

China / Hong Kong Industry Focus

Aluminium Sector

Refer to important disclosures at the end of this report

DBS Group Research . Equity

5 Feb 2024

Growing consumption to drive price rebound

- Demand from the transportation and power industries drove inventories down to a multi-year low, supporting rebound in prices
- Expect narrower surplus in 2024 on keen demand for lightweight materials and supply shortfall amid production suspension in Yunnan
- Limited risk on bauxite supply disruption; stable cost outlook ahead
- The acceleration of the carbon transition trend will further drive demand and support sector earnings CAGR of >20% (2023-2025); our top pick – [CHALCO \(2600 HK/601600 CH\)](#)

Growing China transportation and power consumption. We expect China's aluminium consumption to continue growing at a rate of 2-3% in 2024, attributable to the increasing demand for aluminium in the transportation and power sectors. On the other hand, we foresee limited new capacity to be added over the next few years, as the sector approaches the industry ceiling of 45m tonnes (2022: 44.5m tonnes). In addition, the output suspension in Yunnan scheduling between October and March would further reduce the available domestic market supply, bringing in a constructive market outlook.

Cost pressure limited from bauxite shipment disruption. As bauxite shipments from Guinea for Chinese producers are not passing through the Red Sea, we foresee no significant impact on operations from the Red Sea incident. As per latest market price, aluminium product margin improved despite coal cost standing firm during the warming season. Furthermore, energy supply pressure in aluminium production should ease after winter while other key cost components such as alumina, carbon, and caustic soda are expected to remain stable. As such, we believe the overall profitability in subsequent quarters would expand.

Undemanding valuation; top pick CHALCO. For 2024, we expect aluminium price to trade up to RMB19,000/ RMB19,500 in 2024/ 2025, from RMB18,709 in 2023 amid lower interest rates, a soft landing, and stronger demand in global carbon transition development accelerating. The sector is trading at a price-book (P/BV) of 0.7x, against a forecasted ROE of c.9%. Meanwhile, we expect solid support for aluminium prices as aluminium inventory has remained steady at its seven-year low levels, supporting earnings CAGR >20% for CHALCO during the industry's green transition, and thus making it our preferred sector pick.

HSI: 15,510

ANALYST

Duncan Chan +852 36684178 duncanchan@dbs.com

Recommendation & valuation

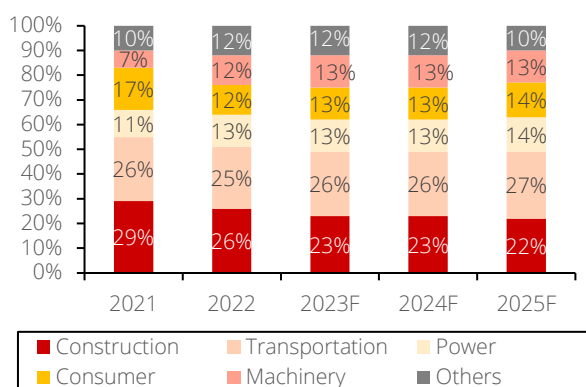
Company	Currency	Price	Target Price	Rating
CHALCO (2600 HK)	HK\$	3.60	4.70	BUY
CHALCO (601600 CH)	RMB	5.50	6.50	BUY

Source: Thomson Reuters, DBS Bank (Hong Kong) Limited ("DBS HK")

Healthy China aluminium consumption growth expected

Growing demand from lightweight material in the transportation sector has made China the largest aluminium user in the market. We expect contribution in transportation and power investment to outpace the subdued local construction market this year. In addition, the rising adoption of energy vehicle market penetration and power investment (combined 39% of China total) would require more aluminium. In the meantime, we expect China aluminium downstream market activities' continuous improvement to support metal usage and support our forecast of demand growth at 2-3% in 2024.

Non-construction consumption drivers

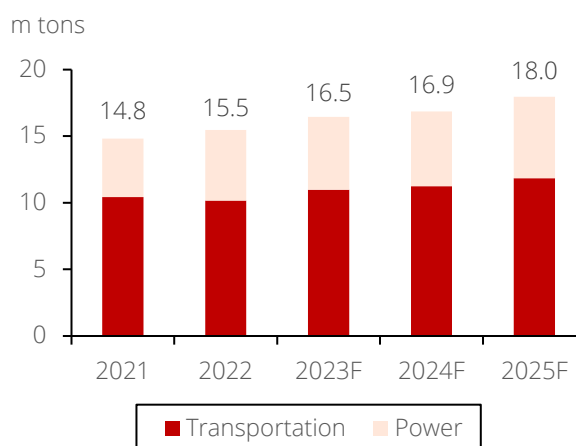


Source: Bloomberg Finance L.P., DBS HK

Growing transportation and power demand in China

China's pure electric passenger cars consumed 188 kilograms (kg) of aluminum per vehicle in 2022, while fuel passenger cars used only 154 kg. According to the industry's energy-saving technology blueprint, the amount of aluminum used will increase to 250 kg and 350 kg in 2025 and 2030, respectively. As such, we foresee the combined demand from the two segments will expand at an above-industry-average of 4.5% CAGR during 2023-2025. China consumption would increase to 41% of total by 2025, from an estimated 38-39% in 2023.

China's aluminium consumption - transportation and power segments

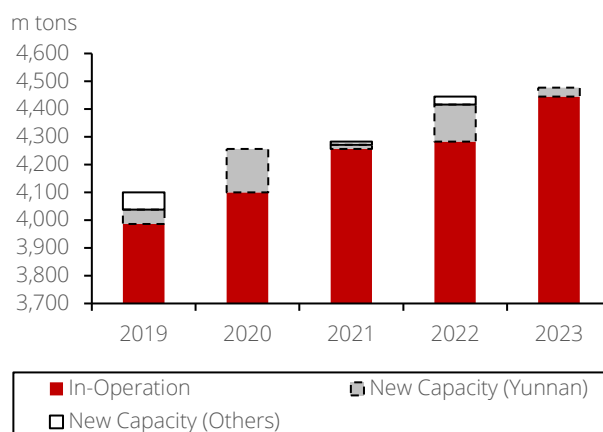


Source: Bloomberg Finance L.P., DBS HK

China capacity ceiling and curtailment in Yunnan

We expect existing China supply policies to control the industry upper limit at a total capacity of 45m tonnes per annum would cap aluminium output. In addition, China smelters are increasingly swapping their capacity from other provinces into Yunnan, which represents 12-13% of China's total capacity in 2023. With the supply disruption in Yunnan, which started in 4Q23 due to capacity curtailment, expected to continue into the drought season in 1Q24, we estimate that would translate into 1m tonnes of output reduction, or 2% of the expected national supply.

