

North American Precious Metals Weekly

2023 recap: a volatile year for precious metals, but it ended on a high note

Price Objective Change

Q4'23 marked a sharp positive turn for precious metals

We review the Q4'23 and 2023 performance of the precious metals and the related equities. In Q4'23, the gold price increased 12% while silver was up 7%. Strong Q4'23 gold and silver prices were driven by sharply lower real rates as well as Israel-Gaza tensions. Real rates (US 10-yr TIPS) fell to 1.7% at year-end, far below the October peak of 2.5%. For full year 2023, gold increased 13% while silver declined by 1%.

Q4'23 was similarly very strong for the equities

The S&P/TSX Global Gold (STGD) Index in Q4'23 increased 16% to 215 points and the Philadelphia Gold and Silver Index (XAU) was up 17% to 126 points. Q4 top performing equities: Harmony Gold (+74%), New Gold (+60%), Regis Resources (+55%), Eldorado (+46%), and Anglo American Platinum (+41%). Underperformers: SSR Mining (-19%), Franco-Nevada (-17%), Sibanye (-12%), Impala Platinum (-4%) and Triple Flag (+2%).

2023: gold +13% but equities underperformed the metal

Precious metal indices ended the year higher with the STGD Index and the XAU Index both 4% higher, materially underperforming the gold price which appreciated 13% in 2023. Among BofA's global precious metals coverage, performance in 2023 was mixed. Many platinum group metal (PGM) producers declined sharply on weak palladium (-39%) and platinum (-8%) prices, while gold exposed equities fared better. Two notable underperformers were Franco and SSR which both experienced idiosyncratic issues (the closure of the Cobre Panama mine, and weak 2024+ guidance respectively). Top 2023 performers were mostly high-beta names with high-cost and leverage. Top 2023 performers: Harmony Gold (+90%), Hochschild Mining (+61%), Eldorado Gold (+55%), New Gold (+49%), Kinross (+48%), Underperformers: Impala Platinum (-60%), Sibanye (-48%), Anglo American Platinum (-37%), SSR Mining (-31%) and Fresnillo (-30%).

Themes from each quarter of 2023

In Q1'23, the price of gold appreciated 8%. Most gold equities performed well – top outperformers were from among the underperformers of 2022, including Centerra, Eldorado, and the South African gold miners. In Q2'23, every gold stock we cover underperformed the S&P500 (+8%) as the broader equity markets shook-off SVIB bank liquidity and debt ceiling concerns, and embraced the surprisingly resilient U.S. economy. The PGM and silver stocks were the biggest Q2'23 underperformers. In Q3'23, gold prices were sluggish, down 4% as real rates continued rising. Most precious metal equities declined, with the majority materially underperforming the S&P500 (-4%). In Q4'23, the price of gold rebounded strongly, up 13%, after the Federal reserve indicated a preference for rate cuts in 2024, leading U.S. real rates to decline sharply. The vast majority of gold exposed equities strongly outperformed the S&P500 (+11%).

We increase PO's for HBM and PAAS and update estimates for FNV and IAG (pages 2-3).

>> Employed by a non-US affiliate of BofAS and is not registered/qualified as a research analyst under the FINRA rules.

Refer to "Other Important Disclosures" for information on certain BofA Securities entities that take responsibility for the information herein in particular jurisdictions.

BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Refer to important disclosures on page 24 to 26. Analyst Certification on page 23. Price Objective Basis/Risk on page 22.

12639945

Timestamp: 02 January 2024 05:30AM EST

02 January 2024

Equity
Americas
Gold & Precious Metals

Lawson Winder, CFA >>
Research Analyst
Merrill Lynch (Canada)
+1 416 369 7592
lawson.winder@bofa.com

Harmen Puri >>
Research Analyst
Merrill Lynch (Canada)
+1 416 369 7540
harmen.puri@bofa.com

Sathish Kasinathan
Research Analyst
BofAS
sathish.kasinathan@bofa.com

See Team Page for List of Analysts

Exhibit 1: Real prices of key metals

BofA sees gold at \$1,975/oz in 2024E

	2023A	2024E
Gold, real (\$/oz)	1,943	1,975
Silver, real (\$/oz)	23.40	23.26
Palladium (\$/oz)	1,340	750
Platinum (\$/oz)	968	1,050
Copper (\$/lb)	3.85	3.91

Source: Bloomberg, BofA Global Research
BofA GLOBAL RESEARCH

NAV = net asset value

WoW: week-over-week

YTD: year-to-date

ETF: exchange traded fund

NAV: net asset value

Cap: capitalization

PO: Price Objective

yoy: year-over-year

AMC: After market close

BMO: Before market open

mn: million

bn: billion

IRR = internal rate of return

Exhibit 2: Gold Indices and Closing Prices

Week-over-Week changes in key metals prices and indices

	29-Dec-23	22-Dec-23	Weekly	52 Week	
	Close		% Change	High	Low
Gold Indices					
Philadelphia Gold and Silver Index (XAU)	125.69	127.94	-1.8%	145.15	102.39
NYSE Arca Exchange Gold Bugs Index (HUI)	243.31	247.91	-1.9%	284.46	197.04
S&P/TSX Global Gold Index	284.56	290.28	-2.0%	345.05	244.14
FT Australasia Gold Index	10,223.52	11,565.76	-11.6%	12,259.24	8,765.00
FT Africa Gold Index	2,555.89	2,565.18	-0.4%	3,075.09	1,765.76
FT North American Gold Index	1,402.60	1,414.98	-0.9%	1,584.24	1,134.17
FT All Gold Mines Index	1,924.54	1,932.22	-0.4%	2,163.38	1,512.48
Precious Metal Prices					
Gold Prices - US\$/oz	2,062.98	2,053.08	0.5%	2,135.39	1,804.92
Silver Price - US\$/oz	23.80	24.19	-1.6%	26.14	19.90
Platinum Price - US\$/oz	991.90	976.60	1.6%	1,134.95	843.10
Palladium Price - US\$/oz	1,100.24	1,205.81	-8.8%	1,843.18	925.11

Source: Bloomberg

BofA GLOBAL RESEARCH

Gold closes out 2023 north of \$2,000/oz

Pushed by a falling US dollar, surging central bank purchases (led by China and Türkiye), and heightened geopolitical tensions (Ukraine and Gaza), gold ended the year at \$2,063 per ounce (/oz) representing an increase of 13.1%. The bullion price averaged a stunning \$1,943/oz in 2023, +7.8% vs. \$1,803/oz in 2022. BofA is forecasting for gold to average \$1,975/oz in 2024E (silver is forecast to average \$23.26/oz). In our view, gold could rise to \$2,400/oz end of 2024, if rate cuts start before Q2'24. Currently, the market is pricing in one cut in March 2024 and a total of 6 rate cuts for full year 2024, bringing down the federal funds rates between 3.75% to 4.00%. Gold's trajectory should be guided by US economic data, with the US CPI print and US non-farm payrolls being key gauges for overall economic health. Gold equities were lower last week with the S&P/TSX Global Gold Index down 2.0%, the Philadelphia Gold and Silver Index (XAU) down 1.8% and the NYSE Arca Exchange Gold Bugs Index (HUI) down 1.9%.

Estimate Changes**Precious metal changes**

Franco-Nevada (FNV): Last Thursday (28-Dec-23), Gold Fields (GFI) announced that its Salares Norte project in Chile is delayed in starting-up due to difficulties in pre-commissioning and commissioning activities. First gold production from Salares Norte is now expected in April 2024 with full-year 2024 production guided to be 220-250 thousand gold equivalent ounces (k GEO). This compares to prior guidance (reiterated with the Q3'23 operations update on 16-Nov-23) of first gold production in December 2023, 2023 production of 0.1k GEO, and 2024 production of in-the-range-of 400k GEO. GFI continues to expect run-rate production of 600k GEO to be realized in 2025 and 2026. FNV holds a 2% net smelter return (NSR) royalty on all production from Salares Norte, with GFI holding an option to repurchase 1% of the 2% NSR within 24 months following the declaration of commercial production. We continue to assume GFI exercises this repurchase option immediately upon Salares Norte reaching commercial production (in late 2024E). As a result of the delays announced last week by GFI, we reduce our 2024E attributable production for FNV to 628k GEO from 630k GEO, and reduce our 2024E EPS for FNV to \$3.24 from \$3.26. On base case estimates, FNV is trading at a small discount to its senior royalty/streaming peers (RGLD and WPM) vs. a historical premium, we maintain our Buy rating.

IAMGOLD (IAG): We update our Essakane model for the recent technical report filing ([see BofA: Higher reserves drive a longer mine life, LoM costs and capex better than expected](#)). We increased our NAV for Essakane to \$445mn (was \$221mn). We adjust our discount rate to 10% (from 5%) given the complex security situation in North Burkina Faso. We increase our Price Objective (PO) to C\$4.40/\$3.20 (from C\$4.10/\$3.00).

Reiterate Buy rating on re-rate potential with the large-scale and long mine-life Côté project expected to commence production in early 2024.

Pan American Silver (PAAS): We update our La Colorada Skarn model for the recently released preliminary economic assessment (PEA) – see our note ([see BofA: La Colorada Skarn PEA suggests solid economics at scale, but daunting capex, 19-Dec-23](#)). We now value the asset at \$470mn (\$1.23/sh) versus prior carrying value of nil. We assume the 50,000 tonnes per day (tpd) scenario in our base case model, though apply conservatism on costs given PEA-level study and potential inflationary impacts. We increase our Price Objective (PO) to \$18.75 (from \$17.25). We continue to view PAAS as a liquid vehicle of choice for balanced gold and silver exposure, two metals on which we are constructive. Reiterate Buy rating.

Base metal changes

Hudbay Minerals (HBM): We update our HBM model for the Copper World copper mining project to better reflect the latest technical report (slightly higher life of mine copper and gold production and slightly adjust lower cost assumptions). We assume construction of Copper World commences in mid-2026E with first production in 2029E. We also reduce our discount rate for Copper World to 11% from 12% to reflect a level of de-risking by delaying the construction of an on-site concentrate leaching circuit. As a result, we increase our 2024E net asset value (NAV) by 13%. Also, given that we expect 2024E to be a very strong year for HBM operationally due to the ramp-up of ore processing from the high-grade Pampacancha satellite pit near Constancia in Peru, we increase our 2024E EV/EBITDA target multiple to 3.5x from 3.0x, and we increase our 2025E EV/EBITDA target multiple to 3.0x from 2.5x. Our 2024E P/NAV target multiple is unchanged at 1.0x. As a result of these updates, we increase our price objective (PO) for HBM to \$6.25 (C\$8.50) per share from \$5.00 (C\$6.75) per share. Given a lack of clarity on the precise timing of Copper World, and thus the outlook for volume growth beyond 2024E and the consequent decline in copper production volumes post 2025E, balanced by the strong outlook for 2024E, we reiterate our Neutral rating.

Exhibit 3: Hudbay Minerals (HBM) model changes

Our 2024E NAV increase by 13% as we refine our Copper World life of mine model.

	2023E			2024E			2025E			2026E		
US\$ millions / per share	Old	New	% Chg	Old	New	% Chg	Old	New	% Chg	Old	New	% Chg
Revenues	1,641	1,641	0%	2,159	2,159	0%	2,308	2,308	0%	1,921	1,921	0%
Adjusted EBITDA	611	611	0%	900	900	0%	1,044	1,044	0%	868	868	0%
Adjusted net income	52	52	0%	287	287	0%	300	300	0%	87	87	0%
Adjusted EPS US\$/sh	0.17	0.17	0%	0.82	0.82	0%	0.86	0.86	0%	0.25	0.25	0%
Cashflow from operations (post cash interest)	352	352	0%	615	620	1%	602	607	1%	386	391	1%
Capex	310	310	0%	354	389	10%	544	471	-13%	1,329	322	-76%
Free cash flow	42	42	0%	261	231	-11%	58	136	135%	-943	69	-107%
Net debt (net cash)	1,170	1,170	0%	823	853	4%	779	731	-6%	1,728	668	-61%
NAV per share (USD)	6.50	6.80	5%	6.10	6.90	13%	6.70	7.90	18%	6.61	8.30	25%
Copper production (kt)	137	137	0%	171	171	0%	170	170	0%	154	154	0%
Zinc production (kt)	36	36	0%	39	39	0%	34	34	0%	38	38	0%
Precious metal production (koz)	332	332	0%	402	402	0%	303	303	0%	258	258	0%
Total cash costs (US\$/lb)	0.74	0.74	0%	0.78	0.78	0%	1.26	1.26	0%	1.16	1.16	0%

