

A Mixed Week for Junior Gold Equities as Gold Rises Further

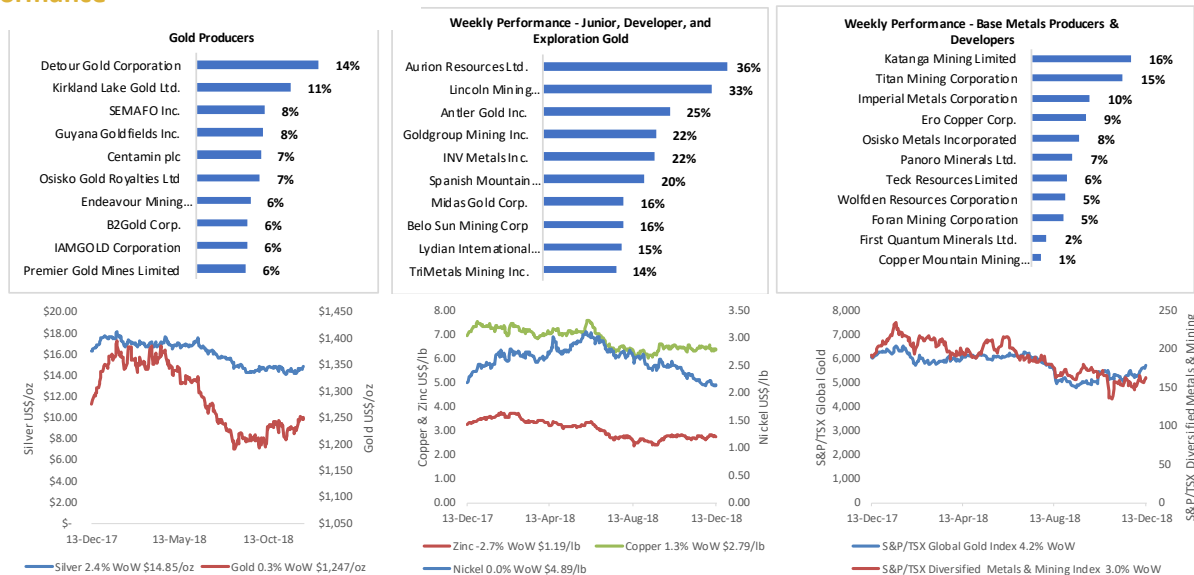
Precious Metals

After a muted performance despite a higher gold price, Junior gold equities were higher overall this week as the price of gold continued to rise. Since last Thursday, gold continued to perform stronger, reaching a high of US\$1,250 per ounce briefly on Monday, only to fall to US\$1,241 per ounce on Thursday following better-than-expected initial jobless claims figures from last week. A decision by the U.S. Federal Reserve on whether to raise the key interest rate in its meeting next week may also have stalled gold's run given the general consensus that another raise is likely. The VanEck Vectors Junior Gold Miners ETF reflected the better performance in the junior gold space, rising almost one point, while the S&P Global Gold Index registered a six point gain. Despite the S&P/TSX Venture Composite Index falling another 6 points this week, several junior explorers performed well, including Midas Gold Corp. (MAX-T, BUY rating, \$1.90 target; up 16%), Harte Gold Corp. (HRT-T, BUY rating, \$0.80 target; up 10%) and Nighthawk Gold Corp. (NHK-T, BUY rating, \$0.90 target; up 8%). Meanwhile, Detour Gold Corp. (DGC-T, BUY rating, \$15.50 target) rose 14% after shareholders voted to remove most of the Company's board of directors and interim CEO. Osisko Gold Royalties (OR-T, BUY rating, \$16.50 target; up 7%) and SEMAFO Inc. (SMF-T, BUY rating, \$6.00 target; up 8%) were also among the better performing gold producers this week. Finally, platinum, silver and palladium were all higher, finishing 1%, 2% and 4% higher.

Base Metals

The base metals were mixed week over week (WoW) as of Thursday's close. LME copper was the most positively impacted metal up +1.3% to \$2.79/lb while LME zinc was down -2.7% WoW at \$1.19/lb. Nickel was unchanged WoW. The LME Index was up 0.32% WoW at 2,883.7 on Thursday's close. The S&P Composite Diversified Metals & Mining Industry Index closed Thursday at 5,211.91, which was up 2.97% WoW. Metals are all down YoY with copper, zinc and nickel down -8.0%, -16.5% and -2.3% respectively. LME inventories were mostly down WoW with copper and nickel inventories down -4.0% and -0.3% WoW respectively. Zinc was up 2.3%. Excluding bonded warehouse inventories, we calculate the current days of consumption at 5.5 for copper and 3.9 for zinc. The US Dollar Index was up 28bps this week, closing on Thursday at 97.08, having little impact on base metals prices. The base metals equities in our coverage were mixed WoW. The most negatively impacted weekly performer in our coverage universe was Capstone Mining (CS: TSX, BUY, \$0.85/sh target), down -16.4% WoW. The most positively impacted weekly performer in our coverage universe was Copper Mountain (CMMC: TSX, BUY, C\$2.00/sh target), which was up +1.4% WoW on Thursday.

Weekly Performance



Source: Bloomberg and Haywood Securities

Contents

Haywood Research: The Week in Review	3
Weekly Commodities	5
Commodities Prices and Inventories	6
Commodities and ETFs	9
Upcoming Macroeconomic News	11
Weekly Indices	12
Weekly Equities	13
Precious Metals Companies	14
Base Metals Companies	16
Major International Miners	17

Tables

Comparables Tables: Consensus and Haywood Forecasts/Multiples, Plus Market Valuations for In Situ Resources	18
Precious Metals Companies	18
Base Metals Companies	28
Other Companies (Uranium, Diamond, Cobalt, Coal, Iron)	34
Junior Exploration Companies Review: Performance of Companies Included in Junior X and Upcoming Catalysts	37
Haywood Metals and Currencies Forecasts	39



Haywood Research: The Week in Review – Covered Companies

Publications from the Haywood Research team for the week included the following for covered companies:

- ◆ **Market Outlook:** Positioning for a recovery and sector rotations into 2019
- ◆ **Liberty Gold Corp. (LGD-T, \$0.345):** Drilling result
- ◆ **Harte Gold Corp. (HRT-T, \$0.36):** On track for commercial production
- ◆ **Cobalt 27 Capital Corp. (KBLT-V, \$3.90):** Target Price Downgrade
- ◆ **Roxgold Inc. (ROXG-T, \$0.77):** Project update
- ◆ **Aurion Resources Ltd. (AU-V, \$1.04):** Drilling result
- ◆ **GT Gold Corp. (GTT-V, \$0.60):** Drilling result from Saddle North

INDUSTRY REPORTS

Market Outlook: Positioning for a recovery and sector rotations into 2019

- ◆ North American equity markets experienced rising volatility in 2018 as the nearly decade-long bull market wavers in the face of tightening monetary policy and a deteriorating growth outlook. We believe that greater equity market volatility in the coming quarters should increase the payoff from bottom-up fundamental analysis in stock selection as the results of passive investment strategies deteriorate. With this report we provide a brief overview of broad trends in relevant equity indices, fixed-income markets, and commodities before completing a deeper dive into our coverage universe.

[Positioning for a recovery and sector rotations into 2019](#)

COVERED NAMES

Liberty Gold Corp. (LGD-T, \$0.345, [Buy Rating, \$1.00 Target Price])

- ◆ Liberty Gold announced results from the ongoing Reverse Circulation drilling at its Goldstrike Project in southwestern Utah. results are from Rotary Percussion (RC) drilling within the northern portion of the Main Goldstrike Deposit where previous drilling had been restricted to pre-determined roads and pads prior to the receipt of the amended Plan of Operations late last month. Additionally, the Company conducted further back-fill drill testing of its historic pits to identify further mineralization in its backfill material that is above the current cut-off grades.

[Further Drilling of Historic Backfill Material Continues to Show Promise](#)

Harte Gold Corp. (HRT-T, \$0.36, [Buy Rating, \$0.80 Target Price])

- ◆ With consistent throughput of 575k tpd, HRT is in position to achieve a full year of production from the Sugar Zone in 2019. We look for production to be complemented by drilling progress and resource growth. The Sugar Zone mill is achieving steady throughput of 575tpd, with over 24kt of material processed YTD. Management is pleased with operating costs and recoveries, including 59% from the gravity circuit.

[On Track for Commercial Production](#)

Cobalt 27 Capital Corp. (KBLT-V, \$3.90, [Buy Rating, \$10.20 Target Price])

- ◆ We are lowering our target on Cobalt 27 based on weakness in the commodity price. Our revised 12-month cobalt price forecast of US\$30/lb (from US\$45) results in our target price for KBLT shares declining to \$10.20/share from \$17.00. The cobalt price severely underperformed in the second half of 2018 after a nearly euphoric run in the first half, following a strong 2017. Based on LME futures, cobalt hit a high of US\$43/lb in March 2018 before steadily declining in Q2.

[Revising Cobalt Price Forecast and Target Price; Maintaining BUY on Anticipated Cobalt Rebound](#)

Roxgold Inc. (ROXG-T, \$0.77, [Buy Rating, \$1.90 Target Price])

- ◆ While the completion of the Bagassi South Expansion Project comes in-line with our expectations on timing, the execution of the project approximately 10% below budget highlights the company's ongoing ability to reliably deliver on multiple operational facets.

[The Story of Operational Execution Continues as Bagassi South Reaches Completion Under Budget](#)



MINING FLASHES

Aurion Resources Ltd. (AU-V, \$1.04 [Not Rated])

- ◆ Aurion Resources released assay results from its ongoing, 15,000 metre drill program at its flagship, 100% owned Risti Gold Project in Northern Finland. In total, 64 drill holes (~10,000 metres) have been completed since July of this year, with 9 drill hole results still pending. Most notably in the recent release, high grade mineralization intersected in drill holes 77-42-51-54-75 along a north-south section, may outline a coherent zone made up of over two sets of mineralized quartz veins. However, the width and strike length of the shoot remains unknown as more drilling will be needed to better define the outline of this high-grade mineralization.

[Positive Drill Results Bode Well for 2019](#)

GT Gold Corp. (GTT-V, \$0.60 [Not Rated])

- ◆ The recent results are important for two reasons, firstly indicating the potential for near-surface, higher-grade mineralization that to date has primarily been intersected at depth, and secondly, implications for the overall size potential of the Saddle North porphyry system, particularly to the southeast.

[Size Potential at Saddle North Remains Unclear](#)



Weekly Commodities

PRECIOUS METALS

Name	Close	1Wk Δ	1 week %	1 Month %	3 Month %	6 Month %	12 Month %	5 Day Trend	52W H/L	1W H/L
Gold Spot	\$ 1,243	\$ 5.04	0.4%	3.4%	3.5%	(4.3)%	(1.0)%		\$ 1,366	\$ 1,249
US\$/oz									\$ 1,160	\$ 1,238
Silver Spot	\$ 14.77	\$ 0.30	2.0%	5.5%	4.2%	(13.3)%	(8.1)%		\$ 17.70	\$ 14.77
US\$/oz									\$ 13.90	\$ 14.47
Platinum Spot	\$ 797	\$ 6.91	0.9%	(5.0)%	(0.7)%	(11.8)%	(10.2)%		\$ 1,029	\$ 803
US\$/oz									\$ 756	\$ 785
Palladium Spot	\$ 1,263	\$ 51.57	4.3%	13.4%	28.6%	24.8%	23.9%		\$ 1,272	\$ 1,265
US\$/oz									\$ 834	\$ 1,211

BASE METALS

Name	Close	1Wk Δ	1 week %	1 Month %	3 Month %	6 Month %	12 Month %	5 Day Trend	52W H/L	1W H/L
Copper Future	\$ 2.79	\$ 0.04	1.3%	1.1%	2.4%	(15.1)%	(8.0)%		\$ 3.32	\$ 2.80
US\$/lb									\$ 2.64	\$ 2.76
Nickel Spot	\$ 4.89	\$ -	-	(4.3)%	(13.9)%	(30.7)%	(2.3)%		\$ 7.14	\$ 4.92
US\$/lb									\$ 4.86	\$ 4.85
Zinc Spot	\$ 1.19	\$ (0.03)	(2.7)%	3.4%	12.3%	(19.1)%	(16.5)%		\$ 1.64	\$ 1.23
US\$/lb									\$ 1.04	\$ 1.19
Aluminum Spot	\$ 0.87	\$ (0.01)	(1.2)%	(0.4)%	(5.6)%	(16.1)%	(3.8)%		\$ 1.18	\$ 0.88
US\$/lb									\$ 0.87	\$ 0.87
Iron Ore Spot	\$ 67.49	\$ 1.59	2.4%	(9.5)%	(1.6)%	2.8%	(2.9)%		\$ 140.00	\$ 78.80
US\$/t									\$ 77.70	\$ 77.70

ENERGY

Name	Close	1Wk Δ	1 week %	1 Month %	3 Month %	6 Month %	12 Month %	5 Day Trend	52W H/L	1W H/L
Newcastle Coal	\$ 102.50	\$ 0.75	0.7%	(4.1)%	(10.4)%	(8.2)%	2.5%		\$ 115.30	\$ 102.50
US\$/t									\$ 89.50	\$ 101.75
Uranium Spot	\$ 29.75	\$ 0.80	2.8%	2.2%	8.8%	24.2%	14.4%		\$ 29.85	\$ 29.75
US\$/lb									\$ 26.25	\$ 28.75
WTI	\$ 53.10	\$ 1.61	3.1%	(4.8)%	(22.1)%	(18.6)%	(1.7)%		\$ 76.55	\$ 53.10
US\$/bbl									\$ 49.41	\$ 51.00
Brent	\$ 61.85	\$ 1.79	3.0%	(5.9)%	(19.6)%	(17.4)%	5.0%		\$ 85.89	\$ 61.85
US\$/bbl									\$ 57.78	\$ 59.97
Henry Hub	\$ 4.12	\$ (0.21)	(4.8)%	(0.6)%	38.2%	29.8%	36.6%		\$ 4.96	\$ 4.55
US\$/MMBtu									\$ 2.91	\$ 4.12

Source: Haywood Securities and Bloomberg

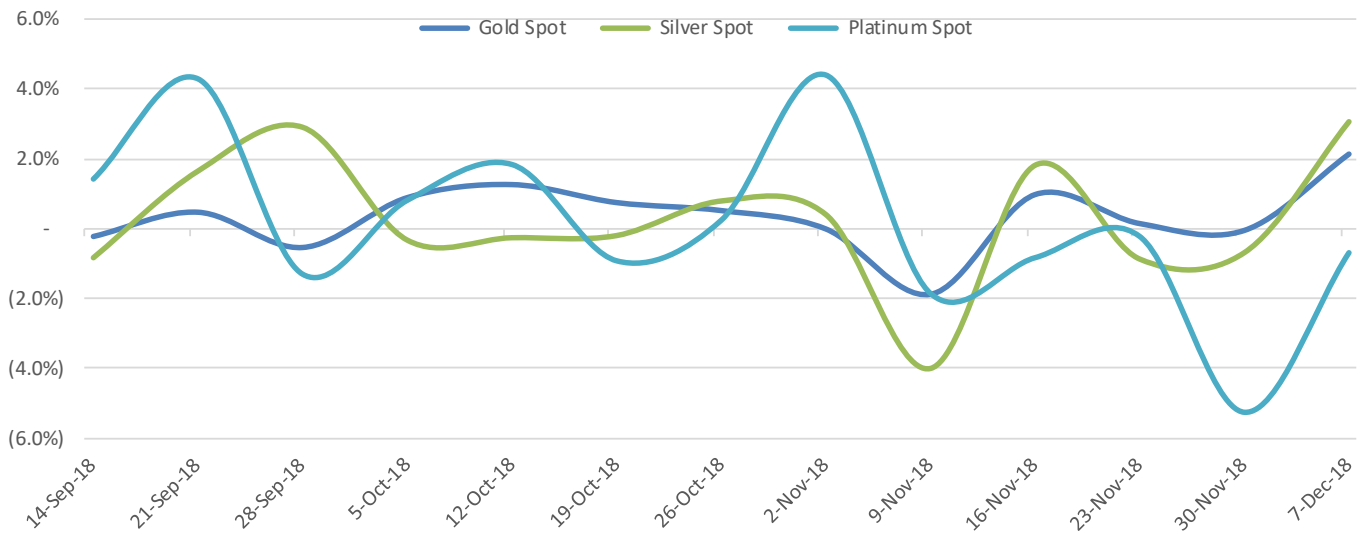


Commodities Prices and Inventories

Precious Metals

Spot Price				
Commodities	LME Spot Price	Weekly Δ	YTD Δ	1 Year Δ
Gold	US\$ 1,243 /oz	0.4%	1.3%	1.3%
Silver	US\$ 14.77 /oz	2.1%	-12.9%	-8.1%
Platinum	US\$ 797 /oz	0.9%	-14.3%	-10.2%

Precious Metals Weekly Change (12 weeks)



Source: Haywood Securities and Bloomberg

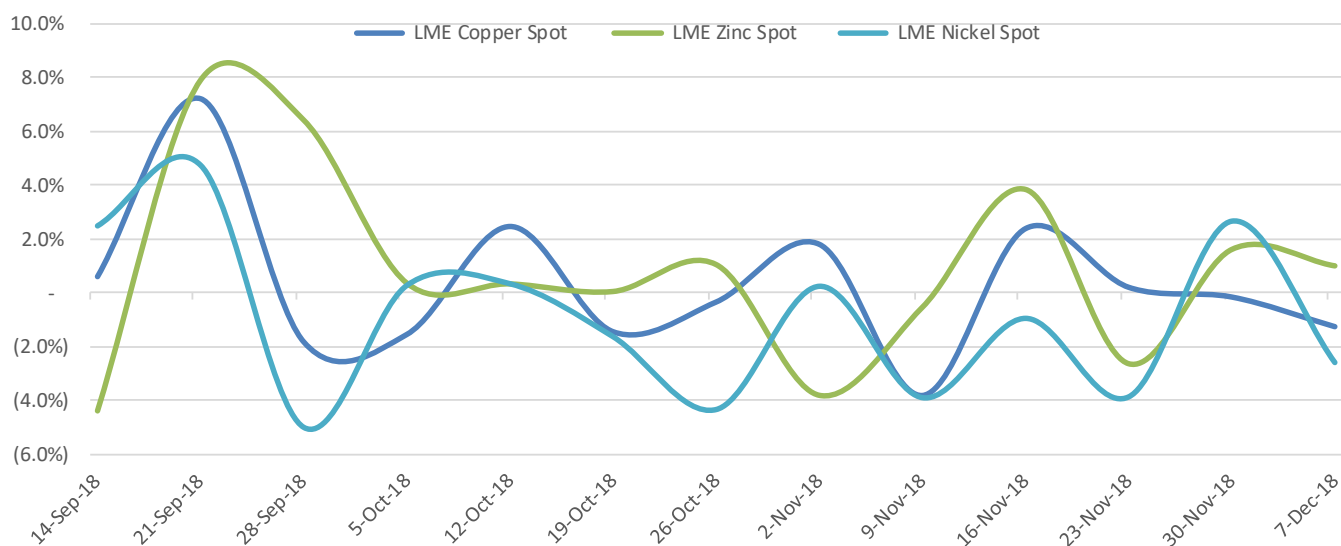


Base Metals

Spot Price				
Commodities	LME Spot Price	Weekly Δ	YTD Δ	1 Year Δ
Copper	US\$ 2.79 /lb	1.3%	-14.5%	-8.0%
Zinc	US\$ 1.19 /lb	-2.7%	-21.1%	-16.5%
Nickel	US\$ 4.89 /lb	0.0%	-15.2%	-2.3%

LME Inventory			Total Inventory Excluding Bonded Warehouse Inventory			
Commodities	LME Inventory	Weekly Δ	Total (t)	YTD Δ	1 Year Δ	Days of Consumption
Copper	119,975	-4.0%	353,463	-35%	-35%	5.5
Zinc	113,800	2.3%	140,650	-44%	-46%	3.9
Nickel	210,348	-0.3%	225,282	-45%	-46%	37.7

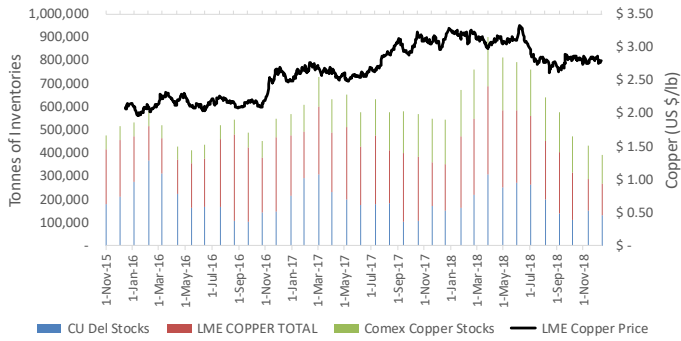
Base Metals Weekly Change (12 weeks)



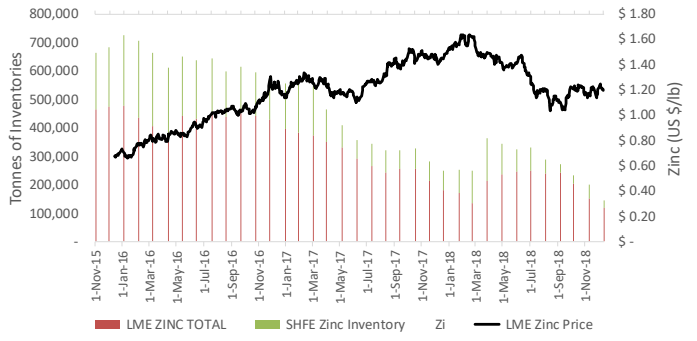
Source: Haywood Securities and Bloomberg



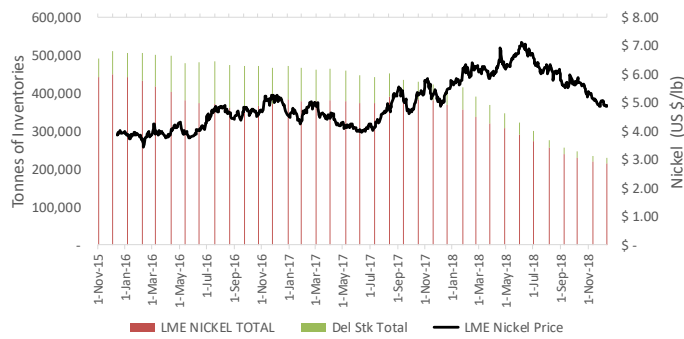
Copper Price & Inventories



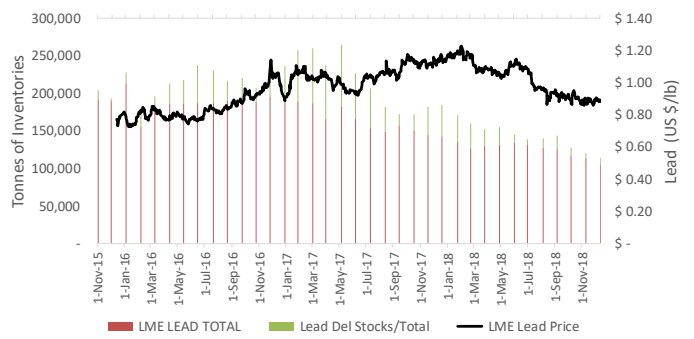
Zinc Price & Inventories



Nickel Price & Inventories



Lead Price & Inventories



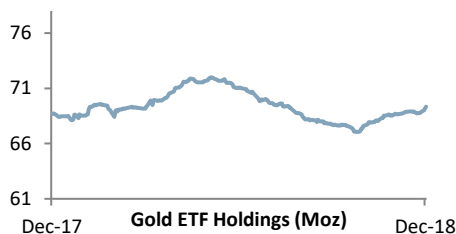
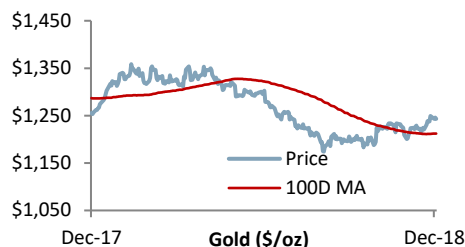
Note: Total Inventories exclude the bonded warehouse inventories

Source: Haywood Securities and Bloomberg



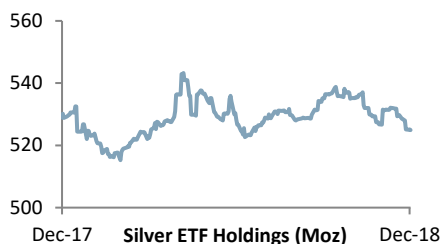
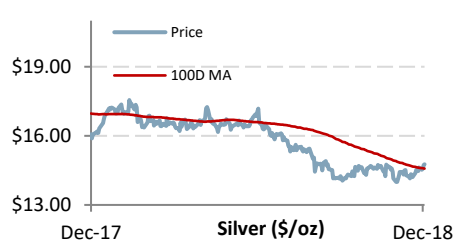
Commodities and ETFs: A Week in Action

Gold – 1-Year US\$/oz (left) and Total ETF Holdings (right)



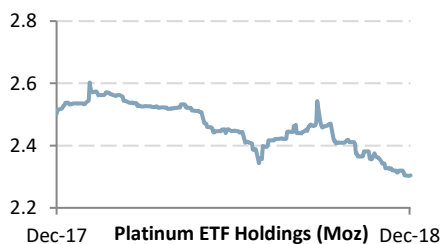
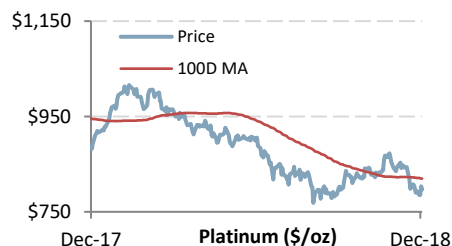
- ◆ Spot: Gain (+0.4%) for the week
- ◆ ETF Holdings: 69,341,390 ounces, up 572,937 ounces for the week

Silver – 1-Year US\$/oz (left) and Total ETF Holdings (right)



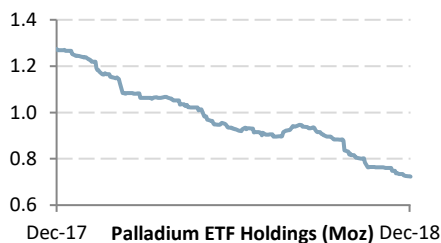
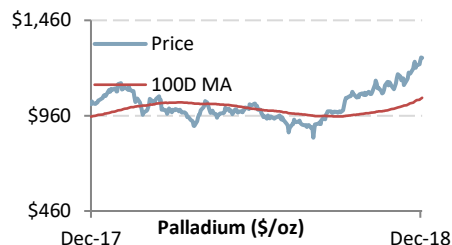
- ◆ Spot: Gain (+2.0%) for the week
- ◆ ETF Holdings: 524,959,571 ounces, down 3,197,796 ounces for the week

Platinum – 1-Year US\$/oz (left) and Total ETF Holdings (right)



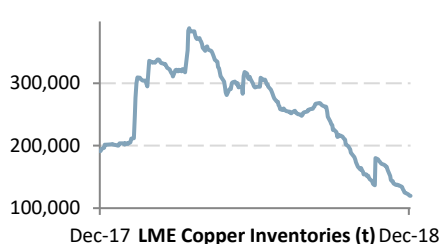
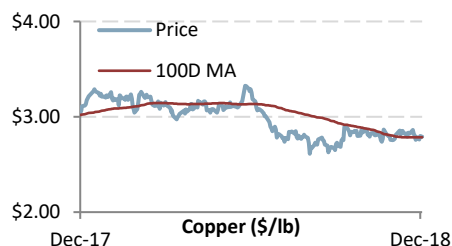
- ◆ Spot: Gain (+0.9%) for the week
- ◆ ETF Holdings: 2,304,090 ounces, down 10,501 ounces for the week