Industry capacity approaching the ceiling

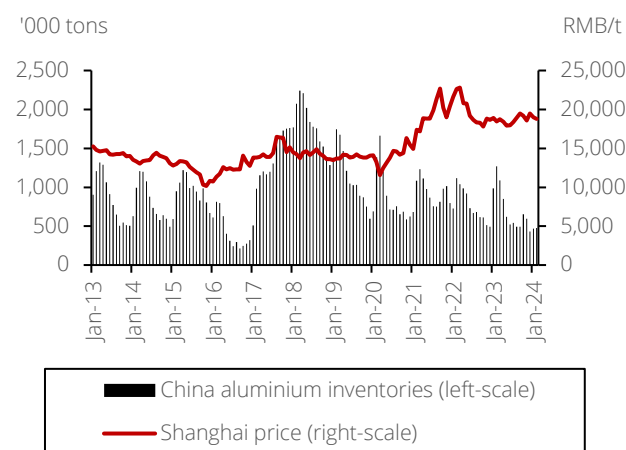


Source: Bloomberg Finance L.P., DBS HK

Aluminium inventories at multi-year low levels

As per the latest industry data as of early February 2024, China's aluminium inventory had dropped c.19% from early December, reaching a seven-year record-low – 473,000 tonnes – the second lowest over past decade – and represent less than 40-days of estimated China aluminium consumption. Meanwhile, we predict that the ongoing rebound in aluminium consumption will help the overall inventory levels to maintain at its multi-year low levels, resulting in a solid support to an uptick in future aluminium prices.

Inventories stood at multi-year low level

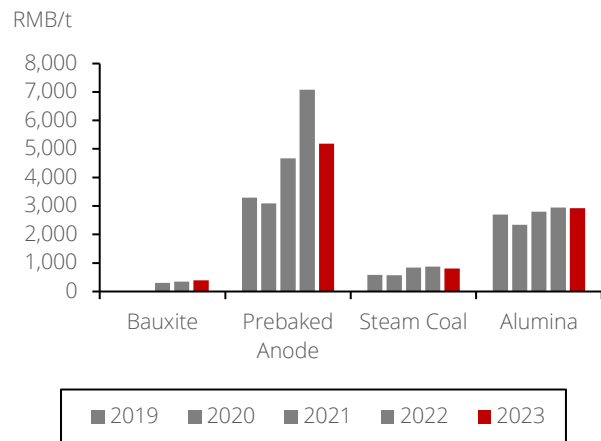


Source: Bloomberg Finance L.P., DBS HK

Modest supply risk on Red Sea Incident

We noticed that aluminium premiums in the European market spiked up after the news broke but have since stabilised. In contrast, Shanghai premiums have consistently declined over the past month. We believe the market has overreacted to concerns about the Red Sea Incident's impact on China's market supply of bauxite for alumina production. With feedback indicating that operations in Guinea are proceeding normally for leading China aluminium producers, we believe the alumina market will eventually normalise over the next few months.

Major aluminium input cost

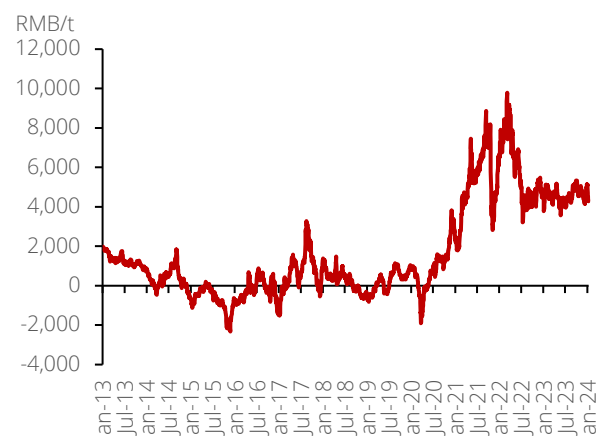


Source: Bloomberg Finance L.P., DBS HK

Price and margins outlook amid global transition

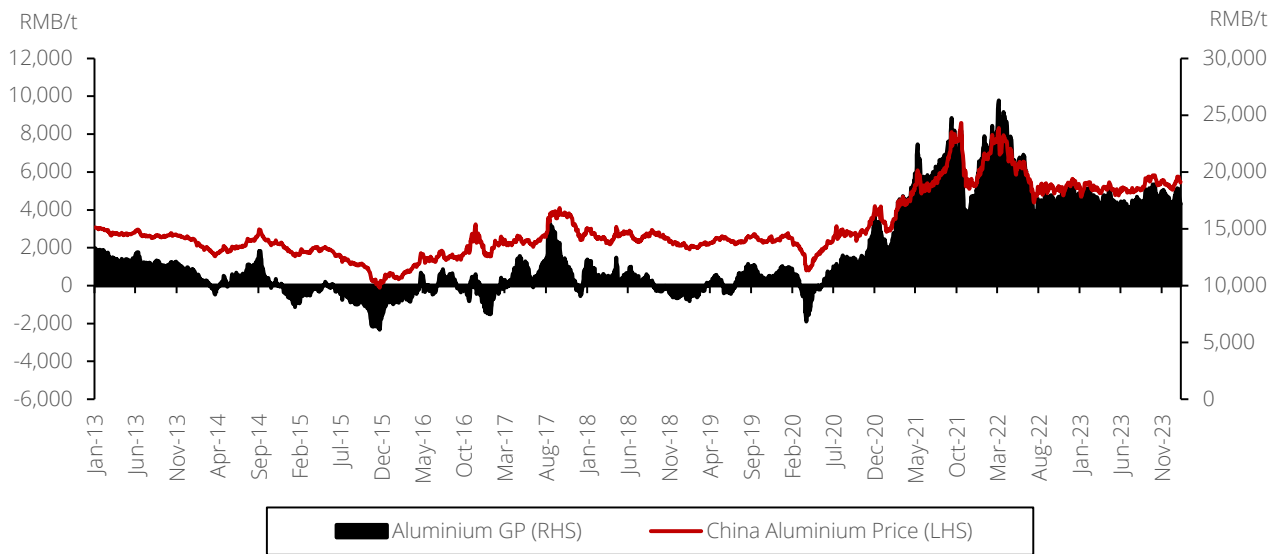
In 2024, we foresee global aluminium output growth to be slow on delayed construction progress in Latin America and India. And we expect market surplus to gradually narrow ahead. Moreover, we believe the implementation of the carbon tax 2026 onwards in the Europe market would serve as an important cost-factor pushing aluminium price upward, which will help green smelters to differentiate from their peers. Meanwhile, compared to a barely breakeven situation in 2020, China's smelters are currently commanding profitability levels of around RMB4,000/tonne.