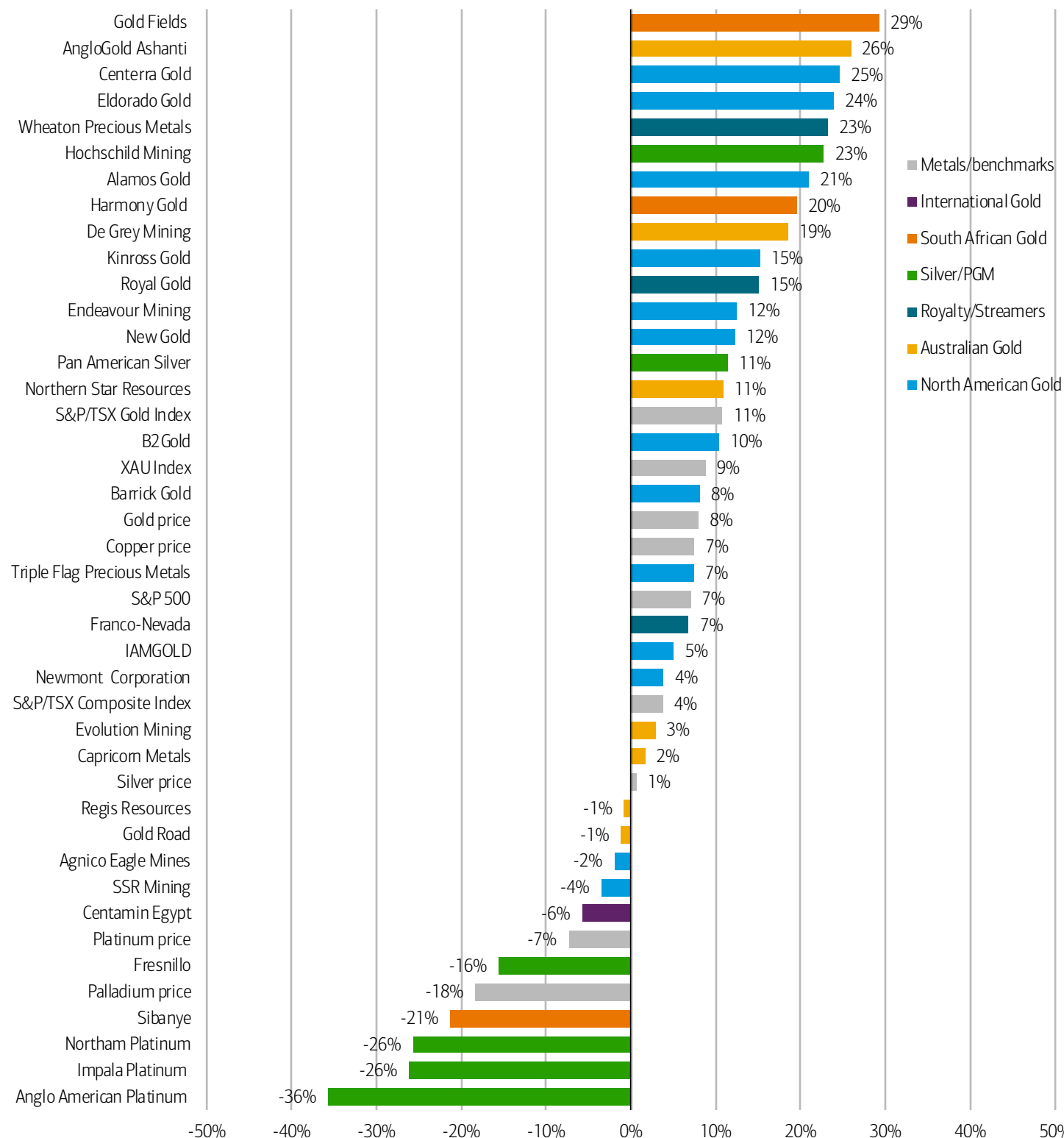
Source: BofA Global Research

BofA GLOBAL RESEARCH

Q1'23 returns for precious metals

Exhibit 4: Q1'23 returns

Q1'23 returns were supported by strong metal prices



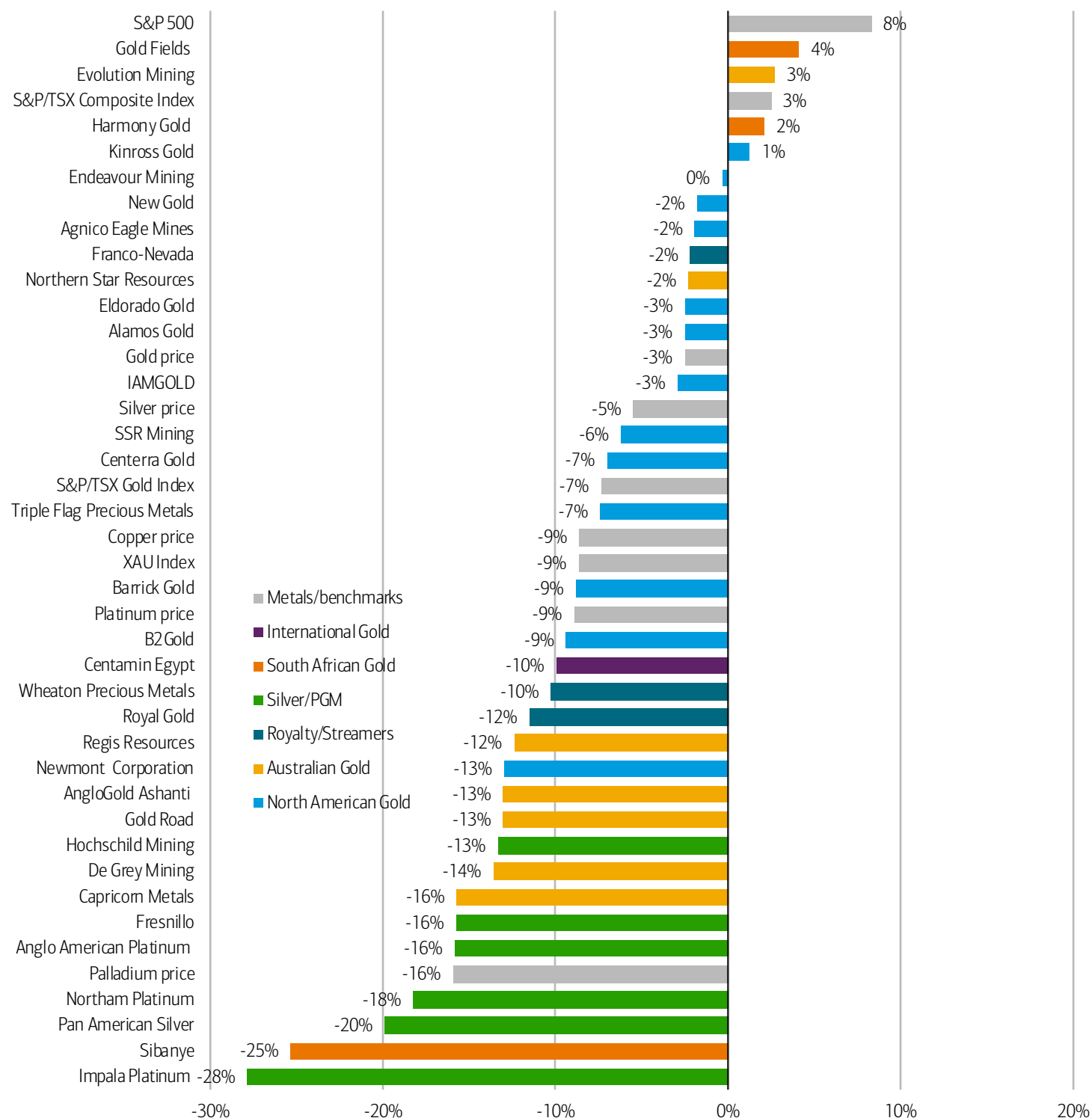
Source: Bloomberg. Note: this is a curated, not exhaustive list of global precious metal equities

BofA GLOBAL RESEARCH

Q2'23 returns for precious metals

Exhibit 5: Q2'23 returns

A tough quarter for precious metal equities with most equities much lower; gold price was down 3% and silver down 5%



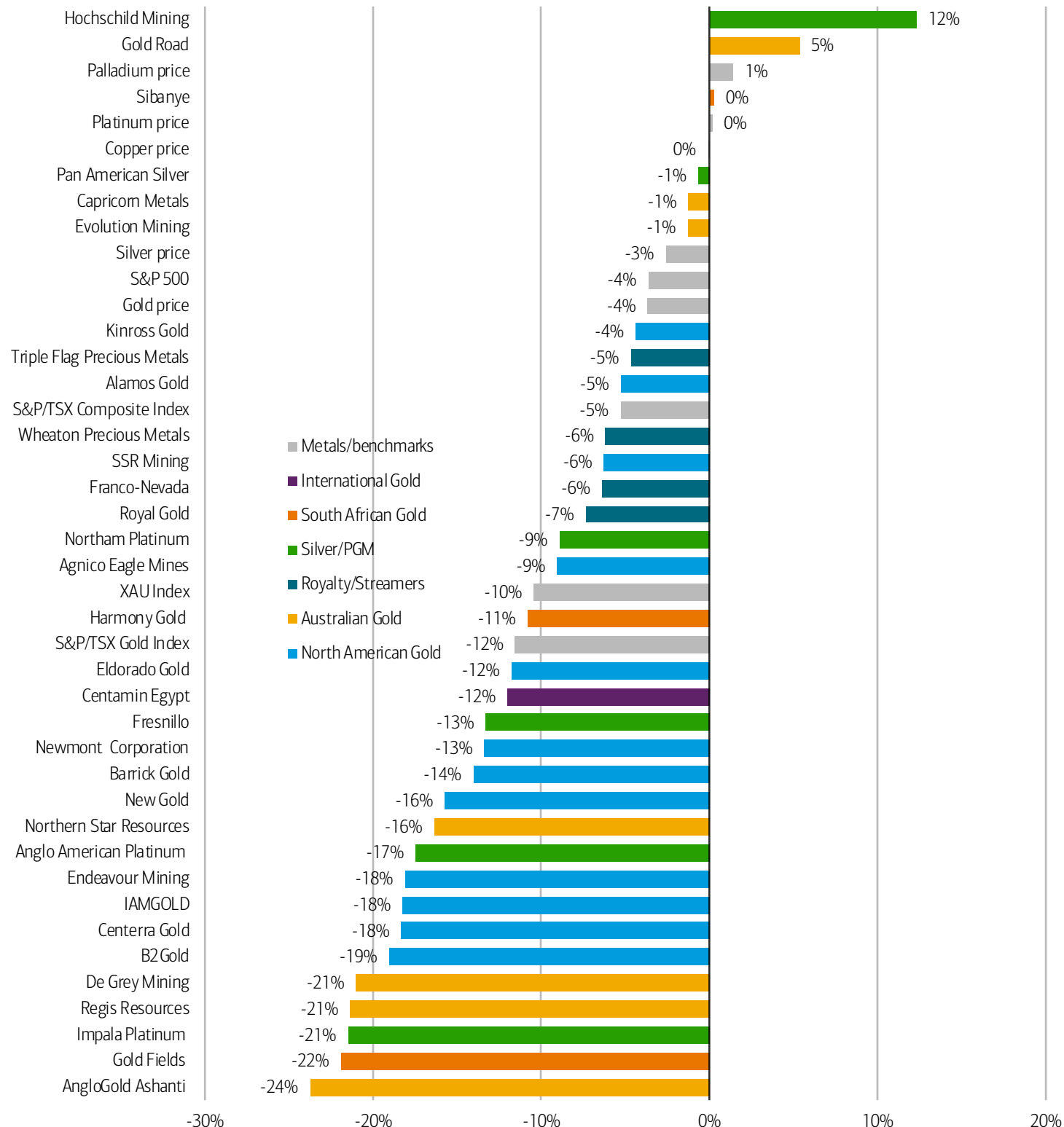
Source: Bloomberg. Note: this is a curated, not exhaustive list of global precious metal equities

BofA GLOBAL RESEARCH

Q3'23 returns for precious metals

Exhibit 6: Q3'23 returns

Q3'23 was another rough quarter for most precious metal equities with gold down 4% and silver down 3%



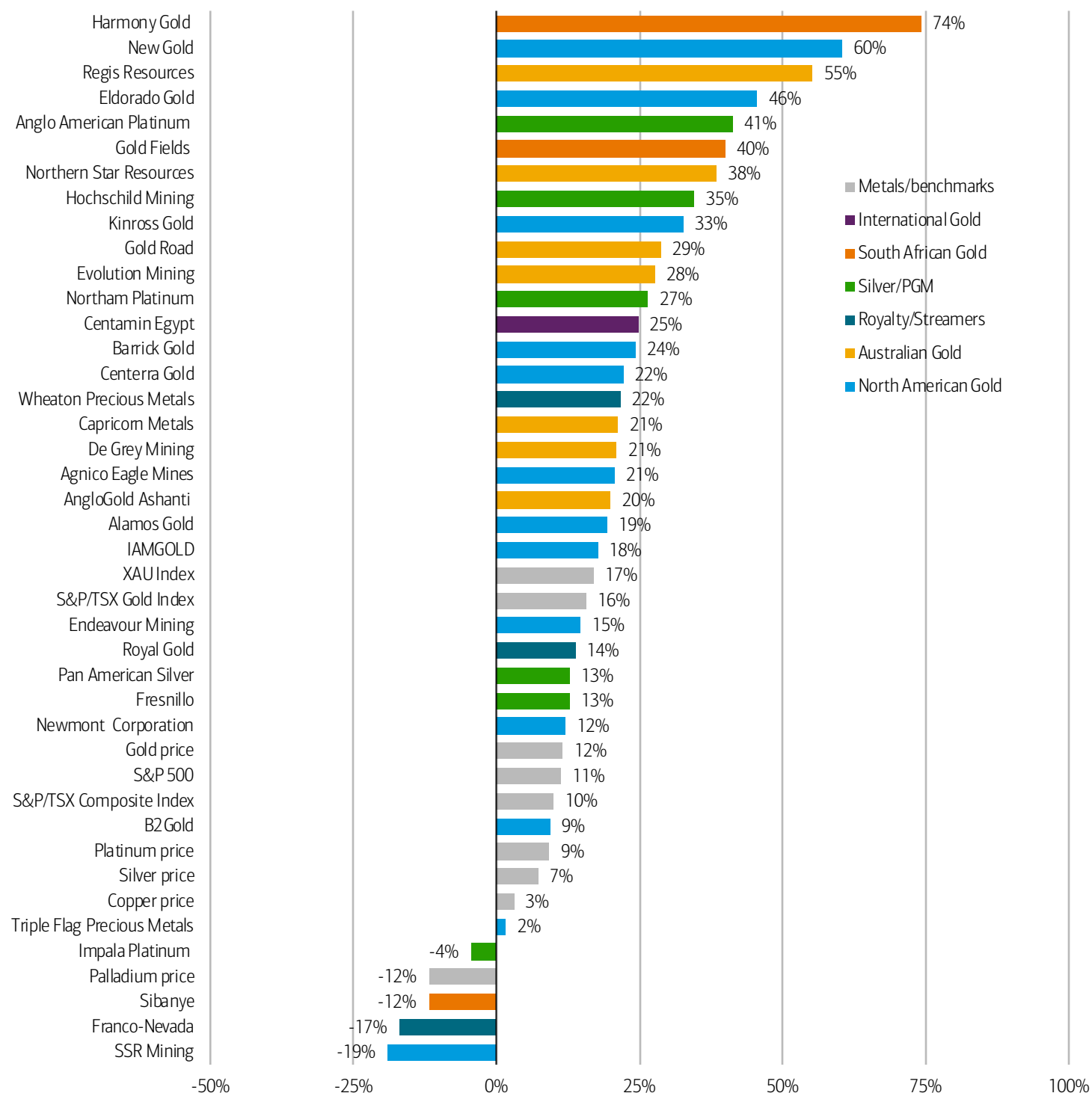
Source: Bloomberg. Note: this is a curated, not exhaustive list of global precious metal equities

