

North American Precious Metals Weekly

Re-visiting gold price leverage + Newmont site visit and Endeavour CEO departure

Industry Overview

Bullish gold? IAG, SSRM, PAAS offer most torque

We refresh gold price sensitivities across our coverage universe on the back of the recent volatility in gold prices. For investors bullish of gold, we highlight IAMGOLD (IAG), SSR Mining (SSRM) and Pan American Silver (PAAS) for highest sensitivity to gold price changes. For less volatile exposure we recommend royalty/streaming company equities including Franco-Nevada (FNV), Wheaton Precious Metals (WPM), and Triple Flag Precious Metals (TFPM). For charts, please see Exhibits 3-9 on pages 2-3.

Newmont: Australia site visit highlights

Last week, we published a report highlighting our recent site visit to Newmont's Boddington and Tanami mines in Australia. These assets account for 10% and 6% of our NAV respectively, with the broader country accounting for 36% of our NAV. Our biggest takeaway: both assets showed significant potential for mine life extension and/or expansion. At Tanami, the Tanami Expansion 2 (TE2) which is expected to boost annual production and reduce costs remains on track for H2'25 completion and on-budget (\$1.2-1.3 billion). Also of interest at Tanami was the Oberon deposit (30km from Tanami) which could be a future source of open-pit production. At Boddington, NEM continues to expect lower grades in 2024 and 2025 as stripping of the South pit results in milling of medium-grade stockpiles. However, we were encouraged by efficiency gains from the relatively new autonomous haulage truck fleet and there appears to significant potential to substantially extend the mine life through both resource conversion and exploration upside. For more details, see ([BofA: Site visit to Newmont Australia: with a focus on the Tanami and Boddington mines, 04-Jan-24](#))

Endeavour Mining: abrupt CEO termination spurs sell-off

Last week, Endeavour Mining (EDV) announced the termination of Sébastien de Montessus, President and CEO, with immediate effect. Also effective immediately, Ian Cockerill (Deputy Chair of the Board) was been appointed replacement CEO and Executive Director. To our understanding, Ian appears to be a permanent replacement for the CEO role. Sébastien's termination comes as an unexpected surprise, and an investigation is still ongoing. Information is still limited. Nevertheless, we note: (1) the situation appears unrelated to the company's ongoing operations, (2) a permanent CEO replacement has already been appointed, and (3) the CEO replacement has extensive mining experience spanning nearly 5 decades and thus appears an appropriate fit to lead EDV. Shares were down ~10% on the lack of information and potential for further headline risks as the situation unfolds. We await further information and expect this to be a focus with the company's upcoming expected releases including Q4'23 operational results with 2024 guidance and thereafter Q4'23 financial results. For more details see (BofA: A shock to kick off 2024: CEO terminated on serious misconduct, 04-Jan-24).

07 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 metal prices

BofA sees gold at \$1,975 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

>> 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 15 to 17.

12642304

Timestamp: 07 January 2024 03:30PM EST

Exhibit 2: Gold Indices and Closing Prices

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

	5-Jan-24	29-Dec-23	Weekly	52 Week	
	Close		% Change	High	Low
Gold Indices					
Philadelphia Gold and Silver Index (XAU)	120.30	125.69	-4.3%	145.15	102.39
NYSE Arca Exchange Gold Bugs Index (HUI)	232.98	243.31	-4.2%	284.46	197.04
S&P/TSX Global Gold Index	275.61	284.05	-3.0%	345.05	244.14
FT Australasia Gold Index	10,223.52	11,659.13	-12.3%	12,259.24	8,765.00
FT Africa Gold Index	2,275.04	2,510.23	-9.4%	3,075.09	1,765.76
FT North American Gold Index	1,340.03	1,396.59	-4.0%	1,584.24	1,134.17
FT All Gold Mines Index	1,808.51	1,908.73	-5.3%	2,163.38	1,512.48
Precious Metal Prices					
Gold Prices - US\$/oz	2,045.45	2,062.98	-0.8%	2,135.39	1,804.92
Silver Price - US\$/oz	23.19	23.80	-2.5%	26.14	19.90
Platinum Price - US\$/oz	964.18	991.90	-2.8%	1,134.95	843.10
Palladium Price - US\$/oz	1,030.56	1,100.24	-6.3%	1,843.18	925.11

Source: Bloomberg

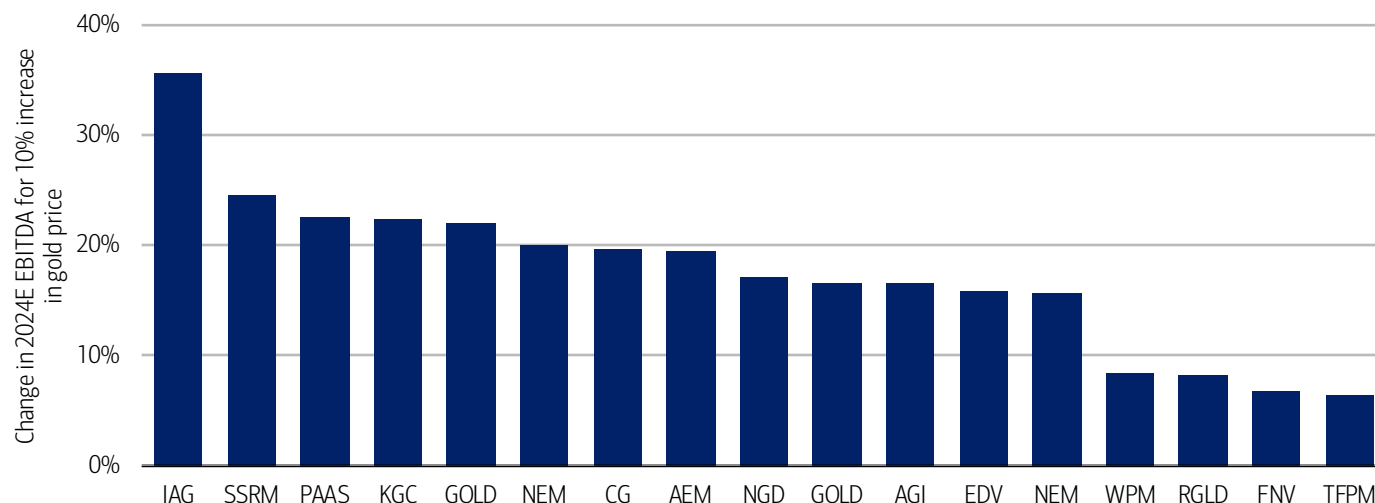
BofA GLOBAL RESEARCH

Gold declines on robust US employment report

Last week, gold experienced a modest decline of 0.8% to \$2,045 per ounce (/oz). The downward movement can be attributed to softening Fed rate cut expectations. The US nonfarm payroll report (5-Jan-24) was better than expected with an employment increase of 216,000 that beat estimates at 170,000 and was much stronger vs. the prior reading of 173,000. Additionally, average hourly earnings grew at 0.4%, beating estimates at 0.3%. The strong employment report, in our view, pushed real US real rates higher, with two year TIPS increasing by 1.5%. Gold has historically found support in January, partly due to Chinese New Year buying. BofA is forecasting for gold to average \$1,975/oz in 2024E (silver is forecast to average \$23.26/oz). the BofA Commodities team thinks gold could rise to \$2,400/oz by the end of 2024, if rate cuts start before Q2'24. Gold equities were lower last week with the S&P/TSX Global Gold Index down 3.0%, the Philadelphia Gold and Silver Index (XAU) down 4.3%, and the NYSE Arca Exchange Gold Bugs Index (HUI) down 4.2%.

