

North American Precious Metals Weekly

Gold edges lower on rates, central bank buying continues. All eyes on Q1'23 results.

Estimate Change

Q1'23 earnings around the corner

Q1'23 earnings for the precious metals companies will commence in late April. Many will pre-report production results prior to then, and we expect it to be weak operationally for many. Most companies in our coverage have guided to H2'23 (i.e. back-half weighted) production. We do not expect negative guidance revisions (given the back-half weighted guides and that one quarter is normally too early to identify material deviations from plan). Metal prices were quite favorable in Q1'23, with gold averaging \$1,892 per ounce (/oz), silver \$22.55/oz and copper averaging \$4.06 per pound (/lb), up 9%, 6%, and 11% respectively vs. the Q4'22 averages prices. Also, price appreciation at quarter end vs. last quarter end will mean considerable provisional pricing tailwinds for some, notably: GOLD, NEM, PAAS, CGAU, NGD. Also, declining oil prices (a key input cost) in Q1'23 should imply cost tailwinds, though this might be more apparent in subsequent quarters.

Central bank buying continued in February

Central bank buying continued in February with global gold reserves up by 52 tonnes (t), higher for the 11th consecutive month. January and February net purchases totaled 125t, the strongest start to a year since 2010. Last week, the People's Bank of China (PBOC) reported a further increase in its gold reserve holdings with March purchases of 18 tons (t), the fifth consecutive month of increases. China's gold reserves now sit at 2,068t. The World Gold Council continues to believe that strong central bank gold buying, which set a record in 2022, could continue, particularly owing to the metal's investment appeal (low or negative yielding sovereign debt, rising sanctions risks, and threat of currency wars).

GOLD Q1'23 production weak but guidance reiterated.

Last week, Barrick Gold (GOLD) reported Q1'23 production results and Q1'23 unit cash cost guidance that were below forecasts. Q1'23 gold production was 952 thousand ounces (koz). Relative to the midpoint of the guidance range of 4.2 to 4.6 million ounces (Moz), this represents 22% of the year's expected gold production. Similarly, copper production of 88 million pounds (Mlbs) was light representing just 20% of the guidance midpoint of 420-470Mlbs. Q1'23 costs for both gold and copper will be elevated relative to FY23 guidance ranges. Importantly, GOLD reiterated all operating guidance (link: [GOLD Q1'23 op results light, guidance reiterated 13-Apr-23](#)). We lower our Q1'23E EPS to \$0.13 (from \$0.17) and reduce our 2023E EPS to \$1.32 (from \$1.39). We lower 2023E DPS to \$0.40 from \$0.45. On page 2 we also update earnings for RGLD and SSR.

TFPM Q1'23 revenues beat consensus

Also last week, Triple Flag (TFPM) released Q1'23 operational results. Q1'23 revenue of \$50.3 million was ahead of consensus but in-line with BofA estimates. Q1'23 sales of 26,599 gold equivalent ounces (GEOs) were slightly ahead of consensus. This is TFPM's first quarter of results post-Maverix acquisition and in our view, a solid start to the year.

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Exhibit 1: Real prices of key metals

BofA sees gold at \$2,009/oz in 2023E

	2022A	2023E
Gold, real (\$/oz)	1,802	2,009
Silver, real (\$/oz)	21.79	24.55
Palladium (\$/oz)	2,110	1,520
Platinum (\$/oz)	963	1,186
Copper (\$/lb)	3.99	4.28

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

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Timestamp: 17 April 2023 01:00AM EDT

Exhibit 2: Gold Indices and Closing Prices

Weekly changes for gold and various gold indices

	14-Apr-23	6-Apr-23	Weekly	52 Week	
	Close		% Change	High	Low
Gold Indices					
Philadelphia Gold and Silver Index (XAU)	141.54	138.69	2.1%	171.43	90.08
NYSE Arca Exchange Gold Bugs Index (HUI)	273.55	271.70	0.7%	338.04	172.86
S&P/TSX Global Gold Index	327.06	326.40	0.2%	379.45	216.92
FT Australasia Gold Index	10,223.52	11,315.30	-9.6%	12,471.27	5,934.91
FT Africa Gold Index	2,844.05	2,697.01	5.5%	2,844.05	1,361.72
FT North American Gold Index	1,584.24	1,558.71	1.6%	2,055.82	1,066.32
FT All Gold Mines Index	2,141.13	2,079.30	3.0%	2,549.07	1,326.79
Precious Metal Prices					
Gold Prices - US\$/oz	2,004.17	2,007.91	-0.2%	2,048.74	1,614.96
Silver Price - US\$/oz	25.35	24.98	1.5%	26.22	17.56
Platinum Price - US\$/oz	1,048.70	1,011.80	3.6%	1,105.72	821.28
Palladium Price - US\$/oz	1,507.52	1,470.06	2.5%	2,492.75	1,350.00

Source: Bloomberg, BofA Global Research

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Gold softened but remained above \$2,000/oz last week

Last week, gold edged lower by 0.2% to \$2,004/oz while silver jumped by 1.5% to \$25.35/oz, helped by strength in decarbonization-related industrial metals (for example, the copper price was also up, by 2.5%). A soft USD (the DXY was down 0.3% to 101.6 last week) was a tailwind for gold last week, while much stronger US real rates (the real yield on two-year US treasuries increased to 1.84% from 1.46% last week) was a material headwind for gold. The USD and real rates are both historically strongly negatively correlated to the gold price and appeared to be pulling gold in different directions last week, with real rates ultimately winning out. BofA Commodities is bullish on gold in 2023E, forecasting an annual average price of \$2,009/oz. We think there could be a consolidation period in the coming months before the yellow metal resumes its ascent to a new all-time high by Q4'22 (the BofA Commodities team forecasts \$2,200/oz in Q4'22E). The gold equities bucked the weakness in the gold price last week (possibly helped by the strong silver price) with the Philadelphia Gold and Silver Index (XAU) up 2.1% to 141.5 points and NYSE Arca Exchange Gold Bugs index up 0.7% to 271.7 points and the S&P/TSX Global Gold Index eking out a 0.2% increase.

Estimate changes

Barrick (GOLD): We further refine our Q1'23 estimates for non-operational items. We lower our Q1'23E EPS to \$0.13 (from \$0.17). We lower our 2023E EPS to \$1.32 (from \$1.39). Some of these non-operational changes also impact our projections of cash position (i.e. lower) and we now model no performance dividend for FY23 (i.e. our 2023E DPS is now \$0.40, versus \$0.45 prior).

SSR Mining (SSRM): We refine our Q1'23 operational estimates to align with company guidance on H1 and H2 production weightings. We lower our 2023E EPS to \$1.37 (from \$1.41) and model Q1'23 EPS of \$0.06.

Triple Flag Precious Metals (TFPM): We update for Q1'23 GEO sales which were largely in-line with BofA. No changes to our 2023E EPS.

Royal Gold (RGLD): We update for Q1'23 stream sales which were higher-than-expected versus BofAe. We increase our 2023E EPS to \$4.62 (from \$4.48).

Key focus areas for companies

Below we set-out our forecasts for quarterly production in 2023 for our precious metals coverage to highlight that production is expected to be weak for most in Q1'23.

