

North American Precious Metals Weekly

The gold price surges higher: we revisit sensitivities across our coverage

Industry Overview

Gold on a tear and up 6% week-over-week

Last week, the price of gold surged 6% higher on the back of increased volatility in broader markets, primarily from contagion in the U.S. and global banking sectors. Gold continues to demonstrate its role as a lower risk asset in times of heightened uncertainty. Also driving gold higher were sharply lower real rates (as proxied with the U.S. 10 year TIPS). The USD (a lower risk currency) held-up well last week with the dollar-weighted index (DXY) off just 0.7%; more meaningful weakness would have added bullish support for the yellow metal. The BofA Commodities team is constructive on the gold price in 2023E, calling it to the \$2,000/oz level. In light of the recent up-trend in the gold price, we re-visit estimate sensitivities to the gold price across our precious metals coverage, and highlight names with the greatest torque.

Revisiting gold price sensitivities: IAG, NGD stand-out

Sensitivity to the gold price for producers is largely driven by (1) the cost base, i.e. higher cost producers offer more torque as they benefit from the most margin expansion in an upswing in gold prices, and (2) financial leverage; producers with higher levels of debt (i.e. enterprise value with a higher component of debt) also offer more torque to the gold price. Using net asset value (NAV) and EBITDA, we provide an indication of the gold price sensitivities across our coverage. On 2023E EBITDA, IAMGOLD (IAG) offers the greatest sensitivity with a 10% increase in gold price driving a 35% increase in EBITDA. This is due to IAG's high-cost base. Similarly, New Gold's (NGD's) and Kinross Gold's (KGC's) 2023E EBITDA increase 25% for a 10% increase in the gold price – both also high-cost producers. On the flipside, royalty and streaming (R&S) stocks offer the least sensitivity owing to the limited operating costs associated with the business model (no cost on royalties, typically low fixed costs on streams). See Exhibits 3-6 for full details on sensitivities.

BTG R&R: highlighting the impacts of M&A

Last week, B2Gold (BTG) reported updated reserves and resources. Reserves were down 15% yoy, reflecting mining depletion. M&I resources also declined, though this was more muted at Fekola which saw benefits from regional consolidation and near-mine exploration activity. The update excluded reserves and resources to be gained through the acquisition of Sabina Gold and Silver (TSX: SBB, not rated). We calculate, pro-forma for the acquisition (expected to close Q2'23), that BTG has reserves of 8.9 million ounces (Moz), M&I of 20.9Moz, and inferred resources of 8.3Moz. This is 68%, 43% and 52% higher than BTG's existing reserves (ex-acquisition) – demonstrating the benefits of M&A ([see BofA: Reserves decline 15% yoy; SBB acquisition highlights benefits of M&A for R&R, 16-Mar-23](#)).

We provide a summary of other precious metals news flow on page 2.

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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

Jason Fairclough >>

Research Analyst
MLI (UK)
jason.fairclough@bofa.com

Patrick Mann, CFA >>

Research Analyst
MLI (UK)
patrick.mann@bofa.com

Cameron Needham >>

Research Analyst
MLI (UK)
cameron.needham@bofa.com

Michael Widmer

Commodity Strategist
MLI (UK)
michael.widmer@bofa.com

See Team Page for List of Analysts

Exhibit 1: Real prices of key metals

BofA sees gold at \$1,841/oz in 2023E

	2022A	2023E
Gold, real (\$/oz)	1,802	1,841
Silver, real (\$/oz)	21.79	22.83
Palladium (\$/oz)	2,110	1,865
Platinum (\$/oz)	963	1,325
Copper (\$/lb)	3.99	3.91

Source: Bloomberg, BofA Global Research Estimates
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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

R&R: reserves and resources

M&I: measured and indicated



Exhibit 2: Gold Indices and Closing Prices

Weekly changes for gold and various gold indices

	17-Mar-23	10-Mar-23	Weekly	52 Week	
	Close		% Change	High	Low
Gold Indices					
Philadelphia Gold and Silver Index (XAU)	123.86	111.59	11.0%	171.43	90.08
NYSE Arca Exchange Gold Bugs Index (HUI)	242.00	213.77	13.2%	338.04	172.86
S&P/TSX Global Gold Index	298.11	265.27	12.4%	379.45	216.92
FT Australasia Gold Index	10,223.52	9,034.75	13.2%	12,471.27	5,934.91
FT Africa Gold Index	2,031.89	1,868.88	8.7%	2,800.81	1,361.72
FT North American Gold Index	1,337.13	1,247.14	7.2%	2,055.82	1,066.32
FT All Gold Mines Index	1,744.45	1,627.51	7.2%	2,549.07	1,326.79
Precious Metal Prices					
Gold Prices - US\$/oz	1,981.66	1,868.26	6.1%	1,998.38	1,614.96
Silver Price - US\$/oz	22.51	20.54	9.6%	26.22	17.56
Platinum Price - US\$/oz	977.18	964.88	1.3%	1,105.72	821.28
Palladium Price - US\$/oz	1,407.83	1,383.98	1.7%	2,640.08	1,350.00

Source: Bloomberg, BofA Global Research

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Gold surges over 6% higher

Last week, gold rose 6.1% while silver was up 9.6%, closing at \$1,982 per ounce (/oz) and \$22.51/oz respectively. Gold was notably strong the whole week as fears of risk in the U.S. and global banking systems dominated markets. Gold is a notable safe haven in times of uncertainty. Real rates also trended lower, a very strong tailwind to the gold price. The Philadelphia Gold and Silver Index (XAU) was up 11.0% to close at 123.86.

Precious metals news flow

Barrick Gold (GOLD): On 10-Mar-23, Barrick Gold (GOLD) President and CEO, Mark Bristow stated in an interview with S&P Global Market Intelligence, that there is no “specific ratio” of gold to copper that drives the company’s strategic decisions and noted that profits from copper could one day outweigh profits from gold. He noted that currently, copper is 20% of GOLD’s bottom line, and based on current plans, this will rise to 30%, and that new explorations discoveries or acquisitions could boost this further. Regarding M&A, he stated that one company should be acquiring “unless it’s stressed”, and if its stressed, one shouldn’t pay a premium. We like GOLD for its top tier asset base, strong free cash flow, and discounted valuation relative senior producer peers. Buy.

B2Gold (BTG): On 14-Mar-23, Snowline Gold (not covered) announced that BTG (Buy) agreed to a strategic investment in the company through participation of its flow-through private placement. BTG recently purchased 3 million (mn) common shares of the company in the open-market and with the private placement participation, BTG will own 5.0% of the company. Snowline Gold is an exploration-stage company exploring the Yukon Territory, in the underexplored Selwyn Basin. This follows BTG’s recently announced acquisition of Sabina Gold & Silver (SBB, not rated). While this represents a very small investment today, we think it demonstrates BTG’s interest in Canadian exploration and growth, a stark contrast to its existing operating portfolio of mines which span Canada, the Philippines, and Namibia.

Triple Flag (TFPM): It was disclosed last week that TFPM’s largest shareholder, Elliott Asset Management acquired an additional 4.76mn shares of TFPM. After having its position in TFPM diluted to 65% from 83% post TPFM’s acquisition of Maverix, this increases Elliott’s position to 67% of TFPM’s total outstanding shares. We think this should assuage investor concerns that Elliott could be a motivated seller of its large position in TFPM’s equity. We like TFPM for its peer leading volume growth, well diversified and precious metals focused portfolio, and substantial valuation discount to the senior royalty and streaming peers. Maintain Buy rating.



Gold price sensitivity

Exhibit 3: 2023E EBITDA and EV/EBITDA sensitivity for North American precious metal companies

IAG has the greatest sensitivity to EBITDA (+35% increase in EBITDA for a 10% increase in the gold price). KGC and NGD are next.

