

July 23, 2023 07:17 PM GMT

China Gold Miners | Asia Pacific

Be selective amid gold price volatility

We highlight near-term upside for Chinese gold miners on better Rmb-denominated ASP and more favorable funding costs compared to global peers. Zhaojin is our preferred pick amid higher gold price environment.

Upside risk to gold price into 1Q24: With our US economist Ellen Zentner expecting the first Fed rate cut in March 2024, we see the gold price rising to US \$2,100/oz in 1Q24 vs US\$1,900/oz currently. While ETF flows are struggling, central bank buying has driven strong physical demand. Although a stronger USD is an overhang to gold price, we note that gold and USD can rally simultaneously at times of safe-haven demand. Our global commodities team forecasts base case 2023/24 average gold price of US\$1,988 (+11% YoY) and US\$2,050 (+3% YoY), respectively.

Higher gold ASP expected for Chinese miners: Marking-to-market weaker Rmb YTD (with 2H23 USDCNY 7.1 vs. 6.8 previously), we expect Chinese gold ASP to rise 15% YoY to Rmb447/g in 2023 (Exhibit 15). Compared to flattish global gold investment holdings, AUMs for China onshore gold have recorded inflows of 12% YTD. In our view, this signals investors' appetite for gold-related investments. We accordingly raise our earnings forecasts for Zhaojin, Zhongjin and Shandong Gold.

Zhaojin is our preferred pure gold play: With record high gold ASP in local currency terms, we forecast Zhaojin's 2023e net profit to more than double to Rmb1bn. In addition, concerns over a potential sell-down by Fosun (3.57% stake now vs. 31.08% in Nov-22) have reduced. The new strategic partnership with Zijin following its 20% stake purchase in Zhaojin should add to investors' confidence about the new Haiyu project next year.

Government fiscal policy easing an added positive: We expect lower interest costs and access to low-cost borrowing, supported by the government, to alleviate the interest burden. Low-cost financing allows attractive returns for Chinese gold projects. Assuming a long-term gold price forecast of US\$1,300/oz, our analysis suggests 11.6-15.3% IRRs using funding costs of 6-8%.

MORGAN STANLEY ASIA LIMITED+

Sara Chan

Equity Analyst

Sara.Chan@morganstanley.com

+852 2848-5292

Rachel L Zhang

Equity Analyst

Rachel.Zhang@morganstanley.com

+852 2239-1520

Hannah Yang, CFA

Equity Analyst

Hannah.Yang1@morganstanley.com

+852 2239-7079

Yujie Wang

Equity Analyst

Yujie.Wang@morganstanley.com

+852 2239-1502

Chris Jiang

Equity Analyst

Chris.Jiang@morganstanley.com

+852 3963-1593



GREATER CHINA MATERIALS

Asia Pacific

Industry View

Attractive

WHAT'S CHANGED

	From	To
Zhongjin Gold Corp. Ltd. (600489.SS) Price Target	Rmb10.39	Rmb10.96
Shandong Gold Mining Co. Ltd (1787.HK) Price Target	HK\$16.10	HK\$16.60
Shandong Gold Mining Co. Ltd (600547.SS) Price Target	Rmb15.60	Rmb15.22
Zhaojin Mining Industry (1818.HK) Price Target	HK\$12.50	HK\$12.90

Related research:

[metal&ROCK: The Price Deck – 3Q23: What's in the Price? \(21 Jun 2023\)](#)





Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

+ = Analysts employed by non-U.S. affiliates are not registered with FINRA, may not be associated persons of the member and may not be subject to FINRA restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Order of preference

Exhibit 1: Gold miners - order of preference

Name	Zhaojin	Shandong Gold (H)	Zhongjin Gold	Shandong Gold (A)
Stock code	1818.HK	1787.HK	600489.SS	600547.SS
Rating	EW	EW	EW	UW
Trading currency	HKD	HKD	CNY	CNY
Current price	11.66	16.12	11.11	25.61
Target upside (%)	10.6%	3.0%	-1.4%	-40.6%
Market cap (US\$ bn)	5 USD	15 USD	8 USD	15 USD
Street view				
Green - Overweight				
Yellow - Equal-weight				
Red - Underweight				
Buy/Overweight	6	3	2	9
Hold/Equal-weight	3	1	2	1
Sell/Underweight	1	0	1	2
PB Multiples				
2023e	2.0 e	1.9 e	2.0 e	3.3 e
2024e	1.9 e	1.8 e	2.0 e	3.1 e
Price Performance				
1M Abs Perf	6.4%	4.5%	7.2%	7.7%
3M Abs Perf	(12.6%)	(7.2%)	(4.8%)	(1.5%)
YTD Abs Perf	34.3%	11.3%	35.7%	33.7%

Current prices as of July 21, 2023.

Source: Refinitiv, Morgan Stanley Research, including (e) estimates

Investment case

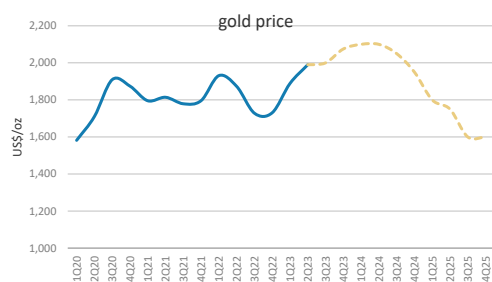
Miners - Benefiting from record-high Rmb-denominated gold price

Against our base case gold price, which is +11% YoY in USD terms to average US\$1,742/oz this year, our Rmb-denominated gold price is 15% higher YoY at Rmb430/g. On our estimates, every 1% change in gold price has a 0.7-2.7% change on gold miners' earnings (Exhibit 3). We expect progress on the new Haiyu mine to be a key catalyst for Zhaojin.

Zhaojin is our preferred pick

We highlight the near-term earnings upside for Chinese gold producers from weaker Rmb trend. Zhaojin is our preferred pick among upstream gold miners.

Exhibit 2: Our global commodities team projects a higher gold price into year end



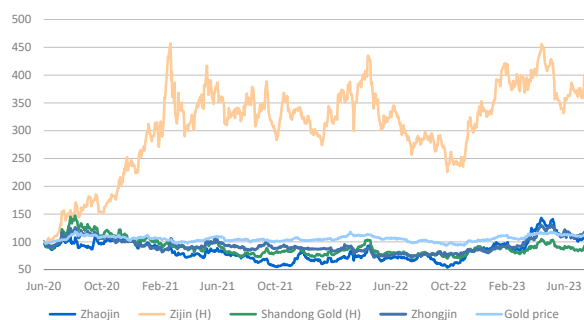
Source: Bloomberg, Morgan Stanley Research

Exhibit 3: Earnings sensitivity to gold price

Gold miners	Share price vs. gold price			Estimated impact on share price from every 1% move in gold price
	2-year	3-year	5-year	
Zhaojin	76%	73%	35%	3.2%
Shandong Gold (H)	81%	59%	NA	5.8%
Shandong Gold (A)	79%	67%	60%	5.8%
Zhongjin	70%	70%	46%	1.4%

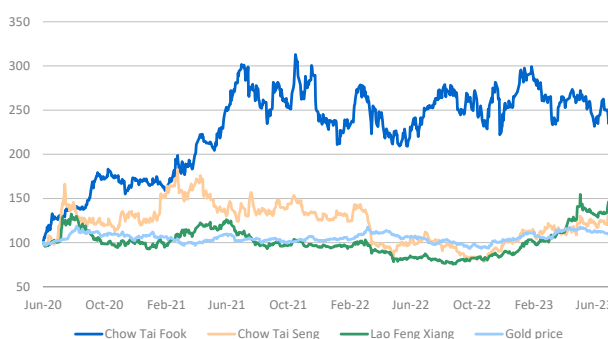
Source: Refinitiv, Morgan Stanley Research estimates

Exhibit 4: Share price performance chart - miners
Chinese Gold Miners vs. Gold Price



Source: Refinitiv, Morgan Stanley Research. June 1, 2020 as 100

Exhibit 5: Share price performance chart - jewelers
Chinese Jewelers vs. Gold Price



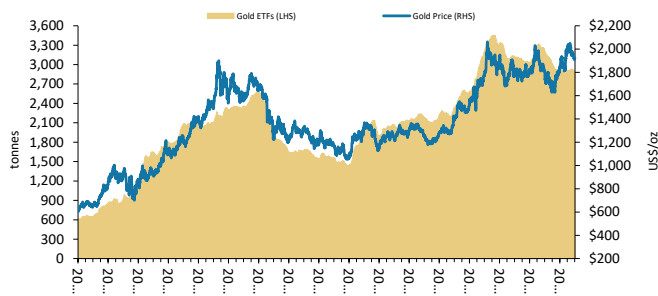
Source: Refinitiv, Morgan Stanley Research. June 1, 2020 as 100

Our View on Gold

Morgan Stanley's Commodities team sees recent correlations with key drivers (USD, interest rates and ETF holdings) breaking down. We also highlight that similarities with 2011 seem to be rising. Morgan Stanley's base case is for gold to rise further to US\$2,075/oz in 4Q23 and US\$2,100 in 1Q24 vs. current level of US\$1,900/oz.

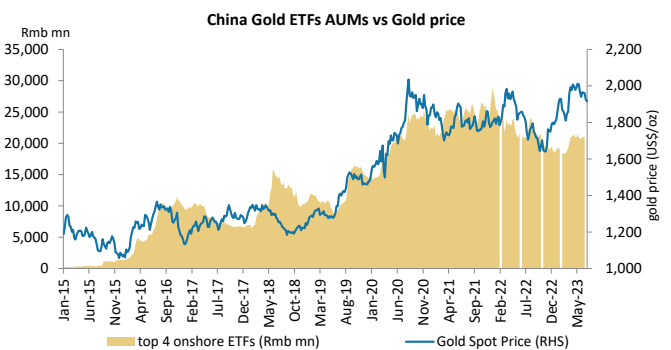
See the [Gold section in metal&ROCK: The Price Deck – 3Q23: What's in the Price? \(21 Jun 2023\)](#) and [metal&ROCK: Gold: 2011 Parallels?](#) for more details.

Exhibit 6: While global gold ETFs are flattish YTD....