BofA GLOBAL RESEARCH

Q4'23 returns for precious metals

Exhibit 7: Q4'23 Returns

Q4'23 was a strong quarter for equities following strong metal price performance with gold crossing above \$2,000/oz



Source: Bloomberg. Note: this is a curated, not exhaustive list of global precious metal equities

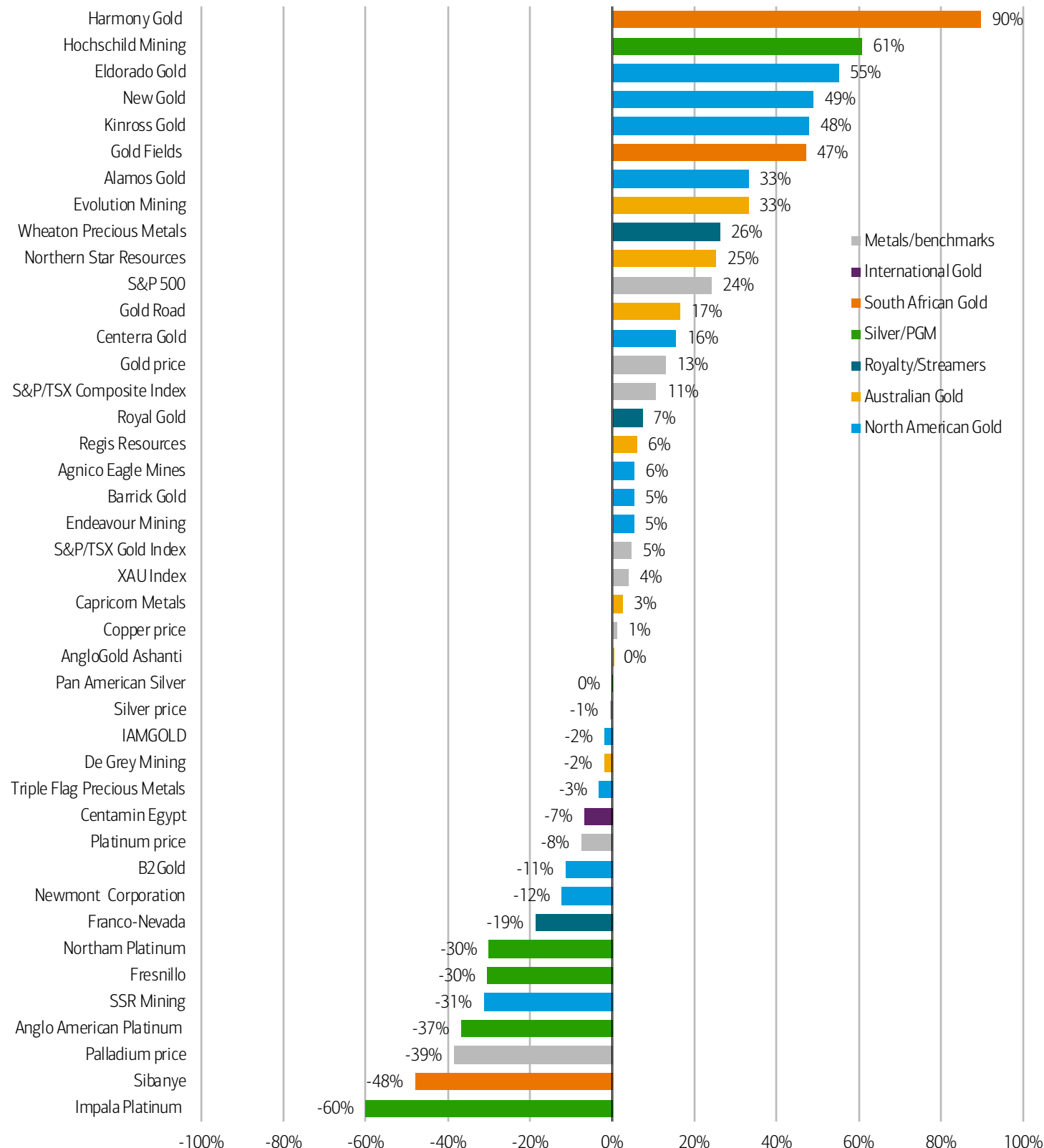
BofA GLOBAL RESEARCH



'23 YTD returns for the gold sector

Exhibit 8: 2023 returns

Strong gold prices supported company share prices but equity indices underperformed the gold price



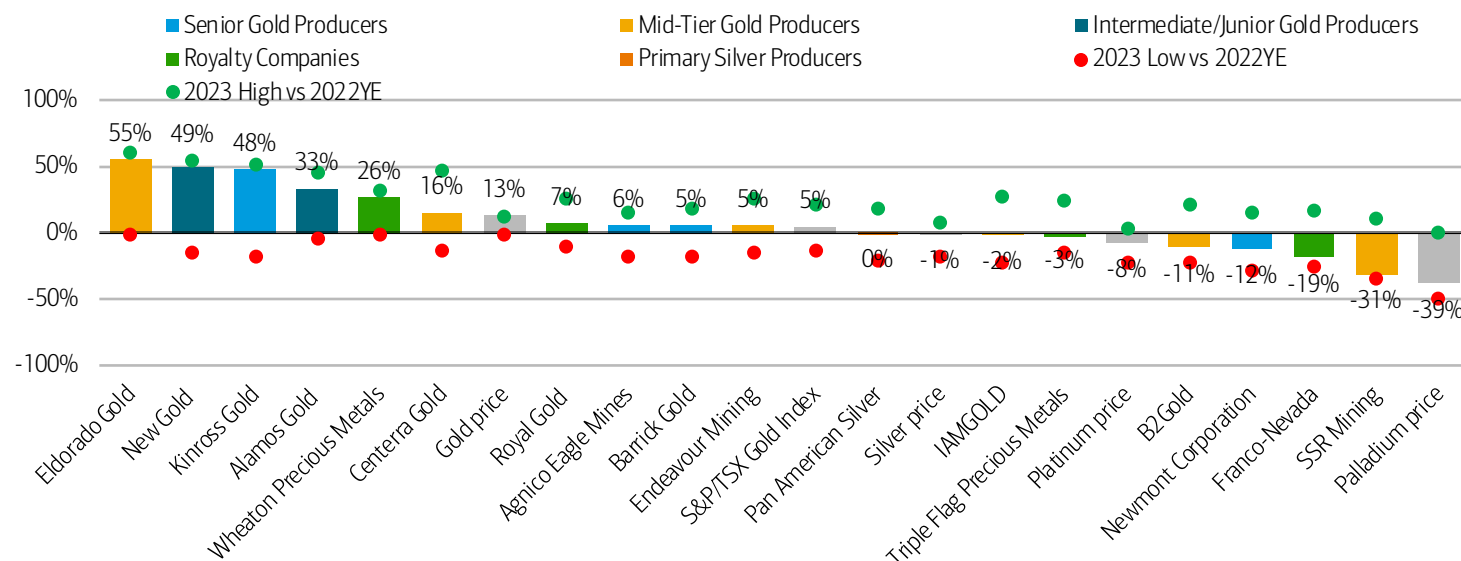
Source: BofA Global Research

BofA GLOBAL RESEARCH

2023 return ranges for the gold equities

Exhibit 9: Full-year 2023 returns for BofA North American precious metals coverage

Eldorado Gold the best performer +55%

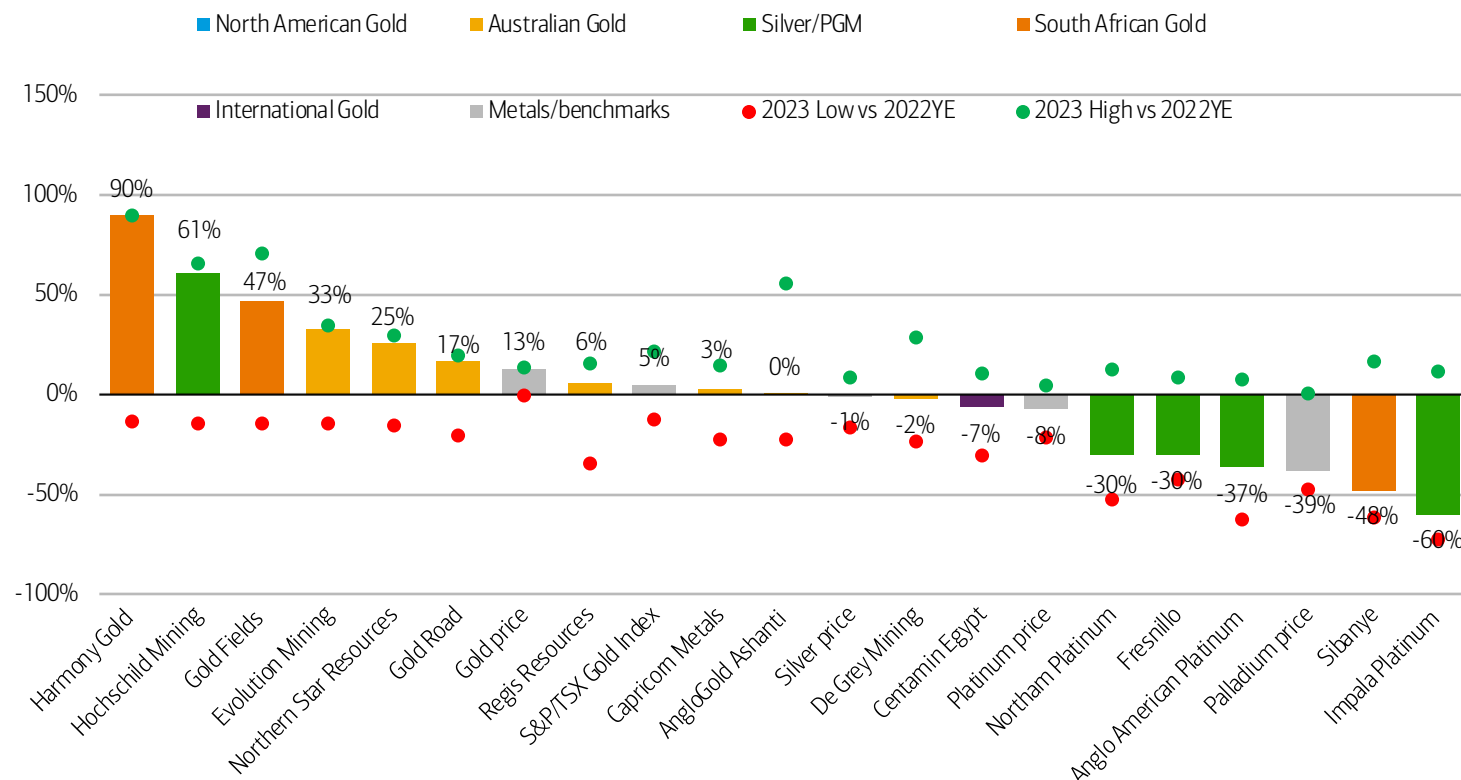


Source: Bloomberg

BofA GLOBAL RESEARCH

Exhibit 10: Full-year 2023 returns for global gold sector (excluding North American precious metal stocks covered by BofA)

Harmony Gold was the best global performer at +90%.