Exhibit 3: EBITDA Sensitivity to Gold Price Change

IAG, SSRM and PAAS have the highest sensitivity to gold price increases.

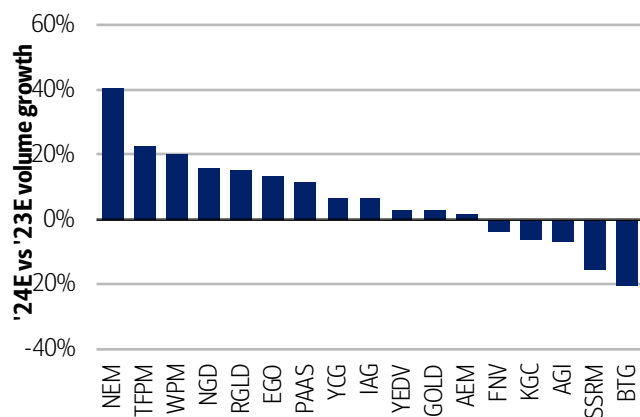


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 4: 2024E vs 2023E Production Growth Ranked

NEM highest production growth in 2024E

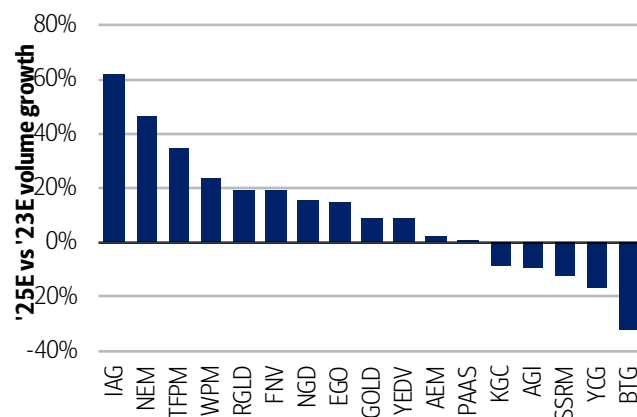


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 5: 2025E vs 2023E Production Growth Ranked

IAG highest production growth in 2025E

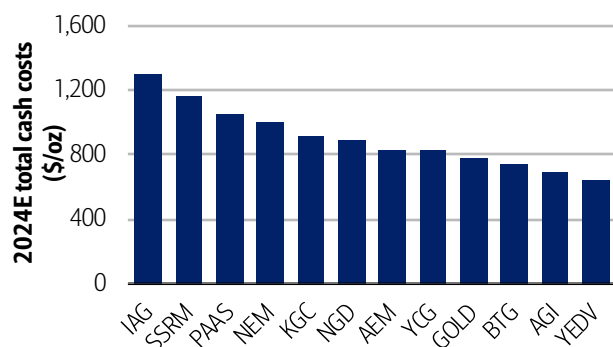


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 6: 2024E Total Cash Cost Ranked

IAG highest cost base in 2024E

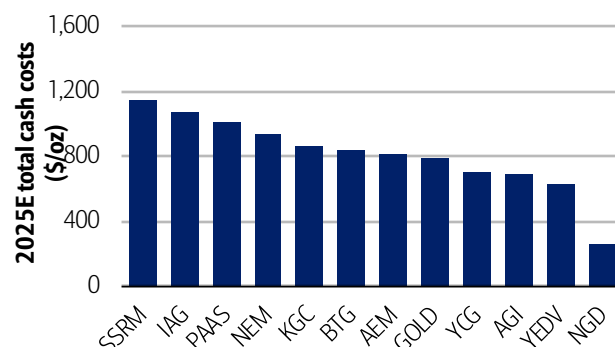


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 7: 2025E Total Cash Cost Ranked