Palladium – 1-Year US\$/oz (left) and Total ETF Holdings (right)



- ◆ Spot: Gain (+4.3%) for the week
- ◆ ETF Holdings: 723,070 ounces, down 5,252 ounces for the week

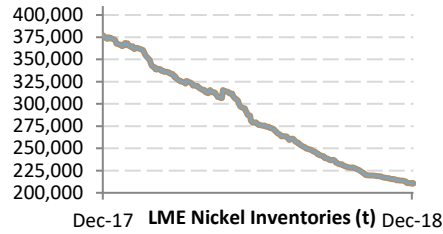
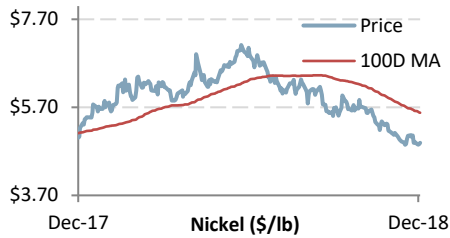
Copper – 1-Year US\$/lb (left) and LME Inventory (right)



- ◆ Futures: Gain (+1.3%) for the week
- ◆ LME Copper: 119,975 tonnes, down 4,975 tonnes for the week

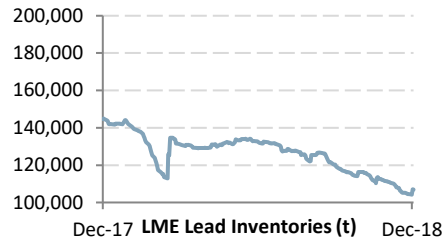
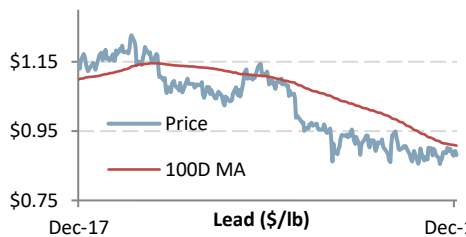


Nickel – 1-Year US\$/lb (left) and LME Inventory (right)



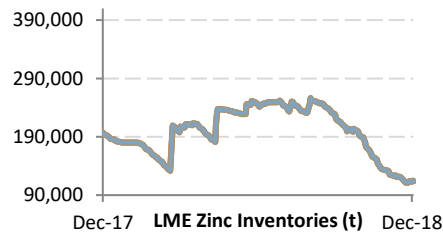
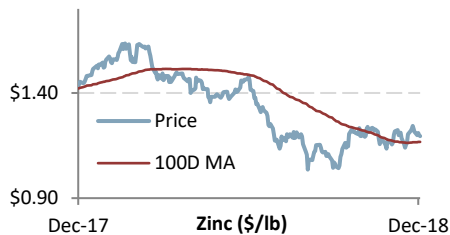
- ◆ Spot: Unchanged (0.0%) for the week
- ◆ LME Nickel: 210,348 tonnes, down 528 tonnes for the week

Lead – 1-Year US\$/lb (left) and LME Inventory (right)



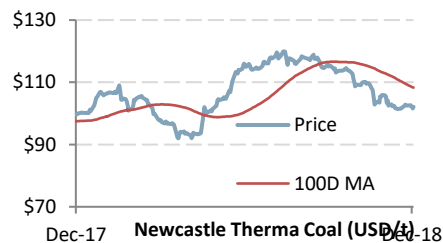
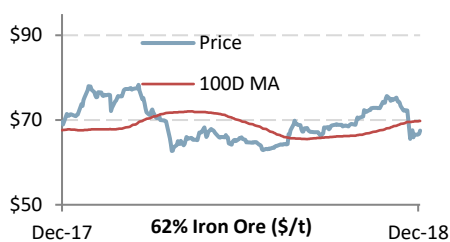
- ◆ Spot: Loss (-1.4%) for the week
- ◆ LME Lead: 106,950 tonnes, up 2,400 tonnes for the week

Zinc – 1-Year US\$/lb (left) and LME Inventory (right)



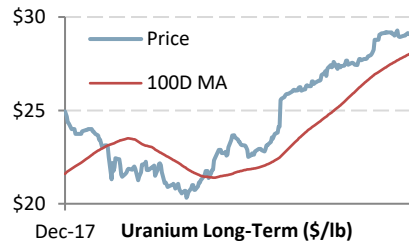
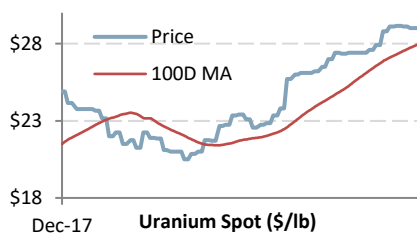
- ◆ Spot: Loss (-2.7%) for the week
- ◆ LME Zinc: 113,800 tonnes, up 2,575 tonnes for the week

Iron – 1-Year US\$/t 62% Fe (left) and 1-Year US\$/t Newcastle (right)



- ◆ Newcastle Thermal Futures: Loss (-0.4%) for the week
- ◆ 62% Fe Iron Ore: Gain (+2.4%) for the week

Uranium – 1-Year US\$/lb Short Term (left) and Long-term (right)



- ◆ Uranium Long: Gain (+2.8%) for the week

Source: Bloomberg, UxC Consulting, and Haywood Securities



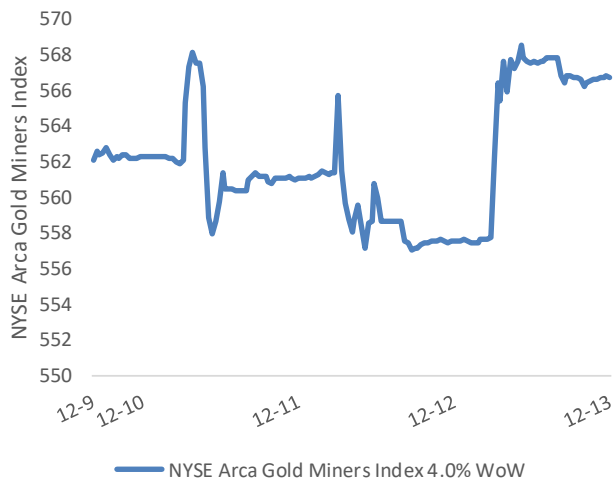
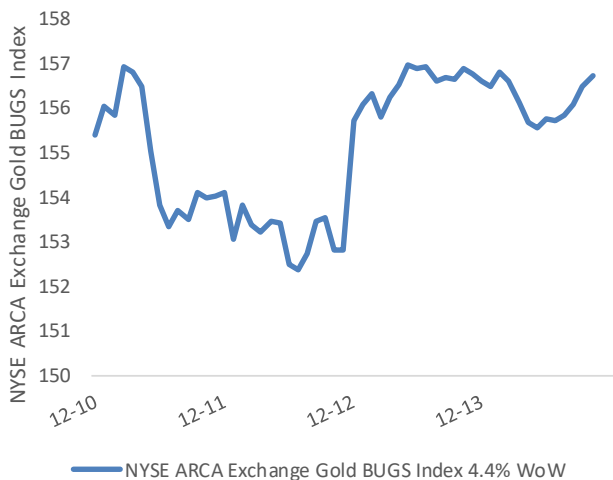
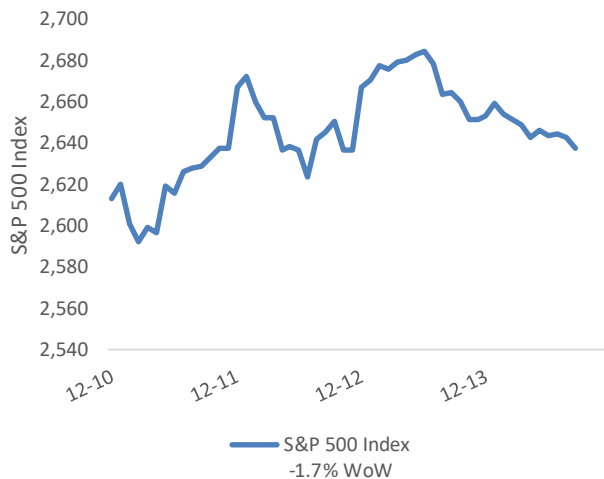
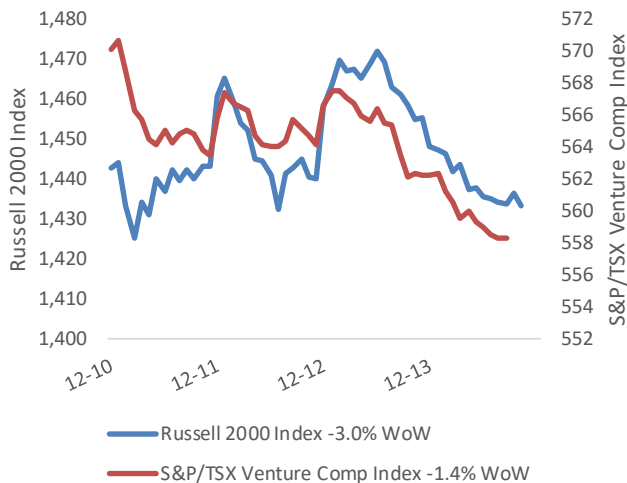
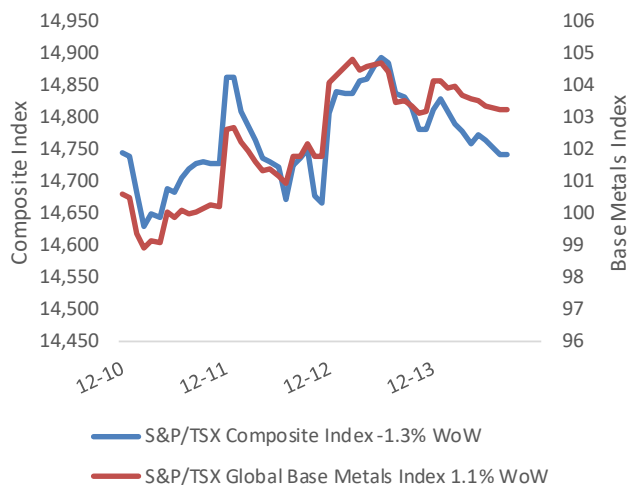
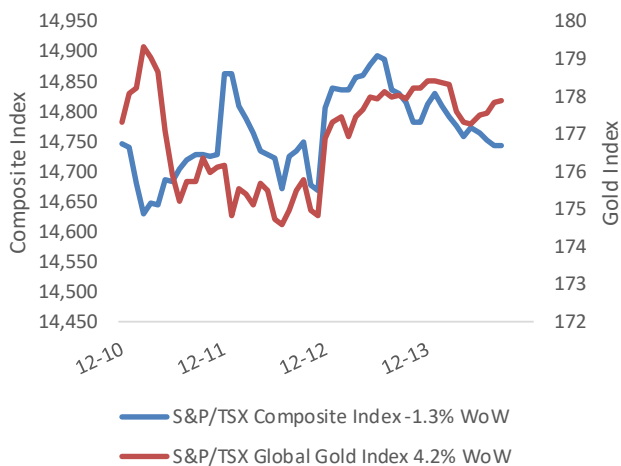
Upcoming Macroeconomic News and Events

Date	Event	Period	Survey	Prior	Relevance
United States					
12/14/2018	Retail Sales Advance MoM	Nov	0.10%	0.80%	92
12/14/2018	Retail Sales Ex Auto MoM	Nov	0.20%	0.70%	65
12/14/2018	Retail Sales Ex Auto and Gas	Nov	0.40%	0.30%	62
12/14/2018	Industrial Production MoM	Nov	0.30%	0.10%	89
12/14/2018	Capacity Utilization	Nov	78.60%	78.40%	62
12/14/2018	Markit US Composite PMI	Dec P	--	54.7	70
12/14/2018	Markit US Manufacturing PMI	Dec P	55	55.3	90
12/14/2018	Markit US Services PMI	Dec P	54.6	54.7	70
12/17/2018	Empire Manufacturing	Dec	20	23.3	83
12/17/2018	Total Net TIC Flows	Oct	--	-\$29.1b	66
12/17/2018	Net Long-term TIC Flows	Oct	--	\$30.8b	74
12/18/2018	Housing Starts	Nov	1230k	1228k	90
12/18/2018	Building Permits	Nov	1265k	1263k	63
12/19/2018	MBA Mortgage Applications	14-Dec	--	1.60%	92
12/19/2018	Current Account Balance	3Q	--	-\$101.5b	73
12/19/2018	Existing Home Sales	Nov	5.20m	5.22m	88
12/19/2018	FOMC Rate Decision (Upper Bound)	19-Dec	2.50%	2.25%	98
12/20/2018	Philadelphia Fed Business Outlook	Dec	15	12.9	80
12/20/2018	Initial Jobless Claims	15-Dec	--	206k	98
12/20/2018	Continuing Claims	08-Dec	--	1661k	69
12/20/2018	Bloomberg Consumer Comfort	16-Dec	--	59.4	68
12/20/2018	Leading Index	Nov	0.00%	0.10%	84
Canada					
12/17/2018	Int'l Securities Transactions	Oct	--	7.70b	53
12/18/2018	Manufacturing Sales MoM	Oct	--	0.20%	70
12/19/2018	CPI NSA MoM	Nov	--	0.30%	88
12/19/2018	CPI YoY	Nov	--	2.40%	95
12/20/2018	Wholesale Trade Sales MoM	Oct	--	-0.50%	63
12/21/2018	Retail Sales MoM	Oct	--	0.20%	79
12/21/2018	Retail Sales Ex Auto MoM	Oct	--	0.10%	74
12/21/2018	GDP MoM	Oct	--	-0.10%	84
12/21/2018	BoC Business Outlook Future Sales	4Q	--	15	51

Source: Bloomberg



Weekly Indices

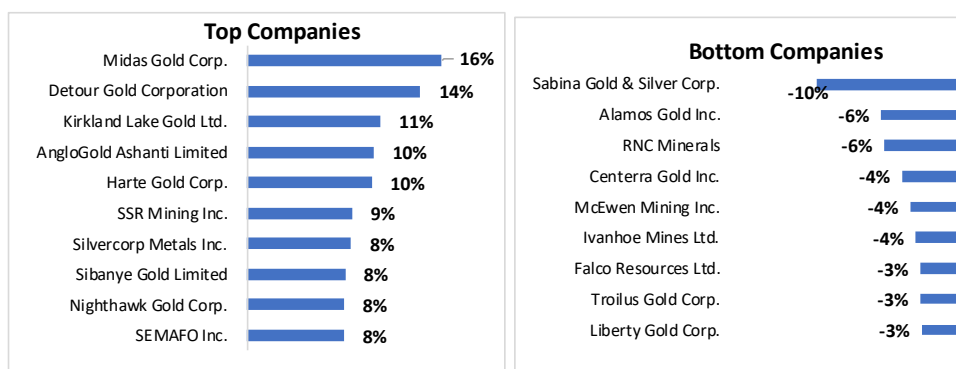


Source: Bloomberg and Haywood Securities



Weekly Equities

Equity Weekly Performance – Precious Metals Companies (S&P/TSX Global Mining Index and Haywood Covered Companies)



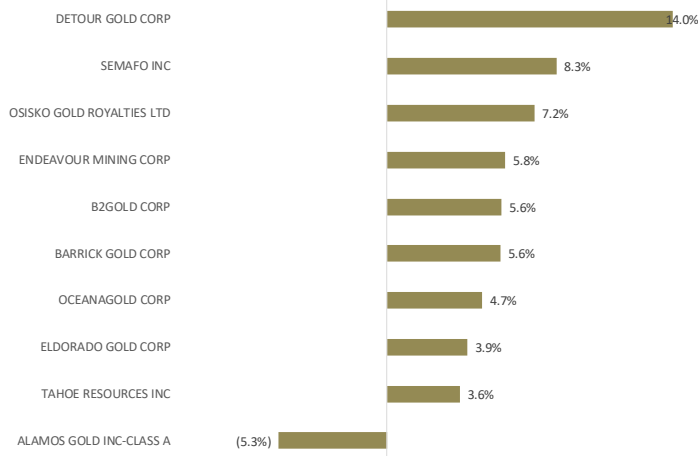
Ticker	Company	Close	1Wk \$	1Wk %	52Wk High	52Wk Low
TSX:AEM	Agnico Eagle Mines Limited	53.45	2.16	4%	62.80	42.35
TSX:ASR	Alacer Gold Corp.	2.20	0.04	2%	2.97	1.97
TSX:AGI	Alamos Gold Inc.	4.26	(0.26)	(6)%	8.49	4.13
NYSE:AU	AngloGold Ashanti Limited	11.97	1.12	10%	12.00	7.08
TSX:AR	Argonaut Gold Inc.	1.26	0.03	2%	2.87	1.18
TSX:AKG	Asanko Gold Inc.	0.93	(0.03)	(3)%	1.79	0.55
TSXV:AGB	Atlantic Gold Corporation	1.67	0.05	3%	1.99	1.40
TSX:BTO	B2Gold Corp.	3.58	0.20	6%	4.06	2.77
TSXV:BGM	Barkerville Gold Mines Ltd.	0.33	(0.01)	(3)%	0.78	0.33
TSX:ABX	Barrick Gold Corporation	18.85	0.98	5%	19.49	12.54
TSX:CG	Centerra Gold Inc.	5.41	(0.25)	(4)%	8.21	4.76
TSX:CGG	China Gold International Resources (1.73	(0.03)	(2)%	3.19	1.59
NYSE:CDE	Coeur Mining, Inc.	4.06	0.09	2%	8.94	3.81
NYSE:BVN	Compañía de Minas Buenaventura S.	15.19	0.47	3%	16.80	11.67
TSX:CNL	Continental Gold Inc.	2.21	0.10	5%	4.13	1.98
TSX:DGC	Detour Gold Corporation	11.08	1.37	14%	15.40	9.11
TSX:ELD	Eldorado Gold Corporation	0.78	0.02	3%	1.85	0.73
TSX:EDV	Endeavour Mining Corporation	17.75	1.03	6%	26.86	16.34
TSX:EDR	Endeavour Silver Corp.	2.66	0.19	8%	4.40	2.27
TSXV:EQX	Equinox Gold Corp.	0.93	0.04	4%	1.23	0.85
TSXV:FPC	Falco Resources Ltd.	0.30	(0.01)	(3)%	1.13	0.29
TSX:FR	First Majestic Silver Corp.	7.05	0.49	7%	11.09	6.12
TSX:FVI	Fortuna Silver Mines Inc.	4.49	0.21	5%	7.78	4.22
TSX:FNV	Franco-Nevada Corporation	97.76	3.65	4%	101.48	76.53
NYSE:GFI	Gold Fields Limited	3.26	0.15	5%	4.54	2.20
TSX:G	Goldcorp Inc.	12.61	(0.01)	(0)%	19.32	11.00
TSX:GSC	Golden Star Resources Ltd.	3.96	(0.03)	(1)%	5.70	3.24
TSXV:GQC	Goldquest Mining Corp.	0.10	-	-	0.46	0.09
TSX:GUY	Guyana Goldfields Inc.	1.53	0.11	8%	5.42	1.24
NYSE:HMY	Harmony Gold Mining Company Limi	1.65	0.03	2%	2.53	1.43
TSX:HRT	Harte Gold Corp.	0.38	0.04	10%	0.55	0.29
NYSE:HL	Hecla Mining Company	2.36	0.02	1%	4.63	2.17
TSX:IMG	IAMGOLD Corporation	4.51	0.25	6%	8.20	3.64
TSX:IVN	Ivanhoe Mines Ltd.	2.48	(0.09)	(4)%	4.54	2.00
TSX:K	Kinross Gold Corporation	3.88	0.11	3%	5.90	3.15
TSX:KL	Kirkland Lake Gold Ltd.	33.39	3.27	11%	33.37	16.54
TSX:LGD	Liberty Gold Corp.	0.33	(0.01)	(3)%	0.50	0.29
TSX:LUG	Lundin Gold Inc.	4.95	0.20	4%	5.52	4.08
TSX:MAG	MAG Silver Corp.	9.28	0.33	4%	15.97	8.10
TSX:MOZ	Marathon Gold Corporation	0.81	0.02	3%	1.28	0.65
NYSE:MUX	McEwen Mining Inc.	1.74	(0.07)	(4)%	2.55	1.68
TSX:MAX	Midas Gold Corp.	0.73	0.10	16%	1.21	0.55
TSX:NGD	New Gold Inc.	1.08	0.03	3%	4.45	0.90
NYSE:NEM	Newmont Mining Corporation	34.04	1.38	4%	42.04	29.06
TSX:NHK	Nighthawk Gold Corp.	0.41	0.03	8%	0.76	0.30
TSX:NG	NovaGold Resources Inc.	5.26	0.22	4%	6.47	4.44
TSX:OGC	OceanaGold Corporation	4.05	0.20	5%	4.19	2.97
TSX:OR	Osisko Gold Royalties Ltd	10.70	0.73	7%	15.17	9.27
TSX:OSK	Osisko Mining Inc.	2.55	0.05	2%	3.77	1.60
TSX:PAAS	Pan American Silver Corp.	18.98	1.10	6%	24.22	16.05
TSX:PG	Premier Gold Mines Limited	1.49	0.08	6%	3.94	1.39
TSX:PVG	Pretium Resources Inc.	9.95	0.35	4%	14.94	7.93
TSXV:PGM	Pure Gold Mining Inc.	0.63	0.04	7%	0.71	0.47
NasdaqGS:GOLD	Randgold Resources Limited	88.52	4.89	6%	104.05	59.90
TSX:RNx	RNC Minerals	0.51	(0.03)	(6)%	1.18	0.07
TSX:ROXG	Roxgold Inc.	0.76	(0.01)	(1)%	1.44	0.76
NasdaqGS:RGLD	Royal Gold, Inc.	79.56	3.26	4%	98.53	70.16
TSX:SBB	Sabina Gold & Silver Corp.	1.22	(0.14)	(10)%	2.62	1.11
TSX:SSL	Sandstorm Gold Ltd.	5.92	0.35	6%	6.95	4.60
NYSE:SA	Seabridge Gold Inc.	11.70	0.12	1%	15.30	10.10
TSX:SMF	SEMAFO Inc.	2.60	0.19	8%	4.14	2.24
NYSE:SBGL	Sibanye Gold Limited	2.84	0.21	8%	5.29	2.02
TSX:SVM	Silvercorp Metals Inc.	2.81	0.22	8%	4.02	2.43
TSX:SSRM	SSR Mining Inc.	15.63	1.23	9%	15.25	9.66
TSX:THO	Tahoe Resources Inc.	4.94	0.18	4%	7.27	2.88
TSX:TMR	TMAC Resources Inc.	6.44	0.14	2%	11.50	3.95
TSX:TXG	Torex Gold Resources Inc	11.93	0.62	5%	14.58	7.29
TSX:TML	Treasury Metals Inc.	0.26	0.02	6%	0.67	0.21
TSX:TLG	Troilus Gold Corp.	0.60	(0.02)	(3)%	2.25	0.40
TSX:WDO	Wesdome Gold Mines Ltd.	3.60	(0.04)	(1)%	4.18	1.71
TSX:WPM	Wheaton Precious Metals Corp.	22.16	0.48	2%	29.93	19.87

Source: Capital IQ and Haywood Securities

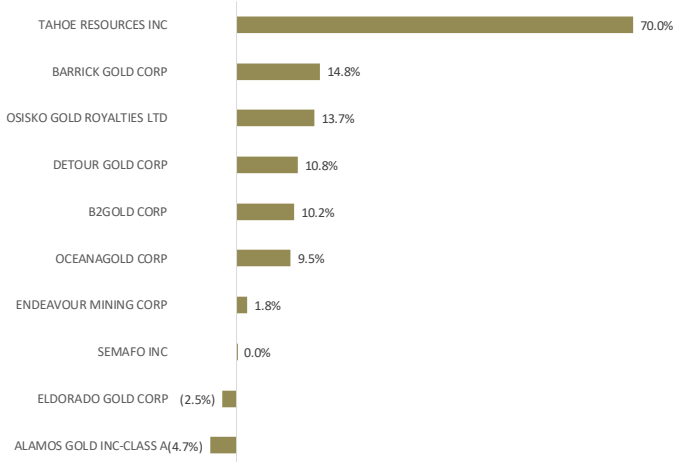


Weekly Performance – Precious Metals Companies (Covered Large Cap)

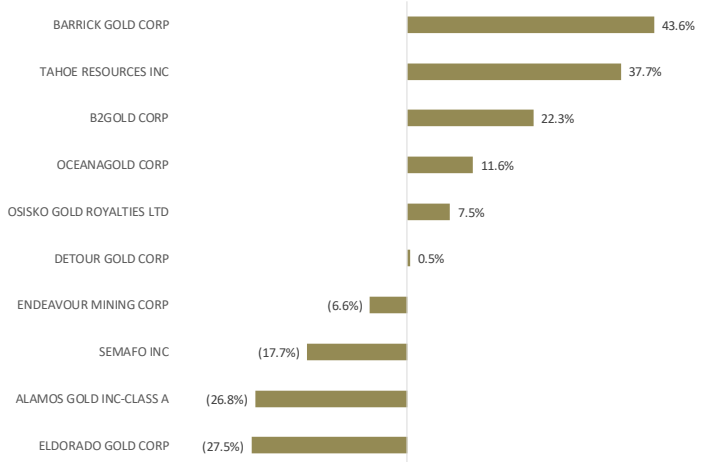
Weekly Price Change



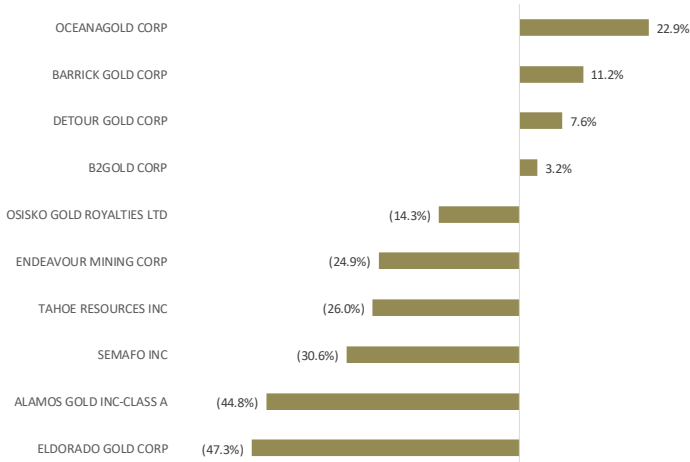
1-Month Price Change



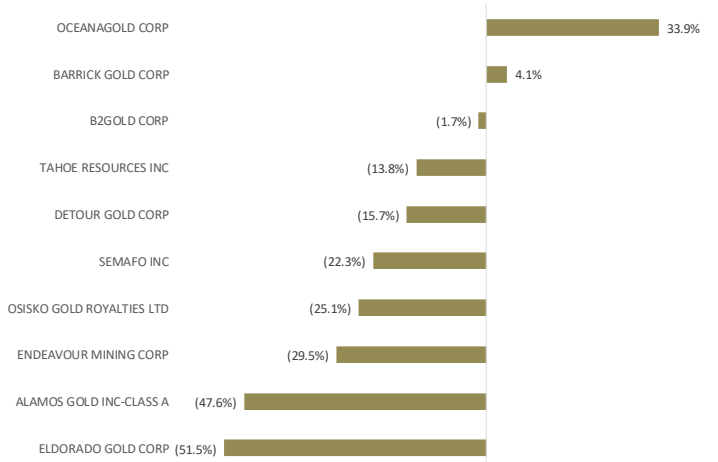
3-Month Price Change



6-Month Price Change



1-Year Price Change

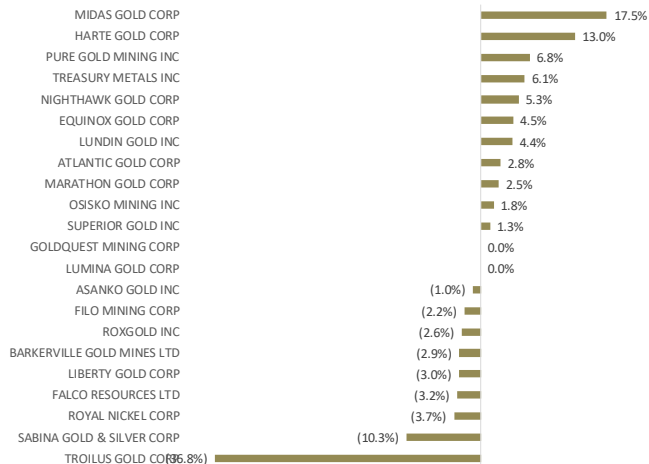


Source: Bloomberg and Haywood Securities

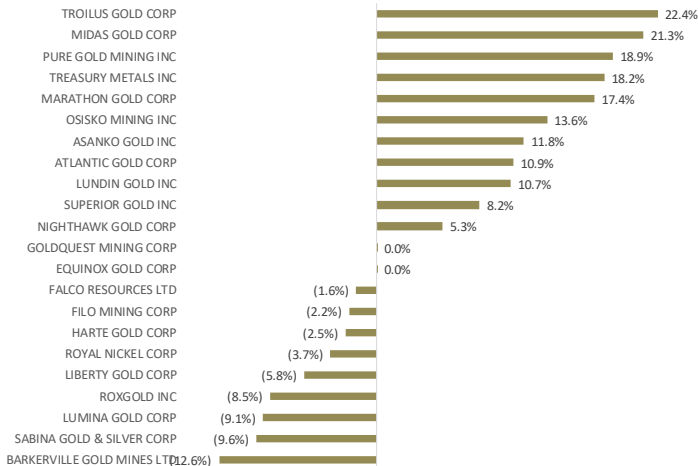


Weekly Performance – Precious Metals Companies (Covered Small Cap)