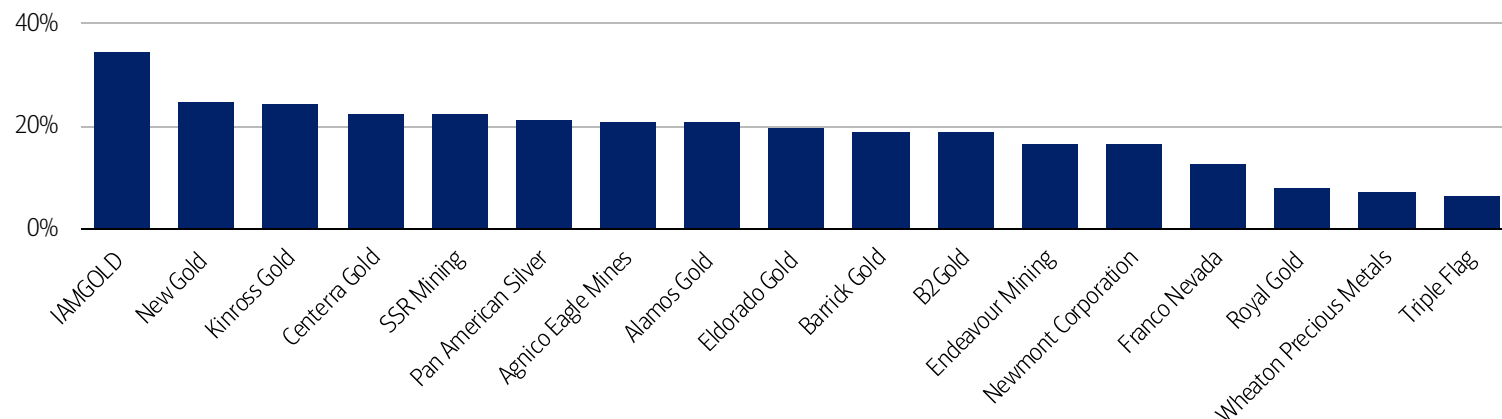
Priced as of 17-Mar-2023	2023E EBITDA					2023E EV/EBITDA				
	-10% Case	Base Case	+10% Case	Δ -10% case	Δ +10% case	-10% Case	Base Case	+10% Case	Δ -10% case	Δ +10% case
Senior Gold Producers										
Agnico Eagle Mines	2,304	2,910	3,516	-21%	21%	10.3x	8.2x	6.8x	26%	-17%
Barrick Gold	4,587	5,667	6,747	-19%	19%	8.8x	7.2x	6.0x	24%	-16%
Kinross Gold	1,131	1,498	1,866	-25%	25%	6.3x	4.8x	3.8x	32%	-20%
Newmont Corporation	4,250	5,088	5,927	-16%	16%	9.5x	8.0x	6.8x	20%	-14%
Mid-Tier Gold Producers										
B2Gold	750	925	1,100	-19%	19%	4.5x	3.6x	3.0x	23%	-16%
Centerra Gold	140	181	222	-23%	23%	5.8x	4.5x	3.7x	29%	-18%
Eldorado Gold	275	358	429	-23%	20%	7.4x	5.7x	4.7x	30%	-17%
Endeavour Mining	1,079	1,293	1,508	-17%	17%	5.5x	4.6x	4.0x	20%	-14%
IAMGOLD	174	266	358	-35%	35%	9.5x	6.2x	4.6x	53%	-26%
SSR Mining	405	523	641	-23%	23%	7.8x	6.0x	4.9x	29%	-18%
Intermediate/Junior Gold Producers										
Alamos Gold	341	431	520	-21%	21%	12.7x	10.0x	8.3x	26%	-17%
New Gold	186	249	310	-25%	25%	3.9x	2.9x	2.3x	34%	-20%
Royalty Companies										
Franco Nevada	1,012	1,033	1,162	-2%	12%	26.0x	25.5x	22.6x	2%	-11%
Royal Gold	461	502	542	-8%	8%	18.6x	17.1x	15.8x	9%	-7%
Wheaton Precious Metals	732	800	858	-8%	7%	27.1x	24.8x	23.2x	9%	-7%
Triple Flag	164	176	187	-6%	6%	10.2x	9.6x	9.0x	7%	-6%
Primary Silver Producers										
Pan American Silver	334	424	513	-21%	21%	10.8x	8.5x	7.0x	27%	-17%

Source: BofA Global Research, Bloomberg

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Exhibit 4: North American precious metal companies ranked by % change in EBITDA with a 10% increase in gold price compared to base case

IAMGOLD offers the greatest torque to higher metal prices given it's high-cost base relative to peers.



Source: BofA Global Research

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Exhibit 5: 2023E NAV and P/NAV sensitivity for North American precious metal companies

R&S company valuations have a very low sensitivity to gold price compared to the gold producers

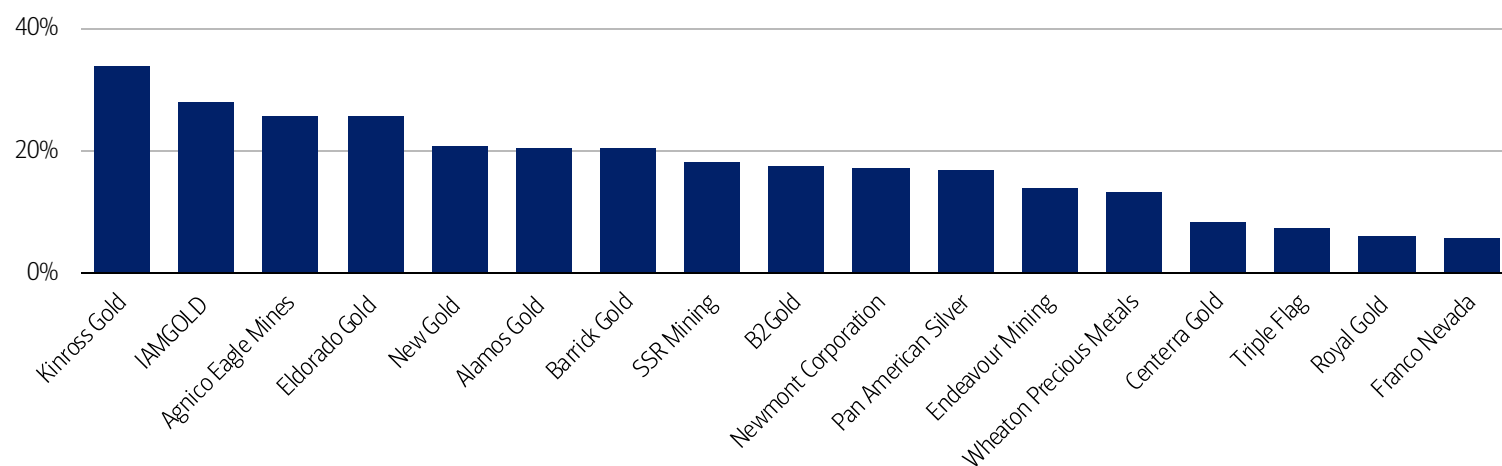
Priced as of 17-Mar-2023	2023E NAV					2023E P/NAV				
	-10% Case	Base Case	+10% Case	Δ -10% case	Δ +10% case	-10% Case	Base Case	+10% Case	Δ -10% case	Δ +10% case
Senior Gold Producers										
Agnico Eagle Mines	24.88	32.41	40.76	-23%	26%	0.49x	0.64x	0.80x	-23%	26%
Barrick Gold	13.21	16.20	19.50	-18%	20%	0.73x	0.89x	1.08x	-18%	20%
Kinross Gold	3.00	4.45	5.95	-33%	34%	0.73x	1.08x	1.44x	-33%	34%
Newmont Corporation	29.00	35.20	41.30	-18%	17%	0.60x	0.73x	0.86x	-18%	17%
Mid-Tier Gold Producers										
B2Gold	2.99	3.50	4.11	-15%	17%	0.82x	0.96x	1.12x	-15%	17%
Centerra Gold	7.15	8.21	8.89	-13%	8%	0.82x	0.94x	1.01x	-13%	8%
Eldorado Gold	8.31	11.80	14.83	-30%	26%	0.84x	1.19x	1.50x	-30%	26%
Endeavour Mining	21.73	26.10	29.71	-17%	14%	0.71x	0.85x	0.97x	-17%	14%
IAMGOLD	2.50	3.40	4.35	-26%	28%	1.00x	1.37x	1.75x	-26%	28%
SSR Mining	12.31	15.02	17.74	-18%	18%	0.86x	1.05x	1.24x	-18%	18%
Intermediate/Junior Gold Producers										
Alamos Gold	6.65	8.55	10.30	-22%	20%	0.59x	0.76x	0.91x	-22%	20%
New Gold	1.58	2.00	2.41	-21%	21%	1.78x	2.24x	2.71x	-21%	21%
Royalty Companies										
Franco Nevada	52.12	55.25	58.45	-6%	6%	0.36x	0.39x	0.41x	-6%	6%
Royal Gold	57.70	61.40	65.05	-6%	6%	0.46x	0.49x	0.52x	-6%	6%
Wheaton Precious Metals	17.95	21.25	24.08	-16%	13%	0.40x	0.47x	0.53x	-16%	13%
Triple Flag	9.10	9.55	10.25	-5%	7%	0.73x	0.77x	0.83x	-5%	7%
Primary Silver Producers										
Pan American Silver	16.54	18.10	19.32	-9%	17%	0.94x	1.03x	1.10x	-9%	7%