SSRM highest cost base in 2025E

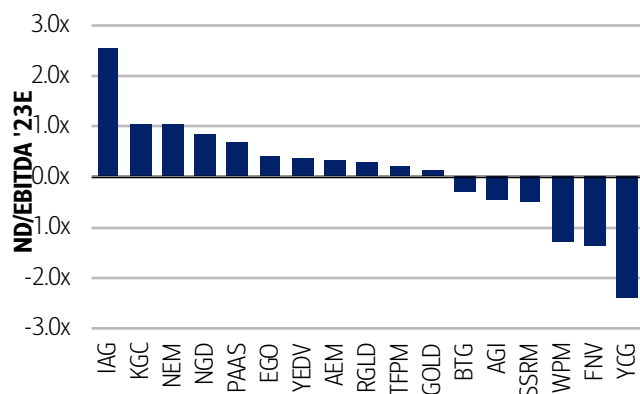


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 8: ND/EBITDA 2023E Ranked

IAG highest ND/EBITDA '23E

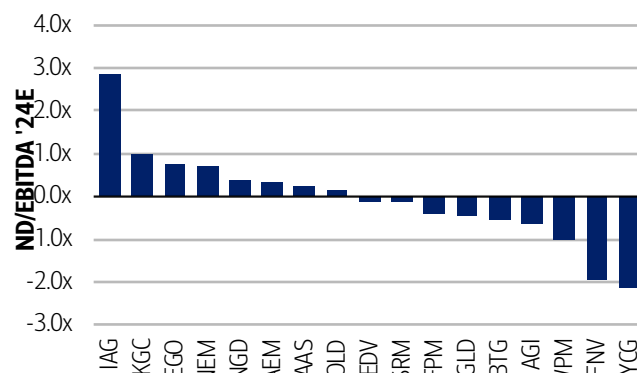


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 9: ND/EBITDA 2024E Ranked

IAG highest ND/EBITDA '24E



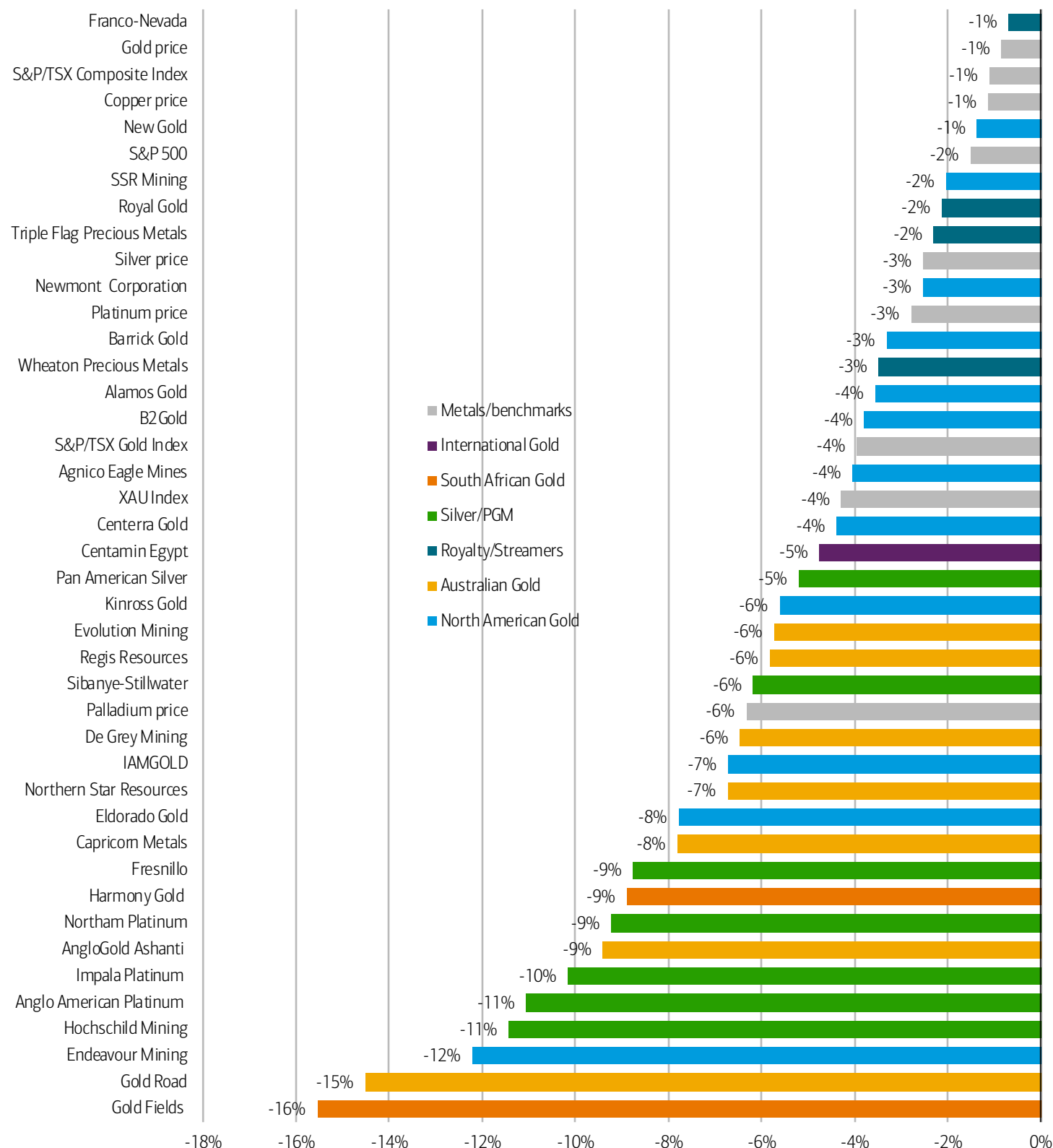
Source: BofA Global Research

BofA GLOBAL RESEARCH

WoW returns for the gold sector

Exhibit 10: WoW returns for the global gold sector and key metals/benchmarks

Gold equities traded lower week-over-week due to climbing metal price. Franco-Nevada was the best performer, down -1%



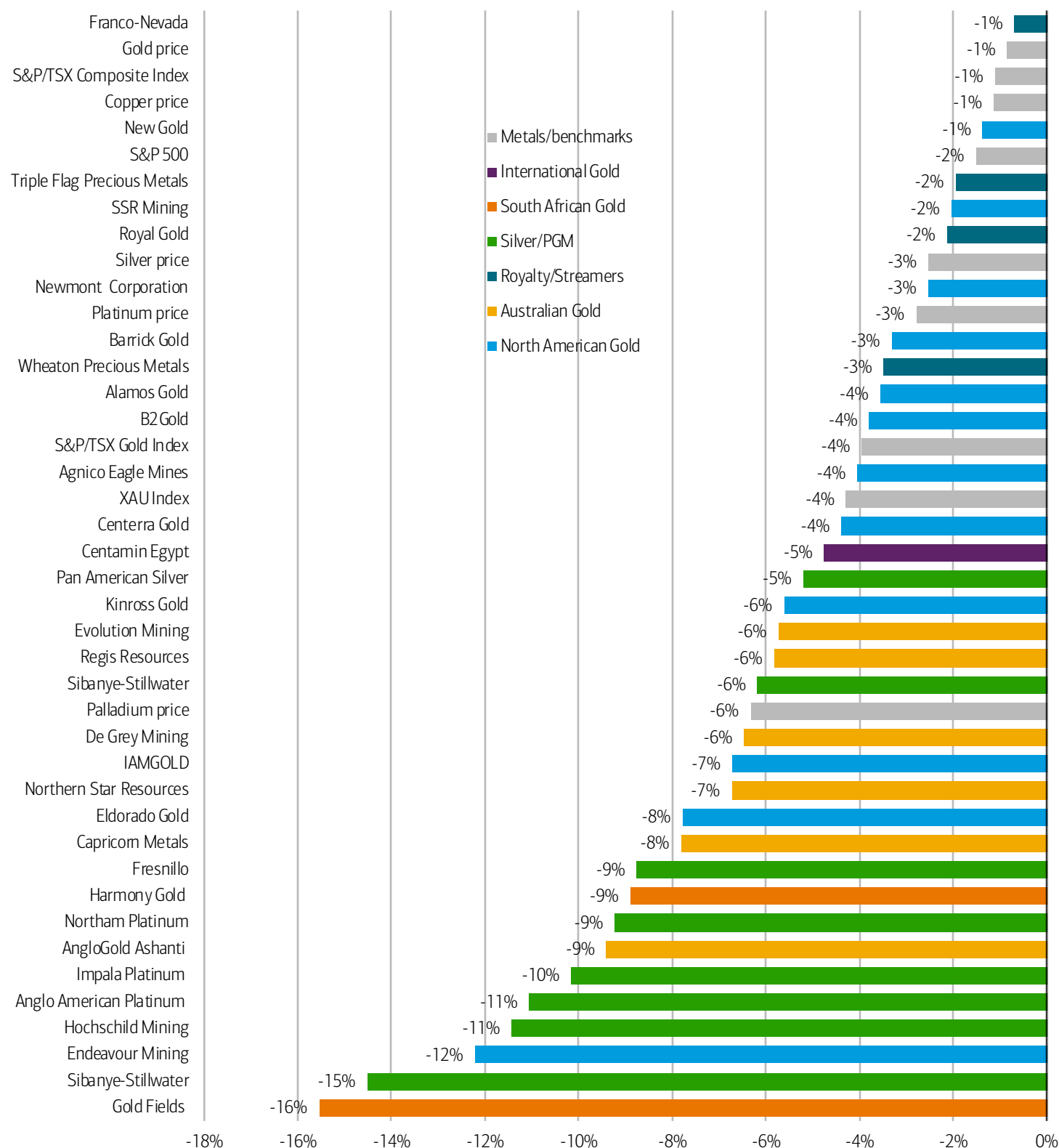
Source: Bloomberg. Note: this is not an exhaustive list of global precious metal equities