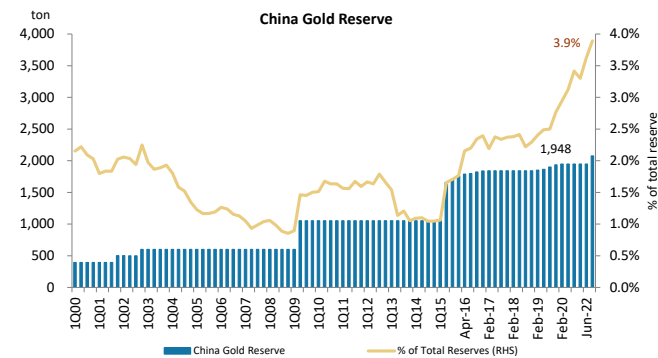
Source: Bloomberg, Morgan Stanley Research

Exhibit 7: China onshore gold investments have recorded inflows of +12% YTD



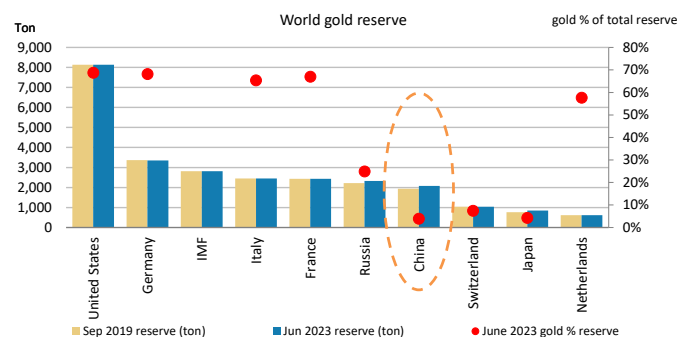
Source: Bloomberg, Morgan Stanley Research

Exhibit 8: China's Central Bank has been adding gold reserve



Source: World Gold Council, Morgan Stanley Research

Exhibit 9: With 2,076 tons, China's gold reserves account for just 3.9% of its total reserves, well below the US's 68.8% and the ECB's 35.5%



Source: World Gold Council, Morgan Stanley Research

Policy easing to allow cheaper financing option for Chinese miners

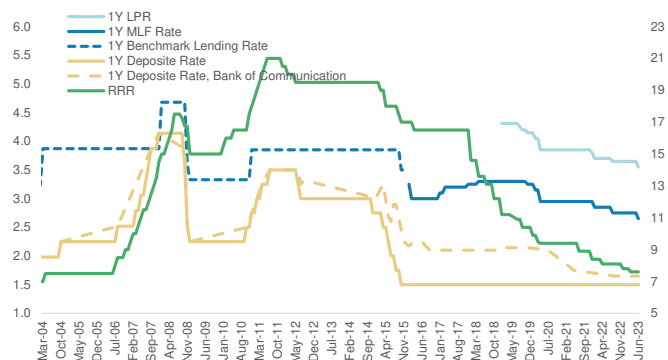
With access to low cost funding, we expect Chinese gold miners will also benefit from a lower interest burden to improve their earnings profile.

Exhibit10: We estimate every 1% change in interest costs would affect returns by 1.8%

funding cost	6.0%	7.0%	8.0%
gold price (US\$/oz)	1,200	1,200	1,200
fund raised (Rmb mn)	1,000	1,000	1,000
valuation (US\$/oz)	84.00	84.00	84.00
price per ton (Rmb/ton)	14.84	14.84	14.84
reserve volume (ton)	67.40	67.40	67.40
reserve life (years)	15.00	15.00	15.00
annual production (ton)	4.49	4.49	4.49
unit analysis (Rmb/g)			
gold price	239.23	239.23	239.23
unit cost	150.00	150.00	150.00
unit margin	89.23	89.23	89.23
unit interest cost	13.35	15.58	17.81
unit net margin	53.11	51.55	50.00
annual profit (Rmb mn)	238.64	231.64	224.64
IRR	15.3%	13.4%	11.6%

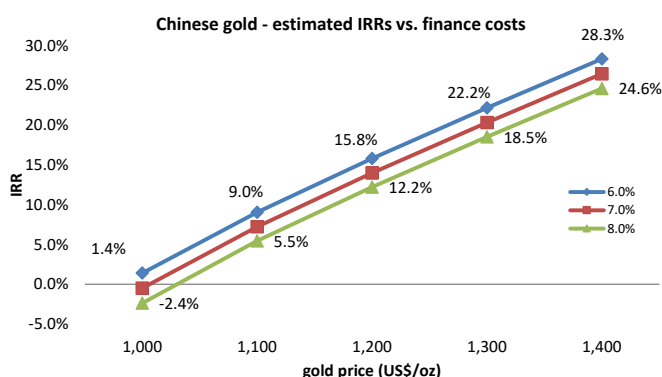
Source: Morgan Stanley Research estimates

Exhibit 11: Our China Economics team expects further cuts to interest rates as part of the easing policy



Source: CEIC, Wind, Morgan Stanley Research

Exhibit 12: Our estimates on IRR sensitivities against interest rate



Source: Morgan Stanley Research estimates

Exhibit 13: Chinese miners financing

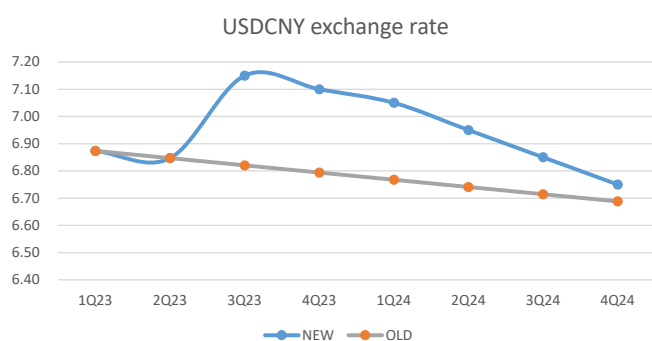
Company	Date		Amount raised (Rmb mn)	Interest rate / cost	Duration (years)
	May-23	Super Short-term Bonds issuance	70,000	2.1%	0.67
	May-23	Super Short-term Bonds issuance	60,000	2.1%	0.67
	Dec-22	Super Short-term Bonds issuance	1,000	2.3%	0.5
	Dec-22	Super Short-term Bonds issuance	50,000	2.4%	0.75
	Oct-22	Super Short-term Bonds issuance	50,000	1.8%	0.75
	Jul-22	Super Short-term Bonds issuance	50,000	1.7%	0.5
Shandong Gold	Apr-22	Super Short-term Bonds issuance	70,000	2.2%	0.75
	Mar-22	Super Short-term Bonds issuance	100,000	2.2%	0.75
	Dec-21	Super Short-term Bonds issuance	50,000	2.7%	0.75
	Nov-21	Super Short-term Bonds issuance	50,000	2.7%	0.55
	Oct-21	Super Short-term Bonds issuance	50,000	2.6%	0.75
	Aug-21	Super Short-term Bonds issuance	50,000	2.5%	0.75
	Jul-21	Super Short-term Bonds issuance	50,000	2.7%	0.75
	May-23	Super Short-term Bonds issuance	1,500	2.0%	0.08
	May-23	Super Short-term Bonds issuance	1,500	2.0%	0.08
	Apr-23	Medium-term Notes issuance	1,000	3.2%	3
	Apr-23	Medium-term Notes issuance	1,000	3.6%	2+N
	Feb-23	Super Short-term Bonds issuance	1,000	2.0%	0.08
	Feb-23	Super Short-term Bonds issuance	1,500	2.0%	0.08
Zhaojin	Sep-22	Medium-term Notes issuance	1,000	2.8%	3
	Mar-22	Super Short-term Bonds issuance	1,000	2.2%	0.75
	Mar-22	Super Short-term Bonds issuance	1,000	2.2%	0.75
	Jan-22	Super Short-term Bonds issuance	1,000	2.3%	0.75
	Jul-21	Medium-term Notes issuance	1,000	3.5%	3
	Jun-21	Medium-term Notes issuance	1,000	3.6%	3
	Jun-21	Medium-term Notes issuance	1,000	3.6%	3

Source: Chinamoney, Morgan Stanley Research

What's Changed

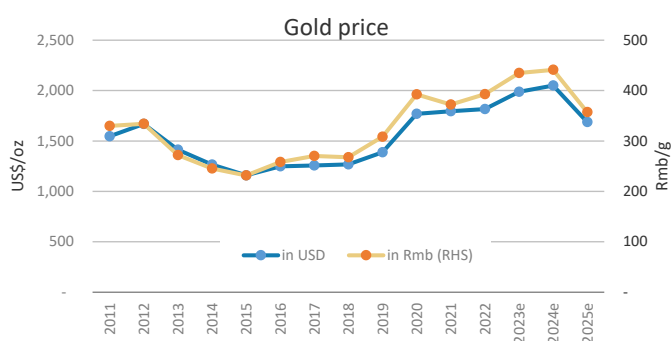
Marking-to-market the weaker Rmb YTD, we have modelled in 2023e/24e USDCNY assumptions of 6.98/6.90 vs. 6.83/6.73 previously (with 2H23 USDCNY 7.1 vs. 6.8 previously). We expect Chinese gold ASP to rise 15% YoY to Rmb447/g in 2023. Accordingly we revise up our earnings forecasts for Chinese pure gold miners Zhaojin, Shandong Gold and Zhongjin.