Aluminium product simulated GP



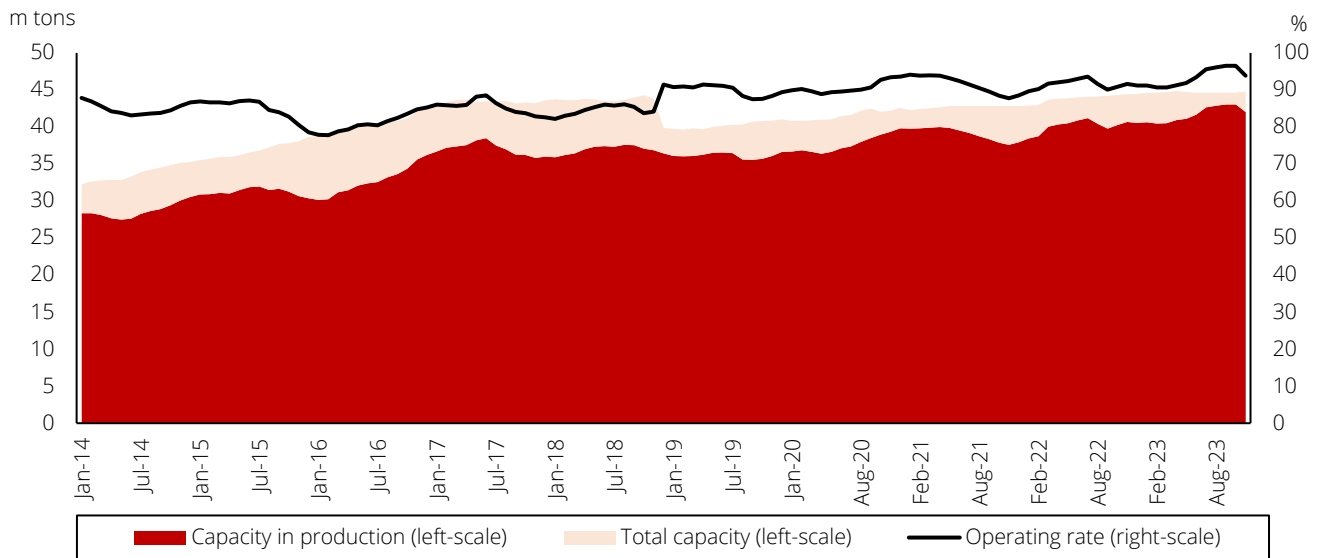
Source: Bloomberg Finance L.P.

A look at industry's profitability history - aluminium price and aluminium product GP



Source: Bloomberg Finance L.P., DBS HK

A look at industry's supply landscape - aluminium capacity and utilisation



Source: Bloomberg Finance L.P., DBS HK

Aluminium Sector

Global aluminium demand/ supply/ price forecast

(k tonnes)	2020	2021	2022	2023F	2024F	2025F
Bauxite mine production, m tonnes	406	390	396	397	401	409
% y-o-y	12.8	-3.9	1.5	0.3	1.0	2.0
Primary aluminium production	64,007	66,517	68,728	70,417	71,826	73,513
% y-o-y	3.6	3.9	3.3	2.5	2.0	2.3
Primary aluminium consumption	55,850	64,858	66,531	67,955	69,954	71,898
% y-o-y	0.1	16.1	2.6	2.1	2.9	2.8
Market balance	8,157	1,659	2,197	2,462	1,872	1,615
LME aluminium price (US\$/tonne)	1,731	2,485	2,711	2,250	2,300	2,400
% y-o-y	-4.5	43.6	9.1	-17.0	2.2	4.3

Source: Bloomberg Finance L.P., DBS HK

Aluminium Sector

Recommendation and valuation

In view of the relatively modest industry growth prospect, we expect producers with new projects on hand would benefit from better volume growth potential. Based on this, we have formulated the following recommendation: BUY CHALCO and HOLD Hongqiao.

Aluminium Corp of China Ltd (“CHALCO”, 2600 HK, BUY, HK\$4.7)

Set to be a key beneficiary of the expected rebound in aluminium demand, supported by a constructive industry outlook, CHALCO is our preferred sector top pick. The company has a leading position in the market, with a smelting capacity exceeding 8mtpa (c.18% of China total aluminium capacity), the largest in China. CHALCO is also committed to energy transition, with around 40% of its power sourced from non-thermal energy sources, which it plans to increase to over 50% by 2025. Our target price is

set at 1.1x FY24F price-to-book (P/BV), in line with +1SD to its historical average amid our expected ROE expansion.

China Hongqiao Group Ltd (“Hongqiao”, 1378 HK, HOLD, HK\$6.0)

The company plans to relocate almost 60% of its total capacity (6.46m tonnes p.a. or c.15% of China total) to the Yunnan province from 2025 onwards, with the aim of accessing hydropower resources. This relocation is expected to accelerate the company's capacity utilisation and benefit its margins, thus leading to a superior margin compared to its peers. Meanwhile, we assume the company's aluminium gross margins rebound towards 2022's level, supporting earnings CAGR (2023-2025) of >20%. Based on our analysis, we have set a target price of 0.6x FY24F P/BV, in line with the historical average.