Source: BofA Global Research, Bloomberg

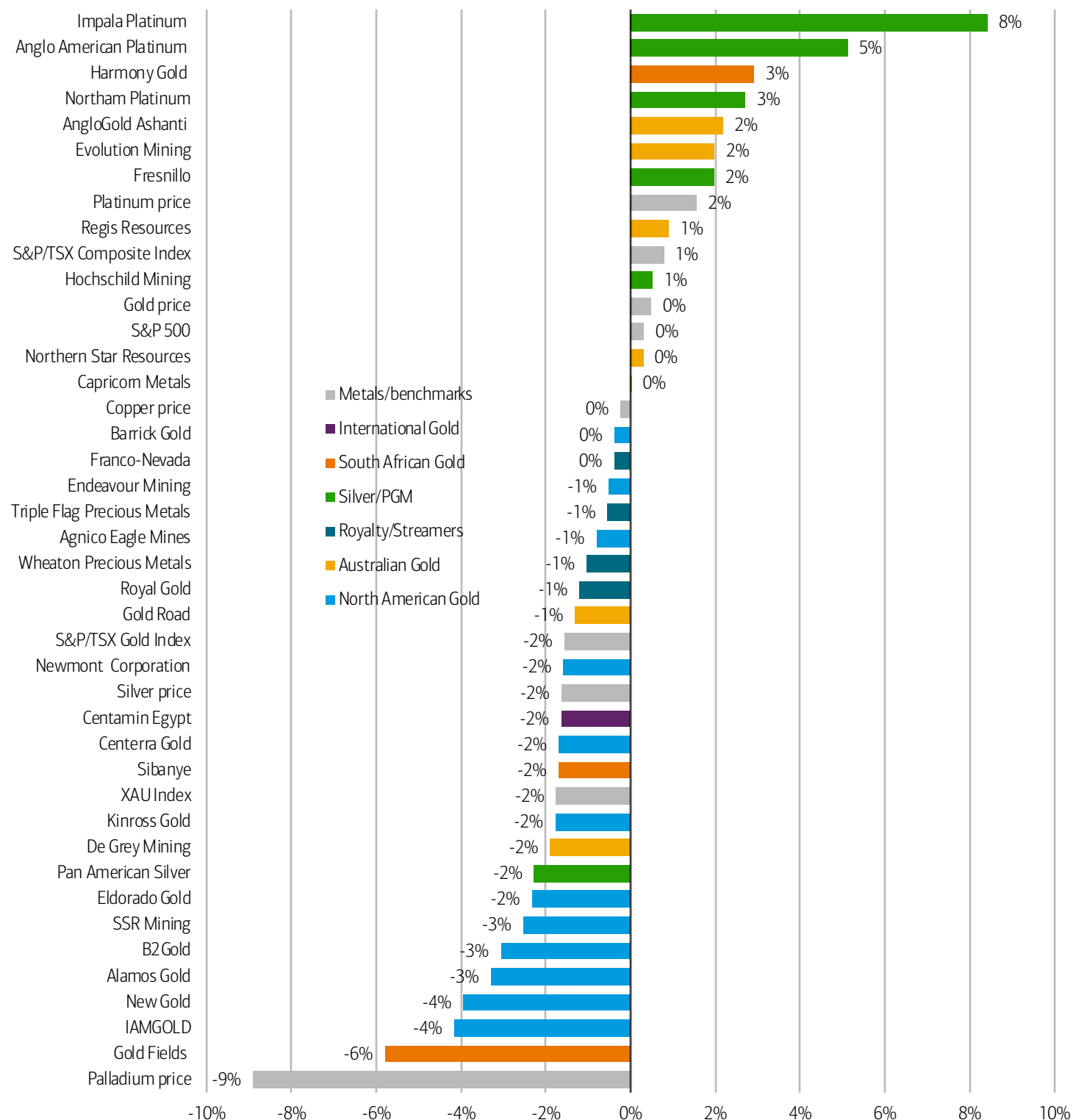
BofA GLOBAL RESEARCH



WoW returns for the gold sector

Exhibit 11: WoW returns for the global gold sector and key metals/benchmarks

Gold equities traded higher week-over-week due to climbing metal price. Impala Platinum was the best performer, up 8%.



Source: Bloomberg. Note: this is not an exhaustive list of global precious metal equities

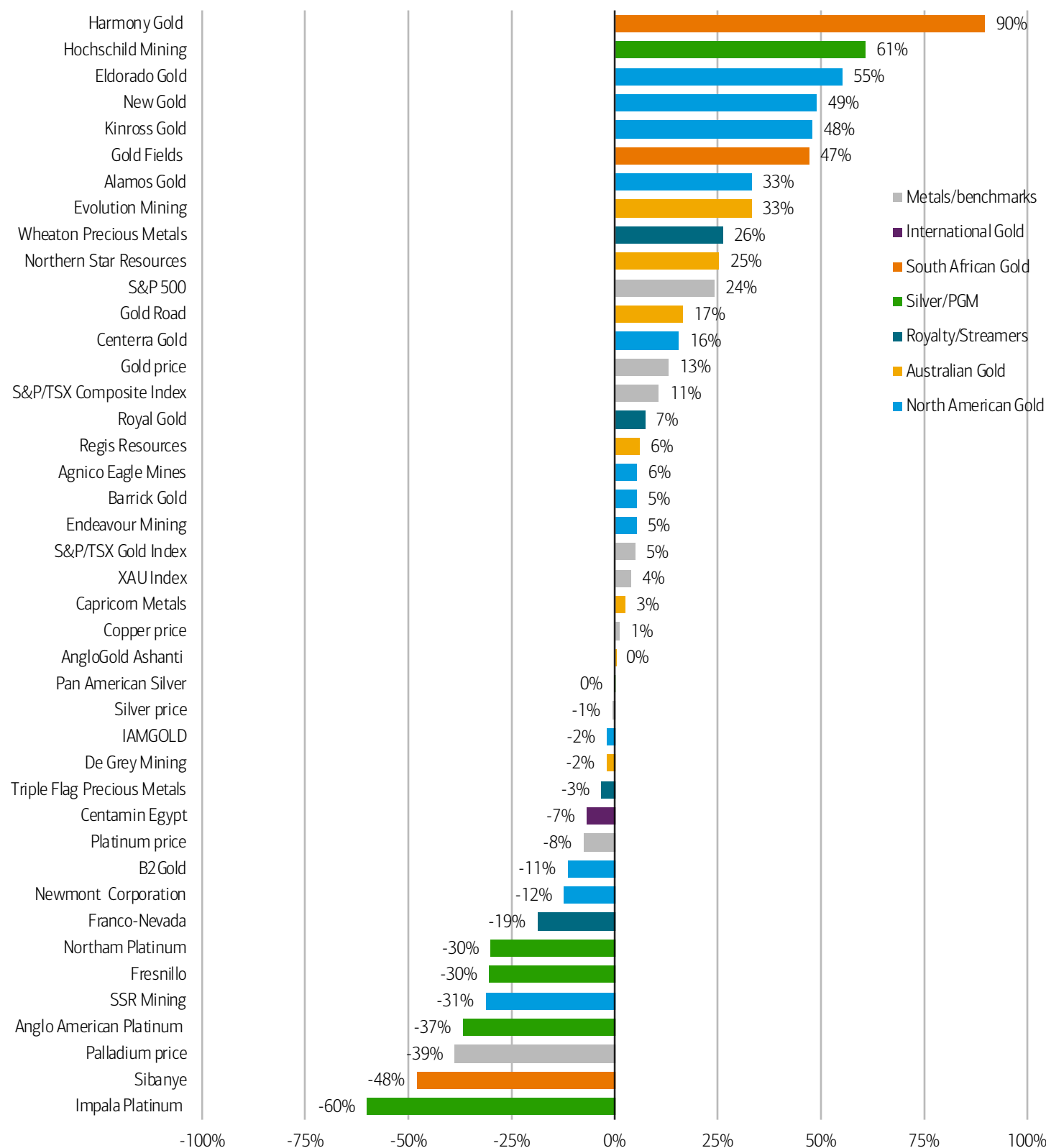
BofA GLOBAL RESEARCH



YTD returns for the gold sector (2023)

Exhibit 12: Year to date returns for the global gold sector and key metals/benchmarks

Harmony was the best performing precious metal stock in our global coverage in 2023



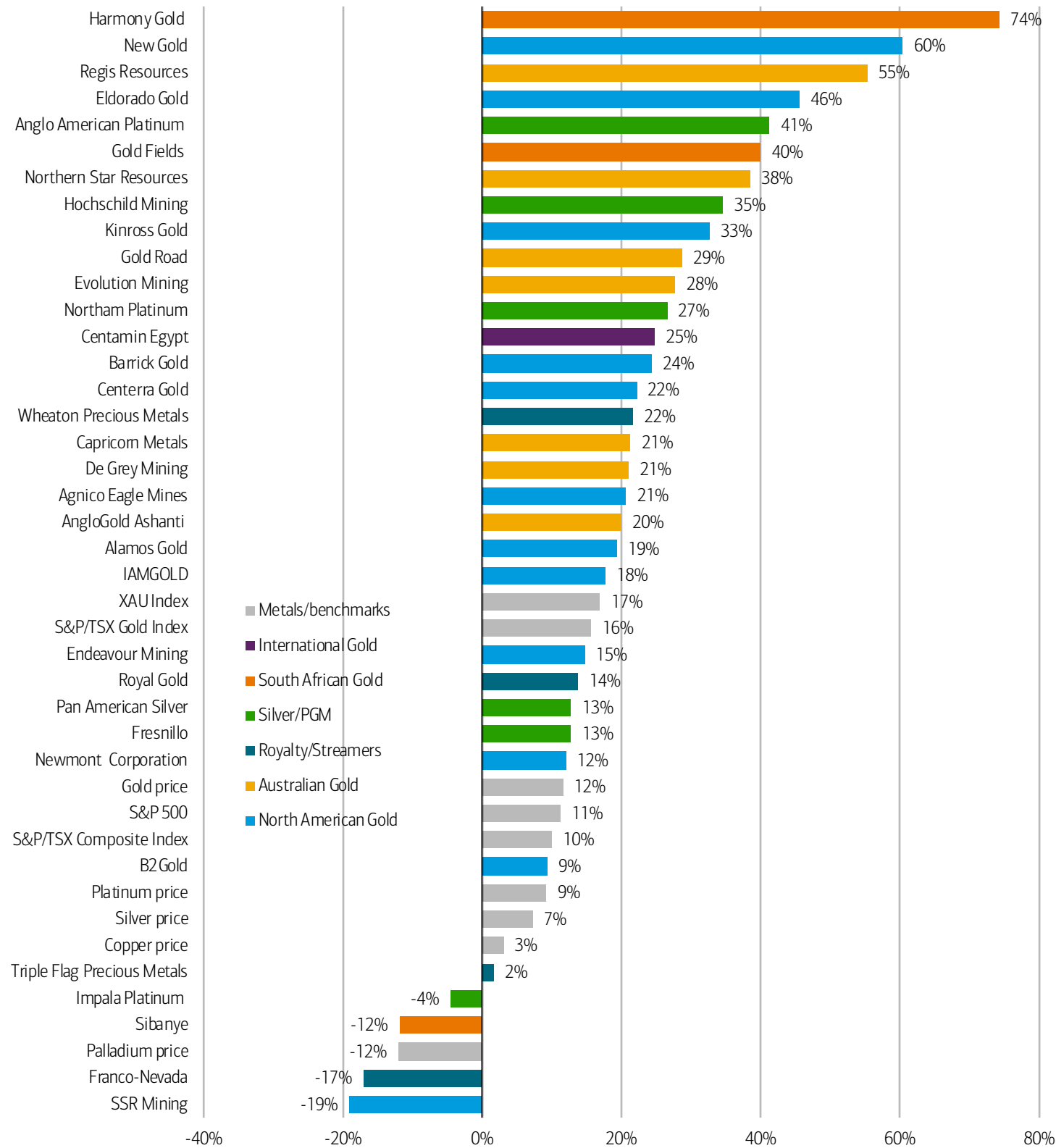
Source: Bloomberg. Note: this is not an exhaustive list of global precious metal equities

BofA GLOBAL RESEARCH

QTD returns for the gold sector

Exhibit 13: Quarter to date returns for the global gold sector and key metals/benchmarks

Most equities continue to trade higher on the higher gold price. Harmony is the best performer, up 74%



Source: Bloomberg. Note: this is not an exhaustive list of global precious metal equities

BofA GLOBAL RESEARCH



Valuation overview

Exhibit 14: Valuation Comparables for North American Gold and Precious Metals Producers and Royalty Companies

North American precious metal stocks are trading at 1.35x NAV (market value weighted), vs. the 10-year range of 1.0-2.0x NAV

