1,809	1,809
Cash & ST Invt	2,237	3,602	1,700	1,997	2,511
Inventory	915	1,905	2,334	1,839	2,472
Debtors	1,259	1,598	1,159	1,406	1,877
Other Current Assets	156	809	525	525	525
Total Assets	7,999	13,639	14,213	15,222	17,447
ST Debt	1,211	1,356	1,969	1,969	2,439
Creditors	894	1,364	559	1,150	1,546
Other Current Liab	709	1,112	731	731	731
LT Debt	1,018	1,420	2,219	2,219	2,749
Other LT Liabilities	123	292	324	324	324
Shareholder's Equity	4,037	8,042	8,355	8,781	9,626
Minority Interests	6	54	55	47	31
Total Cap. & Liab.	7,999	13,639	14,213	15,222	17,447
Non-Cash Wkg. Capital	727	1,837	2,727	1,888	2,597
Net Cash/(Debt)	8	826	(2,488)	(2,191)	(2,677)
Debtors Turn (avg days)	30.6	30.0	32.9	33.9	33.9
Creditors Turn (avg days)	39.7	39.3	43.4	44.4	44.4
Inventory Turn (avg days)	32.2	30.7	33.4	34.4	34.4
Asset Turnover (x)	NM	0.5	0.4	0.4	0.5
Current Ratio (x)	1.6	2.1	1.8	1.5	1.6
Quick Ratio (x)	1.2	1.4	0.9	0.9	0.9
Net Debt/Equity (X)	CASH	CASH	0.3	0.2	0.3
Net Debt/Equity ex MI (X)	CASH	CASH	0.3	0.2	0.3
Capex to Debt (%)	13.3	42.7	18.1	31.0	19.3
Z-Score (X)	NA	NA	NA	NA	NA

Source: Company, DBS HK

Cash Flow Statement (RMB m)

FY Dec	2017A	2018A	2019A	2020F	2021F
Pre-Tax Profit	2,367	1,500	477	801	1,588
Dep. & Amort.	108	143	234	341	393
Tax Paid	(106)	(224)	(337)	(308)	(521)
Assoc. & JV Inc/(loss)	(26)	(123)	(212)	(153)	(153)
(Pft)/ Loss on disposal of FAs	0	0	0	0	0
Chg in Wkg.Cap.	(920)	(1,356)	(163)	839	(709)
Other Operating CF	(920)	745	670	261	277
Net Operating CF	504	685	669	1,780	875
Capital Exp.(net)	(297)	(1,185)	(758)	(1,300)	(1,000)
Other Invt.(net)	241	1,167	434	0	0
Invt in Assoc. & JV	(746)	(1,790)	(1,044)	0	0
Div from Assoc & JV	0	0	0	0	0
Other Investing CF	(38)	(553)	(1,454)	0	0
Net Investing CF	(840)	(2,360)	(2,823)	(1,300)	(1,000)
Div Paid	(71)	(293)	(388)	(183)	(362)
Chg in Gross Debt	965	495	1,322	0	1,000
Capital Issues	0	0	0	0	0
Other Financing CF	1,443	2,519	(693)	0	0
Net Financing CF	2,337	2,721	241	(183)	638
Currency Adjustments	0	0	0	0	0
Chg in Cash	2,000	1,046	(1,913)	298	513
Opg CFPS (RMB)	1.28	1.80	0.64	0.73	1.23
Free CFPS (RMB)	0.19	(0.44)	(0.07)	0.37	(0.10)

Source: Company, DBS HK

Ganfeng Lithium Co Ltd

Appendix: China's Lithium Industry Overview

Long term EV industry prospects remain despite hiccups in China

China is the world's largest automobile vehicle market and its NEV market is rapidly expanding. Lithium is an integral component of batteries used in NEVs. China has set explicit mandates for battery electric vehicle (BEV) production targets for 2025-30. We expect demand to continue to rise over the next decade. In 2020, we expect NEV output to decline due to the ongoing COVID-19 outbreak which is likely to affect demand for batteries installed capacity. Still, we foresee China's lithium consumption growth at c.22% p.a. in 2019-22, from an estimated 103m tonnes LCE in 2019.

Demand outlook for power batteries in China. China has accelerated the development of new energy and intelligent network industries. According to industry data, in 2019 the total output of China's NEV market was 1.2m vehicles. As of Dec-19, total installed lithium battery capacity of NEVs was 9.33GWh, of which EV passenger vehicles accounted for 48%. We assume that output of NEVs in 2020 will be lower than 2019. This will be a big drop from the government's original plan of 2 million vehicles.

However, the postponement of the government's subsidy cuts may spur a rebound of car purchases. Moreover, in the long term, technological breakthroughs are biased toward the "cobalt-free" trend with competitive cost advantages. This also favours usage of lithium iron phosphate batteries. Based on our estimates, China's lithium consumption in EV industries should increase c.22% in 2019-2022. Considering that sales volume of NEVs in China is expected to hit 6m units by 2025 and 12m by 2030, market outlook should be more bullish in the long term.

Ex-NEV lithium drivers: 5G and energy storage are positive

We forecast China's lithium consumption in the ex-NEV segment to grow at 1% CAGR in 2019- 2022.

- **5G network development.** In terms of demand for consumer batteries, mass production of 5G mobile phones has commenced since the Ministry of Industry and Information Technology started issuing 5G licences in 2019. We expect rapid commercialisation of 5G mobile phones riding on 5G network coverage completion, serving as a new driver in addition to smart consumer electronic products.

Energy storage the main growth driver. In China, domestic demand for energy storage increased significantly since 2018 as its two grid companies worked on a range of projects to support network operations and complete energy storage networks. In the long term, the energy storage market has much more room to expand than the NEV market.

