

Energy Transition and Materials

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Analyst Presentation

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Contents

-
- 0** Energy transition in 2023: Big Eight Predictions

 - 1** China Macro: Three cycles to upbeat

 - 2** China oil and gas: The balance of energy security vs energy transition

 - 3** China Lithium: Constructive long-term outlook under transportation electrification demand

 - 4** China Cement: Profitability back on the table

 - 5** China Polysilicon: Price war in place

 - 6** China Green Capex: Grid infra upgrade underway

 - 7** China SOE: Accelerated SOE reform

Energy transition in 2023: Big Predictions



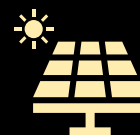
Energy security and ESG to drive global O&G offshore Capex upcycle, supporting mid-term offshore rig/well service demand

China mobility recovery and market consolidation to support **sustainable China refining margin recovery**, despite global macro headwinds



Global lithium market to **remain in supply deficit** even beyond 2025 as supply response is slower than demand growth

We expect China lithium carbonate price to average at **CNY441/550/550k per ton** in 2023E/2024E/2025E



Polysilicon prices to crash below marginal **cash cost of CNY51/kg** by 2025E due to extreme overcapacity

Global 23-25E ESS demand **CAGR of >55%**, driven by reduced cost on both polysilicon and battery



China grid Capex, connecting the transition from power generation side to end users, is essential to China energy transition

Carbon trading scheme will **steepen the cost curve** of China cement industry and benefit leading players in long term

Peer valuation comparisons

MQ energy transition pecking order: COSL (Marquee buy) > Sinopec (O/P) > CNOOC-H (N), CNOOC-A (U/P) > PetroChina (U/P)

MQ materials pecking order: CONCH (O/P) > CRC (O/P); Tianqi-H (Marquee buy) > > QSL (O/P) > Ganfeng (O/P) > Youngy (N)

Company	Ticker	Mkt cap (bln USD)	3m vol. (mn USD)	Rating	TP	Cur Px	Upside	PE		PB		Div Yield	
								23E	24E	23E	24E	23E	24E
Cement													
Conch-H	914 HK	19.80	22	OP	37.60	24.35	54%	5.4	5.1	0.6	0.6	7%	8%
Conch-A	600585 CH	19.80	87	OP	35.10	27.06	30%	6.8	6.4	0.8	0.7	7%	8%
CR Cement	1313 HK	3.19	4	OP	5.60	3.54	58%	5.7	5.0	0.4	0.4	6%	7%
CNBM	3323 HK	5.98	20	n.a.	n.a.	5.40	n.a.	4.8	3.8	0.4	0.4	9%	10%
Huaxin	600801 CH	3.64	22	n.a.	n.a.	14.73	n.a.	8.5	7.3	1.0	0.9	5%	6%
Oil & gas													
Sinopec-H	386 HK	111.08	86	OP	6.10	5.08	20%	7.1	6.9	0.8	0.6	8%	8%
Sinopec-A	600028 CH	111.08	170	OP	6.90	6.59	5%	10.4	10.2	1.1	0.9	7%	7%
PetroChina-H	857 HK	213.05	86	UP	3.20	5.27	-39%	8.1	12.2	0.6	0.6	5%	3%
PetroChina-A	601857 CH	213.05	198	UP	4.30	7.97	-46%	13.9	20.9	1.0	1.0	4%	2%
CNOOC-H	883 HK	81.17	139	N	10.40	12.34	-16%	4.3	5.0	0.8	0.7	7%	6%
CNOOC-A	600938 CH	81.06	167	UP	12.70	18.50	-31%	7.3	8.4	1.3	1.2	6%	5%
COSL-H	2883 HK	9.12	9	OP	19.80	8.86	123%	8.7	6.5	0.9	0.8	3%	4%
COSL-A	601808 CH	9.12	20	OP	26.90	15.66	72%	17.5	13.1	1.8	1.6	2%	2%
Lithium													
Ganfeng-H	1772 HK	17.83	36	OP	77.70	54.35	43%	6.1	3.7	1.9	1.4	1%	2%
Ganfeng-A	002460 CH	17.83	230	OP	84.60	63.93	32%	8.2	4.9	2.5	1.8	1%	2%
Tianqi-A	002466 CH	16.55	323	OP	134.20	72.16	86%	4.8	4.0	2.0	1.5	3%	4%
Tianqi-H	9696 HK	16.55	17	OP	123.40	50.75	143%	3.0	2.5	1.3	0.9	4%	5%
Qinghai Salt Lake	000792 CH	15.94	83	OP	29.20	20.15	45%	7.2	4.9	3.3	2.1	0%	0%
Youngy Co., Ltd	002192 CH	2.57	87	N	82.00	68.18	20%	8.1	6.3	4.2	2.6	0%	0%
Solar													
GCL Tech	3800 HK	6.38	40	N	2.16	1.86	16%	2.9	14.1	0.8	0.7	0%	0%
Tongwei	600438 CH	25.31	260	UP	21.25	38.31	-45%	7.2	34.1	2.4	2.5	7%	1%
Daqo	688303 CH	12.21	76	UP	18.98	38.93	-51%	6.9	126.2	1.6	1.5	2%	0%
Renewables													
NARI	600406 CH	25.69	67	OP	34.20	26.07	31%	23.5	20.5	3.9	3.5	2%	2%

Source: Bloomberg, Macquarie Research, May 2023 (prices as of 5 May 2023), Data for Not Rated stocks is Bloomberg consensus.

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1

China Macro:
Three cycles to upbeat



Reversal of the three cycles in China for 2023

Covid cycle, economic cycle, and political cycle

- **Covid cycle** is behind us as China mobility data is now way above 2019-levels after reopening.
- **Political cycle** sees less impact post the 20th Congress meeting, as more pro-growth policies have been rolled out.
- **Economic cycle** is just in the beginning stage, as reflected in the improving real loan data since Nov 2022.
- We believe **infra recovery** is supported by strong mid-to-long corporate loan. The turning point of household mid and long-term loan growth in Mar also indicates increasing housing demand, in line with **positive contract sales growth YTD**.

March new Rmb loans beat again with strong adjusted new Rmb loans. We believe the trend is likely to continue throughout 2023.

New RMB loans (bn Rmb)	2023-03	2023-02	2023-01	2022-12	2022-11	2022-10
All RMB loans	3,890	1,810	4,900	1,400	1,210	615
Household loans	1,245	208	257	175	263	-18
- Short-term	609	122	34	-11	53	-51
- Mid and long-term	635	86	223	187	210	33
Loans to enterprises	2,700	1,610	4,680	1,264	884	463
- Short-term	1,082	579	1,510	-42	-24	-184
- Mid and long-term	2,070	1,110	3,500	1,211	737	462
- Bill financing	-469	-99	-413	115	155	191
Loans to non-banking financial institutions	-38	17	-59	-1	-10	114
Adjusted new RMB loans*	4,359	1,909	5,313	1,285	1,055	425
Total mid and long-term loans	2,705	1,196	3,723	1,398	947	496

*Note: Adjusted new RMB loans = All Rmb loans - Bill financing

YoY%	2023-03	2023-02	2023-01	2022-12	2022-11	2022-10
All RMB loans	24%	47%	23%	24%	-5%	-26%
Household loans	65%	-162%	-69%	-53%	-64%	-104%
- Short-term	58%	-142%	-66%	-172%	-65%	-220%
- Mid and long-term	70%	-288%	-70%	-48%	-64%	-92%
Loans to enterprises	9%	30%	39%	91%	56%	49%
- Short-term	34%	41%	50%	-61%	-159%	540%
- Mid and long-term	54%	120%	67%	257%	116%	111%
- Bill financing	-247%	-132%	-331%	-72%	-3%	64%
Loans to non-banking financial institutions	-17%	-90%	-59%	-102%	-73%	96%
Adjusted new RMB loans*	55%	106%	40%	78%	-5%	-40%
Total mid and long-term loans	57%	160%	31%	101%	3%	-23%

YoY (bn Rmb)	2023-03	2023-02	2023-01	2022-12	2022-11	2022-10
All RMB loans	760	580	920	270	-60	-211
Household loans	491	545	-586	-196	-471	-483
- Short-term	225	413	-67	-27	-99	-94
- Mid and long-term	261	132	-519	-169	-372	-389
Loans to enterprises	220	370	1,320	602	316	153
- Short-term	273	167	500	64	-65	-156
- Mid and long-term	725	605	1,400	872	395	243
- Bill financing	-787	-404	-592	-294	-6	75
Loans to non-banking financial institutions	8	-162	83	-56	27	56
Adjusted new RMB loans*	1,547	984	1,512	564	-54	-286
Total mid and long-term loans	987	737	881	702	23	-146

New total social financing (TSF) (bn Rmb)	2023-03	2023-02	2023-01	2022-12	2022-11	2022-10
China TSF	5,380	3,156	5,987	1,306	1,984	913
RMB loans	3,950	1,818	4,931	1,440	1,145	443
Foreign currency-denominated loans	43	31	-13	-167	-65	-72
Entrusted loans	17	-8	58	-10	-9	47
Trust loans	-5	7	-6	-76	-37	-6
Undiscounted bankers' acceptances	179	-7	296	-55	19	-216
Corporate bonds	329	364	155	-489	60	241
Domestic equity of non-financial firms	61	57	96	144	79	79
Government bonds	602	814	414	281	652	279

YoY%	2023-03	2023-02	2023-01	2022-12	2022-11	2022-10
China TSF	16%	159%	-3%	-45%	-24%	-44%
RMB loans	22%	100%	17%	39%	-12%	-43%
Foreign currency-denominated loans	79%	-35%	-113%	157%	384%	2094%
Entrusted loans	63%	4%	36%	-76%	-351%	-372%
Trust loans	-83%	-109%	-91%	-83%	-83%	-94%
Undiscounted bankers' acceptances	524%	-98%	-37%	-61%	-150%	143%
Corporate bonds	-12%	1%	-73%	-326%	-85%	7%
Domestic equity of non-financial firms	-36%	-2%	-33%	-22%	-39%	-7%
Government bonds	-15%	199%	-31%	-76%	-20%	-55%

YoY (bn Rmb)	2023-03	2023-02	2023-01	2022-12	2022-11	2022-10
China TSF	724	1,939	-189	-1,052	-615	-704
RMB loans	721	910	733	405	-157	-332
Foreign currency-denominated loans	19	-17	-116	-102	-51	-69
Entrusted loans	7	-0	16	32	-12	64
Trust loans	21	82	62	379	183	100
Undiscounted bankers' acceptances	150	416	-177	87	57	-127
Corporate bonds	-46	3	-429	-705	-340	15
Domestic equity of non-financial firms	-34	-1	-48	-41	-51	-6
Government bonds	-105	542	-189	-887	-164	-338