BofA GLOBAL RESEARCH

YTD returns for the gold sector (2024)

Exhibit 11: Year to date returns for the global gold sector and key metals/benchmarks

Franco-Nevada was the best performer in our global coverage year-to-date, down -1%



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

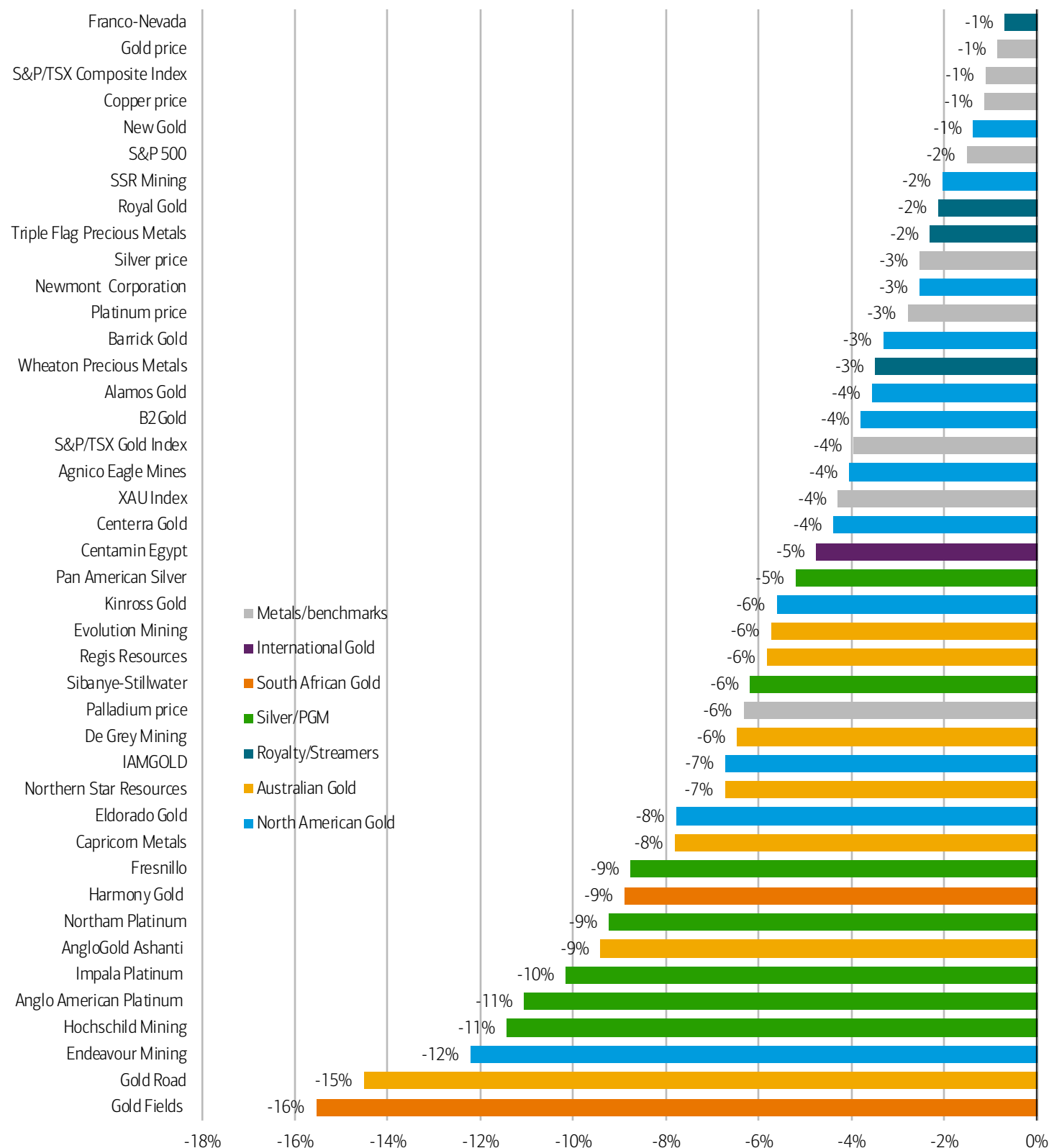
BofA GLOBAL RESEARCH



QTD returns for the gold sector

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

Franco-Nevada was the best performer in our global coverage quarter-to-date, down -1%



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

BofA GLOBAL RESEARCH



Valuation overview

Exhibit 13: Valuation Comparables for North American Gold and Precious Metals Producers and Royalty Companies

North American precious metal stocks are trading at 1.32x NAV (market value weighted), vs. the 10-year range of 1.0-2.0x NAV

Priced as of 05-Jan-2024				Market Cap	EPS		P/E (x)		CFPS		P/CFPS (x)				
	BofA Sym	Share Price	Shares O/S	(USDmn)	Rating	2023E	2024E	2023E	2024E	2023E	2024E	2023E	2024E	NAV	P/NAV
Senior Gold Producers															
Agnico Eagle Mines	AEM	52.63	497	26,133	BUY	2.12	2.49	24.8	21.1	5.37	5.88	9.8	8.9	36.75	1.43
Barrick Gold	GOLD	17.49	1,756	30,704	BUY	0.83	1.24	21.1	14.1	2.37	2.54	7.4	6.9	19.95	0.88
Kinross Gold	KGC	5.71	1,228	7,011	UNDE	0.44	0.46	13.0	12.4	1.19	1.22	4.8	4.7	5.30	1.08
Newmont Corporation	NEM	40.34	1,152	46,492	BUY	1.51	2.20	26.7	18.3	3.49	4.54	11.6	8.9	38.40	1.05
Market Cap Weighted Average								23.8	17.4			9.5	8.1		1.09
Mid-Tier Gold Producers															
B2Gold	BTG	3.04	1,300	3,953	BUY	0.27	0.29	11.3	10.5	0.63	0.51	4.8	6.0	3.25	0.94
Centerra Gold ⁽¹⁾	YCG	7.64	216	1,233	UNDE	0.00	0.39	NA	14.7	0.60	1.05	9.6	5.5	14.15	0.54
Eldorado Gold	EGO	11.96	205	2,447	UNDE	0.49	0.36	24.4	33.2	1.61	1.69	7.4	7.1	14.25	0.84
Endeavour Mining ⁽¹⁾	YEDV	26.40	248	4,895	BUY	1.36	2.71	14.5	7.3	3.13	4.87	6.3	4.1	34.80	0.76
IAMGOLD	IAG	2.36	481	1,136	BUY	0.03	0.00	78.7	NA	0.67	0.45	3.5	5.2	4.90	0.48
SSR Mining	SSRM	10.54	204	2,149	UNDE	1.09	0.60	9.7	17.6	2.15	1.57	4.9	6.7	12.55	0.84
Market Cap Weighted Average								19.6	14.6			6.0	5.6		0.79
Intermediate/Junior Gold Producers															
Alamos Gold	AGI	12.99	397	5,154	NEUT	0.51	0.57	25.5	22.8	1.32	1.35	9.8	9.6	10.15	1.28
New Gold	NGD	1.44	687	989	UNDE	(0.03)	0.21	NA	6.9	0.43	0.49	3.3	3.0	2.80	0.51
Market Cap Weighted Average								25.5	20.2			8.8	8.5		1.16
Royalty Companies															
Franco-Nevada	FNV	110.04	192	21,141	BUY	3.41	3.24	32.3	34.0	4.91	4.98	22.4	22.1	56.35	1.95
Royal Gold	RGLD	118.38	66	7,777	UNDE	3.45	4.29	34.3	27.6	6.11	7.72	19.4	15.3	60.05	1.97
Triple Flag Precious Metals	TFPM	13.05	202	2,630	BUY	0.33	0.63	39.5	20.7	0.76	0.97	17.2	13.4	9.60	1.36
Wheaton Precious Metals	WPM	47.62	453	21,572	BUY	1.12	1.37	42.5	34.8	1.59	2.15	29.9	22.1	22.80	2.09
Market Cap Weighted Average								37.1	32.7			24.8	20.7		1.98
Primary Silver Producers															
Pan American Silver	PAAS	15.48	364	5,642	BUY	0.15	0.48	NA	32.3	1.44	1.97	10.8	7.9	15.00	1.03
Market Cap Weighted Average								0.0	32.3			10.8	7.9		1.03
Gold producer only:								23.4	17.3			9.1	7.8		1.06
Overall average:								27.4	22.0			13.5	11.4		1.32