Source: BofA Global Research, Bloomberg

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Exhibit 6: North American precious metal companies ranked by % change in NAV with a 10% increase in gold price compared to base case

Our KGC NAV shows the greatest sensitivity to a 10% increase in gold prices.



Source: BofA Global Research

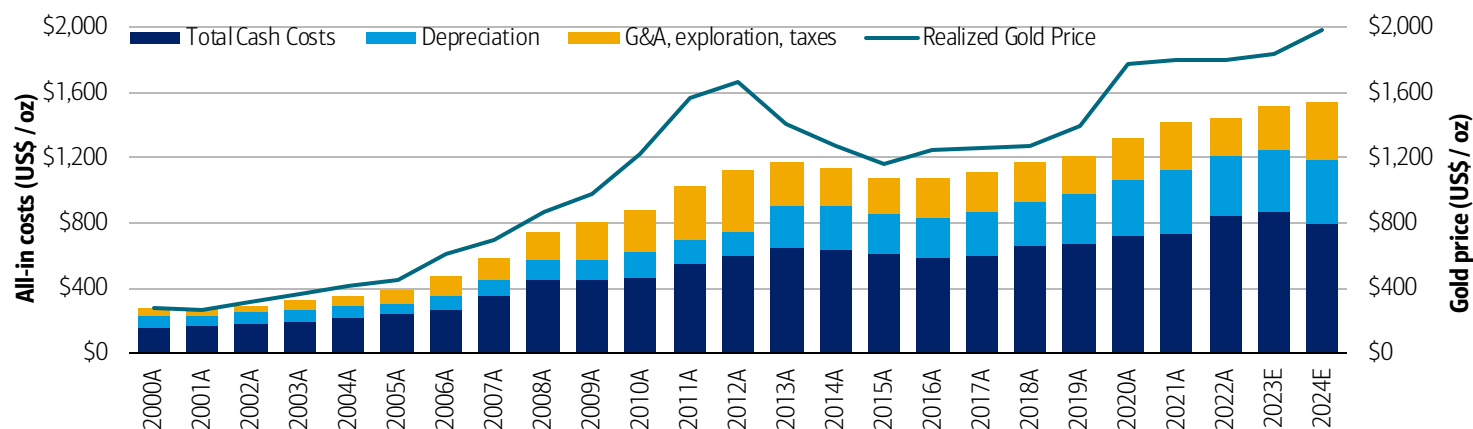
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Updating our all-in cost trend chart

We update our all-in cost chart to include 2022 actuals and 2024E operating cost assumptions for global gold producers. Over the last 2 decades, the average annual gold price tended to find support at around 15% – 20% above all-in operating costs. BofA forecasts costs for producers to rise in the next 2 years, supporting our gold price assumption to reach an all-time high of \$2,200/oz in 2024E.

Exhibit 7: All in cost margin for global gold producers

A rising gold price environment in face of a recessionary environment is set to coincide with operating record costs in 2023E and 2024E



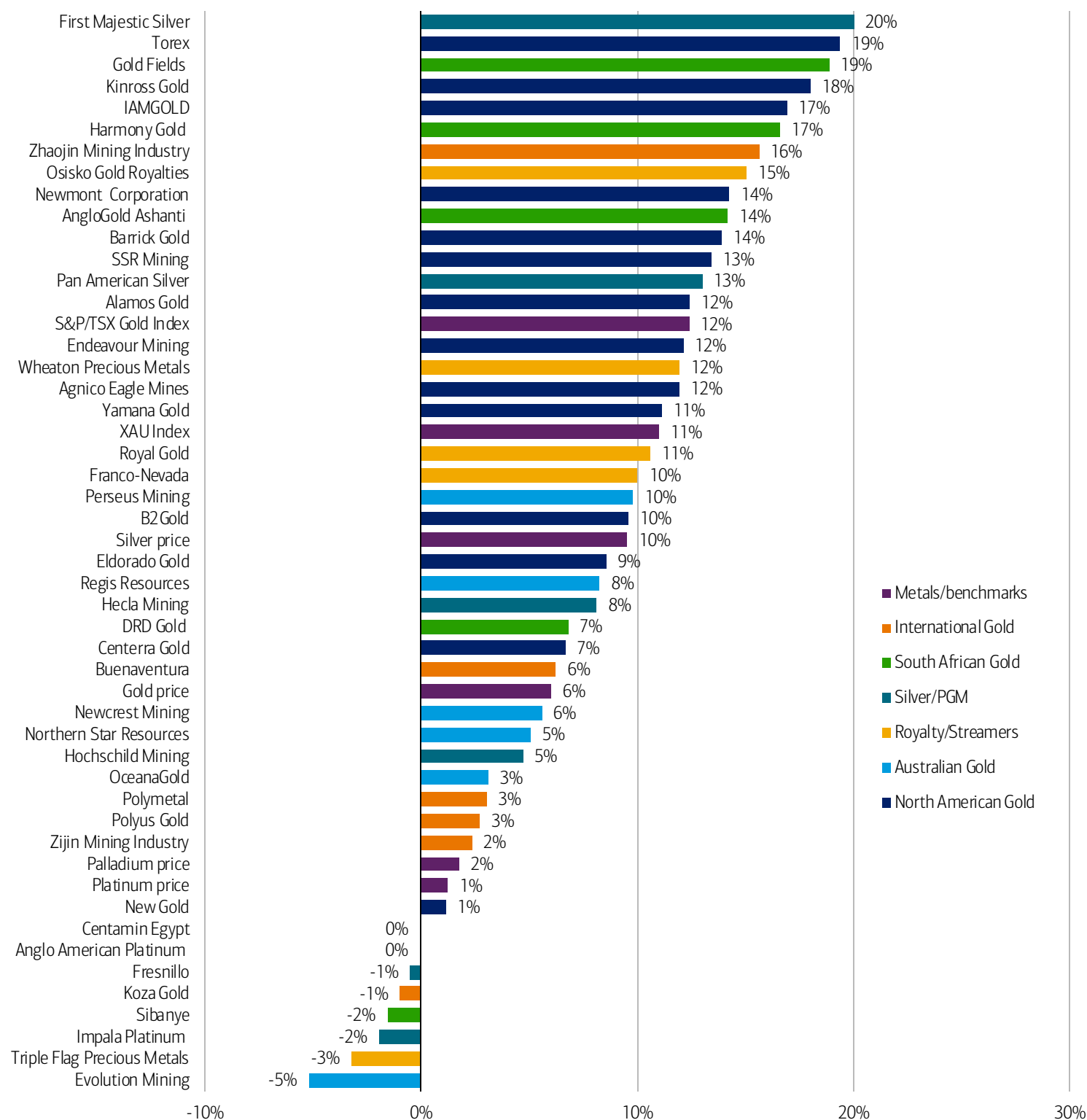
Source: BofA Global Research, Company Reports, Bloomberg

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WoW returns for the gold sector

Exhibit 8: WoW returns for the global gold sector and key metals/benchmarks

Most gold equities traded higher in a strong week for gold. WoW, First Majestic Silver best performer +20%.