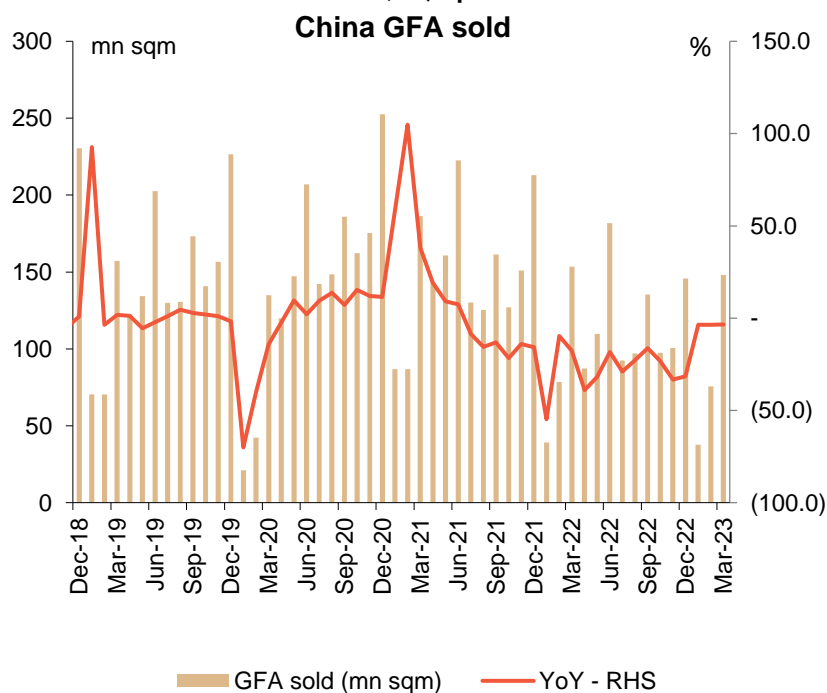
Source: Wind, Macquarie Research, May 2023

China property sales recovery underway

Property sales recovery to sustain with mild property price reflation

- New home sales area in China was only -3.5% YoY in 1Q23, following the strong secondary home sales growth YTD.
- The increasing second-home supply, as reflected in higher % of second home sales, will only support a mild housing price reflation.
- We expect new home sales to grow at 5-10% YoY in 2023.

GFA sold was -3.5% YoY in 1Q23, up from -24.3% YoY in 2022



Second home sales area as of total sales area (%)

	Beijing	Shenzhen	Nanjing	Hangzhou	Qingdao	Suzhou	Nanning	Yangzhou
Jan-21	56%	42%	48%	45%	30%	41%	12%	18%
Feb-21	64%	51%	50%	21%	30%	45%	16%	22%
Mar-21	59%	54%	35%	42%	29%	41%	16%	23%
Apr-21	60%	55%	43%	38%	31%	45%	14%	28%
May-21	67%	51%	27%	33%	30%	36%	10%	28%
Jun-21	53%	46%	43%	32%	29%	27%	15%	28%
Jul-21	52%	48%	47%	28%	21%	32%	16%	24%
Aug-21	55%	23%	56%	25%	16%	40%	14%	0%
Sep-21	50%	33%	50%	18%	13%	32%	13%	16%
Oct-21	44%	18%	43%	15%	9%	39%	12%	17%
Nov-21	45%	28%	45%	12%	14%	44%	10%	20%
Dec-21	51%	34%	35%	18%	15%	36%	20%	21%
Jan-22	53%	27%	33%	25%	15%	38%	17%	21%
Feb-22	60%	27%	27%	21%	14%	30%	15%	25%
Mar-22	59%	24%	42%	35%	12%	34%	18%	23%
Apr-22	56%	37%	45%	30%	19%	41%	13%	40%
May-22	55%	54%	42%	30%	14%	35%	19%	52%
Jun-22	46%	40%	43%	32%	13%	22%	20%	50%
Jul-22	58%	37%	52%	33%	34%	54%	20%	49%
Aug-22	55%	42%	52%	29%	31%	50%	21%	45%
Sep-22	52%	31%	53%	22%	22%	30%	16%	45%
Oct-22	46%	33%	54%	24%	31%	43%	22%	40%
Nov-22	53%	45%	51%	26%	28%	50%	24%	38%
Dec-22	46%	43%	44%	27%	22%	37%	19%	25%
Jan-23	53%	45%	59%	14%	33%	56%	18%	44%
Feb-23	62%	53%	50%	35%	35%	48%	25%	53%
Mar-23	59%	53%	52%	41%	32%	52%	25%	51%
Apr-23	51%	46%	60%	39%	39%	59%	29%	59%

Higher % of second home sales area

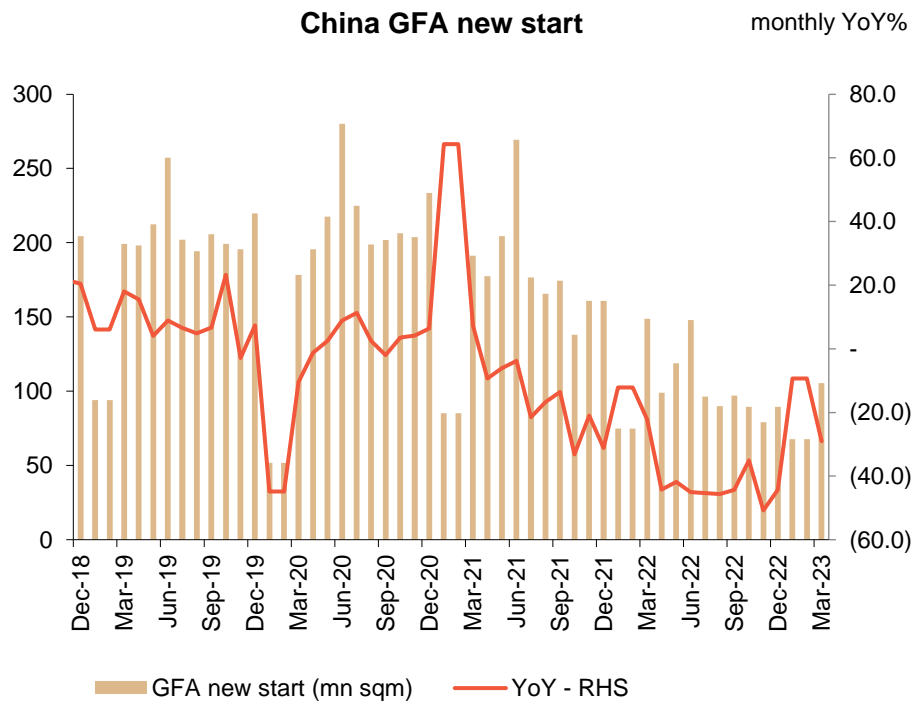
Source: Wind, NBS, Macquarie Research, May 2023

China's economy is seeing lowered dependency on property

Property de-capacity will have a prolonged impact on GFA new starts

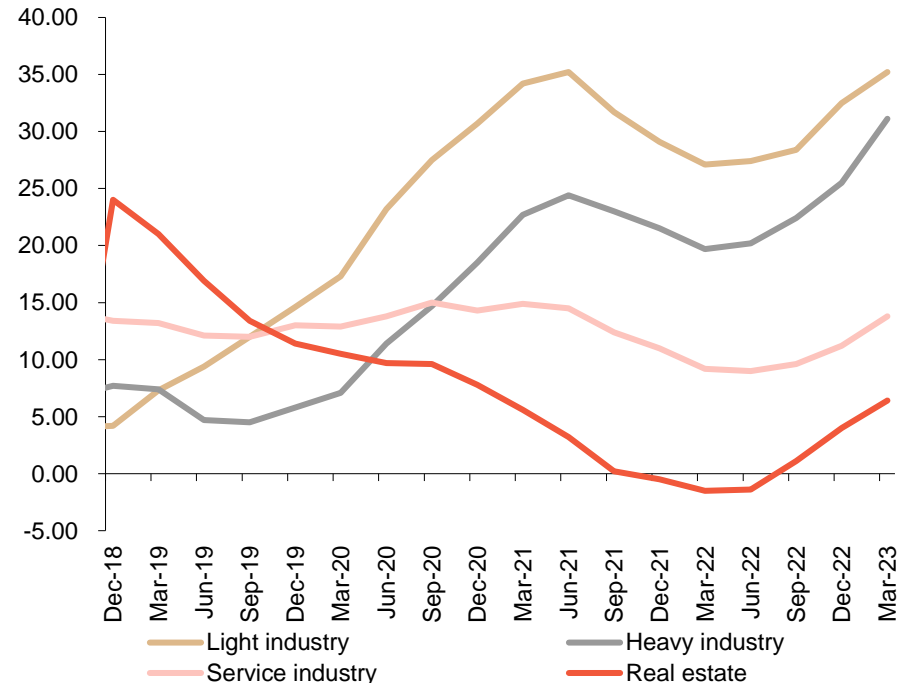
- The contribution of the real estate industry to RMB loans is shrinking after property de-capacity.
- GFA new starts would take a longer time to recover compared to GFA sold, given developers' damaged balance sheets.
- While GFA new starts could see narrower decline in the coming months due to the low base starting April 2022.