Potential driver of disruption along the supply chain

China's lithium products output has been declining amid falling lithium prices and smelting factories' profitability. Despite low utilisation of nameplate capacity at smelting plants, China's lithium processing capacity is expected to grow by c.13% CAGR during 2019-2022, dominated by a few leading players. The top four players account for 60%/75% of lithium carbonate and lithium hydroxide total capacity. GFLi accounted for 6% in 2019, which is projected to remain at 6% by 2022. For lithium hydroxide, GFLi accounted for 12% of total processing capacity in 2019 and should increase to 17% as a result of rapid capacity additions among other local players. Given that China is a net importer of spodumene for lithium compound production, the supply chain has been disrupted by miners postponing or stopping higher cost production. According to the Shanghai Metal Market (SMM) report, spodumene inventory has been drawn down to 2-4 months since late-2019. This is expected to bottleneck production going forward.

Regional hub in Asia

Alongside Japan and Korea, China has emerged as an established regional hub in manufacturing power batteries and related accessories. China is the major supplier of lithium hydroxide products. Japan and Korea were two major export destinations in 2019, accounting for a combined 91% of China's total exports. In 2019, China's total exports of lithium hydroxide were 48,685 tonnes. On the other hand, China is a major consumer of lithium carbonate products. Most major carbonate producers are located overseas. In 2019, Argentina and Chile were the two major import sources, accounting for a combined 85% of total imports. China's total imports of carbonate products were 29,315 tonnes in the same year.

Lithium prices outlook

Over 2019, lithium prices in China declined across the board for carbonates, hydroxides and lithium metal (down 44%/52%/32% y-o-y) amid a surplus in the market as NEV sales slowed down in China. Domestic spodumene prices have corrected c.50% and overall market prices have stabilised at RMB465 per tonne since November 2019. In 2020, we expect reduced new supply of spodumene as high cost producers exit and producers in South America postpone their ramp up of new capacity. On the contrary, in view of government's NEV related purchase subsidies and pipeline of new NEV models by automakers scheduled over the next nine to twelve months, we are optimistic that consumption demand will boost recovery of lithium prices. In 2020/2021, we assume lithium carbonate price reaching an average of RMB52,000 per tonne and RMB53,000 per tonne respectively, up from an average of RMB51,400 per tonne in 2019. We assume lithium hydroxide prices reaching an average of RMB55,500 per tonne and RMB57,000 per tonne, up from RMB54,900 per tonne.

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China lithium market overview, 2016-2022F

	2016	2017	2018	2019	2020F	2021F	2022F
Unit: '000 tonnes/ LCE							
Capacity							
Lithium carbonate	85.0	164.8	205.2	338.0	408.0	448.0	458.0
Lithium hydroxide	45.0	55.0	104.4	158.0	257.0	292.0	330.0
Lithium metal	4.2	4.3	5.7	5.7	8.4	8.4	8.4
Output							
Spodumene concentrate	30.0	10.0	12.6	59.1	63.0	65.0	75.0
Lithium mica concentrate	120.0	200.0	178.0	484.6	610.0	620.0	620.0
Salt-lake lithium ('000 tonnes LCE)	18.1	23.8	31.5	35.2	55.5	66.5	81.5
Lithium carbonate	53.0	83.0	120.6	153.2	170.0	180.0	195.0
Lithium hydroxide	24.9	43.0	58.9	84.7	109.1	142.0	185.0
Lithium metal	2.5	2.8	3.2	3.8	4.0	4.2	4.3
Total supply of lithium raw material ('000 tonnes LCE)	42.9	50.3	61.5	84.4	111.6	124.0	139.7
% y-o-y		17.2	22.3	37.2	32.2	11.1	12.7
Lithium raw material imports ('000 tonnes LCE)	50.7	152.6	212.1	205.2	167.1	167.1	178.8
Lithium raw material exports ('000 tonnes LCE)	0.8	0.5	0.2	0.2	0.2	0.2	0.2
Demand							
Lithium-ion batteries ('000 tonnes LCE)	56.5	67.3	90.0	103.7	126.9	151.7	189.3
Pharmaceuticals ('000 tonnes LCE)	2.2	2.3	2.5	2.7	2.8	3.0	3.0
Lubricating grease ('000 tonnes LCE)	7.0	7.1	7.3	7.5	7.6	7.9	7.9
Glass and ceramics ('000 tonnes LCE)	9.3	9.9	14.7	14.8	14.9	15.0	15.0
Other sectors ('000 tonnes LCE)	16.3	17.1	22.2	22.5	22.8	23.3	23.3
Total consumption for lithium raw material ('000 tonnes LCE)	91.3	103.7	136.7	151.2	175.0	200.9	238.5
% y-o-y		13.6	31.8	10.6	15.7	14.8	18.7
Lithium raw material demand and supply balance ('000 tonnes LCE)	1.5	98.7	136.7	138.2	103.5	90.0	79.8

Source: SMM, DBS HK

DBS HK recommendations are based on an Absolute Total Return* Rating system, defined as follows:

STRONG BUY (>20% total return over the next 3 months, with identifiable share price catalysts within this time frame)

BUY (>15% total return over the next 12 months for small caps, >10% for large caps)

HOLD (-10% to +15% total return over the next 12 months for small caps, -10% to +10% for large caps)

FULLY VALUED (negative total return, i.e., > -10% over the next 12 months)

SELL (negative total return of > -20% over the next 3 months, with identifiable share price catalysts within this time frame)

**Share price appreciation + dividends*

Completed Date: 27 Apr 2020 12:48:08 (HKT)

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Sources for all charts and tables are DBS HK unless otherwise specified.

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