Exhibit 14: We update our models for pure gold miners with 2% weaker Rmb for 2023 and 2024



Source: Bloomberg, Morgan Stanley Research estimates

Exhibit 15: We project Rmb-denominated gold price to rise 15% YoY this year



Source: Bloomberg, Morgan Stanley Research estimates

Exhibit 16: What's changed

Company	old EPS (Rmb/share)			new EPS (Rmb/share)			% change		
	2023e	2024e	2025e	2023e	2024e	2025e	2023e	2024e	2025e
Zhaojin	0.29	0.37	0.49	0.31	0.39	0.49	4.7%	5.4%	0.1%
Shandong Gold (A and H)	0.53	0.56	0.81	0.56	0.61	0.84	6.0%	9.2%	3.6%
Zhongjin	0.43	0.34	0.30	0.46	0.37	0.30	6.2%	7.3%	0.4%

Source: Morgan Stanley Research estimates

Exhibit 17: MSe vs. consensus

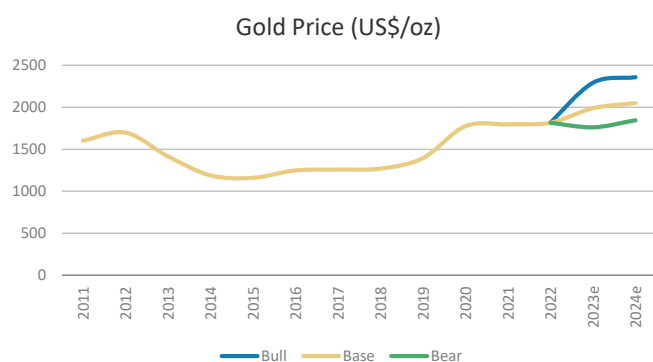
Ticker	Company	2023 EPS			2024 EPS		
		MSe	Cons	% diff.	MSe	Cons	% diff.
1818.HK	Zhaojin	0.31	0.29	4%	0.39	0.42	-7%
1787.HK	Shandong Gold(H)	0.56	0.49	15%	0.61	0.61	0%
600547.SS	Shandong Gold(A)	0.56	0.53	5%	0.61	0.67	-8%
600489.SS	Zhongjin Gold	0.46	0.55	-17%	0.37	0.60	-39%

Source: Refinitiv consensus, Morgan Stanley Research estimates

Valuation Methodology

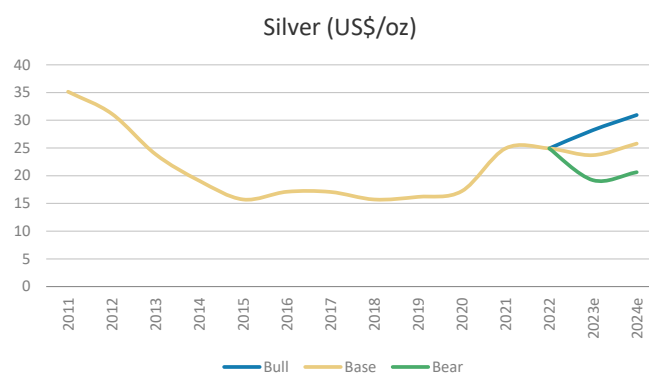
Our price targets are derived from our DCF models using Morgan Stanley's base case gold price forecasts.

Exhibit 18: Gold price assumptions in our bull, base and bear scenarios



Source: Bloomberg, Morgan Stanley Research (e) estimates

Exhibit 19: Silver price assumptions in our bull, base and bear scenarios



Source: Bloomberg, Morgan Stanley Research (e) estimates

Shandong Gold

Base case HK\$16.60/Rmb15.22: We derive our base case value from our DCF model which discounts our base-case earnings estimates through 2030, and then normalizes them by a 7% WACC. We assume a steady-state revenue growth rate of 3% p.a. For Shandong Gold-A, we assume its premium vs. H share to converge to 10% over the next twelve months.

Bull case HK\$24.80/Rmb31.58: In our bull case, we model a 2023e gold price of US \$2,292/oz. We also build in the high end of company production guidance for gold output. For Shandong Gold-A, we assume the current 44% premium vs. H share to stay under our bull case scenario.

Bear case HK\$6.83/Rmb6.11: We assume 2023e gold price at US\$1,761/oz under our bear case scenario. Other assumptions stay unchanged. In this scenario, we assume no premium vs. its A share.

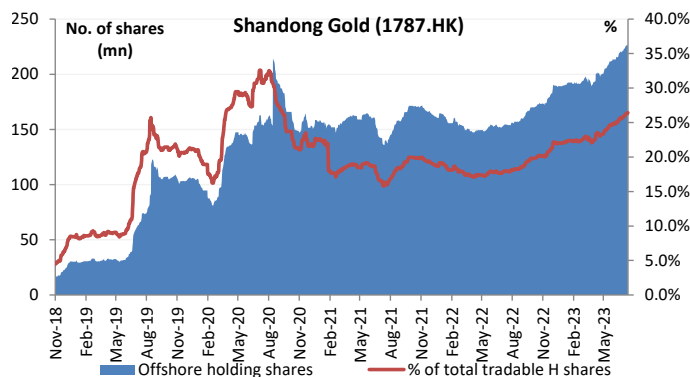
Exhibit 20: Shandong Gold-H base case DCF

Key Assumptions		Cost of Equity		10.4%	
Shares outstanding (mn)	4,473	Risk Free Rate	2.7%		
Target D/(D+E)	50%	ERP	5.6%		
Equity Weight	50%	Equity Beta	1.2		
Debt Weight	50%	Country Premium	1.0%		
WACC	7%	Cost of Debt	3.4%		
Terminal growth	3%	Interest Rate	5.0%		
		Tax rate	33%		

DCF (Rmb mn)	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
EBITDA	8,012	8,799	10,954	9,637	8,626	8,103	7,169	7,460
Net interest expense	(1,061)	(969)	(876)	(769)	(645)	(531)	(436)	(355)
Capex	(8,316)	(8,316)	(1,510)	(2,000)	(2,000)	(2,000)	(2,000)	(2,000)
Tax	(1,017)	(1,125)	(1,797)	(1,531)	(1,352)	(1,308)	(1,126)	(1,300)
FCF	(2,382)	(1,611)	6,771	5,337	4,629	4,265	3,608	3,805
Terminal (2030e)								100,887
Discounting Factor	100%	94%	88%	82%	77%	72%	67%	63%
NPV	17,819	21,593	24,801	19,271	14,893	10,971	7,168	3,805
Terminal	63,302	67,661	72,319	77,298	82,620	88,309	94,389	100,887
EV	81,122	89,253	97,120	96,569	97,513	99,280	101,557	104,693
Net debt	12,294	12,792	5,112	(1,358)	(7,290)	(12,905)	(17,988)	(23,196)
Equity - 100%	68,828	76,461	92,009	97,927	104,803	112,184	119,544	127,889
Minority	4,067	4,371	4,790	5,148	5,463	5,768	6,031	6,334
Value of Shareholder's Equity (Rmb mn)	64,761	72,090	87,218	92,780	99,340	106,416	113,514	121,555
Share value (Rmb/shr)	14.50	16.10	19.50	20.70	22.20	23.80	25.40	27.20
Share value (HKD/shr)	15.00	16.60	20.10	21.40	22.90	24.60	26.20	28.10

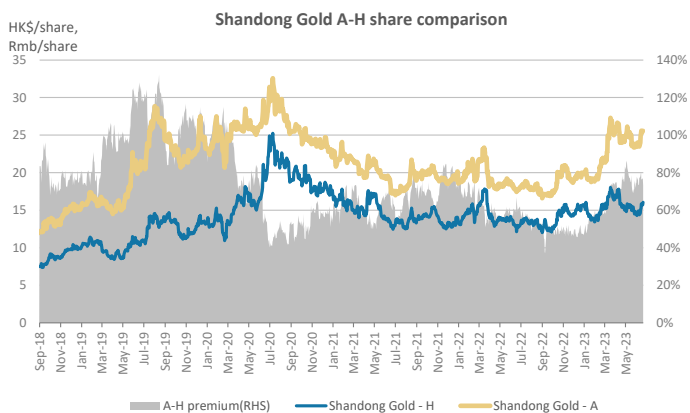
Source: Company data, Morgan Stanley Research; e = Morgan Stanley Research estimates

Exhibit 21: Southbound flow of Shandong Gold - H



Source: Wind, Morgan Stanley Research

Exhibit 22: Shandong Gold A and H



Source: Company data, Woodmac, Morgan Stanley Research estimates

Zhongjin

Base case Rmb10.96: We derive our base case value from our DCF model which discounts our base case earnings estimates through 2030, and then normalizes them by a 7% WACC. We calculate our cost of equity assumption on an ERP of 5.2%, and a beta of 1.17. We assume a steady-state revenue growth rate of 2% p.a.

Bull case Rmb14.49: We lift our bull case value on the back of increased contribution from copper and weaker Rmb assumptions. The additional volume is partially offset by bigger-than-expected production depletion of 11% vs. 4% in our previous assumption. We model a 2023e gold price of US\$2,292. We assume production to stay flat compared with an 11% decline in our base case.

Bear case Rmb5.56: We raise our bear case value on weaker Rmb assumptions. We set our bear case value using our 2023e bear case gold price of US\$1,761/oz.

Exhibit 23: Zhongjin - base case DCF

Key Assumptions	Cost of Equity		8.0%	
Shares outstanding (mn)	4,572	Risk Free Rate	0.0%	
Target D/(D+E)	25%	ERP	5.2%	
Equity Weight	75%	Equity Beta	1.170	
Debt Weight	25%	Country Premium	2.0%	
WACC	7% Cost of Debt		3.4%	
Terminal growth	2%	Interest Rate	4.5%	
		Tax rate	25%	

DCF (Rmb mn)	2024e	2025e	2026e	2027e	2028e	2029e	2030e
EBITDA	5,248	4,584	5,212	4,985	4,757	5,033	5,098
Net interest expense	(233)	(208)	(175)	(157)	(150)	(144)	(140)
Capex	(1,390)	(1,391)	(1,393)	(1,394)	(1,395)	(1,396)	(1,397)
Tax	(856)	(704)	(875)	(829)	(779)	(854)	(875)
FCF	2,770	2,282	2,769	2,605	2,433	2,639	2,685
Terminal (2030e)							56,328
NPV	15,026	13,098	11,558	9,393	7,253	5,152	2,685
Terminal	37,823	40,419	43,193	46,157	49,325	52,710	56,328
EV	52,849	53,517	54,751	55,550	56,578	57,862	59,013
Net debt	(672)	(2,619)	(4,119)	(5,774)	(7,322)	(8,995)	(10,478)
Equity - 100%	53,522	56,136	58,870	61,324	63,900	66,857	69,491
Minority	3,410	4,057	4,862	5,625	6,341	7,126	7,931
Value of Shareholder's Equity (Rmt)	50,112	52,079	54,008	55,699	57,559	59,730	61,560
Share value (Rmb/shr)	10.96	11.39	11.81	12.18	12.59	13.06	13.46

Source: Company data, Morgan Stanley Research estimates

Zhaojin

Base case HK\$12.90: We derive our base case value from our DCF model which discounts our base case earnings estimates through 2030, and then normalizes them by a 6% WACC. We calculate our cost of equity assumption on an ERP of 5.6%, and a beta of 1.18. We assume a steady-state revenue growth rate of 2% p.a.

Bull case HK\$15.38: We model a 2023e gold price of US\$2,292/oz and weaker Rmb assumptions. We assume faster ramp-up from Haiyu in 3Q24 vs. end 2024 in our base case.

Bear case HK\$7.74: We raise our bear case value on weaker Rmb assumptions. We set our bear case value using our 2023e bear case gold price of US\$1,761/oz.