GFA new start was -19.2% YoY in 1Q23, up from -39.4% YoY in 2022



Medium and long-term loans from property industry shows slower YoY growth than other sectors starting 2020


accu. YoY % **Balance of medium and long-term loans of Chinese financial institutions**



Source: Wind, Macquarie Research, May 2023

2

China oil and gas:
The balance of energy
security vs energy transition



Hunt China refining alpha on fragile oil price

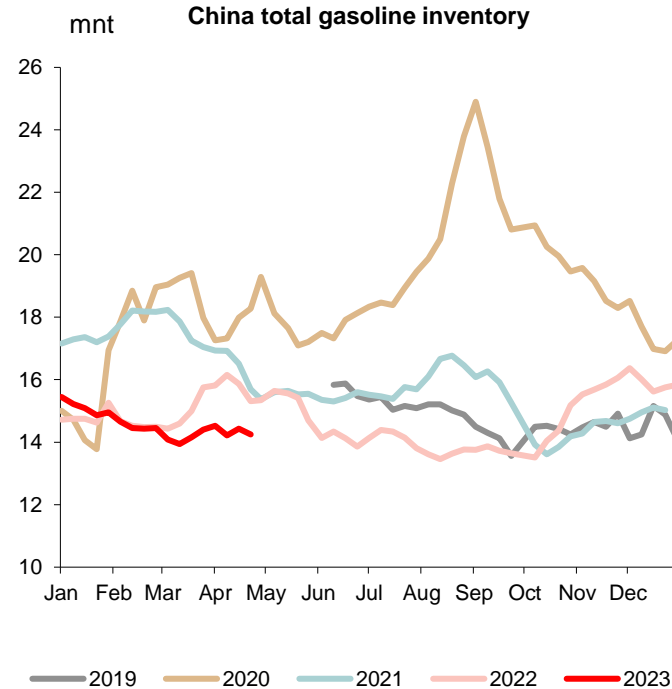
Focus on sustainable medium-term China refining margin recovery

- OPEC+ production cut does not alter our bearish oil price view, as quickly softening ex-China refining margins indicates weakening global demand. We expect Brent to average at \$US76/70/66/BBL in 2023/24/25E.
- China mobility recovery and market consolidation could support a sustainable refining margin recovery in China.
- Sinopec, as the leading SOE refiners, will lead China's hydrogen development, as it has advantages in both production (hydrogen as a by-product of its chemical business) and demand (adding hydrogen fuel at existing gasoline stations).
- **Sinopec (386 HK, OP, TP \$HK 6.10)** remains our top pick in China oil majors for refining upside, sustainable dividend yield and SOE Reform.

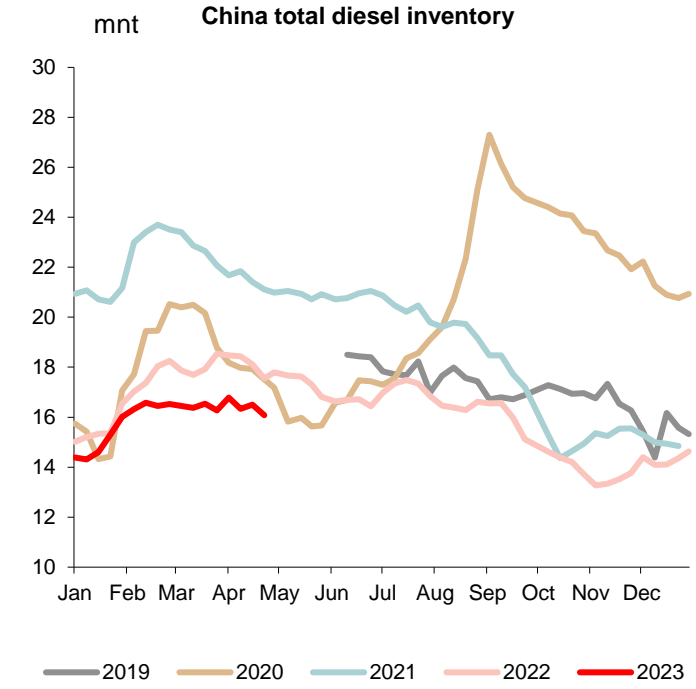
China refining margin remains solid



Historical low gasoline inventory



So does diesel inventory



Source: Bloomberg, Wind, Longzhong, Macquarie Research, May 2023

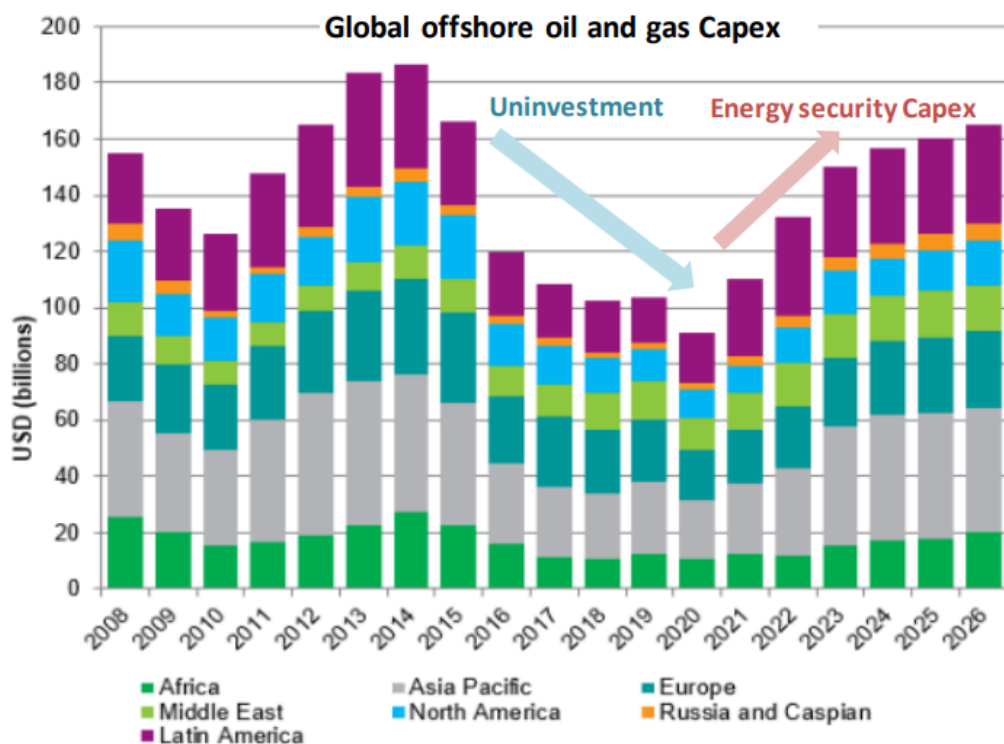
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Capture global offshore rig and well services upcycle

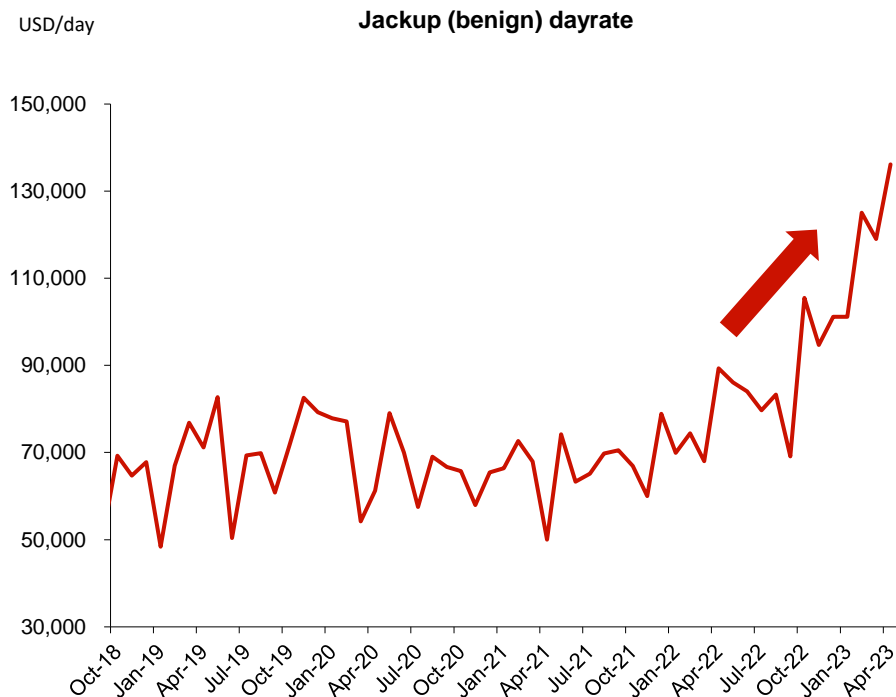
Upstream Capex to remain high amid energy security push, boosting rig and oilfield service demand

- Energy security is key to energy transition. Global upstream capex is on the rise after a 57% cut from the last peak in 2014.
- High upstream capex will directly transfer to offshore rig and well services demand, in line with the surging orders we observed since 2022.
- **COSL (2883 HK, OP, TP HK\$ 19.80)** is our Marquee Buy with continuous overseas market share gain. An accelerated shift into a more asset-light business model driven by well-services supports long-term secular growth.

Oil & gas capex upcycle to support rig and well services demand



Global jackup saw surging dayrates under strong demand



Source: Esgjan, IHS, Macquarie Research, May 2023

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COSL (2883 HK / 601808 CH), Outperform

H-share TP HK\$19.80; A-share TP Rmb26.90.

Catalysts: higher-than-expected dayrate hikes for rigs globally and in China; better-than-expected offshore rig and service orders; and CNOOC's shale exploration potential.

Risks: long-term Brent oil price falls below US\$60/bbl amid heightened recession risk.

COSL key financials and forecast

RMB Million	Actual 2021	2022E	Mqe 2023E	2024E
Revenue	29,168	32,144	35,980	40,667
EBITDA	11,020	8,148	10,512	12,410
EBIT	4,126	3,394	5,649	7,355
Recurring Net Profit	4,909	2,374	4,277	5,711
YoY		-52%	80%	34%
Underlying EPS (RMB)	1.03	0.50	0.90	1.20

Recurring EBIT	2021	2022E	2023E	2024E
Drilling Services	(64)	(542)	1,253	2,289
Well Services	3,405	3,648	4,093	4,748
Marine Support Services	256	267	281	295
Geophysical and Surveying	(24)	21	22	23

EBITDA	2021	2022E	2023E	2024E
Drilling Services	595	2,137	3,951	5,034
Well Services	4,236	4,464	4,999	5,799
Marine Support Services	1,015	1,025	1,039	1,053
Geophysical and Surveying	561	521	522	523

Key assumptions	2021	2022E	2023E	2024E
Total Operating days				
Jack-up	11,383	12,499	12,994	13,421
Semi	2,699	2,907	3,444	3,778
Day rates ('0000 USD/d)				
Jack-up	7.0	7.0	7.7	8.4
Semi	13.5	13.5	15.0	16.2

COSL net profit vs. dayrate sensitivity analysis

Day rates ('0000 USD/d)	Jack-up	2023 Net profit (Rmb mn)					2014 level Base	
		-20%	-10%	Base	+10%	+20%		
Value		6.1	6.9	7.7	8.4	9.2		
Semi	-20%	12.0	2,810	3,292	3,775	4,258	4,741	6,952
	-10%	13.5	3,060	3,543	4,026	4,509	4,992	7,203
	Base	15.0	3,311	3,794	4,277	4,760	5,243	7,454
	+10%	16.5	3,562	4,045	4,528	5,011	5,494	7,705
	+20%	18.0	3,813	4,296	4,779	5,261	5,744	7,956
	2014 level	32.2	6,152	6,635	7,118	7,600	8,083	10,295