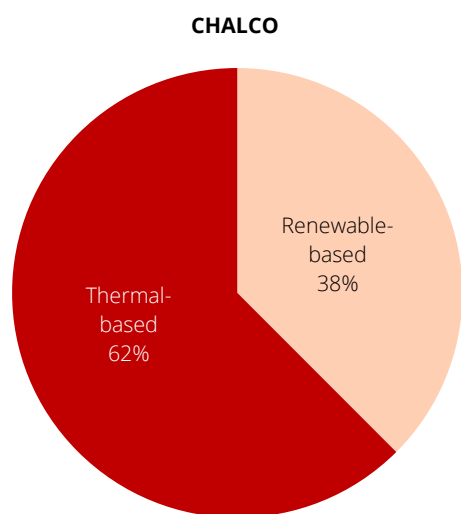
At a glance: CHALCO vs. Hongqiao

		CHALCO (2600 HK)			Hongqiao (1378 HK)		
		FY22	FY23F	FY24F	FY22	FY23F	FY24F
Operating data	Unit						
Aluminium							
Capacity	'000 tons	8,150	8,150	8,150	6,460	6,460	6,460
Sales volume	'000 tons	6,737	6,573	6,873	5,473	6,000	6,100
Average selling price	RMB/ton	15,622	16,721	17,006	17,582	16,533	16,814
Operating ratios							
Revenue	RMB mn	290,988	319,797	325,139	131,699	130,335	133,692
% y-o-y	%	1.0	9.9	1.7	15.0	-1.0	2.6
Net profit	RMB mn	4,192	4,200	5,061	8,702	7,081	8,321
% y-o-y	%	-27.2	0.2	20.5	-45.9	-18.6	17.5
GPM	%	10.8	7.8	8.9	13.8	11.7	13.8
EBITDAM	%	8.4	7.5	8.1	17.0	16.1	17.2
NPM	%	1.4	1.3	1.6	6.6	5.4	6.2
Liquidity ratios							
Gross debt/EBITDA	%	3.6	3.6	3.3	2.2	2.3	2.1
Net gearing	%	77.0	65.0	45.0	22.0	18.0	7.0

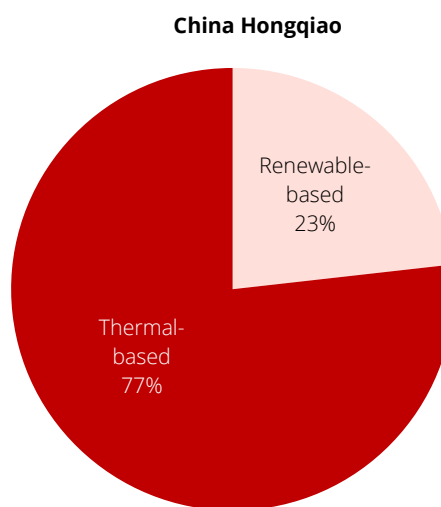
Source: DBS HK

Aluminium Sector

Energy consumption structure



Source: Bloomberg Finance L.P., DBS HK



Source: Bloomberg Finance L.P., DBS HK

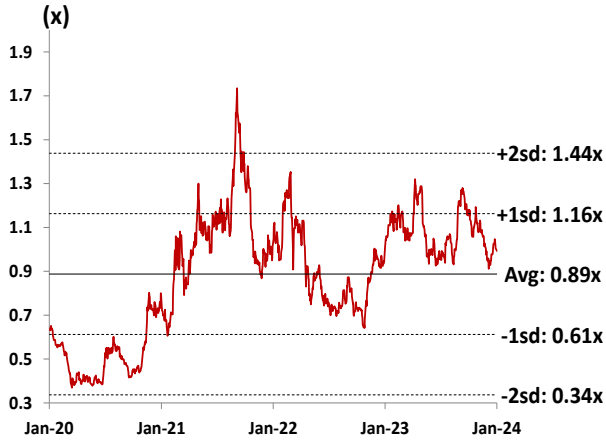
Peer valuation

Company	Ticker	5 Feb		Year End	PER (x)		EPS chg (%)		PBR (x)		EV/EBITDA (x)		Dividend	ROE	Net gearing
		Price Local\$	Mkt cap US\$ mn		2023F	2024F	2023F	2024F	2023F	2024F	2023F	2024F	yield (%) 2023F	(%) 2023F	(%) 2022
HK listed															
ALUMINUM CORP OF CHINA LTD-H	2600.HK	3.60	93,180	12/2022	8.8	7.8	58.2	12.7	0.9	0.9	6.6	6.1	1.4	11.1	130.6
CHINA HONGQIAO GROUP LTD	1378.HK	5.54	52,494	12/2022	5.0	4.0	9.9	22.8	0.5	0.5	4.4	4.1	12.1	10.7	39.3
UNITED CO RUSAL INTERNATIONA	486.HK	2.41	36,615	12/2022	3.4	2.4	(22.9)	42.9	0.3	0.3	6.3	4.7	na	10.6	50.2
Average					5.7	4.7	15.0	26.1	0.6	0.5	5.7	5.0	6.7	10.8	73.3
China listed															
ALUMINUM CORP OF CHINA LTD-A	601600.CH	5.50	85,745	12/2022	13.1	11.4	61.5	14.5	1.4	1.3	6.8	6.3	0.9	11.1	130.6
HENAN SHENHUO COAL & POWER-A	000933.CH	16.50	37,120	12/2022	6.0	5.2	(25.3)	14.8	1.7	1.4	5.6	5.0	5.9	30.2	153.5
YUNNAN ALUMINIUM CO LTD-A	000807.CH	10.01	34,714	12/2022	7.5	6.2	(6.6)	19.5	1.2	1.1	5.6	4.8	1.3	16.4	24.6
SHANDONG NANSHAN ALUMINUM-A	600219.CH	2.76	32,316	12/2022	9.8	8.2	(10.3)	19.2	0.6	0.6	3.2	2.7	0.8	6.5	na
TIANSHAN ALUMINUM GROUP CO-A	002532.CH	4.91	22,841	12/2022	8.3	6.9	(4.7)	20.8	0.9	0.8	7.3	6.2	6.0	10.1	116.0
Average					8.9	7.6	2.9	17.8	1.2	1.0	5.7	5.0	3.0	14.9	106.2
Overseas listed															
HINDALCO INDUSTRIES LTD	HNDL.IN	584.90	15,788	03/2023	136.8	122.3	0.2	11.8	13.3	12.1	7.5	6.9	0.1	10.1	47.2
NORSK HYDRO ASA	NHY.NO	60.42	11,607	12/2022	19.4	14.9	(64.0)	30.1	1.6	1.5	6.4	5.6	3.2	7.9	na
ALCOA CORP	AA.US	29.49	5,263	12/2023	13.3	1.6	na	749.1	0.2	0.1	8.2	5.1	10.6	0.5	20.4
ALUMINA LTD	AWC.AU	1.10	3,177	12/2022	na	4.7	na	na	0.3	0.3	na	32.4	na	na	6.9
Average					56.5	46.3	(31.9)	263.7	5.0	4.6	7.4	5.8	4.6	6.2	33.8
Grand Average					21.0	17.4	(0.4)	87.1	2.1	1.9	6.2	5.2	4.2	11.4	79.1

Source: Thomson Reuters, Bloomberg Finance L.P., DBS HK

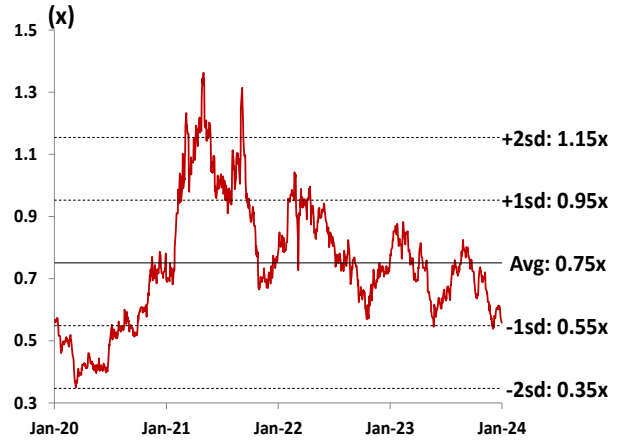
Historical PB band

CHALCO



Source: Bloomberg Finance L.P.