Exhibit 3: Quarterly production forecasts for our coverage

Many producers are expected to have a weak start to the year

		Gold Production					
Company Name	BofA Ticker	Q1'23E	Q2'23E	Q3'23E	Q4'23E	2023E	Q1 % of 2023E
Seniors							
Agnico Eagle Mines	AEM	781	861	861	863	3,365	23%
Barrick Gold	GOLD	952	1,072	1,153	1,189	4,366	22%
Kinross Gold	KGC	457	528	533	554	2,072	22%
Mid-Tier							
B2Gold	BTG	250	250	270	270	1,040	24%
Centerra Gold	CGAU	42	42	95	95	274	15%
Endeavour Mining	EDVMF	319	319	368	368	1,375	23%
IAMGOLD	IAG	110	110	110	110	441	25%
SSR Mining	SSRM	119	131	184	186	619	19%
Intermediate/Junior							
Alamos Gold	AGI	123	140	112	111	486	25%
New Gold	NGD	82	70	82	83	318	26%
Silver							
Pan American Silver	PAAS	124	123	125	125	498	25%

Source: BofA Global Research

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Senior gold producers

Agnico Eagle (AEM): Key focus areas: (1) commentary on the ongoing development at Odyssey underground and any strategy change following the acquisition of the 50% of Canadian Malartic it did not previously own, (2) updates at Fosterville where noise concerns by locals led to lower production and at Kittila where the expansion permit has been held-up by regulator concerns, and (3) the extent to which inflation has eased, if it has, particularly in labor.

Barrick (GOLD): Key focus areas: (1) timing of a potential restart at Porgera, after Barrick announced signing an agreement to progress with the resumption of operations on March 30th and timing of the other conditions that must be met, (2) updates at the Reko Diq project (Pakistan), (3) the permitting status of Goldrush, which is a key driver of gold production growth at Nevada Gold Mines (NGM) and is assumed to receive permits in 2023 guidance, and (4) the latest on exploration at NGM, where recent success led to a significant build-up in mineral inventory that could be converted to reserves in coming years, and (5) the outlook for M&A from GOLD's perspective.

Kinross (KGC): Key focus areas: (1) updates on the 24k expansion at Tasiast which is expected to be completed by mid-year and ramped up to design by end of year, (2) ramp-up of La Coipa, (3) views on Round Mountain where an open pit expansion will be foregone and replaced with a possible underground expansion, (4) Great Bear updates, (5) Q1'23 results (which we expected will disappoint consensus expectations) and the outlook for the balance of 2023, and (6) plans to refinance \$500 million of 5.95% senior notes maturing on March 15, 2024.

Mid-tier gold producers

B2Gold (BTG): Key focus areas: (1) any updates on planning for the Goose Project, including timing of spend (2) sustainability of capital returns including BTG's very elevated dividend yield particularly in light of higher gold prices (3) updates on the alternatives being reviewed for Gramalote, i.e. whether a potential sale is near, (4) timing of the Fekola Complex plan.



Centerra Gold (CGAU): Key focus areas: (1) Update on the timing of a restart of Öksüt, (2) updates at the Gemfields Goldfield asset which CGAU acquired in Feb 2022, and whether CGAU sees opportunity to acquire further assets in light of its strong balance sheet, (3) views on the path to a potential monetization of the Thompson Creek molybdenum mine.

Eldorado Gold (EGO): Key focus areas: (1) updates on the ongoing construction progress at Skouries, (2) turnaround at Olympias, (3) impacts on costs in Türkiye with the Turkish Lira being artificially held around the elections.

Endeavour Mining (EDV): Key focus areas: (1) updates on the timing of Sabodala-Massawa expansion completion, (2) commentary on the capital returns thinking for 2023 and beyond, particularly as the current dividend framework only provides guidance (minimum thresholds) until 2023, (3) outlook for M&A, and (4) exploration updates particularly at the exciting Tanda Iguela greenfield discovery.

IAMGOLD (IAG): Key focus areas: (1) updates on the Côté gold project, including remaining spend and comfort around the completion/first gold pour (expected in early 2024), (2) any changes in strategy following the announcement of Renaud Adams as permanent CEO of the company.

SSR Mining (SSRM): Key focus areas: (1) timing of the key technical reports (Copler, Marigold), (2) views on Türkiye particularly from a political perspective with elections upcoming and the pressures on costs from the artificially strong Turkish Lira.

Junior / intermediate gold producers

Alamos Gold (AGI): Key focus areas: (1) updates on the ongoing expansion at Island, (2) timing of the development plan for Puerta Del Aire at Mulatos, (3) outlook for M&A given attractive valuation for AGI and the run-up in gold prices.

New Gold (NGD): Key focus areas: (1) how C-Zone development is progressing (previously, first production was expected to commence in H2'23), (2) any change in strategy with the new CEO, Patrick Godin, who has been in place since Nov 2022.

Precious metal royalty / streaming companies

Franco-Nevada (FNV): Key focus areas: (1) views on the deal pipeline, including jurisdictions, metal type, stage of assets (i.e. pre-construction funding, assets nearing end of construction looking for financing top-ups, etc).

Royal Gold (RGLD): Key focus areas: (1) where RGLD sees opportunity for additional deal activity after recent deals it has announced (Great Bear, Cortez deals), (2) views on longer-term guidance which it does not currently provide (while peers do). We note RGLD will host an analyst and investor day on April 20, where we expected 2023 gold equivalent ounce volume guidance for 2023 to be introduced.

Triple Flag Precious Metals (TFPM): Key focus areas: (1) commentary on whether TFPM sees more opportunity for consolidation, (2) views on its deal pipeline.

Wheaton Precious Metals (WPM): Key focus areas: (1) WPM's commentary around the outlook for deals, in light of a relatively quiet year in 2022, and (2) an updated view on gold equivalent ounce volume guidance given downwards revisions in 2022 (to 2022 and long-term guidance).

Q1'23 EPS estimates vs. consensus

Below we provide a comparison of our estimates versus consensus.

Exhibit 4: First quarter 2023 earnings preview (Q1'23)

The North American metals and mining sector kicks off Q1'23 reporting in late April.

As of April 14, 2023	BofA	Share	Stock	Reporting	BofA	Bloomberg	EPS	EPS	QoQ	YoY	BofA	Bloomberg	BofA	Bloomberg
	Ticker	Price	Rating	Date	Q1'23E	Q1'23E	Q4'22A	Q1'22A	Δ%	Δ%	2023E	2023E	2024E	2024E
Senior gold producers														
Agnico Eagle Mines	AEM	\$58.36	B-1-7	27-Apr	0.51	0.51	0.41	0.53	24%	-4%	2.72	1.88	2.71	2.14
Barrick Gold	GOLD	\$19.67	B-1-8	3-May	0.13	0.17	0.13	0.21	4%	-38%	1.32	0.83	1.48	1.03
Kinross Gold	KGC	\$5.34	B-3-7	9-May	0.09	0.05	0.09	0.06	0%	50%	0.49	0.28	0.55	0.27
Mid-Tier gold producers														
Eldorado Gold	EGO	C\$11.55	C-3-9	27-Apr	0.04	0.03	0.14	(0.11)	-71%	-136%	0.45	0.32	0.44	0.44
SSRM Mining	SSRM	\$15.79	B-1-7	4-May	0.06	0.03	0.12	0.31	-50%	-81%	1.37	0.73	1.26	0.79
Endeavour Mining	YEDV	C\$35.91	B-1-7	4-May	0.40	0.29	0.26	0.49	54%	-18%	2.43	1.60	3.56	1.76
B2Gold	BTG	\$4.29	B-1-7	9-May	0.07	0.07	0.11	0.06	-36%	17%	0.39	0.31	0.34	0.32
IAMGOLD	IAG	\$3.10	C-1-9	11-May	(0.03)	(0.03)	0.14	0.05	-121%	nm	0.02	(0.07)	0.09	0.20
Centerra Gold	YCG	C\$10.15	B-3-7		0.04	(0.06)	(0.06)	0.19	-167%	nm	0.31	0.53	0.54	0.52
Intermediate and junior gold producers														
New Gold	NGD	\$1.36	C-3-9	26-Apr	0.03	0.01	(0.02)	(0.01)	nm	nm	0.15	0.05	0.31	0.12
Alamos Gold	AGI	\$13.41	B-2-7	26-Apr	0.08	0.10	0.09	0.05	-11%	60%	0.47	0.43	0.61	0.48
Royalty/streaming companies														
Franco-Nevada	FNV	\$156.19	B-1-7	2-May	0.80	0.83	0.85	0.95	-6%	-16%	3.57	3.57	4.34	3.87
Royal Gold	RGLD	\$141.37	B-2-7	3-May	1.17	NA	0.91	0.82	29%	43%	4.62	4.09	4.67	4.95
Wheaton Precious Metals	WPM	\$50.89	B-1-7	4-May	0.23	0.28	0.37	0.35	-38%	-34%	1.25	1.18	1.56	1.34

Source: BofA Global Research, Company Filings

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Key commodity and currency prices

Exhibit 5: Quarterly change in various commodities and currencies

Metal price performance in Q1'23 – gold, copper and silver were all higher QoQ.