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

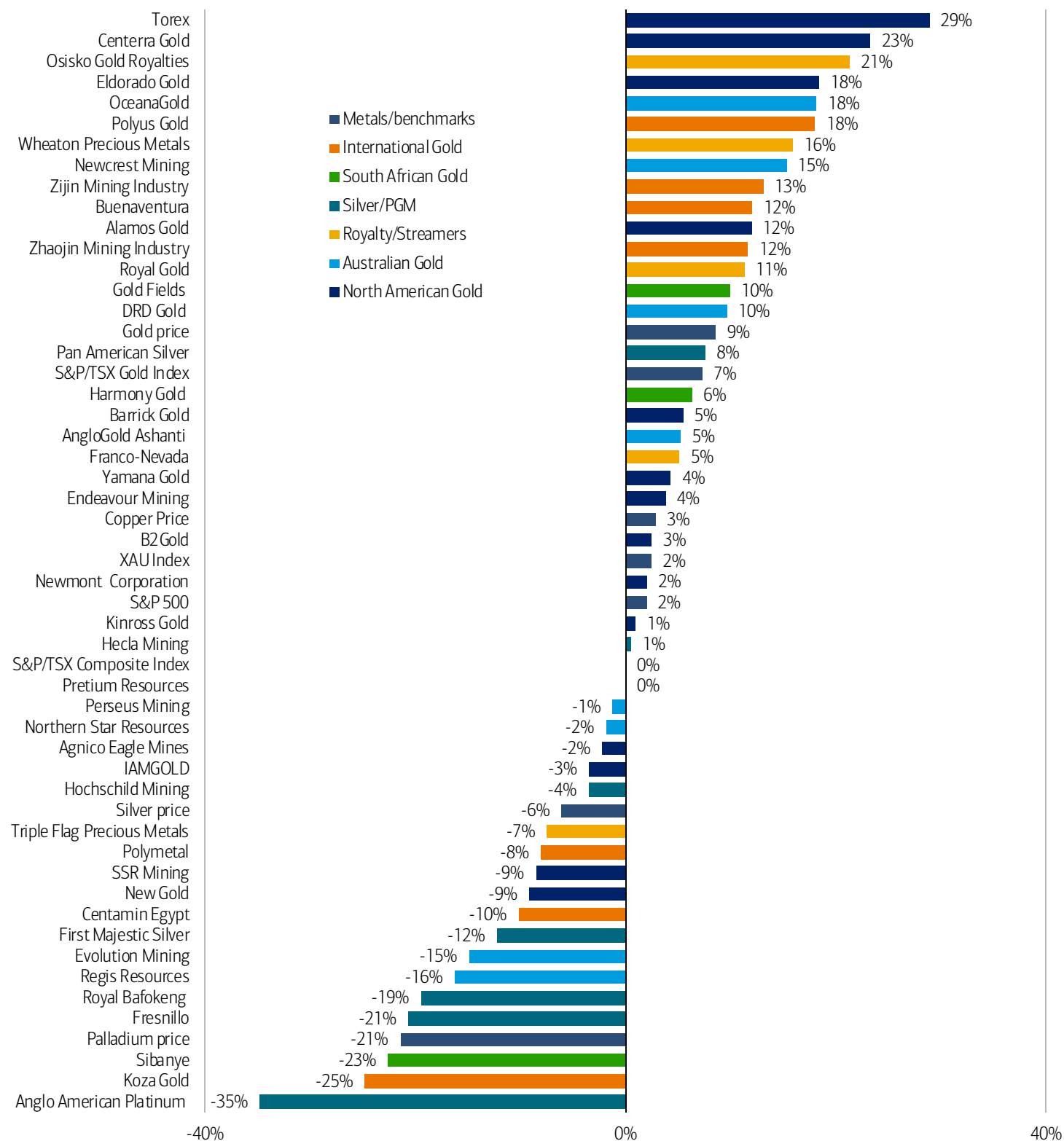
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YTD returns for the gold sector

Exhibit 9: Year to date returns for the global gold sector and key metals/benchmarks

Most stocks up given solid start to the year on metal prices, with Torex best performer +29% YTD.



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



Valuation overview

Exhibit 10: Valuation Comparables for North American Gold and Precious Metals Producers and Royalty Companies

North American precious metal stocks are trading at 1.61x NAV (market value weighted), vs. the 10 year range of 1.0-2.0x NAV