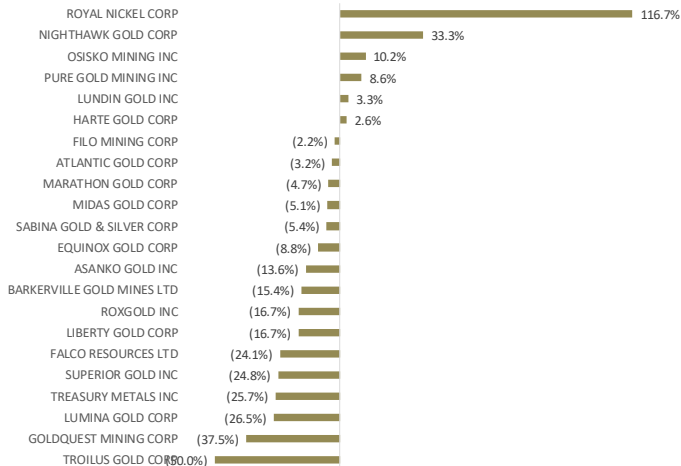
Weekly Price Change



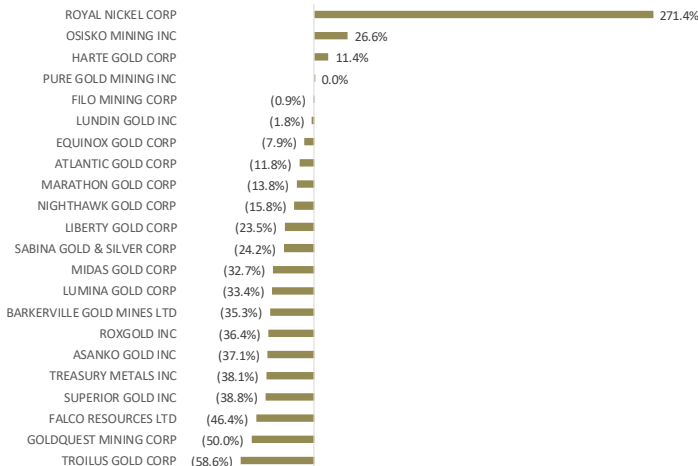
1-Month Price Change



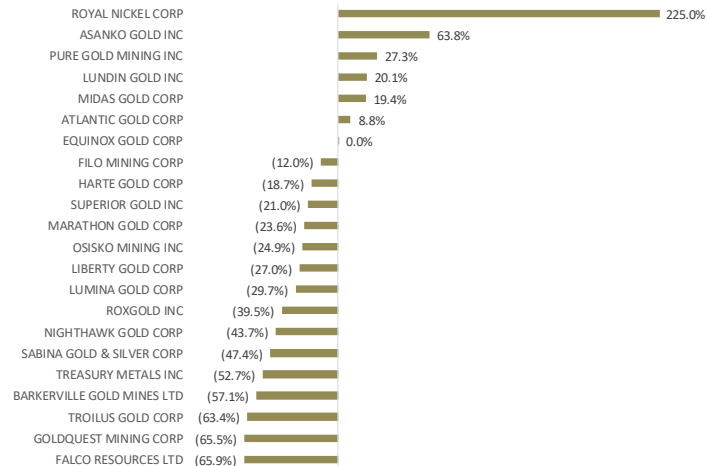
3-Month Price Change



6-Month Price Change



1-Year Price Change

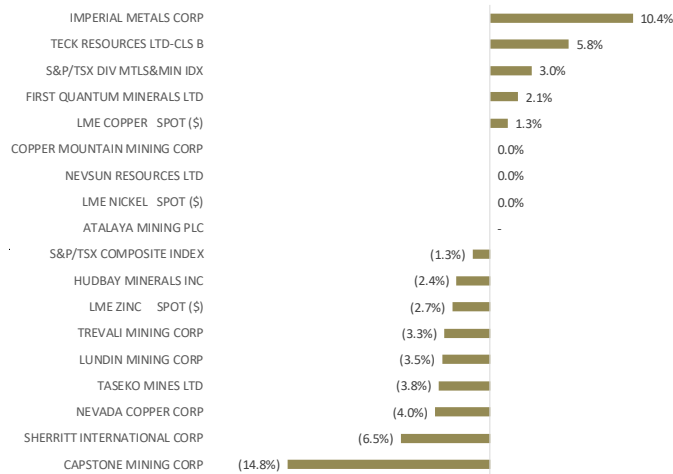


Source: Bloomberg and Haywood Securities

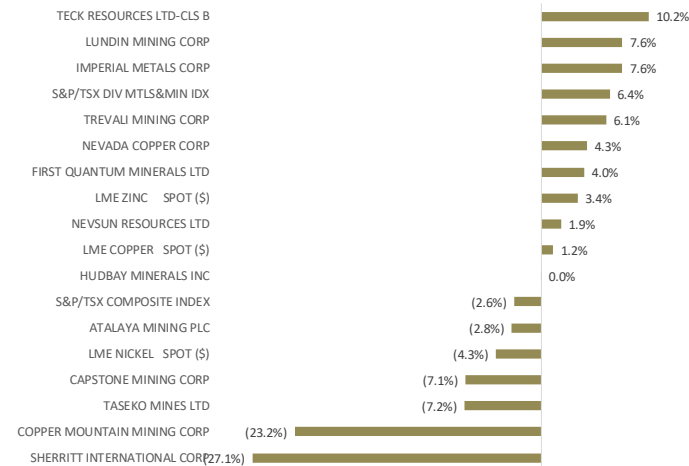


Equity Weekly Performance – Base Metals Companies

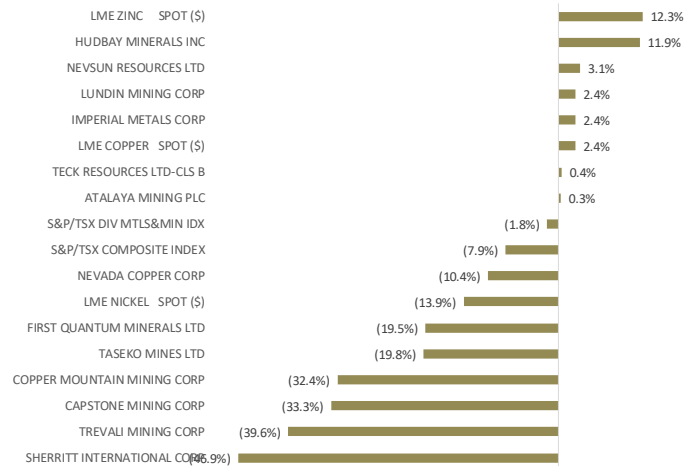
Weekly Price Change



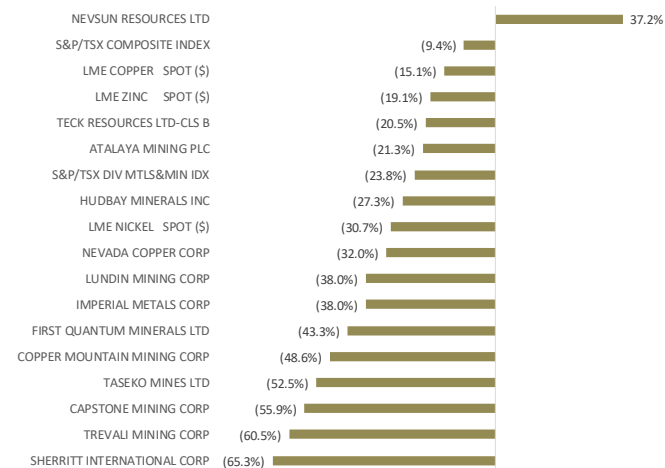
1-Month Price Change



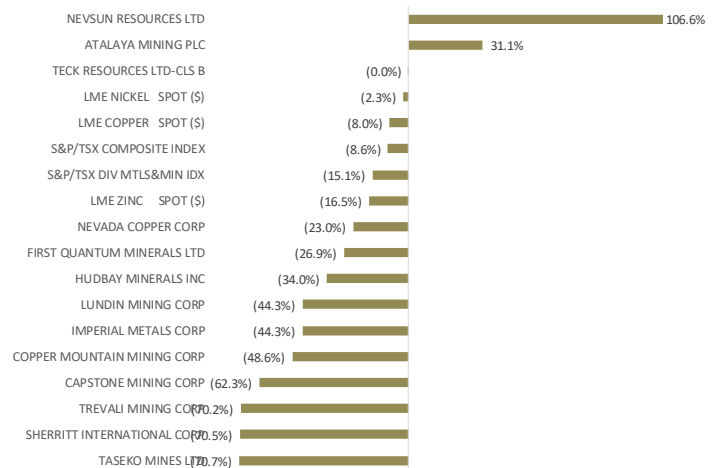
3-Month Price Change



6-Month Price Change



1-Year Price Change

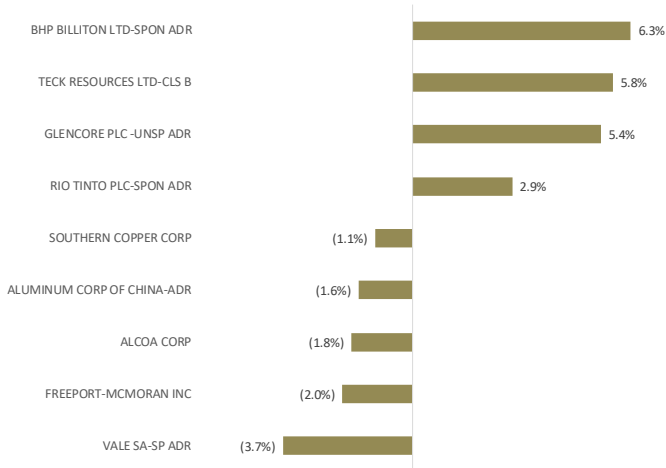


Source: Bloomberg and Haywood Securities

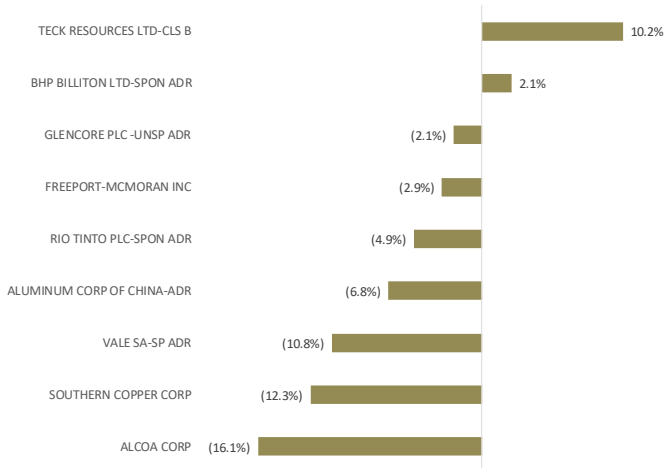


Equity Weekly Performance – Major International Miners

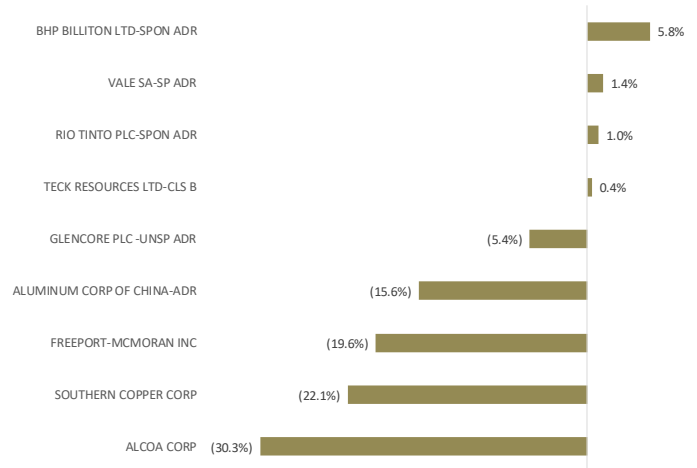
Weekly Price Change



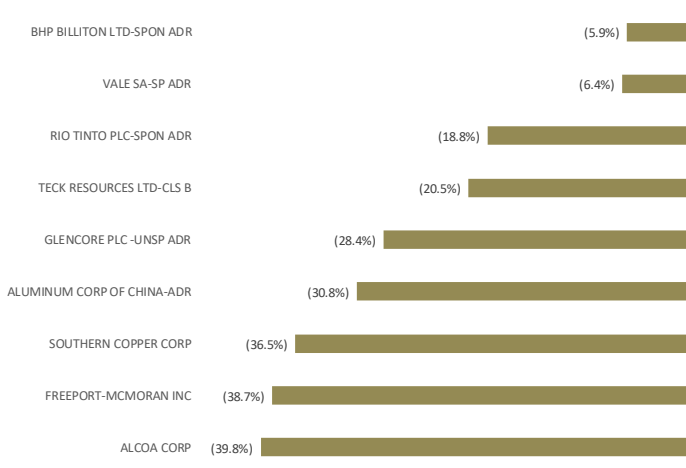
1-Month Price Change



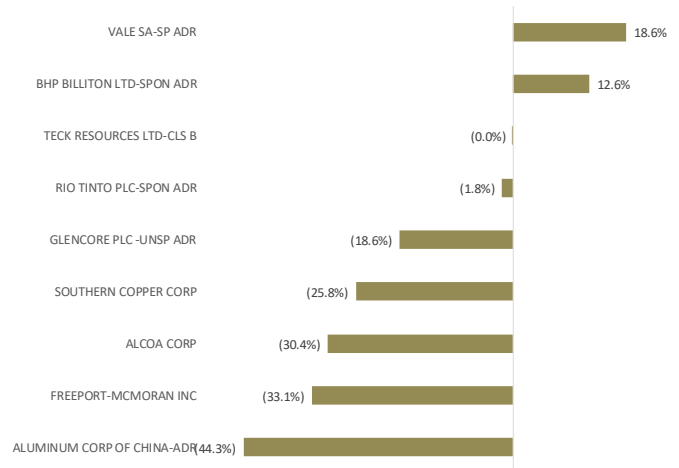
3-Month Price Change



6-Month Price Change



1-Year Price Change



Source: Bloomberg and Haywood Securities



Other Precious Metals Companies – Market and Valuation Statistics (Consensus Estimates)

Company	Symbol	Price	Shares O/S (millions)	Market Capitalization (millions)	Cash (millions)	Working Capital (millions)	Debt (millions)	Enterprise Value (millions)	2018E CFPS	2019E CFPS	Number of Estimates	P/CF Ratio 2018E 2019E	EV/CF Ratio 2018E 2019E	EV/EBITDA Ratio 2018E 2019E	P/NAV 2018E			
PGM Producers																		
Anglo American Platinum Limited	JSE:AMS	C\$ 50.11	262.2	US\$ 9,835	US\$ 675	US\$ 847	US\$ 609	US\$ 9,597	US\$ 2.85	US\$ 3.47	3	13.2x 10.8x	12.8x 10.5x	9.8x 8.8x	1.8x			
Impala Platinum Holdings Limited	JSE:IMP	C\$ 3.54	702.3	US\$ 1,859	US\$ 270	US\$ 655	US\$ 487	US\$ 1,691	US\$ 0.20	US\$ 0.40	3	13.3x 6.7x	12.1x 6.1x	6.2x 4.5x	1.4x			
Lormin Plc	LSE:LMI	C\$ 0.80	282.7	US\$ 168	US\$ 264	US\$ 247	-	(US\$ 79)	US\$ 0.19	US\$ 0.38	1	3.1x 1.6x	- -	- -	0.3x			
Group Average - PGM Producers												9.9x	6.3x	12.5x	8.3x	8.0x	6.7x	1.2x
Silver Producers																		
Americas Silver Corporation	TSX:USA	C\$ 1.87	43.4	US\$ 61	US\$ 3	US\$ 3	US\$ 7	US\$ 64	US\$ 0.33	US\$ 0.29	2	4.2x 4.8x	4.4x 5.0x	10.7x 3.4x	0.3x			
Coeur Mining, Inc.	NYSE:CDE	C\$ 5.42	203.3	US\$ 825	US\$ 105	US\$ 140	US\$ 366	US\$ 1,050	US\$ 0.58	US\$ 0.95	4	7.0x 4.3x	8.9x 5.5x	7.4x 4.6x	0.8x			
Endeavour Silver Corp.	TSX:EDR	C\$ 2.66	130.6	US\$ 260	US\$ 29	US\$ 57	-	US\$ 202	US\$ 0.21	US\$ 0.28	5	9.7x 7.1x	7.5x 5.5x	7.1x 5.2x	0.9x			
First Majestic Silver Corp.	TSX:FR	C\$ 7.05	193.6	US\$ 1,021	US\$ 80	US\$ 128	US\$ 150	US\$ 1,043	US\$ 0.35	US\$ 0.63	3	14.9x 8.3x	15.3x 8.5x	21.2x 7.7x	1.0x			
Fortuna Silver Mines Inc.	TSX:FVI	C\$ 4.49	159.9	US\$ 537	US\$ 177	US\$ 183	US\$ 40	US\$ 394	US\$ 0.49	US\$ 0.68	6	6.8x 5.0x	5.0x 3.6x	3.5x 2.7x	0.9x			
Fresnillo PLC	LSE:FRES	C\$ 14.20	736.9	US\$ 7,830	US\$ 689	US\$ 1,240	US\$ 799	US\$ 7,390	US\$ 1.08	US\$ 1.16	5	9.8x 9.2x	9.3x 8.7x	7.2x 6.6x	0.9x			
Hecla Mining Company	NYSE:HL	C\$ 3.15	480.2	US\$ 1,133	US\$ 61	US\$ 66	US\$ 534	US\$ 1,601	US\$ 0.25	US\$ 0.38	7	9.3x 6.2x	13.2x 8.7x	9.6x 7.8x	1.0x			
Mandaley Resources Corporation	TSX:MND	C\$ 0.07	451.6	US\$ 22	US\$ 27	US\$ 5	US\$ 32	US\$ 49	US\$ 0.05	US\$ 0.07	1	1.0x 0.7x	2.2x 1.6x	- 1.4x	0.1x			
Pan American Silver Corp.	TSX:PAAS	C\$ 18.98	153.3	US\$ 2,178	US\$ 253	US\$ 444	US\$ 21	US\$ 1,755	US\$ 1.25	US\$ 1.70	8	11.4x 8.4x	9.1x 6.7x	7.2x 5.7x	1.0x			
SSR Mining Inc.	TSX:SSRM	C\$ 15.63	120.2	US\$ 1,407	US\$ 481	US\$ 649	US\$ 244	US\$ 1,001	US\$ 0.85	US\$ 1.33	5	13.7x 8.8x	9.7x 6.3x	7.5x 5.9x	1.1x			
Silvercorp Metals Inc.	TSX:SVM	C\$ 2.81	168.7	US\$ 355	US\$ 124	US\$ 99	-	US\$ 256	US\$ 0.46	US\$ 0.45	1	4.6x 4.7x	3.3x 3.4x	3.1x 3.1x	0.6x			
Group Average - Silver Producers												8.4x	6.1x	8.0x	5.8x	8.5x	4.9x	0.8x
Group Average - Silver Producers (excluding high/low)												8.5x	6.4x	7.8x	5.9x	7.1x	5.0x	0.8x
Diamond Producers																		
Lucara Diamond Corp.	TSX:LUC	C\$ 1.62	396.5	US\$ 481	US\$ 31	US\$ 70	-	US\$ 411	US\$ 0.15	US\$ 0.20	6	8.3x 6.1x	7.1x 5.2x	5.5x 3.4x	0.6x			
Mountain Province Diamonds Inc.	TSX:MPVD	C\$ 1.68	210.0	US\$ 264	US\$ 22	US\$ 71	US\$ 303	US\$ 496	US\$ 0.54	US\$ 0.45	3	2.3x 2.8x	4.4x 5.3x	4.1x 3.7x	0.5x			
Petra Diamonds Limited	LSE:PDL	C\$ 0.63	865.3	US\$ 407	US\$ 222	US\$ 148	US\$ 712	US\$ 971	US\$ 0.18	US\$ 0.20	3	2.6x 2.4x	6.2x 5.7x	4.7x 4.2x	0.7x			
Stornoway Diamond Corporation	TSX:SWY	C\$ 0.20	894.2	US\$ 131	US\$ 5	(US\$ 75)	US\$ 181	US\$ 386	(US\$ 0.01)	US\$ 0.05	3	- 2.9x	- 8.5x	12.7x 6.0x	0.4x			
Group Average - Diamond Producers												4.4x	3.6x	5.9x	6.2x	6.8x	4.3x	0.6x
Royalty Companies																		
Anglo Pacific Group plc	LSE:APF	C\$ 2.38	180.1	US\$ 321	US\$ 15	US\$ 22	US\$ 8	US\$ 306	US\$ 0.26	US\$ 0.26	3	6.8x 6.9x	6.4x 6.6x	5.6x 5.4x	0.8x			
Altius Minerals Corporation	TSX:ALS	C\$ 12.76	43.0	US\$ 410	US\$ 36	US\$ 22	US\$ 78	US\$ 466	US\$ 0.65	US\$ 0.72	4	14.6x 13.3x	16.6x 15.1x	11.6x 10.5x	1.1x			
Franco-Nevada Corporation	TSX:FNV	C\$ 97.76	186.4	US\$ 13,636	US\$ 77	US\$ 150	-	US\$ 13,486	US\$ 2.60	US\$ 2.94	16	28.1x 24.9x	27.8x 24.6x	26.0x 23.2x	2.0x			
Maverix Metals Inc.	TSXV:MMX	C\$ 2.47	215.4	US\$ 398	US\$ 15	US\$ 21	US\$ 6	US\$ 383	US\$ 0.09	US\$ 0.10	4	19.8x 18.4x	19.0x 17.7x	19.2x 14.9x	1.4x			
Osisko Gold Royalties Ltd	TSX:OR	C\$ 10.70	156.3	US\$ 1,252	US\$ 114	US\$ 218	US\$ 325	US\$ 1,358	US\$ 0.40	US\$ 0.45	14	20.1x 17.8x	21.9x 19.3x	19.1x 17.0x	1.0x			
Royal Gold, Inc.	US:RGLD	C\$ 106.30	65.5	US\$ 5,212	US\$ 117	US\$ 122	US\$ 355	US\$ 5,445	US\$ 4.37	US\$ 4.47	12	18.2x 17.8x	19.0x 18.6x	15.9x 16.4x	1.7x			
Sandstorm Gold Ltd.	TSX:SSL	C\$ 5.92	182.6	US\$ 809	US\$ 20	US\$ 21	-	US\$ 788	US\$ 0.25	US\$ 0.29	7	17.5x 15.2x	17.0x 14.8x	17.6x 13.6x	1.0x			
Wheaton Precious Metals Corp.	TSX:WPM	C\$ 22.16	444.0	US\$ 7,364	US\$ 119	US\$ 108	US\$ 1,381	US\$ 8,636	US\$ 1.09	US\$ 1.19	15	15.2x 13.9x	17.8x 16.4x	17.1x 15.5x	1.2x			
Group Average - Royalty Companies												17.5x	16.0x	18.2x	16.6x	16.5x	14.6x	1.3x
Group Average - Royalty Companies (excluding high/low)												17.6x	16.1x	18.5x	17.0x	16.8x	14.6x	1.3x

