EXPLORATION
insights NEWSLETTER
JOE MAZUMDAR | BRENT COOK

Where do we go from here?

Thoughts on the past year and a macro outlook for 2020

by Joe Mazumdar on January 13, 2020

(White 'metal' rat, Latin style)

Happy New Year, and welcome to the third decade of the third millennium. While January 1st marks the beginning of the year in the Gregorian calendar, January 25th, 2020 kicks off the year of the White Metal Rat in the Chinese calendar.

The presence of metal in the almanac of the second largest global economy, which also happens to be the largest consumer of commodities, may foreshadow the beginning of yet another commodity supercycle. However, the absence of another consuming nation of the scale of China with the potential for double-digit growth on the horizon makes this proposition a bit far-fetched.

In this commentary:

- I reflect a bit on our history and accomplishments in the past year, and
- review the portfolio performance of both *Open* and *Closed* positions during 2019, including revisions to align myself with a renewed perspective on commodity trends (gold, silver, copper, nickel, palladium, uranium, and lithium).

Looking back

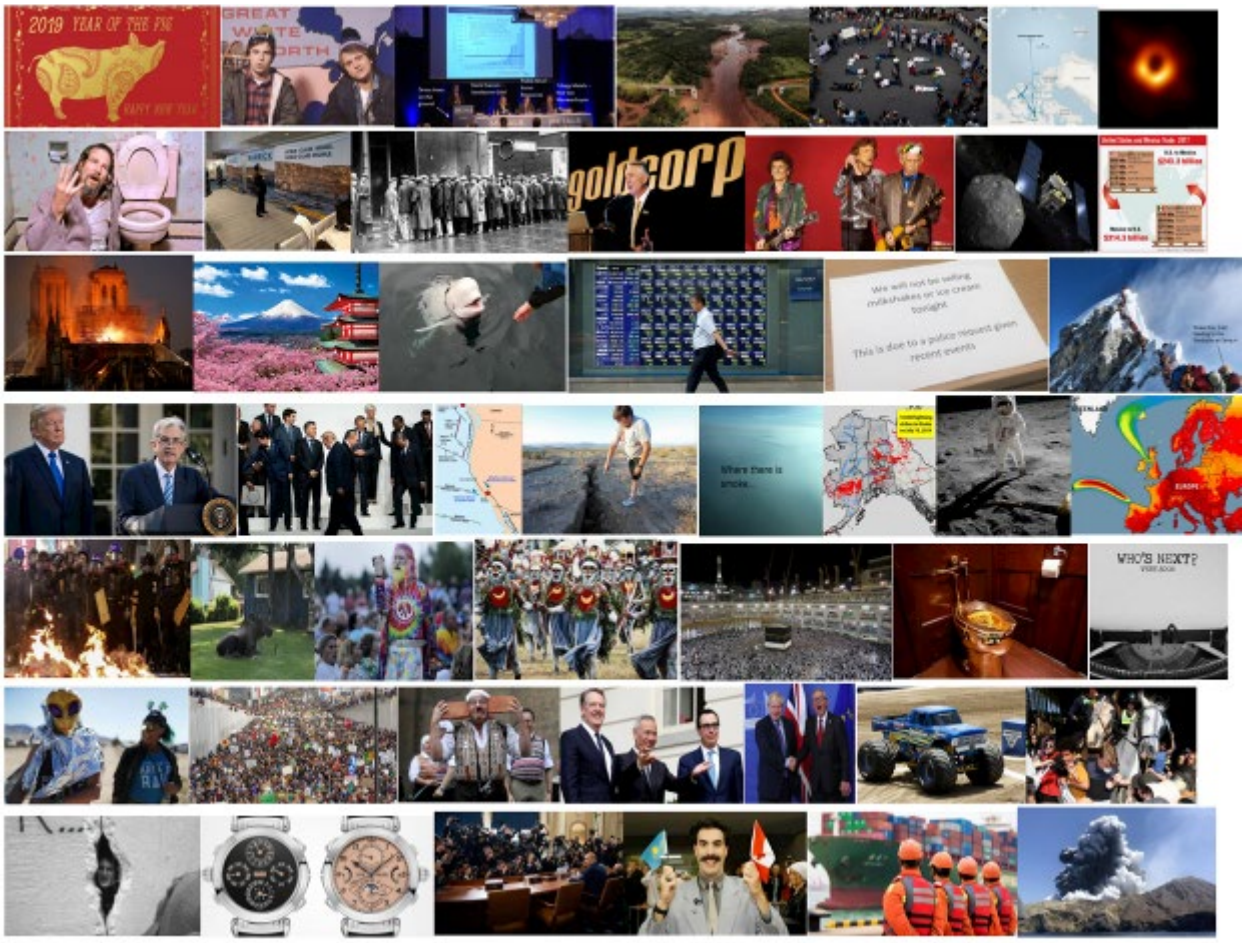
As we enter a new decade, I thought I would do a brief reflection on the longevity of *Exploration Insights*—which is now in its thirteenth year—before I delve into last year's achievements and our plans for the new year.

Paul van Eden, who was a broker at Global Resource Investments (now Sprott USA), began writing an investment newsletter dedicated to the mining sector in 2003, and did so until April 2008, when Brent Cook took over and put pen to paper in the first edition of *Exploration Insights*.

I began contributing to the publication in December 2015 and assumed full responsibility for it in March 2016. Now, almost halfway through my fifties, I plan to continue delivering the weekly well into the next decade, or until artificial intelligence replaces the real kind.