Exhibit 24: Zhaojin - base case DCF

Key Assumptions	Cost of Equity		10.2%							
	Shares outstanding (mn)	3,270	Risk Free Rate	2.7%	Target D/(D+E)	68%	ERP	5.6%		
			Equity Weight	33%	Equity Beta	1.180	Debt Weight	68%	Country Premium	1.0%
WACC	6%		Cost of Debt	3.4%						
Terminal growth	2%		Interest Rate	4.5%						
			Tax rate	25%						
DCF (Rmb mn)	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e		
EBITDA	2,990	3,433	3,995	3,927	4,290	4,110	4,525	4,602		
Net interest expense	(414)	(377)	(370)	(413)	(399)	(386)	(301)	(196)		
Capex	(1,277)	(1,461)	(1,737)	(1,253)	(1,408)	(1,384)	(1,284)	(1,284)		
Tax	(390)	(496)	(623)	(582)	(664)	(612)	(723)	(757)		
FCF	909	1,098	1,265	1,679	1,819	1,728	2,217	2,365		
Terminal (2030e)								66,845		
Discounting Factor	100%	95%	90%	85%	80%	76%	72%	68%		
NPV	10,499	10,128	9,536	8,735	7,451	5,948	4,457	2,365		
Terminal	45,621	48,180	50,882	53,736	56,750	59,933	63,295	66,845		
EV	56,120	58,307	60,418	62,471	64,201	65,881	67,751	69,210		
Net debt	14,856	14,753	15,355	15,158	14,979	13,776	12,299	10,622		
Equity - 100%	41,264	43,554	45,063	47,313	49,222	52,105	55,453	58,588		
Minority	3,657	3,937	4,288	4,616	4,990	5,335	5,742	6,168		
Value of Shareholder's Equity (Rmb mn)	37,607	39,617	40,775	42,697	44,233	46,771	49,711	52,420		
Share value (Rmb/shr)	11.50	12.10	12.50	13.10	13.50	14.30	15.20	16.00		
Share value (HKD/shr)	12.90	13.80	14.90	15.90	16.70	18.00	18.50	19.50		

Source: Company data, Morgan Stanley Research estimates

What's in the Price

Company	What's in the price	What's the market missing?
Zhaojin	<ul style="list-style-type: none"> We estimate the stock is currently pricing in an implied gold price of US\$1,680/oz. 	<ul style="list-style-type: none"> We believe the market is overly concerned about timing on the Haiyu mine given multiple years of delays. Our 2H23 gold price assumption is 5% above consensus.
Shandong Gold	<ul style="list-style-type: none"> We estimate the stock is currently pricing in an implied gold price of US\$1,770/oz. 	<ul style="list-style-type: none"> Increased portion of lower-margin smelting and refining gold business partially reduces earnings sensitivity to gold price.
Zhongjin	<ul style="list-style-type: none"> We estimate the stock is currently pricing in an implied gold price of US\$1,990/oz. 	<ul style="list-style-type: none"> Incremental revenue from the newly acquired assets double the earnings basis versus last year. We estimate an annual depletion of 10% for Zhongjin's gold output, which is well below other Chinese gold majors of flat to 11% growth.

Zhongjin – Financial summary

Exhibit 25: Zhongjin: Financial Summary

Assumptions	2021	2022	2023e	2024e	2025e	Profitability Ratios %	2021	2022	2023e	2024e	2025e
Mined gold volume (t)	20.0	19.9	19.4	19.4	19.4	ROE	6.8%	8.2%	8.3%	6.5%	5.3%
ASP (Rmb/g)	238	258	293	298	234	EBITDA margin	8.4%	9.0%	11.0%	11.3%	10.9%
Cash Cost (Rmb/t)	(128)	(128)	(139)	(137)	(139)	EBIT margin	5.2%	6.0%	7.5%	7.7%	7.0%
Mined Gold Volume (k oz)	643	641	624	624	624	Pre-tax profit margin	4.5%	5.3%	7.0%	7.4%	6.7%
ASP (USD/oz)	1,796	1,816	1,988	2,050	1,688	Net profit margin	3.0%	3.7%	4.7%	3.8%	3.5%
Cash Cost (USD/oz)	(619)	(591)	(621)	(616)	(658)	Net Debt / Equity %	-27.5%	-15.8%	-4.6%	2.5%	9.4%
RMB/USD	6.45	6.73	6.98	6.90	6.58	Interest cover (EBITDA) (x)	8.0	8.6	11.0	13.3	16.5
P&L (Rmb mn)	2021	2022	2023e	2024e	2025e	Days sales AR outstanding	1.7	0.5	0.4	0.4	0.4
Net Sales	56,102	57,151	47,300	46,467	42,086	Days in inventory	3.8	3.8	3.9	3.6	3.7
Gross Profit	5,825	5,922	5,717	6,097	5,282	Days payable outstanding	2.5	3.5	5.2	4.7	4.8
EBITDA	4,703	5,137	5,227	5,248	4,584	Cash conversion	3.0	0.8	(0.8)	(0.7)	(0.7)
Consensus EBITDA			5,700	6,059	6,309	Balance Sheet (Rmb mn)	2021	2022	2023e	2024e	2025e
Diff. to Consensus EBITDA (%)			(8)	(13)	(27)	Cash & Equivalents	7,528	9,862	8,637	10,045	10,955
EBIT	2,930	3,413	3,535	3,590	2,956	Receivables	104	59	49	48	43
Net Financing Cost	(452)	(431)	(308)	(233)	(208)	Inventories	12,046	11,621	9,618	9,449	8,558
Pre-tax Profit	2,533	3,048	3,293	3,423	2,815	Property, Plant and Equipment	15,465	15,145	14,859	14,605	14,382
Tax	(574)	(547)	(591)	(856)	(704)	Intangible Asset	4,705	4,508	4,508	4,508	4,508
Minority Interest	(261)	(384)	(494)	(787)	(647)	Goodwill	716	714	714	714	714
Net Profit	1,698	2,117	2,208	1,780	1,464	Other Current Asset	72	278	278	278	278
Cash Flow (Rmb mn)	2021	2022	2023e	2024e	2025e	Other Asset	6,995	6,454	6,245	6,213	6,115
EBITDA	4,703	5,137	5,227	5,248	4,584	Total Assets	47,631	48,642	44,908	45,861	45,554
-Taxes Paid	(574)	(547)	(591)	(856)	(704)	Payables	2,917	3,071	2,492	2,419	2,206
-Working Capital Changes	(812)	1,043	1,246	65	627	Borrowings	14,361	13,955	9,866	9,373	8,336
-Others	574	547	591	856	704	Other Current Liability	31	58	58	58	58
Operating cash flow	3,891	6,180	6,473	5,313	5,212	Other Liabilities	3,400	3,556	3,201	3,293	3,063
-Capex.	(1,031)	(632)	(1,388)	(1,390)	(1,391)	Total Liabilities	20,709	20,639	15,617	15,142	13,661
FCF	2,859	5,548	5,085	3,924	3,820	Shareholders Equity	24,844	25,875	26,669	27,309	27,836
Disposal of PP&E	9	7	0	0	0	Minority Interest	2,078	2,128	2,622	3,410	4,057
Acquisition	(5,000)	(5,760)	0	0	0	Total Liabilities and Equity	47,631	48,642	44,908	45,861	45,554
Investing cash flow	(1,715)	(947)	(1,388)	(1,390)	(1,391)	Valuation	2021	2022	2023e	2024e	2025e
Equity Raised	4,425,627	0	0	0	0	P/E	23.5	18.8	24.1 e	30.3 e	34.4 e
Debt Raised	17,253	14,901	0	0	0	P/BV	1.6	1.5	1.9 e	1.8 e	1.8 e
Dividend	(1,087)	(1,356)	(1,414)	(1,140)	(937)	EV/Sales	0.8	0.7	1.1 e	1.1 e	1.2 e
Financing cash flow	(769)	(2,454)	(6,390)	(2,738)	(2,914)	EV/EBITDA	8.2	7.0	9.1 e	8.9 e	9.5 e
Net increase in cash	1,034	2,741	2,864	1,901	1,947	FCF Yield %	7.2%	14.0%	10.0% e	7.4% e	7.2% e
						Dividend Yield %	2.7%	3.4%	2.7% e	2.1% e	1.9% e
Per Share Data (Rmb)	2021	2022	2023e	2024e	2025e	Quarterly Financials	1Q23	2Q23e	3Q23e	4Q23e	2023e
ModelWare EPS	0.35	0.44	0.46	0.37	0.30	Net sales	16,400	16,481	16,247	(1,829)	47,300
Consensus EPS	0.38	0.43	0.54	0.58	0.63	Gross profit	1,811	1,829	1,778	299	5,717
Diff. to Consensus EPS (%)	(8)	2	(15)	(37)	(52)	EBIT	1,401	1,375	1,330	(570)	3,535
DPS	0.22	0.28	0.29	0.24	0.19	EBIT Margin	9%	8%	8%	31%	7%
BVPS	5.13	5.34	5.50	5.63	5.74	Net Income	1,045	900	1,079	(816)	2,208
						EPS	0.11	0.15	0.11	0.09	0.46

Source: Company data, Morgan Stanley Research (e) estimates

Risk Reward – Zhongjin Gold Corp. Ltd. (600489.SS)

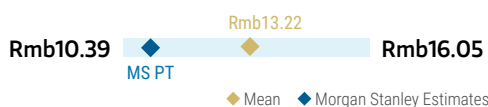
Possible price increase and production volume decline priced in; EW

PRICE TARGET Rmb10.96

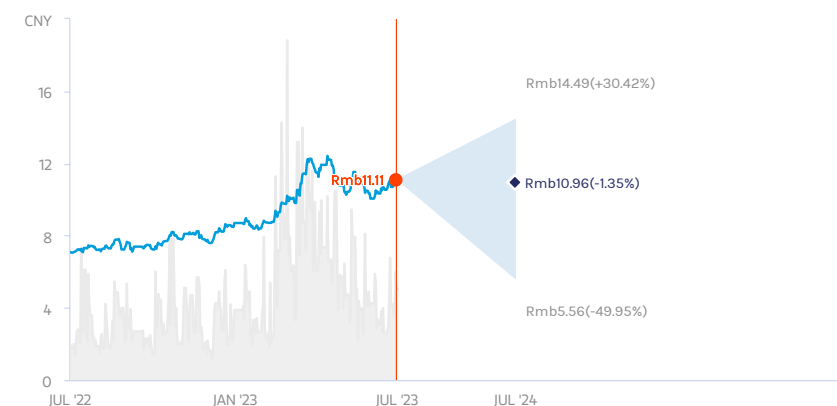
Our DCF model uses a WACC of 7% (cost of equity of 8.0%). We assume a steady-state revenue growth rate of 2% p.a.