All data sourced from Capital IQ

Source: Capital IQ and Haywood Securities



Senior Gold Producers – Reserves and Resources

Symbol	Market	Working	Enterprise	Reserves & Resources					Reserves					Reserves (M&I and Inferred)					Global					
				Au	Au	AuEq	AuEq	% Au	Au	Au	AuEq	AuEq	% Au	EV/oz	Au	Au	AuEq	AuEq	% Au	% Au	% AuEq	EV/oz	EV/oz	
Agnico Eagle Mines Limited	NYSE:AEM	US \$9,161	US \$896	US \$9,989	62.2	2.02	68.0	2.21	91%	21.3	2.54	22.5	2.68	95%	US \$470	40.9	1.83	45.5	2.03	90%	52%	54%	US \$161	US \$147
Alamos Gold Inc.	TSX:AGI	US \$1,329	US \$301	US \$1,031	22.3	1.28	23.0	1.32	97%	9.8	1.50	10.2	1.56	96%	US \$105	12.4	1.15	12.8	1.18	97%	40%	39%	US \$46	US \$45
AngloGold Ashanti Limited	JSE:ANG	US \$4,958	US \$519	US \$6,443	192.5	1.56	218.2	1.77	88%	45.1	1.20	47.2	1.25	96%	US \$143	147.4	1.81	171.1	2.10	86%	33%	37%	US \$33	US \$30
B2Gold Corp.	TSX:BT O	US \$2,624	US \$132	US \$2,950	24.4	0.86	30.2	1.06	81%	8.2	1.21	8.2	1.21	100%	US \$360	16.2	0.75	22.0	1.01	74%	53%	63%	US \$121	US \$98
Barrick Gold Corporation	TSX:ABX	US \$16,385	US \$2,554	US \$19,543	191.0	0.76	316.0	1.25	60%	77.4	1.11	104.4	1.49	74%	US \$253	113.6	0.62	211.6	1.16	54%	30%	30%	US \$102	US \$62
Centamin plc	LSE:CEY	US \$1,554	US \$337	US \$1,217	11.4	1.12	11.4	1.12	100%	4.0	1.02	4.0	1.02	100%	US \$304	7.4	1.18	7.4	1.18	100%	33%	33%	US \$107	US \$107
Compañía de Minas Buenaventura S.A.A.	NYSE:BVN	US \$3,876	US \$358	US \$4,166	23.7	0.31	81.3	1.06	29%	6.0	0.20	27.0	0.89	22%	US \$692	17.6	0.38	54.2	1.17	32%	23%	16%	US \$175	US \$51
Endeavour Mining Corporation	TSX:EDV	US \$1,461	US \$146	US \$1,859	15.1	1.84	15.1	1.84	100%	7.6	1.77	7.6	1.77	100%	US \$244	7.5	1.91	7.5	1.91	100%	35%	35%	US \$123	US \$123
Evolution Mining Limited	ASX:EVN	US \$4,033	US \$241	US \$4,008	13.8	0.91	16.9	1.11	82%	6.6	0.88	8.5	1.14	77%	US \$611	7.1	1.24	8.2	1.43	87%	36%	32%	US \$291	US \$238
Fresnillo PLC	LSE:FRES	US \$7,830	US \$1,240	US \$7,390	38.0	0.79	79.8	1.66	48%	9.6	0.76	20.3	1.62	47%	US \$774	28.1	0.79	59.1	1.67	48%	33%	48%	US \$194	US \$93
Gold Fields Limited	JSE:GFI	US \$2,642	US \$86	US \$4,447	108.2	2.27	124.2	2.60	87%	48.6	2.66	50.3	2.76	97%	US \$91	59.6	2.02	73.9	2.51	81%	42%	52%	US \$41	US \$36
Goldcorp Inc.	TSX:G	US \$8,376	US (\$190)	US \$11,535	113.3	0.65	195.8	1.13	58%	53.2	0.65	100.7	1.23	53%	US \$217	60.1	0.66	95.0	1.04	63%	37%	39%	US \$102	US \$59
IAMGOLD Corporation	TSX:IMG	US \$1,610	US \$873	US \$1,133	37.3	1.19	38.1	1.22	98%	16.6	1.17	16.6	1.17	100%	US \$68	20.7	1.21	21.4	1.26	97%	50%	51%	US \$30	US \$30
Kinross Gold Corporation	TSX:K	US \$3,602	US \$1,197	US \$4,140	64.0	0.67	65.1	0.68	98%	28.1	0.67	28.7	0.69	98%	US \$147	35.9	0.67	36.4	0.67	99%	20%	20%	US \$65	US \$64
Kirkland Lake Gold Ltd.	TSX:KL	US \$5,133	US \$162	US \$4,998	20.6	4.82	20.6	4.82	100%	4.8	10.93	4.8	10.93	100%	US \$1,041	15.8	4.12	15.8	4.12	100%	44%	44%	US \$242	US \$242
Newcrest Mining Limited	ASX:NCM	US \$11,453	US \$1,021	US \$12,425	123.4	0.58	220.8	1.03	56%	62.3	0.60	116.3	1.13	54%	US \$200	61.1	0.55	104.5	0.94	58%	17%	20%	US \$101	US \$56
Newmont Mining Corporation	NYSE:NEM	US \$18,153	US \$3,884	US \$18,440	111.5	0.80	146.5	1.05	76%	68.8	0.93	75.9	1.02	91%	US \$268	42.6	0.65	70.6	1.08	60%	32%	21%	US \$165	US \$126
Northern Star Resources Limited	ASX:NST	US \$3,764	US \$259	US \$3,518	16.1	2.94	28.8	5.28	56%	4.1	3.62	4.1	3.62	100%	US \$867	12.0	2.83	24.7	5.84	49%	53%	77%	US \$219	US \$122
OceanaGold Corporation	TSX:OGC	US \$1,828	US \$93	US \$1,916	13.0	1.60	14.1	1.73	92%	5.9	1.42	6.6	1.60	89%	US \$325	7.1	1.78	7.5	1.88	95%	43%	43%	US \$147	US \$136
Randgold Resources Limited	LSE:RRS	US \$8,322	US \$906	US \$7,419	24.1	3.37	24.1	3.37	100%	13.9	3.83	13.9	3.83	100%	US \$534	10.2	2.90	10.2	2.90	100%	45%	45%	US \$308	US \$308
Yamana Gold Inc.	TSX:YRI	US \$2,046	US \$7	US \$3,856	55.5	0.49	117.4	1.04	47%	19.3	0.35	55.7	1.02	35%	US \$200	36.2	0.63	61.6	1.07	59%	45%	53%	US \$70	US \$33
Group Average - Total					# Companies: 21					US \$377					US \$135	US \$105								

Equivalency assumptions (US\$/12-13-18): \$1,243/oz Au, \$14.77/oz Ag, \$797/oz Pt, \$1,263/oz Pd, \$2.79/lb Cu, \$1.19/lb Zn, \$0.88/lb Pb, \$4.89/lb Ni, \$11.29/lb Mo, \$24.95/lb Co, \$0/t Sb, \$29.09/lb U3O8, \$8.82/lb Sn, \$93.00/t HCC, \$67.26/t 62% Fe

Source: SNL Financial retrieved on December 13, 2018



Intermediate Gold Producers – Reserves and Resources

Company	Symbol	Market Capitalization (millions)	Working Capital (millions)	Enterprise Value (millions)	Global Reserves & Resources					Reserves					Resources (M&I and Inferred)					Global			
					Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	EV/oz Au	Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	Inferred	EV/oz Au	EV/oz AuEq
Acacia Mining plc	LSE:ACA	US \$1,032	US \$0	US \$1,089	25.7	3.66	27.9	3.98	92%	7.5	3.83	7.9	4.05	94%	US \$146	18.2	3.60	20.0	3.95	91%	63%	US \$42	US \$39
Centerra Gold Inc.	TSX:CG	US \$1,219	US \$635	US \$913	33.5	0.43	63.2	0.81	53%	16.5	0.67	22.5	0.91	73%	US \$55	17.0	0.32	40.7	0.76	42%	40%	US \$27	US \$14
China Gold International Resources Corp. Ltd.	TSX:CGG	US \$516	US \$87	US \$1,557	10.5	0.16	66.4	0.98	16%	4.6	0.27	23.8	1.41	19%	US \$339	6.0	0.12	42.6	0.84	14%	44%	US \$148	US \$23
Detour Gold Corporation	TSX:DGC	US \$1,425	US \$198	US \$1,476	20.8	0.96	20.8	0.96	100%	16.0	0.97	16.0	0.97	100%	US \$92	4.8	0.96	4.8	0.96	100%	23%	US \$71	US \$71
Eldorado Gold Corporation	TSX:ELD	US \$474	US \$500	US \$575	39.6	0.87	54.4	1.20	73%	16.5	1.37	23.5	1.95	70%	US \$35	23.1	0.69	30.9	0.92	75%	51%	US \$15	US \$11
Harmony Gold Mining Company Limited	JSE:HAR	US \$871	US \$41	US \$1,190	95.8	1.21	129.2	1.63	74%	24.5	0.68	37.3	1.04	66%	US \$49	71.3	1.65	91.9	2.13	78%	36%	US \$12	US \$9
Highland Gold Mining Limited	AIM:HGM	US \$639	US \$44	US \$767	17.2	2.99	17.2	2.99	100%	5.1	3.26	5.1	3.26	100%	US \$150	12.1	3.04	12.1	3.04	100%	19%	US \$45	US \$45
McEwen Mining Inc.	NYSE:MUX	US \$590	US \$38	US \$606	13.2	0.11	85.0	0.70	16%	0.8	1.46	0.9	1.69	86%	US \$806	12.5	0.10	84.1	0.70	15%	46%	US \$46	US \$7
Pretium Resources Inc.	TSX:PVG	US \$1,405	US (\$468)	US \$2,014	48.8	0.68	63.8	0.89	77%	8.7	14.63	9.1	15.26	96%	US \$231	40.1	0.56	54.7	0.77	73%	32%	US \$41	US \$32
Regis Resources Limited	ASX:RRL	US \$1,535	US \$135	US \$1,401	8.4	0.90	8.4	0.90	100%	3.8	1.07	3.8	1.07	100%	US \$371	4.6	0.79	4.6	0.79	100%	44%	US \$167	US \$167
Resolute Mining Limited	ASX:RSG	US \$585	US \$152	US \$469	12.6	1.55	12.6	1.55	100%	4.8	1.41	4.8	1.41	100%	US \$98	7.8	1.64	7.8	1.64	100%	41%	US \$37	US \$37
SEMAFO Inc.	TSX:SMF	US \$612	US \$83	US \$628	7.0	2.70	7.0	2.70	100%	2.9	3.37	2.9	3.37	100%	US \$219	4.2	2.37	4.2	2.37	100%	33%	US \$89	US \$89
Tahoe Resources Inc.	TSX:THO	US \$1,147	US \$103	US \$1,146	22.6	0.50	43.3	0.95	52%	3.7	0.56	8.1	1.23	46%	US \$308	18.9	0.49	35.2	0.90	54%	46%	US \$51	US \$26
Torex Gold Resources Inc	TSX:TXG	US \$751	US \$57	US \$964	8.4	2.67	11.6	3.68	72%	3.3	2.74	3.3	2.80	98%	US \$295	5.1	2.63	8.3	4.22	62%	85%	US \$115	US \$83
Group Average - Total					# Companies: 14					US \$228										US \$65	US \$47		

Equivalency assumptions (US\$ / 12-13-18): \$1,243/oz Au, \$14.77/oz Ag, \$797/oz Pt, \$1,263/oz Pd, \$2.79/lb Cu, \$1.19/lb Zn, \$0.88/lb Pb, \$4.89/lb Ni, \$11.29/lb Mo, \$24.95/lb Co, \$0/lb Sb, \$29.09/lb U3O8, \$8.82/lb Sn, \$93.00/t HCC, \$67.26/t 62% Fe

Source: SNL Financial retrieved on December 13, 2018



Junior Gold Producers – Reserves and Resources

Company	Symbol	Market Capitalization (millions)	Working Capital (millions)	Enterprise Value (millions)	Global Reserves & Resources					Reserves					Reserves EV/oz Au	Resources (M&I and Inferred)					Global		
					Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au		Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	% Au Inferred	EV/oz Au	EV/oz AuEq
Alacer Gold Corp.	TSX:ASR	US \$482	US \$103	US \$666	7.3	0.66	13.8	1.25	53%	3.7	2.17	5.0	2.99	72%	US \$182	3.6	0.39	8.7	0.94	41%	54%	US \$92	US \$48
Alio Gold Inc.	TSX:ALO	US \$60	US \$92	US (\$17)	7.4	0.53	7.9	0.57	93%	1.9	0.89	2.0	0.90	99%	-	5.4	0.46	5.9	0.51	91%	25%	-	-
Argonaut Gold Inc.	TSX:AR	US \$176	US \$96	US \$88	12.6	0.57	15.3	0.70	82%	4.5	0.62	5.2	0.72	87%	US \$20	8.1	0.55	10.2	0.69	80%	16%	US \$7	US \$6
Asanko Gold Inc.	TSX:AKG	US \$161	US \$11	US \$149	6.2	1.46	6.2	1.46	100%	4.7	1.57	4.7	1.57	100%	US \$32	1.6	1.22	1.6	1.22	100%	15%	US \$24	US \$24
Azimah Resources Limited	ASX:AZM	US \$14	US \$2	US \$12	0.9	1.55	0.9	1.55	100%	0.3	2.14	0.3	2.14	100%	US \$45	0.6	1.38	0.6	1.38	100%	47%	US \$14	US \$14
Beadell Resources Limited	ASX:BDR	US \$56	US (\$11)	US \$112	3.7	0.43	15.0	1.72	25%	1.5	1.83	1.5	1.83	100%	US \$76	2.3	0.28	13.6	1.71	17%	66%	US \$30	US \$7
Dundee Precious Metals Inc.	TSX:DPM	US \$436	US \$35	US \$439	9.7	0.39	19.3	0.78	50%	2.7	3.35	3.6	4.47	75%	US \$163	7.0	0.29	15.7	0.66	45%	55%	US \$45	US \$23
Fiore Gold Ltd.	TSX:F	US \$24	US \$17	US \$6	3.8	0.93	3.8	0.93	100%	0.3	0.52	0.3	0.52	100%	US \$20	3.5	1.00	3.5	1.00	100%	26%	US \$2	US \$2
Golden Star Resources Ltd.	TSX:GSC	US \$327	US (\$91)	US \$496	10.9	3.21	10.9	3.21	100%	1.5	2.55	1.5	2.55	100%	US \$326	7.6	3.58	7.6	3.58	100%	72%	US \$45	US \$45
Goldgroup Mining Inc.	TSX:GGA	US \$7	US (\$3)	US \$11	0.3	0.96	0.7	2.05	47%	-	-	-	-	-	-	0.3	0.96	0.7	2.05	47%	35%	US \$31	US \$15
Guyana Goldfields Inc.	TSX:GUY	US \$195	US \$116	US \$104	8.4	2.95	8.4	2.95	100%	4.0	2.87	4.0	2.87	100%	US \$26	4.4	3.03	4.4	3.03	100%	47%	US \$12	US \$12
Jaguar Mining Inc.	TSX:JAG	US \$50	US \$2	US \$58	3.3	4.22	3.3	4.22	100%	0.3	3.94	0.3	3.94	100%	US \$181	3.0	4.25	3.0	4.25	100%	52%	US \$18	US \$18
Leagold Mining Corporation	TSX:LMC	US \$307	US \$48	US \$468	25.5	1.04	27.8	1.13	92%	5.6	1.34	5.9	1.40	96%	US \$83	19.9	8.75	21.9	9.65	91%	45%	US \$18	US \$17
Medusa Mining Limited	ASX:MML	US \$47	US \$12	US \$35	1.3	3.83	1.3	3.83	100%	0.3	6.69	0.3	6.69	100%	US \$106	1.0	4.07	1.0	4.07	100%	41%	US \$26	US \$26
Metanor Resources Inc.	TSX:MTO	US \$44	US (\$6)	US \$52	1.7	1.54	1.7	1.54	100%	0.2	7.38	0.2	7.38	100%	US \$258	1.5	1.40	1.5	1.40	100%	79%	US \$30	US \$30
Minera IRL Limited	BVL:MIRL	US \$9	US (\$79)	US \$90	2.5	2.17	2.5	2.17	100%	1.1	1.87	1.1	1.87	100%	US \$83	1.4	2.43	1.4	2.43	100%	76%	US \$36	US \$36
New Gold Inc.	TSX:NGD	US \$472	US \$362	US \$1,050	22.2	0.72	28.7	0.93	77%	14.8	0.79	17.8	0.95	83%	US \$71	7.4	0.62	10.9	0.91	68%	20%	US \$47	US \$37
Orosur Mining Inc.	TSX:OMI	US \$12	US (\$15)	US \$27	0.6	0.65	1.3	1.50	44%	0.1	1.42	0.1	1.42	100%	US \$217	0.5	0.57	1.2	1.51	38%	17%	US \$46	US \$20
Orvana Minerals Corp.	TSX:ORV	US \$14	US (\$6)	US \$29	2.2	3.90	2.9	5.14	76%	0.3	3.50	0.4	4.27	82%	US \$83	1.8	3.99	2.5	5.33	75%	47%	US \$13	US \$10
Perseus Mining Limited	ASX:PRU	US \$280	US \$47	US \$272	12.5	1.14	12.5	1.14	100%	4.7	1.45	4.7	1.45	100%	US \$58	7.8	1.02	7.8	1.02	100%	38%	US \$22	US \$22
Premier Gold Mines Limited	TSX:PG	US \$237	US \$63	US \$175	10.7	1.59	11.0	1.62	98%	3.0	1.22	3.1	1.24	99%	US \$58	7.7	1.80	7.9	1.84	98%	52%	US \$16	US \$16
Roxgold Inc.	TSX:ROXG	US \$216	US \$69	US \$184	1.2	16.71	1.2	16.71	100%	0.7	11.48	0.7	11.48	100%	US \$246	0.5	-	0.5	-	100%	80%	US \$151	US \$151
Shanta Gold Limited	AIM:SHG	US \$44	US \$20	US \$56	2.8	2.46	2.8	2.46	100%	0.5	4.40	0.5	4.40	100%	US \$108	2.3	2.24	2.3	2.24	100%	60%	US \$20	US \$20
TMAC Resources Inc.	TSX:TMR	US \$541	US (\$17)	US \$656	6.6	8.12	6.6	8.12	100%	3.6	7.72	3.6	7.72	100%	US \$182	3.0	8.66	3.0	8.66	100%	57%	US \$99	US \$99
Group Average - Total					# Companies: 24					US \$119					US \$37		US \$30						

Equivalency assumptions (US\$ / 12-13-18): \$1,243/oz Au, \$14.77/oz Ag, \$797/oz Pt, \$1,263/oz Pd, \$2.79/lb Cu, \$1.19/lb Zn, \$0.88/lb Pb, \$4.89/lb Ni, \$11.29/lb Mo, \$24.95/lb Co, \$0/t Sb, \$29.09/lb U3O8, \$8.82/lb Sn, \$93.00/t HCC, \$67.26/t 62% Fe

Source: SNL Financial retrieved on December 13, 2018



Gold Exploration-Stage Companies (Resource Only) – Enterprise Value per Ounce of Gold

Company	Symbol	Market Capitalization (millions)	Working Capital (millions)	Enterprise Value (millions)	Global Reserves & Resources					Reserves					Resources (M&I and Inferred)					Global				
					Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	% Au Inferred	EV/oz Au	EV/oz AuEq		
Alexandria Minerals Corporation	TSXV:AZX	US \$13	US (\$1)	US \$13	1.3	2.34	1.9	3.28	71%	-	-	-	-	-	1.3	2.34	1.9	3.28	71%	44%	US \$10	US \$7		
Rio2 Limited	TSXV:RIO	US \$36	US \$0	US \$35	5.9	0.37	5.9	0.37	100%	3.7	0.40	3.7	0.40	100%	2.1	0.33	2.1	0.33	100%	29%	US \$6	US \$6		
Aurion Resources Ltd.	TSXV:AU	US \$57	US \$10	US \$46	0.8	0.70	0.8	0.70	100%	0.0	5.20	0.0	5.20	100%	0.8	0.70	0.8	0.70	100%	-	US \$56	US \$56		
Auryn Resources Inc.	TSX:AUG	US \$88	US \$3	US \$84	2.3	5.56	2.6	6.30	88%	-	-	-	-	-	2.3	5.56	2.6	6.30	88%	72%	US \$36	US \$32		
Balmoral Resources Ltd	TSX:BAR	US \$15	US \$4	US \$12	1.2	1.20	1.8	1.76	68%	-	-	-	-	-	1.2	1.20	1.8	1.76	68%	36%	US \$10	US \$7		
Calibre Mining Corp.	TSXV:CXB	US \$12	US \$0	US \$12	2.3	1.18	3.0	1.59	74%	-	-	-	-	-	2.3	1.18	3.0	1.59	74%	99%	US \$5	US \$4		
Cardinal Resources Limited	ASX:CDV	US \$107	US \$25	US \$105	7.0	1.13	7.0	1.13	100%	-	-	-	-	-	7.0	1.13	7.0	1.13	100%	7%	US \$15	US \$15		
Condor Gold Plc	AIM:CNR	US \$28	US \$1	US \$26	3.1	3.68	3.1	3.74	98%	0.7	3.04	0.7	3.11	98%	2.4	3.91	2.4	3.97	98%	55%	US \$9	US \$8		
Corvus Gold Inc.	TSX:KOR	US \$228	US \$4	US \$224	2.2	0.30	2.3	0.32	95%	-	-	-	-	-	2.2	0.30	2.3	0.32	95%	19%	US \$103	US \$98		
Eastmain Resources Inc.	TSX:ER	US \$34	US \$4	US \$29	1.7	6.59	1.7	6.65	99%	-	-	-	-	-	1.7	6.59	1.7	6.65	99%	37%	US \$17	US \$17		
Eco Oro Minerals Corp	CNSX:EOM	US \$16	US (\$18)	US \$31	3.5	4.38	3.7	4.59	95%	-	-	-	-	-	3.5	4.38	3.7	4.59	95%	37%	US \$9	US \$8		
GobiMin Inc.	TSXV:GMN	US \$11	US \$19	US (\$7)	2.9	1.50	2.9	1.50	100%	-	-	-	-	-	2.9	1.50	2.9	1.50	100%	63%	-	-		
Gold Standard Ventures Corp	TSX:GSV	US \$319	US \$22	US \$296	3.6	0.80	3.7	0.84	96%	-	-	-	-	-	3.6	0.80	3.7	0.84	96%	73%	US \$82	US \$79		
Mako Mining Corp.	TSXV:MKO	US \$37	US (\$1)	US \$37	0.9	7.81	1.0	7.96	98%	-	-	-	-	-	0.9	7.81	1.0	7.96	98%	84%	US \$39	US \$39		
Granada Gold Mine Inc.	TSXV:GGM	US \$7	US (\$4)	US \$8	5.0	1.23	5.1	1.24	99%	-	-	-	-	-	5.0	1.23	5.1	1.24	99%	69%	US \$2	US \$2		
Integra Resources Corp.	TSXV:ITR	US \$35	US (\$3)	US \$36	2.3	0.46	3.6	0.72	64%	-	-	-	-	-	2.3	0.46	3.6	0.72	64%	100%	US \$16	US \$10		
Kasbah Resources Limited	ASX:KAS	US \$7	US (\$1)	US \$7	0.2	0.55	1.7	4.15	13%	-	-	0.7	4.03	-	0.2	0.93	1.0	4.24	22%	-	US \$30	US \$4		
Liberty Gold Corp.	TSX:LGD	US \$52	US \$1	US \$59	1.6*	0.66	1.6	0.66	100%	-	-	-	-	-	1.6*	0.66	1.6	0.66	100%	24%	US \$38	US \$38		
Lincoln Mining Corporation	TSXV:LMG	US \$1	US (\$1)	US \$2	0.1	1.91	0.1	1.91	100%	-	-	-	-	-	0.1	1.91	0.1	1.91	100%	5%	US \$21	US \$21		
Lion One Metals Limited	TSXV:LIO	US \$35	US \$13	US \$23	0.7	0.09	13.7	1.76	5%	-	-	-	-	-	0.7	0.09	13.7	1.76	5%	60%	US \$31	US \$2		
Marathon Gold Corporation	TSX:M.OZ	US \$92	US \$4	US \$88	3.2	1.99	3.2	1.99	100%	-	-	-	-	-	3.2	1.99	3.2	1.99	100%	34%	US \$27	US \$27		
Monarques Gold Corporation	TSX:MQR	US \$40	US \$4	US \$38	3.8	2.93	3.8	2.93	100%	0.2	6.70	0.2	6.70	100%	3.6	2.89	3.6	2.89	100%	16%	US \$10	US \$10		
New Pacific Metals Corp.	TSXV:NJAG	US \$143	US \$20	US \$123	0.5	6.12	0.6	7.20	85%	-	-	-	-	-	0.5	6.12	0.6	7.20	85%	45%	US \$242	US \$205		
Nighthawk Gold Corp.	TSX:NHK	US \$55	US \$12	US \$43	2.9	1.70	2.9	1.70	100%	-	-	-	-	-	2.9	1.70	2.9	1.70	100%	90%	US \$15	US \$15		
Northern Empire Resources Corp.	TSXV:NM	US \$65	US \$8	US \$57	1.0	1.26	1.0	1.26	100%	-	-	-	-	-	1.0	1.26	1.0	1.26	100%	3%	US \$60	US \$60		
Novo Resources Corp.	TSXV:NVO	US \$252	US \$34	US \$214	0.9	2.83	1.0	3.19	89%	-	-	-	-	-	0.9	2.83	1.0	3.19	89%	52%	US \$237	US \$210		
Orex Minerals Inc.	TSXV:REX	US \$7	US \$2	US \$5	0.1	0.33	0.5	2.84	12%	-	-	-	-	-	0.1	0.33	0.5	2.84	12%	47%	US \$75	US \$9		
Osisko Mining Inc.	TSX:OSK	US \$490	US \$81	US \$414	7.6	2.40	7.6	2.40	100%	-	-	-	-	-	7.6	2.40	7.6	2.40	100%	53%	US \$54	US \$54		
Osprey Gold Development Ltd.	TSXV:OS	US \$2	US \$0	US \$1	0.4	3.56	0.4	3.56	100%	-	-	-	-	-	0.4	3.56	0.4	3.56	100%	92%	US \$3	US \$3		
Puma Exploration Inc.	TSXV:PUMA	US \$7	US (\$0)	US \$7	0.0	0.27	0.7	4.79	6%	-	-	-	-	-	0.0	0.27	0.7	4.79	6%	12%	US \$179	US \$10		
Pure Gold Mining Inc.	TSXV:PGM	US \$121	US \$7	US \$112	2.0	8.57	2.0	8.57	100%	-	-	-	-	-	2.0	8.57	2.0	8.57	100%	15%	US \$55	US \$55		
Red Pine Exploration Inc.	TSXV:RPX	US \$9	US \$2	US \$7	0.7	1.75	0.7	1.75	100%	-	-	-	-	-	0.7	1.75	0.7	1.75	100%	96%	US \$11	US \$11		
Redstar Gold Corp.	TSXV:RGC	US \$6	US \$2	US \$4	0.5	2.94	0.7	3.75	78%	-	-	-	-	-	0.5	2.94	0.7	3.75	78%	7%	US \$7	US \$5		
Regulus Resources Inc.	TSXV:REG	US \$89	US (\$2)	US \$89	5.7	0.37	18.6	1.20	31%	-	-	-	-	-	5.7	0.37	18.6	1.20	31%	89%	US \$16	US \$5		
Reunion Gold Corporation	TSXV:RGD	US \$44	US \$4	US \$39	0.7	2.10	0.7	2.10	100%	-	-	-	-	-	0.7	2.10	0.7	2.10	100%	-	US \$56	US \$56		
Revival Gold Inc.	TSXV:RVG	US \$19	US \$2	US \$17	2.0	0.62	2.0	0.62	100%	-	-	-	-	-	2.0	0.62	2.0	0.62	100%	39%	US \$9	US \$9		
Rupert Resources Ltd.	TSXV:RUP	US \$81	US \$2	US \$83	1.1	2.16	1.1	2.16	100%	-	-	-	-	-	1.1	2.16	1.1	2.16	100%	83%	US \$77	US \$77		
Sarama Resources Ltd	TSXV:SWA	US \$9	US \$1	US \$8	1.1	1.75	1.1	1.75	100%	-	-	-	-	-	1.1	1.75	1.1	1.75	100%	78%	US \$7	US \$7		
SolGold plc	TSX:SOLG	US \$850	US \$36	US \$812	10.7	0.36	32.7	1.09	33%	-	-	-	-	-	10.7	0.36	32.7	1.09	33%	52%	US \$76	US \$25		
Spanish Mountain Gold Ltd.	TSXV:SPA	US \$11	US \$1	US \$10	8.0	0.33	8.2	0.34	98%	-	-	-	-	-	8.0	0.33	8.2	0.34	98%	51%	US \$1	US \$1		
Teras Resources Inc.	TSXV:TRA	US \$8	US \$0	US \$7	1.1	0.48	1.3	0.55	88%	-	-	-	-	-	1.1	0.48	1.3	0.55	88%	10%	US \$7	US \$6		
TriMetals Mining Inc.	TSX:TMI	US \$7	US (\$0)	US \$8	1.9	0.07	15.8	0.61	12%	-	-	-	-	-	1.9	0.07	15.8	0.61	12%	40%	US \$4	US \$1		
Vendetta Mining Corp.	TSXV:VTT	US \$19	US (\$0)	US \$19	-	-	1.7	4.42	-	-	-	-	-	-	-	-	1.0	2.56	-	-	US \$11	US \$11		
West Kirkland Mining Inc.	TSXV:WKM	US \$14	US (\$0)	US \$14	0.8	0.46	0.9	0.54	85%	0.6	0.58	0.7	0.67	86%	0.2	0.30	0.3	0.37	81%	45%	US \$18	US \$15		
Group Average - Total					# Companies: 44																		US \$42	US \$30