Priced as of 29-Dec-2023	Market Cap					EPS		P/E (x)		CFPS		P/CFPS (x)		NAV	P/NAV
	BofA Sym	Share Price	Shares O/S	(USDmn)	Rating	2023E	2024E	2023E	2024E	2023E	2024E	2023E	2024E		
Senior Gold Producers															
Agnico Eagle Mines	AEM	54.85	497	27,235	BUY	2.12	2.49	25.9	22.0	5.37	5.88	10.2	9.3	36.75	1.49
Barrick Gold	GOLD	18.09	1,756	31,757	BUY	0.83	1.24	21.8	14.6	2.37	2.54	7.6	7.1	19.95	0.91
Kinross Gold	KGC	6.05	1,228	7,428	UNDE	0.44	0.46	13.8	13.2	1.19	1.22	5.1	5.0	5.30	1.14
Newmont Corporation	NEM	41.39	1,152	47,702	BUY	1.51	2.20	27.4	18.8	3.49	4.54	11.9	9.1	38.40	1.08
Market Cap Weighted Average								24.6	18.0			9.8	8.3		1.13
Mid-Tier Gold Producers															
B2Gold	BTG	3.16	1,300	4,109	BUY	0.27	0.29	11.7	10.9	0.63	0.51	5.0	6.2	3.25	0.97
Centerra Gold ⁽¹⁾	YCG	7.91	216	1,288	UNDE	0.00	0.39	NA	15.3	0.60	1.05	10.0	5.7	14.15	0.42
Eldorado Gold	EGO	12.97	204	2,651	UNDE	0.49	0.36	26.5	36.0	1.61	1.69	8.1	7.7	14.25	0.91
Endeavour Mining ⁽¹⁾	YEDV	29.77	248	5,565	BUY	1.36	2.71	16.5	8.3	3.13	4.87	7.2	4.6	34.80	0.65
IAMGOLD	IAG	2.53	481	1,217	BUY	0.03	0.00	84.3	NA	0.67	0.45	3.8	5.6	4.90	0.52
SSR Mining	SSRM	10.76	204	2,194	UNDE	1.09	0.60	9.9	17.9	2.15	1.57	5.0	6.8	12.55	0.86
Market Cap Weighted Average								21.3	15.5			6.5	5.9		0.77
Intermediate/Junior Gold Producers															
Alamos Gold	AGI	13.47	397	5,346	NEUT	0.51	0.57	26.4	23.6	1.32	1.35	10.2	10.0	10.15	1.33
New Gold	NGD	1.46	685	999	UNDE	(0.03)	0.21	NA	7.0	0.42	0.58	3.4	2.5	2.80	0.52
Market Cap Weighted Average								26.4	21.0			9.1	8.8		1.20
Royalty Companies															
Franco-Nevada	FNV	110.81	192	21,289	BUY	3.41	3.24	32.5	34.2	4.91	4.98	22.6	22.3	56.35	1.97
Royal Gold	RGLD	120.96	66	7,946	UNDE	3.45	4.29	35.1	28.2	6.11	7.72	19.8	15.7	60.05	2.01
Triple Flag Precious Metals	TFPM	13.31	202	2,683	BUY	0.33	0.63	40.3	21.1	0.76	0.97	17.6	13.7	9.60	1.39
Wheaton Precious Metals	WPM	49.34	453	22,351	BUY	1.12	1.37	44.1	36.0	1.59	2.15	31.0	22.9	22.80	2.16
Market Cap Weighted Average								38.0	33.4			25.4	21.1		2.03
Primary Silver Producers															
Pan American Silver	PAAS	16.33	364	5,951	BUY	0.15	0.48	NA	34.0	1.44	1.97	11.4	8.3	15.00	1.09
Market Cap Weighted Average								NA	34.0			11.4	8.3		1.09
Gold producer only:								24.3	17.9			9.4	8.1		1.09
Overall average:								28.2	22.7			13.8	11.7		1.35

Source: Bloomberg, Company reports, BofA Global Research estimates (1) stock price in CAD; EPS, CFPS, NAV in USD (2) CAD (3) stock price in AUD (4) 2021 metrics actual

Note: (1) stock price in CAD\$, EPS, CFPS, NAV in USD\$; (2) CAD\$ (3) AUD\$ (4) ZAR (5) stock price, NAV in pence; market cap in GBP, EPS, CFPS in USD; (6) stock price, market cap and NAV in CAD\$; EPS and CFPS in USD\$; (7) share price and NAV in HKD; EPS and CFPS in CNY, market cap in USD; (8) stock price, NAV in pence; market cap in USD, EPS, CFPS in GBP; (9) stock price, market cap, NAV in AUD, EPS, and CFPS in USD; (10) stock price and market cap in CAD; NAV in GBP, EPS and CFPS in USD; (11) stock price, market cap, EPS, CFPS and NAV in TRY; (12) Estimates are based on Bloomberg consensus; (13) stock price, market cap and NAV in ZAR; EPS and CFPS in USD; (14) stock price, market cap in ZAR; NAV, EPS and CFPS in AUD (15) stock price and market cap in ZAR; EPS and CFPS in USD, NAV in GBP (16) stock price and market cap in ZAR; EPS, CFPS and NAV in CAD; (17) June 30th year end; (18) Adjusted P/NAV = (share price - net cash and investments) / DCF of mining assets using a 5% discount rate. (21) stock price listed in RUB

BofA GLOBAL RESEARCH

Exhibit 15: Valuation Comparables for Global Gold and Precious Metals Producers and Royalty Companies

Global precious metal stocks are trading at 1.31x NAV (market value weighted)

Priced as of 29-Dec-2023	BofA Sym	Share Price	Shares Outstanding	MC (USDmn)	Rating	EPS 2023	EPS 2024	P/E (x) 2023	P/E (x) 2024	CFPS 2023	CFPS 2024	P/CFPS (x) 2023	P/CFPS (x) 2024	NAV	P/NAV
Australian Gold Producers⁽⁹⁾															
Capricorn Metals	CRNLF	4.71	377	1,211	NEUT	0.01	0.29	NA	16.2	0.41	0.44	11.6	10.8	4.33	1.09
De Grey Mining	DGMLF	1.26	1,851	1,583	BUY	(0.01)	(0.01)	NA	NA	(0.01)	(0.01)	NA	NA	1.54	0.81
Evolution Mining	CAHPF	3.96	1,976	5,329	NEUT	0.08	0.28	48.1	14.2	0.40	0.59	9.9	6.7	3.69	1.07
Gold Road	ELKMF	1.97	1,081	1,447	BUY	0.11	0.13	11.9	9.9	0.23	0.25	5.9	5.3	2.13	0.92
Northern Star Resources	NESRF	13.65	1,149	10,686	BUY	0.51	0.58	26.8	23.7	1.18	1.79	11.6	7.6	12.97	1.05
Regis Resources	RGRNF	2.18	755	1,122	BUY	(0.03)	(0.03)	NA	NA	0.60	0.66	2.5	2.3	2.08	1.05
Market Cap Weighted Average								32.1	19.5			10.2	7.1		1.03
South African Gold Producers⁽¹⁹⁾															
Gold Fields ⁽¹³⁾	GFIOF	277.78	894	13,565	NEUT	1.10	1.14	13.8	13.3	2.16	n/a	7.0	NA	235.06	1.18
Harmony Gold ^(14,18)	HGMCF	119.59	620	4,052	UNDE	7.80	12.19	15.3	9.8	16.12	15.29	7.4	7.8	79.94	1.50
Market Cap Weighted Average								14.0	12.5			6.5	8.5		1.28
International Gold Producers															
AngloGold Ashanti	AULGF	353.41	420	8,106	NEUT	0.84	1.35	23.1	14.3	1.88	3.13	10.3	6.2	310.60	1.14
Centamin Egypt ^(5,18)	CELTF	99.70	1,158	1,471	BUY	0.10	0.14	12.5	9.2	0.22	0.26	5.7	4.8	130.78	0.76
Market Cap Weighted Average								21.4	13.6			9.6	6.0		1.08
South African PGM Producers⁽⁵⁾															
Anglo American Platinum	AGPPF	964.00	265	13,977	NEUT	61.79	29.50	15.6	32.7	78.18	48.03	12.3	20.1	665.71	1.45
Impala Platinum	IMPUF	91.27	904	4,511	UNDE	22.02	(0.67)	4.1	NA	27.72	11.07	3.3	8.2	59.58	1.53
Northam Platinum	NPTLF	140.43	396	3,041	BUY	23.76	8.65	5.9	16.2	35.86	16.85	3.9	8.3	62.97	2.23
Market Cap Weighted Average								11.8	29.7			9.2	15.9		
International Silver Producers															
Fresnillo	FNLPF	594.40	737	5,578	UNDE	0.16	0.16	NA	NA	0.48	0.86	NA	NA	272.85	2.77
Hochschild	HCHDF	107.10	514	702	BUY	0.07	0.11	NA	NA	0.33	0.45	NA	NA	98.83	1.38
Market Cap Weighted Average								NA	NA			NA	NA		2.62
Global average															1.31
Global average ex-royalty															1.28

Source: Bloomberg, Company reports, BofA Global Research estimates (1) stock price in CAD; EPS, CFPS, NAV in USD (2) CAD (3) stock price in AUD (4) 2021 metrics actual

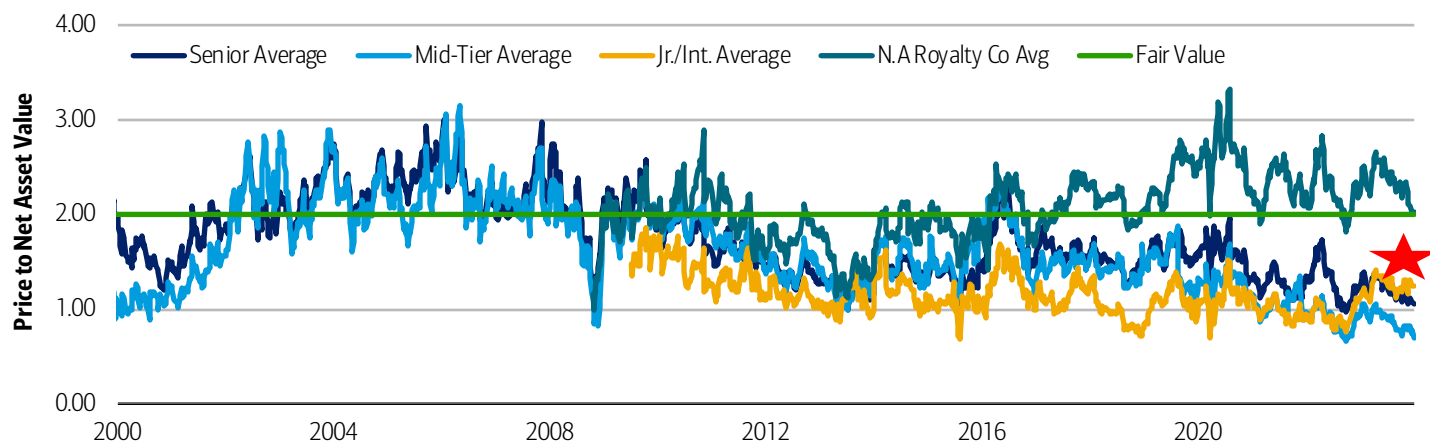
Note: (1) stock price in CAD\$, EPS, CFPS, NAV in USD\$; (2) CAD\$ (3) AUD\$ (4) ZAR (5) stock price, NAV in pence; market cap in GBP, EPS, CFPS in USD; (6) stock price, market cap and NAV in CAD\$; EPS and CFPS in USD\$; (7) share price and NAV in HKD; EPS and CFPS in CNY, market cap in USD; (8) stock price, NAV in pence; market cap in USD EPS, CFPS in GBP; (9) stock price, market cap, NAV in AUD, EPS, and CFPS in USD; (10) stock price and market cap in CAD; NAV in GBP, EPS and CFPS in USD; (11) stock price, market cap, EPS, CFPS and NAV in TRY; (12) Estimates are based on Bloomberg consensus; (13) stock price, market cap and NAV in ZAR; EPS and CFPS in USD, (14) stock price, market cap in ZAR; NAV, EPS and CFPS in AUD (15) stock price and market cap in ZAR; EPS and CFPS in USD, NAV in GBP (16) stock price and market cap in ZAR; EPS, CFPS and NAV in CAD; (17) June 30th year end; (18) Adjusted P/NAV = (share price - net cash and investments) / DCF of mining assets using a 5% discount rate. (21) stock price listed in RUB

BofA GLOBAL RESEARCH



Exhibit 16: North American gold producer and royalty & streamer P/NAV history

Historical P/NAV multiples for the North American sector. Sector trading at 1.35xNAV, between the 1.0-2.0x historical range