China Hongqiao



Source: Bloomberg Finance L.P.

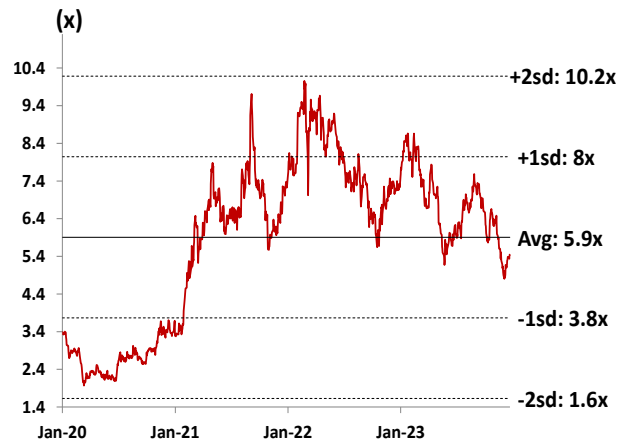
Historical PE band

CHALCO



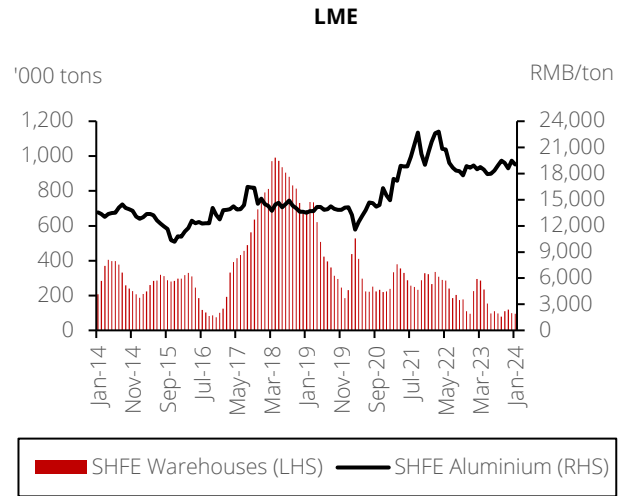
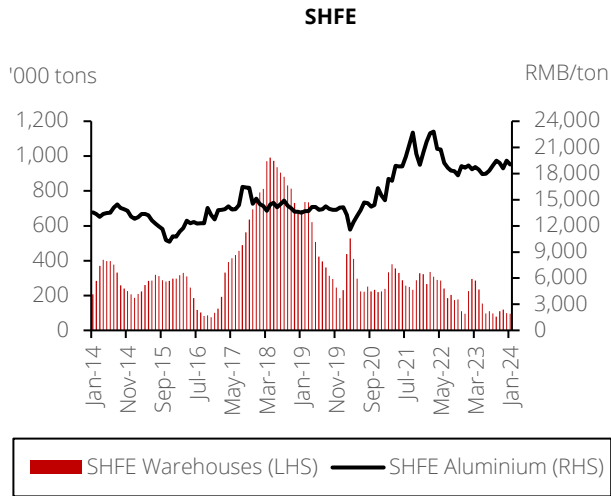
Source: Bloomberg Finance L.P.

China Hongqiao



Source: Bloomberg Finance L.P.

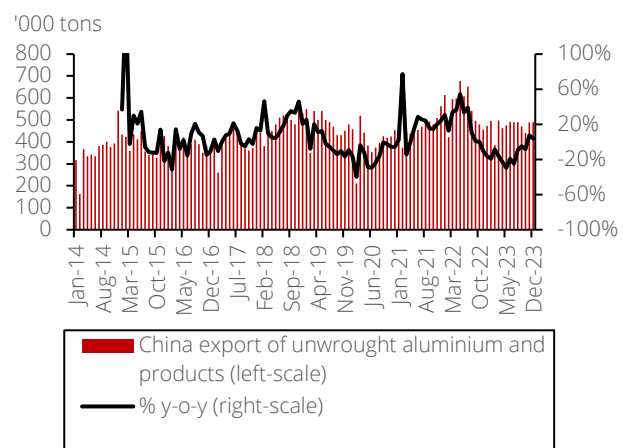
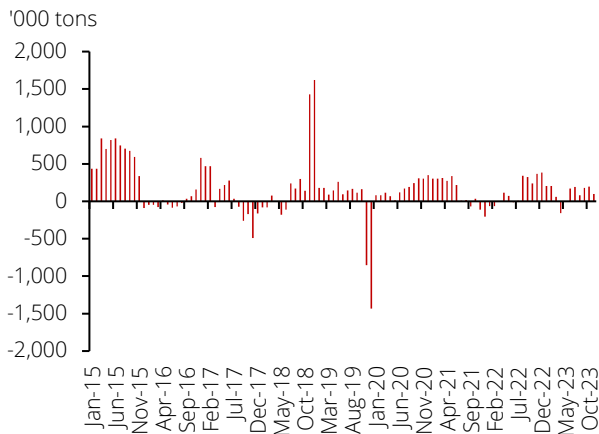
Aluminium forward price and inventory at warehouses



Source: Bloomberg Finance L.P.

Source: Bloomberg Finance L.P.