Consensus Price Target Distribution

Source: Refinitiv, Morgan Stanley Research



RISK REWARD CHART



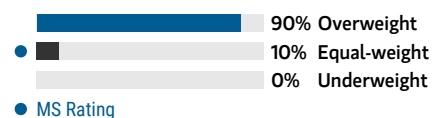
Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

EQUAL-WEIGHT THESIS

- ASP in line with the global commodity price deck for 2023e/2024e/2025e of Rmb288/g/Rmb292/g/Rmb237/g, respectively.
- We expect the company's earnings to be dragged down by its declining gold production vs. previous normal level and increasing exposure to low-margin smelting business.
- On a relative basis, we view the stock as fairly valued.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Market Share: *Negative*
Pricing Power: *Positive*

View descriptions of Risk Rewards Themes [here](#)

BULL CASE

Rmb14.49

2.6x 2023e BVPS

Gold prices surge: The economy experiences a larger impact than our expectation, which supports higher gold prices vs. our base case. 1) In our bull case, we assume a gold price of US\$2,292/oz in 2023; 2) the company acquires 1tpa of gold resources; 3) organic growth is the same as in our base case.

BASE CASE

Rmb10.96

2.0x 2023e BVPS

Gold prices increase significantly: We use Morgan Stanley Research's base-case 2023 gold price forecast of US\$1,988/oz. We assume annual mined gold production of 19.4 tons in 2023.

BEAR CASE

Rmb5.56

1.0x 2023e BVPS

Gold prices go to bear case, and no resource acquisition: USD strength and accelerating Fed rate hikes bring gold prices to our bear case. 1) We use Morgan Stanley Research's bear case 2023 gold price forecast of US\$1,761/oz; 2) higher-than-expected costs due to environmental production.

Risk Reward – Zhongjin Gold Corp. Ltd. (600489.SS)

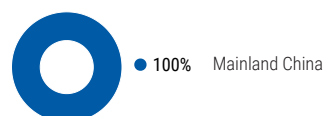
KEY EARNINGS INPUTS

Drivers	2022	2023e	2024e	2025e
USDCNY	6.7	7.0	6.9	NA
Gold price (US\$/oz)	1,815.8	1,988.4	2,050.0	NA
Copper price (US\$/lb)	4.2	3.9	3.8	NA
Silver price (US\$/oz)	24.9	23.7	25.8	NA
Unit cost blended (Rmb/g)	(188.0)	(214.6)	(218.1)	NA

INVESTMENT DRIVERS

- Retreat of gold prices as uncertainties in global economies are resolved better than expected.
- Scattered mine locations cause further difficulty in cost control.
- Higher-than-expected minority interest offsets growth quality.

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

4/5
MOST

3 Month
Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

SUSTAINABILITY & ESG



RISKS TO PT/RATING

RISKS TO UPSIDE

- Asset injection faster than expected.
- Further cost control to improve production efficiency.

RISKS TO DOWNSIDE

- Weaker-than-expected gold prices
- Less-than-expected gold production

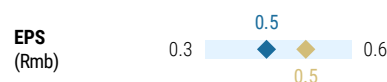
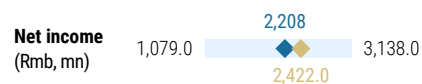
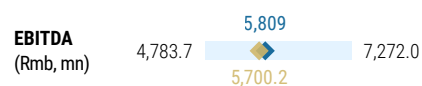
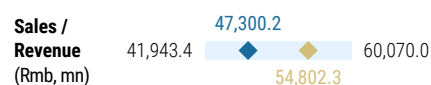
OWNERSHIP POSITIONING

Inst. Owners, % Active: 96.7%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2023e



◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

Shandong Gold – Financial summary

Exhibit 26: Shandong Gold - Financial summary

Income Statement	2021	2022	2023e	2024e	2025e	Balance Sheet	2021	2022	2023e	2024e	2025e
Sales	33,933	50,306	60,892	62,343	66,505	Current Assets	14,268	21,475	15,871	9,803	12,816
Cost of sales	(31,558)	(44,138)	(52,528)	(53,406)	(55,575)	Cash & cash equivalents	4,525	7,753	385	-5,898	-3,474
SG&A	(2,771)	(2,642)	(2,771)	(2,868)	(3,059)	Receivables	3,579	4,684	5,669	5,804	6,192
DD&A	(1,517)	(1,754)	(1,981)	(2,305)	(2,632)	Others	6,164	9,038	9,816	9,897	10,099
Other income	1,023	(692)	(354)	(354)	(379)	Non Current Assets	64,768	69,741	75,661	81,020	79,294
EBITDA	2,144	4,587	7,220	8,020	10,124	Fixed assets	31,598	37,028	42,850	48,346	46,710
EBIT	627	2,833	5,239	5,715	7,492	Others	33,170	32,712	32,811	32,674	32,584
Interest income	72	85	199	47	(83)	TOTAL ASSETS	79,037	91,216	91,531	90,823	92,110
Interest expenses	(733)	(1,051)	(1,139)	(971)	(837)	Current Liabilities	35,012	34,690	35,232	33,929	33,323
Associates	22	35	49	50	54	Accounts payable	15,249	13,144	15,642	15,904	16,550
Pre tax profit	(12)	1,902	4,348	4,841	6,626	Bank loans	9,910	9,912	7,956	6,391	5,139
Tax	(218)	(551)	(1,174)	(1,307)	(1,988)	Others	9,853	11,634	11,634	11,634	11,634
Minority interest	8	160	(254)	(283)	(371)	Non-current Liabilities	12,064	19,724	17,014	14,847	13,112
Net Profit	(230)	1,351	3,174	3,534	4,638	LT loans	5,340	13,548	10,839	8,671	6,937
Net profit to equity shareholders	(221)	1,512	2,920	3,251	4,267	Others	6,724	6,176	6,176	6,176	6,176
Normalized net profit	(1,590)	1,804	2,970	3,231	4,247	TOTAL LIABILITIES	47,076	54,414	52,247	48,776	46,435
EPS (Rmb/share)	(0.04)	0.28	0.56	0.61	0.84	Net Assets	31,961	36,802	39,284	42,048	45,675
Dividend	224	313	438	488	640	Equity to owners of company	29,329	32,931	35,414	38,177	41,804
YoY growth %						Minority interest	2,632	3,871	3,871	3,871	3,871
Revenue	-47%	48%	21%	2%	7%	SHAREHOLDERS EQUITY	31,961	36,802	39,284	42,048	45,675
EBIT	-82%	352%	85%	9%	31%	Net debt / (cash) (Rmb mn)	10,242	13,826	16,528	19,080	13,669
Pretax profit	-100%	-16094%	129%	11%	37%	Net debt to equity (%)	32%	38%	42%	45%	30%
Net income	-111%	-783%	93%	11%	31%						
EBIT margin	1.8%	5.6%	8.6%	9.2%	11.3%						
PBT margin	0.0%	3.8%	7.1%	7.8%	10.0%						
Net margin	-0.7%	3.0%	4.8%	5.2%	6.4%						
Key assumptions	2021	2022e	2023e	2024e	2025e	Cash Flow Statement	2021	2022e	2023e	2024e	2025e
USDCNY	6.45	6.73	6.98	6.90	6.58	EBITDA	2,144	4,587	7,220	8,020	10,124
Gold price (US\$/oz)	1,796	1,816	1,988	2,050	2,050	Cash interest paid	(316)	(1,034)	(877)	(709)	(574)
ASP (Rmb/g)	373	392	445	454	433	Tax paid	(640)	(1,092)	(1,174)	(1,307)	(1,988)
Mined gold production (ton)	13.2	38.7	39.7	42.0	53.6	Gross Cash Flow	1,188	2,462	5,169	6,004	7,562
China	7.9	32.6	34.4	36.0	47.5	Chg in working capital	507	(2,062)	466	17	(12)
Overseas	5.4	6.1	5.3	6.1	6.1	Operating Cash Flow	1,206	2,527	7,241	7,455	8,847
Ore grade (g/t)	1.64	2.00	2.45	2.56	2.44	Capex	(5,875)	(8,316)	(8,316)	(8,316)	(1,510)
China	1.38	3.15	3.41	3.56	12.09	Free Cash Flow	(4,668)	(5,789)	(1,075)	(861)	7,337
Overseas	0.68	0.69	0.89	0.98	0.56	Borrowings	2,303	9,430	(4,666)	(3,733)	(2,986)
Unit cash cost (Rmb/g)	215	133	135	125	98	Dividends paid	(467)	(497)	(692)	(770)	(1,011)
ASIC (Rmb/g)	272	163	166	155	113	IPO proceeds	2,250	6,235	0	0	0
Unit cash cost (US\$/oz)	1,035	613	601	562	462	Others	3,686	(126)	(935)	(920)	(916)
AISC (US\$/oz)	1,310	754	738	701	534	Net Cash Flow	853	3,017	(7,368)	(6,284)	2,424
						Free Cash Flow/share (Rmb)	(1.04)	(1.29)	(0.24)	(0.19)	1.64

Source: Company data, Morgan Stanley Research (e) estimates

Risk Reward – Shandong Gold Mining Co. Ltd (1787.HK)

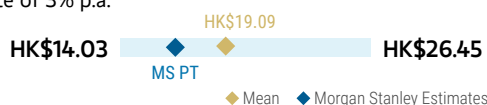
Higher gold price in 2023 with production rebound

PRICE TARGET HK\$16.60

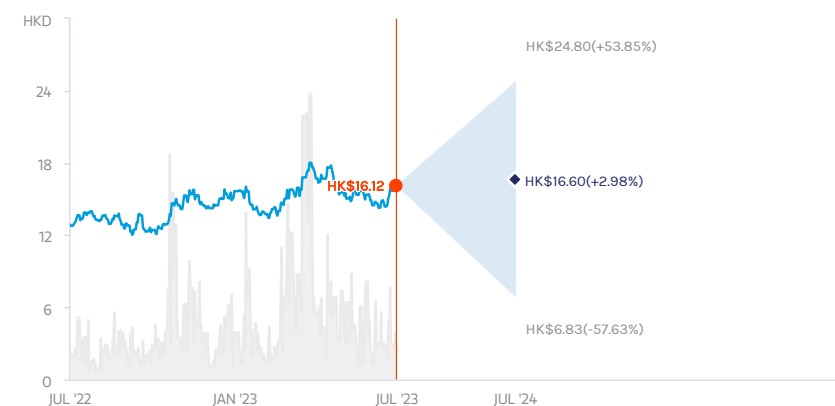
DCF discounts our earnings estimates through 2030, and then normalizes them by a 7% WACC. We calculate our cost of equity assumption on an ERP of 5.6%, and a beta of 1.2. We assume a steady-state revenue growth rate of 3% p.a.