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

Global precious metal stocks are trading at 1.20x NAV (market value weighted)

Priced as of 05-Jan-2024	BofA Sym	Share Price	Shares Outstanding	MC (USDmn)	Rating	EPS 2024	EPS 2025	P/E (x) 2024	P/E (x) 2025	CFPS 2024	CFPS 2025	P/CFPS (x) 2024	P/CFPS (x) 2025	NAV	P/NAV
Australian Gold Producers⁽⁹⁾															
Capricorn Metals	CRNLF	4.42	377	1,120	NEUT	0.29	0.25	15.2	17.4	0.44	0.34	10.1	12.9	4.33	1.02
De Grey Mining	DGMLF	1.20	1,851	1,485	BUY	(0.01)	(0.02)	NA	NA	(0.01)	(0.02)	NA	NA	1.54	0.77
Evolution Mining	CAHPF	3.80	1,976	5,039	NEUT	0.28	0.47	13.7	8.1	0.59	0.78	6.5	4.9	3.69	1.03
Gold Road	ELKMF	1.71	1,081	1,241	BUY	0.13	0.17	8.5	6.7	0.25	0.29	4.6	4.0	2.13	0.80
Northern Star Resources	NESRF	12.96	1,149	9,998	BUY	0.58	1.03	22.5	12.6	1.79	2.12	7.2	6.1	12.97	1.00
Regis Resources	RGRNF	2.09	755	1,060	BUY	(0.03)	0.28	NA	4.9	0.54	0.72	2.6	2.0	2.27	0.92
Market Cap Weighted Average								17.5	10.9			6.8	5.8		0.97
South African Gold Producers⁽¹⁹⁾															
Gold Fields ⁽¹³⁾	GFIOF	240.00	894	11,477	NEUT	1.14	2.02	11.2	6.4	2.16	n/a	6.0	NA	235.06	1.02
Harmony Gold ^(14,18)	HGMCF	111.46	620	3,698	UNDE	12.19	16.22	9.1	6.9	16.12	15.29	6.9	7.3	79.94	1.39
Market Cap Weighted Average								10.7	6.5			6.7	8.2		1.15
International Gold Producers															
AngloGold Ashanti	AULGF	327.55	420	7,357	NEUT	1.35	2.46	13.0	7.1	3.13	4.19	5.6	4.2	310.60	1.05
Centamin Egypt ^(5,18)	CELTf	95.25	1,158	1,404	BUY	0.14	0.18	8.8	6.7	0.26	0.31	4.6	3.9	130.78	0.73
Market Cap Weighted Average								12.3	7.1			5.4	4.1		1.00
South African PGM Producers⁽⁵⁾															
Anglo American Platinum	AGPPF	877.23	265	12,455	NEUT	29.50	23.50	29.7	37.3	48.03	43.80	18.3	20.0	665.71	1.32
Impala Platinum	IMPUF	83.89	904	4,060	UNDE	(0.67)	2.21	NA	37.9	11.07	13.98	7.6	6.0	59.58	1.41
Northam Platinum	NPTLF	130.41	396	2,765	BUY	8.65	7.38	15.1	17.7	16.85	12.10	7.7	10.8	62.97	2.07
Sibanye-Stillwater	SBYSF	23.90	2,831	3,621	UNDE	(1.02)	(0.97)	NA	NA	2.78	2.62	8.6	9.1	18.40	1.30
Market Cap Weighted Average								27.1	34.6			16.1	17.5		
International Silver Producers															
Fresnillo	FNLPF	544.00	737	5,099	UNDE	0.16	0.24	43.6	28.4	109.28	126.70	5.0	4.3	272.85	2.54
Hochschild	HCHDF	95.15	514	623	BUY	0.11	0.27	11.3	4.4	56.79	77.72	1.7	1.2	98.83	1.22
Market Cap Weighted Average								40.1	25.8			4.6	4.0		2.39
Global average								10.6							1.20
Global average ex-royalty															1.08

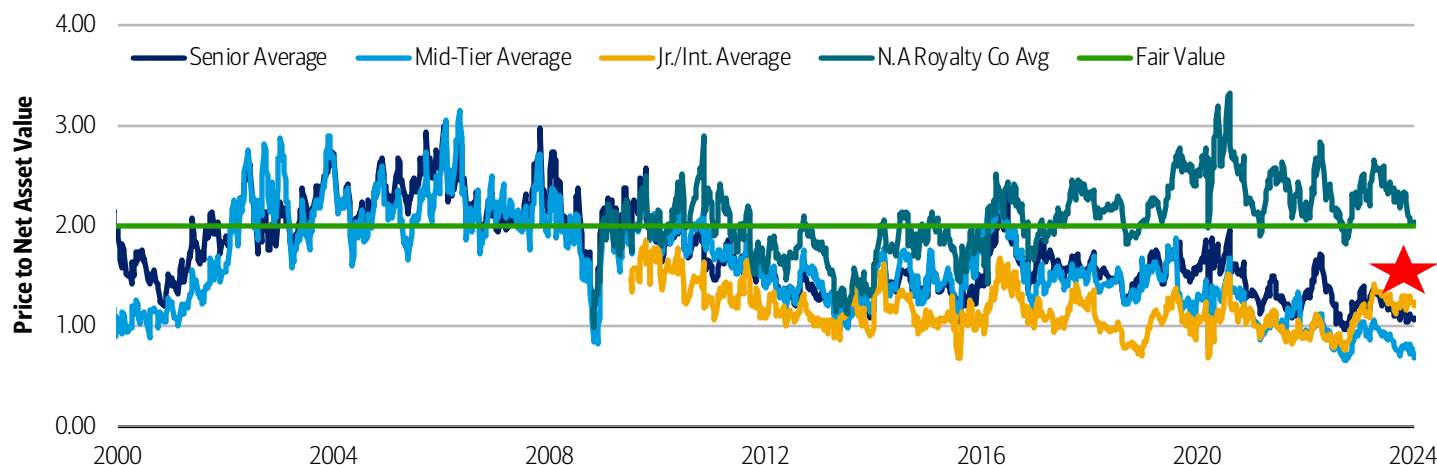
Source: Bloomberg, Company reports, BofA Global Research estimates (1) stock price in CAD; EPS, CFPS, NAV in USD (2) CAD (3) stock price in AUD (4) 2021 metrics actual