Quarterly Average Commodity/FX	Q4'22A	Q1'23A	QoQ	2021	2022	BofA '23E
AVG Gold PRICE (US\$/oz)	1,731	1,892	9.3%	1,771	1,800	2,009
AVG Silver PRICE (US\$/oz)	21.29	22.55	5.9%	20.52	25.14	24.55
AVG Platinum PRICE (US\$/oz)	976	995	1.9%	886	1,091	1,186
AVG Palladium PRICE (US\$/oz)	1,939	1,568	-19.2%	2,201	2,400	1,520
AVG Copper PRICE (US\$/lb)	3.64	4.06	11.5%	2.80	4.28	4.28
AVG Lead PRICE (US\$/lb)	0.95	0.97	1.6%	0.83	1.00	95.61
AVG Zinc PRICE (US\$/lb)	1.36	1.42	4.1%	1.03	1.36	1.32
AVG Nickel PRICE (US\$/lb)	11.55	11.78	2.0%	6.25	8.38	10.53
AVG Metallurgical Coal Price (US\$/ton)	446	250	-43.9%			
AVG Uranium Price (US\$/lb)	47.72	48.80	2.3%			
AVG Rare Earth NdPr Price (US\$/kg)	137,440	106,744	-22.3%			
AVG C\$:US\$	0.74	0.74	0.4%			
AVG Australian\$:US\$	0.66	0.68	4.0%			
AVG Brazilian Real:US\$	0.19	0.19	1.3%			
AVG South African Rand:US\$	0.06	0.06	-0.8%			
AVG Peruvian Nuevo Sol:US\$	0.26	0.26	2.1%			
AVG Argentinian peso:US\$	0.61	0.52	-15.5%			
AVG Chilean peso:US\$ cents	0.11	0.12	12.8%			
AVG Diesel spot price (\$USD/g)	337.15	286.50	-15.0%			
AVG WTI spot oil price (USD\$/bbl)	82.82	75.96	-8.3%			
AVG Euro: US\$ Exchange Ratio	1.02	1.07	5.0%			
AVG US\$:C\$ Exchange Rate	1.36	1.35	-0.4%			

Source: Bloomberg, BofA Global Research

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Metals prices up in Q1'23 -> provisional pricing tailwinds

All metals rebounded strong in Q1'23 versus the end of Q4'22. Comparing average Q1'23 prices to the end of period Q4'22 prices, both gold and copper were up 8%. This will mean positive provisional pricing adjustments, i.e. tailwinds to Q1'23 financials. Companies estimated to benefit include: GOLD, NEM, NGD, PAAS, CGAU.

Exhibit 6: Commodity price changes during the period

Gold and copper up from end of period Q4'22 to end of period Q1'23

Changes during the period	End of Q4'22	End of Q1'23	QoQ Δ%	Price today	YTD Δ%
Gold PRICE (US\$/oz)	1,824	1,969	8%	2,019	3%
Silver PRICE (US\$/oz)	23.95	24.10	1%	24.97	4%
Platinum PRICE (US\$/oz)	1,074	995	-7%	1,008	1%
Palladium PRICE (US\$/oz)	1,793	1,464	-18%	1,439	-2%
Copper PRICE (US\$/lb)	8,365	9,004	8%	8,785	-2%
Lead PRICE (US\$/lb)	2,337	2,123	-9%	2,116	0%
Zinc PRICE (US\$/lb)	3,003	2,947	-2%	2,808	-5%
Nickel PRICE (US\$/lb)	29,886	23,651	-21%	22,493	-5%
Metallurgical Coal Price (US\$/ton)	276	302	10%	297	-2%
Uranium Price (US\$/lb)	48.25	48.00	-1%	49.00	2%
Rare Earth NdPr Price (US\$/kg)	104.7	76.9	-27%	77.7	1%

Source: Bloomberg

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BofA vs. Bloomberg consensus

Below, we set out our Q1'23 estimates for our coverage vs. the Bloomberg consensus mean estimates for those companies. We caution that Bloomberg consensus mean production and unit cost measures are based on substantially fewer estimate contributions than for EBITDA and/or EPS.

Exhibit 7: BofA Estimates Versus Consensus

Comparison to consensus on production, cash costs, EBITDA and EPS for Q1'23

		Gold Production (oz)			Annual Change Total Cash Costs (US\$/oz)			EBITDA (US\$mn)			EPS (US\$mn)		
		BofA	Consensus	% diff	BofA	Consensus	% diff	BofA	Consensus	% diff	BofA	Consensus	Abs diff
Senior gold producers													
Agnico Eagle Mines	AEM	781,111	767,650	1.8%	\$840	\$854	-1.7%	723	681	6.2%	0.53	0.48	+0.05
Barrick Gold	GOLD	965,624	958,000	0.8%	\$902	\$956	-5.6%	1,253	1,305	-4.0%	0.21	0.17	+0.04
Kinross Gold	KGC	456,946	461,850	-1.1%	\$1,084	\$994	9.0%	466	314	48.6%	0.06	0.05	+0.02
Mid-tier gold producers													
B2Gold	BTG	249,947	n/a	NM	\$872	N/A	NM	224	226	-1.1%	0.06	0.07	-0.01
Centerra Gold	YCG	41,824	n/a	NM	\$972	\$885	9.8%	41	21	94.9%	0.19	(0.06)	+0.25
Endeavour Mining	YEDV	319,217	n/a	NM	\$831	\$885	-6.1%	372	295	26.1%	0.49	0.29	+0.20
IAMGOLD	IAG	110,145	100,250	9.9%	\$1,168	\$1,291	-9.5%	70	56	26.1%	0.05	(0.03)	+0.08
SSR Mining	SSRM	137,895	N/A	NM	\$1,178	\$1,153	2.2%	93	93	0.0%	0.31	0.03	+0.28
Eldorado Gold	EGO	109,331	114,150	-4.2%	\$753	\$828	-9.1%	85	88	-4.2%	0.14	0.05	+0.09
Intermediate and junior gold producers													
Alamos Gold	AGI	123,331	304,500	-59.5%	\$906	\$862	5.1%	101	106	-4.7%	0.05	0.10	-0.05
New Gold	NGD	70,147	34,348,000	-99.8%	\$1,176	\$1,089	8.0%	81	71	13.4%	(0.01)	0.01	-0.02
Royalty/streaming companies													
		Attr. Gold Equivalent Output (oz)			Total Cash Costs (US\$/oz)			EBITDA (US\$mn)			EPS (US\$mn)		
Franco-Nevada	FNV	188,867	156,300	20.8%	NA	NA	NM	256	258	-0.8%	0.95	0.83	+0.12
Royal Gold	RGLD	82,453	89,400	-7.8%	NA	NA	NM	127	130	-2.2%	0.82	N/A	nm
Triple Flag	YTFPM	23,517	27,100	-13.2%	NA	NA	NM	41	39	5.7%	0.09	N/A	nm
Wheaton Precious Metals	WPM	190,711	69,371	174.9%	NA	NA	NM	167	174	-4.0%	0.35	0.28	+0.08

Source: BofA Global Research, Bloomberg.

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Q1'23 operating data comparison

Below we outline Q1'23 operating forecasts with YoY and QoQ comparisons.

Exhibit 8: QoQ and YoY Operating Data Comparison

Sequentially (QoQ), Q1'23 is expected to be a relatively weak operational quarter.