Consensus Price Target Distribution

Source: Refinitiv, Morgan Stanley Research



RISK REWARD CHART



Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

BULL CASE

HK\$24.80

implies 2.7x 2023e BVPS

Our bull case assumption is a gold price of US\$2,292/oz in 2023. Production is projected at 40 tons.

BASE CASE

HK\$16.60

implies 1.8x 2023e BVPS

We use Morgan Stanley Research's base case 2023 gold price forecast of US\$1,988/oz. Production is projected at 40 tons.

BEAR CASE

HK\$6.83

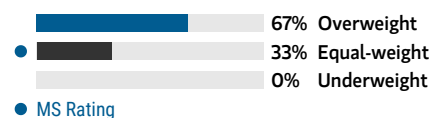
implies 0.7x 2023e BVPS

We use Morgan Stanley Research's bear case 2023 gold price forecast of US\$1,761/oz. Production is projected at 40 tons.

EQUAL-WEIGHT THESIS

- Being the largest pure gold producer in China, Shandong Gold enjoys scalable mine operations and high sensitivity to gold prices.
- With a strong balance sheet, the company has consistently paid dividends since its A-share listing in 2003.
- However, the stronger RMB, potential execution risks on projects overseas, and potential asset impairments remain earnings overhangs.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Market Share: *Positive*
Pricing Power: *Positive*

View descriptions of Risk Rewards Themes [here](#)

Risk Reward – Shandong Gold Mining Co. Ltd (1787.HK)

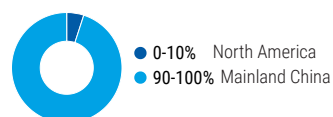
KEY EARNINGS INPUTS

Drivers	2022	2023e	2024e	2025e
USD/CNY exchange rate	6.7	7.0	6.9	6.6
Price in US\$ per oz	1,815.8	1,988.4	2,050.0	2,050.0
Silver price (Rmb/g)	22.0	23.7	25.8	25.8

INVESTMENT DRIVERS

- Gold prices are the biggest driver of earnings
- Execution on production, especially after the Veladero acquisition
- Cost control for China and overseas

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

4/5
MOST

3 Month
Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

SUSTAINABILITY & ESG



RISKS TO PT/RATING

RISKS TO UPSIDE

- Stronger-than-expected gold price that moves the share price toward our bull case.
- Further RMB depreciation.
- Production upside from China or overseas operations.

RISKS TO DOWNSIDE

- Stronger RMB, which would be negative for Shandong Gold's earnings.
- Execution risks on Veladero mine.
- Overall mine grade dropping further.

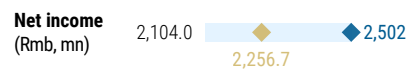
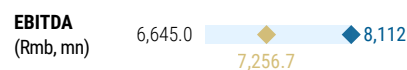
OWNERSHIP POSITIONING

Inst. Owners, % Active 76.2%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2023e



◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

Risk Reward – Shandong Gold Mining Co. Ltd (600547.SS)

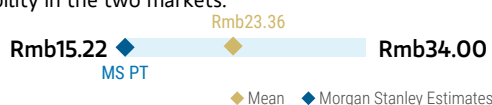
Rich valuation premium to H-shares

PRICE TARGET Rmb15.22

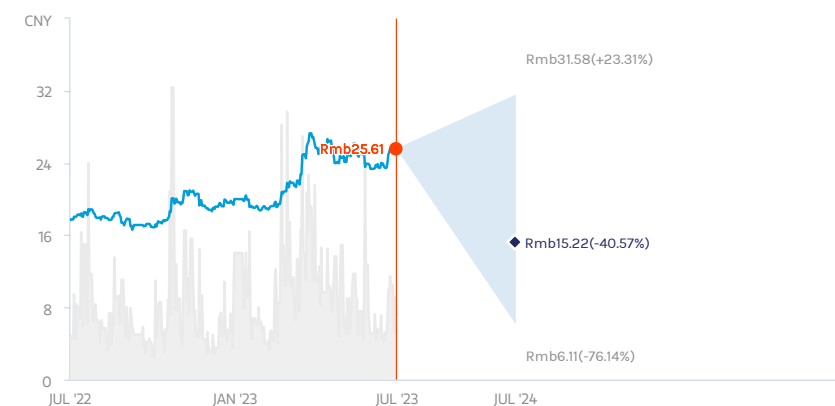
Our price target for Shandong Gold A-shares is derived from our H-share PT assuming a FX rate of 1.2 and 10% AH premium. We expect the A-H differential to continue over the next 12 months given the difference in the tradability in the two markets.

Consensus Price Target Distribution

Source: Refinitiv, Morgan Stanley Research



RISK REWARD CHART



Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

BULL CASE

Rmb31.58

4.0x 2023e BVPS

Our bull case assumption is a gold price of US\$2,292/oz in 2023. Production is projected at 40 tons. We assume the current 44% premium vs. H share to stay under our bull case scenario.

BASE CASE

Rmb15.22

1.9x 2023e BVPS

We use Morgan Stanley Research's base case 2023 gold price forecast of US\$1,988/oz. Production is projected at 40 tons. We assume its premium vs. H share to coverage to 10% over the next twelve months.

BEAR CASE

Rmb6.11

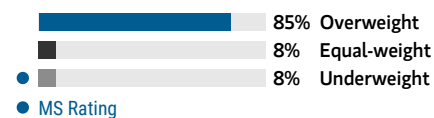
0.8x 2023e BVPS

We use Morgan Stanley Research's bear case 2023 gold price forecast of US\$1,761/oz. Production is projected at 40 tons. We assume no premium vs. its A share.

UNDERWEIGHT THESIS

- As the largest pure gold producer in China, Shandong Gold enjoys scalable mine operations and high sensitivity to gold prices.
- With a strong balance sheet, the company has consistently paid dividends since its 2003 A-share listing.
- However, we are Underweight the A-shares given their rich valuation premium to the H-shares.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Market Share: *Negative*
Pricing Power: *Negative*

View descriptions of Risk Rewards Themes [here](#)

Risk Reward – Shandong Gold Mining Co. Ltd (600547.SS)

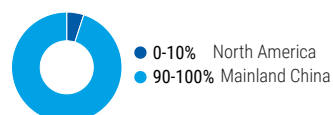
KEY EARNINGS INPUTS

Drivers	2022	2023e	2024e	2025e
USD/CNY exchange rate	6.7	7.0	6.9	6.6
Price in US\$ per oz	1,815.8	1,988.4	2,050.0	2,050.0
Silver price (Rmb/g)	22.0	23.7	25.8	25.8

INVESTMENT DRIVERS

- A stronger RMB is negative for Shandong Gold's earnings.
- Convergence of A/H differential via Stock Connect would narrow its A-share premium vs. H-shares.

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

5/5
MOST
3 Month
Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

SUSTAINABILITY & ESG



RISKS TO PT/RATING

RISKS TO UPSIDE

- Stronger-than-expected gold price that moves the share price toward our bull case.
- Further RMB depreciation.
- Production upside from China or overseas operations.

RISKS TO DOWNSIDE

- Stronger RMB, which would be negative for Shandong Gold's earnings.
- Execution risks on Veladero mine.
- Overall mine grade dropping further.

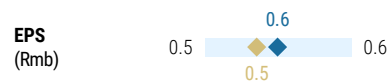
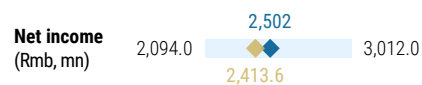
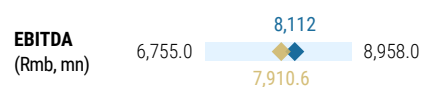
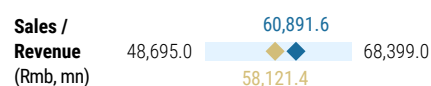
OWNERSHIP POSITIONING

Inst. Owners, % Active 85.1%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2023e



◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

Zhaojin – Financial summary

Exhibit 27: Zhaojin - Financial summary

Assumptions	2021	2022	2023e	2024e	2025e	Balance Sheet (Rmb mn)	2021	2022	2023e	2024e	2025e
Mined gold volume (t)	10.4	12.8	14.5	16.3	25.4	Cash & equivalents	2,998	3,583	4,103	4,206	3,604
ASP (Rmb/g)	378	390	447	456	364	Receivables	188	216	234	267	318
Cash cost (Rmb/g)	115	136	135	138	125	Inventory	4,181	4,671	4,915	5,537	6,990
Volume (K.oz)	406	619	570	640	962	PPE	15,458	16,004	16,455	17,050	17,873
ASP (US\$/oz)	1,799	1,798	1,988	2,050	1,688	Investment securities (LT)	2,001	2,078	2,078	2,078	2,078
Cash cost (US\$/oz)	553	630	602	624	591	Other assets	18,196	19,335	19,638	19,658	19,723
Rmb/US\$	6.4	6.7	7.0	6.9	6.6	Total Assets	43,023	45,887	47,423	48,797	50,586
						Payables (ST and LT)	389	431	458	515	651
						Borrowings	9,128	11,481	11,481	11,481	11,481
						Other Liabilities	13,777	13,929	14,543	14,719	14,945
						Total Liabilities	23,294	25,840	26,481	26,715	27,076
						Net Assets	19,729	20,047	20,942	22,081	23,510
						Shareholders Equity	16,302	16,610	17,285	18,144	19,222
						Minority Interest	3,427	3,438	3,657	3,937	4,288
						Total Liabilities and Equity	43,023	45,887	47,423	48,797	50,586
						Valuation Multiples (x)	2021	2022	2023e	2024e	2025e
						P/E	526.7	62.6	38.4 e	30.3 e	23.0 e
						P/BV	1.1	1.5	2.1 e	2.0 e	1.9 e
						EV/Sales	4.6	5.1	5.9 e	5.4 e	4.4 e
						EV/EBITDA	20.0	20.4	17.6 e	15.4 e	13.2 e
						FCF Yield	(3.0%)	2.8%	1.2% e	1.2% e	(2.3%) e
						Dividend Yield	0.0%	0.5%	0.8% e	1.1% e	1.4% e
						Profitability Ratios	2021	2022	2023e	2024e	2025e
						ROE (average)	0.2%	2.4%	5.6% e	6.8% e	8.6% e
						EBITDA Margin	23.0%	25.1%	35.1%	35.2%	34.5%
						EBIT Margin	10.3%	13.5%	23.8%	24.9%	25.4%
						Pre-tax Margin	4.1%	9.4%	18.9%	21.0%	22.2%
						Net Margin	0.5%	5.1%	11.8%	13.1%	13.8%
						Balance Sheet Ratios	2021	2022	2023e	2024e	2025e
						Net Debt (Cash) - Rmb mn	14,108	15,376	14,856	14,753	15,355
						Net Debt / Equity %	86.5%	92.6%	85.9%	81.3%	79.9%
						Interest Cover (EBITDA) (x)	2.6	3.7	4.5	5.1	6.0
						Sensitivity analysis of 1% change in gold pr	2022	2023	2024		
						EBIT	2.5%	2.4%	2.6%		
						EBITDA	1.7%	1.7%	1.9%		
						EPS	3.2%	2.9%	3.0%		
						Quarterly EPS trend					
						EPS (Rmb)	1Q	2Q	3Q	4Q	FY
						2022	0.03	0.01	0.05	0.04	0.12
						2023e	0.03	0.08	0.08	0.11	0.31
						YoY change % (2023e)	17%	1392%	69%	154%	149%

Source: Company data, Morgan Stanley Research (e) estimates

Risk Reward – Zhaojin Mining Industry (1818.HK)

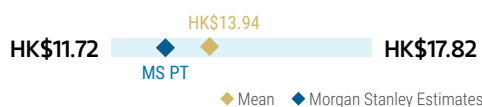
Higher gold prices but lower volume

PRICE TARGET HK\$12.90

Base case DCF model using our WACC of 6% with 1.18 beta and a steady-state revenue growth rate of 2% p.a.