Day rates ('0000 USD/d)	Jack-up	COSL-H P/E					2014 level	
		-20%	-10%	Base	+10%	+20%		
Value		6.1	6.9	7.7	8.4	9.2	12.7	
Semi	-20%	12.0	13.0	11.1	9.7	8.6	7.7	5.3
	-10%	13.5	12.0	10.3	9.1	8.1	7.3	5.1
	Base	15.0	11.1	9.7	8.5	7.7	7.0	4.9
	+10%	16.5	10.3	9.1	8.1	7.3	6.7	4.8
	+20%	18.0	9.6	8.5	7.7	7.0	6.4	4.6
	2014 level	32.2	6.0	5.5	5.1	4.8	4.5	3.6

3

China Lithium:
Constructive long-term
outlook under transportation
electrification demand

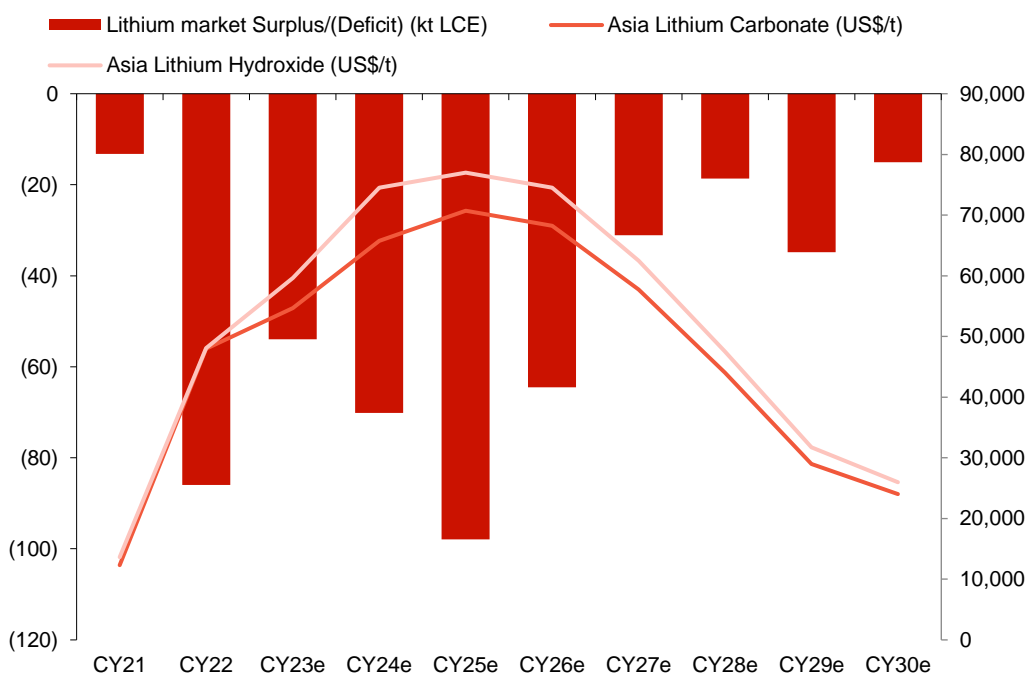


Bullish lithium price outlook

Lithium market to remain in deficit through to 2030

- The global EV penetration, which includes mild hybrid EVs, could exceed 60% by 2030 per our estimate.
- We expect global lithium market to remain in deficit, and forecast China lithium carbonate price to average at CNY441/550/550k per ton in 2023-25E.
- In the long run, lithium prices could remain elevated at CNY130k/t LCE, underpinned by escalating operating and capital costs and marginal volumes from high-cost lepidolite producers.
- **Tianqi (9696 HK, OP, TP \$HK 123.40)** is our top pick in China lithium as it holds high-quality and low-cost lithium assets with cheap relative valuation and more resilient earnings than peers.

Lithium market to remain in deficit despite supply responses



Global lithium supply and demand forecast

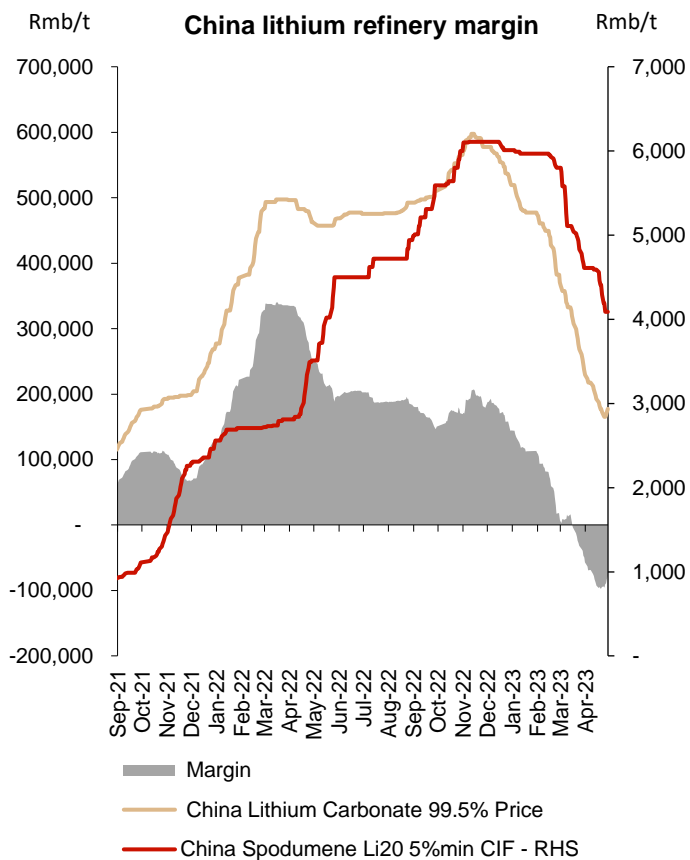
('000 t LCE)	2022	2023E	2024E	2025E	2026E
Spodumene	388	538	677	786	935
Brine	315	392	463	538	639
Lepidolite	104	101	120	135	145
Recycling and other	0	15	6	18	48
Total supply	807	1,045	1,266	1,476	1,767
Chemical/industrial	150	153	146	131	125
EV battery	588	746	928	1,123	1,337
Consumer battery	63	65	68	75	83
ESS (fixed) battery	66	109	172	237	281
Other	26	26	23	7	7
Total demand	893	1,099	1,336	1,574	1,832
Surplus (deficit) (kt)	(86)	(54)	(70)	(98)	(64)

Source: Bloomberg, Wind, Longzhong, Macquarie Research, May 2023

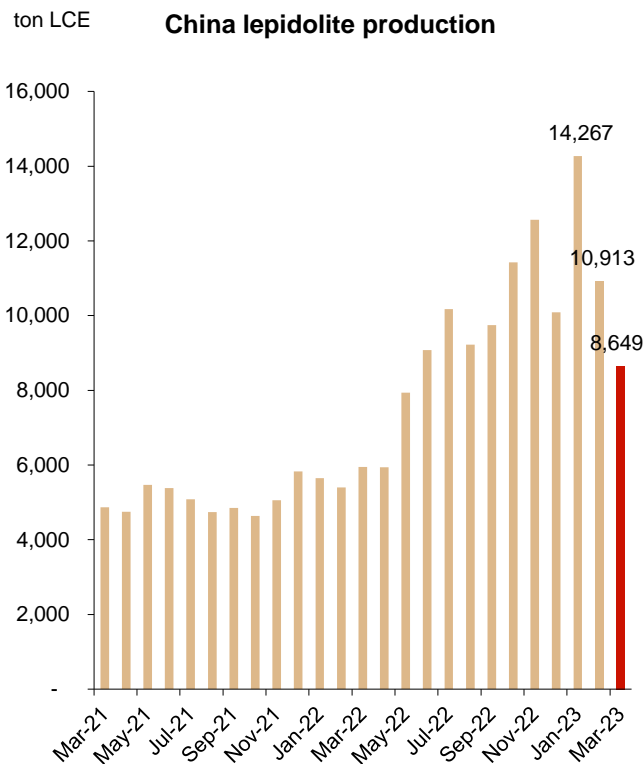
Remain constructive on the lithium market outlook

Spot lithium price has already bottomed out amid restocking demand and reduced supply

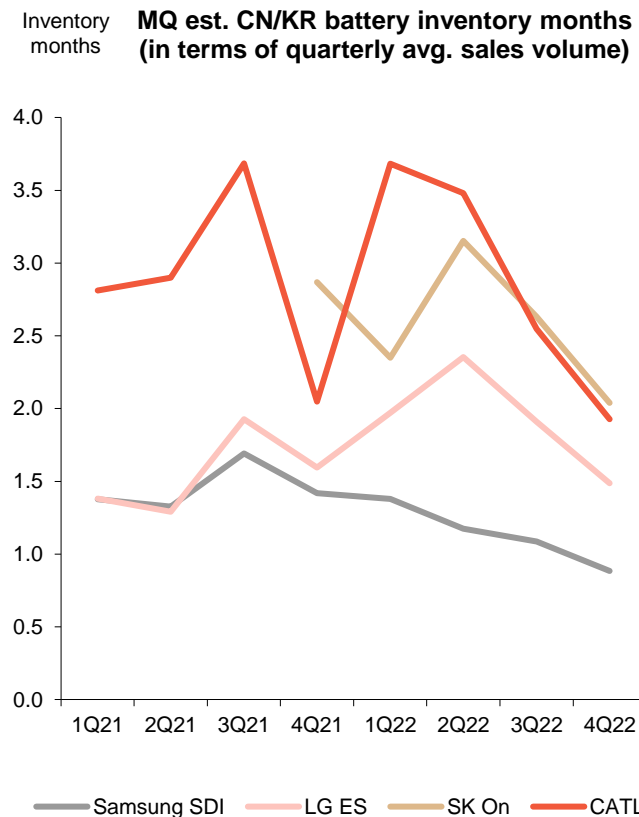
Spot lithium price has bottomed out since late April



Reduced lepidolite supply post govt inspection



Battery makers kept destocking since 2H22, leading to low inventory



Source: Bloomberg, SMM, Longzhong, Macquarie Research, May 2023

Tianqi (9696 HK / 002466 CH), Outperform

H-share TP HK\$37.60 (Outperform, TP HK\$123.40, Marquee Buy); A-share TP Rmb134.20 (Outperform).

Catalysts: Stronger-than-expected NEV and ESS sales; updates on the production ramp-up at Kwinana; higher-than expected downstream restocking demand.