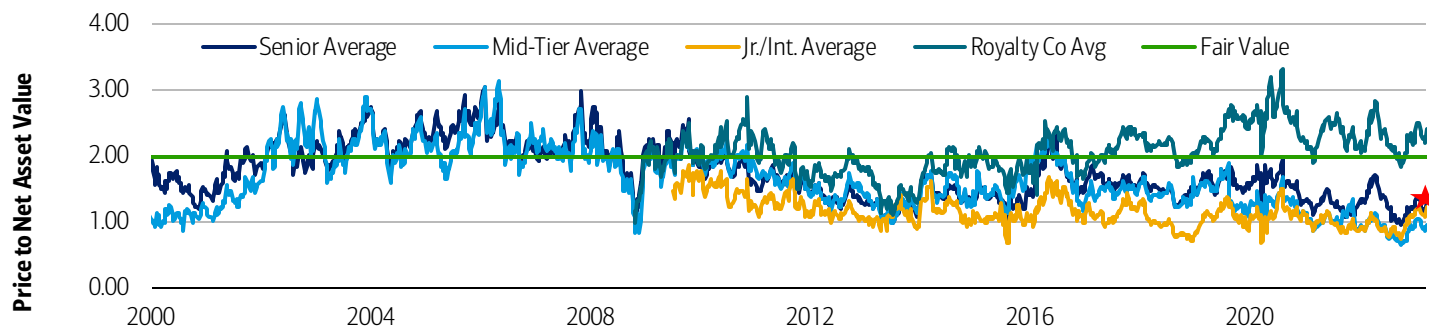
Priced as of 17-Mar-2023																	
	BofA Sym	Share Price	Shares O/S	Market Cap (USDmn)	Rating	EPS 2023E	P/E (x) 2024E	CFPS 2023E	P/CFPS (x) 2024E	2023E	2024E	2023E	2024E	DCF	Net Cash	NAV	P/NAV
Senior Gold Producers																	
Agnico Eagle Mines	AEM	50.84	457	23,235	BUY	1.98	2.59	25.7	19.6	4.88	5.97	10.4	8.5	35.26	(2.85)	32.41	1.57
Barrick Gold	GOLD	18.12	1,755	31,807	BUY	1.05	1.36	17.3	13.3	2.76	2.83	6.6	6.4	15.80	0.40	16.20	1.12
Kinross Gold	KGC	4.13	1,222	5,046	BUY	0.29	0.52	14.2	7.9	1.04	1.12	4.0	3.7	5.75	(1.30)	4.45	0.93
Newmont Corporation	NEM	48.17	794	38,234	BUY	2.09	3.27	23.0	14.7	5.14	6.36	9.4	7.6	35.70	(0.50)	35.20	1.37
Market Cap Weighted Average								21.3	15.1			8.4	7.2				1.31
Mid-Tier Gold Producers																	
B2Gold	BTG	3.66	1,075	3,933	BUY	0.31	0.33	11.8	11.1	0.66	0.62	5.5	5.9	2.75	0.75	3.50	1.05
Centerra Gold ⁽¹⁾	YCG	8.76	218	1,397	UNDE	0.01	0.50	NA	12.8	0.54	1.12	11.9	5.7	6.80	1.41	8.21	0.78
Eldorado Gold	EGO	9.90	185	1,830	UNDE	0.17	0.48	58.2	20.6	1.40	1.92	7.1	5.2	14.64	(2.84)	11.80	0.68
Endeavour Mining ⁽¹⁾	YEDV	30.60	247	5,508	BUY	1.84	3.48	12.1	6.4	4.47	6.08	5.0	3.7	25.77	0.33	26.10	0.86
IAMGOLD	IAG	2.49	479	1,193	BUY	(0.08)	0.08	NA	31.1	0.51	0.76	4.9	3.3	2.24	0.95	3.40	0.73
SSR Mining	SSRM	14.33	207	2,961	BUY	1.02	1.20	14.0	11.9	2.16	2.40	6.6	6.0	13.06	1.97	15.02	0.95
Yamana Gold	AUY	5.79	961	5,564	NO R	0.29	0.37	20.2	15.6	0.82	0.91	7.1	6.3	5.40	(0.40)	5.00	1.16
Market Cap Weighted Average								18.4	12.3			6.2	4.9				0.88
Intermediate/Junior Gold Producers																	
Alamos Gold	AGI	11.32	394	4,458	NEUT	0.36	0.60	31.4	18.9	1.05	1.40	10.8	8.1	8.30	0.25	8.55	1.32
New Gold	NGD	0.89	682	607	UNDE	0.05	0.29	17.8	3.1	0.35	0.68	2.5	1.3	2.57	(0.28)	2.28	0.39
Market Cap Weighted Average								29.8	17.0			9.8	7.3				1.21
Royalty Companies																	
Franco-Nevada	FNV	143.50	192	27,488	BUY	3.23	4.27	44.4	33.6	4.85	6.05	29.6	23.7	48.75	6.50	55.25	2.60
Royal Gold	RGLD	125.45	66	8,235	NEUT	3.87	4.55	32.4	27.6	6.63	7.99	18.9	15.7	60.00	1.40	61.40	2.04
Triple Flag	TFPM	12.41	201	2,492	BUY	0.47	0.73	26.4	17.0	0.85	1.06	14.5	11.7	12.85	(0.05)	12.80	0.97
Wheaton Precious Metals	WPM	45.30	452	20,476	BUY	1.16	1.56	39.1	29.0	1.77	2.34	25.6	19.3	20.70	1.54	21.26	2.13
Market Cap Weighted Average								40.1	30.5			26.1	20.6				2.29
Primary Silver Producers																	
Pan American Silver	PAAS	17.58	211	3,704	BUY	0.60	0.55	29.3	32.0	1.75	1.75	10.1	10.0	17.20	0.90	18.10	0.97
Market Cap Weighted Average								29.3	32.0			10.1	10.0				0.97
Gold producer only:								21.3	14.8			8.2	6.9				1.25
Overall average:								27.6	20.2			14.0	11.4				1.58

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

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Exhibit 11: North American gold producer and royalty & streamer P/NAV history

Historical P/NAV multiples for the North American sector. Sector trading at 1.61x NAV, between the 1.0-2.0x historical range

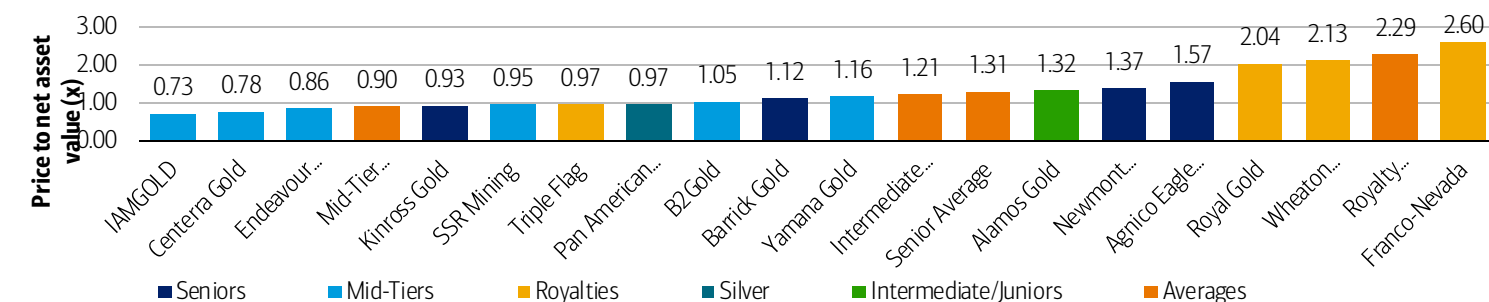


Source: BofA Global Research, Bloomberg

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Exhibit 12: 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

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Exhibit 13: Net asset value, reserves and resources

North American precious metals coverage universe, ratings and NAV's

					Gold Only						Primary	Primary
Priced as of 17-Mar-2023	BofA	Share	Shares	Market	Enterprise						Metal	Metal
Senior Gold Producers	Sym	Price	O/S	Cap	Value	Rating	DCF	NC	NAV	P/NAV	Reserves	Resources
											Moz	Moz
Agnico Eagle Mines	AEM	50.84	457	23,235	23,781	B-1-7	32.90	(2.85)	32.41	1.57	44.6	114.8
Barrick Gold	GOLD	18.12	1,755	31,807	40,533	B-1-8	15.80	0.40	16.20	1.12	69.0	271.0
Kinross Gold	KGC	4.13	1,222	5,046	7,171	B-1-7	5.75	(1.30)	4.45	0.93	32.6	70.3
Newmont Corporation	NEM	48.17	794	38,234	40,732	B-1-8	35.70	(0.50)	35.20	1.37	95.5	208.0
Market Cap Weighted Average										1.31		
Mid-Tier Gold Producers												
B2Gold	BTG	3.66	1,075	3,933	3,356	B-1-7	2.75	0.75	3.50	1.05	6.3	22.0
Centerra Gold ⁽¹⁾	YCG	8.76	218	1,393	818	B-3-7	6.80	1.41	8.21	0.73	4.8	13.0
Eldorado Gold	EGO	9.90	185	1,830	2,037	C-3-9	11.80	0.00	11.80	0.84	17.7	57.9
Endeavour Mining	YEDV	30.60	247	7,546	5,988	B-1-7	25.77	0.33	26.10	0.85	17.8	53.8
IAMGOLD	IAG	2.49	479	1,193	1,646	C-1-9	2.24	0.95	3.40	0.69	12.4	45.6
SSR Mining	SSRM	14.33	207	2,961	3,151	B-1-7	13.06	1.97	15.02	0.95	9.2	21.1
Yamana Gold	AUY	5.79	961	5,564	6,608	-6-	5.00	0.00	5.00	1.16	13.7	57.2
Market Cap Weighted Average										0.91		
Intermediate/Junior Gold Producers												
Alamos Gold ⁽⁶⁾	AGI	11.32	394	4,458	4,327	B-2-7	8.30	0.25	8.55	1.32	10.3	21.8
New Gold	NGD	0.89	682	607	725	C-3-9	2.60	(0.30)	2.30	0.39	3.7	6.8
Market Cap Weighted Average										1.22		
Royalty Companies												
Franco-Nevada	FNV	143.50	192	27,488	26,308	B-1-7	48.75	6.50	55.25	2.81	NA	NA
Royal Gold	RGLD	125.45	66	8,235	8,560	B-2-7	60.00	1.40	61.40	2.07	NA	NA
Triple Flag	TFPM	12.41	201	2,492	1,727	C-1-7	9.60	(0.05)	9.55	1.30	NA	NA
Wheaton Precious Metals	WPM	45.30	452	20,476	19,870	B-1-7	19.72	1.54	21.26	2.13	NA	NA
Market Cap Weighted Average										2.29		
Primary Silver Producers												
Fresnillo ⁽⁵⁾	FNLPF	710.00	737	6,369	6,605	B-2-8	358.75	0.00	358.75	1.98	397.8	1,265.5
Hochschild Mining ⁽⁵⁾	HCHDF	67.25	514	421	596	C-1-8	134.76	0.00	135	0.50	41.2	288.8
Pan American Silver	PAAS	17.58	211	3,704	3,591	C-1-8	17.20	0.90	18.10	0.97	529.3	1,807.6
Market Cap Weighted Average										1.48		