Equivalency assumptions (US\$/12-18): \$1,243/oz Au, \$14.77/oz Ag, \$797/oz Pt, \$1,263/oz Pd, \$2.79/lb Cu, \$1.19/lb Zn, \$0.88/lb Pb, \$4.89/lb Ni, \$11.29/lb Mo, \$24.95/lb Co, \$0/t Sb, \$29.09/lb U3O8, \$8.82/lb Sn, \$93.00/t HCC, \$67.26/t 62% Fe
 Source: SNL Financial retrieved on December 13, 2018

*Includes only Liberty's Goldstrike and Kinsley Mountain Projects



Silver – Enterprise Value per Ounce of Silver

Company	Symbol	Market Capitalization (millions)	Working Capital (millions)	Enterprise Value (millions)	Global Reserves & Resources					Reserves					Reserves EV/oz Ag	Resources (M&I and Inferred)					Global		
					Ag (Moz)	Ag (g/t)	AgEq (Moz)	AgEq (g/t)	% Ag	Ag (Moz)	Ag (g/t)	AgEq (Moz)	AgEq (g/t)	% Ag		Ag (Moz)	Ag (g/t)	AgEq (Moz)	AgEq (g/t)	% Ag	% Ag Inferred	EV/oz Ag	EV/oz AgEq
Alexco Resource Corp.	TSX:AXR	US \$89	US \$10	US \$79	86	357	156	649	55%	-	-	-	-	-	-	86	357	156	649	55%	21%	US \$0.92	US \$0.51
Americas Silver Corporation	TSX:USA	US \$61	US \$3	US \$65	136	151	349	387	39%	28	164	77	445	37%	US \$2.29	108	148	273	374	40%	37%	US \$0.48	US \$0.19
Athena Silver Corporation	OTCPK:AHNR	US \$1	US (\$3)	US \$4	43	67	43	67	100%	-	-	-	-	-	-	43	67	43	67	100%	-	US \$0.09	US \$0.09
Aurcana Corporation	TSXV:AUN	US \$19	US \$2	US \$17	18	290	18	290	100%	-	-	-	-	-	-	18	290	18	290	100%	37%	US \$0.94	US \$0.94
Bear Creek Mining Corporation	TSXV:BCM	US \$93	US \$41	US \$52	496	42	1,124	96	44%	288	51	653	115	44%	US \$0.18	208	34	471	77	44%	33%	US \$0.10	US \$0.05
Coeur Mining, Inc.	NYSE:CDE	US \$842	US \$140	US \$1,130	673	26	1,450	56	46%	165	18	413	44	40%	US \$6.87	509	31	1,038	64	49%	21%	US \$1.68	US \$0.78
Defiance Silver Corp.	TSXV:DEF	US \$16	US (\$1)	US \$18	17	182	18	193	94%	-	-	-	-	-	-	17	182	18	193	94%	100%	US \$1.05	US \$0.99
Dolly Varden Silver Corporation	TSXV:DV	US \$18	US \$3	US \$15	43	333	43	333	100%	-	-	-	-	-	-	43	333	43	333	100%	25%	US \$0.36	US \$0.36
Endeavour Silver Corp.	TSX:EDR	US \$276	US \$57	US \$218	156	193	271	335	58%	33	198	60	354	56%	US \$6.51	123	192	211	330	58%	70%	US \$1.40	US \$0.81
First Majestic Silver Corp.	TSX:FR	US \$1,029	US \$128	US \$1,051	401	161	747	300	54%	133	180	227	308	58%	US \$7.93	263	153	508	294	52%	77%	US \$2.62	US \$1.41
Fortuna Silver Mines Inc.	TSX:FVI	US \$523	US \$183	US \$382	90	15	511	87	18%	45	15	270	89	17%	US \$8.52	46	16	241	86	19%	87%	US \$4.22	US \$0.75
Golden Minerals Company	AMEX:AUMN	US \$23	US \$4	US \$19	68	372	98	540	69%	-	-	-	-	-	-	68	372	98	540	69%	8%	US \$0.28	US \$0.19
Hecla Mining Company	NYSE:HL	US \$1,133	US \$66	US \$1,616	751	68	2,599	235	29%	177	221	591	739	30%	US \$9.13	574	56	2,008	195	29%	78%	US \$2.15	US \$0.62
Investigator Resources Limited	ASX:IVR	US \$6	US \$2	US \$4	42	140	49	165	85%	-	-	-	-	-	-	42	140	49	165	85%	45%	US \$0.10	US \$0.09
Kootenay Silver Inc	TSXV:KTN	US \$21	US \$2	US \$19	76	62	124	101	61%	-	-	-	-	-	-	76	62	124	101	61%	19%	US \$0.25	US \$0.15
MacPhersons Resources Limited	ASX:MRP	US \$21	US \$2	US \$19	20	22	88	96	23%	8	178	16	355	50%	US \$2.29	12	14	72	82	17%	29%	US \$0.94	US \$0.22
MAG Silver Corp.	TSX:MAG	US \$579	US \$142	US \$438	170	70	688	282	25%	-	-	-	-	-	-	170	70	688	282	25%	55%	US \$2.57	US \$0.64
Mandalay Resources Corporation	TSX:MND	US \$22	US \$5	US \$51	63	31	313	153	20%	8	19	73	176	11%	US \$6.47	56	39	240	168	23%	19%	US \$0.80	US \$0.16
Minco Silver Corporation	TSX:MSV	US \$20	US \$23	US (\$3)	162	158	268	262	60%	50	189	63	240	78%	-	112	148	205	269	55%	52%	-	-
Mineworx Technologies Ltd.	TSXV:MWX	US \$31	US \$2	US \$29	22	9	398	158	6%	-	-	-	-	-	-	22	9	398	158	6%	-	US \$1.30	US \$0.07
Pan American Silver Corp.	TSX:PAAS	US \$2,163	US \$444	US \$1,749	1,446	91	2,252	141	64%	291	93	505	162	58%	US \$6.01	1,157	90	1,752	137	66%	24%	US \$1.21	US \$0.78
Silver Bear Resources Plc	TSX:SBR	US \$80	US \$16	US \$182	60	704	61	710	99%	22	809	22	809	100%	US \$8.16	38	655	39	664	99%	63%	US \$3.01	US \$2.99
Silver Bull Resources, Inc.	OTCPK:SVBL	US \$23	US \$3	US \$21	27	48	152	267	18%	-	-	-	-	-	-	27	48	152	267	18%	0%	US \$0.76	US \$0.14
SilverCrest Metals Inc.	TSXV:SIL	US \$202	US \$10	US \$192	38	257	72	492	52%	-	-	-	-	-	-	38	257	72	492	52%	90%	US \$5.10	US \$2.66
Silvercorp Metals Inc.	TSX:SVM	US \$338	US \$99	US \$244	213	121	584	333	36%	84	202	179	431	47%	US \$2.90	129	96	405	303	32%	66%	US \$1.15	US \$0.42
Group Average - Total					# Companies: 25										US \$5.60						US \$1.39	US \$0.67	

Equivalency assumptions (US\$ / 12-13-18): \$1,243/oz Au, \$14.77/oz Ag, \$797/oz Pt, \$1,263/oz Pd, \$2.79/lb Cu, \$1.19/lb Zn, \$0.88/lb Pb, \$4.89/lb Ni, \$11.29/lb Mo, \$24.95/lb Co, \$0/t Sb, \$29.09/lb U3O8, \$8.82/lb Sn, \$93.00/t HCC, \$67.26/t 62% Fe

Source: SNL Financial retrieved on December 13, 2018



Comparables Tables – Base Metals

Base Metal Companies – Haywood Estimates

Company	Ticker	Analyst	Last Price (C\$)	Shares O/S	MC (C\$M)	Target (C\$)	Return (%)	Rating	NAVPS (US\$)	CFPS (US\$)	2018E	2019E	Primary Commodity	Production, million pounds	2018E	2019E	Total Cash Costs, US\$/lb	2018E	2019E	Price / NAV	Target / NAV	EV / CFPS	2018E	2019E	Target / CFPS	2018E	2019E
Capstone Mining	CS-T	PV	\$0.51	399	\$204	\$0.85	67%	BUY	\$2.63	0.30	0.28		Copper	184	152	\$1.55	\$1.82	0.1x	0.2x	3.6x	3.82	2.1x	2.25				
Copper Mountain Mining	CMMC-T	PV	\$0.74	188	\$139	\$2.00	170%	BUY	\$3.99	0.31	0.38		Copper	78	86	\$1.93	\$2.14	0.1x	0.4x	6.7x	5.38	4.9x	3.92				
HudBay Minerals	HBM-T	PV	\$6.42	261	\$1,677	\$9.00	40%	BUY	\$10.07	1.69	1.76		Copper	320	278	\$0.81	\$0.52	0.5x	0.7x	4.1x	3.97	4.0x	3.82				
Lundin Mining	LUN-T	PV	\$5.80	733	\$4,254	\$8.00	38%	BUY	\$7.04	0.68	0.78		Copper	376	384	\$1.51	\$1.31	0.6x	0.8x	5.3x	4.65	8.7x	7.67				
Nevada Copper Corp.	NCU-T	PV	\$0.36	659	\$237	\$0.90	150%	BUY	\$1.21	-0.02	-0.01		Copper	-	-	-	-	0.2x	0.6x	-	-	-	-				
Nevsun Resources	NSU-T	PV	\$5.97	303	\$1,806	\$6.00	1%	TENDER	\$5.98	0.15	0.39		Zinc	241	231	\$0.84	\$0.64	0.7x	0.8x	30.6x	11.94	29.6x	11.58				
Trevali Mining	TV-T	PV	\$0.44	831	\$362	\$1.00	130%	BUY	\$0.87	0.14	0.22		Zinc	373	413	\$0.72	\$0.68	0.4x	0.9x	2.9x	1.84	5.5x	3.41				
Group Average																		0.4x	0.6x	8.9x	5.3x	9.1x	5.4x				

C\$/US\$ = 1.36

Source: Haywood Securities

Valuation and Production Data, Based on Haywood Estimates

Market and Balance Sheet Data for Haywood Base Metals Equities Coverage 13-Dec-18

Company	Symbol	Price	Shares O/S (millions)	Market Capitalization (millions)	Cash (millions)	Working Capital (millions)	Debt (millions)	Enterprise Value (millions)	NAV8% per Share (US\$)	NAV10% per Share (US\$)	Price / NAV8%	Price / NAV10%	Debt/Equity	Debt/Market Cap
Base Metals														
CAPSTONE MINING CORP	TSX:CS	C\$ 0.52	399.4	US\$ 156	US\$ 65	US\$ 150	US\$ 232	US\$ 433	US\$ 2.63	US\$ 2.07	0.15x	0.19x	0.3x	1.5x
COPPER MOUNTAIN MINING CORP	TSX:CMMC	C\$ 0.73	188.2	US\$ 103	US\$ 32	(US\$ 19)	US\$ 213	US\$ 342	US\$ 3.99	US\$ 3.34	0.14x	0.16x	1.0x	2.1x
HUDBAY MINERALS INC	TSX:HBM	C\$ 6.40	261.3	US\$ 1,252	US\$ 460	US\$ 454	US\$ 976	US\$ 1,769	US\$ 10.07	US\$ 8.28	0.48x	0.58x	0.5x	0.8x
LUNDIN MINING CORP	TSX:LUN	C\$ 5.79	733.5	US\$ 3,181	US\$ 1,470	US\$ 1,547	US\$ 433	US\$ 2,643	US\$ 6.01	US\$ 5.47	0.72x	0.79x	0.1x	0.1x
NEVADA COPPER CORP	TSX:NCU	C\$ 0.36	659.2	US\$ 178	US\$ 37	US\$ 29	US\$ 100	US\$ 253	US\$ 1.21	US\$ 0.84	0.22x	0.32x	1.4x	0.6x
NEVSUN RESOURCES LTD	TSX:NSU	C\$ 5.97	302.6	US\$ 1,353	US\$ 89	US\$ 135	-	US\$ 1,404	US\$ 5.98	US\$ 5.23	0.75x	0.86x	-	-
TREVALI MINING CORP	TSX:TV	C\$ 0.44	831.2	US\$ 271	US\$ 94	US\$ 175	US\$ 157	US\$ 334	US\$ 0.87	US\$ 0.77	0.37x	0.42x	0.2x	0.6x
Group Average - Base Metals											0.40x	0.47x	0.6x	0.9x
Group Average - Base Metals (excluding high/low)											0.39x	0.46x	0.4x	0.7x

All data sourced from Bloomberg and Haywood Securities

Enterprise Value includes non-controlling interest (CS, CMMC, LUN, NSU)

C\$/US\$ FX Rate: \$1.34

Cash Flow, EBITDA Estimates with Multiples for Haywood Base Metals Equities Coverage 13-Dec-18

Company	Symbol	Price	2017E CFPS	2018E CFPS	2019E CFPS	2017E EBITDA	2018E EBITDA	2019E EBITDA	P/CF Ratio	2018E	2019E	EV/CF Ratio	2018E	2019E	EV/EBITDA Ratio	2018E	2019E
Base Metals																	
CAPSTONE MINING CORP	TSX:CS	C\$ 0.52	US\$ 0.34	US\$ 0.30	US\$ 0.28	US\$ 156	US\$ 140	US\$ 132	1.7x	1.8x	3.6x	3.8x	3.1x	3.3x			
COPPER MOUNTAIN MINING CORP	TSX:CMMC	C\$ 0.73	US\$ 0.59	US\$ 0.31	US\$ 0.38	US\$ 0	US\$ 63	US\$ 76	2.4x	1.9x	5.9x	4.8x	5.5x	4.5x			
HUDBAY MINERALS INC	TSX:HBM	C\$ 6.40	US\$ 2.18	US\$ 1.69	US\$ 1.76	US\$ 592	US\$ 572	US\$ 586	3.8x	3.6x	4.0x	3.8x	3.1x	3.0x			
LUNDIN MINING CORP	TSX:LUN	C\$ 5.79	US\$ 1.16	US\$ 0.68	US\$ 0.81	US\$ 1,160	US\$ 693	US\$ 728	8.5x	7.2x	5.3x	4.5x	3.8x	3.6x			
NEVADA COPPER CORP	TSX:NCU	C\$ 0.36	(US\$ 0.05)	(US\$ 0.02)	(US\$ 0.01)	(US\$ 4)	(US\$ 8)	(US\$ 4)	-	-	-	-	-	-			
NEVSUN RESOURCES LTD	TSX:NSU	C\$ 5.97	US\$ 0.06	US\$ 0.15	US\$ 0.39	US\$ 13	US\$ 44	US\$ 134	39.4x	15.4x	30.6x	12.0x	31.6x	10.5x			
TREVALI MINING CORP	TSX:TV	C\$ 0.44	US\$ 0.18	US\$ 0.14	US\$ 0.22	US\$ 119	US\$ 131	US\$ 228	3.2x	2.0x	2.9x	2.0x	2.6x	1.5x			
Group Average - Base Metals									9.8x	5.3x	8.7x	5.1x	8.3x	4.4x			
Group Average - Base Metals (excluding high/low)									3.9x	3.3x	4.3x	3.7x	3.6x	3.2x			

All data sourced from Bloomberg and Haywood Securities

Enterprise Value includes non-controlling interest (CS, CMMC, LUN, NSU)

C\$/US\$ FX Rate: \$1.34

Source: Bloomberg and Haywood Securities



Production Estimates for Haywood Base Metals Equities Coverage

13-Dec-18

Company	Revenue US\$M	Copper Mlb	2018 Haywood Estimates				2019 Haywood Estimates					
			Zinc Mlb	Nickel Mlb	Gold koz	Silver koz	Revenue US\$M	Copper Mlb	Zinc Mlb	Nickel Mlb	Gold koz	Silver koz
Base Metals												
CAPSTONE MINING CORP	US\$ 434	148	9	-	0.5	1,486	US\$ 430	145	11	-	-	1,345
COPPER MOUNTAIN MINING CORP	US\$ 237	78	-	-	26.9	283	US\$ 280	86	-	-	30.9	334
HUDBAY MINERALS INC	US\$ 1,387	320	263	-	134.4	3,844	US\$ 1,338	278	273	-	142.6	3,313
LUNDIN MINING CORP	US\$ 1,739	364	329	33	67.8	4,133	US\$ 1,986	380	336	27	81.1	4,044
NEVSUN RESOURCES LTD	US\$ 319	32	241	-	8.6	457	US\$ 334	17	231	-	9.9	513
TREVALI MINING CORP	US\$ 542	-	373	-	0.3	1,403	US\$ 601	-	413	-	1.4	1,474

All data sourced from Bloomberg and Haywood Securities

CS/US\$ FX Rate: \$1.34

Ratio Estimates for Haywood Base Metals Equities Coverage

13-Dec-18

Company	P/E Ratio		P/CF Ratio		EV/CF Ratio		EV/EBITDA Ratio		Price / NAV8%	Price / NAV10%	Debt/ Equity	Debt/ Market Cap
	2018E	2019E	2018E	2019E	2018E	2019E	2018E	2019E				
Base Metals												
CAPSTONE MINING CORP	3.7x	4.3x	1.7x	1.8x	3.6x	3.8x	3.1x	3.3x	0.15x	0.19x	0.3x	1.5x
COPPER MOUNTAIN MINING CORP	-	-	2.4x	1.9x	5.9x	4.8x	5.5x	4.5x	0.14x	0.16x	1.0x	2.1x
HUDBAY MINERALS INC	9.6x	37.6x	3.8x	3.6x	4.0x	3.8x	3.1x	3.0x	0.48x	0.58x	0.5x	0.8x
LUNDIN MINING CORP	8.4x	18.1x	8.5x	7.2x	5.3x	4.5x	3.8x	3.6x	0.72x	0.79x	0.1x	0.1x
NEVSUN RESOURCES LTD	-	-	39.4x	15.4x	30.6x	12.0x	31.6x	10.5x	0.75x	0.86x	-	-
TREVALI MINING CORP	11.0x	22.0x	3.2x	2.0x	2.9x	1.8x	2.6x	1.5x	0.37x	0.42x	0.2x	0.6x
Group Average - Base Metals	8.2x	20.5x	9.8x	5.3x	8.7x	5.1x	8.3x	4.4x	0.40x	0.47x	0.4x	1.0x
Group Average - Base Metals (excluding high/low)	5.4x	11.1x	4.4x	3.7x	4.7x	4.2x	3.9x	3.6x	0.39x	0.46x	0.3x	0.7x

All data sourced from Bloomberg and Haywood Securities

CS/US\$ FX Rate: \$1.34

Enterprise Value includes non-controlling interest (CS, CMMC, LUN, NSU)

Source: Bloomberg and Haywood Securities



Base Metal Companies – Market and Valuation Statistics (Consensus Estimates)

As of December 13, 2018																					
Company	Symbol	Price	1-Day %	7-Day %	YTD (%)	Shares O/S (millions)	Market Capitalization (US\$ millions)	Cash (US\$ millions)	Working Capital (US\$ millions)	Debt (US\$ millions)	Enterprise Value (US\$ millions)	2017 CFPS	2018E CFPS	2019E CFPS	P/CF Ratio		EV/CF Ratio		EV/EBITDA Ratio		P / NAV
															2018E	2019E	2018E	2019E	2018E	2019E	
Large-Cap Base Metals Producers																					
ANGLO AMERICAN PLC	LSE:AAL	GBP 1712	1.9	10.0	10.5	1293	\$27,949	\$7,800	\$7,382	\$11,971	\$37,024	\$6.02	\$5.03	\$5.39	4.3x	4.0x	5.7x	5.3x	4.2x	4.3x	1.1x
ANTOFAGASTA PLC	LSE:ANTO	GBP 794.6	0.7	4.6	(20.9)	986	\$9,894	\$1,084	\$2,068	\$2,709	\$12,646	\$2.23	\$1.47	\$1.73	6.8x	5.8x	8.7x	7.4x	5.7x	4.9x	1.1x
BHP BILLITON LIMITED	ASX:BHP	AUD 32.81	1.9	4.5	11.0	3212	\$119,848	\$15,871	\$21,141	\$26,805	\$135,761	\$3.47	\$3.36	\$3.49	7.1x	6.8x	12.6x	12.1x	5.6x	6.0x	-
FIRST QUANTUM MINERALS LTD	TSX:FM	CAD 12.35	(1.0)	2.1	(29.9)	689	\$6,378	\$1,296	\$1,121	\$6,871	\$13,693	\$1.34	\$2.53	\$2.57	3.7x	3.6x	7.8x	7.7x	8.0x	6.1x	-
FREEPORT-MCMORAN INC	NYSE:FCX	USD 10.925	(1.3)	(2.0)	(42.4)	1449	\$15,838	\$4,447	\$5,741	\$13,117	\$25,886	\$3.24	\$3.18	\$2.12	3.4x	5.2x	5.6x	8.4x	3.8x	6.0x	-
GLENCORE PLC	LSE:GLEN	GBP 295.15	1.2	9.0	(20.9)	14036	\$52,324	\$2,124	\$5,312	\$33,934	\$83,672	\$0.41	\$0.88	\$0.91	4.2x	4.1x	6.8x	6.6x	4.9x	4.8x	-
KGHM POLSKA MIEDZ SA	WSE:KGH	PLN 90.4	1.6	1.2	(18.7)	200	\$4,779	\$169	\$618	\$2,060	\$6,749	\$3.85	\$4.65	\$6.29	5.2x	3.8x	7.3x	5.4x	5.1x	4.6x	0.9x
RIO TINTO PLC	LSE:RIO	GBP 3734.5	0.7	6.3	(5.3)	1280	\$82,884	\$10,550	\$7,823	\$15,176	\$94,974	\$7.77	\$7.20	\$7.60	6.6x	6.2x	10.3x	9.8x	5.3x	5.7x	-
TECK RESOURCES LTD-CLS B	TSX:TCK.B	CAD 30.26	1.8	5.8	(7.9)	567	\$13,030	\$760	\$1,706	\$5,084	\$16,027	\$6.15	\$5.77	\$5.84	3.9x	3.9x	4.9x	4.8x	3.6x	4.0x	-
TURQUOISE HILL RESOURCES LTD	TSX:TRQ	CAD 2.21	(0.9)	(6.4)	(48.5)	2012	\$3,331	\$1,445	\$2,662	\$4,159	\$5,081	\$0.06	\$0.09	\$0.10	18.6x	16.2x	28.4x	24.8x	14.7x	12.1x	-
VALE SA-SP ADR	NYSE:VALE	USD 13.02	0.0	(3.8)	6.5	5284	\$68,804	\$4,323	\$5,840	\$22,460	\$80,321	-	\$2.25	\$2.24	5.8x	5.9x	6.8x	6.8x	4.9x	4.9x	1.6x
BOLIDEN AB	SSE:BOLE	SEK 203.55	(0.3)	7.4	(26.1)	274	\$6,143	\$307	\$728	\$653	\$6,468	\$5.46	\$4.59	\$4.46	4.9x	5.1x	5.2x	5.3x	4.2x	4.5x	1.4x
SOUTHERN COPPER CORP	NYSE:SCCO	USD 32.04	0.2	(1.1)	(32.5)	773	\$24,768	\$1,005	\$2,002	\$5,957	\$29,568	\$2.56	\$2.99	\$3.23	10.7x	9.9x	12.8x	11.8x	8.2x	7.6x	-
Group Average - Large-Cap Producers															6.3x	6.0x	9.5x	9.0x	6.0x	5.8x	1.2x
Group Average - Large-Cap Producers (excluding high/low)															5.3x	5.1x	7.9x	7.7x	5.3x	5.3x	1.1x
Mid Tier Base Metals Producers																					
HUDBAY MINERALS INC	TSX:HBM	CAD 6.4	(1.7)	(2.4)	(42.5)	261	\$1,253	\$356	\$251	\$1,064	\$1,848	\$2.00	\$1.66	\$1.59	2.9x	3.0x	4.3x	4.5x	3.1x	3.5x	-
IVANHOE MINES LTD-CL A	TSX:IVN	CAD 2.475	(1.4)	(3.7)	(41.6)	1011	\$1,874	\$181	\$179	\$32	\$1,175	(\$0.05)	(\$0.03)	\$0.00	-	1853.9x	-	1163.1x	-	-	-
KAZ MINERALS PLC	LSE:KAZ	GBP 547.6	(2.6)	2.9	(38.8)	448	\$3,100	\$1,821	\$1,400	\$3,877	\$5,162	\$1.72	\$1.37	\$1.59	5.1x	4.3x	8.4x	7.2x	4.3x	4.4x	-
LUNDIN MINING CORP	TSX:LUN	CAD 5.79	1.4	(3.5)	(30.7)	733	\$3,181	\$1,567	\$1,708	\$450	\$2,593	\$1.15	\$0.69	\$0.82	6.3x	5.3x	5.1x	4.3x	3.9x	3.5x	-
MMG LTD	SEHK:1208	HKD 3.63	6.8	0.6	(6.4)	8051	\$3,741	\$936	\$194	\$9,193	\$13,040	\$0.25	\$0.20	\$0.23	2.3x	2.0x	8.2x	7.0x	7.2x	6.2x	1.7x
OZ MINERALS LTD	ASX:OZL	AUD 8.89	1.8	2.8	(2.9)	323	\$2,075	\$570	\$720	\$0	\$1,739	\$0.88	\$0.74	\$0.84	8.7x	7.7x	7.3x	6.4x	4.9x	5.2x	1.0x
Group Average - Mid Tier Producers															5.1x	312.7x	-	198.8x	4.7x	4.5x	1.4x
Group Average - Mid Tier Producers (excluding high/low)															4.7x	5.1x	6.2x	6.3x	4.3x	4.4x	-
Small Cap Base Metals Producers																					
AMERIGO RESOURCES LTD	TSX:ARG	CAD 0.85	(5.6)	(7.6)	(22.7)	177	\$113	\$28	(\$5)	\$63	\$161	\$0.19	\$0.13	\$0.26	4.9x	2.4x	7.0x	3.5x	-	-	-
ATALAYA MINING PLC	TSX:AYM	CAD 3.5	(3.6)	(2.8)	38.9	137	\$360	\$52	\$27	\$0	\$312	-	\$0.14	\$0.19	18.6x	14.0x	16.1x	12.1x	5.0x	4.2x	-
CAPSTONE MINING CORP	TSX:CS	CAD 0.52	(1.9)	(14.8)	(63.9)	399	\$156	\$116	\$189	\$271	\$444	\$0.26	\$0.28	\$0.29	1.4x	1.4x	4.0x	3.9x	3.3x	3.2x	-
COPPER MOUNTAIN MINING CORP	TSX:CMC	CAD 0.73	(5.2)	0.0	(52.3)	188	\$103	\$36	\$6	\$245	\$345	\$0.26	\$0.27	\$0.32	2.1x	1.7x	6.9x	5.7x	6.9x	4.3x	-
IMPERIAL METALS CORP	TSX:III	CAD 1.27	15.5	10.4	(62.4)	121	\$115	\$41	(\$190)	\$713	\$811	\$0.21	(\$0.10)	\$0.24	-	3.9x	-	27.6x	18.8x	8.1x	-
WESTERN AREAS LTD	AU:WSA	AUD 2.03	4.4	(1.0)	(37.3)	273	\$401	\$112	\$119	\$1	\$290	\$0.22	\$0.21	\$0.28	7.1x	5.3x	5.0x	3.8x	4.8x	3.7x	1.1x
SHERRITT INTERNATIONAL CORP	TSX:S	CAD 0.43	(2.3)	(6.5)	(75.0)	397	\$128	\$148	\$268	\$658	\$506	(\$0.04)	(\$0.03)	\$0.05	-	6.9x	-	27.1x	4.0x	3.3x	-
NEVSUN RESOURCES LTD	TSX:NSU	CAD 5.97	0.0	(0.0)	95.1	303	\$1,353	\$125	\$162	\$0	\$1,404	(\$0.07)	\$0.20	\$0.33	22.7x	13.5x	23.6x	14.0x	17.6x	11.6x	-
TASEKO MINES LTD	TSX:TKO	CAD 0.77	0.0	(3.8)	(73.8)	228	\$132	\$64	\$67	\$263	\$360	\$0.57	\$0.28	\$0.37	2.1x	1.5x	5.7x	4.2x	5.1x	3.8x	-
TREVALI MINING CORP	TSX:TV	CAD 0.435	(1.1)	(3.3)	(71.4)	831	\$271	\$94	\$144	\$161	\$338	\$0.21	\$0.16	\$0.21	2.1x	1.5x	2.6x	1.9x	1.9x	1.5x	-
Group Average - Small Cap Producers															7.6x	5.2x	-	10.4x	7.5x	4.9x	1.1x
Group Average - Small Cap Producers (excluding high/low)															6.1x	4.6x	-	9.3x	6.7x	4.4x	-