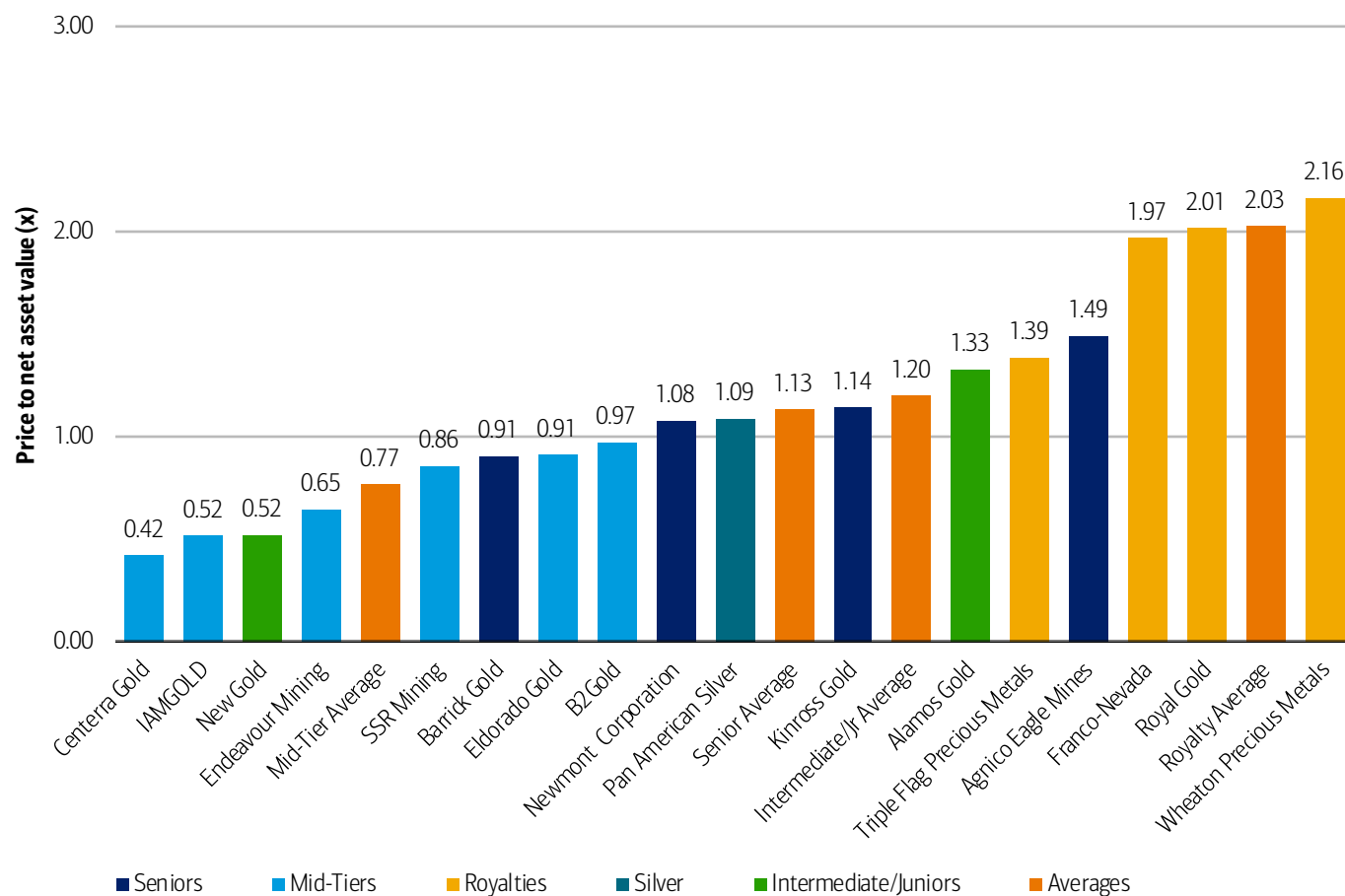


Source: Bloomberg

BofA GLOBAL RESEARCH

Exhibit 17: Price to Net Asset Value (P/NAV) for North American Gold and Precious Metals Producers and Royalty Companies

P/NAV multiples for our North American Precious metals coverage. Royalty & Streamers most expensive



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 18: Net asset value, reserves and resources
North American precious metals coverage universe, ratings and NAV's

Priced as of 29-Dec-2023	BofA Sym	Share Price	Shares O/S	Market Cap	NAV	P/NAV	Primary Metal Reserves	Primary Metal Resources
Senior Gold Producers							Moz	Moz
Agnico Eagle Mines	AEM	54.85	497	27,235	36.75	1.49	44.6	114.8
Barrick Gold	GOLD	18.09	1,756	31,757	19.95	0.91	69.0	271.0
Kinross Gold	KGC	6.05	1,228	7,428	5.30	1.14	32.6	70.3
Newmont Corporation	NEM	41.39	1,152	47,702	38.40	1.08	95.5	208.0
Market Cap Weighted Average						1.13		
Mid-Tier Gold Producers								
B2Gold	BTG	3.16	1,300	4,109	3.25	0.97	6.3	22.0
Centerra Gold ⁽¹⁾	YCG	7.91	216	1,288	14.15	0.42	4.8	13.0
Eldorado Gold	EGO	12.97	204	2,651	14.25	0.91	17.7	57.9
Endeavour Mining	YEDV	29.77	248	7,375	34.80	0.65	17.8	53.8
IAMGOLD	IAG	2.53	481	1,217	4.90	0.52	12.4	45.6
SSR Mining	SSRM	10.76	204	2,194	12.55	0.86	9.2	21.1
Market Cap Weighted Average						0.77		
Intermediate/Junior Gold Producers								
Alamos Gold ⁽⁶⁾	AGI	13.47	397	5,346	10.15	1.33	10.3	21.8
New Gold	NGD	1.46	685	999	2.80	0.52	3.7	6.8
Market Cap Weighted Average						1.20		
Royalty Companies								
Franco-Nevada	FNV	110.81	192	21,289	56.35	1.97	NA	NA
Royal Gold	RGLD	120.96	66	7,946	60.05	2.01	NA	NA
Triple Flag Precious Metals	TFPM	13.31	202	2,683	9.60	1.39	NA	NA
Wheaton Precious Metals	WPM	49.34	453	22,351	22.80	2.16	NA	NA
Market Cap Weighted Average						2.03		
Primary Silver Producers								
Pan American Silver	PAAS	16.33	364	5,951	15.00	1.09	529.3	1,807.6
Market Cap Weighted Average						1.09		

Source: Bloomberg, Company reports, BofA Global Research estimates

Note: (1) stock price in CAD\$, EPS, CFPS, NAV in USD\$; (2) CAD\$ (3) AUD\$ (4) ZAR (5) stock price, NAV in pence; market cap in GBP, EPS, CFPS in USD; (6) stock price, market cap and NAV in CAD\$; EPS and CFPS in USD\$; (7) share price and NAV in HKD; EPS and CFPS in CNY, market cap in USD; (8) stock price, NAV in pence; market cap in USD, EPS, CFPS in GBP; (9) stock price, market cap, NAV in AUD, EPS, and CFPS in USD; (10) stock price and market cap in CAD; NAV in GBP, EPS and CFPS in USD; (11) stock price, market cap, EPS, CFPS and NAV in TRY; (12) Estimates are based on Bloomberg consensus; (13) stock price, market cap and NAV in ZAR; EPS and CFPS in USD, (14) stock price, market cap in ZAR; NAV, EPS and CFPS in AUD (15) stock price and market cap in ZAR; EPS and CFPS in USD, NAV in GBP (16) stock price and market cap in ZAR; EPS, CFPS and NAV in CAD; (17) June 30th year end; (18) Adjusted P/NAV = (share price - net cash and investments) / DCF of mining assets using a 5% discount rate. (21) stock price listed in RUB

BofA GLOBAL RESEARCH



Exhibit 19: Net asset value, reserves and resources
Global precious metals coverage universe, ratings and NAV's

Priced as of 29-Dec-2023	BofA Sym	Share Price	Shares O/S	MC	NAV	P/NAV	P&P Primary Metal Reserves (million oz)	Total Primary Metal Resources incl'd'g P&P (mln oz)
Australian Gold Producers^(3,12)								
Capricorn Metals	CRNLF	4.71	377	1,213	4.33	1.09	1.3	3.6
De Grey Mining	DGMLF	1.26	1,851	1,585	1.54	0.81	5.1	15.7
Evolution Mining	CAHPF	3.96	1,976	5,338	3.69	1.07	10.0	40.3
Gold Road	ELKMF	1.97	1,081	1,450	2.13	0.92	4.1	8.9
Northern Star	NESRF	13.65	1,149	10,704	12.97	1.05	20.2	77.6
Regis Resources	RGRNF	2.18	755	1,124	2.08	1.05	3.6	10.6
Market Cap Weighted Average						1.03		
South African Gold Producers⁽⁴⁾								
Gold Fields	GFIOF	277.78	894	13,565	235.06	1.18	52.1	96.9
Harmony Gold ⁽¹²⁾	HGMCF	119.59	620	4,052	79.94	1.50	42.5	66.9
Market Cap Weighted Average						1.28		
International Gold Producers								
AngloGold Ashanti	AULGF	353.41	420	7,701	310.60	1.14	29.7	154.2
Centamin Egypt ⁽⁵⁾	CELTF	99.70	1,158	1,471	130.78	0.76	5.0	14.8
Market Cap Weighted Average						1.08		
South African PGM Producers⁽¹⁶⁾								
Anglo American Platinum ⁽⁵⁾	AGPPF	964.00	265	13,977	665.71	1.45	177.2	847.4
Impala Platinum ⁽⁵⁾	IMPUF	91.27	850	4,511	59.58	1.53	34.1	250.0
Northam Platinum ⁽⁵⁾	NPTLF	140.43	397	3,041	62.97	2.23	14.0	195.9
Market Cap Weighted Average						2.62		
International Silver Producers								
Fresnillo ⁽⁵⁾	FNLPF	594.40	737	5,578	272.85	2.77	397.8	1,265.5
Hochschild Mining ⁽⁵⁾	HCHDF	107.10	514	702	99	1.38	41.2	288.8
Market Cap Weighted Average						2.06		

Source: Bloomberg, Company reports, BofA Global Research estimates

All tickers represent BofA Global Research covered companies. (1) stock price in CAD; NAV in USD (2) CAD (3) AUD (4)ZAR (5) stock price in pence; NAV in USD, (6) NAV in CAD; (7) silver reserves, silver resources and silver mined in model (8) palladium reserves, palladium resources and palladium mined in model; (9) Reserves and resources on a GEO basis; (10) stock price in CAD, NAV in GBP, (11) stock price and NAV in TRY; (12) June 30th year end; (13) Forecasts based on management guidance; (14) Reserves and resources on an SEO basis (15) Reserves and resources on a Platinum Equivalent (4E->Platinum + Palladium + Rhodium + Gold) basis; (16) stock price in ZAR, NAV in GBP; (17) stock price in ZAR, NAV in CAD; (18) stock price and NAV in HKD; (19) stock price and NAV in GBpAdjusted P/NAV = (share price - net cash and investments) / DCF of mining assets using a 5% discount rate. (20) stock price in RUB

BofA GLOBAL RESEARCH

Exhibit 20: EV/EBIT and EV/EBITDA ratios for North American Gold and Precious Metal Producers and Royalty/Streaming Companies

Valuation metrics for the North American precious metal sector

Priced as of 29-Dec-2023	BofA Sym	Share Price	Shares Outstanding	MC (USDmn)	Debt (USDmn)	Cash (USDmn)	Enterprise Value (EV) (USDmn)	EBIT (\$mn) 2023E 2024E	EV/EBIT (x) 2023E 2024E	EBITDA (\$mn) 2023E 2024E	EV/EBITDA (x) 2023E 2024E
Senior Gold Producers											
Agnico Eagle Mines	AEM	54.85	497	27,235	2,115	433	29,783	3,166 2,014	9.4 14.8	4,704 3,548	6.3 8.4
Barrick Gold	GOLD	18.09	1,756	31,757	4,774	4,157	49,334	3,020 4,998	16.3 9.9	5,032 6,690	9.8 7.4
Kinross Gold	KGC	6.05	1,228	7,428	2,512	487	10,519	833 918	12.6 11.5	1,798 1,782	5.9 5.9
Newmont Corporation	NEM	41.39	1,152	47,702	6,924	3,570	58,413	1,410 3,193	41.4 18.3	3,527 5,972	16.6 9.8
Market Cap Weighted Average									24.6 14.3		11.5 8.4
Mid-Tier Gold Producers											
B2Gold	BTG	3.16	1,300	4,109	56	506	3,921	532 671	7.4 5.8	917 902	4.3 4.3
Centerra Gold ⁽¹⁾	YCG	7.91	216	1,288	0	402	1,690	102 155	16.6 10.9	233 297	7.3 5.7
Eldorado Gold	EGO	12.97	204	2,651	561	457	3,665	142 206	25.9 17.8	391 459	9.4 8.0
Endeavour Mining ⁽¹⁾	YEDV	29.77	248	7,375	1,034	845	7,758	820 1,014	9.5 7.7	941 1,497	8.2 5.2
IAMGOLD	IAG	2.53	481	1,217	966	748	2,976	(4) 55	NA 53.7	205 327	14.5 9.1
SSR Mining	SSRM	10.76	204	2,194	367	412	3,971	279 188	14.3 21.1	485 367	8.2 10.8
Market Cap Weighted Average									10.8 16.9		8.3 6.7
Intermediate/Junior Gold Producers											
Alamos Gold	AGI	13.47	397	5,346	0	208	5,547	316 367	17.6 15.1	507 587	10.9 9.4
New Gold	NGD	1.46	685	999	397	183	1,579	90 230	17.5 6.9	306 451	5.2 3.5
Market Cap Weighted Average									17.6 13.3		9.7 8.1
Royalty Companies											
Franco-Nevada	FNV	110.81	192	21,289	0	1,295	22,584	754 765	29.9 29.5	1,031 1,075	21.9 21.0
Royal Gold	RGLD	120.96	66	7,946	497	127	8,582	296 361	29.0 23.8	462 574	18.6 15.0
Triple Flag Precious Metals	TFPM	13.31	202	1,978	67	32	1,946	49 142	39.8 13.7	115 211	17.0 9.2
Wheaton Precious Metals	WPM	49.34	453	22,351	7	829	23,186	488 654	47.5 35.4	705 975	32.9 23.8
Market Cap Weighted Average									36.0 30.1		25.2 20.5
Primary Silver Producers											
Pan American Silver	PAAS	16.33	364	5,951	321	409	7,995	63 320	NA 25.0	574 845	13.9 9.5
Market Cap Weighted Average									NA 25.0		13.9 9.5