		Annual Change						Sequential Change			
		Gold Production (oz)			Total Cash Costs (US\$/oz)			Gold Production (oz)		Total Cash Costs (US\$/oz)	
		Q1'22A	Q1'23E	YoY %	Q1'22A	Q1'23E	YoY %	Q4'22A	QoQ %	Q4'22A	QoQ %
Senior Gold Producers											
Agnico Eagle Mines	AEM	660,604	781,111	18.2%	\$811	\$840	3.5%	799,438	-2.3%	\$863	-2.7%
Barrick Gold	GOLD	990,000	965,624	-2.5%	\$832	\$902	8.4%	1,120,000	-13.8%	\$868	3.9%
Kinross Gold	KGC	505,224	456,946	-9.6%	\$957	\$1,084	13.3%	595,683	-23.3%	\$842	28.7%
Mid-Tier Gold Producers											
B2Gold	BTG	209,365	249,947	19.4%	\$784	\$872	11.2%	367,870	-32.1%	\$618	41.1%
Centerra Gold	YCG	93,784	41,824	-55.4%	\$497	\$972	95.6%	53,222	-21.4%	\$790	23.0%
Endeavour Mining	YEDV	367,335	319,217	-13.1%	\$737	\$831	12.8%	355,000	-10.1%	\$831	0.0%
IAMGOLD	IAG	174,000	110,145	-36.7%	\$1,017	\$1,168	14.8%	185,000	-40.5%	\$1,126	3.7%
SSRM Mining	SSRM	157,011	137,895	-12.2%	\$749	\$1,178	57.3%	153,187	-10.0%	\$1,019	15.7%
Eldorado Gold	EGO	93,209	109,331	17.3%	\$835	\$753	-9.9%	128,453	-14.9%	\$741	1.6%
Intermediate/Junior Gold Producers											
Alamos Gold	AGI	98,900	123,331	24.7%	\$992	\$906	-8.7%	134,200	-8.1%	\$810	11.9%
New Gold	NGD	72,210	70,147	-2.9%	\$966	\$1,176	21.70%	52,432	33.80%	\$1,296	-9.3%
Royalty/Streaming Companies											
		Attr. Gold Equivalent Output (oz)			Total Cash Costs (US\$/oz)			Attrib. GEO (oz)		Total Cash Costs (US\$/oz)	
Franco-Nevada	FNV	178,614	188,867	5.7%	NA	NA	NM	178,614	5.7%	NA	NM
Royal Gold	RGLD	79,500	82,453	3.7%	NA	NA	NM	85,800	-3.9%	NA	NM
Triple Flag	YTFPM	20,133	27,100	34.6%	NA	NA	NM	19,507	38.9%	NA	NM
Wheaton Precious Metals	WPM	176,700	190,711	7.9%	NA	NA	NM	171,367	11.3%	NA	NM

Source: BofA Global Research

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Conference call details

Exhibit 9: North American Metals & Mining Earnings calendar

Earnings release dates, conference call dates/times, and dial-in information

Ticker	Period	Date	Tzone (ET)	Call Date	Call Time (ET)	Primary Call-In Number	Replay Number
Senior gold producers							
AEM	Q1'23	27-Apr	AMC	28-Apr	8:30 AM	888-664-6392 / 416-764-8659	888-390-0541 / 416-764-8677 pc: 175235#
GOLD	Q1'23	3-May	BMO	3-May	11:00 AM	800-319-4610 / 416-915-3239 / UK 08081012791	855-669-9658 / 604-674-8052 pc: 9942
KGC	Q1'23	9-May	AMC	10-May	7:45 AM	888-330-2446 / 240-789-2732 pc: 4915537	800-770-2030 / 647-362-9199 pc: 4915537
Mid-tier gold producers							
EGO	Q1'23	27-Apr	AMC	28-Apr	11:30 AM	800-319-4610 / 604-638-5340	800-319-6413 / 604-638-9010 pc: 0052
SSRM	Q1'23	4-May	BMO	4-May	5:00 PM	800-319-4610 / 604-638-5340	855-669-9658 / 412-317-0088 pc: 9958
YEDV	Q1'23	4-May	BMO	4-May	8:30 AM	US 844-543-0451 / CDA 855-513-1368 / INT 431-341-4089	
BTG	Q1'23	9-May	AMC	10-May	1:00 PM	844-543-0451 / 855-513-1368 / 431-341-4089	
IAG	Q1'23	11-May	AMC	12-May	8:30 AM	800-319-4610 / 604-638-5340	800-319-6413 / 604-638-9010 pc: 0071
YCG	Q1'23	TBA	BMO	TBA	9:00 AM	800-750-9140 / 416-981-0157	800-558-5253 / 416-626-4100 pc: 22021107
Intermediate and junior gold producers							
NGD	Q1'23	26-Apr	AMC	27-Apr	8:30 AM	888-664-6383 / 416-764-8650 pc: 03648094	888-390-0541 / 416-764-8677 pc: 648094
AGI	Q1'23	26-Apr	AMC	27-Apr	11:00 AM	800-806-5484 / 416-340-2217 pc: 7943015#	800-408-3053 / 905-694-9451 pc: 1136724#
Royalty/streaming companies							
FNV	Q1'23	2-May	AMC	3-May	10:00 AM	888-390-0546 / 416-764-8688 US 833-470-1428 / CDA 833-950-0062 / Int. 646-904-5544	888-390-0541 / 416-764-8677 pc: 471262#
RGLD	Q1'23	3-May	AMC	4-May	12:00 PM	pc: 594830	
WPM	Q1'23	4-May	AMC	4-May	11:00 AM	888-664-6383 / 416-764-8650 pc: 26164042	888-390-0541 / 416-764-8677 pc: 164042#
YTFPM	Q1'23	9-May	AMC	10-May	9:00 AM	888-330-2384 / 647-800-3739 pc: 4548984	800-770-2030 / 647-362-9199 pc: 4548984
Silver producers							
PAAS	Q1'23	TBA	AMC	TBA	11:00 AM	800-319-4610 / 604-638-5340	