CS/US\$ FX Rate: \$1.34



Copper Non-Producers – Enterprise Value per Pound of Copper Equivalent

Company	Symbol	Price	Shares	Market	Working	LTD	Enterprise	Primary /	Copper	Reserves & Resources* - Attributable		EV/lb CuEq** (US\$)	
			O/S (million)	Capitalization (million)	Capital (million)	Value (million)	Value (million)	Secondary Metal	Ratio*** (% Contained)	Reserve (CuEq** Mlb)	R&R (Total) (CuEq** Mlb)	Reserve	Total
Abacus Mining & Exploration Corporation	TSXV:AME	C\$ 0.08	48.2	US\$ 3	US\$ (0.1)	US\$ 11.9	US\$ 15	Cu / Au	70%	763	953	\$0.020	\$0.016
Candente Copper Corp.	TSX:DNT	C\$ 0.06	180.6	US\$ 7	US\$ (1.0)	US\$ 0.0	US\$ 8	Cu / Au	89%	-	12,547	-	\$0.001
Copper Fox Metals Inc.	TSXV:CUU	C\$ 0.09	449.0	US\$ 30	US\$ 1.2	US\$ 0.0	US\$ 29	Cu / Au	70%	2,307	5,478	\$0.013	\$0.005
Coro Mining Corp.	TSX:COP	C\$ 0.05	1455.4	US\$ 54	US\$ 4.9	US\$ 0.8	US\$ 50	Cu / -	100%	-	590	-	\$0.085
Excelsior Mining Corp.	TSX:MIN	C\$ 0.90	234.6	US\$ 158	US\$ 18.2	US\$ 0.0	US\$ 140	Cu / -	100%	5,128	8,016	\$0.027	\$0.017
Filo Mining Corp.	TSXV:FIL	C\$ 2.20	72.6	US\$ 119	US\$ 3.8	US\$ 0.0	US\$ 116	Cu / Au	53%	-	7,913	-	\$0.015
Foran Mining Corporation	TSXV:FOM	C\$ 0.31	128.0	US\$ 30	US\$ 3.8	US\$ 0.0	US\$ 26	Cu / Zn	44%	-	1,842	-	\$0.014
Getty Copper Inc.	TSXV:GTC	C\$ 0.02	108.4	US\$ 2	US\$ (0.6)	US\$ 0.8	US\$ 3	Cu / Mo	98%	776	1,216	\$0.004	\$0.003
Highland Copper Company Inc.	TSXV:HI	C\$ 0.08	472.9	US\$ 28	US\$ (3.0)	US\$ 6.7	US\$ 38	Cu / Ag	99%	1,680	4,490	\$0.023	\$0.008
Indico Resources Ltd.	TSXV:IDI	C\$ 0.01	147.0	US\$ 1	US\$ (4.2)	US\$ 0.0	US\$ 5	Cu / -	100%	-	122	-	\$0.039
Los Andes Copper Ltd.	TSXV:LA	C\$ 0.20	271.7	US\$ 41	US\$ 5.5	US\$ 0.0	US\$ 35	Cu / Mo	93%	-	11,818	-	\$0.003
Nevada Copper Corp.	TSX:NCU	C\$ 0.36	661.9	US\$ 178	US\$ 133.8	US\$ 86.6	US\$ 131	Cu / Au	91%	5,529	7,742	\$0.024	\$0.017
NGEx Resources Inc.	TSX:NGQ	C\$ 1.00	227.7	US\$ 170	US\$ 2.2	US\$ 0.0	US\$ 168	Cu / Au	76%	-	26,471	-	\$0.006
Northern Dynasty Minerals Ltd.	TSX:NDM	C\$ 0.81	312.7	US\$ 190	US\$ 10.4	US\$ 0.0	US\$ 179	Cu / Au	57%	-	142,498	-	\$0.001
Northsle Copper and Gold Inc.	TSXV:NCX	C\$ 0.09	117.2	US\$ 7	US\$ 0.2	US\$ 0.0	US\$ 7	Cu / Au	53%	-	4,633	-	\$0.002
Osisko Metals Incorporated	TSXV:OM	C\$ 0.55	136.3	US\$ 56	US\$ 12.8	US\$ 0.0	US\$ 43	Zn / Pb	3%	-	146	-	\$0.297
Panoro Minerals Ltd.	TSXV:PML	C\$ 0.24	263.8	US\$ 47	US\$ (3.2)	US\$ 2.0	US\$ 53	Cu / Au	77%	-	10,306	-	\$0.005
Philippine Metals Inc.	TSXV:PHI	C\$ 0.05	16.4	US\$ 1	US\$ 0.0	US\$ 0.0	US\$ 1	Cu / -	100%	-	331	-	\$0.002
PolyMet Mining Corp.	TSX:POM	C\$ 1.12	320.7	US\$ 269	US\$ (185.3)	US\$ 0.0	US\$ 454	Cu / Ni	46%	3,415	10,789	\$0.133	\$0.042
Quaterra Resources Inc.	TSXV:QTA	C\$ 0.07	201.0	US\$ 11	US\$ (0.2)	US\$ 0.7	US\$ 11	Cu / -	100%	-	3,894	-	\$0.003
Regulus Resources Inc.	TSXV:REG	C\$ 1.35	88.5	US\$ 89	US\$ (2.4)	US\$ 0.0	US\$ 92	Cu / Au	51%	-	8,308	-	\$0.011
Serengeti Resources Inc.	TSXV:SIR	C\$ 0.17	92.5	US\$ 12	US\$ 0.5	US\$ 0.0	US\$ 11	Cu / Au	63%	-	1,311	-	\$0.009
St. Augustine Gold and Copper Limited	TSX:SAU	C\$ 0.02	726.8	US\$ 11	US\$ (4.4)	US\$ 0.0	US\$ 15	Cu / Au	56%	4,437	6,842	\$0.003	\$0.002
Trilogy Metals Inc.	AMEX:TMQ	C\$ 2.69	131.6	US\$ 264	US\$ 6.4	US\$ 0.0	US\$ 258	Cu / Zn	77%	-	5,776	-	\$0.045
Western Copper and Gold Corporation	TSX:WRN	C\$ 0.63	100.8	US\$ 48	US\$ 3.9	US\$ 0.0	US\$ 44	Cu / Au	57%	8,232	17,606	\$0.005	\$0.002
Group Average - Total												\$0.028	\$0.026

*All reserve and resource data sourced from SNL, additional data sourced from Capital IQ.

**CuEq = copper equivalent. Calculated based on Haywood's formal long-term metal price forecasts.

***Copper Ratio = value of in situ copper / total value of in situ metals.



Nickel Non-Producers – Enterprise Value per Pound of Nickel Equivalent

Company	Symbol	Price	Shares O/S (million)	Market Capitalization (million)	Working Capital (million)	LTD Value (million)	Enterprise Value (million)	Primary / Secondary Metal	Nickel Ratio*** (% Contained)	Reserves & Resources* - Attributable		EV/lb NiEq** (US\$)	
										Reserve (NiEq** Mlb)	R&R (Total) (NiEq** Mlb)	Reserve	Total
Asian Mineral Resources Limited	TSXV:ASN	C\$ 0.35	8.7	US\$ 2	US\$ (1.9)	US\$ 0.0	US\$ 4	Ni / Cu	76%	92	92	\$0.046	\$0.046
CaNickel Mining Limited	TSXV:CML	C\$ 0.07	37.5	US\$ 2	US\$ (80.2)	US\$ 0.0	US\$ 82	Ni / -	100%	83	397	\$0.996	\$0.207
FPX Nickel Corp.	TSXV:FPX	C\$ 0.13	146.0	US\$ 14	US\$ 1.2	US\$ 5.6	US\$ 18	Ni / -	100%	-	5,569	-	\$0.003
Giga Metals Corporation	TSXV:GIGA	C\$ 0.19	43.1	US\$ 6	US\$ 5.9	US\$ 0.0	US\$ 0	Ni / Co	85%	-	6,890	-	\$0.000
Gossan Resources Limited	TSXV:GSS	C\$ 0.08	33.6	US\$ 2	US\$ 0.1	US\$ 0.0	US\$ 2	Ni / Cu	54%	-	73	-	\$0.025
Hannan Metals Ltd.	TSXV:HAN	C\$ 0.08	47.7	US\$ 3	US\$ 0.7	US\$ 0.3	US\$ 2	Ni / Cu	78%	-	2,539	-	\$0.001
Nautilus Minerals Inc.	TSX:NUS	C\$ 0.06	683.0	US\$ 31	US\$ (56.7)	US\$ 0.0	US\$ 87	Ni / Cu	52%	-	41,741	-	\$0.002
New Era Minerals Inc.	TSXV:NEM	C\$ 0.04	103.4	US\$ 3	US\$ (0.9)	US\$ 0.9	US\$ 4	Ni / -	100%	-	454	-	\$0.010
Pure Nickel Inc.	TSXV:NIC	C\$ 0.02	68.1	US\$ 1	US\$ (0.3)	US\$ 0.0	US\$ 1	Ni / Cu	59%	-	173	-	\$0.006
RNC Minerals	TSX:RXN	C\$ 0.51	446.0	US\$ 170	US\$ (21.2)	US\$ 0.3	US\$ 192	Ni / Co	87%	3,855	7,143	\$0.050	\$0.027
Sama Resources Inc.	TSXV:SME	C\$ 0.28	189.4	US\$ 40	US\$ 5.3	US\$ 0.0	US\$ 34	Ni / Cu	49%	-	286	-	\$0.120
Strongbow Exploration Inc.	TSXV:SBW	C\$ 0.15	86.6	US\$ 10	US\$ 2.7	US\$ 4.3	US\$ 11	Ni / Sn	53%	-	678	-	\$0.017
Group Average - Total												\$0.364	\$0.039

*All reserve and resource data sourced from SNL, additional data sourced from Capital IQ.

**NiEq = nickel equivalent. Calculated based on Haywood's formal long-term metal price forecasts.

***Nickel Ratio = value of in situ nickel / total value of in situ metals.

Zinc Non-Producers – Enterprise Value per Pound of Zinc Equivalent

Company	Symbol	Price	Shares O/S (million)	Market Capitalization (million)	Working Capital (million)	LTD Value (million)	Enterprise Value (million)	Primary / Secondary Metal	Zinc Ratio*** (% Contained)	Reserves & Resources* - Attributable		EV/lb ZnEq** (US\$)	
										Reserve (ZnEq** Mlb)	R&R (Total) (ZnEq** Mlb)	Reserve	Total
Ascendant Resources Inc.	TSX:ASND	C\$ 0.43	77.1	US\$ 25	US\$ 0.8	US\$ 0.0	US\$ 24	Zn / Pb	72%	320	1,405	\$0.075	\$0.017
Commander Resources Ltd.	TSXV:CMD	C\$ 0.09	35.3	US\$ 2	US\$ 2.7	US\$ 0.0	US\$ (0)	Zn / Cu	56%	-	25	-	-
El Nino Ventures Inc.	TSXV:ELN	C\$ 0.03	61.6	US\$ 1	US\$ 1.3	US\$ 0.0	US\$ 0	Zn / Cu	60%	-	530	-	\$0.000
Firestone Ventures Inc.	TSXV:FV	C\$ 0.07	53.7	US\$ 3	US\$ (0.2)	US\$ 0.0	US\$ 3	Zn / Pb	77%	-	428	-	\$0.007
Fireweed Zinc Ltd.	TSXV:FWZ	C\$ 0.83	31.7	US\$ 20	US\$ 2.1	US\$ 0.0	US\$ 18	Zn / Pb	65%	-	6,988	-	\$0.003
InZinc Mining Ltd.	TSXV:IZN	C\$ 0.05	108.9	US\$ 4	US\$ 0.6	US\$ 0.0	US\$ 3	Zn / Cu	71%	-	4,098	-	\$0.001
Karmin Exploration Inc.	TSXV:KAR	C\$ 0.71	77.0	US\$ 41	US\$ (1.7)	US\$ 0.0	US\$ 43	Zn / Pb	54%	-	2,430	-	\$0.018
Osisko Metals Incorporated	TSXV:OM	C\$ 0.55	136.3	US\$ 56	US\$ 12.8	US\$ 0.0	US\$ 43	Zn / Pb	71%	-	301	-	\$0.144
Rathdowney Resources Ltd.	TSXV:RTH	C\$ 0.10	161.7	US\$ 11	US\$ (4.1)	US\$ 0.0	US\$ 16	Zn / Pb	83%	-	3,590	-	\$0.004
ScoZinc Mining Ltd.	TSXV:SZM	C\$ 0.56	5.3	US\$ 2	US\$ 0.1	US\$ 0.0	US\$ 2	Zn / Pb	68%	-	1,485	-	\$0.001
Titan Mining Corporation	TSX:TI	C\$ 1.07	102.0	US\$ 82	US\$ (7.8)	US\$ 0.0	US\$ 89	Zn / -	100%	-	1,182	-	\$0.076
Trevali Mining Corporation	TSX:TV	C\$ 0.44	831.2	US\$ 271	US\$ 175.4	US\$ 144.7	US\$ 240	Zn / Pb	69%	1,667	14,479	\$0.144	\$0.017
Wolfden Resources Corporation	TSXV:WLF	C\$ 0.20	114.4	US\$ 17	US\$ 1.6	US\$ 0.0	US\$ 15	Zn / Au	37%	-	3,242	-	\$0.005
Group Average - Total												\$0.110	\$0.024

*All reserve and resource data sourced from SNL, additional data sourced from Capital IQ.

**ZnEq = Zinc equivalent. Calculated based on Haywood's formal long-term metal price forecasts.

***Zinc Ratio = value of in situ zinc / total value of in situ metals.



Base Metals Sensitivity

Company	Target	Metric	Primary Commodity	Base Case	Percentage Change Relative to Haywood Forecasted Commodity Prices								
					-30%	-20%	-10%	-5%	0%	5%	10%	20%	30%
PRODUCERS													
Capstone Mining Corp.	\$0.85	NAVPS	Copper	\$1.65	(\$1.84)	(\$0.63)	\$0.45	\$1.06	\$1.65	\$2.19	\$2.73	\$3.81	\$4.95
Copper Mountain Mining Corp.	\$2.00	NAVPS	Copper	\$3.48	(\$1.32)	\$0.34	\$1.95	\$2.71	\$3.48	\$4.22	\$4.95	\$6.44	\$7.90
Hudbay Minerals Inc.	\$9.00	NAVPS	Copper	\$7.63	\$1.99	\$3.89	\$5.76	\$6.70	\$7.63	\$8.56	\$9.50	\$11.37	\$13.23
Lundin Mining Corporation	\$8.00	NAVPS	Copper	\$6.44	\$1.96	\$3.56	\$5.01	\$5.73	\$6.44	\$7.14	\$7.85	\$9.26	\$10.66
Nevsun Resources Ltd.	\$6.00	NAVPS	Copper	\$5.33	\$2.01	\$3.12	\$4.22	\$4.78	\$5.33	\$5.88	\$6.43	\$7.54	\$8.64
Trevali Mining Corporation	\$1.00	NAVPS	Zinc	\$0.77	\$0.05	\$0.31	\$0.54	\$0.66	\$0.77	\$0.90	\$1.00	\$1.24	\$1.44
DEVELOPERS / EXPLORERS													
Nevada Copper Corp.	\$0.90	NAVPS	Copper	\$1.30	(\$0.84)	(\$0.05)	\$0.63	\$0.96	\$1.30	\$1.63	\$1.96	\$2.63	\$3.28

Company	Target	Metric	Primary Commodity	Base Case	Percentage Change Relative to Haywood Forecasted Commodity Prices								
					-30%	-20%	-10%	-5%	0%	5%	10%	20%	30%
PRODUCERS													
Capstone Mining Corp.	\$0.85	2018 CFPS	Copper	\$0.30	\$0.21	\$0.24	\$0.27	\$0.29	\$0.30	\$0.32	\$0.33	\$0.36	\$0.39
Copper Mountain Mining Corp.	\$2.00	2018 CFPS	Copper	\$0.50	\$0.24	\$0.33	\$0.41	\$0.45	\$0.50	\$0.54	\$0.58	\$0.66	\$0.75
Hudbay Minerals Inc.	\$9.00	2018 CFPS	Copper	\$1.69	\$1.48	\$1.55	\$1.63	\$1.66	\$1.69	\$1.72	\$1.75	\$1.82	\$1.88
Lundin Mining Corporation	\$8.00	2018 CFPS	Copper	\$0.68	\$0.53	\$0.59	\$0.64	\$0.66	\$0.68	\$0.71	\$0.73	\$0.78	\$0.83
Nevsun Resources Ltd.	\$6.00	2018 CFPS	Copper	\$0.18	\$0.05	\$0.09	\$0.14	\$0.16	\$0.18	\$0.21	\$0.23	\$0.27	\$0.32
Trevali Mining Corporation	\$1.00	2018 CFPS	Zinc	\$0.14	\$0.10	\$0.11	\$0.13	\$0.13	\$0.14	\$0.14	\$0.15	\$0.16	\$0.17

Note: For price forecast estimates, please refer to the "Haywood Metals and Currencies Forecast" Table later in this report

Company	Target	Metric	Primary Commodity	Base Case	Percentage Change Relative to Haywood Forecasted Commodity Prices								
					-30%	-20%	-10%	-5%	0%	5%	10%	20%	30%
PRODUCERS													
Capstone Mining Corp.	\$0.85	2019 CFPS	Copper	\$0.28	(\$0.07)	\$0.05	\$0.17	\$0.22	\$0.28	\$0.34	\$0.40	\$0.52	\$0.63
Copper Mountain Mining Corp.	\$2.00	2019 CFPS	Copper	\$0.48	(\$0.03)	\$0.15	\$0.30	\$0.40	\$0.48	\$0.56	\$0.62	\$0.74	\$0.86
Hudbay Minerals Inc.	\$9.00	2019 CFPS	Copper	\$1.76	\$0.75	\$1.11	\$1.44	\$1.60	\$1.76	\$1.92	\$2.09	\$2.41	\$2.74
Lundin Mining Corporation	\$8.00	2019 CFPS	Copper	\$0.78	\$0.10	\$0.34	\$0.56	\$0.67	\$0.78	\$0.89	\$1.00	\$1.22	\$1.44
Nevsun Resources Ltd.	\$6.00	2019 CFPS	Copper	\$0.39	\$0.07	\$0.18	\$0.28	\$0.34	\$0.39	\$0.44	\$0.49	\$0.60	\$0.70
Trevali Mining Corporation	\$1.00	2019 CFPS	Zinc	\$0.22	\$0.05	\$0.10	\$0.16	\$0.19	\$0.22	\$0.25	\$0.28	\$0.33	\$0.36

Note: For price forecast estimates, please refer to the "Haywood Metals and Currencies Forecast" Table later in this report



Comparables Tables – Other (Uranium, Lithium, Diamond, Cobalt, Coal, Iron)

Uranium/Lithium Companies – Haywood Estimates

Company	Ticker	Analyst	Last Price	Shares O/S	MC (C\$M)	Target (C\$)	Return (%)	Rating	NAVPS (US\$)	CFPS (US\$) 2018E 2019E	Primary Commodity	Production, million pounds 2018E 2019E	Total Cash Costs, US\$/lb 2018E 2019E	Price / NAV	Target / NAV	EV / CFPS 2018E 2019E	Target / CFPS 2018E 2019E	
Denison Mines	DML-T	CH	\$0.68	589	\$401	\$2.10	209%	BUY	C\$2.10	(\$0.02)	Uranium	-	-	0.3x	1.0x	-	-	
Energy Fuels	UUUU-US	CH	\$3.60	91	US\$328	US\$4.80	33%	BUY	\$4.84	(\$0.05)	Uranium	1.1	1.1	\$35	0.7x	1.0x	-	-
NexGen Energy	NXE-T	CH	\$2.69	350	\$940	\$6.00	123%	BUY	C\$5.98	(\$0.01)	Uranium	-	-	-	0.4x	1.0x	-	-
Uranium Energy	UEC-US	CH	\$1.28	179	US\$229	US\$2.90	127%	BUY	\$2.87	\$0.00	Uranium	0.8	0.8	\$29	0.4x	1.0x	501.1x	-
Uranium Participation	U-T	CH	\$4.68	138	\$646	\$5.10	9%	BUY	C\$5.13	-	Uranium	-	-	-	0.9x	1.0x	-	-
Plateau Energy	PLU-V	CH	\$0.69	77	\$53	\$3.00	335%	BUY	\$2.96	(\$0.01)	Uranium	-	-	-	0.2x	1.0x	-	-
Group Average														0.5x	1.0x	501.1x	-	

C\$/US\$ = 1.34
A\$/US\$ = 1.38
E/US\$ = 0.79

Source: Bloomberg and Haywood Securities

Diamond Companies – Haywood Estimates

Company	Ticker	Analyst	Last Price (C\$)	Shares O/S (M)	MC (C\$M)	Target (C\$)	Return (%)	Rating	NAVPS (US\$)	CFPS (US\$) 2018E 2019E	Primary Commodity	Production, 000's carats 2018E 2019E	TCC, US\$/ct 2018E 2019E	AISC, US\$/ct 2018E 2019E	Price / NAV	Target / NAV	EV / CFPS 2018E 2019E	Target / CFPS 2018E 2019E		
Mountain Province Diamonds Inc.	TSX:MPVD	MPVD-T	GM	\$1.68	210	\$353	\$5.20	210%	BUY	\$3.89	\$0.52 \$0.55	Diamonds	6,972 7,425	\$77 \$85	\$97 \$91	0.3x	1.0x	4.9x 4.6x	7.4x 7.1x	
Lucara Diamond Corp.	TSX:LUC	LUC-T	GM	\$1.62	397	\$642	\$3.20	98%	BUY	\$1.67	\$0.17 \$0.22	Diamonds	358 339	\$256 \$288	\$545 \$382	0.7x	1.4x	6.7x 5.1x	14.1x 10.8x	
Group Average															0.5x	1.2x	5.8x	4.9x	10.8x	8.9x

C\$/US\$ = 1.336

Source: Bloomberg and Haywood Securities

Cobalt Companies – Haywood Estimates

Company	Ticker	Analyst	Last Price (C\$)	Shares O/S (M)	MC (C\$M)	Target (C\$)	Return (%)	Rating	NAVPS (US\$)	CFPS (US\$) 2018E 2019E	Primary Commodity	Production, 000's carats 2018E 2019E	TCC, US\$/ct 2018E 2019E	AISC, US\$/ct 2018E 2019E	Price / NAV	Target / NAV	EV / CFPS 2018E 2019E	Target / CFPS 2018E 2019E		
Mountain Province Diamonds Inc.	TSX:MPVD	MPVD-T	GM	\$1.68	210	\$353	\$5.20	210%	BUY	\$3.89	\$0.52 \$0.55	Diamonds	6,972 7,425	\$77 \$85	\$97 \$91	0.3x	1.0x	4.9x 4.6x	7.4x 7.1x	
Lucara Diamond Corp.	TSX:LUC	LUC-T	GM	\$1.62	397	\$642	\$3.20	98%	BUY	\$1.67	\$0.17 \$0.22	Diamonds	358 339	\$256 \$288	\$545 \$382	0.7x	1.4x	6.7x 5.1x	14.1x 10.8x	
Group Average															0.5x	1.2x	5.8x	4.9x	10.8x	8.9x

C\$/US\$ = 1.336

Source: Bloomberg and Haywood Securities



Diamond Sensitivity

Company	Target	Metric	Primary Commodity	Base Case	Percentage Change Relative to Haywood Forecasted Exchange Rate								
					-30%	-20%	-10%	-5%	0%	5%	10%	20%	30%
DEVELOPER / PRODUCER													
Mountain Province Diamonds Inc.	\$5.20	NAVPS	Copper	\$5.20	\$2.84	\$3.60	\$4.39	\$4.79	\$5.20	\$5.62	\$6.04	\$6.90	\$7.80
Lucara Diamond Corp.	\$3.20	NAVPS	Copper	\$2.13	\$1.98	\$2.03	\$2.08	\$2.11	\$2.13	\$2.16	\$2.19	\$2.24	\$2.29
DEVELOPER / PRODUCER													
Mountain Province Diamonds Inc.	\$5.20	2018 CFPS	Diamonds	\$0.52	\$0.67	\$0.61	\$0.56	\$0.54	\$0.52	\$0.51	\$0.49	\$0.46	\$0.44
Lucara Diamond Corp.	\$3.20	2018 CFPS	Diamonds	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17
DEVELOPER / PRODUCER													
Mountain Province Diamonds Inc.	\$5.20	2019 CFPS	Diamonds	\$0.69	\$0.38	\$0.48	\$0.58	\$0.64	\$0.69	\$0.74	\$0.79	\$0.90	\$1.00
Lucara Diamond Corp.	\$3.20	2019 CFPS	Diamonds	\$0.22	\$0.22	\$0.22	\$0.22	\$0.22	\$0.22	\$0.22	\$0.22	\$0.22	\$0.22

Note: Diamond sensitivities reflect changes in USD/CAD exchange rate

Note: For price forecast estimates, please refer to the "Haywood Metals and Currencies Forecast" Table later in this report