China primary aluminium production (change on year) China export of unwrought aluminium and products

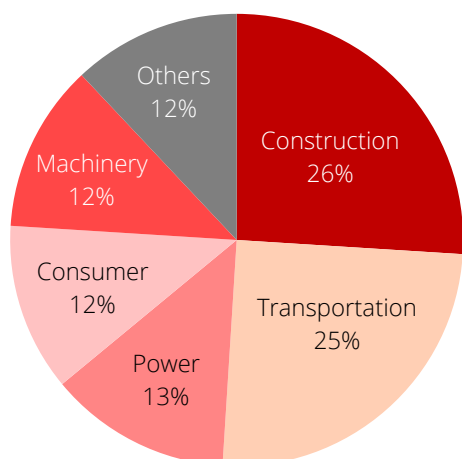


Source: Bloomberg Finance L.P., DBS HK

Source: Bloomberg Finance L.P., DBS HK

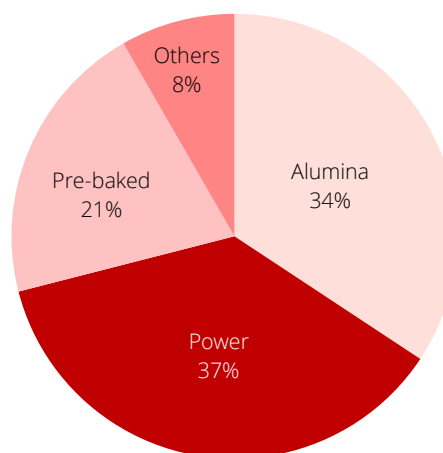
Aluminium Sector

China primary aluminium demand breakdown, 2022



Source: DBS HK

China primary aluminium cost breakdown, 2022



Source: DBS HK

China aluminium supply/demand balance

	2017	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F
Unit: mn tons										
Al output	32.3	35.8	35.0	37.1	38.5	40.2	41.0	41.9	42.5	42.8
% y-o-y	1.2	10.8	-2.2	6.0	3.8	4.4	1.9	2.2	1.4	0.7
Export	0.0	0.1	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.0
Import	0.1	0.1	0.1	1.1	1.6	0.7	1.4	1.4	1.4	1.4
Net export/(import)	(0.1)	(0.1)	0.0	(1.1)	(1.6)	(0.5)	(1.2)	(1.4)	(1.4)	(1.4)
% y-o-y	7.3	(32.0)	(100.9)	(167,122.1)	48.8	(69.4)	156.7	11.0	0.0	0.0
Apparent consumption	32.4	35.9	35.0	38.2	40.1	40.7	42.2	43.2	43.8	44.1
% y-o-y	1.0	10.7	-2.4	9.0	5.0	1.5	3.7	2.5	1.4	0.7
Capacity	43.6	39.9	41.0	42.6	42.8	44.5	44.8	44.9	45.0	45.0
Capacity utilisation (%)	74.2	89.8	85.4	87.2	89.9	90.4	91.5	93.3	94.3	95.0
Shanghai price (RMB/t)	14,559	14,256	13,909	14,104	18,958	19,980	18,709	19,000	19,500	20,000

Source: National Bureau of Statistics of China, China Customs, Thomson Reuters, Bloomberg Finance L.P., DBS HK

DBS Group Research 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: 5 Feb 2024 16:29:38 (HKT)

Dissemination Date: 6 Feb 2024 11:15:31 (HKT)

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

GENERAL DISCLOSURE/DISCLAIMER

This report is prepared by DBS Bank (Hong Kong) Limited ("DBS HK"). This report is solely intended for the clients of DBS Bank Ltd., DBS HK, DBS Vickers (Hong Kong) Limited ("DBSV HK"), and DBS Vickers Securities (Singapore) Pte Ltd. ("DBSVS"), its respective connected and associated corporations and affiliates only and no part of this document may be (i) copied, photocopied or duplicated in any form or by any means or (ii) redistributed without the prior written consent of DBS HK.

The research set out in this report is based on information obtained from sources believed to be reliable, but we (which collectively refers to DBS Bank Ltd., DBS HK, DBSV HK, DBSVS, its respective connected and associated corporations, affiliates and their respective directors, officers, employees and agents (collectively, the "DBS Group") have not conducted due diligence on any of the companies, verified any information or sources or taken into account any other factors which we may consider to be relevant or appropriate in preparing the research. Accordingly, we do not make any representation or warranty as to the accuracy, completeness or correctness of the research set out in this report. Opinions expressed are subject to change without notice. This research is prepared for general circulation. Any recommendation contained in this document does not have regard to the specific investment objectives, financial situation and the particular needs of any specific addressee. This document is for the information of addressees only and is not to be taken in substitution for the exercise of judgement by addressees, who should obtain separate independent legal or financial advice. The DBS Group accepts no liability whatsoever for any direct, indirect and/or consequential loss (including any claims for loss of profit) arising from any use of and/or reliance upon this document and/or further communication given in relation to this document. This document is not to be construed as an offer or a solicitation of an offer to buy or sell any securities. The DBS Group, along with its affiliates and/or persons associated with any of them may from time to time have interests in the securities mentioned in this document. The DBS Group, may have positions in, and may effect transactions in securities mentioned herein and may also perform or seek to perform broking, investment banking and other banking services for these companies.

Any valuations, opinions, estimates, forecasts, ratings or risk assessments herein constitutes a judgment as of the date of this report, and there can be no assurance that future results or events will be consistent with any such valuations, opinions, estimates, forecasts, ratings or risk assessments. The information in this document is subject to change without notice, its accuracy is not guaranteed, it may be incomplete or condensed, it may not contain all material information concerning the company (or companies) referred to in this report and the DBS Group is under no obligation to update the information in this report.

This publication has not been reviewed or authorized by any regulatory authority in Singapore, Hong Kong or elsewhere. There is no planned schedule or frequency for updating research publication relating to any issuer.

The valuations, opinions, estimates, forecasts, ratings or risk assessments described in this report were based upon a number of estimates and assumptions and are inherently subject to significant uncertainties and contingencies. It can be expected that one or more of the estimates on which the valuations, opinions, estimates, forecasts, ratings or risk assessments were based will not materialize or will vary significantly from actual results. Therefore, the inclusion of the valuations, opinions, estimates, forecasts, ratings or risk assessments described herein IS NOT TO BE RELIED UPON as a representation and/or warranty by the DBS Group (and/or any persons associated with the aforesaid entities), that:

- (a) such valuations, opinions, estimates, forecasts, ratings or risk assessments or their underlying assumptions will be achieved, and
- (b) there is any assurance that future results or events will be consistent with any such valuations, opinions, estimates, forecasts, ratings or risk assessments stated therein.

Please contact the primary analyst for valuation methodologies and assumptions associated with the covered companies or price targets. Any assumptions made in this report that refers to commodities, are for the purposes of making forecasts for the company (or companies) mentioned herein. They are not to be construed as recommendations to trade in the physical commodity or in the futures contract relating to the commodity referred to in this report.