Source: 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->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 14: EV/ EBIT and EV/EBITDA ratios for North American Gold and Precious Metal Producers and Royalty Companies

Valuation metrics for the North American precious metals sector

Priced as of 17-Mar-2023	BofA Sym	Share Price	Shares Outstanding	MC (USDmn)	Debt (USDmn)	Cash (USDmn)	Enterprise Value (EV) (USDmn)	Rating	EBIT (\$mn)		EV/EBIT (x)		EBITDA (\$mn)		EV/EBITDA (x)	
									2023E	2024E	2023E	2024E	2023E	2024E	2023E	2024E
Senior Gold Producers																
Agnico Eagle Mines	AEM	50.84	457	23,235	1,471	822	23,781	BUY	1,655	2,093	14.4	11.4	2,910	3,615	8.2	6.6
Barrick Gold	GOLD	18.12	1,755	31,807	5,095	5,240	40,533	BUY	3,437	5,570	11.8	7.3	5,667	7,546	7.2	5.4
Kinross Gold	KGC	4.13	1,222	5,046	2,552	497	7,171	BUY	594	986	12.1	7.3	1,498	1,671	4.8	4.3
Newmont Corporation	NEM	48.17	794	38,234	6,127	3,813	40,548	BUY	2,829	3,925	14.3	10.3	5,088	6,378	8.0	6.4
Market Cap Weighted Average											13.3	9.2			7.5	5.9
Mid-Tier Gold Producers																
B2Gold	BTG	3.66	1,075	3,933	63	549	3,356	BUY	569	651	5.9	5.2	918	893	3.7	3.8
Centerra Gold ⁽¹⁾	YCG	8.76	218	1,393	6	581	818	UNDE	65	191	12.6	4.3	181	328	4.5	2.5
Eldorado Gold	EGO	9.90	185	1,830	514	306	2,037	UNDE	145	224	14.1	9.1	358	469	5.7	4.3
Endeavour Mining ⁽¹⁾	YEDV	30.60	247	7,546	881	833	5,988	BUY	789	1,332	7.6	4.5	1,308	1,832	4.6	3.3
IAMGOLD	IAG	2.49	479	1,193	924	536	1,646	BUY	(8)	170	NA	9.7	266	455	6.2	3.6
SSR Mining	SSRM	14.33	207	2,961	423	802	3,151	BUY	315	373	10.0	8.4	523	586	6.0	5.4
Yamana Gold	AUY	5.79	961	5,564	774	539	6,608	NO R	466	597	14.2	11.1	953	1,087	6.9	6.1
Market Cap Weighted Average											10.1	7.6			5.5	4.5
Intermediate/Junior Gold Producers																
Alamos Gold	AGI	11.32	394	4,458	0	132	4,327	NEUT	232	382	18.7	11.3	431	602	10.0	7.2
New Gold	NGD	0.89	682	607	399	280	725	UNDE	74	332	9.7	2.2	249	568	2.9	1.3
Market Cap Weighted Average											17.4	10.0			9.0	6.3
Royalty Companies																
Franco-Nevada	FNV	143.50	192	27,488	0	1,057	26,308	BUY	743	1,078	35.4	24.4	1,033	1,388	25.5	19.0
Royal Gold	RGLD	125.45	66	8,235	446	122	8,560	NEUT	326	361	26.3	23.7	502	574	17.1	14.9
Triple Flag	TFFM	12.41	201	1,768	0	87	1,681	BUY	105	165	16.0	10.2	176	231	9.6	7.3
Wheaton Precious Metals	WPM	45.30	452	20,476	2	495	19,870	BUY	539	743	36.8	26.8	800	1,059	24.8	18.8
Market Cap Weighted Average											33.5	24.4			23.2	17.7
Primary Silver Producers																
Fresnillo	FNLPF	710.00	737	6,369	1,170	1,152	6,605	NEUT	471	816	14.0	8.1	993	1,354	6.6	4.9
Hochschild Mining	HCHDF	67.25	514	421	314	204	596	BUY	121	284	4.9	2.1	259	450	2.3	1.3
Pan American Silver	PAAS	17.58	211	3,704	314	187	3,591	BUY	194	175	18.5	20.5	424	420	8.5	8.5
Market Cap Weighted Average											15.0	11.9			7.0	5.9

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

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Exhibit 15: Valuation Comparables for Global Gold and Precious Metal Producers and Royalty Companies Cont'd

Valuation metrics for international precious metals producers

Priced as of 17-Mar-2023	BofA Sym	Share Price	Shares Outstanding	MC (USDmn)	Rating	EPS		P/E (x)		CFPS		P/CFPS (x)		DCF	NC	NAV	P/NAV
						2023E	2024E	2023E	2024E	2023E	2024E	2023E	2024E				
South African Gold Producers⁽¹⁹⁾																	
AngloGold Ashanti ⁽¹³⁾	AULGF	374.42	419	8,514	BUY	1.38	2.37	14.7	8.6	2.52	3.80	8.1	5.4	256.34	0.00	256.34	1.46
Gold Fields ⁽¹³⁾	GFIOF	209.27	891	10,133	NEUT	0.92	1.61	12.3	7.1	2.16	n/a	5.3	NA	191.57	0.00	191.57	1.09
Harmony Gold ^(14,18)	HGMCF	67.57	618	2,269	UNDE	7.82	13.44	8.6	5.0	16.12	15.29	4.2	4.4	40.90	0.00	40.90	1.65
Sibanye ⁽⁵⁾	SBSW	8.29	713	5,914	BUY	2.30	2.11	3.6	3.9	2.81	2.68	2.9	3.1	11.68	0.00	11.68	0.71
Market Cap Weighted Average								10.9	6.7			5.6	4.4				1.17
PGM Producers⁽⁵⁾																	
Anglo American Platinum	AGPPF	1004.32	265	14,473	UNDE	174.54	161.46	5.8	6.2	190.44	178.50	5.3	5.6	1,097.32	0.00	1,097.32	0.92
Market Cap Weighted Average								5.8	6.2			5.3	5.6				0.92