Risks: Lower-than-expected lithium prices due to faster production ramp-up or sluggish NEV sales.

Tianqi key financials and forecast

Key financial summary (Rmb'mn)		2022A	2023E	2024E	2025E
Revenue	CNYm	40,449	57,158	65,579	69,731
BBG cons.			41,335	35,635	35,137
Diff.			38%	84%	98%
EBITDA	CNYm	34,394	44,036	52,228	56,050
EBIT	CNYm	33,740	43,289	51,211	54,913
BBG cons. (A)			37,248	29,951	29,848
BBG cons. (H)			32,905	24,570	26,020
Diff. vs A			16%	71%	84%
NPAT	CNYm	24,125	24,497	29,865	30,956
BBG cons. (A)			19,981	17,305	15,978
BBG cons. (H)			18,793	15,520	15,155
Diff. vs A			23%	73%	94%
EPS (Rmb/sh)	CNYm	15.52	14.92	18.19	18.86

Key operating metrics		2022A	2023E	2024E	2025E
Total					
Revenue	CNYm	40,449	57,158	65,579	69,731
Gross Profit	CNYm	34,432	47,356	55,878	59,875
Gross Margin %	%	85.1%	82.9%	85.2%	85.9%
Mining and smelting industry					
Revenue	CNYm	15,439	21,722	22,068	24,320
Gross Profit	CNYm	12,962	18,495	18,583	20,574
Gross Margin %	%	84.0%	85.1%	84.2%	84.6%
Chemical raw materials and chemical products manufacturing					
Revenue	CNYm	25,009	35,434	43,510	45,410
Gross Profit	CNYm	21,469	28,860	37,293	39,299
Gross Margin %	%	85.8%	81.4%	85.7%	86.5%
Other					
Revenue	CNYm	1.4	1.5	1.6	1.7
Gross Profit	CNYm	0.8	1.5	1.6	1.7
Gross Margin %	%	55.8%	99.9%	99.9%	99.9%

Tianqi EV/EBITDA valuation under different calculations

Tianqi EV/EBITDA calculation	FY2022A	FY2023F	FY2024F	FY2025F
1) Normal calculation				
EV/EBITDA (x) - H	1.3	1.0	0.3	-0.1
EV/EBITDA (x) - A	3.0	2.3	1.5	0.9
2) Excl. greenbushes in minorities and EBITDA				
Greenbushes EBITDA 100%	22,012	44,393	44,508	49,426
Tianqi EBITDA ex-74% Greenbushes	18,106	11,185	19,292	19,475
EV/EBITDA (x) - H	1.17	0.56	-0.29	-1.01
EV/EBITDA (x) - A	2.87	1.89	0.83	0.03
3) Excl. greenbushes in minorities and EBITDA, using market value of SQM				
SQM Stock price (USD/sh)	68	68	68	68
SQM market value (Rmb mn)	31,541	31,541	31,541	31,541
Enterprise value - H	1.05	0.47	-0.37	-1.09
Enterprise value - A	2.75	1.80	0.75	-0.04
Ratios				
PE-H	2.8	2.9	2.4	2.3
PE-A	5.1	5.3	4.4	4.2
PB-H	1.3	0.8	0.6	0.4
PB-A	2.3	1.5	1.0	0.8

Source: Bloomberg, Company data, Macquarie Research, May 2023 (priced as of 5 May 2023)

4

China Cement:
Profitability back on the table



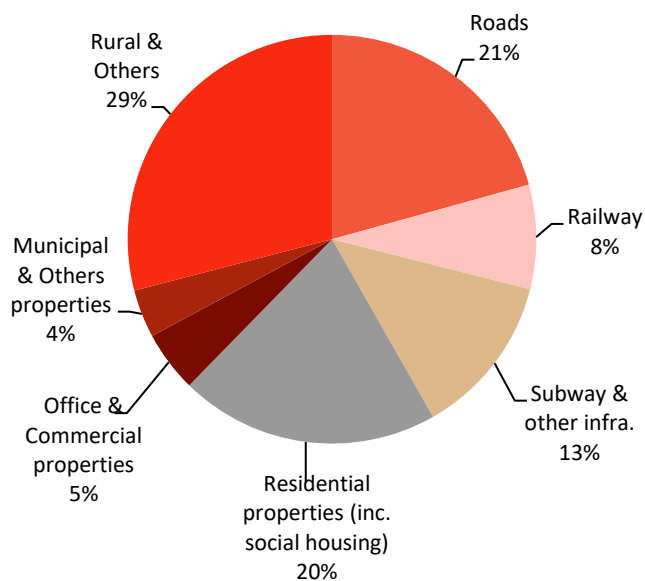
Brighter supply and demand outlook for cement

Sustainable GP/t improvement under improved market cooperation and lowered coal costs

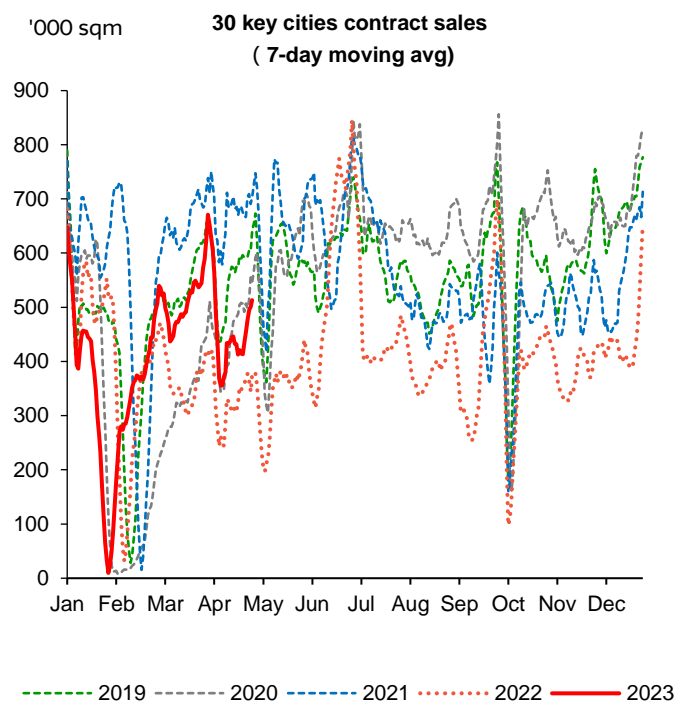
- We believe GFA new starts, one of the key driver for cement demand, will gradually improve following the sustainable property sales recovery.
- Industry leaders could see accelerated GP/t improvement in 2H23 under cleared business model and lowering coal prices.
- **Carbon trading scheme** will benefit energy efficient players like **Conch** in long-term given their low carbon emission and high environmental standards.
- **Conch (914 HK, OP, TP HK\$ 37.60)** is our top pick on improved capital allocation, favourable dividend yield and strengthened pricing power.

China cement demand is mainly driven by property and infra

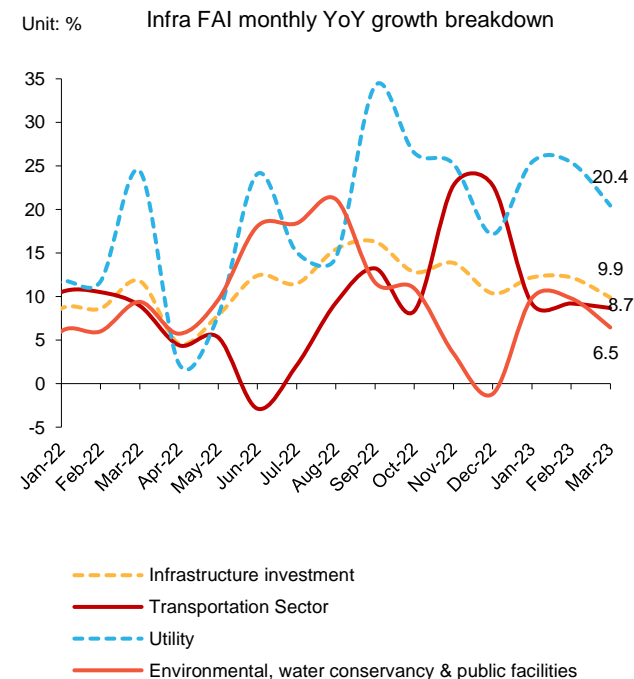
2022 Cement Demand Breakdown



New home sales growth remained positive YoY growth



Mild infra recovery to support cement demand



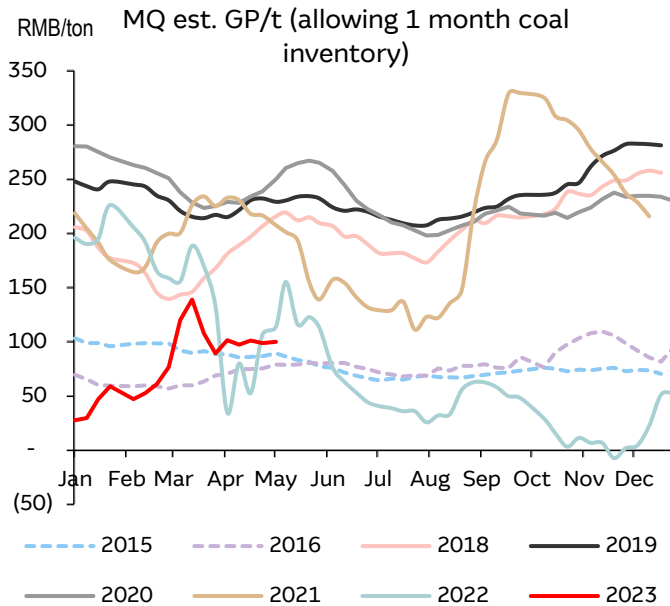
Source: Digital Cement, Wind, NBS, Macquarie Research, May 2023

Sustainable cement GP/t recovery in 2023

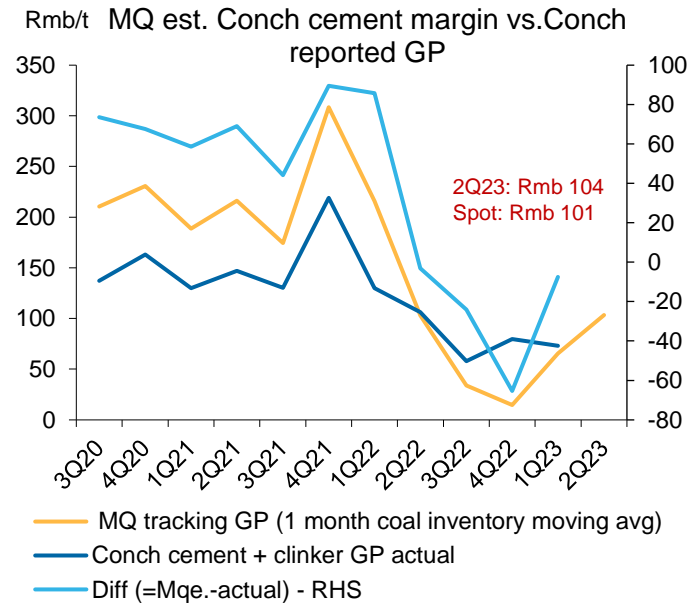
Cement GP/t has maintained at ~Rmb100/t despite abnormal rainfalls in April

- We believe price weakness in April is short-lived due to weather impact.
- China cement GP/t keeps firm at Rmb100/t on improved market cooperation and lower coal prices. Companies in Jiangsu/ Zhejiang/ Anhui already announced production cuts plan for April-May.
- Optimistic on 2Q23 infra demand as more key projects finished bidding and jump start construction. Cement demand in key projects in Conch's sales area increased by >30% YoY, per 1Q23 briefing.