Aluminium Sector

DBS Vickers Securities (USA) Inc ("DBSVUSA"), a US-registered broker-dealer, does not have its own investment banking or research department, has not participated in any public offering of securities as a manager or co-manager or in any other investment banking transaction in the past twelve months and does not engage in market-making.

ANALYST CERTIFICATION

The research analyst(s) primarily responsible for the content of this research report, in part or in whole, certifies that the views about the companies and their securities expressed in this report accurately reflect his/her personal views. The analyst(s) also certifies that no part of his/her compensation was, is, or will be, directly or indirectly, related to specific recommendations or views expressed in the report. The research analyst (s) primarily responsible for the content of this research report, in part or in whole, certifies that he or his associate¹ does not serve as an officer of the issuer or the new listing applicant (which includes in the case of a real estate investment trust, an officer of the management company of the real estate investment trust; and in the case of any other entity, an officer or its equivalent counterparty of the entity who is responsible for the management of the issuer or the new listing applicant) and the research analyst(s) primarily responsible for the content of this research report or his associate does not have financial interests² in relation to an issuer or a new listing applicant that the analyst reviews. DBS Group has procedures in place to eliminate, avoid and manage any potential conflicts of interests that may arise in connection with the production of research reports. The research analyst(s) responsible for this report operates as part of a separate and independent team to the investment banking function of the DBS Group and procedures are in place to ensure that confidential information held by either the research or investment banking function is handled appropriately. There is no direct link of DBS Group's compensation to any specific investment banking function of the DBS Group.

COMPANY-SPECIFIC / REGULATORY DISCLOSURES

1. DBS Bank Ltd, DBS HK, DBSVS or their subsidiaries and/or other affiliates have a proprietary position in Aluminum Corp of China Ltd (2600 HK) recommended in this report as of 31 Jan 2024.


DBS Bank Ltd, DBS HK, DBSVS or their subsidiaries and/or other affiliates have a proprietary position in Alcoa Corp (AA US) and Alumina Ltd (AWC AU) recommended in this report as of 29 Dec 2023.

2. **Compensation for investment banking services:**
DBSVUSA does not have its own investment banking or research department, nor has it participated in any public offering of securities as a manager or co-manager or in any other investment banking transaction in the past twelve months. Any US persons wishing to obtain further information, including any clarification on disclosures in this disclaimer, or to effect a transaction in any security discussed in this document should contact DBSVUSA exclusively.
3. **Disclosure of previous investment recommendation produced:**
DBS Bank Ltd, DBSVS, DBS HK, their subsidiaries and/or other affiliates of DBSVUSA may have published other investment recommendations in respect of the same securities / instruments recommended in this research report during the preceding 12 months. Please contact the primary analyst listed on page 1 of this report to view previous investment recommendations published by DBS Bank Ltd, DBS HK, DBSVS, their subsidiaries and/or other affiliates of DBSVUSA in the preceding 12 months.

¹ An associate is defined as (i) the spouse, or any minor child (natural or adopted) or minor step-child, of the analyst; (ii) the trustee of a trust of which the analyst, his spouse, minor child (natural or adopted) or minor step-child, is a beneficiary or discretionary object; or (iii) another person accustomed or obliged to act in accordance with the directions or instructions of the analyst.

² Financial interest is defined as interests that are commonly known financial interest, such as investment in the securities in respect of an issuer or a new listing applicant, or financial accommodation arrangement between the issuer or the new listing applicant and the firm or analysis. This term does not include commercial lending conducted at arm's length, or investments in any collective investment scheme other than an issuer or new listing applicant notwithstanding the fact that the scheme has investments in securities in respect of an issuer or a new listing applicant.

RESTRICTIONS ON DISTRIBUTION

<p>General</p>	<p>This report is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation.</p>
<p>Australia</p>	<p>This report is being distributed in Australia by DBS Bank Ltd, DBSVS or DBSV HK. DBS Bank Ltd holds Australian Financial Services Licence no. 475946.</p> <p>DBS Bank Ltd, DBSVS and DBSV HK are exempted from the requirement to hold an Australian Financial Services Licence under the Corporation Act 2001 ("CA") in respect of financial services provided to the recipients. Both DBS Bank Ltd and DBSVS are regulated by the Monetary Authority of Singapore under the laws of Singapore, and DBSV HK is regulated by the Hong Kong Securities and Futures Commission under the laws of Hong Kong, which differ from Australian laws.</p> <p>Distribution of this report is intended only for "wholesale investors" within the meaning of the CA.</p>
<p>Hong Kong</p>	<p>This report is being distributed in Hong Kong by DBS Bank Ltd, DBS Bank (Hong Kong) Limited and DBS Vickers (Hong Kong) Limited, all of which are registered with or licensed by the Hong Kong Securities and Futures Commission to carry out the regulated activity of advising on securities. DBS Bank Ltd., Hong Kong Branch is a limited liability company incorporated in Singapore.</p> <p>For any query regarding the materials herein, please contact Dennis Lam (Reg No. AH 8290) at dbsvhk@dbs.com.</p>
<p>Indonesia</p>	<p>This report is being distributed in Indonesia by PT DBS Vickers Sekuritas Indonesia.</p>
<p>Malaysia</p>	<p>This report is distributed in Malaysia by AllianceDBS Research Sdn Bhd ("ADBSR"). Recipients of this report, received from ADBSR are to contact the undersigned at 603-2604 3333 in respect of any matters arising from or in connection with this report. In addition to the General Disclosure/Disclaimer found at the preceding page, recipients of this report are advised that ADBSR (the preparer of this report), its holding company Alliance Investment Bank Berhad, their respective connected and associated corporations, affiliates, their directors, officers, employees, agents and parties related or associated with any of them may have positions in, and may effect transactions in the securities mentioned herein and may also perform or seek to perform broking, investment banking/corporate advisory and other services for the subject companies. They may also have received compensation and/or seek to obtain compensation for broking, investment banking/corporate advisory and other services from the subject companies.</p> <p style="text-align: right;"> Wong Ming Tek, Executive Director, ADBSR</p>
<p>Singapore</p>	<p>This report is distributed in Singapore by DBS Bank Ltd (Company Regn. No. 196800306E) or DBSVS (Company Regn No. 198600294G), both of which are Exempt Financial Advisers as defined in the Financial Advisers Act and regulated by the Monetary Authority of Singapore. DBS Bank Ltd and/or DBSVS, may distribute reports produced by its respective foreign entities, affiliates or other foreign research houses pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Where the report is distributed in Singapore to a person who is not an Accredited Investor, Expert Investor or an Institutional Investor, DBS Bank Ltd accepts legal responsibility for the contents of the report to such persons only to the extent required by law. Singapore recipients should contact DBS Bank Ltd at 6878 8888 for matters arising from, or in connection with the report.</p>
<p>Thailand</p>	<p>This report is being distributed in Thailand by DBS Vickers Securities (Thailand) Co Ltd.</p> <p>For any query regarding the materials herein, please contact [Chanpen Sirithanarattanakul] at [research@th.dbs.com]</p>
<p>United Kingdom</p>	<p>This report is produced by DBS HK which is regulated by the Hong Kong Monetary Authority</p> <p>This report is disseminated in the United Kingdom by DBS Bank Ltd, London Branch ("DBS UK"). DBS Bank Ltd is regulated by the Monetary Authority of Singapore. DBS UK is authorised by the Prudential Regulation Authority and is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request.</p> <p>In respect of the United Kingdom, this report is solely intended for the clients of DBS UK, its respective connected and associated corporations and affiliates only and no part of this document may be (i) copied, photocopied or duplicated in any form or by any means or (ii) redistributed without the prior written consent of DBS UK. This communication is directed at persons having professional experience in matters relating to investments. Any investment activity following from this communication will only be engaged in with such persons. Persons who do not have professional experience in matters relating to investments should not rely on this communication.</p>