Source: (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

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Operating Comparables

Exhibit 16: 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 17-Mar-2023

	BofA Sym	Share Price	Shares O/S	Market Cap	Enterprise Value	P&P Gold Reserves (moz)	Production		EV Per Oz of Prod. (USD)		EV Per Oz of Reserves	EV Per Oz of Resources
							2023E ('000 oz)	2024E ('000 oz)	2023E	2024E	YE 2021	YE 2021
Senior Gold Producers												
Agnico-Eagle Mines	AEM	50.84	457	23,235	23,781	44.6	3,343	3,473	7,114	6,847	533	207
Barrick Gold	GOLD	18.12	1,755	31,807	40,533	69.0	4,417	4,559	9,176	8,890	587	150
Kinross Gold	KGC	4.13	1,222	5,046	7,171	32.6	2,057	1,860	3,485	3,854	220	102
Newmont Corporation	NEM	48.17	794	38,234	40,732	95.5	5,981	6,007	6,810	6,781	427	196
Market Cap Weighted Average									7,517	7,370	494	176
Mid-Tier Gold Producers												
B2Gold	BTG	3.66	1,075	3,933	3,356	6.3	1,040	819	3,227	4,097	536	152
Centerra Gold ⁽¹⁾	YCG	8.76	218	1,393	818	4.8	274	287	2,981	2,852	169	63
Eldorado Gold	EGO	9.90	185	1,830	2,037	17.7	502	546	4,058	3,733	115	35
Endeavour Mining ⁽¹⁾	YEDV	30.60	247	7,546	5,988	17.8	1,375	1,560	4,354	3,838	337	111
IAMGOLD	IAG	2.49	479	1,193	1,646	12.4	458	537	3,596	3,066	133	36
SSR Mining	SSRM	14.33	207	2,961	3,151	9.2	636	606	4,957	5,197	344	149
Yamana Gold ⁽⁶⁾	AUY	5.79	961	5,564	6,608	13.7	872	789	7,576	8,372	483	116
Market Cap Weighted Average									4,069	4,006	323	108
Intermediate/Junior Gold Producers												
Alamos Gold	AGI	11.32	394	4,458	4,327	10.3	495	492	8,744	8,804	420	199
New Gold	NGD	0.89	682	607	725	3.7	296	383	2,452	1,892	196	107
Market Cap Weighted Average									7,841	7,812	388	185
Royalty Companies							Attributable Production					
Franco-Nevada	FNV	143.50	192	27,488	26,308	NA	697	813	37,767	32,354	NA	NA
Royal Gold	RGLD	125.45	66	8,235	8,560	NA	348	355	24,629	24,093	NA	NA
Triple Flag	TFFM	12.41	201	2,492	1,727	NA	112	133	15,451	12,957	NA	NA
Wheaton Precious Metals	WPM	45.30	452	20,476	19,870	NA	636	789	31,219	25,177	NA	NA
									32,789	27,983		
Primary Silver Producers												
Fresnillo ^(5,7)	FNLPF	710.00	737	6,337	6,605	397.8	56,107	59,841	118	110	16.61	5.22
Hochschild Mining ^(5,7)	HCHDF	67.25	514	419	596	41.2	25,604	33,456	23	18	14.46	2.06
Pan American Silver	PAAS	17.58	211	3,704	3,591	529.3	15,149	14,975	237	240	6.78	1.99
Market Cap Weighted Average									152	148	13.22	3.97

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

International gold producers operating forecasts

Priced as of 17-Mar-2023

	BofA Sym	Share Price	Shares O/S	Market Cap	Enterprise Value	P&P Gold Reserves	Production		EV Per Oz of Prod. (USD)		EV Per Oz of Reserves	EV Per Oz of Resources
							2023E	2024E	2023E	2024E		
South African Gold Producers⁽⁴⁾												
AngloGold Ashanti	AULGF	374.42	419	8,539	9,495	29.7	2,623	2,779	3,619	3,417	320	62
Gold Fields	GFIOF	209.27	891	10,163	11,164	52.1	2,360	2,829	4,730	3,946	214	115
Harmony Gold ⁽¹²⁾	HGMCF	67.57	618	2,275	2,328	42.5	1,456	1,457	1,599	1,597	55	35
Sibanye	SBSW	8.29	708	320	116	16.6	864	754	134	154	7	1
Market Cap Weighted Average									3,935	3,473	240	84

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 18: Stock Mentioned

Stock prices and ratings mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
BTG	BTG US	B2Gold	US\$ 3.66	B-1-7
YBTO	BTO CN	B2Gold	C\$ 5.01	B-1-7
GOLD	GOLD US	Barrick Gold	US\$ 18.12	B-1-8
TFPM	TFPM US	Triple Flag	US\$ 12.41	C-1-7
YTFPM	TFPM CN	Triple Flag	C\$ 17.54	B-1-7

Source: BofA Global Research

BofA GLOBAL RESEARCH

Price objective basis & risk**B2Gold Corp (YBTO / BTG)**

Our price objective for B2Gold (BTG/YBTO) is US\$4.30/C\$5.80 based on the stock trading at 1.25x our estimated net asset value (NAV) based on a 10-year average gold price of \$1,869/oz (long-term real price of \$1,800/oz starts in 2028E), a 5% discount rate and 1.32x USDCAD. Historically, North American precious metal stocks have traded between 1.0x and 3.0x NAV and between 1.0x and 2.0x more recently with a median of 1.25-1.50 times, with unhedged, growth-oriented producers occupying the upper end of the range. We use a 1.25x NAV multiple for BTG vs. mid-tier gold producer peers' target multiples at 0.65x-1.75x due to its superior free cash flow generation, partly offset by low production growth.

While our gold price forecast is a key driver of our rating, it is also a risk to our BTG valuation/forecasts. Other downside risks to our BTG valuation are: 1) political risk from Mali, Nicaragua, the Philippines, Namibia and Colombia, 2) mine plan estimates in excess of BTG reserves, 3) lack of commodity diversification, 4) mine plans that are based on outstanding permits or approvals, 5) unfavorable changes in currencies, 6) unforeseen increases in input costs such as the price of oil and labor and 7) the possibility it could lose its social license to operate at any of its mines or projects. Upside risks are a higher gold price, the possibility for BTG to be acquired and unexpected exploration success.

Barrick Gold (GOLD)

Our price objective (PO) for Barrick Gold is \$25.00 per share and is based on the stock trading at 1.50 times our estimated net asset value (NAV). Our NAV of is based on a 5 percent discount rate and 10-year average gold and copper price forecasts of \$1,869 per ounce and \$3.66 per pound. Historically, North American precious metal stocks have traded between 1 and 3 times NAV, with unhedged, growth-oriented producers with assets located in relatively geopolitically stable regions occupying the upper end of the range. Preventing us from assigning a higher target P/NAV multiple is Barrick's stable gold output. Downside risks to our price objective are: commodity price weakness, the inability to secure financing for expansion or development projects, unforeseen operating problems, political or legal challenges in the regions in which the company operates, rising capital and operating costs and delays in the development of its growth projects.

Triple Flag Precious Metals Corp. (YTFPM / TFPM)

Our C\$22.00 (\$16.75) per share PO for TFPM is based on a target valuation multiple of 1.75x our estimated NAV and a USDCAD FX rate of 1.32. The multiple is a slight discount to the senior royalty & streaming peers giving consideration to TFPM's smaller market cap and liquidity, and less diversification by geography, commodity and operator, partly offset by above average margins and attributable GEO production growth. The multiple is at the high end of the range for the gold producer peers given the attractive relative

investment characteristics of the royalty & streaming business model (precious metals exposure with insulation from opex and capex inflation and upside from production growth and exploration success.

Our NAV estimate is based on a 5% real discount rate and ten-year average real gold and silver prices of \$1,779/oz and \$23.31/oz with long-term prices of \$1,800/oz and \$25.00/oz (starting in 2028E).

Downside risks to our PO are: 1) a lack of input the operation of portfolio assets, 2) competition from a growing royalty and streaming sector 3) precious metal price volatility, 4) asset investments in non-investment grade emerging markets, 5) concentrated ownership structure, 6) ramp up issues at the Gunnison and Pumpkin Hollow mines.

Upside risks are: 1) higher than expected gold and silver prices, 2) future exploration discoveries and unexpected expansions at mines in the portfolio, 3) a potential acquisition of TFPM.

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.