Consensus Price Target Distribution

Source: Refinitiv, Morgan Stanley Research



RISK REWARD CHART



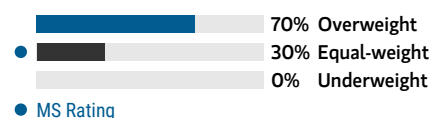
Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

EQUAL-WEIGHT THESIS

- Zhaojin's valuation has a high correlation with gold prices at >80%. It is a pure gold play, with 85% of gross profit contribution from gold.
- The Haiyu Gold mine, when reaching its full capacity, is guided to contribute 502k oz. of self-mined gold per year, +80% from the 2020 level, at a cost of around Rmb100/g. Based on management's guidance, Haiyu is scheduled to commence by 2025.
- Zhaojin faces the pressure of cost increase amid industry trend of commodity price growth.
- The company has little potential for capacity increase in short term and guides lower production volume than expected.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Market Share: *Positive*
Pricing Power: *Positive*

View descriptions of Risk Rewards Themes [here](#)

BULL CASE

HK\$15.38

2.9x 2023e P/B

Gold prices surge: 1) Morgan Stanley's bull case gold at US\$2,292/oz in 2023e; 2) Same gold production assumption as base case.

BASE CASE

HK\$12.90

2.4x 2023e P/B

Gold prices remain strong: 1) Morgan Stanley's base case gold price forecast is US\$1,988/oz in 2023e; 2) Gold production is forecast to be 17.7 tons in 2023.

BEAR CASE

HK\$7.74

1.5x 2023e P/B

Gold prices go to bear case: USD strength and accelerating Fed rate hikes bring gold price to our bear case. 1) Morgan Stanley's bear case gold at US\$1,761/oz in 2023e; 2) Same gold production assumption as base case.

Risk Reward – Zhaojin Mining Industry (1818.HK)

KEY EARNINGS INPUTS

Drivers	2022	2023e	2024e	2025e
Gold belong to ZJ (t)	19.2	17.7	19.9	29.9
Price in RMB per gram	390.0	447.3	456.1	364.3
Cash cost (Rmb/g)	136.3	135.0	138.4	125.0

CATALYST CALENDAR

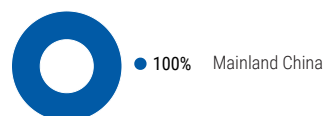
Date	Event
21 Aug 2023 - 25 Aug 2023	Half Year 2023 Zhaojin Mining Industry Co Ltd Earnings Release
18 Oct 2023 - 23 Oct 2023	Q3 2023 Zhaojin Mining Industry Co Ltd Earnings Release

Source: Refinitiv, Morgan Stanley

INVESTMENT DRIVERS

- Holding inventory on speculation of higher gold prices later on
- Significant accretive acquisitions

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies [here](#)

MS ALPHA MODELS

4/5
MOST
3 Month
Horizon

Source: Refinitiv, FactSet, Morgan Stanley Research; 1 is the highest favored Quintile and 5 is the least favored Quintile

SUSTAINABILITY & ESG



RISKS TO PT/RATING

RISKS TO UPSIDE

- Stronger-than-expected gold prices move the share price toward our bull case
- Further RMB depreciation
- Production volume increases more than expected

RISKS TO DOWNSIDE

- Falling gold prices amid US dollar strength
- Execution risk in new projects
- Increased borrowings lead to higher financing costs and weigh on near-term earnings

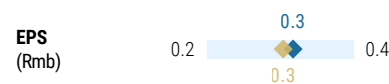
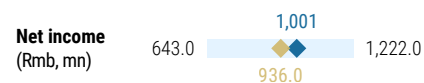
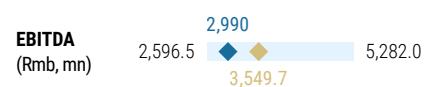
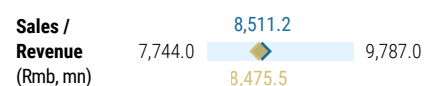
OWNERSHIP POSITIONING

Inst. Owners, % Active 44%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2023e



◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

Risk Reward Reference links

1. View explanation of Options Probabilities methodology - [Options_Probabilities_Exhibit_Link.pdf](#)
2. View descriptions of Risk Rewards Themes - [RR_Themes_Exhibit_Link.pdf](#)
3. View explanation of regional hierarchies - [Microsoft PowerPoint - Exhibit Links.pptx](#)
4. View explanation of 'Indicator of Change' methodology - [ESG_Indicator_of_Change_External_Link.pdf](#)
5. View explanation of Theme/Exposure methodology - [ESG_Sustainable_Solutions_External_Link.pdf](#)
6. View explanation of HERS methodology - [ESG_HERS_External_Link.pdf](#)

Disclosure Section

The information and opinions in Morgan Stanley Research were prepared or are disseminated by Morgan Stanley Asia Limited (which accepts the responsibility for its contents) and/or Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research), and/or Morgan Stanley Taiwan Limited and/or Morgan Stanley & Co International plc, Seoul Branch, and/or Morgan Stanley Australia Limited (A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents), and/or Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents), and/or Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105); Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at 18th Floor, Tower 2, One World Center, Plot- 841, Jupiter Textile Mill Compound, Senapati Bapat Marg, Lower Parel, Mumbai 400013, India Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Anil Shenoy, Tel. No.: +91-22-61181000 or Email: Anil.Shenoy@morganstanley.com; Grievance officer details: Mr. Anil Shenoy, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com which accepts the responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research, and their affiliates (collectively, "Morgan Stanley").

For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/researchdisclosures, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

For valuation methodology and risks associated with any recommendation, rating or price target referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Sara Chan; Chris Jiang; Yujie Wang; Hannah Yang, CFA; Rachel L Zhang.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflict/policies. A Portuguese version of the policy can be found at www.morganstanley.com.br

Important Regulatory Disclosures on Subject Companies

As of June 30, 2023, Morgan Stanley beneficially owned 1% or more of a class of common equity securities of the following companies covered in Morgan Stanley Research: Aluminum Corp. of China Ltd., Angang Steel Company Limited, China Lesso Group Holdings Ltd, China Steel Corp., Jiangxi Copper, Shandong Nanshan Aluminium Co..

Within the last 12 months, Morgan Stanley managed or co-managed a public offering (or 144A offering) of securities of Zhaojin Mining Industry.

Within the last 12 months, Morgan Stanley has received compensation for investment banking services from Beijing New Building Materials PLC, Tianqi Lithium Industries Inc..

In the next 3 months, Morgan Stanley expects to receive or intends to seek compensation for investment banking services from China Steel Corp., CMOG Group Ltd, Ganfeng Lithium Co. Ltd., Jiangxi Copper, Shandong Gold Mining Co. Ltd, Tianqi Lithium Industries Inc., Zhejiang Huayou Cobalt Co Ltd, Zijin Mining Group.

Within the last 12 months, Morgan Stanley has received compensation for products and services other than investment banking services from China Jushi, China Steel Corp., CMOG Group Ltd, Tianqi Lithium Industries Inc., Xinyi Glass Holding Limited, Zijin Mining Group.

Within the last 12 months, Morgan Stanley has provided or is providing investment banking services to, or has an investment banking client relationship with, the following company: China Steel Corp., CMOG Group Ltd, Ganfeng Lithium Co. Ltd., Jiangxi Copper, Shandong Gold Mining Co. Ltd, Tianqi Lithium Industries Inc., Zhaojin Mining Industry, Zhejiang Huayou Cobalt Co Ltd, Zijin Mining Group.

Within the last 12 months, Morgan Stanley has either provided or is providing non-investment banking, securities-related services to and/or in the past has entered into an agreement to provide services or has a client relationship with the following company: China Jushi, China Steel Corp., CMOG Group Ltd, Tianqi Lithium Industries Inc., Xinyi Glass Holding Limited, Zijin Mining Group. The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues. Equity Research analysts' or strategists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report. Morgan Stanley trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of the debt research report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of June 30, 2023)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.

For disclosure purposes only (in accordance with FINRA requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1353	37%	280	44%	21%	607	39%
Equal-weight/Hold	1658	46%	293	46%	18%	716	46%
Not-Rated/Hold	2	0%	0	0%	0%	0	0%
Underweight/Sell	610	17%	68	11%	11%	224	14%
Total	3,623		641			1547	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Important Disclosures for Morgan Stanley Smith Barney LLC & E*TRADE Securities LLC Customers

Important disclosures regarding the relationship between the companies that are the subject of Morgan Stanley Research and Morgan Stanley Smith Barney LLC or Morgan Stanley or any of their affiliates, are available on the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures. For Morgan Stanley specific disclosures, you may refer to www.morganstanley.com/researchdisclosures.

Each Morgan Stanley research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC and E*TRADE Securities LLC. This review and approval is conducted by the same person who reviews the research report on behalf of Morgan Stanley. This could create a conflict of interest.