Source: Company Reports

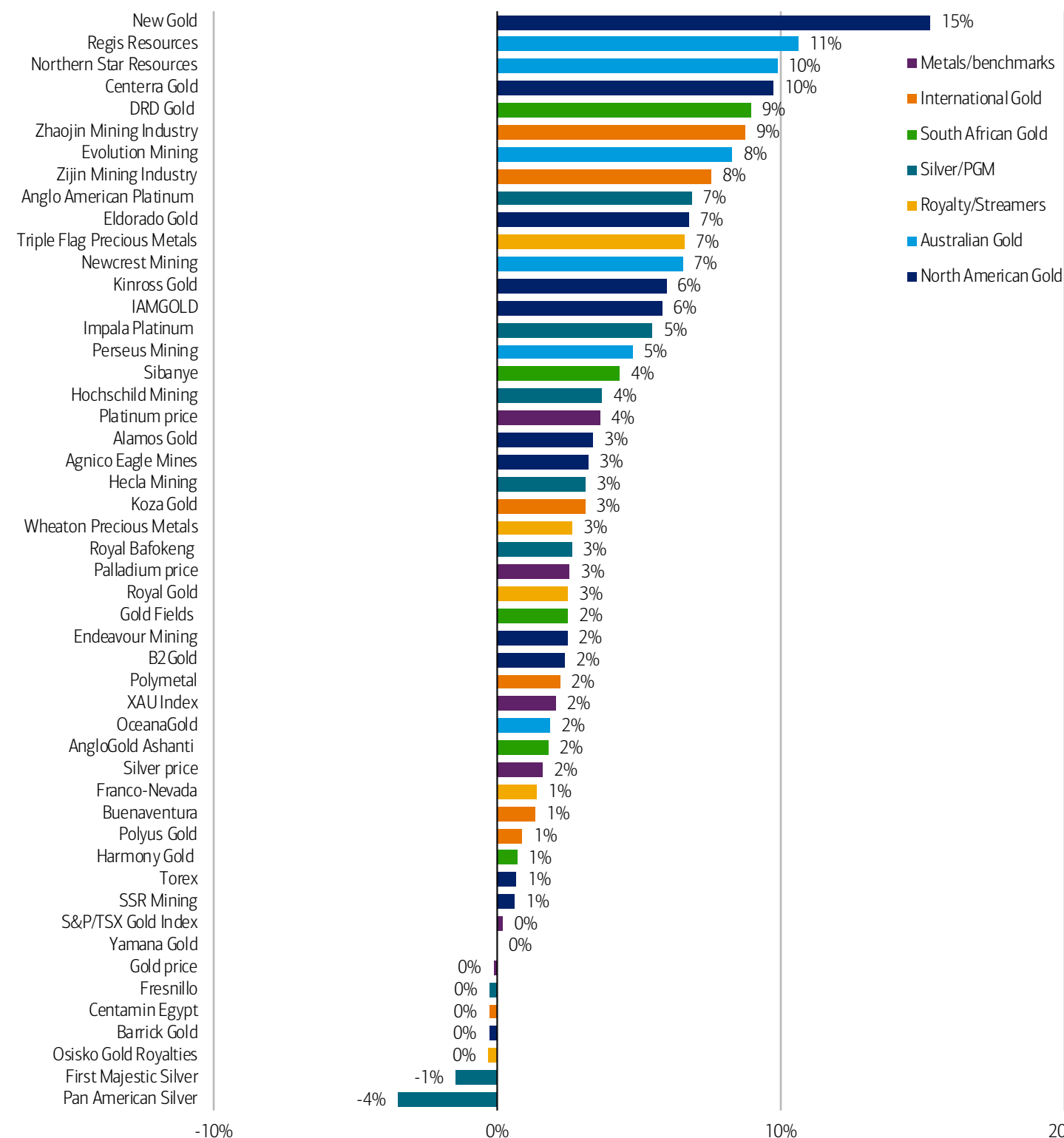
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WoW returns for the gold sector

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

Most gold equities traded higher in a strong week for the gold price. NewGold WoW +15%



f

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

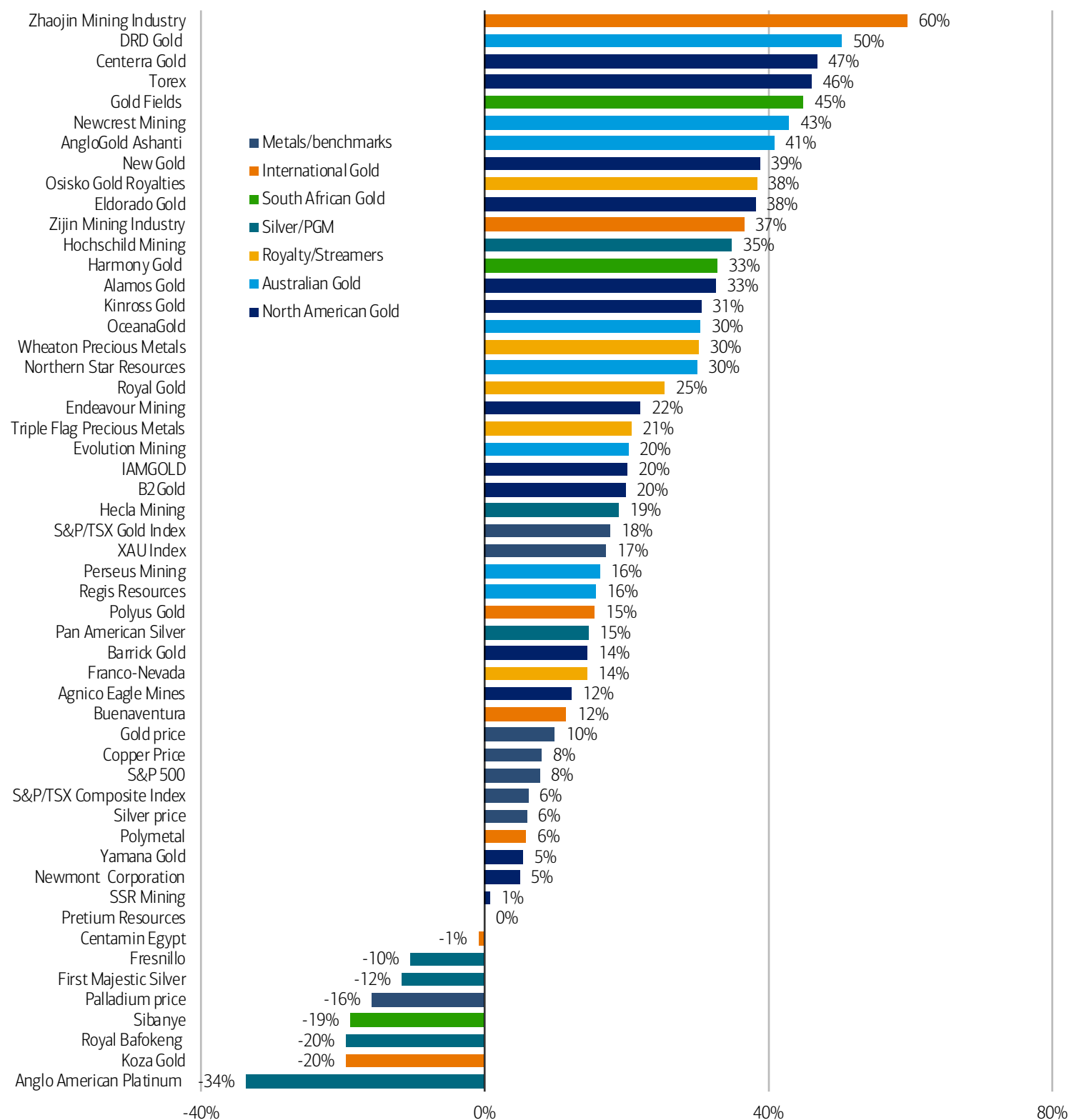
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YTD returns for the gold sector

Exhibit 11: 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. Zhaojin best performer +60%



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



Valuation overview

Exhibit 12: Valuation Comparables for North American Gold and Precious Metals Producers and Royalty Companies

North American precious metal stocks are trading at 1.73x NAV (market value weighted), vs. the 10-year range of 1.0-2.0x NAV