In 2019, we sent 48 newsletters to our subscribers' inboxes along with 5 Alerts (buy/sell) and 6 Comments (notable moves on portfolio companies), covering the companies in our portfolio as well as a variety of topics, including:

- portfolio updates and *Top Picks*
- macro themes that have impacted our investments in the mining sector such as a discussion on fund flows, a currency war, factors supporting an improving gold sentiment, interest rate cuts, trade tensions, and the copper market
- the underbelly of the Canadian junior market and the need to purge the number of miners listed in it
- the mega-mergers of the first part of 2019, which transitioned to a flurry of M&As in the gold sector in the latter part of the year
- Australian producers migrating into the Americas
- country reviews of Finland, Peru, and Japan
- conference reviews including the *Swiss Mining Institute* in Zurich and Geneva, the *121 Mining* in New York, the *FEM19* in Finland, *PeruMin* in Peru, the *Sprott Natural Resource Symposium* in Vancouver, *PDAC 2019* in Toronto, and the *Metals Investor Forum* in Vancouver and Toronto
- the post-mortem of a failed hard rock lithium play in northern Quebec



(2019 *Exploration Insights* in pictures)

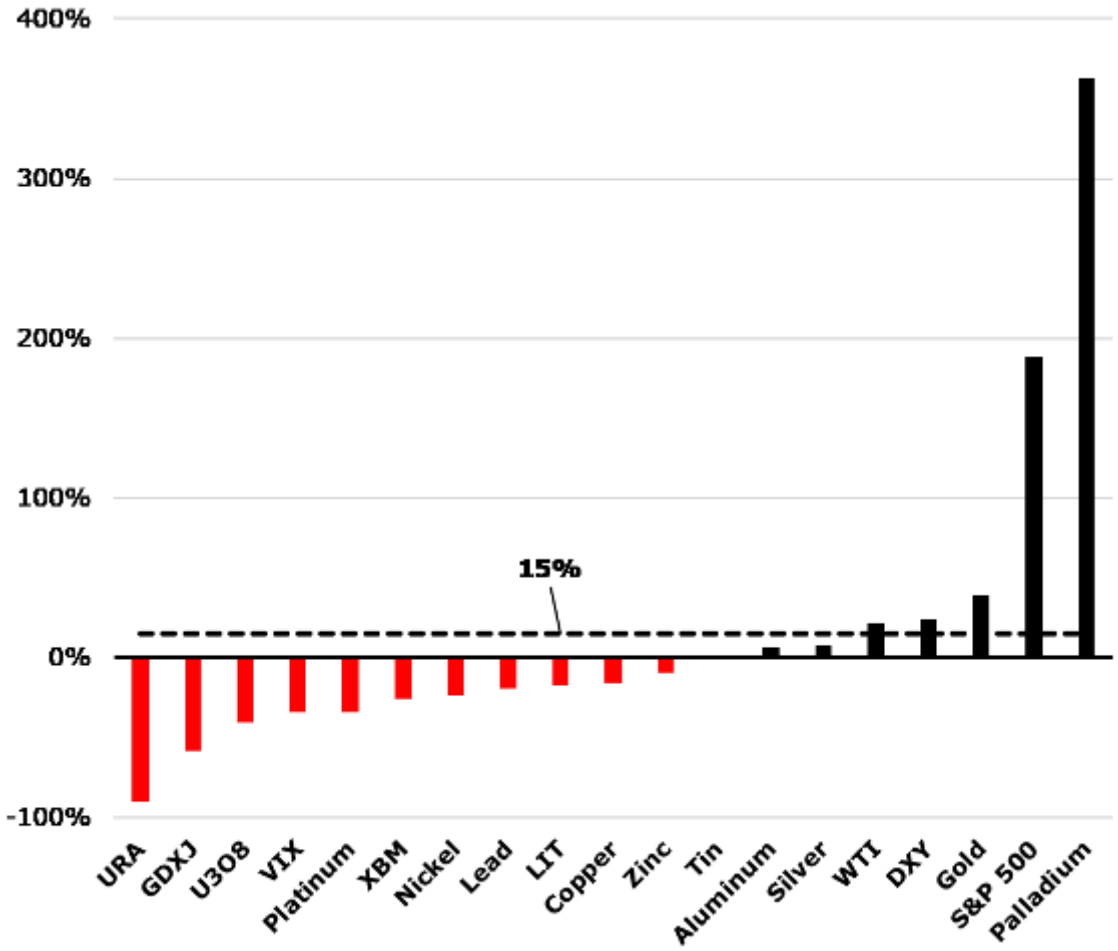
Apart from the publication of the weekly newsletter, I kept busy travelling to several conferences and projects in Mexico, Finland, British Columbia, Arizona, Chile, Japan, Ecuador, and Bolivia, among others. Conferences and site visits provide material for the letter and allow me to present our ideas to a broader audience as well as learn about different types of projects and the state of the mining industry in other countries.

I have also been conducting the *Capital Markets for Geologists* short course with several colleagues for the last couple of years. Recently, we have taken it on the road from Vancouver (AME Roundup, link here) to northern Finland (FEM19), and plan to continue to do so in the future. We do it not for the money, but because it allows us to meet and pass on knowledge to the next generation of miners, make new contacts, and reconnect with old ones.

Last year, we delivered on our promises to upgrade the *Exploration Insights* website and introduce a *Members Forum*, which has morphed into a lively platform for the exclusive use of subscribers to make inquiries, participate in discussions, and send comments. Time permitting, I enjoy answering questions as I always learn something new and, on occasion, generate new ideas for investment opportunities from them.