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

Historical P/NAV multiples for the North American sector. Sector trading at 1.32xNAV, between the 1.0-2.0x historical range

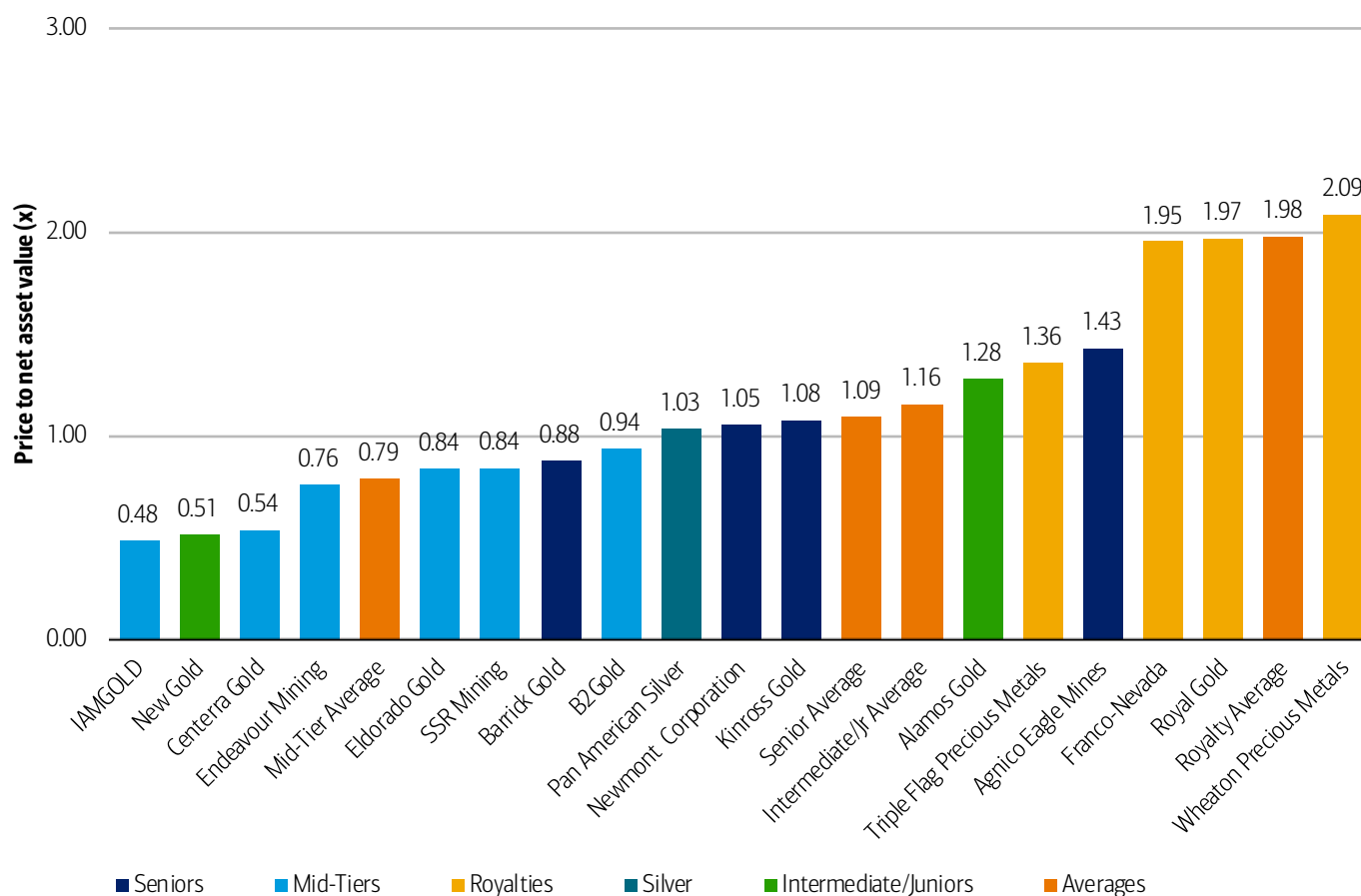


Source: Bloomberg

BofA GLOBAL RESEARCH

Exhibit 16: 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 17: Net asset value, reserves and resources
North American precious metals coverage universe, ratings and NAV's

Priced as of 05-Jan-2024	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	52.63	497	26,133	36.75	1.43	44.6	114.8
Barrick Gold	GOLD	17.49	1,756	30,704	19.95	0.88	69.0	271.0
Kinross Gold	KGC	5.71	1,228	7,011	5.30	1.08	32.6	70.3
Newmont Corporation	NEM	40.34	1,152	46,492	38.40	1.05	95.5	208.0
Market Cap Weighted Average						1.09		
Mid-Tier Gold Producers								
B2Gold	BTG	3.04	1,300	3,953	3.25	0.94	6.3	22.0
Centerra Gold ⁽¹⁾	YCG	7.64	216	1,233	14.15	0.40	4.8	13.0
Eldorado Gold	EGO	11.96	205	2,447	14.25	0.84	17.7	57.9
Endeavour Mining	YEDV	26.40	248	6,540	34.80	0.57	17.8	53.8
IAMGOLD	IAG	2.36	481	1,136	4.90	0.48	12.4	45.6
SSR Mining	SSRM	10.54	204	2,149	12.55	0.84	9.2	21.1
Market Cap Weighted Average						0.79		
Intermediate/Junior Gold Producers								
Alamos Gold ⁽⁶⁾	AGI	12.99	397	5,154	10.15	1.28	10.3	21.8
New Gold	NGD	1.44	687	989	2.50	0.58	3.7	6.8
Market Cap Weighted Average						1.16		
Royalty Companies								
Franco-Nevada	FNV	110.04	192	21,141	56.35	1.95	NA	NA
Royal Gold	RGLD	118.38	66	7,777	60.05	1.97	NA	NA
Triple Flag Precious Metals	TFPM	13.05	202	2,630	9.60	1.36	NA	NA
Wheaton Precious Metals	WPM	47.62	453	21,572	22.80	2.09	NA	NA
Market Cap Weighted Average						1.98		
Primary Silver Producers								
Pan American Silver	PAAS	15.48	364	5,642	15.00	1.03	529.3	1,807.6
Market Cap Weighted Average						1.03		