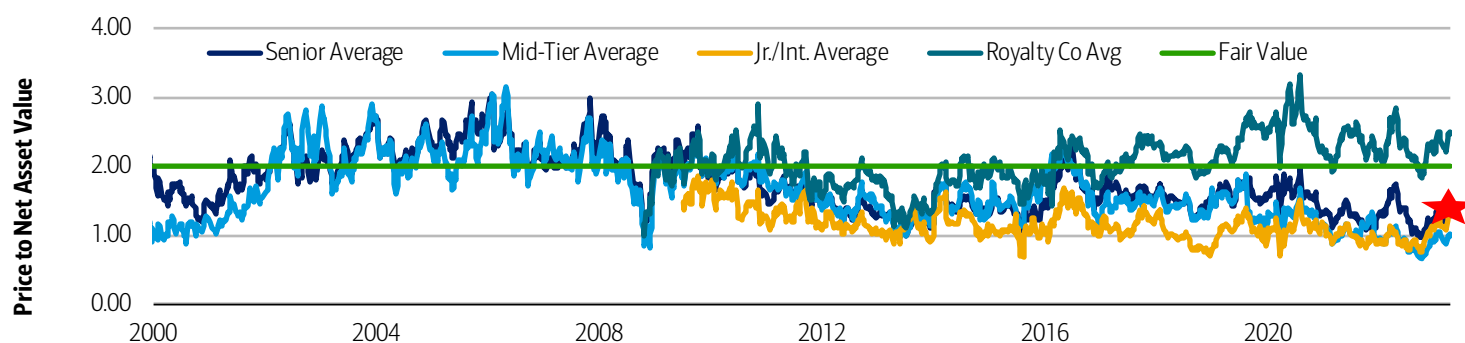
Priced as of 14-Apr-2023			Market Cap		EPS		P/E (x)		CFPS		P/CFPS (x)						
	BofA Sym	Share Price	Shares O/S	(USDmn)	Rating	2023E	2024E	2023E	2024E	2023E	2024E	2023E	2024E	DCF	Net Cash	NAV	P/NAV
Senior Gold Producers																	
Agnico Eagle Mines	AEM	58.36	457	26,672	BUY	2.72	2.71	21.5	21.5	5.68	6.10	10.3	9.6	37.40	(3.25)	34.15	1.71
Barrick Gold	GOLD	19.67	1,755	34,528	BUY	1.32	1.48	14.9	13.3	3.11	2.99	6.3	6.6	16.70	0.40	17.10	1.15
Kinross Gold	KGC	5.34	1,222	6,525	UNDE	0.49	0.55	10.9	9.7	1.27	1.29	4.2	4.1	5.80	(1.30)	4.50	1.19
Market Cap Weighted Average								17.1	16.2			7.7	7.5				1.37
Mid-Tier Gold Producers																	
B2Gold	BTG	4.28	1,075	4,600	BUY	0.39	0.34	11.0	12.6	0.75	0.62	5.7	6.9	2.85	0.75	3.60	1.19
Centerra Gold ⁽¹⁾	YCG	10.15	218	1,618	UNDE	0.31	0.54	23.9	13.7	0.84	1.17	8.8	6.3	7.16	1.71	8.87	0.84
Eldorado Gold	EGO	11.55	185	2,134	UNDE	0.45	0.44	25.7	26.3	1.82	1.87	6.4	6.2	15.34	(2.84)	12.50	0.75
Endeavour Mining ⁽¹⁾	YEDV	35.91	247	6,464	BUY	2.43	3.56	10.8	7.4	5.21	6.26	5.0	4.2	26.25	0.30	26.55	0.99
IAMGOLD	IAG	3.10	479	1,485	BUY	0.02	0.09	NA	34.4	0.58	0.77	5.3	4.0	2.24	0.95	3.50	0.89
SSR Mining	SSRM	15.79	207	3,263	BUY	1.37	1.26	11.5	12.5	2.53	2.47	6.2	6.4	13.51	1.97	15.48	1.02
Market Cap Weighted Average								13.9	14.1			5.9	5.6				0.99
Intermediate/Junior Gold Producers																	
Alamos Gold	AGI	13.41	394	5,281	NEUT	0.47	0.61	28.5	22.0	1.20	1.40	11.2	9.5	8.20	0.45	8.65	1.55
New Gold	NGD	1.36	682	928	UNDE	0.15	0.31	9.1	4.4	0.47	0.70	2.9	1.9	2.69	(0.28)	2.40	0.57
Market Cap Weighted Average								25.6	19.4			9.9	8.4				1.40
Royalty Companies																	
Franco-Nevada	FNV	156.19	192	29,919	BUY	3.57	4.34	43.8	36.0	5.19	6.12	30.1	25.5	49.25	6.50	55.75	2.80
Royal Gold	RGLD	141.37	66	9,280	NEUT	4.62	4.67	30.6	30.3	7.40	8.12	19.1	17.4	60.70	1.40	62.10	2.28
Triple Flag	TFPM	16.96	201	3,405	BUY	0.52	0.82	32.6	20.7	0.94	1.20	18.0	14.1	12.85	(0.05)	12.80	1.33
Wheaton Precious Metals	WPM	50.89	452	23,003	BUY	1.26	1.56	40.4	32.6	1.85	2.34	27.5	21.7	20.70	1.54	21.28	2.39
Market Cap Weighted Average								40.1	33.2			27.0	22.5				2.51
Primary Silver Producers																	
Pan American Silver	PAAS	18.73	211	3,946	BUY	0.96	0.62	19.5	30.2	2.13	1.83	8.8	10.2	17.90	0.07	17.97	1.04
Market Cap Weighted Average								19.5	30.2			8.8	10.2				1.04
Gold producer only:								17.0	16.0			7.5	7.2				1.30
Overall average:								26.5	23.2			15.4	13.4				1.78

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

Historical P/NAV multiples for the North American sector. Sector trading at 1.73x NAV, between the 1.0-2.0x historical range

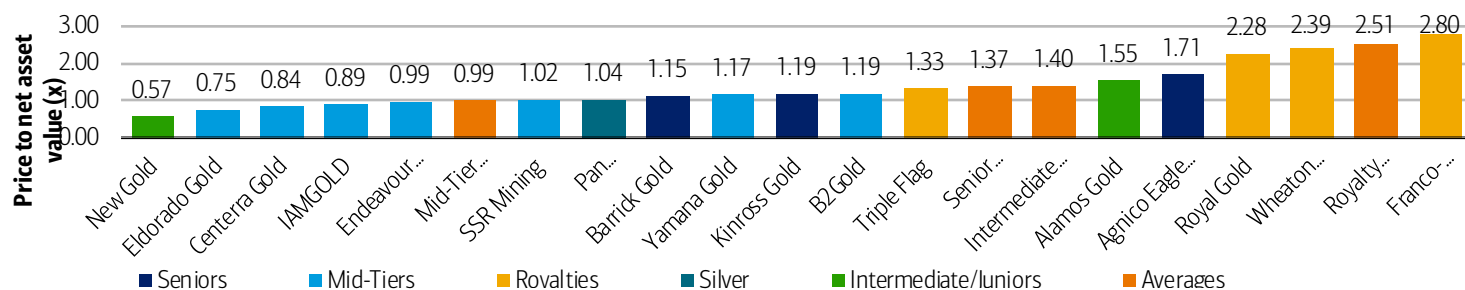


Source: BofA Global Research, Bloomberg

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Exhibit 14: 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 15: Net asset value, reserves and resources

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

	BofA	Share	Shares	Market	Gold Only						Primary	Primary
Priced as of 14-Apr-2023	Sym	Price	O/S	Cap	Enterprise	Rating	DCF	NC	NAV	P/NAV	Metal	Metal
Senior Gold Producers					Value						Reserves	Resources
											Moz	Moz
Agnico Eagle Mines	AEM	58.36	457	26,672	27,389	B-1-7	34.00	(3.25)	34.15	1.71	44.6	114.8
Barrick Gold	GOLD	19.67	1,755	34,528	43,853	B-1-8	16.70	0.40	17.10	1.15	69.0	271.0
Kinross Gold	KGC	5.34	1,222	6,525	8,824	B-3-7	5.80	(1.30)	4.50	1.19	32.6	70.3
Market Cap Weighted Average										1.37		
Mid-Tier Gold Producers												
B2Gold	BTG	4.28	1,075	4,600	3,900	B-1-7	2.85	0.75	3.60	1.19	6.3	22.0
Centerra Gold ⁽¹⁾	YCG	10.15	218	1,659	1,143	B-3-7	7.16	1.71	8.87	0.82	4.8	13.0
Eldorado Gold	EGO	11.55	185	2,134	2,328	C-3-9	12.50	0.00	12.50	0.92	17.7	57.9
Endeavour Mining	YEDV	35.91	247	8,856	6,983	B-1-7	26.25	0.30	26.55	1.01	17.8	53.8
IAMGOLD	IAG	3.10	479	1,485	2,138	C-1-9	2.24	0.95	3.50	0.96	12.4	45.6
SSR Mining	SSRM	15.79	207	3,263	3,600	B-1-7	13.51	1.97	15.48	1.02	9.2	21.1
Market Cap Weighted Average										1.03		
Intermediate/Junior Gold Producers												
Alamos Gold ⁽⁶⁾	AGI	13.41	394	5,281	5,151	B-2-7	8.20	0.45	8.65	1.55	10.3	21.8
New Gold	NGD	1.36	682	928	1,045	C-3-9	2.70	(0.30)	2.40	0.57	3.7	6.8
Market Cap Weighted Average										1.41		
Royalty Companies												
Franco-Nevada	FNV	156.19	192	29,919	28,728	B-1-7	49.25	6.50	55.75	3.04	NA	NA
Royal Gold	RGLD	141.37	66	9,280	9,603	B-2-7	60.70	1.40	62.10	2.31	NA	NA
Triple Flag	TFPM	16.96	201	3,405	2,468	B-1-7	9.75	(0.05)	9.70	1.74	NA	NA
Wheaton Precious Metals	WPM	50.89	452	23,003	22,181	B-1-7	19.74	1.54	21.28	2.39	NA	NA
Market Cap Weighted Average										2.51		
Primary Silver Producers												
Fresnillo ⁽⁵⁾	FNLPF	785.80	737	7,190	7,730	B-2-8	368.44	0.00	368.44	2.13	397.8	1,265.5
Hochschild Mining ⁽⁵⁾	HCHDF	92.20	514	588	763	C-1-8	140.65	0.00	141	0.66	41.2	288.8
Pan American Silver	PAAS	18.73	211	3,946	6,917	C-1-8	17.90	0.07	17.97	1.04	529.3	1,807.6
Market Cap Weighted Average										1.63		