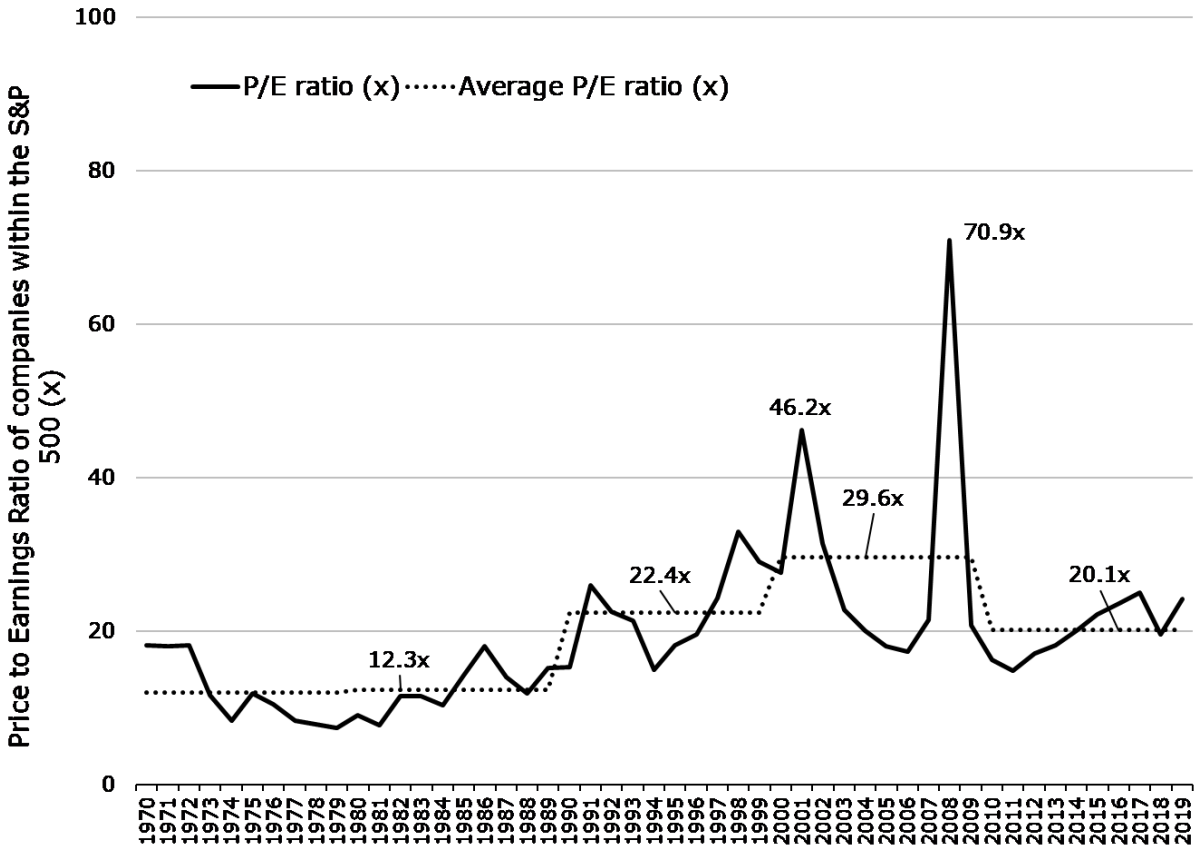
Commodity focus going forward

Over the past decade, the only metal that beat the S&P 500 (which generated a ~190% return, or 10-12% compounded annually, over the period) was palladium, (Fig. 1). Nothing else came close.



(Figure 1: Returns on commodities [Aluminum, Copper, Gold, Lead, Nickel, Platinum, Palladium, Silver, Tin, Uranium, Zinc and WTI], USD index [DXY], volatility index [VIX] and equity indexes [S&P 500, GDXJ, LIT, XBM, URA] over the last decade. Note that LIT, URA and XBM do not cover the entire decade. Source: *Investing.com and Exploration Insights*)

Given that the S&P 500 continually breaks its own records, generalist investors wonder if it is overvalued. However, although the average price-to-earnings ratio (P/E) of the companies listed on the index is currently higher than the level recorded before 1990, the average over the past decade (20.1x) is in-line with the previous ones, (Fig. 2).



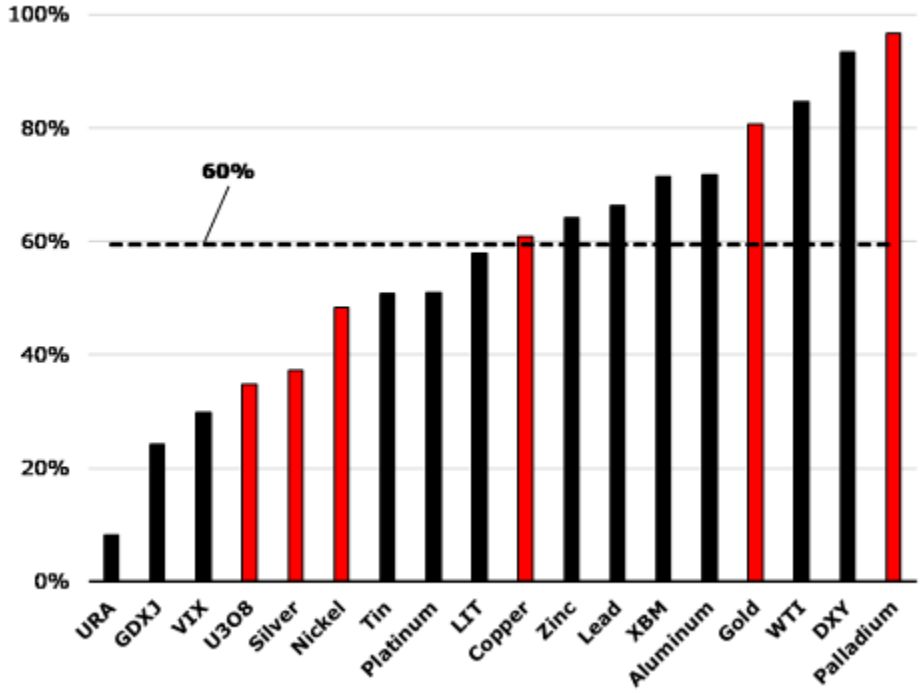
(Figure 2: Annual price to earnings [P/E] ratio of companies within the S&P 500 since 1970, with the decade averages [dotted line]. The P/E ratio peaked in the 2000s at 29.6x, with a high around the Global Financial Crisis at over 70x. Source: *www.multpl.com and Exploration Insights*)

Despite the potential for the continued strength in the broader U.S. equity markets to attract generalist investors, my commodity focus for mining equity exposure in the coming year is based on two central themes:

- **Gold and silver -** precious metals that benefit from a weakening U.S. dollar accompanied by rising levels of negative-yielding debt and global uncertainty in a year of U.S. elections.
- **Copper, nickel, palladium and, less so, uranium and lithium** - metals that may be positively impacted by global initiatives to reduce greenhouse gas emissions, which translate into the trend toward electric vehicles, more catalytic converters for vehicles using petroleum, and non-carbon based energy.

Except for gold and palladium, which is trading near its decade's high, the majority of my chosen metal exposures are trading well below their peaks from the previous decade, (Fig. 3).