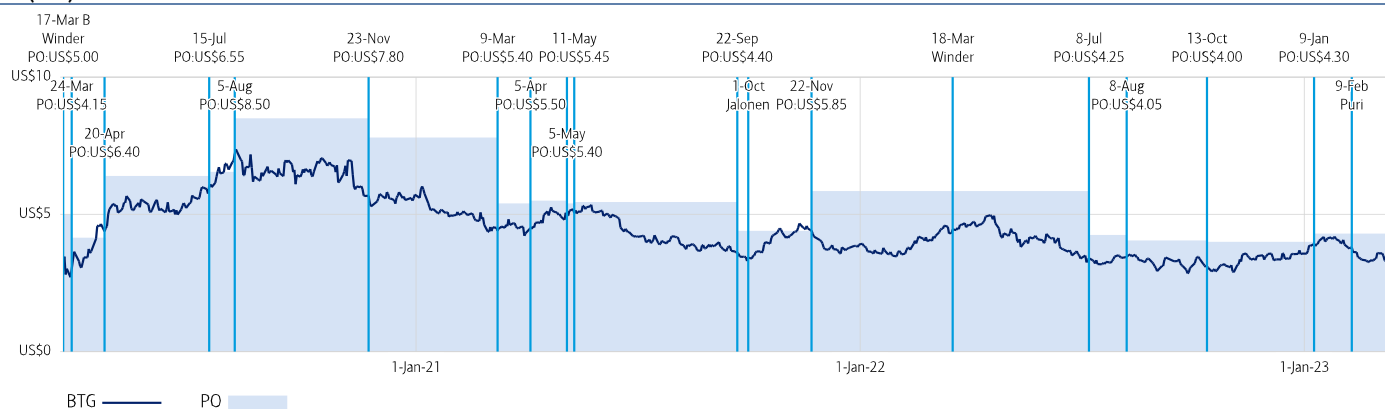
North America - Metals and Mining Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Agnico Eagle Mines	AEM	AEM US	Lawson Winder, CFA
	Alcoa Corporation	AA	AA 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
	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
	Kinross Gold	KGC	KGC US	Lawson Winder, CFA
	MP Materials	MP	MP US	Lawson Winder, CFA
	Newmont Corporation	NEM	NEM US	Lawson Winder, CFA
	Nucor	NUE	NUE US	Lawson Winder, CFA
	Pan American Silver	PAAS	PAAS US	Lawson Winder, CFA
	SSR Mining Inc.	SSRM	SSRM US	Lawson Winder, CFA
	SSR Mining Inc.	YSSRM	SSRM CN	Lawson Winder, CFA
	Steel Dynamics	STLD	STLD 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
	Cleveland-Cliffs	CLF	CLF US	Lawson Winder, CFA
	Commercial Metals	CMC	CMC US	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
	Royal Gold	RGLD	RGLD US	Lawson Winder, CFA
UNDERPERFORM				
	Centerra Gold	YCG	CG CN	Lawson Winder, CFA
	Centerra Gold	CGAU	CGAU US	Lawson Winder, CFA
	Eldorado Gold	EGO	EGO US	Harmen Puri
	Eldorado Gold	YELD	ELD CN	Harmen Puri
	First Quantum	FQVLF	FQVLF US	Lawson Winder, CFA
	First Quantum Minerals	YFM	FM CN	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
	New Gold Inc.	YNGD	NGD CN	Harmen Puri
	New Gold Inc.	NGD	NGD US	Harmen Puri
	Nexa Resources	NEXA	NEXA US	Lawson Winder, CFA
	United States Steel Corporation	X	X US	Lawson Winder, CFA

Disclosures

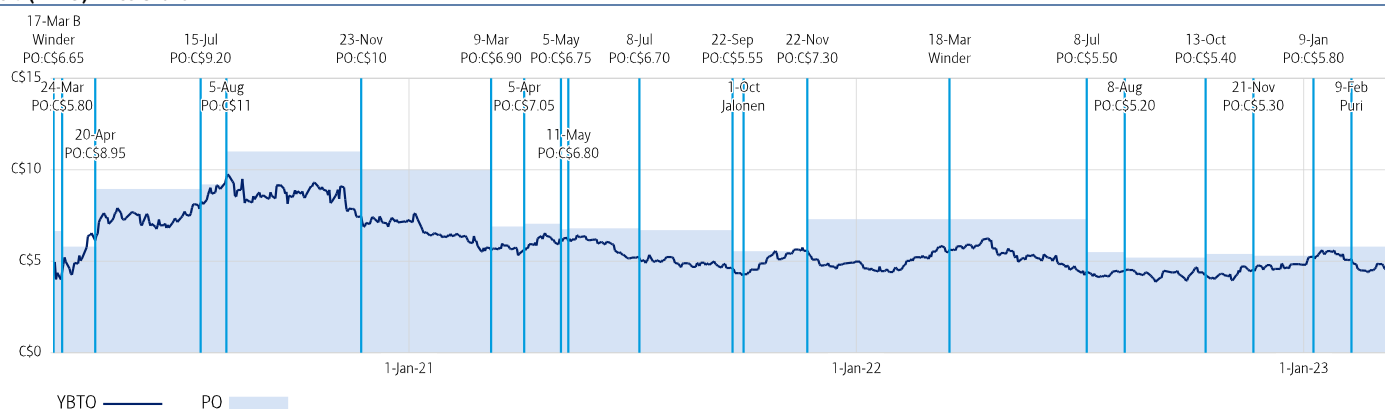
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B2Gold (BTG) Price Chart

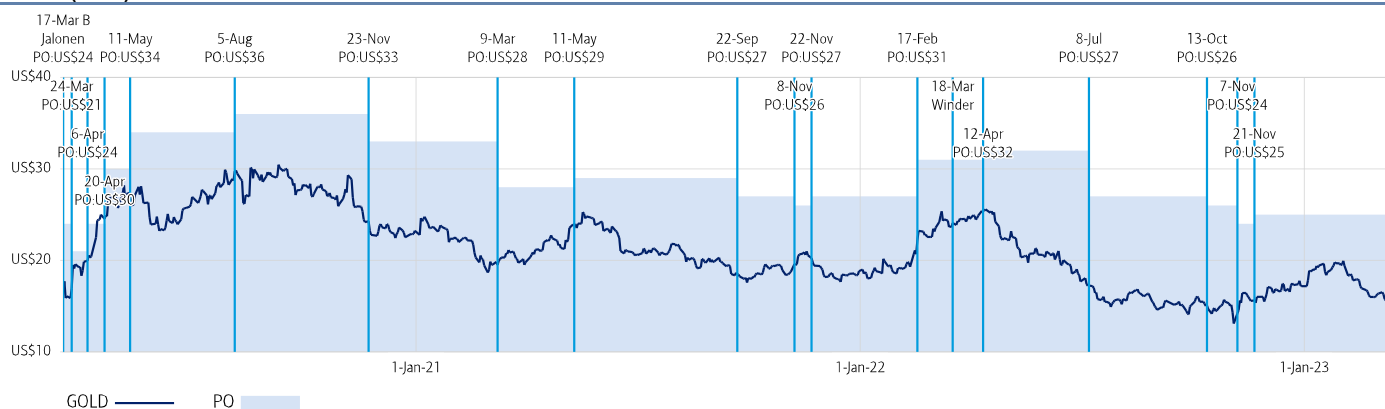
B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

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B2Gold (YBTO) Price Chart

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Barrick Gold (GOLD) Price Chart

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Triple Flag (TFPM) Price Chart



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Triple Flag (YTFPM) Price Chart



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Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	55	57.89%	Buy	21	38.18%
Hold	20	21.05%	Hold	12	60.00%
Sell	20	21.05%	Sell	11	55.00%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2022)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1853	52.58%	Buy	1040	56.13%
Hold	840	23.84%	Hold	493	58.69%
Sell	831	23.58%	Sell	404	48.62%

^{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.

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Underperform	N/A	≥ 20%

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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

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