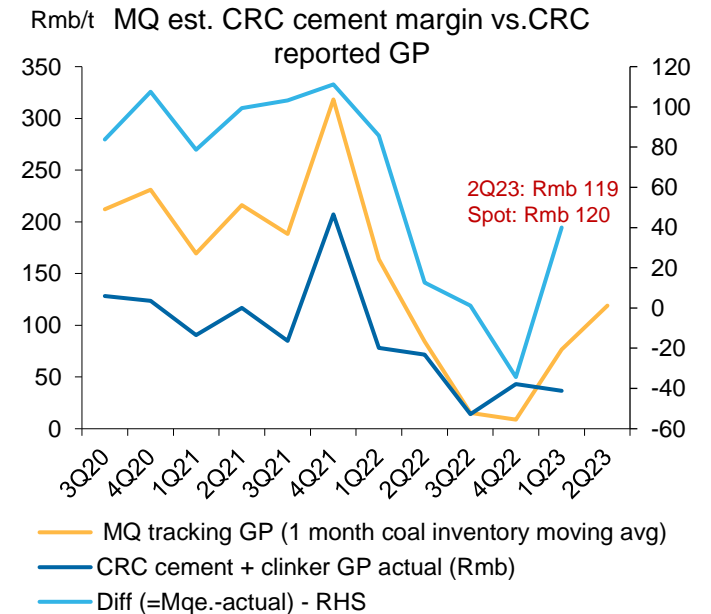
China cement GP/t remained at Rmb100/t since April



MQ modelled Conch GP/t reached Rmb104/t in 2Q23



MQ modelled CRC GP/t reached Rmb119/t in 2Q23



Source: Digital Cement, Wind, Macquarie Research, May 2023

Conch (914 HK / 600585 CH), Outperform

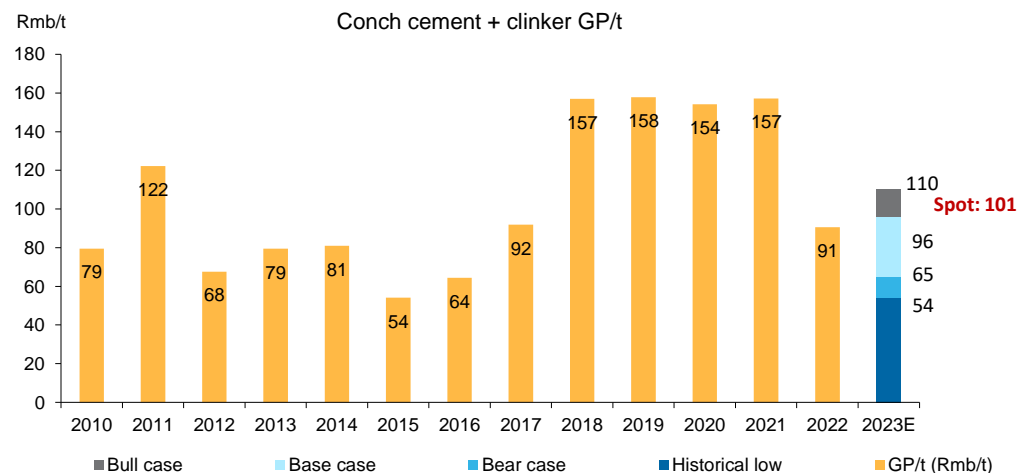
H-share TP HK\$37.60 (Outperform); A-share TP Rmb35.10 (Outperform).

Catalysts: stronger-than-expected property sales recovery, 2023E capex guidance.

Risks: Widening price gap leading to product inflow from other low-priced regions, which could affect GP/t in YRD/PRD. Larger-than-expected impact from coal mine accidents, which could lead to reduced coal output and boost coal prices.

Key Changes	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023E Fcst.	2024E Fcst.	2025E Fcst.
Key Drivers							
Self produced products							
Total sales vol. (mnt)	58	307	304	283	307	311	311
ASP (Rmb/t)	367	306	361	321	306	301	297
VA cons.					311	312	311
Unit Cost (Rmb/t)	237	210	203	230	210	202	199
GP/t (Rmb/t)	130	96	157	91	96	99	98
VA cons.					88	91	95
Key Financials (Rmb mn)							
Sales	157,030	176,243	167,953	132,022	135,292	135,640	135,275
Gross Profit	50,906	50,142	48,564	27,191	31,243	32,776	32,569
EBIT	44,188	46,786	43,827	20,092	28,194	29,991	29,791
EBITDA	49,459	52,216	49,784	26,881	35,991	38,680	39,342
NP	33,630	35,164	33,301	15,861	21,045	22,307	22,158
EPS (Rmb/sh)	6.35	6.64	6.28	2.99	3.97	4.21	4.18
Consensus NP					18,844	20,952	22,553
% diff					11.7%	6.5%	-1.8%

Conch EPS (HK\$/sh) vs. GP/t sensitivity analysis



	23E GP/t	Implied FY23 EPS	vs. base case	vs. FY23 cons.	Implied FY23 PE	Div yield
Bull case	110	4.58	15%	16%	5.3	9.3%
Base case	96	3.97	0%	1%	6.1	8.1%
Bear case	65	2.63	-34%	-33%	9.2	5.4%
Historical low	54	2.16	-46%	-45%	11.2	4.4%

Note: EPS and GP/t in RMB/sh, GP refers to total cement + clinker (self produced) products

5

China Polysilicon:
Price war in place



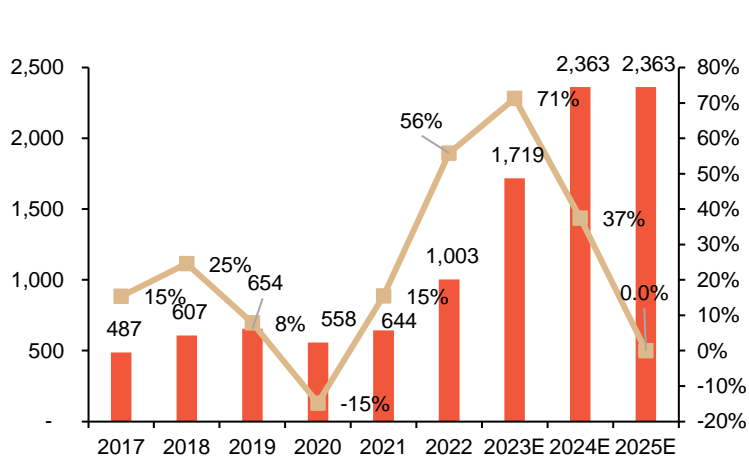
Polysilicon oversupply will lead to fierce price war

New capacity build-up cause supply/demand balance reversal to start in 2023

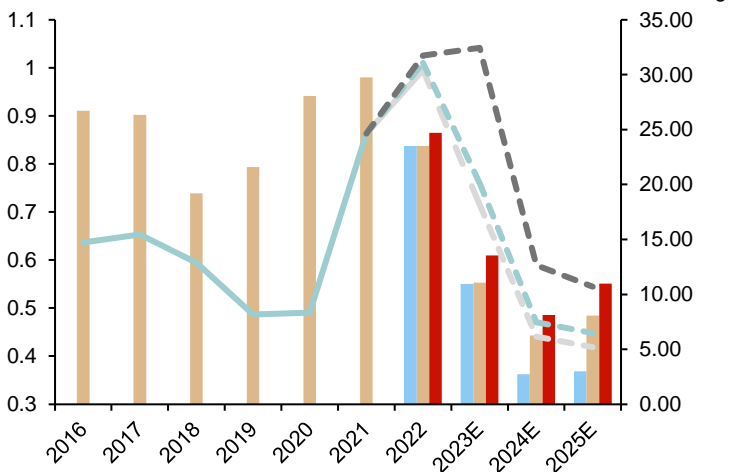
- We expect global polysilicon capacity to reach 2.36 million tonnes in 2025, much higher than demand of 1.14 million tonnes, implying 48% utilization rate.
- Due to low production flexibility, overcapacity will lead to price war and cause polysilicon prices to crash below marginal cash cost of CNY51/kg in 2025E.
- 1Q23 results gave clear evidence that price war is already in place and will accelerate into 2Q23.
- Reiterate Marquee Sell on **Tongwei (600438 CH, UP, TP CNY21.25)** given its expensive valuation and reduced cost advantage
- **GCL (3800 HK, N, TP HK2.16)** is our most preferred name in the polysilicon space given its cost advantage should help it sail through industry downcycle

Polysilicon capacity will increase substantially in 2023

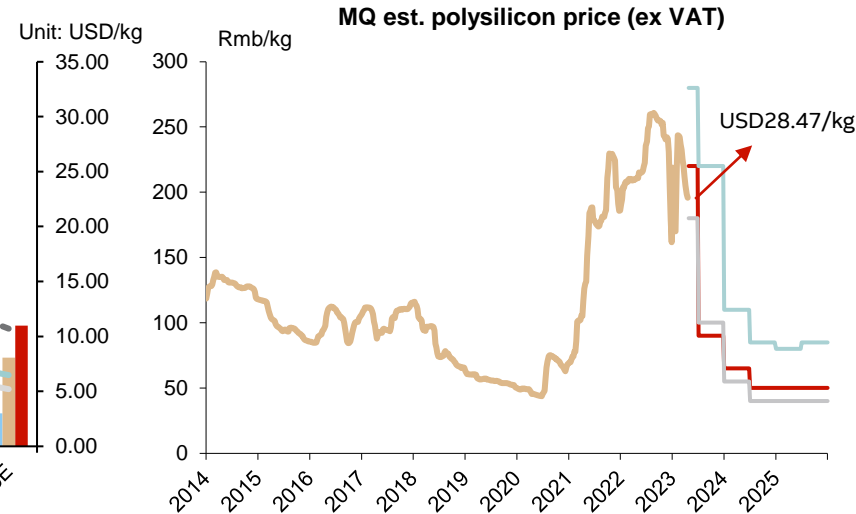
Unit:kt/year **Global polysilicon capacity**