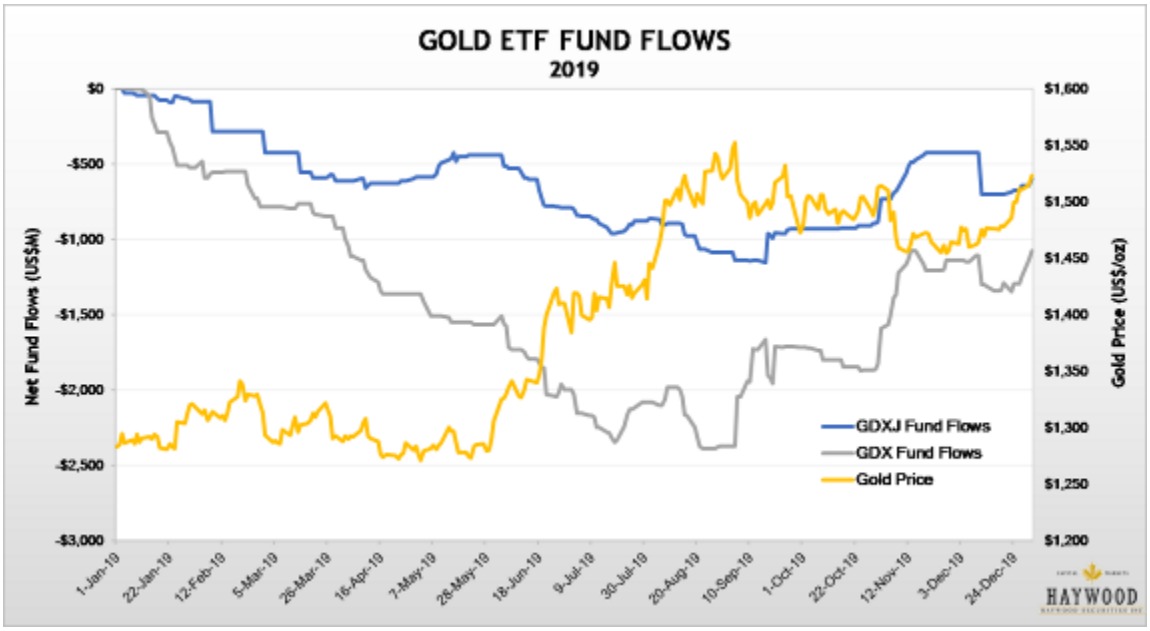
Interestingly, there can be a significant difference between the price levels of equities and the commodities underlying them. For example, although gold ended the year trading at ~80% of its decade's high, the precious metal equities index (GDXJ) traded at ~9%, although not as low as the uranium equities (URA).



(Figure 3: Latest prices of commodities [Aluminum, Copper, Gold, Lead, Nickel, Platinum, Palladium, Silver, Tin, Uranium, Zinc and WTI], the USD index [DXY], and equity indexes [S&P 500, GDXJ, LIT, XBM, URA] as a proportion of their highs over the past decade. Note a few of the equity indices [LIT, URA and XBM] do not cover the entire decade. Source: *Investing.com and Exploration Insights*)

The underperformance of gold equities versus the gold price in 2019 is a reflection of a reduced flow of funds into the gold equity ETFs (GDX and GDXJ), which were down US$1.0 billion and US$0.6 billion, respectively.

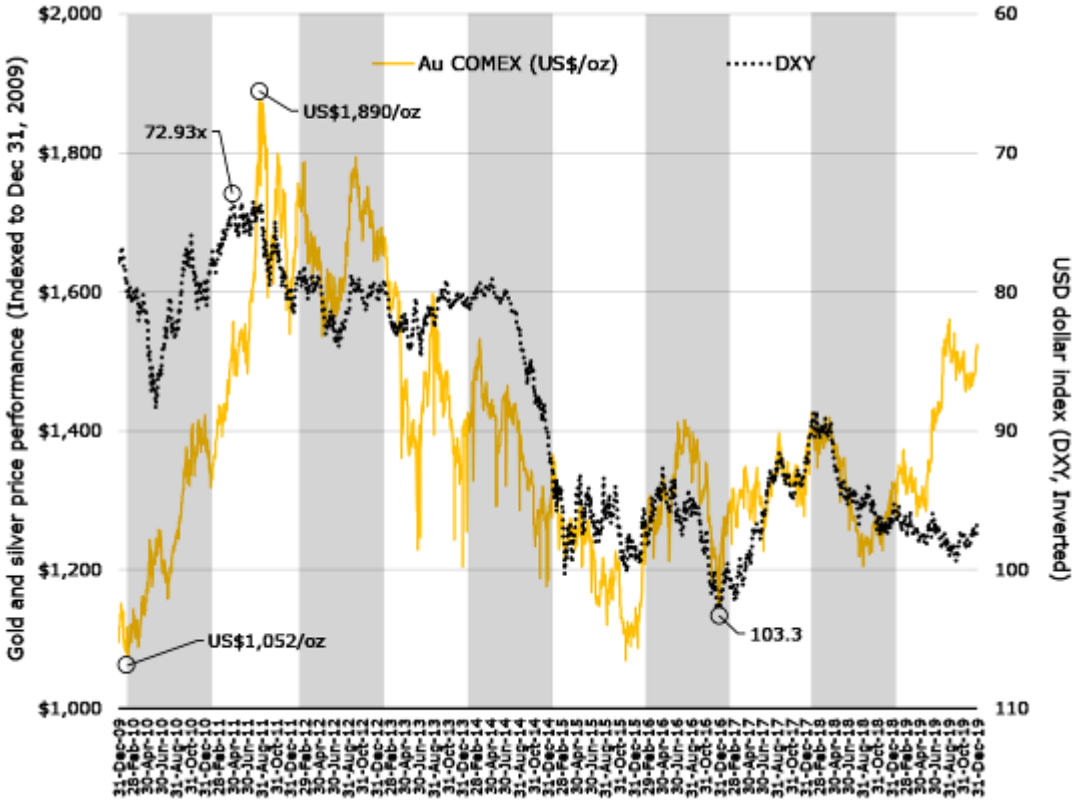
By sharp contrast, the gold ETF (GLD) received US$5.2 billion. That said, after the gold price reached US$1,550 per ounce during the summer, inflows for both the GDX and GDXJ began trending upwards, as generalist investors were slow to take notice, (Fig. 4).