Other Important Disclosures

Morgan Stanley Research policy is to update research reports as and when the Research Analyst and Research Management deem appropriate, based on developments with the issuer, the sector, or the market that may have a material impact on the research views or opinions stated therein. In addition, certain Research publications are intended to be updated on a regular periodic basis (weekly/monthly/quarterly/annual) and will ordinarily be updated with that frequency, unless the Research Analyst and Research Management determine that a different publication schedule is appropriate based on current conditions.

Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at <http://www.morganstanley.com/matrix>.

Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at <http://www.morganstanley.com/matrix>.

Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (<http://www.morganstanley.com/terms.html>). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound by our Terms of Use (<http://www.morganstanley.com/terms.html>). In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan Stanley

processes personal data, how we use cookies and how to reject cookies see our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html). If you do not agree to our Terms of Use and/or if you do not wish to provide your consent to Morgan Stanley processing your personal data or using cookies please do not access our research. Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

The "Important Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management.

Morgan Stanley may make investment decisions that are inconsistent with the recommendations or views in this report.

To our readers based in Taiwan or trading in Taiwan securities/instruments: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Any non-customer reader within the scope of Article 7-1 of the Taiwan Stock Exchange Recommendation Regulations accessing and/or receiving Morgan Stanley Research is not permitted to provide Morgan Stanley Research to any third party (including but not limited to related parties, affiliated companies and any other third parties) or engage in any activities regarding Morgan Stanley Research which may create or give the appearance of creating a conflict of interest. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

Certain information in Morgan Stanley Research was sourced by employees of the Shanghai Representative Office of Morgan Stanley Asia Limited for the use of Morgan Stanley Asia Limited. Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves. Neither this report nor any part of it is intended as, or shall constitute, provision of any consultancy or advisory service of securities investment as defined under PRC law. Such information is provided for your reference only.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A. located at Av. Brigadeiro Faria Lima, 3600, 6th floor, São Paulo - SP, Brazil; and is regulated by the Comissão de Valores Mobiliários; in Mexico by Morgan Stanley México, Casa de Bolsa, S.A. de C.V. which is regulated by Comisión Nacional Bancaria y de Valores. Paseo de los Tamarindos 90, Torre 1, Col. Bosques de las Lomas Floor 29, 05120 Mexico City; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents) and by Morgan Stanley Bank Asia Limited; in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and by Morgan Stanley Bank Asia Limited, Singapore Branch (Registration number T14FC0118); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105); Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at 18th Floor, Tower 2, One World Center, Plot- 841, Jupiter Textile Mill Compound, Senapati Bapat Marg, Lower Parel, Mumbai 400013, India Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Anil Shenoy, Tel. No.: +91-22-61181000 or Email: Anil.Shenoy@morganstanley.com; Grievance officer details: Mr. Anil Shenoy, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com; in Canada by Morgan Stanley Canada Limited; in Germany and the European Economic Area where required by Morgan Stanley Europe S.E., authorised and regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin) under the reference number 14-9169; in the US by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, disseminates in the UK research that it has prepared, and research which has been prepared by any of its affiliates, only to persons who (i) are investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"); (ii) are persons who are high net worth entities falling within Article 49(2)(a) to (d) of the Order; or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000, as amended) may otherwise lawfully be communicated or caused to be communicated. RMB Morgan Stanley Proprietary Limited is a member of the JSE Limited and A2X (Pty) Ltd. RMB Morgan Stanley Proprietary Limited is a joint venture owned equally by Morgan

Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited. The information in Morgan Stanley Research is being disseminated by Morgan Stanley Saudi Arabia, regulated by the Capital Market Authority in the Kingdom of Saudi Arabia, and is directed at Sophisticated investors only.

Morgan Stanley Hong Kong Securities Limited is the liquidity provider/market maker for securities of Aluminum Corp. of China Ltd., CMOG Group Ltd, Ganfeng Lithium Co. Ltd., Jiangxi Copper, Shandong Gold Mining Co. Ltd, Xinyi Glass Holding Limited, Zhaojin Mining Industry, Zijin Mining Group listed on the Stock Exchange of Hong Kong Limited. An updated list can be found on HKEx website: <http://www.hkex.com.hk>.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA), and is directed at Professional Clients only, as defined by the DFSA. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria to be a Professional Client. A distribution of the different MS Research ratings or recommendations, in percentage terms for Investments in each sector covered, is available upon request from your sales representative.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided exclusively to persons based on their risk and income preferences by the authorized firms. Comments and recommendations stated here are general in nature. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Indicators and trackers referenced in Morgan Stanley Research may not be used as, or treated as, a benchmark under Regulation EU 2016/1011, or any other similar framework.

The issuers and/or fixed income products recommended or discussed in certain fixed income research reports may not be continuously followed. Accordingly, investors should regard those fixed income research reports as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or individual fixed income products.

Morgan Stanley may hold, from time to time, material financial and commercial interests regarding the company subject to the Research report.

Registration granted by SEBI and certification from the National Institute of Securities Markets (NISM) in no way guarantee performance of the intermediary or provide any assurance of returns to investors. Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

INDUSTRY COVERAGE: Greater China Materials

COMPANY (TICKER)	RATING (AS OF)	PRICE* (07/21/2023)
Chris Jiang		
CGN Mining Co Ltd (1164.HK)	O (01/18/2023)	HK\$0.80
Hannah Yang, CFA		
CSG Holding Co., Ltd. (000012.SZ)	U (07/04/2022)	Rmb5.93
Flat Glass Group Co Ltd (6865.HK)	O (07/30/2020)	HK\$23.00
Flat Glass Group Co Ltd (601865.SS)	O (07/30/2020)	Rmb33.90
Jiangsu Pacific Quartz Co Ltd (603688.SS)	E (04/25/2023)	Rmb103.62
MMG Ltd (1208.HK)	U (07/13/2022)	HK\$2.78
Shandong Pharmaceutical Glass Co. Ltd. (600529.SS)	O (01/04/2021)	Rmb26.29
Triumph New Energy Co Ltd (1108.HK)	O (07/14/2021)	HK\$5.89
Triumph New Energy Co Ltd (600876.SS)	O (07/14/2021)	Rmb16.17
Xinyi Glass Holding Limited (0868.HK)	E (09/30/2021)	HK\$11.78
Zhuzhou Kibing Group Co Ltd (601636.SS)	U (07/04/2022)	Rmb8.58
Rachel L Zhang		
Aluminum Corp. of China Ltd. (601600.SS)	O (11/30/2020)	Rmb5.86
Aluminum Corp. of China Ltd. (2600.HK)	O (11/30/2020)	HK\$3.52
Angang Steel Company Limited (0347.HK)	O (11/28/2013)	HK\$2.06
Angang Steel Company Limited (000898.SZ)	O (01/09/2018)	Rmb2.80
Baoshan Iron & Steel (600019.SS)	O (01/16/2016)	Rmb5.76
Beijing New Building Materials PLC (000786.SZ)	O (10/20/2022)	Rmb25.62
Beijing Oriental Yuhong Waterproof Techn (002271.SZ)	O (10/20/2022)	Rmb27.59
China Jushi (600176.SS)	O (12/22/2020)	Rmb13.98
China Lesso Group Holdings Ltd (2128.HK)	U (10/20/2022)	HK\$4.91
CMOC Group Ltd (3993.HK)	O (09/24/2019)	HK\$4.86
CMOC Group Ltd (603993.SS)	E (09/24/2019)	Rmb5.81
Ganfeng Lithium Co. Ltd. (002460.SZ)	E (06/16/2020)	Rmb58.44
Ganfeng Lithium Co. Ltd. (1772.HK)	O (06/16/2020)	HK\$49.50
Guangdong Jia Yuan Technology Co., Ltd. (688388.SS)	U (04/25/2023)	Rmb23.96

Henan Liliang Diamond Co. Ltd (301071.SZ)	O (06/14/2022)	Rmb39.90
Jiangxi Copper (0358.HK)	O (09/24/2019)	HK\$12.48
Jiangxi Copper (600362.SS)	E (09/24/2019)	Rmb19.05
JL Mag Rare-Earth Co. Ltd (6680.HK)	O (05/26/2022)	HK\$12.88
JL Mag Rare-Earth Co. Ltd (300748.SZ)	E (05/26/2022)	Rmb18.10
Lee & Man Paper Manufacturing (2314.HK)	E (01/04/2023)	HK\$2.57
Maanshan Iron & Steel (0323.HK)	E (03/24/2021)	HK\$1.42
Maanshan Iron & Steel (600808.SS)	E (03/24/2021)	Rmb2.58
Nine Dragons Paper (2689.HK)	E (01/04/2023)	HK\$4.81
Nuode New Materials Co Ltd (600110.SS)	U (04/25/2023)	Rmb6.91
Shandong Nanshan Aluminium Co. (600219.SS)	O (11/30/2020)	Rmb3.09
Tianqi Lithium Industries Inc. (9696.HK)	O (08/22/2022)	HK\$47.90
Tianqi Lithium Industries Inc. (002466.SZ)	O (08/22/2022)	Rmb66.23
Tongling Jingda Special Magnet Wire Co (600577.SS)	E (04/25/2023)	Rmb4.18
Weixing New Building Materials (002372.SZ)	O (10/20/2022)	Rmb20.22
Sara Chan		
FangDa Carbon New Material Co. Ltd. (600516.SS)	O (01/05/2021)	Rmb5.97
Shandong Gold Mining Co. Ltd (600547.SS)	U (11/06/2018)	Rmb25.35
Shandong Gold Mining Co. Ltd (1787.HK)	E (11/06/2018)	HK\$15.96
Zhaojin Mining Industry (1818.HK)	E (03/25/2021)	HK\$11.48
Zhongjin Gold Corp. Ltd. (600489.SS)	E (04/13/2022)	Rmb11.13
Zijin Mining Group (2899.HK)	O (07/09/2019)	HK\$12.74
Zijin Mining Group (601899.SS)	O (07/13/2022)	Rmb12.53
Yujie Wang		
Chengxin Lithium Group Co. Ltd. (002240.SZ)	E (11/25/2022)	Rmb27.70
China Steel Corp. (2002.TW)	U (01/04/2023)	NT\$29.25
GEM Co Ltd (002340.SZ)	E (07/13/2022)	Rmb6.92
Sinomine Resource Group Co Ltd (002738.SZ)	O (11/25/2022)	Rmb46.06
Yongxing Special Materials Technology (002756.SZ)	E (11/25/2022)	Rmb53.42
Zhejiang Huayou Cobalt Co Ltd (603799.SS)	O (02/23/2021)	Rmb49.82

Stock Ratings are subject to change. Please see latest research for each company.

* Historical prices are not split adjusted.