Cobalt Sensitivity

Company	Target	Metric	Primary Commodity	Base Case	Percentage Change Relative to Haywood Forecasted Exchange Rate								
					-30%	-20%	-10%	-5%	0%	5%	10%	20%	30%
INVENTORY FUND													
Cobalt 27 Capital Corp.	\$10.20	NAVPS	Cobalt	\$10.17	\$8.81	\$9.22	\$9.67	\$9.92	\$10.17	\$10.42	\$10.67	\$11.23	\$11.82

Note: For price forecast estimates, please refer to the "Haywood Metals and Currencies Forecast" Table later in this report

Lithium Sensitivity

Company	Target	Metric	Primary Commodity	Base Case	Percentage Change Relative to Haywood Forecasted Exchange Rate								
					-30%	-20%	-10%	-5%	0%	5%	10%	20%	30%
DEVELOPERS / EXPLORERS													
Plateau Energy Metals Inc.	\$3.00	NAVPS	Lithium	\$2.94	\$2.05	\$2.34	\$2.64	\$2.79	\$2.94	\$3.08	\$3.23	\$3.53	\$3.82

Note: For price forecast estimates, please refer to the "Haywood Metals and Currencies Forecast" Table later in this report

Uranium Sensitivity

Company	Target	Metric	Primary Commodity	Base Case	Percentage Change Relative to Haywood Forecasted Commodity Prices								
					-30%	-20%	-10%	-5%	0%	5%	10%	20%	30%
PRODUCERS													
Energy Fuels Inc.	\$4.90	NAVPS	Uranium	\$4.95	(\$0.75)	\$1.23	\$3.06	\$4.01	\$4.95	\$5.63	\$6.60	\$8.68	\$10.80
Uranium Energy Corp.	\$2.90	NAVPS	Uranium	\$2.86	\$1.65	\$2.01	\$2.43	\$2.65	\$2.86	\$3.08	\$3.30	\$3.74	\$4.19
DEVELOPERS/EXPLORERS													
Denison Mines Corp.	\$2.10	NAVPS	Uranium	\$2.12	\$1.23	\$1.52	\$1.82	\$1.97	\$2.12	\$2.27	\$2.42	\$2.72	\$3.02
NexGen Energy Ltd.	\$6.00	NAVPS	Uranium	\$6.17	\$3.20	\$4.15	\$5.11	\$5.59	\$6.17	\$6.55	\$7.03	\$7.99	\$8.95
INVENTORY FUNDS													
PRODUCERS													
Energy Fuels Inc.	\$4.90	2018 CFPS	Uranium	(\$0.09)	(\$0.17)	(\$0.14)	(\$0.11)	(\$0.10)	(\$0.09)	(\$0.07)	(\$0.06)	(\$0.04)	(\$0.01)
Uranium Energy Corp.	\$2.90	2018 CFPS	Uranium	(\$0.10)	(\$0.10)	(\$0.10)	(\$0.10)	(\$0.10)	(\$0.10)	(\$0.10)	(\$0.10)	(\$0.10)	(\$0.10)
DEVELOPERS/EXPLORERS													
Denison Mines Corp.	\$2.10	2018 CFPS	Uranium	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)
NexGen Energy Ltd.	\$6.00	2018 CFPS	Uranium	(\$0.04)	(\$0.13)	(\$0.13)	(\$0.13)	(\$0.13)	(\$0.04)	(\$0.13)	(\$0.13)	(\$0.13)	(\$0.13)
PRODUCERS													
Energy Fuels Inc.	\$4.90	2019 CFPS	Uranium	\$0.14	(\$0.07)	\$0.00	\$0.07	\$0.10	\$0.14	\$0.17	\$0.21	\$0.28	\$0.35
Uranium Energy Corp.	\$2.90	2019 CFPS	Uranium	\$0.01	(\$0.02)	(\$0.01)	(\$0.00)	\$0.00	\$0.01	\$0.01	\$0.02	\$0.03	\$0.04
DEVELOPERS/EXPLORERS													
Denison Mines Corp.	\$2.10	2019 CFPS	Uranium	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.02)
NexGen Energy Ltd.	\$6.00	2019 CFPS	Uranium	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.04)



Performance of Companies from the last Junior Exploration Report

Company	Ticker	Close Price (C\$)	Market Capitalization (C\$M)	Cash as of Sept Junior X Report (C\$M)	Weekly Performance	QTD Performance	QTD Performance vs. TSXV Index
Junior Exploration Names							
Ascot Resources Ltd.	TSXV:AOT	1.32	230.02	14.17	0.8%	12.8%	36.8%
Aurion Resources Ltd.	TSXV:AU	1.09	75.63	19.00	22.5%	21.1%	45.1%
Chakana Copper Corp.	TSXV:PERU	0.34	27.41	11.00	0.0%	(40.4)%	(16.3)%
Evrin Resources Corp.	TSXV:EVM	0.30	25.34	15.60	(7.7)%	(72.5)%	(48.5)%
Fireweed Zinc Ltd.	TSXV:FWZ	0.83	26.31	3.00	5.1%	(40.7)%	(16.7)%
Juggernaut Exploration Ltd.	TSXV:JUGR	0.13	12.18	2.80	0.0%	(65.8)%	(41.8)%
Kutcho Copper Corp.	TSXV:KC	0.26	14.86	13.24	(10.3)%	(39.5)%	(15.5)%
Oklo Resources Limited	ASX:OKU	0.26	91.87	17.10	(3.7)%	(13.3)%	10.7%
Osisko Metals Incorporated	TSXV:OM	0.55	74.94	30.00	0.0%	(5.2)%	18.8%
Pan Global Resources Inc.	TSXV:PGZ	0.12	11.32	3.40	9.1%	(50.0)%	(26.0)%
Reunion Gold Corporation	TSXV:RGD	0.18	57.70	8.00	(5.3)%	12.5%	36.5%
Sable Resources Ltd.	TSXV:SAE	0.20	27.93	2.80	0.0%	(28.6)%	(4.6)%
Skeena Resources Limited	TSXV:SKE	0.30	28.87	2.52	(1.7)%	(24.4)%	(0.3)%
Other Companies in the News							
No other news for the week							

Source: Haywood Securities



Key Catalysts for Companies Featured in the Last Junior Exploration Report

Company Junior Exploration Names	Ticker	Catalysts
Ascot Resources Ltd.	TSXV:AOT	<ul style="list-style-type: none"> • Following Q1/18's NI 43-101 resource, drilling is underway for a follow up resource estimate with additional targets between Premier and Big Missouri planned • Engineering studies underway
Aurion Resources Ltd.	TSXV:AU	<ul style="list-style-type: none"> • 15,000 metre drill program to commence H2/18
Chakana Copper Corp.	TSXV:PERU	<ul style="list-style-type: none"> • Results from Phase 2 - 20,000 metre drill program – ongoing • Awaiting approval of Semi-detailed Environmental Impact Study that will allow an additional 160 platforms throughout the original Condor option area – H2/18 • Initial mineral resource estimate – Q1/19
Evrin Resources Corp.	TSXV:EVM	<ul style="list-style-type: none"> • Phase 3 Mapping, trenching, soil and rock chip sampling, and ground geophysics work at Cuale – Q3/18 • Receipt of drilling permits – Q4/18 (mid-October) • 3,000 metre (~20 hole) drilling program – Q4/18
Fireweed Zinc Ltd.	TSXV:FWZ	<ul style="list-style-type: none"> • In 2019, the company plans to advance the district potential and de-risk the project with more drilling. Key targets include Jason South zone and the End Zone area. Gravity surveys will also be undertaken.
Juggernaut Exploration Ltd.	TSXV:JUGR	<ul style="list-style-type: none"> • Results from inaugural drill program started on Midas at the 2.1 by 1.6 km King Solomon Gold Zone- ongoing • Results from inaugural drill program started on Empire Property- ongoing • Results from an ongoing, extensive, systematic sampling program, which includes grab, chip, and channel samples - ongoing
Kutcho Copper Corp.	TSXV:KC	<ul style="list-style-type: none"> • Results from 12,000 metre expansion drill program at Kutcho-anticipated completion mid-October 2018 • Delivery of feasibility study anticipated Q2-Q3 2019 • Construction decision estimated Q1-Q3 2021
Oklo Resources Limited	ASX:OKU	<ul style="list-style-type: none"> • Phase 2 results and follow-up AC, DD and RC drilling program at Seko – Q3/18 • Dandoko Gold Corridor metallurgical test work, AC, RC and DD drilling – H2/18 • South and West Mali regional targets geochemistry, auger and AC drilling program – H2/18
Osisko Metals Incorporated	TSXV:OM	<ul style="list-style-type: none"> • Updated open-pit resource for Pine Point - H2 2018 • Economic study on Pine Point - mid-2019
Pan Global Resources Inc.	TSXV:PGZ	<ul style="list-style-type: none"> • Results from Phase 1 ~14 drill holes (3,000 m) testing Cu and Pb-Zn-Ag targets- Started late Q2 • Phase 2 follow-up drilling Q3-Q4 2018
Reunion Gold Corporation	TSXV:RGD	<ul style="list-style-type: none"> • Boulanger drill program to follow up on historically drilled mineralization – H2/18 • Start of drilling and geophysics at Dorlin – Q3/18 • Start of drilling at Waiamu – Q3/18 • Dorlin resource update– end of Q3/18
Sable Resources Ltd.	TSXV:SAE	<ul style="list-style-type: none"> • Results from further drilling of 12 hole program at Margarita Project- ongoing • Results from drilling at its Don Julio project in Argentina - Q4/18
Skeena Resources Limited	TSXV:SKE	<ul style="list-style-type: none"> • Maiden resource estimate for Eskay Creek -Sept. 2018 • Maiden resource estimate for Snip -Q1/19 • Results from 5,000 metres of surface drilling at Eskay Creek- ongoing

Source: Haywood Securities



Haywood Metals and Currencies Performance and Forecasts

Commodities	2018E		2019E		2020E		2021E		2022E+	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
Gold, US\$/oz	\$1,300	\$1,275	\$1,400	\$1,300	\$1,400	\$1,400	\$1,400	\$1,400	\$1,400	\$1,400
Silver, US\$/oz	\$18.00	\$15.85	\$20.00	\$17.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Copper, US\$/lb	\$3.10	\$3.00	\$3.20	\$3.10	\$3.25	\$3.20	\$3.15	\$3.15	\$3.15	\$3.15
Lead, US\$/lb	\$1.10	\$1.00	\$1.10	\$1.05	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10
Nickel, US\$/lb	\$6.50	\$6.20	\$6.75	\$6.50	\$7.00	\$6.75	\$7.25	\$7.00	\$7.50	\$7.00
Zinc, US\$/lb	\$1.40	\$1.30	\$1.35	\$1.25	\$1.30	\$1.20	\$1.20	\$1.15	\$1.15	\$1.10

Currencies	2018E		2019E		2020E		2021E		2022E+	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
C\$/US\$ FX Rate	1.278	1.291	1.266	1.250	1.257	1.280	1.233	1.280	1.218	1.270
AUS\$/US\$ FX Rate	1.307	1.333	1.318	1.333	1.305	1.333	1.277	1.250	1.276	1.299
Euro/US\$ FX Rate	0.833	0.844	0.822	0.813	0.792	0.794	0.775	0.800	0.772	0.781

Source: Bloomberg, Haywood Securities



Important Information and Legal Disclosures

This report may be distributed in the following states: nil. Otherwise, this report may only be distributed into those states with an institutional buyer state securities registration exemption.

Analyst Certification

We, Mick Carew, Geordie Mark, Kerry Smith, Pierre Vaillancourt, Colin Healey, hereby certify that the views expressed in this report (which includes the rating assigned to the issuer's shares as well as the analytical substance and tone of the report) accurately reflect my/our personal views about the subject securities and the issuer. No part of my/our compensation was, is, or will be directly or indirectly related to the specific recommendations.

Important Disclosures

Of the companies included in the report the following Important Disclosures apply:

Ticker	Company	1	2	3	4	5	6	7	8
TSX:AGI	Alamos Gold Inc.			X					
TSX:AKG	Asanko Gold Inc.			X					
TSXV:AGB	Atlantic Gold Corp.			X					
TSX:BTO	B2Gold Corp.	X		X					
TSXV:BGM	Barkerville Gold Mines Ltd.			X	X			X	
TSX:ABX	Barrick Gold Corporation			X					
TSXV:BSR	Bluestone Resources Inc.	X	X	X			X		
TSX:CS	Capstone Mining Corp.			X					
TSXV:KBLT	Cobalt 27 Capital Corp.	X			X	X			
TSX:CMMC	Copper Mountain Mining Corp.			X		X	X		
TSX:DML	Denison Mines Corp.			X	X		X		
TSX:DGC	Detour Gold Corporation	X		X					
TSX:ELD	Eldorado Gold Corporation	X		X					
TSX:EDV	Endeavour Mining Corp.	X		X					
TSX:EFR	Energy Fuels Inc.			X					
TSXV:EQX	Equinox Gold Corp.	X		X	X				
TSXV:FPC	Falco Resources Ltd.			X					
TSXV:FIL	Filo Mining Corp.		X	X	X				
TSXV:GQC	GoldQuest Mining Corp.	X							
ASX:GOR	Gold Road Resources Limited			X					
TSX:HRT	Harte Gold Corp.			X	X				
TSX:HBM	Hudbay Minerals, Inc.			X					
TSX:LGD	Liberty Gold Corp.	X		X	X				
TSX:LUC	Lucara Diamond Corp.		X	X					
TSXV:LUM	Lumina Gold Corp.		X	X	X	X			
TSX:LUG	Lundin Gold Inc.			X					
TSX:LUN	Lundin Mining Corporation			X					
TSX:MOZ	Marathon Gold Corp.	X		X	X				
TSX:MAX	Midas Gold Corp.		X	X					
TSX:MPVD	Mountain Province Diamonds Inc.	X		X					
TSX:NXE	NexGen Energy Ltd.	X		X			X		
TSX:NCU	Nevada Copper Corp.			X	X				
TSX:NSU	Nevsun Resources Ltd.			X					
TSX:NHK	Nighthawk Gold Corp.	X		X					
TSX:OGC	OceanaGold Corporation			X					
TSX:OR	Osisko Gold Royalties Ltd.			X					



TSX:OSK	Osisko Mining Corp.			X	X				
TSXV:PLU	Plateau Energy Metals Inc.		X	X	X	X	X		
TSXV:PGM	Pure Gold Mining Inc.	X	X	X	X				
TSXV:ROG	Roxgold Inc.	X		X					
TSX:RNX	RNC Minerals	X		X			X		
TSX:SBB	Sabina Gold and Silver Corp.			X					
TSXV:SGI	Superior Gold Inc.								
TSX:SMF	SEMAFO Inc.			X					
TSX:STGO	Steppe Gold Ltd.		X	X	X				
TSX:THO	Tahoe Resources Inc.			X					
TSX:TML	Treasury Metals Inc.			X					
TSX:TV	Trevali Mining Corp.	X		X					
TSXV:TLG	Trolius Gold Corp.			X	X				
AMEX:UEC	Uranium Energy Corp.			X	X				
TSX:U	Uranium Participation Corporation	X			X				
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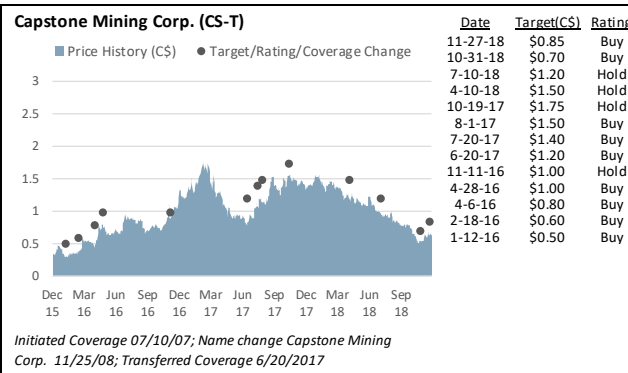
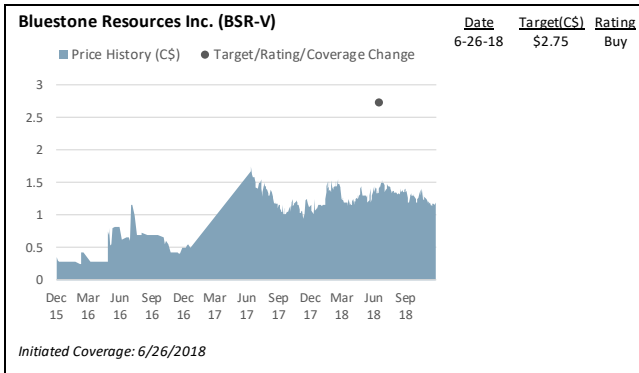
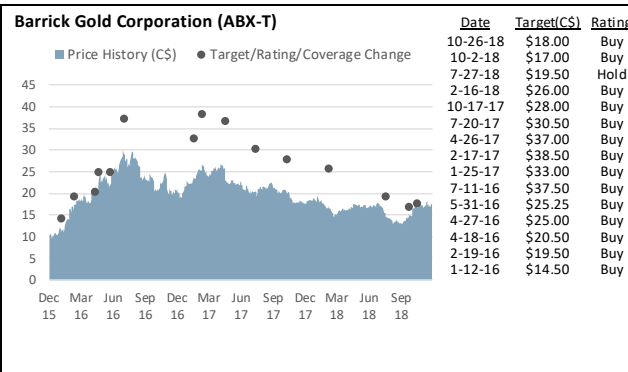
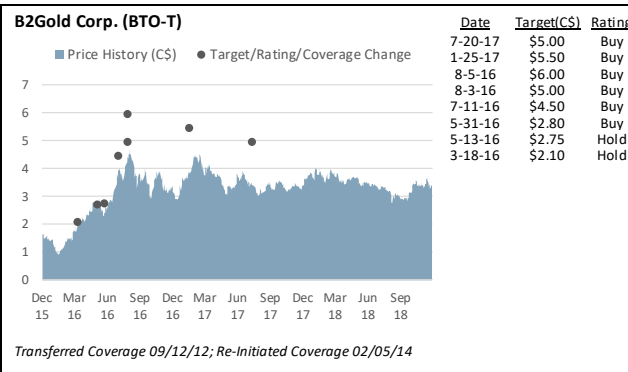
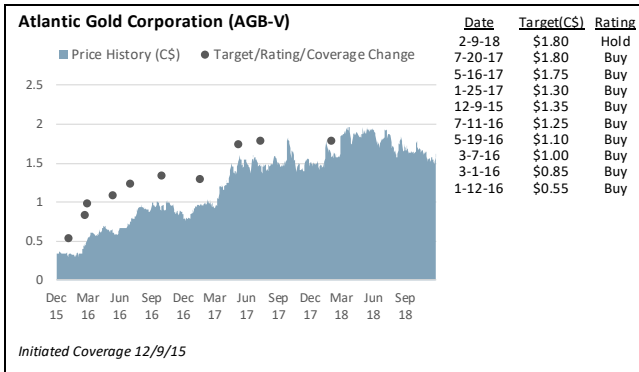
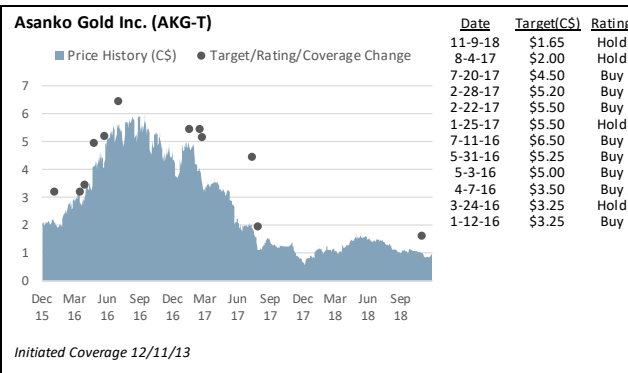
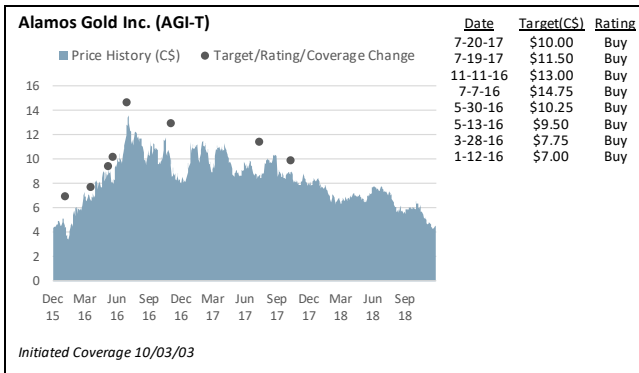
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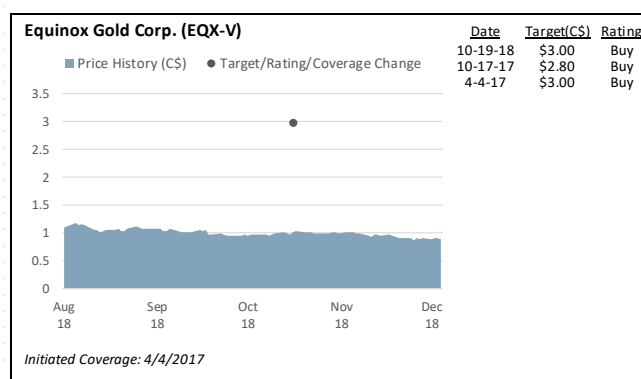
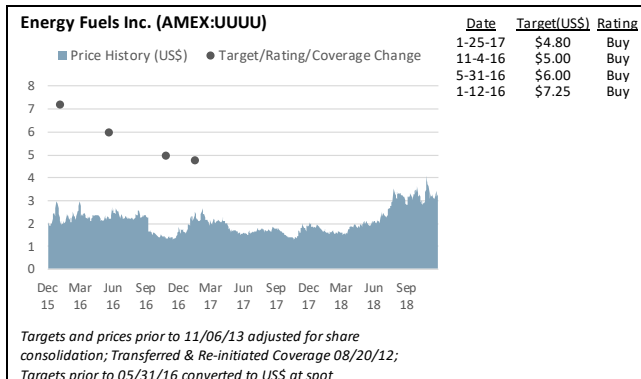
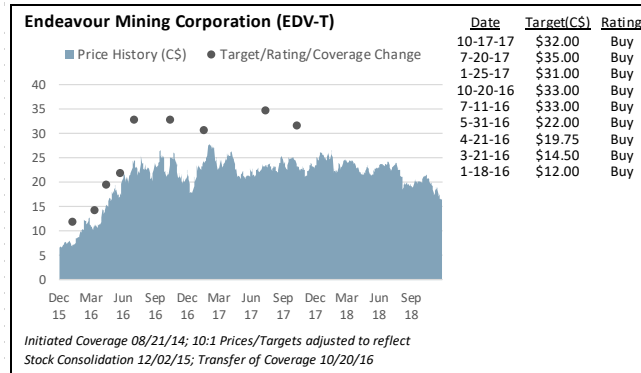
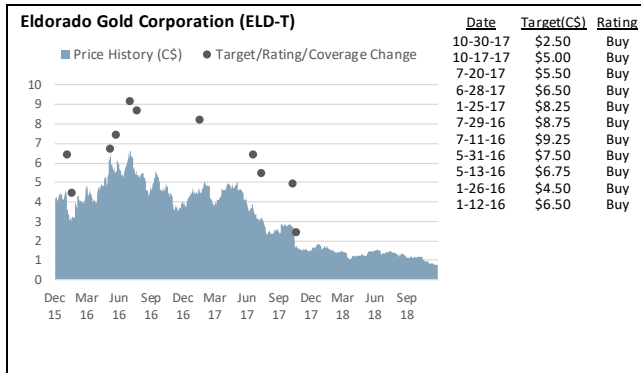
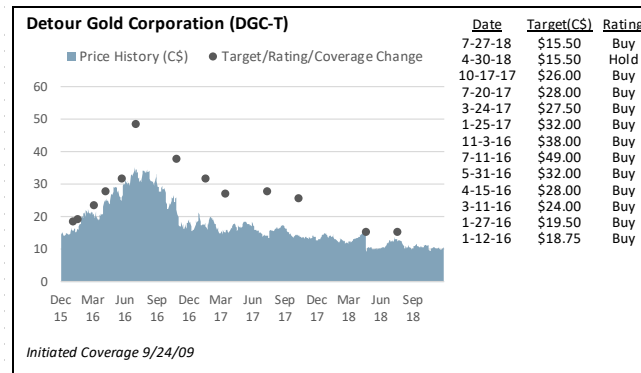
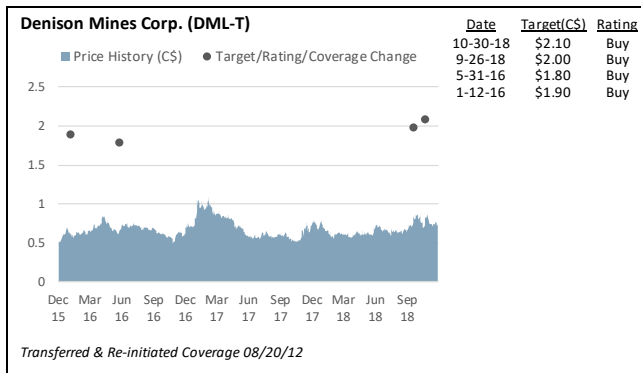
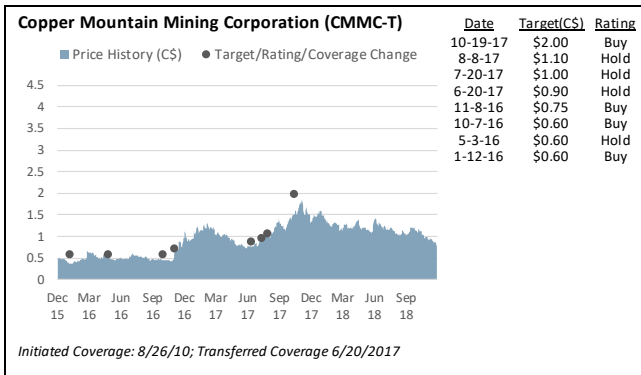
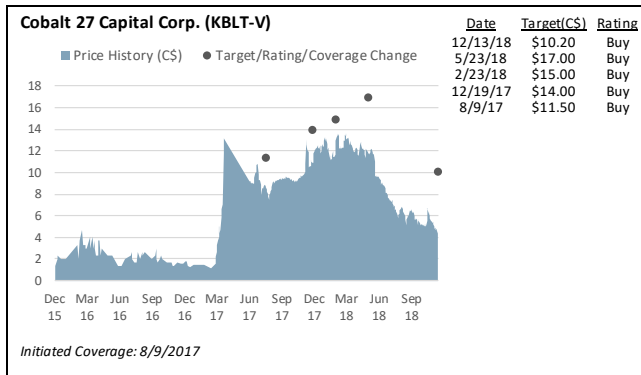
Distribution of Ratings (as of December 14, 2018)