<p>Dubai International Financial Centre</p>	<p>This communication is provided to you as a Professional Client or Market Counterparty as defined in the DFSA Rulebook Conduct of Business Module (the "COB Module"), and should not be relied upon or acted on by any person which does not meet the criteria to be classified as a Professional Client or Market Counterparty under the DFSA rules.</p> <p>This communication is from the branch of DBS Bank Ltd operating in the Dubai International Financial Centre (the "DIFC") under the trading name "DBS Bank Ltd. (DIFC Branch)" ("DBS DIFC"), registered with the DIFC Registrar of Companies under number 156 and having its registered office at units 608 - 610, 6th Floor, Gate Precinct Building 5, PO Box 506538, DIFC, Dubai, United Arab Emirates.</p> <p>DBS DIFC is regulated by the Dubai Financial Services Authority (the "DFSA") with a DFSA reference number F000164. For more information on DBS DIFC and its affiliates, please see http://www.dbs.com/ae/our--network/default.page.</p> <p>Where this communication contains a research report, this research report is prepared by the entity referred to therein, which may be DBS Bank Ltd or a third party, and is provided to you by DBS DIFC. The research report has not been reviewed or authorised by the DFSA. Such research report is distributed on the express understanding that, whilst the information contained within is believed to be reliable, the information has not been independently verified by DBS DIFC.</p> <p>Unless otherwise indicated, this communication does not constitute an "Offer of Securities to the Public" as defined under Article 12 of the Markets Law (DIFC Law No.1 of 2012) or an "Offer of a Unit of a Fund" as defined under Article 19(2) of the Collective Investment Law (DIFC Law No.2 of 2010).</p> <p>The DFSA has no responsibility for reviewing or verifying this communication or any associated documents in connection with this investment and it is not subject to any form of regulation or approval by the DFSA. Accordingly, the DFSA has not approved this communication or any other associated documents in connection with this investment nor taken any steps to verify the information set out in this communication or any associated documents, and has no responsibility for them. The DFSA has not assessed the suitability of any investments to which the communication relates and, in respect of any Islamic investments (or other investments identified to be Shari'a compliant), neither we nor the DFSA has determined whether they are Shari'a compliant in any way.</p> <p>Any investments which this communication relates to may be illiquid and/or subject to restrictions on their resale. Prospective purchasers should conduct their own due diligence on any investments. If you do not understand the contents of this document you should consult an authorised financial adviser.</p>
<p>United States</p>	<p>This report was prepared by DBS HK. DBSVUSA did not participate in its preparation. The research analyst(s) named on this report are not registered as research analysts with FINRA and are not associated persons of DBSVUSA. The research analyst(s) are not subject to FINRA Rule 2241 restrictions on analyst compensation, communications with a subject company, public appearances and trading securities held by a research analyst. This report is being distributed in the United States by DBSVUSA, which accepts responsibility for its contents. This report may only be distributed to Major U.S. Institutional Investors (as defined in SEC Rule 15a-6) and to such other institutional investors and qualified persons as DBSVUSA may authorize. Any U.S. person receiving this report who wishes to effect transactions in any securities referred to herein should contact DBSVUSA directly and not its affiliate.</p>
<p>Other jurisdictions</p>	<p>In any other jurisdictions, except if otherwise restricted by laws or regulations, this report is intended only for qualified, professional, institutional or sophisticated investors as defined in the laws and regulations of such jurisdictions.</p>

DBS Bank (Hong Kong) Limited

13th Floor One Island East, 18 Westlands Road, Quarry Bay, Hong Kong

Tel: (852) 3668-4181, Fax: (852) 2521-1812

DBS Regional Research Offices

HONG KONG

DBS Bank (Hong Kong) Ltd

Contact: Dennis Lam

13th Floor One Island East,

18 Westlands Road, Quarry Bay, Hong Kong

Tel: 852 3668 4181

Fax: 852 2521 1812

e-mail: dbsvhk@dbs.com

SINGAPORE

DBS Bank Ltd

Contact: Andy Sim

12 Marina Boulevard,

Marina Bay Financial Centre Tower 3

Singapore 018982

Tel: 65 6878 8888

e-mail: groupresearch@dbs.com

Company Regn. No. 196800306E

INDONESIA

PT DBS Vickers Sekuritas (Indonesia)

Contact: Maynard Priajaya Arif

DBS Bank Tower

Ciputra World 1, 32/F

Jl. Prof. Dr. Satrio Kav. 3-5

Jakarta 12940, Indonesia

Tel: 62 21 3003 4900

Fax: 6221 3003 4943

e-mail: indonesiaresearch@dbs.com

THAILAND

DBS Vickers Securities (Thailand) Co Ltd

Contact: Chanpen Sirithanarattanakul

989 Siam Pivat Tower Building,

9th, 14th-15th Floor

Rama 1 Road, Pathumwan,

Bangkok Thailand 10330

Tel. 66 2 857 7831

Fax: 66 2 658 1269

e-mail: research@th.dbs.com

Company Regn. No 0105539127012

Securities and Exchange Commission, Thailand