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

Priced as of 05-Jan-2024	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	4.42	377	1,123	4.33	1.02	1.3	3.6
De Grey Mining	DGMLF	1.20	1,851	1,490	1.54	0.77	5.1	15.7
Evolution Mining	CAHPF	3.80	1,976	5,056	3.69	1.03	10.0	40.3
Gold Road	ELKMF	1.71	1,081	1,245	2.13	0.80	4.1	8.9
Northern Star	NESRF	12.96	1,149	10,032	12.97	1.00	20.2	77.6
Regis Resources	RGRNF	2.09	755	1,063	2.27	0.92	3.6	10.6
Market Cap Weighted Average						0.97		
South African Gold Producers⁽⁴⁾								
Gold Fields	GFIOF	240.00	894	11,477	235.06	1.02	52.1	96.9
Harmony Gold ⁽¹²⁾	HGMCF	111.46	620	3,698	79.94	1.39	42.5	66.9
Market Cap Weighted Average						1.15		
International Gold Producers								
AngloGold Ashanti	AULGF	327.55	420	7,701	310.60	1.05	29.7	154.2
Centamin Egypt ⁽⁵⁾	CELTF	95.25	1,158	1,404	130.78	0.73	5.0	14.8
Market Cap Weighted Average						1.00		
South African PGM Producers⁽¹⁶⁾								
Anglo American Platinum ⁽⁵⁾	AGPPF	877.23	265	12,455	665.71	1.32	177.2	847.4
Impala Platinum ⁽⁵⁾	IMPUF	83.89	850	4,060	59.58	1.41	34.1	250.0
Northam Platinum ⁽⁵⁾	NPTLF	130.41	397	2,765	62.97	2.07	14.0	195.9
Sibanye-Stillwater	SBYSF	23.90	2,853	3,621	18.40	1.30	57.7	373.3
Market Cap Weighted Average						2.39		
International Silver Producers								
Fresnillo ⁽⁵⁾	FNLPF	544.00	737	5,099	272.85	2.54	397.8	1,265.5
Hochschild Mining ⁽⁵⁾	HCHDF	95.15	514	623	99	1.22	41.2	288.8
Market Cap Weighted Average						0.00		

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 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 19: 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 05-Jan-2024		Share	Shares	MC	Enterprise	EBIT (\$mn)		EV/EBIT (x)		EBITDA (\$mn)		EV/EBITDA (x)	
	BofA Sym	Price	Outstanding	(USDmn)	Value (EV) (USDmn)	2024E	2025E	2024E	2025E	2023E	2025E	2024E	2025E
Senior Gold Producers													
Agnico Eagle Mines	AEM	52.63	497	26,133	27,885	2,014	2,566	13.8	10.9	4,704	4,127	5.9	6.8
Barrick Gold	GOLD	17.49	1,756	30,704	39,896	4,998	6,050	8.0	6.6	5,032	7,991	7.9	5.0
Kinross Gold	KGC	5.71	1,228	7,011	9,090	918	1,365	9.9	6.7	1,798	2,211	5.1	4.1
Newmont Corporation	NEM	40.34	1,152	46,492	49,530	3,193	7,148	15.5	6.9	3,527	9,971	14.0	5.0
Market Cap Weighted Average								12.4	7.7			9.7	5.3
Mid-Tier Gold Producers													
B2Gold	BTG	3.04	1,300	3,953	3,815	671	578	5.7	6.6	917	786	4.2	4.9
Centerra Gold ⁽¹⁾	YCG	7.64	216	1,233	742	155	189	4.8	3.9	233	317	3.2	2.3
Eldorado Gold	EGO	11.96	205	2,447	2,578	206	167	12.5	15.5	391	473	6.6	5.5
Endeavour Mining ⁽¹⁾	YEDV	26.40	248	6,540	5,711	1,014	1,149	5.6	5.0	941	1,747	6.1	3.3
IAMGOLD	IAG	2.36	481	1,136	1,598	82	352	19.6	4.5	205	715	7.8	2.2
SSR Mining	SSRM	10.54	204	2,149	2,991	188	266	15.9	11.3	485	447	6.2	6.7
Market Cap Weighted Average								9.2	6.6			5.6	4.2
Intermediate/Junior Gold Producers													
Alamos Gold	AGI	12.99	397	5,154	4,919	367	455	13.4	10.8	507	632	9.7	7.8
New Gold	NGD	1.44	687	989	1,198	140	237	8.5	5.1	314	563	3.8	2.1
Market Cap Weighted Average								12.4	9.7			8.5	6.7
Royalty Companies													
Franco-Nevada	FNV	110.04	192	21,141	19,844	761	1,066	26.1	18.6	1,031	1,389	19.2	14.3
Royal Gold	RGLD	118.38	66	7,777	8,007	361	396	22.2	20.2	462	625	17.3	12.8
Triple Flag Precious Metals	TFPM	13.05	202	1,923	1,951	142	165	13.8	11.8	115	232	17.0	8.4
Wheaton Precious Metals	WPM	47.62	453	21,572	20,744	654	750	31.7	27.7	705	1,103	29.4	18.8
Market Cap Weighted Average								26.8	21.9			22.4	15.4
Primary Silver Producers													
Pan American Silver	PAAS	15.48	364	5,642	6,867	320	637	21.5	10.8	574	1,097	12.0	6.3
Market Cap Weighted Average								21.5	10.8			12.0	6.3

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 20: 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 05-Jan-2024		Share	Shares	MC	Enterprise	EBIT (\$mn)		EV/EBIT (x)		EBITDA		EV/EBITDA (x)	
	BofA Sym	Price	Outstanding	(USDmn)	Value (EV) (USDmn)	2023E	2024E	2023E	2024E	2023E	2024E	2023E	2024E
Australian Gold Producers ^(4,12,18)													
Capricorn Metals	CRNLF	4.42	377	1,120	1,106	159	141	10.4	11.7	162	174	10.2	9.4
De Grey Mining	DGMLF	1.20	1,851	1,485	1,411	(16)	(16)	NA	NA	(21)	(14)	NA	NA
Evolution Mining	CAHPF	3.80	1,976	5,039	6,223	891	1,389	10.4	6.7	886	1,974	10.5	4.7
Gold Road	ELKMF	1.71	1,081	1,241	1,219	205	251	8.9	7.2	259	346	7.0	5.3
Northern Star Resources	NESRF	12.96	1,149	9,998	10,124	1,021	1,742	9.9	5.8	1,537	2,987	6.6	3.4
Regis Resources	RGRNF	2.09	755	1,060	1,378	(8)	317	NA	6.5	401	645	5.1	3.2
Market Cap Weighted Average								10.0	6.1			7.6	4.0
South African Gold Producers ⁽¹⁶⁾													
Gold Fields ⁽⁴⁾	GFIOF	240	894	11,477	11,851	1,651	2,691	7.2	4.4	2,480	3,879	4.8	3.1
Harmony Gold	HGMCF	111	620	3,698	3,837	8,591	11,151	8.3	6.4	609	866	6.3	4.4
Market Cap Weighted Average								7.5	4.9			4.2	2.8
International Gold Producers													
AngloGold Ashanti	AULGF	328	420	7,357	8,743	1,041	1,729	8.4	5.1	1,419	2,566	6.2	3.4
Centamin Egypt	CELTf	95.25	1,158	1,404	1,301	342	478	3.8	2.7	367	648	3.5	2.0
Market Cap Weighted Average								7.8	4.8			5.8	3.2
South African PGM Producers													
Anglo American Platinum	AGPPF	877.23	265	12,455	9,848	10,142	8,520	18.1	21.6	26,459	14,825	7.0	12.4
Impala Platinum ⁽⁴⁾	IMPUF	83.89	904	4,060	3,123	472	4,709	NA	12.4	30,074	13,477	1.9	4.3
Norham Platinum ⁽⁴⁾	NPTLF	130.41	396	2,765	3,290	5,753	4,496	10.7	13.7	16,594	5,771	3.7	10.7
Sibanye-Stillwater	SBYSF	23.90	2,831	3,621	3,445	1,421	2,647	45.3	24.3	24,290	12,471	2.6	5.2
Market Cap Weighted Average								22.3	19.3			4.2	9.6
International Silver Producers													
Fresnillo	FNLPF	544.00	737	5,099	5,770	338	452	17.1	12.8	634	997	9.1	5.8
Hochschild Mining	HCHDF	95.15	514	623	797	122	270	6.5	3.0	150	410	5.3	1.9
Market Cap Weighted Average								15.8	11.6			8.6	5.3