(Figure 4: Gold ETF fund flows [GDX, GDXJ] versus the gold price during 2019. Source: *Haywood*)

Gold is the largest metal market I am focused on; therefore, it is also my most considerable exposure in the equity portfolio.

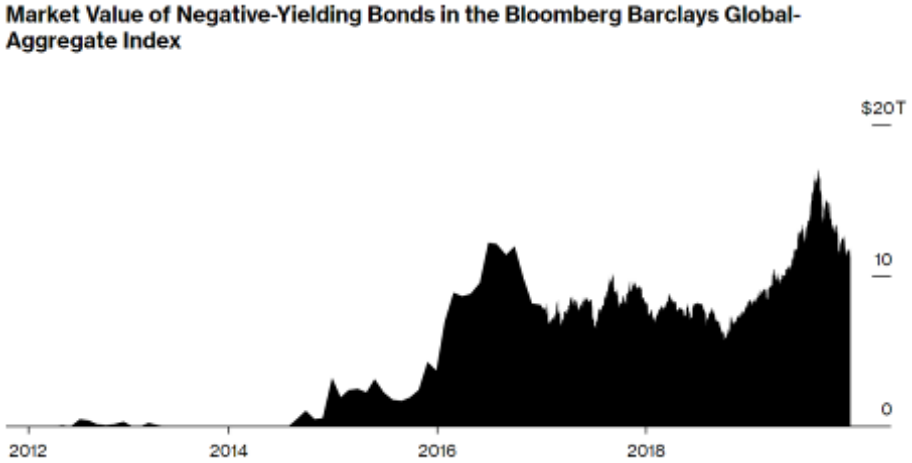
The historical inverse relationship between the gold price and the U.S. dollar is well-known, and it's been evident over most of the last decade. Gold reached a peak of US$1,890 per ounce in 2011 during a period of weakness of the trade-weighted U.S. dollar index (DXY), (Fig. 5), after which it began a downward spiral to a low of ~US$1,060 per ounce in 2015.



(Figure 5: U.S. dollar-denominated gold price over the past decade [2010 to 2019] versus the trade-weighted U.S. dollar [DXY, **inverted**]; therefore, when DXY rises, the U.S. dollar weakens. Source: *Investing.com and Exploration Insights*)

Even though the DXY has been gaining strength since the most recent period of vulnerability at the beginning of 2018, the gold price has also made headways, breaking past the US$1,500 per ounce mark during the summer of 2019.

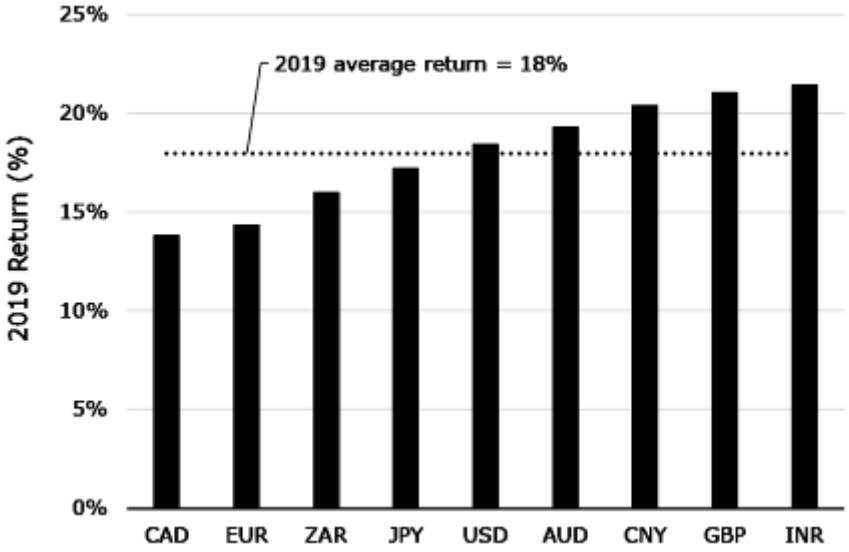
The resilience of the gold price in the past months could be attributed to concerns about weaker global growth rates, which underpinned a number of U.S. interest rate cuts. In addition, although the amount of global negative-yielding debt has fallen back from a peak of ~US$17 trillion, it is still at a high level, (Fig. 6).



(Figure 6: Market value of negative-yielding bonds. Source: *Bloomberg*)

An excellent sign that the gold price is currently well-supported is its strength in multiple

currencies, not just the greenback, (Fig. 7). The average return for nine currencies was 18% during 2019, with the Australian dollar (AUD) gold price dominating over other gold producing nations like Canada (CAD), the US (USD), and South Africa (ZAR). As discussed a few times in the newsletter, the higher Australian gold price has supported many acquisitions in the Americas by Australian-listed producers.