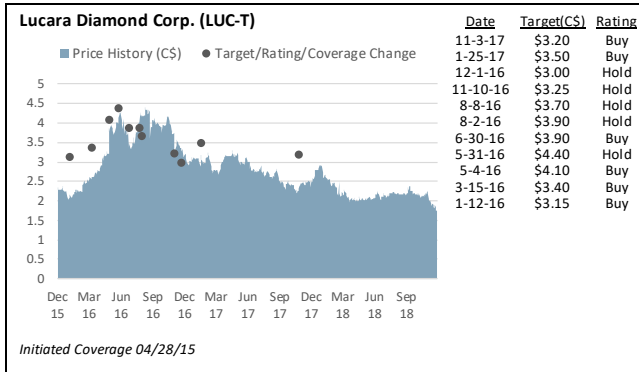
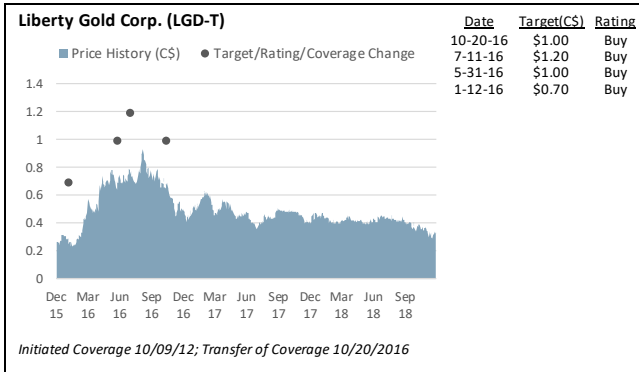
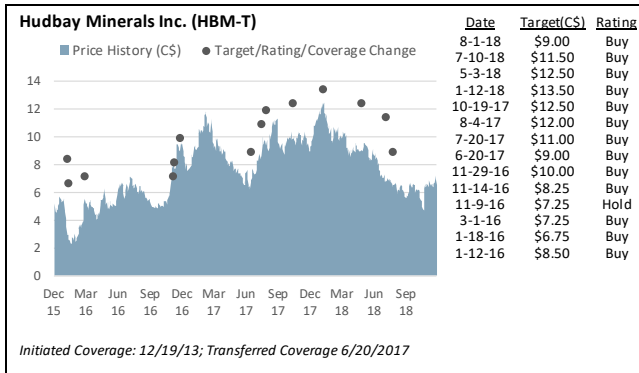
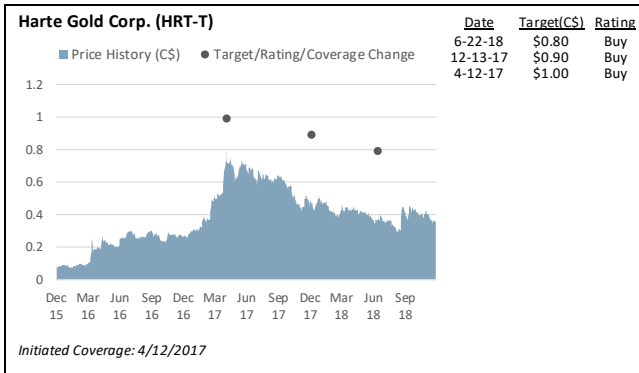
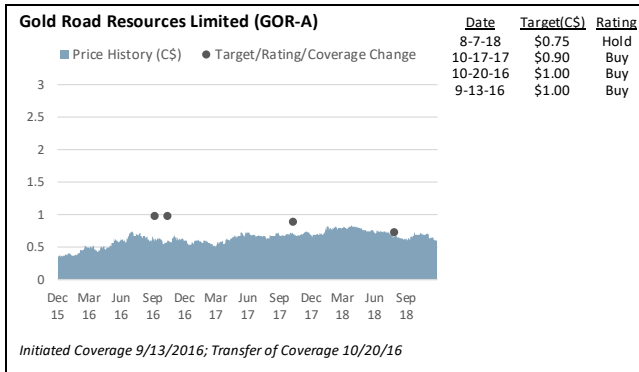
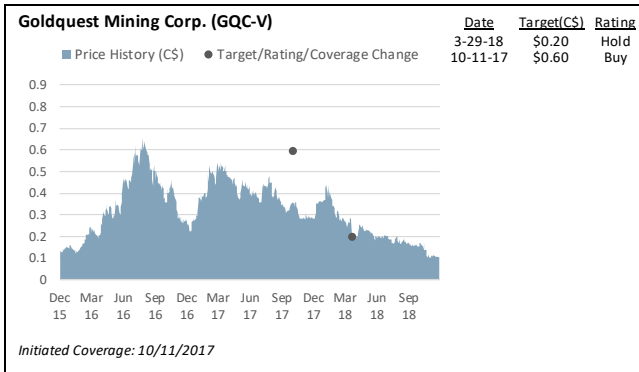
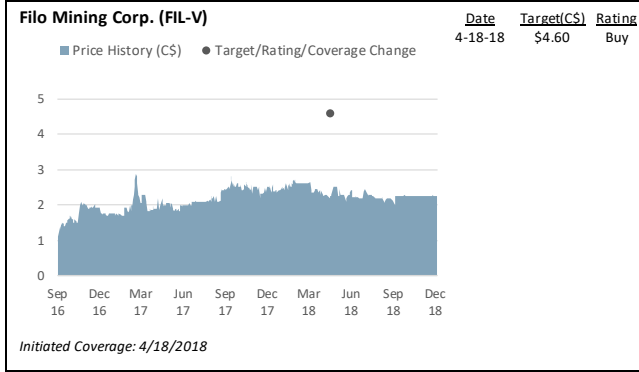
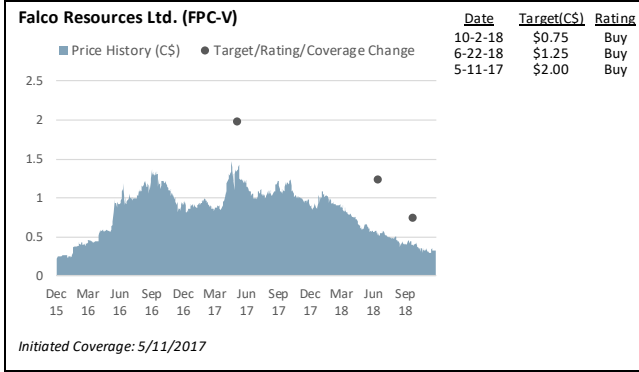
	%	#	IB Clients (TTM)
Buy	76.8%	73	96.0%
Hold	11.6%	11	4.0%
Sell	0.0%	0	0.0%
Tender	2.1%	2	0.0%
UR (Buy)	0.0%	0	0.0%
UR (Hold)	0.0%	0	0.0%
UR (Sell)	0.0%	0	0.0%
Dropped (TTM)	9.5%	9	0.0%

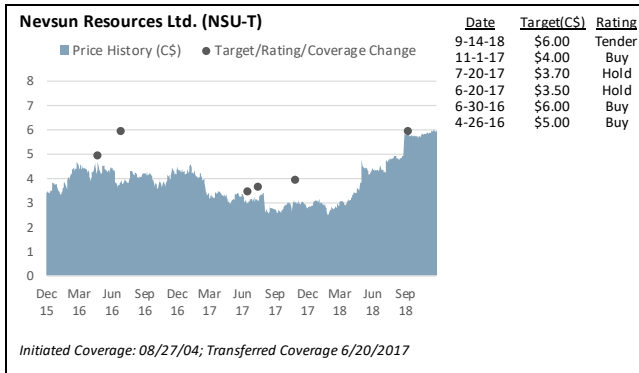
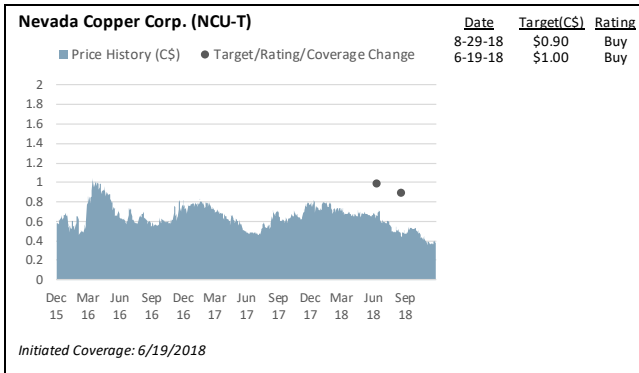
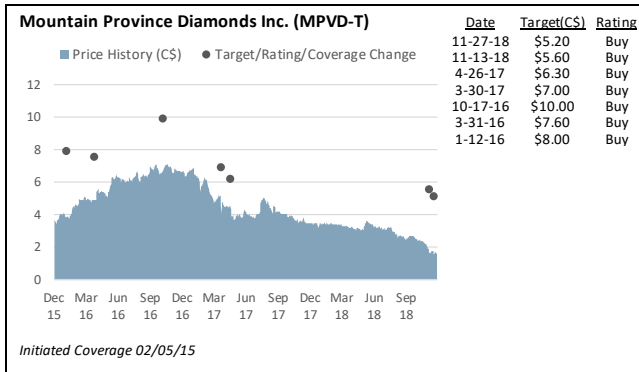
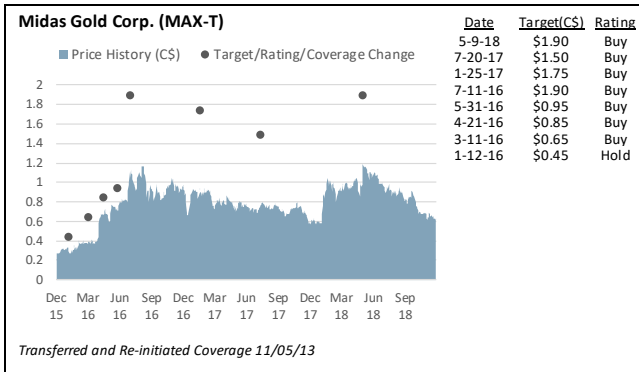
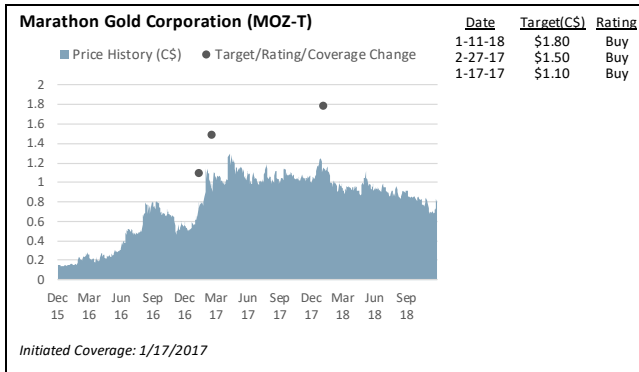
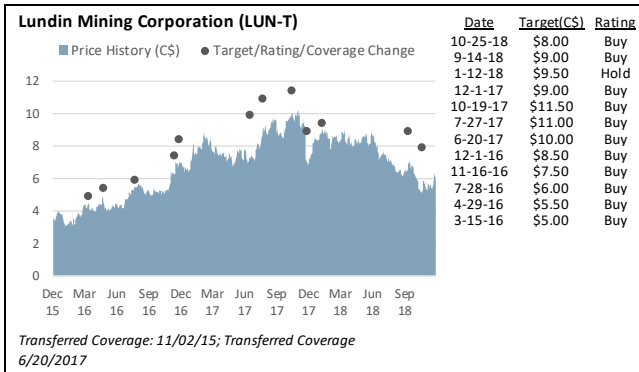
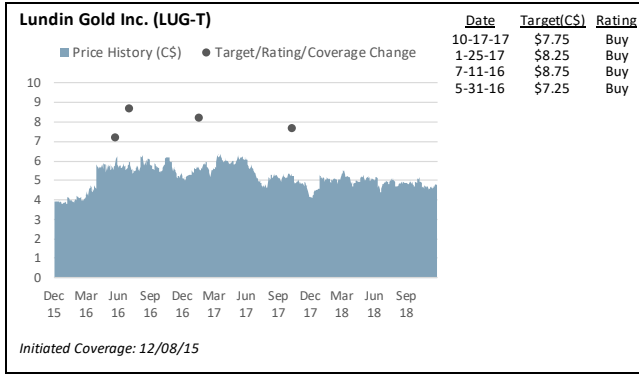
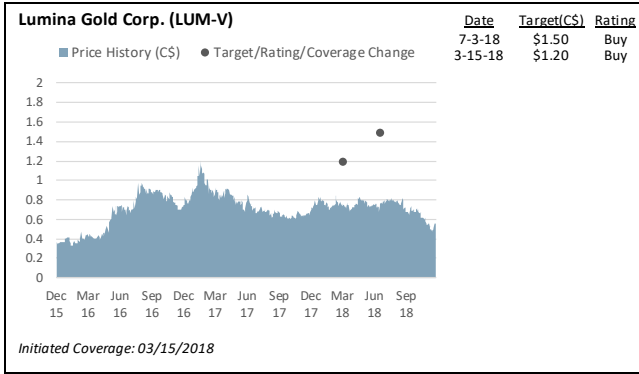


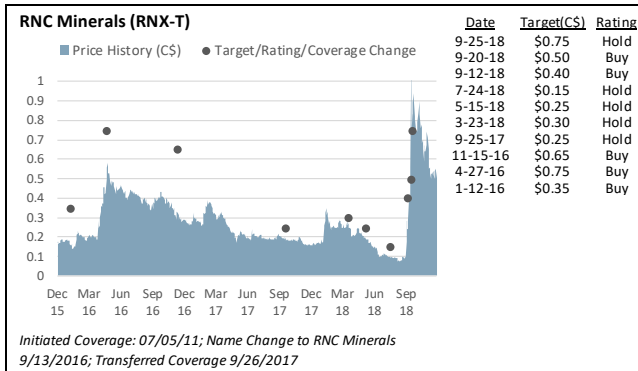
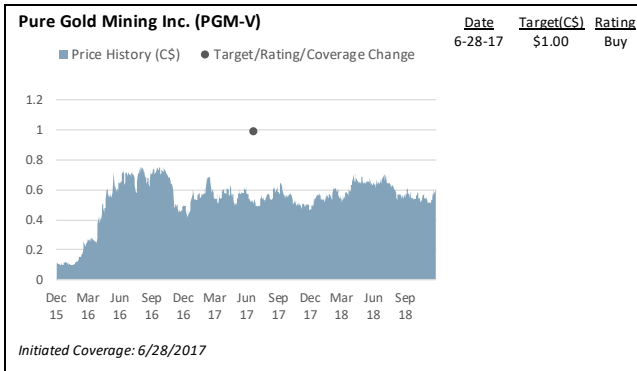
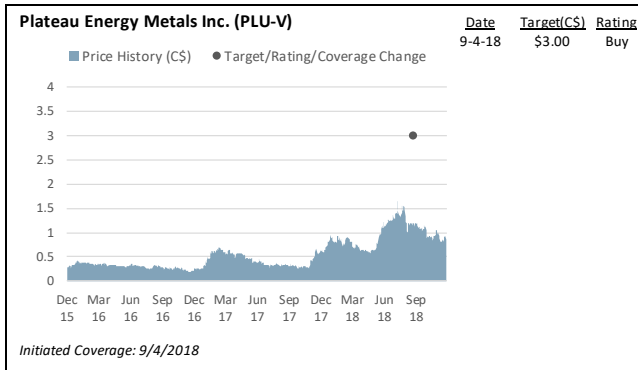
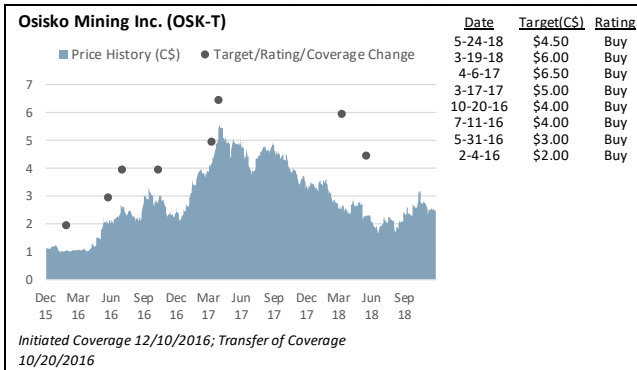
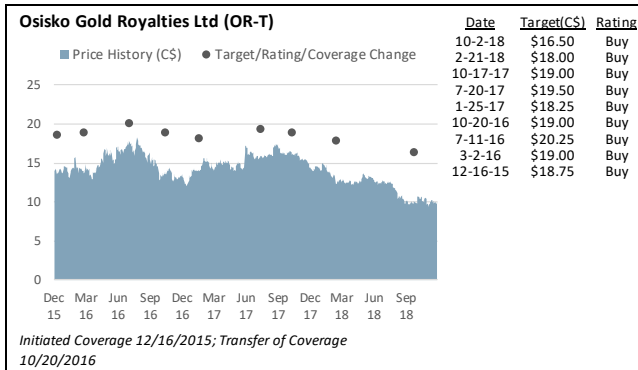
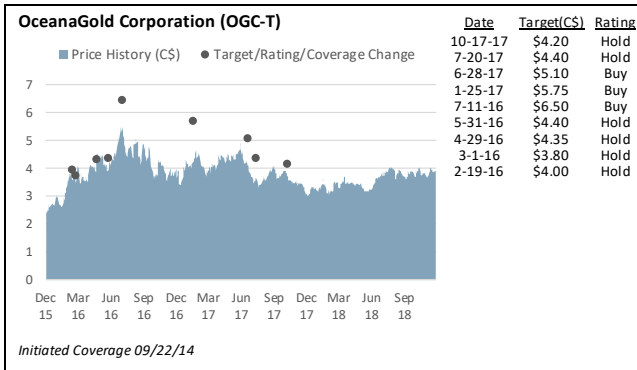
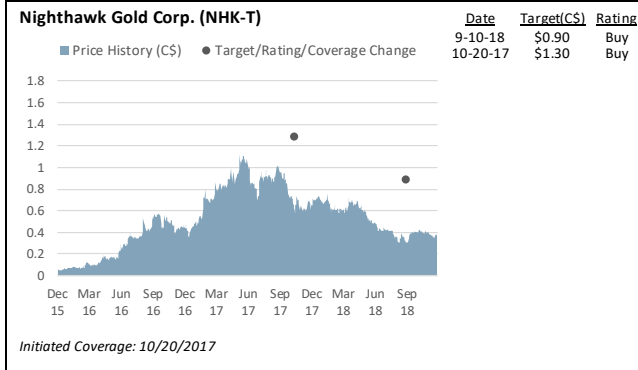
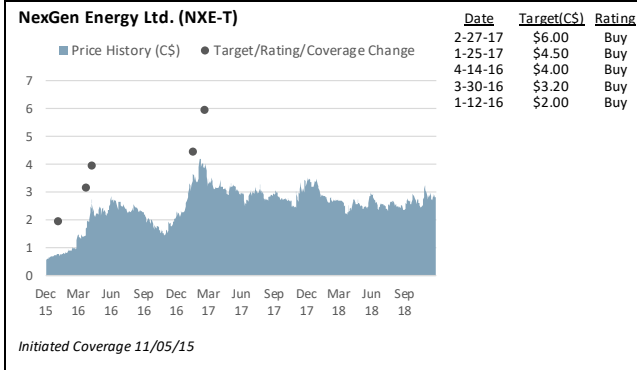
Price Chart, Rating and Target Price History (as of December 14, 2018)

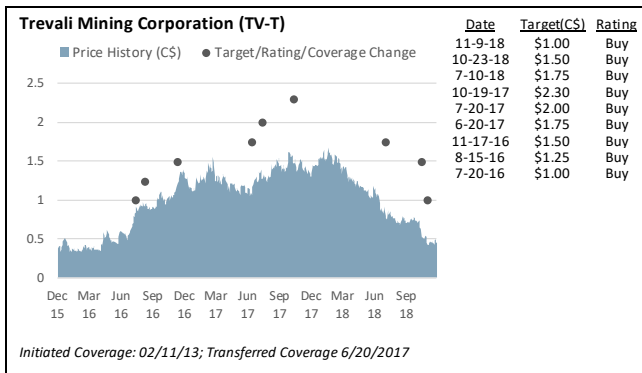
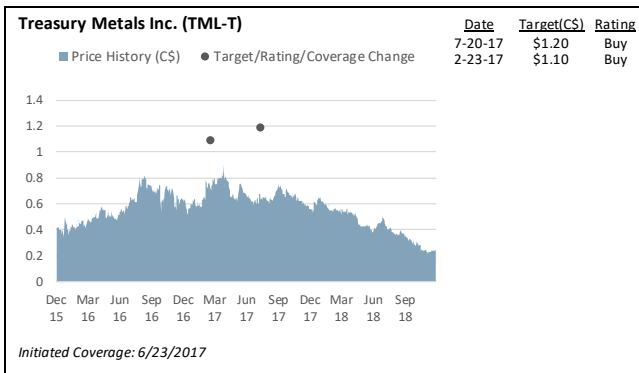
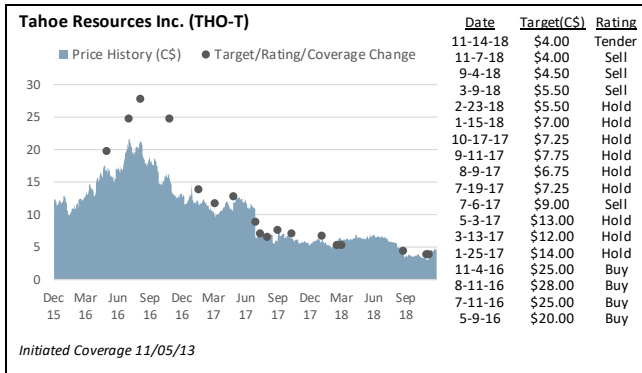
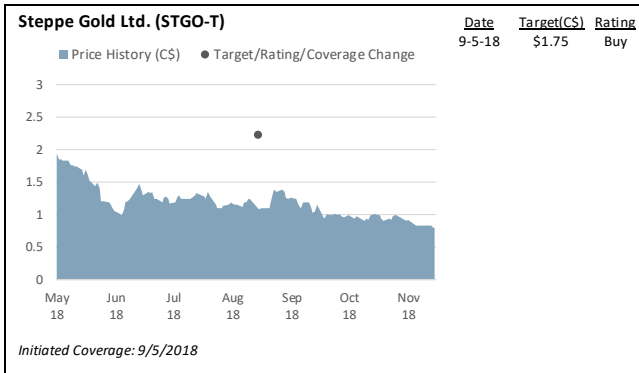
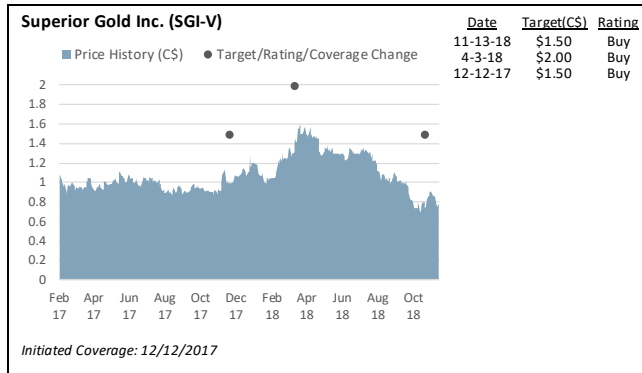
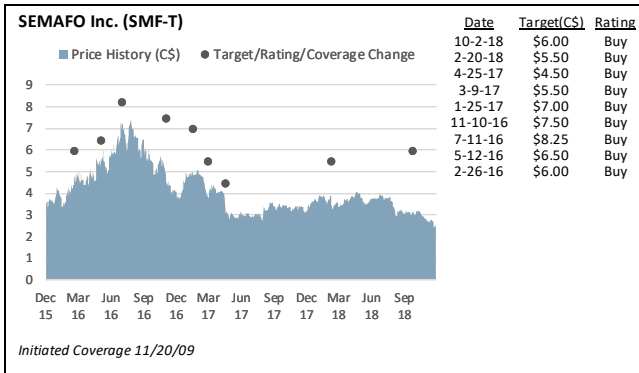
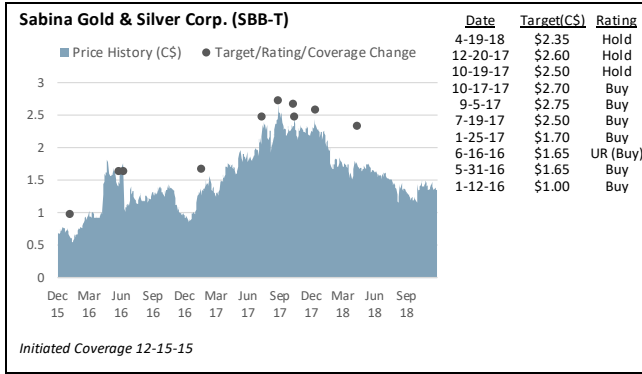
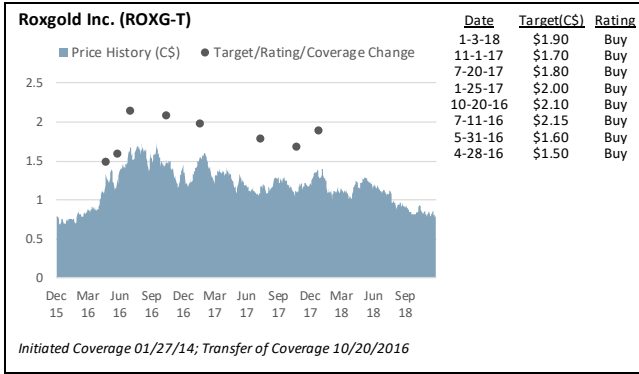


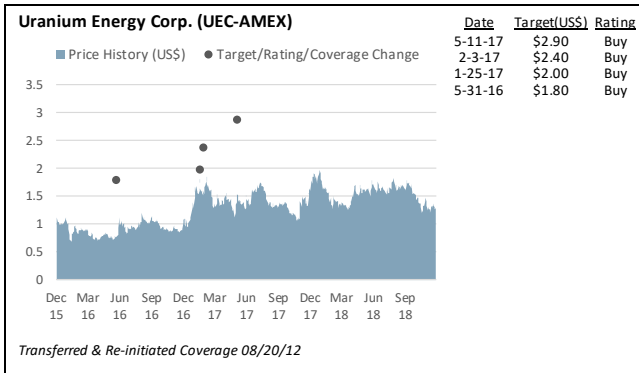
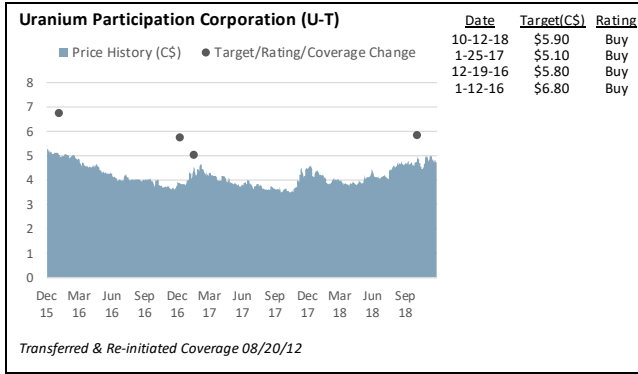
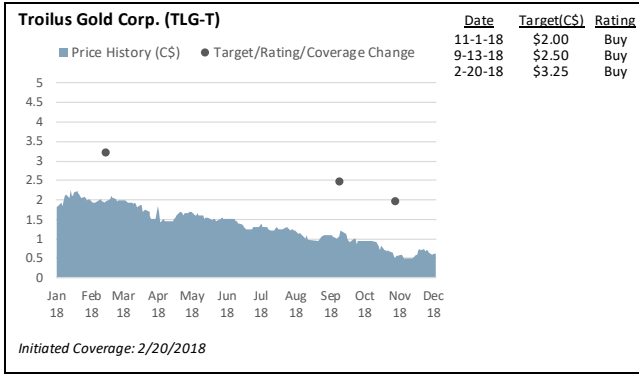












B: Buy; H: Hold; S: Sell; T: Tender; UR: Under Review

Source: Capital IQ and Haywood Securities

B: Buy; H: Hold; S: Sell; T: Tender; UR: Under Review

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