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 21: 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 05-Jan-2024

Priced as of 05-Jan-2024							Production		EV		
	BofA Sym	Share Price	Shares O/S	Market Cap	Enterprise Value	P&P Gold Reserves (moz)	2024E ('000 oz)	2025E ('000 oz)	Per Oz of Prod. (USD)		
										2024E	2025E
Senior Gold Producers											
Agnico-Eagle Mines	AEM	52.63	497	26,133	27,885	44.6	3,499	3,523	7,970	7,916	
Barrick Gold	GOLD	17.49	1,756	30,704	39,896	69.0	4,189	4,445	9,523	8,976	
Kinross Gold	KGC	5.71	1,228	7,011	9,090	32.6	2,032	1,978	4,473	4,596	
Newmont Corporation	NEM	40.34	1,152	46,492	49,530	95.5	7,835	8,168	6,321	6,064	
Market Cap Weighted Average										7,563	7,286
Mid-Tier Gold Producers											
B2Gold	BTG	3.04	1,300	3,953	3,815	6.3	828	703	4,607	5,429	
Centerra Gold ⁽¹⁾	YCG	7.64	216	1,233	742	4.8	372	290	1,995	2,560	
Eldorado Gold	EGO	11.96	205	2,447	2,578	17.7	538	547	4,789	4,712	
Endeavour Mining ⁽¹⁾	YEDV	26.40	248	6,540	5,711	17.8	1,262	1,333	4,526	4,285	
IAMGOLD	IAG	2.36	481	1,136	1,598	12.4	497	757	3,216	2,110	
SSR Mining	SSRM	10.54	204	2,149	2,991	9.2	508	526	5,886	5,687	
Market Cap Weighted Average										4,588	4,566
Intermediate/Junior Gold Producers											
Alamos Gold	AGI	12.99	397	5,154	4,919	10.3	487	475	10,095	10,362	
New Gold	NGD	1.44	687	989	1,198	3.7	372	372	3,224	3,224	
Market Cap Weighted Average										8,749	8,963
Royalty Companies										Attributable Production	
Franco-Nevada	FNV	110.04	192	21,141	19,844	NA	628	778	31,611	25,521	
Royal Gold	RGLD	118.38	66	7,777	8,007	NA	363	376	22,056	21,320	
Triple Flag Precious Metals	YTFRM	17.41	202	3,509	2,665	NA	130	143	20,516	18,629	
Wheaton Precious Metals	WPM	47.62	453	21,572	20,744	NA	731	754	28,369	27,494	
Market Cap Weighted Average										28,230	25,305
Primary Silver Producers											
Pan American Silver	PAAS	15.48	364	5,642	6,867	529.3	21,686	21,046	317	326	
Market Cap Weighted Average										317	326

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 22: Operating Forecasts for Global Gold and Precious Metal Producers (Cont'd)

International gold producers operating forecasts

Priced as of 05-Jan-2024

Priced as of 05-Jan-2024	Shares					Production			EV	
	BofA Sym	Share Price	O/S	Market Cap	Enterprise Value	P&P Gold Reserves (million oz)	2024 ('000 oz)	2025 ('000 oz)	Per Oz of Prod. (USD) 2024E	2025E
Australian Gold Producers ⁽³⁾										
Capricorn Metals	CRNLF	4.42	377	1,123	1,106	1.3	NA	NA	NA	NA
De Grey Mining	DGMLF	1.20	1,851	1,490	1,411	5.1	NA	NA	NA	NA
Evolution Mining	CAHPF	3.80	1,976	5,056	6,223	10.0	775	858	8,027	7,255
Gold Road	ELKMF	1.71	1,081	1,245	1,219	4.1	183	185	6,663	6,597
Northern Star	NESRF	12.96	1,149	10,032	10,124	20.2	1,676	1,873	6,039	5,404
Regis Resources	RGRNF	2.09	755	1,063	1,378	3.6	438	415	3,146	3,319
Market Cap Weighted Average									6,787	6,143
South African Gold Producers ⁽⁴⁾										
Gold Fields	GFIOF	240.00	894	11,515	11,851	52.1	2,572	2,927	4,608	4,048
Harmony Gold ⁽¹²⁾	HGMCF	111.46	620	3,710	3,837	42.5	1,464	1,425	2,621	2,693
Market Cap Weighted Average									4,557	4,013
International Gold Producers										
AngloGold Ashanti	AULGF	327.55	420	7,381	8,743	29.7	2,617	2,822	3,340	3,098
Centamin Egypt ⁽⁵⁾	CELTf	95.25	1,158	1,407	1,301	5.0	488	511	2,665	2,547
Market Cap Weighted Average									3,253	3,026
South African PGM Producers										
Anglo American Platinum ⁽⁵⁾	AGPPF	877.23	265	12,496	9,848	177.2	NA	NA	NA	NA
Impala Platinum ⁽⁵⁾	IMPUF	83.89	850	3,830	3,123	34.1	NA	NA	NA	NA
Northam Platinum ⁽⁵⁾	NPTLF	130.41	397	2,777	3,290	14.0	NA	NA	NA	NA
Sibanye-Stillwater	SBYSF	23.90	2,853	3,662	3,445	57.7	NA	NA	NA	NA
Market Cap Weighted Average									NA	NA
Primary Silver Producers										
Fresnillo ^(5,7)	FNLPF	544.00	737	5,099	5,770	397.8	58,669	59,339	98	97
Hochschild Mining ^(5,7)	HCHDF	95.15	514	623	797	41.2	30,532	29,935	26	27
Market Cap Weighted Average									90	89

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 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

Disclosures

Important Disclosures

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 BofAS 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:

BofAS 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; BofAS 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.

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 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.

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.