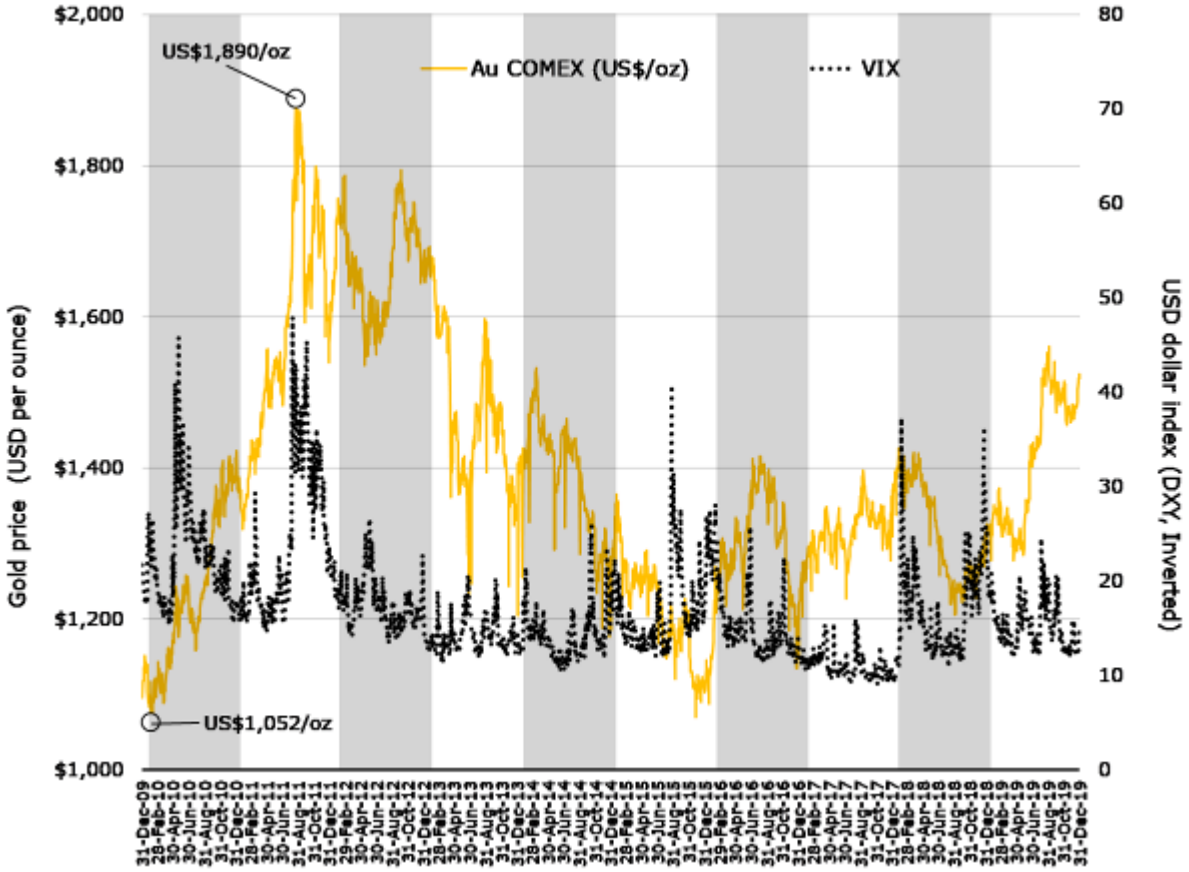
(Figure 7: Gold returns in multiple currencies during 2019. Source: *Investing.com and Exploration Insights*)

As we are well aware, global geopolitical incidents can trigger spikes in the gold price. Since the beginning of 2020, the gold price has been trading up to ~US$1,600 per ounce as the markets absorb a couple of events that have generated market volatility and driven investors to safe-haven assets such as gold and the U.S. dollar:

- the U.S. administration drone-strike killing of a prominent Iranian general in Iraq, and
- the declaration by the North Korean dictator Kim Jong Un to end a moratorium on missile tests, while threatening to unveil a new strategic weapon.

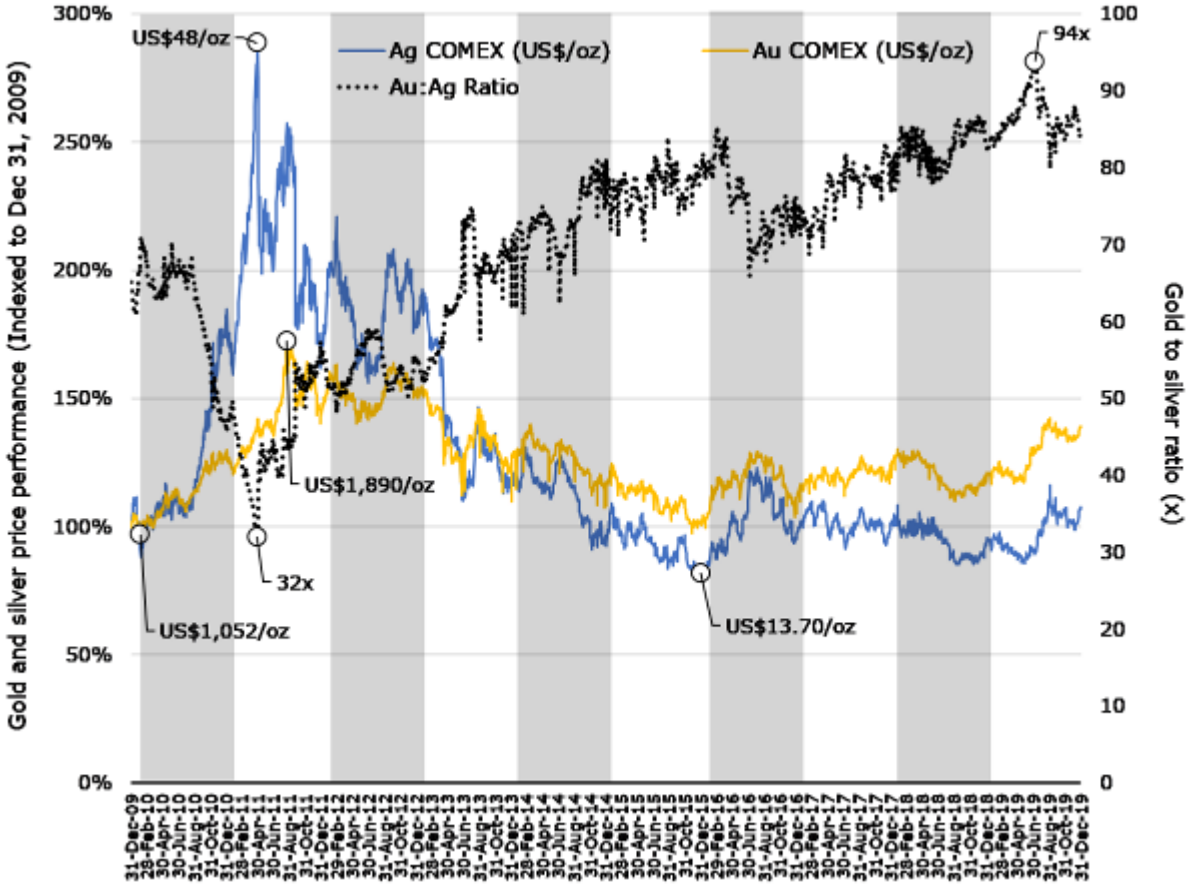
Yet the impact of these geopolitical flashpoints can be ephemeral, so another sharp increase in the gold price beyond US$1,600 may require more market volatility than in 2019, (Fig. 8). An election year in the U.S. combined with an impeachment trial in the Senate may provide the necessary fuel.