Source: BofA Global Research estimates. Company reports

Note: 1) stock price in CAD\$, EPS, CFPS, NAV in USD\$; (2) CAD\$ (3) AUD\$ (4) ZAR (5) stock price, NAV in pence; market cap in GBP, EPS, CFPS in USD; (6) stock price, market cap and NAV in CAD\$; EPS and CFPS in USD\$; (7) share price and NAV in HKD; EPS and CFPS in CNY, market cap in USD; (8) stock price, NAV in pence; market cap in USD, EPS, CFPS in GBP; (9) stock price, market cap, NAV in AUD, EPS, and CFPS in USD; (10) stock price and market cap in CAD; NAV in GBP, EPS and CFPS in USD; (11) stock price, market cap, EPS, CFPS and NAV in TRY; (12) Estimates are based on Bloomberg consensus; (13) stock price, market cap and NAV in ZAR; EPS and CFPS in USD; (14) stock price, market cap in ZAR; NAV, EPS and CFPS in AUD (15) stock price and market cap in ZAR; EPS and CFPS in USD, NAV in GBP (16) stock price and market cap in ZAR; EPS, CFPS and NAV in CAD; (17) June 30th year end; (18) Adjusted P/NAV = (share price - net cash and investments) / DCF of mining assets using a 5% discount rate. (21) stock price listed in RUB

BofA GLOBAL RESEARCH



Exhibit 21: EV/EBIT and EV/EBITDA ratios for Global Gold and Precious Metal Producers and Royalty/Streaming Companies

Valuation metrics for the Global precious metal sector

Priced as of 29-Dec-2023	BofA Sym	Share	Shares	MC	Debt	Cash	Enterprise	EBIT (\$mn)		EV/EBIT (x)		EBITDA		EV/EBITDA (x)	
		Price	Outstanding	(USDmn)	(USDmn)	(USDmn)	Value (EV) (USDmn)	2023E	2024E	2023E	2024E	2023E	2024E	2023E	2024E
Australian Gold Producers ^(4,12,18)															
Capricorn Metals	CRNLF	4.71	377	1,210	61	71	1,338	134	159	14.6	12.4	162	192	12.1	10.2
De Grey Mining	DGMLF	1.26	1,851	1,582	1	75	1,658	(23)	(16)	NA	NA	(21)	(14)	NA	NA
Evolution Mining	CAHPF	3.96	1,976	5,327	1,215	31	6,573	363	891	26.6	10.8	886	1,473	10.9	6.6
Gold Road	ELKMF	1.97	1,081	1,447	82	102	1,628	176	205	13.6	11.7	259	299	9.2	8.0
Northern Star Resources	NESRF	13.65	1,149	10,683	882	756	12,320	479	1,021	25.7	12.1	1,537	2,172	8.0	5.7
Regis Resources	RGRNF	2.18	755	1,121	251	115	1,589	16	(8)	NA	NA	401	342	5.8	6.8
Market Cap Weighted Average										24.4	11.7			8.6	6.0
South African Gold Producers ⁽¹⁶⁾															
Gold Fields ⁽⁴⁾	GFIOF	278	894	13,564	920	651	15,234	1,624	1,651	9.4	9.2	2,480	2,725	6.1	5.6
Harmony Gold	HGMCF	120	620	4,052	405	131	4,574	7,922	8,591	10.6	9.7	622	723	7.4	6.3
Market Cap Weighted Average										18.2	9.3			5.5	5.0
International Gold Producers															
AngloGold Ashanti	AULGF	353	420	8,106	2,091	747	10,987	631	1,041	17.4	10.6	1,419	1,862	7.7	5.9
Centamin Egypt	CELTf	99.70	1,158	1,471	0	96	1,561	215	342	7.2	4.6	367	505	4.2	3.1
Market Cap Weighted Average										16.1	9.8			7.3	5.6
South African PGM Producers															
Anglo American Platinum	AGPPF	964.00	265	13,976	27	1,969	15,984	20,554	10,142	14.2	28.8	26,459	16,213	11.1	18.0
Impala Platinum ⁽⁴⁾	IMPUF	91.27	904	4,511	69	1,650	6,250	22,338	472	5.1	NA	30,074	9,898	3.8	11.6
Northam Platinum ⁽⁴⁾	NPTLF	140.43	396	3,041	1,290	14	4,348	15,447	5,753	5.2	13.8	16,594	6,958	4.8	11.4
Market Cap Weighted Average										14.2	28.8			12.6	18.0
International Silver Producers															
Fresnillo	FNLPF	594.40	737	5,578	1,302	890	8,029	148	338	54.2	23.7	634	835	12.7	9.6
Hochschild Mining	HCHDF	107.10	514	702	321	144	1,231	13	122	92.7	10.1	150	269	8.2	4.6
Market Cap Weighted Average										59.3	21.9			12.1	8.9

Source: BofA Global Research estimates. Company reports

Note: 1) stock price in CAD\$, EPS, CFPS, NAV in USD\$; (2) CAD\$ (3) AUD\$ (4) ZAR (5) stock price, NAV in pence; market cap in GBP, EPS, CFPS in USD; (6) stock price, market cap and NAV in CAD\$; EPS and CFPS in USD\$; (7) share price and NAV in HKD; EPS and CFPS in CNY, market cap in USD; (8) stock price, NAV in pence; market cap in USD, EPS, CFPS in GBP; (9) stock price, market cap, NAV in AUD, EPS, and CFPS in USD; (10) stock price and market cap in CAD; NAV in GBP, EPS and CFPS in USD; (11) stock price, market cap, EPS, CFPS and NAV in TRY; (12) Estimates are based on Bloomberg consensus; (13) stock price, market cap and NAV in ZAR; EPS and CFPS in USD, (14) stock price, market cap in ZAR; NAV, EPS and CFPS in AUD (15) stock price and market cap in ZAR; EPS and CFPS in USD, NAV in GBP (16) stock price and market cap in ZAR; EPS, CFPS and NAV in CAD; (17) June 30th year end; (18) Adjusted P/NAV = (share price - net cash and investments) / DCF of mining assets using a 5% discount rate. (21) stock price listed in RUB

BofA GLOBAL RESEARCH

Operating Comparables

Exhibit 22: Operating Forecasts for Global Gold and Precious Metal Producers

Senior golds have 2+ Moz of annual output. Mid-tiers are between 0.5-1.5 Moz of annual output. Intermediates have <0.5 Moz of annual output

Priced as of 29-Dec-2023

Priced as of 29-Dec-2023							Production		EV		
	BofA Sym	Share Price	Shares O/S	Market Cap	Enterprise Value	P&P Gold Reserves (moz)	2023E ('000 oz)	2024E ('000 oz)	Per Oz of Prod. (USD)		
Senior Gold Producers										2023E	2024E
Agnico-Eagle Mines	AEM	54.85	497	27,235	29,783	44.6	3,437	3,499	8,666	8,513	
Barrick Gold	GOLD	18.09	1,756	31,757	49,334	69.0	4,073	4,189	12,111	11,776	
Kinross Gold	KGC	6.05	1,228	7,428	10,519	32.6	2,169	2,032	4,850	5,176	
Newmont Corporation	NEM	41.39	1,152	47,702	58,413	95.5	5,563	7,835	10,501	7,455	
Market Cap Weighted Average									10,267	8,946	
Mid-Tier Gold Producers											
B2Gold	BTG	3.16	1,300	4,109	3,921	6.3	1,041	828	3,767	4,736	
Centerra Gold ⁽¹⁾	YCG	7.91	216	1,288	1,690	4.8	349	372	4,838	4,545	
Eldorado Gold	EGO	12.97	204	2,651	3,665	17.7	476	538	7,702	6,807	
Endeavour Mining ⁽¹⁾	YEDV	29.77	248	7,375	7,758	17.8	1,222	1,262	6,346	6,148	
IAMGOLD	IAG	2.53	481	1,217	2,976	12.4	467	497	6,369	5,989	
SSR Mining	SSRM	10.76	204	2,194	3,971	9.2	601	508	6,609	7,814	
Market Cap Weighted Average									6,072	6,161	
Intermediate/Junior Gold Producers											
Alamos Gold	AGI	13.47	397	5,346	5,547	10.3	525	487	10,575	11,385	
New Gold	NGD	1.46	685	999	1,579	3.7	321	372	4,924	4,249	
Market Cap Weighted Average									9,323	9,803	
Royalty Companies							Attributable Production				
Franco-Nevada	FNV	110.81	192	21,289	22,584	NA	653	628	34,566	35,976	
Royal Gold	RGLD	120.96	66	7,946	8,582	NA	314	363	27,303	23,640	
Triple Flag Precious Metals	TFPM	13.31	202	2,683	2,123	NA	106	130	20,044	16,345	
Wheaton Precious Metals	WPM	49.34	453	22,351	23,186	NA	609	731	38,049	31,709	
Market Cap Weighted Average									34,346	31,612	
Primary Silver Producers											
Pan American Silver	PAAS	16.33	364	5,951	7,995	529.3	21,050	21,686	380	369	
Market Cap Weighted Average									380	369	

Source: BofA Global Research estimates. Company reports.

Note: All tickers represent BofA Global Research covered companies. (1) stock price in CAD; NAV in USD (2) CAD (3) AUD (4)ZAR (5) stock price in pence; NAV in USD, (6) NAV in CAD; (7) silver reserves, silver resources and silver mined in model (8) palladium reserves, palladium resources and palladium mined in model; (9) Reserves and resources on a GEO basis; (10) stock price in CAD, NAV in GBP; (11) stock price and NAV in TRY; (12) June 30th year end; (13) Forecasts based on management guidance; (14) Reserves and resources on an SEO basis (15) Reserves and resources on a Platinum Equivalent (4E->Platinum + Palladium + Rhodium + Gold) basis; (16) stock price in ZAR, NAV in GBP; (17) stock price in ZAR, NAV in CAD; (18) stock price and NAV in HKD; (19) stock price and NAV in GBP. Adjusted P/NAV = (share price - net cash and investments) / DCF of mining assets using a 5% discount rate. (20) stock price in RUB

BofA GLOBAL RESEARCH

Exhibit 23: Operating Forecasts for Global Gold and Precious Metal Producers (Cont'd)**International gold producers operating forecasts**

Priced as of 29-Dec-2023

Priced as of 29-Dec-2023	Shares					Production			EV		
	BofA Sym	Share Price	O/S	Market Cap	Enterprise Value	P&P Gold Reserves (million oz)	2023 ('000 oz)	2024 ('000 oz)	Per Oz of Prod. (USD)		
Australian Gold Producers ⁽³⁾										2023E	2024E
Capricorn Metals	CRNLF	4.71	377	1,213	1,338	1.3	NA	NA	NA	NA	
De Grey Mining	DGMLF	1.26	1,851	1,585	1,658	5.1	NA	NA	NA	NA	
Evolution Mining	CAHPF	3.96	1,976	5,338	6,573	10.0	651	775	10,094	8,478	
Gold Road	ELKMF	1.97	1,081	1,450	1,628	4.1	167	183	9,744	8,897	
Northern Star	NESRF	13.65	1,149	10,704	12,320	20.2	1,556	1,676	7,920	7,350	
Regis Resources	RGRNF	2.18	755	1,124	1,589	3.6	458	438	3,467	3,629	
Market Cap Weighted Average									8,761	7,834	
South African Gold Producers ⁽⁴⁾											
Gold Fields	GFIOF	277.78	894	13,573	15,234	52.1	2,300	2,572	6,625	5,923	
Harmony Gold ⁽¹²⁾	HGMCF	119.59	620	4,054	4,574	42.5	1,468	1,464	3,116	3,125	
Market Cap Weighted Average									6,494	5,850	
International Gold Producers											
AngloGold Ashanti	AULGF	353.41	420	8,111	10,987	29.7	2,531	2,617	4,340	4,198	
Centamin Egypt ⁽⁵⁾	CELTF	99.70	1,158	1,472	1,561	5.0	456	488	3,422	3,197	
Market Cap Weighted Average									4,226	4,073	
South African PGM Producers											
Anglo American Platinum ⁽⁵⁾	AGPPF	964.00	265	13,985	15,984	177.2	NA	NA	NA	NA	
Impala Platinum ⁽⁵⁾	IMPUF	91.27	850	4,244	6,250	34.1	NA	NA	NA	NA	
Northam Platinum ⁽⁵⁾	NPTLF	140.43	397	3,046	4,348	14.0	NA	NA	NA	NA	
Market Cap Weighted Average									NA	NA	
Primary Silver Producers											
Fresnillo ^(5,7)	FNLPF	594.40	737	5,578	8,029	397.8	55,979	58,669	143	137	
Hochschild Mining ^(5,7)	HCHDF	107.10	514	702	1,231	41.2	24,415	30,532	50	40	
Market Cap Weighted Average									246	237	

Source: : BofA Global Research estimates. Company reports.