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

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Exhibit 16: 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 14-Apr-2023		Share	Shares	MC	Debt	Cash	Enterprise	EBIT (\$mn)		EV/EBIT (x)		EBITDA (\$mn)		EV/EBITDA (x)		
	BofA															
	Sym	Price	Outstanding	(USDmn)	(USDmn)	(USDmn)	Value (EV) (USDmn)	Rating	2023E	2024E	2023E	2024E	2023E	2024E	2023E	2024E
Senior Gold Producers																
Agnico Eagle Mines	AEM	58.36	457	26,672	1,493	659	27,389	BUY	2,277	2,197	12.0	12.5	3,539	3,719	7.7	7.4
Barrick Gold	GOLD	19.67	1,755	34,528	4,782	4,440	43,853	BUY	4,298	5,865	10.2	7.5	6,515	7,842	6.7	5.6
Kinross Gold	KGC	5.34	1,222	6,525	2,641	428	8,824	UNDE	956	1,005	9.2	8.8	1,864	1,807	4.7	4.9
Market Cap Weighted Average											10.7	9.3			6.9	6.1
Mid-Tier Gold Producers																
B2Gold	BTG	4.28	1,075	4,600	57	652	3,900	BUY	728	671	5.4	5.8	1,078	913	3.6	4.3
Centerra Gold ⁽¹⁾	YCG	10.15	218	1,659	14	532	1,143	UNDE	153	204	7.4	5.6	270	342	4.2	3.3
Eldorado Gold	EGO	11.55	185	2,134	511	315	2,328	UNDE	223	221	10.4	10.5	455	466	5.1	5.0
Endeavour Mining ⁽¹⁾	YEDV	35.91	247	8,856	872	951	6,983	BUY	1,006	1,364	6.9	5.1	1,525	1,862	4.6	3.7
IAMGOLD	IAG	3.10	479	1,485	993	408	2,138	BUY	93	184	23.1	11.6	339	469	6.3	4.6
SSR Mining	SSRM	15.79	207	3,263	405	696	3,600	BUY	425	392	8.5	9.2	628	605	5.7	5.9
Market Cap Weighted Average											10.4	8.1			5.4	4.9
Intermediate/Junior Gold Producers																
Alamos Gold	AGI	13.41	394	5,281	0	132	5,151	NEUT	297	385	17.3	13.4	495	605	10.4	8.5
New Gold	NGD	1.36	682	928	399	280	1,045	UNDE	166	348	6.3	3.0	353	585	3.0	1.8
Market Cap Weighted Average											15.5	11.6			9.2	7.4
Royalty Companies																
Franco-Nevada	FNV	156.19	192	29,919	0	1,057	28,728	BUY	820	1,095	35.0	26.2	1,110	1,405	25.9	20.4
Royal Gold	RGLD	141.37	66	9,280	446	122	9,603	NEUT	384	370	25.0	26.0	560	583	17.2	16.5
Triple Flag	TFPM	16.96	201	2,501	2	81	2,420	BUY	116	183	20.8	13.2	193	259	12.5	9.3
Wheaton Precious Metals	WPM	50.89	452	23,003	2	696	22,181	BUY	587	742	37.8	29.9	836	1,058	26.5	21.0
Market Cap Weighted Average											33.1	26.5			23.8	19.2
Primary Silver Producers																
Fresnillo	FNLPF	785.80	737	7,190	1,279	969	7,730	NEUT	655	857	11.8	9.0	1,177	1,394	6.6	5.5
Hochschild Mining	HCHDF	92.20	514	588	314	204	763	BUY	201	313	3.8	2.4	339	479	2.3	1.6
Pan American Silver	PAAS	18.73	211	3,946	314	142	6,917	BUY	306	197	22.6	35.1	536	443	12.9	15.6
Market Cap Weighted Average											16.2	20.4			9.2	9.9

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

Valuation metrics for international precious metals producers

Priced as of 14-Apr-2023	BofA	Share	Shares	MC	EPS		P/E (x)		CFPS		P/CFPS (x)		DCF	NC	NAV	P/NAV	
	Sym	Price	Outstanding	(USDmn)	Rating	2023E	2024E	2023E	2024E	2023E	2024E	2023E					2024E
South African Gold Producers ⁽¹⁹⁾																	
AngloGold Ashanti ⁽¹³⁾	AULGF	491.89	419	11,387	BUY	2.09	2.49	13.0	10.9	3.21	3.90	8.5	7.0	286.81	0.00	286.81	1.72
Gold Fields ⁽¹³⁾	GFIOF	270.93	891	13,356	NEUT	1.25	1.69	12.0	8.9	2.16	n/a	6.9	NA	213.46	0.00	213.46	1.27
Harmony Gold ⁽¹⁴⁾⁽¹⁸⁾	HGMCF	82.92	618	2,834	UNDE	6.72	14.12	12.3	5.9	16.12	15.29	5.1	5.4	53.13	0.00	53.13	1.56
Sibanye ⁽⁵⁾	SBSW	8.63	713	6,156	BUY	2.14	2.43	4.0	3.6	2.75	2.95	3.1	2.9	11.88	0.00	11.88	0.73
Market Cap Weighted Average								10.9	8.3			6.6	5.5				
PGM Producers ⁽⁵⁾																	
Anglo American Platinum	AGPPF	1003.84	265	14,728	BUY	158.12	175.65	6.3	5.7	174.22	192.75	5.8	5.2	1,082.89	0.00	1,082.89	0.93
Market Cap Weighted Average								6.3	5.7			5.8	5.2				

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 18: 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 14-Apr-2023							Production		EV		EV	
BofA Sym	Share	Shares	Enterprise Value	P&P Gold Reserves	Rating	Value (EV)	2023E	2024E	Per Oz of Prod. (USD)	Per Oz of Reserves	Per Oz of Resources	Rating
	Price	O/S										