To be clear, I am not betting on World War III just to make a double on a junior gold mining stock.



(Figure 8: U.S. dollar gold price over the past decade [2010 to 2019] versus the CBOE volatility index [VIX]. Source: *Investing.com and Exploration Insights*)

I also continue to be bullish on **silver**, which is the higher-beta of the two precious metals. The gold-to-silver ratio reached its lowest point of the decade (32x) in early 2011 when gold was approaching its peak, (Fig. 9). Since then, it has been moving up, peaking at 94x in the middle of last year.



(Figure 9: Gold and silver price performance in U.S. dollars over the past decade versus the gold-to-silver ratio. Source: *Investing.com and Exploration Insights*)

Since a fall in the ratio to the 60-70x level would be highly favorable to precious metal producers, I have added a mid-tier silver metal producer as a *Top Pick*. The stock has provided a 50-55% return so far on my January 2019 position.

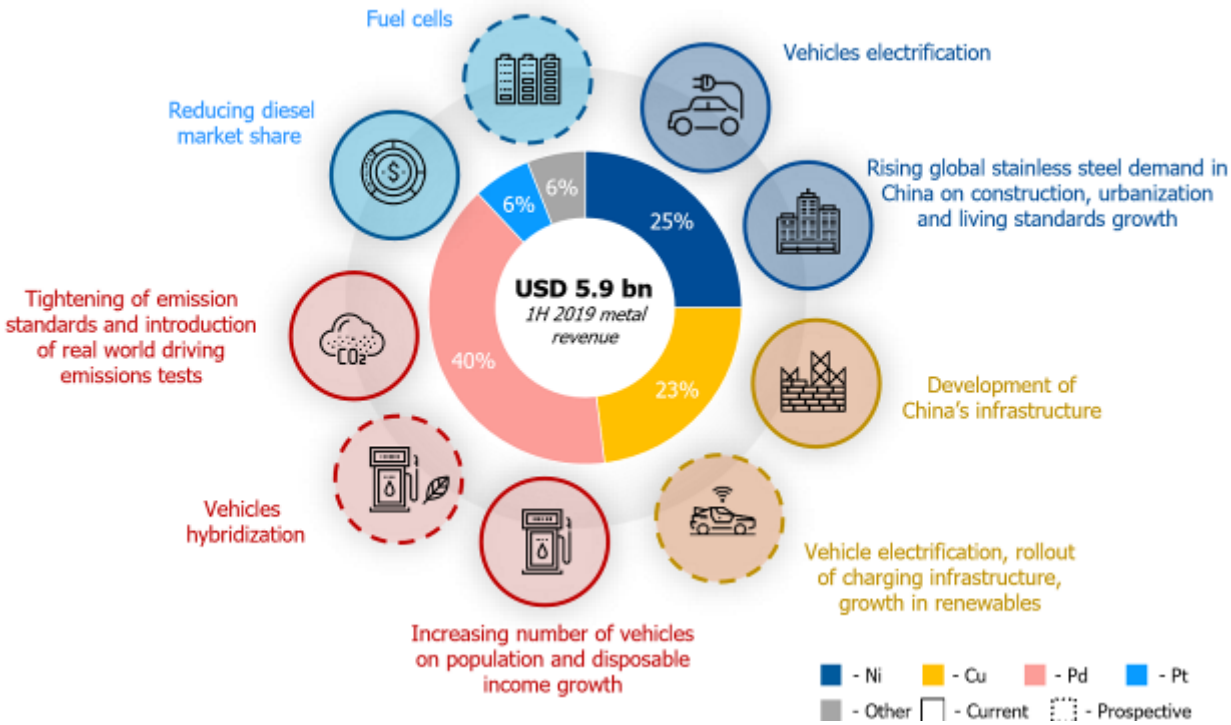
Another outperformer has been a royalty/streaming company that was up 53% in the portfolio in 2019.

I also have four gold-focused *explorers* in the portfolio that currently have active drill programs. For those attending the *Metals Investor Forum* in January (check the website's *Travel & Appearances* section for details), the CEOs of two of the companies will be there to present and take questions during my session.

The next major commodity theme that is driving my investments in the mining sector is the **climate change movement**. Whether you are a climate change denier or Greta Thunberg, (Fig. 10), we can't ignore that there is a lot of capital being deployed for the reduction of emissions of greenhouse gases.

(Figure 10: From little things, big things grow. Source: *Getty Images and theguardian.com*)

Several global initiatives, including vehicle electrification, vehicle hybrids, and tighter emission standards, are having positive impacts on several commodities, including **copper, nickel, and palladium**, (Fig. 11).



(Figure 11: The impact of several initiatives to reduce greenhouse gases, including vehicle electrification, vehicle hybrids, and tighter emission standards on copper, nickel, and palladium. Source: *Norilsk Nickel*)

The near-term tightening of emission standards combined with a reduction of diesel-fueled cars has led to a particularly strong demand for **palladium**, a metal that is critical for

catalytic converters, hence its outperformance, (Fig. 1 above).

But it is not easy to gain exposure to palladium without taking on the jurisdictional risk of Russia or South Africa. Norilsk Nickel (NILSY.OTC, GMKN.MSE), the Russian-based diversified miner, which has a market capitalization of ~US$50 billion and is well-exposed to palladium, nickel, and copper, is up ~60% in 2019 and trading at an all-time high on the Moscow exchange, (Fig. 12).