Polysilicon oversupply will happen in all our scenarios



Polysilicon prices will drop to CNY50/kg



Polysilicon effective production capacity (kt)

Polysilicon capacity growth

Utilization rate-bear case

Utilization rate-base case

Utilization rate-bull case

Polysilicon price-bear case (RHS)

Polysilicon price-base case (RHS)

Polysilicon price-bull case (RHS)

Polysilicon price

MQ bull case

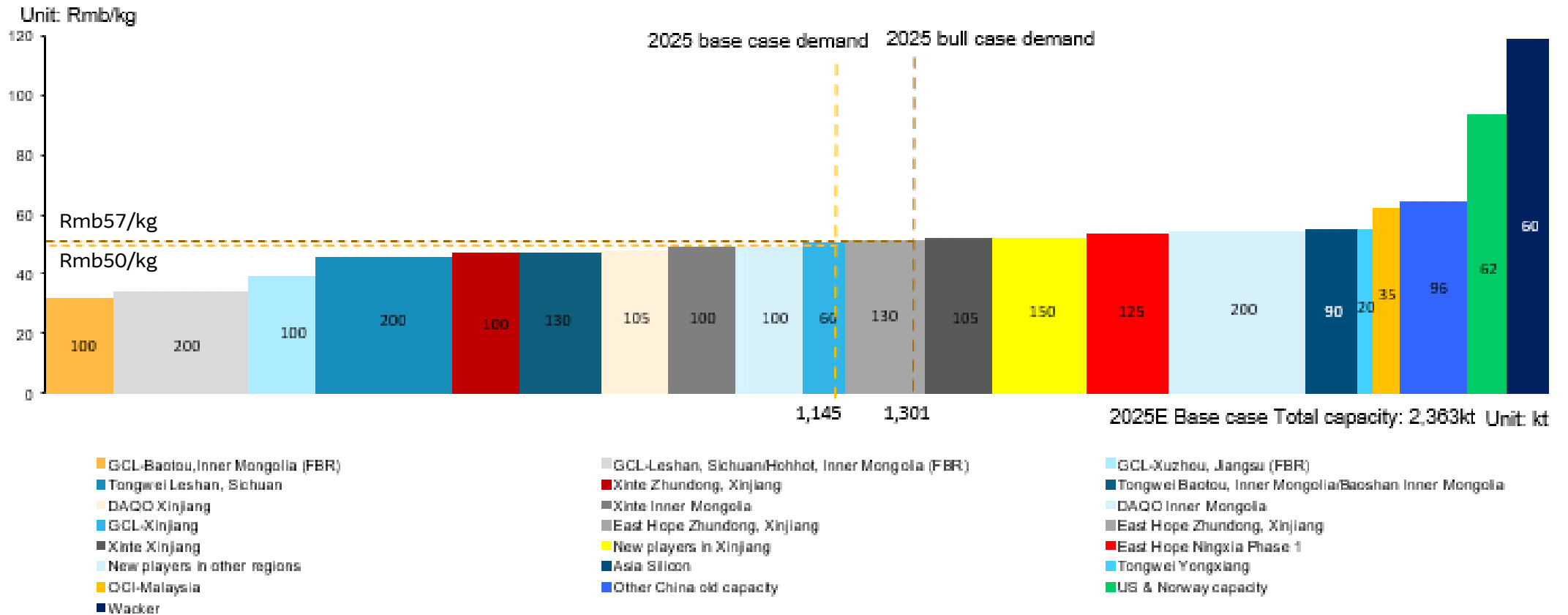
MQ base case

MQ bear case

Polysilicon oversupply lead to fierce price war

Flattened cost curve will cause stiff competition in the upcoming downturn

MQ estimated global polysilicon cash cost curve in 2025E



Source: Company data, Macquarie Research, May 2023

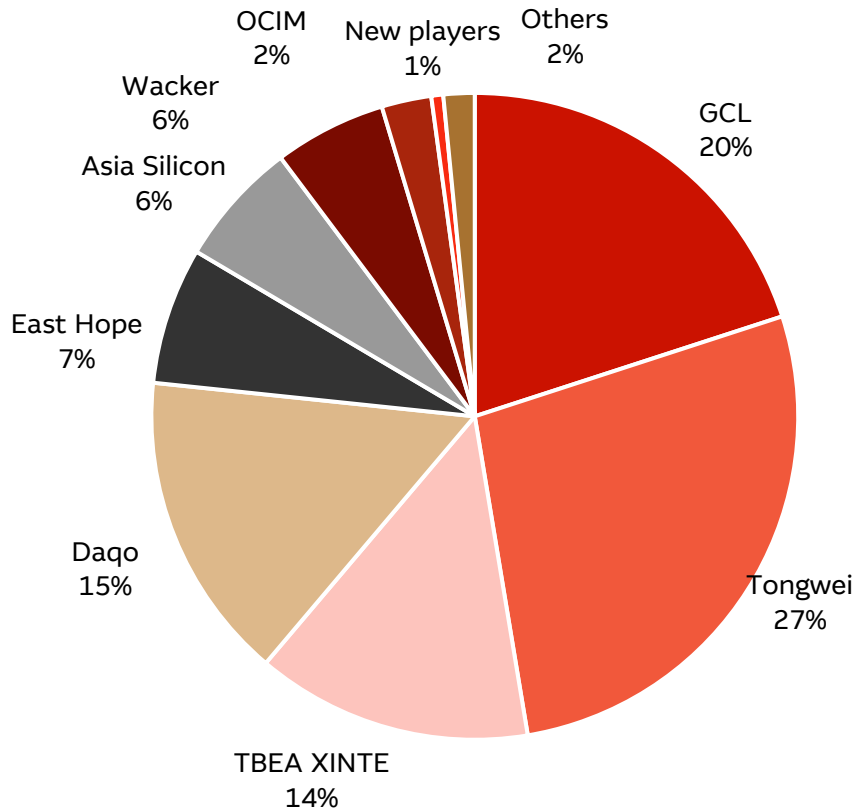
Polysilicon oversupply lead to fierce price war

Upcoming industry downturn to help consolidation the relatively fragmented industry

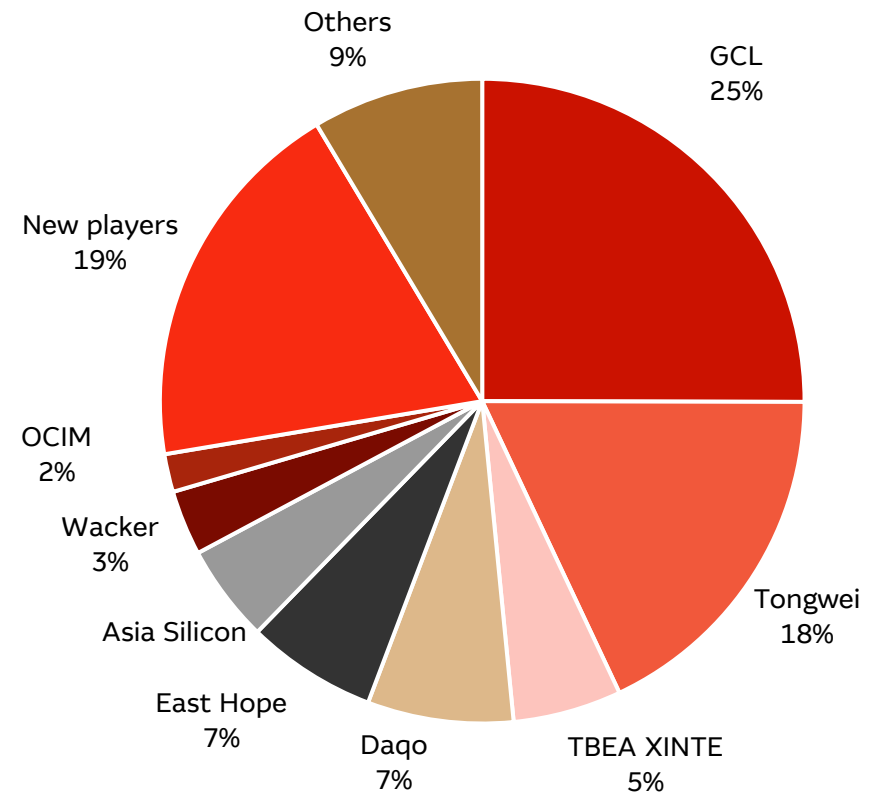
Polysilicon market is relatively fragmented in 2022E

Further consolidation to happen until 2025E

2022 market share in terms of capacity



2025 market share in terms of capacity



Source: Company data, Macquarie Research, May 2023

6

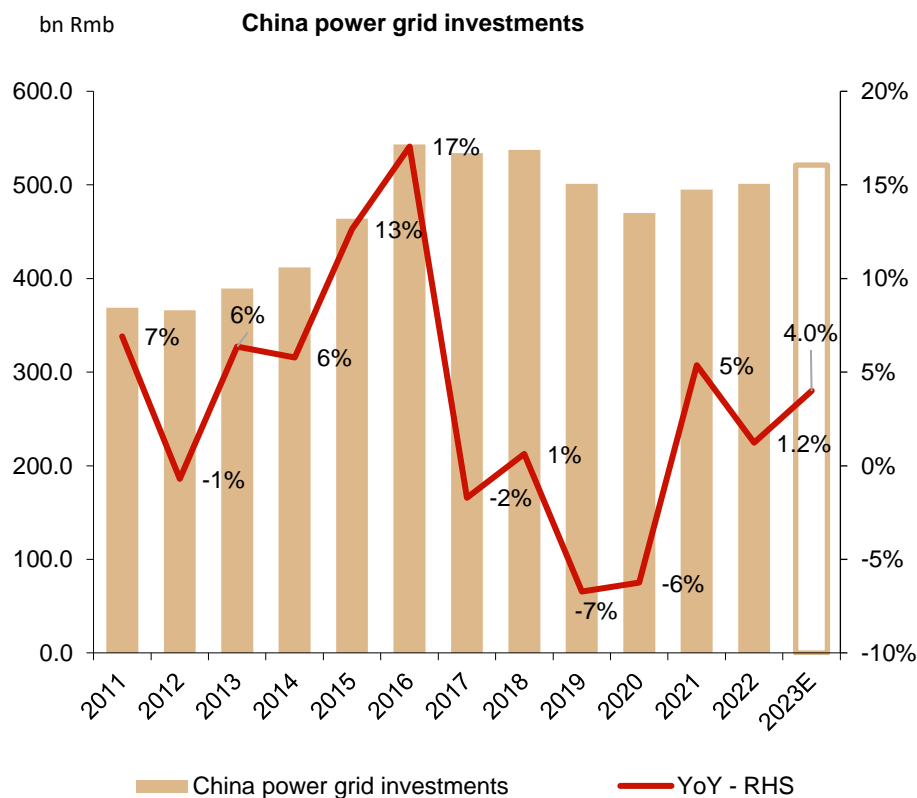
China Green Capex:
Grid infra upgrade underway