Exhibit 18: 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

Senior Gold Producers						(Moz)	(000 oz)	(000 oz)	2023E	2024E	1E 2024	1E 2025
Agnico-Eagle Mines	AEM	58.36	457	26,672	27,389	44.6	3,365	3,473	8,138	7,886	614	239
Barrick Gold	GOLD	19.67	1,755	34,528	43,853	69.0	4,366	4,559	10,045	9,618	636	162
Kinross Gold	KGC	5.34	1,222	6,525	8,824	32.6	2,072	1,976	4,259	4,466	271	126
Market Cap Weighted Average				67,725					5,747	5,552	386	121
Mid-Tier Gold Producers												
B2Gold	BTG	4.28	1,075	4,600	3,900	6.3	1,040	819	3,751	4,762	623	177
Centerra Gold ⁽¹⁾	YCG	10.15	218	1,659	1,143	4.8	274	287	4,165	3,985	236	88
Eldorado Gold	EGO	11.55	185	2,134	2,328	17.7	500	543	4,659	4,290	131	40
Endeavour Mining ⁽¹⁾	YEDV	35.91	247	8,856	6,983	17.8	1,375	1,560	5,077	4,475	393	130
IAMGOLD	IAG	3.10	479	1,485	2,138	12.4	458	537	4,673	3,985	173	47
SSR Mining	SSRM	15.79	207	3,263	3,600	9.2	619	606	5,813	5,937	393	170
Market Cap Weighted Average									4,808	4,691	375	125
Intermediate/Junior Gold Producers												
Alamos Gold	AGI	13.41	394	5,281	5,151	10.3	486	487	10,603	10,571	500	236
New Gold	NGD	1.36	682	928	1,045	3.7	318	383	3,289	2,727	283	154
Market Cap Weighted Average									9,370	9,249	463	222
Royalty Companies							Attributable Production					
Franco-Nevada	FNV	156.19	192	29,919	28,728	NA	681	811	42,168	35,405	NA	NA
Royal Gold	RGLD	141.37	66	9,280	9,603	NA	350	356	27,410	26,983	NA	NA
Triple Flag	TFFM	16.96	201	3,405	2,468	NA	112	150	21,950	16,425	NA	NA
Wheaton Precious Metals	WPM	50.89	452	23,003	22,181	NA	600	788	36,968	28,141	NA	NA
Primary Silver Producers									37,294	30,818		
Fresnillo ^(5,7)	FNLPF	785.80	737	7,244	7,730	397.8	56,107	59,841	138	129	19.43	6.11
Hochschild Mining ^(5,7)	HCHDF	92.20	514	593	763	41.2	25,604	33,456	30	23	18.53	2.64
Pan American Silver	PAAS	18.73	211	3,946	6,917	529.3	15,149	14,975	457	462	13.07	3.83
Market Cap Weighted Average									276	273	16.53	4.91

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

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Exhibit 19: Operating Forecasts for Global Gold and Precious Metal Producers (Cont'd)

International gold producers operating forecasts

Priced as of 14-Apr-2023		Shares		Enterprise		P&P Gold		Production		EV		EV		EV	
BofA Sym	Share Price	O/S	Market Cap	Value	Value	Reserves	Reserves	2023E	2024E	Per Oz of Prod. (USD)	Per Oz of Prod. (USD)	Per Oz of Reserves	Per Oz of Reserves	Per Oz of Resources	Per Oz of Resources
South African Gold Producers ⁽⁴⁾															
AngloGold Ashanti	AULGF	491.89	419	11,388	12,501	29.7	2,623	2,779	4,765	4,498	421	81			
Gold Fields	GFIOF	270.93	891	13,356	14,216	52.1	2,360	2,828	6,023	5,028	273	147			
Harmony Gold ⁽¹²⁾	HGMCF	82.92	618	2,834	3,109	42.5	1,456	1,457	2,136	2,133	73	46			
Sibanye	SBSW	8.63	708	338	328	16.6	864	754	380	435	20	3			
Market Cap Weighted Average									5,039	4,460	311	108			

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

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Stocks mentioned

Prices and ratings for stocks mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
GOLD	GOLD US	Barrick Gold	US\$ 19.67	B-1-8
RGLD	RGLD US	Royal Gold Inc	US\$ 141.37	B-2-7
SSRM	SSRM US	SSR Mining Inc.	US\$ 15.79	B-1-7
YSSRM	SSRM CN	SSR Mining Inc.	C\$ 21.09	B-1-7
TFFM	TFFM US	Triple Flag	US\$ 16.96	B-1-7



Price objective basis & risk

Barrick Gold (GOLD)

Our price objective (PO) for Barrick Gold is \$27.00 per share and is based on the stock trading at 1.50 times our estimated net asset value (NAV). Our NAV 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.

Royal Gold (RGLD)

Our price objective for Royal Gold is \$140 per share, which is based on the stock trading at 2.25 times our adjusted net asset value (NAV), valuing net cash cost 1:1. Our net asset value (NAV) is based on a 5% discount rate and ten-year average gold price forecast of \$1,869/ounce. Historically, North American precious metal stocks have traded between 1 and 3 times NAV, with unhedged, growth-oriented producers occupying the upper end of the range. Given Royal Gold's status as a royalty company as opposed to an operator, our target valuation multiple reflects its good cash flow-generating ability.

Upside risks to our PO are substantially higher commodity prices, higher-than-expected output at the royalty assets, and/or higher reserves at the royalty assets. Downside risks are a weaker gold price, problems at the operations, and no exploration success.

SSR Mining Inc. (SSRM / YSSRM)

Our price objective for SSR Mining is \$20.00 (C\$26.00) per share, and is based on 1.25x our adjusted estimated net asset value (NAV). Our NAV is based on a 5% discount rate (consistent with the vast majority of gold operations within our North American precious metals coverage) and 10-year average gold price forecast of \$1,869 per ounce. Historically, North American precious metal stocks have traded between 1 and 3x NAV, with a median of 1.50x over the past three years (2.00x longer-term). Our target multiple is in line with high quality and strong free cash flow generating mid-tier gold producers. Upside risks to our price objective are stronger than forecast commodity prices, better than expected success at reducing costs and positive regulatory, permitting or operating developments. Downside risks to our price objective for SSR are the inability to secure financing for expansion or development projects, unforeseen operating problems, political, legal or permitting 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\$23.00 (\$17.00) per share PO for TFPM is based on a target valuation multiple of 1.75x our estimated NAV. 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
	Commercial Metals	CMC	CMC US	Lawson Winder, CFA
	Endeavour Mining	YEDV	EDV CN	Harmen Puri
	Endeavour Mining	EDVMF	EDVMF US	Harmen Puri
	Endeavour Mining PLC	XEDVF	EDV LN	Harmen Puri
	First Quantum	FQVLF	FQVLF US	Lawson Winder, CFA
	First Quantum Minerals	YFM	FM CN	Lawson Winder, CFA
	Franco-Nevada	YFNV	FNV CN	Lawson Winder, CFA
	Franco-Nevada	FNV	FNV US	Lawson Winder, CFA
	IAMGOLD	YIMG	IMG CN	Lawson Winder, CFA
	IAMGOLD Corp.	IAG	IAG US	Lawson Winder, CFA
	Ivanhoe Mines	YIVN	IVN CN	Lawson Winder, CFA
	Ivanhoe Mines	IVPAF	IVPAF US	Lawson Winder, CFA
	Lundin Mining	XLPRF	LUMI SS	Lawson Winder, CFA
	Lundin Mining Corp	YLUN	LUN CN	Lawson Winder, CFA
	Lundin Mining Corp	LUNMF	LUNMF US	Lawson Winder, CFA
	MP Materials	MP	MP US	Lawson Winder, CFA
	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
	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

North America - Metals and Mining Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	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
	Steel Dynamics	STLD	STLD 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
	Kinross Gold	KGC	KGC US	Lawson Winder, CFA
	New Gold Inc.	YNGD	NGD CN	Harmen Puri
	New Gold Inc.	NGD	NGD US	Harmen Puri
	Nexa Resources	NEXA	NEXA US	Lawson Winder, CFA
	United States Steel Corporation	X	X US	Lawson Winder, CFA

RSTR

	Newmont Corporation	NEM	NEM US	Lawson Winder, CFA
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Disclosures

Important Disclosures

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

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	55	57.89%	Buy	24	43.64%
Hold	21	22.11%	Hold	11	52.38%
Sell	19	20.00%	Sell	10	52.63%

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

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1869	53.01%	Buy	1030	55.11%
Hold	827	23.45%	Hold	476	57.56%
Sell	830	23.54%	Sell	389	46.87%

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

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

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