Note: All tickers represent BofA Global Research covered companies. (1) stock price in CAD; NAV in USD (2) CAD (3) AUD (4)ZAR (5) stock price in pence; NAV in USD, (6) NAV in CAD; (7) silver reserves, silver resources and silver mined in model (8) palladium reserves, palladium resources and palladium mined in model; (9) Reserves and resources on a GEO basis; (10) stock price in CAD, NAV in GBP, (11) stock price and NAV in TRY; (12) June 30th year end; (13) Forecasts based on management guidance; (14) Reserves and resources on an SEO basis (15) Reserves and resources on a Platinum Equivalent (4E->Platinum + Palladium + Rhodium + Gold) basis; (16) stock price in ZAR, NAV in GBP; (17) stock price in ZAR, NAV in CAD; (18) stock price and NAV in HKD; (19) stock price and NAV in GBP; Adjusted P/NAV = (share price - net cash and investments) / DCF of mining assets using a 5% discount rate. (20) stock price in RUB

BofA GLOBAL RESEARCH

Exhibit 24: Stock Mentioned

Stock prices and ratings mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
FNV	FNV US	Franco-Nevada	US\$ 110.81	B-1-7
YFNV	FNV CN	Franco-Nevada	C\$ 146.77	B-1-7
HBM	HBM US	HudBay Minerals	US\$ 5.52	C-2-8
YHBM	HBM CN	HudBay Minerals	C\$ 7.3	C-2-8
IAG	IAG US	IAMGOLD	US\$ 2.53	C-1-9
YIMG	IMG CN	IAMGOLD Corp.	C\$ 3.34	C-1-9
PAAS	PAAS US	Pan American	US\$ 16.33	C-1-8

Source: BofA Global Research

BofA GLOBAL RESEARCH

Investment Rationale**IAMGOLD Corp.**

We rate IAMGOLD at Buy as we see its valuation as unreasonably discounted by execution and capex concerns for its Côté Gold project. Executing on the ramp-up of this project should clear the way for a higher valuation. While Burkina Faso exposure merits a lower relative multiple, exposure to this jurisdiction will be substantially diluted with the ramp-up of Côté Gold



Price objective basis & risk

Franco-Nevada (YFNV / FNV)

Our price objective for Franco-Nevada is C\$190 (US\$139) per share, and is based on the stock trading at 2.50 times our estimated net asset value (NAV) on a cash-adjusted basis and a USD/CAD FX rate of 1.37x. Historically, North American precious metal streaming stocks have traded between 1.50 and 3.50 times NAV, with growth oriented streaming companies at the top end. Based on its strong balance sheet and low-cost asset base, we believe Franco-Nevada deserves a premium multiple. Franco-Nevada also benefits from an experienced management team. Risks to our price objective for Franco-Nevada are commodity price weakness and unforeseen operating problems at the mines on which its royalties are based..

Hudbay Minerals (YHBM / HBM)

Our C\$8.50 (US\$6.25) per share price objective for Hudbay Minerals (YHBM/HBM) is based on a 3.5x 2024E EV/EBITDA multiple, 3.0x 2025E EV/EBITDA multiple and 1.0x our net asset (NAV) estimate, weighted equally to each. Since 2005, the global copper producers have traded in an EV/EBITDA range from 2.0x to 13.0x with HBM trading at a discount. For HBM, we use a lower-of-the-range target multiple given our neutral/cautious outlook for copper in the near term, as well as an unclear medium to longer-term volume growth outlook.

Upside risks are stronger than forecast copper prices, favorable local currency changes that lower USD costs, the receipt of all permits for Rosemont with no legal challenges, a sooner than expected start of mining of the Pampacancha satellite deposit and the potential for HBM to be targeted for acquisition.

A downside risk to our PO is a weaker-than-expected global economy that could impede metal demand growth expectations, affecting our commodity price forecasts. Other downside risks are a delay in attaining surface access rights at Pampacancha, the political and regulatory climate in the jurisdictions in which HBM operates (Canada, Peru and the USA), stronger than forecast local currencies that increase USD costs, increases in general operating and development costs, labor action, weather and the inability to attain the needed permits to develop Rosemont, M&A risk.

IAMGOLD Corp. (IAG / YIMG)

Our price objective for IAMGOLD is US\$3.20/C\$4.40 per share, and is based on the stock trading at 0.65x times our estimated net asset value (NAV) and a 1.37 CADUSD exchange rate. Historically, North American precious metal stocks have traded between 0.50 and 3 times NAV, with a median of 2.00 times over the long-term, and with unhedged, growth-oriented producers with solid financial positions and low relative costs and located in stable mining jurisdiction occupying the upper end of the range. We ascribe a low P/NAV multiple to IAMGOLD to reflect our forecast for higher than average political risk in Burkina Faso, execution risks at the Cote Gold project, and higher cash costs and debt vs. peers. As the Cote Gold project in Canada ramp-ups through 2024 and 2025, this should drive strong volume growth, lower costs and political risk, and ultimately drive deleveraging.

Pan American Silver (PAAS)

Our price objective for Pan American Silver is \$18.75, and is based on the stock trading at 1.25x our estimated net asset value (NAV) on a net investments-adjusted basis (i.e. the 1.25x multiple is applied to the asset value and then the value of the equity investments is added to that with an effective 1.0x multiple applied). Our NAV is based on a 5% discount rate for all assets, except Escobal for which we use 7.5%. Historically, North American precious metal stocks have traded between 1 and 3 times NAV, with silver producers generally trading at a discount to gold producers.

Upside risks to our price objective are higher than expected commodity price forecasts, a change in the regulatory/permitting environment in the Chubut province of Argentina where Pan American's dormant Navidad project is located, operating results that exceed expectations and lower than expected capital costs. Downside risks to our price objective are unforeseen operating issues, realized commodity prices that are below our forecast, regulatory issues (including tax, environmental and permitting) that cause financial results to differ from our forecast, and higher than expected capital costs.

Analyst Certification

I, Lawson Winder, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

North America - Metals and Mining Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Agnico Eagle Mines	AEM	AEM US	Lawson Winder, CFA
	B2Gold Corp	YBTO	BTO CN	Harmen Puri
	B2Gold Corp	BTG	BTG US	Harmen Puri
	Barrick Gold	GOLD	GOLD US	Lawson Winder, CFA
	Cameco Corporation	YCCO	CCO CN	Lawson Winder, CFA
	Cameco Corporation	CCJ	CCJ US	Lawson Winder, CFA
	Commercial Metals	CMC	CMC US	Lawson Winder, CFA
	Endeavour Mining	YEDV	EDV CN	Harmen Puri
	Endeavour Mining	EDVMF	EDVMF US	Harmen Puri
	Endeavour Mining PLC	XEDVF	EDV LN	Harmen Puri
	Franco-Nevada	YFNV	FNV CN	Lawson Winder, CFA
	Franco-Nevada	FNV	FNV US	Lawson Winder, CFA
	IAMGOLD	YIMG	IMG CN	Lawson Winder, CFA
	IAMGOLD Corp.	IAG	IAG US	Lawson Winder, CFA
	Ivanhoe Mines	YIVN	IVN CN	Lawson Winder, CFA
	Ivanhoe Mines	IVPAF	IVPAF US	Lawson Winder, CFA
	Lundin Mining	XLPRF	LUMI SS	Lawson Winder, CFA
	Lundin Mining Corp	YLUN	LUN CN	Lawson Winder, CFA
	Lundin Mining Corp	LUNMF	LUNMF US	Lawson Winder, CFA
	MP Materials	MP	MP US	Lawson Winder, CFA
	Newmont Corporation	NEM	NEM US	Lawson Winder, CFA
	Newmont Corporation	XNCRF	NEM AU	Lawson Winder, CFA
	Nucor	NUE	NUE US	Lawson Winder, CFA
	Pan American Silver	PAAS	PAAS US	Lawson Winder, CFA
	Teck Resources	YTECK	TECK/B CN	Lawson Winder, CFA
	Teck Resources Ltd	TECK	TECK US	Lawson Winder, CFA
	Triple Flag Precious Metals Corp.	YTFPM	TFPM CN	Lawson Winder, CFA
	Triple Flag Precious Metals Corp.	TFPM	TFPM US	Lawson Winder, CFA
	Wheaton Precious Metals	WPM	WPM US	Lawson Winder, CFA
NEUTRAL				
	Alamos Gold	YAGI	AGI CN	Harmen Puri
	Alamos Gold	AGI	AGI US	Harmen Puri
	Alcoa Corporation	AA	AA US	Lawson Winder, CFA
	Cleveland-Cliffs	CLF	CLF US	Lawson Winder, CFA
	First Quantum	FQVLF	FQVLF US	Lawson Winder, CFA
	First Quantum Minerals	YFM	FM CN	Lawson Winder, CFA
	Freeport-McMoRan	FCX	FCX US	Lawson Winder, CFA
	Hudbay Minerals	YHBM	HBM CN	Lawson Winder, CFA
	HudBay Minerals	HBM	HBM US	Lawson Winder, CFA
	Reliance Steel & Aluminum	RS	RS US	Lawson Winder, CFA
	Steel Dynamics	STLD	STLD US	Lawson Winder, CFA
UNDERPERFORM				
	Centerra Gold	YCG	CG CN	Lawson Winder, CFA

North America - Metals and Mining Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Centerra Gold	CGAU	CGAU US	Lawson Winder, CFA
	Eldorado Gold	EGO	EGO US	Harmen Puri
	Eldorado Gold	YELD	ELD CN	Harmen Puri
	Kinross Gold	KGC	KGC US	Lawson Winder, CFA
	New Gold Inc.	YNGD	NGD CN	Harmen Puri
	New Gold Inc.	NGD	NGD US	Harmen Puri
	Nexa Resources	NEXA	NEXA US	Lawson Winder, CFA
	Royal Gold	RGLD	RGLD US	Lawson Winder, CFA
	SSR Mining Inc.	SSRM	SSRM US	Lawson Winder, CFA
	SSR Mining Inc.	YSSRM	SSRM CN	Lawson Winder, CFA

Disclosures

Important Disclosures

Equity Investment Rating Distribution: Non-Ferrous Metals/Mining & Minerals Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	58	53.70%	Buy	26	44.83%
Hold	24	22.22%	Hold	10	41.67%
Sell	26	24.07%	Sell	13	50.00%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

^{R1} Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. **VOLATILITY RISK RATINGS**, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. **INVESTMENT RATINGS** reflect the analyst's assessment of both a stock's absolute total return potential as well as its attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). Our investment ratings are: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. An investment rating of 6 (No Rating) indicates that a stock is no longer trading on the basis of fundamentals. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R2}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R2} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

INCOME RATINGS, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend. **Coverage Cluster** is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Global Research report referencing the stock.

Price Charts for the securities referenced in this research report are available on the [Price Charts website](#), or call 1-800-MERRILL to have them mailed.

BofAS or one of its affiliates acts as a market maker for the equity securities recommended in the report: Franco-Nevada, HudBay Minerals, IAMGOLD, Pan American.

The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates: HudBay Minerals, Pan American.

BofAS or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: Franco-Nevada, Pan American.

The issuer is or was, within the last 12 months, a non-securities business client of BofAS and/or one or more of its affiliates: Franco-Nevada, Pan American.

BofAS or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: Pan American.

BofAS or an affiliate expects to receive or intends to seek compensation for investment banking services from this issuer or an affiliate of the issuer within the next three months: HudBay Minerals.

BofAS together with its affiliates beneficially owns one percent or more of the common stock of this issuer. If this report was issued on or after the 9th day of the month, it reflects the ownership position on the last day of the previous month. Reports issued before the 9th day of a month reflect the ownership position at the end of the second month preceding the date of the report: Franco-Nevada, HudBay Minerals.

BofAS or one of its affiliates is willing to sell to, or buy from, clients the common equity of the issuer on a principal basis: Franco-Nevada, HudBay Minerals, IAMGOLD, Pan American.

The issuer is or was, within the last 12 months, a securities business client (non-investment banking) of BofAS and/or one or more of its affiliates: HudBay Minerals, Pan American.

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

From time to time research analysts conduct site visits of covered issuers. BofA Global Research policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of BofA or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

Refer to [BofA Global Research policies relating to conflicts of interest](#).

"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofA and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofam.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofA Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to "Wholesale" clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the [Electronic Communications Disclaimers](#) for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such

securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned herein. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

BofA ESGMeter Methodology:

ESGMeter is a proprietary metric based on quantitative analysis and fundamental analyst inputs that reflects our assessment of a company's Environmental, Social and Governance-related attributes. The ESGMeter is intended to indicate a company's likelihood of experiencing stronger financial stability (higher return on equity and lower earnings and price volatility) over the next three years relative to peer group. There are three ESGMeter levels - Low, Medium, and High - which indicate whether a company has attributes most likely to translate into superior financial stability (in the case of a High level) or weaker financial stability (in the case of a Low level) over the next three years relative to its peer group. A Medium level suggests that a company exhibits ESG characteristics that are likely associated with financial stability results in line with its peer group over the next three years. Full details of our methodology, financial stability definition and disclaimers are available at [BofA ESGMeter methodology](#). ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating.

ESGMeter is independent of the BofA Global Research fundamental equity analyst's investment rating, volatility risk rating, income rating or price objective for that company.

Copyright and General Information:

Copyright 2024 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities.

Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS or any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Subject to the quiet period applicable under laws of the various jurisdictions in which we distribute research reports and other legal and BofA Securities policy-related restrictions on the publication of research reports, fundamental equity reports are produced on a regular basis as necessary to keep the investment recommendation current.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.

Research Analysts

Sathish Kasinathan

Research Analyst

BofAS

sathish.kasinathan@bofa.com

Harmen Puri >>

Research Analyst

Merrill Lynch (Canada)

harmen.puri@bofa.com

Lawson Winder, CFA >>

Research Analyst

Merrill Lynch (Canada)

lawson.winder@bofa.com

>> Employed by a non-US affiliate of BofAS and is not registered/qualified as a research analyst under the FINRA rules. Refer to "Other Important Disclosures" for information on certain BofA Securities entities that take responsibility for the information herein in particular jurisdictions.