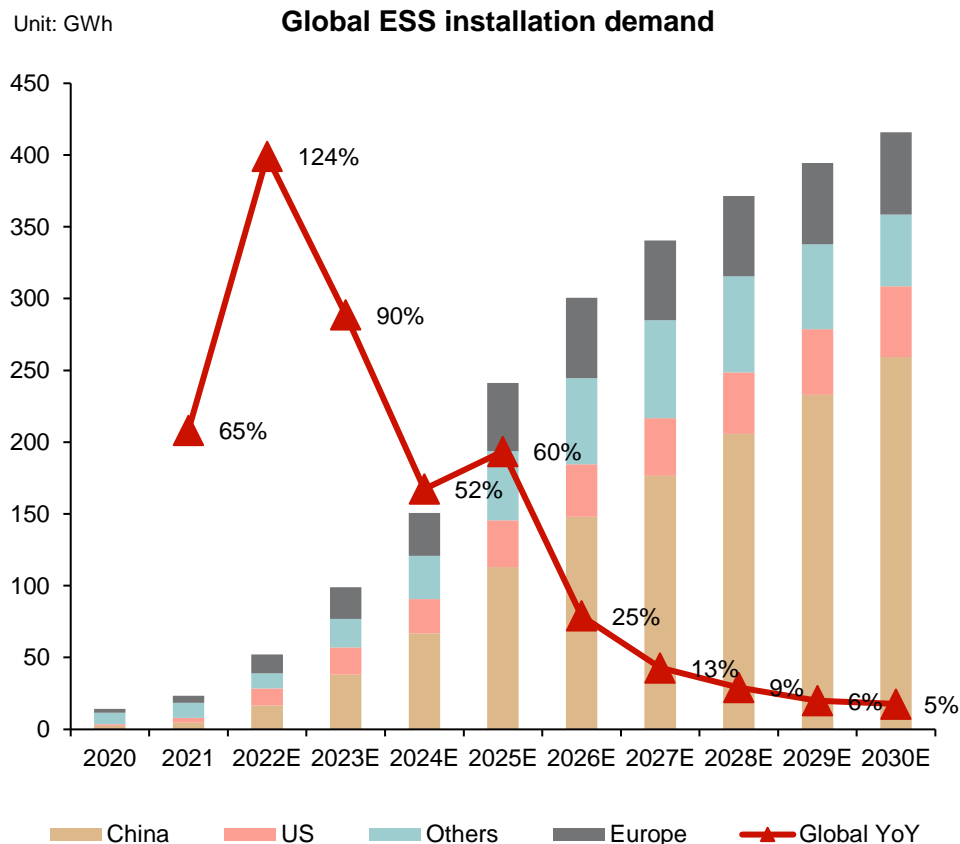
Grid investment to remain high in the 14th FYP period

- China grid investment to increase by 4% YoY in 2023E driven by variable renewable energy (VRE) requirements and economy growth targets.
- Inherent uncertainty and variability in VRE sources require more energy storage capacities.
- **NARI (600406 CH, OP, TP Rmb34.20)** is a key beneficiary of China's grid upgrade with full value chain coverage. The company is also expanding into ESS business by taking advantage of its high market share in power grid value chain.

We expect China power grid investment to grow 4% YoY to Rmb521bn in 2023



Global ESS demand could see a 23E-25E CAGR of >55% driven by improved project economics with falling polysilicon prices and accommodative ESS installation policies worldwide.

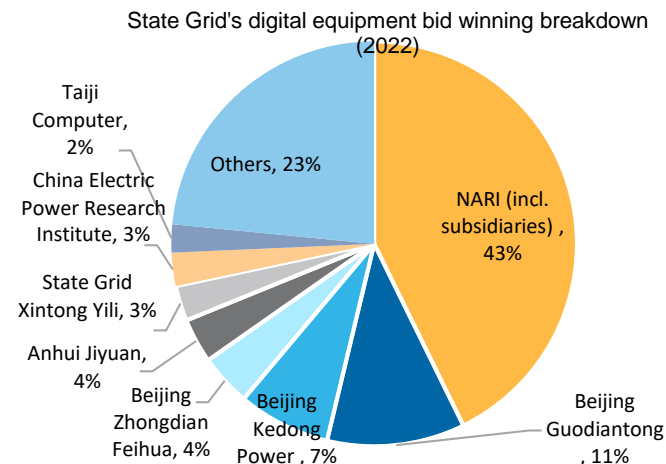


Source: China Electricity Council, Company data, Macquarie Research, May 2023

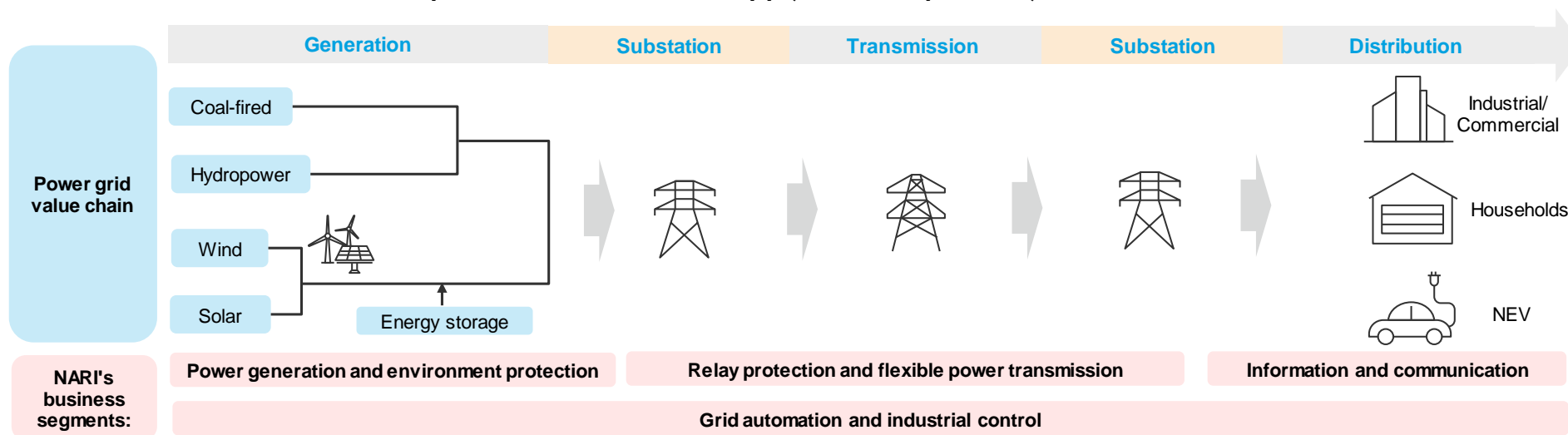
NARI Tech (600406 CH), Outperform

- TP Rmb34.20 (Outperform)
- NARI Tech is the key beneficiary of China grid investment for its technology leadership in high-tech areas like secondary equipment and grid dispatching support system.
- NARI's dispatch and distribution business will have great potential, with the former likely to benefit from the transition to new generation dispatch systems, and the latter to benefit from increasing demand for power load adjustment systems.

NARI Tech accounted for 43% of market share in State Grid's 2022 digital project bidding amount



NARI Tech's main businesses (in pink) cover the entire supply chain of power systems



Source: Company data, Macquarie Research, May 2023

7

China SOE:
Accelerated SOE reform



Accelerated SOE reform to improve core competitiveness

- We believe the valuation system with Chinese characteristics (中特估) implies sustainable FCF yield (dividend yield + cash yield from share buy-backs), and increasing market penetration in China and overseas.
- Our top pick in SOE: **NARI Tech, COSL, Sinopec, Conch**

Energy transition and materials: SOE comps table

Company	Ticker	Rating	TP	Mkt cap (bln USD)	3m vol. (mn USD)	Cur Px	Upside	PE		PB		Div Yield	
								23E	24E	23E	24E	23E	24E
Cement													
Conch-H	914 HK	OP	37.60	19.70	23	24.35	54%	5.4	5.1	0.6	0.6	7%	8%
Conch-A	600585 CH	OP	35.10	19.70	88	27.06	30%	6.8	6.4	0.8	0.7	7%	8%
CR Cement	1313 HK	OP	5.60	3.15	4	3.54	58%	5.7	5.0	0.4	0.4	6%	7%
Oil & gas													
Sinopec-H	386 HK	OP	6.10	106.76	87	5.08	20%	7.1	6.9	0.8	0.6	8%	8%
Sinopec-A	600028 CH	OP	6.90	106.76	171	6.59	5%	10.4	10.2	1.1	0.9	7%	7%
PetroChina-H	857 HK	UP	3.20	200.94	87	5.27	-39%	8.1	12.2	0.6	0.6	5%	3%
PetroChina-A	601857 CH	UP	4.30	200.94	198	7.97	-46%	13.9	20.9	1.0	1.0	4%	2%
CNOOC-H	883 HK	N	10.40	78.09	140	12.34	-16%	4.3	5.0	0.8	0.7	7%	6%
CNOOC-A	600938 CH	UP	12.70	78.09	168	18.50	-31%	7.3	8.4	1.3	1.2	6%	5%
COSL-H	2883 HK	OP	19.80	8.75	9	8.86	123%	8.7	6.5	0.9	0.8	3%	4%
COSL-A	601808 CH	OP	26.90	8.75	20	15.66	72%	17.5	13.1	1.8	1.6	2%	2%
Renewables													
NARI	600406 CH	OP	34.20	25.69	67	26.07	31%	23.5	20.5	3.9	3.5	2%	2%

Source: Company data, Macquarie Research, May 2023