(Figure 12: Norilsk Nickel [GMKN.MSE] share price performance over the past two decades. Source: *Investing.com*)

Regarding junior explorers, I had considered taking part in a private placement to raise funds for Palladium One Mining (PDM.V) back in early November 2019, but I had issues with the grade and potential metallurgy of the Kaukua resource in Finland that dissuaded me.

Despite my reluctance, I suggested to our subscribers that it would still be worth a punt as the share price could move up in a positive palladium price environment. I should have followed my own advice. Since then, the share price is up 230% from the oversubscribed private placement (C$0.06) based on retail investors' demand for exposure to the metal.

My current **copper** exposure includes a junior explorer that is in my *Top Picks* list and whose share price has risen ~44% since early December. The other two copper juniors I hold are currently focused on overcoming permitting delays at their respective projects.

With respect to **nickel** exposure, I took a position in an Australian-based explorer for a promising project it is pursuing in East Asia. Assay results from its active drill program are pending, but may be available in January before the Vancouver mining conferences. The company's CEO will also be presenting during my session at the *Metals Investor Forum*.

I have only one advanced explorer/developer in the **lithium** sector, and I am not planning on adding any others at the moment. The company's experienced management team and the asset's strategic location are factors supporting my decision to hold the stock.

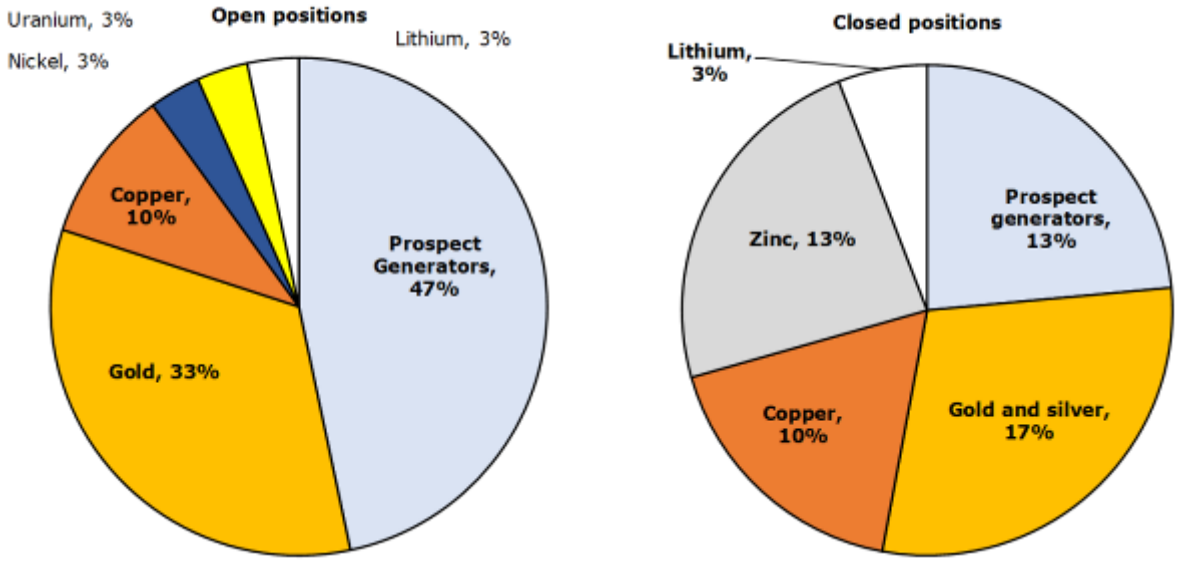
I recently added a leveraged U.S.-based **uranium** play for its short-term exposure (first half of 2020) to a potential restriction of U3O8 imports into the U.S. by the current administration. Given the company's hefty G&A burn rate of ~US$14 million per year, I am not keen on holding it much longer. Therefore, I will most likely seek another company to

gain leverage and longer-term exposure to a potential turnaround in the uranium market.

2019 and overall portfolio performance

After making numerous adjustments to the portfolio during 2019, including the closing of 17 positions in 10 companies and the addition of 7 new positions in 7 new companies, my **open positions** currently comprise 30 holds in 20 companies, (Fig. 13). The breakdown is as follows:

- *47% in prospect generators*, or 14 positions in 7 companies
- *33% in precious metals (gold and silver),* or 10 positions in 7 companies
- *10% in copper*, or 3 positions in 3 companies
- *3% in nickel*, or one position in 1 company
- *3% in uranium,* or one position in 1 company
- *3% in lithium,* or one position in 1 company



(Figure 13: Open positions [left] and Closed positions [right] by focus or commodity. Source: *Exploration Insights*)

By the end of 2019, the open positions had generated an unrecognized average return of ~18% since being added, and a 30-35% return during 2019 alone. The outperformers were led by several long-term positions in prospect generators followed by more recent purchases of liquid precious metal producers and a copper development story. By comparison, at the end of 2018, the open positions had generated a return of only 5-6%.

The underperformers included badly timed positions in a pair of prospect generators, followed by the dismal performance of a copper explorer (Chakana Copper, PERU.V), which I sold.

I was fairly aggressive in 2019 trying to resurrect the portfolio's performance and managed to break even on the closed positions after cutting out 17 positions in 10 companies.

The overall return from the **closed positions** in 2019 was only ~2% and was driven by the sale of all three positions in a royalty company, one position in a prospect and royalty generator, and a couple of positions in a near-term gold producer based in Western Australia.

In 2018, the sale of 7 positions in 6 companies generated a return of ~140%, heavily weighted to the sale of one of them for a 1,280% profit!

The rationale for the 2019 sales was simple: the companies managed to fulfill my investment thesis, and I wanted to re-allocate the funds. For example, the funds from the sale of one of the royalty companies were used to finance a position in a diversified (geography and commodity) prospect generator that offers a similar strategy but at a fraction of the valuation and with a different geographic focus.

In other instances, the decision to sale was triggered by the following:

- Advantage Lithium (AAL.V) - Geopolitical tensions, significant financing risk, combined with the near-term oversupply of lithium carbonate negatively influenced the stock price of this lithium position.
- Azucar Minerals (AMZ.V) - Drilling results from this junior explorer's ongoing program in Mexico did not delineate a sizable copper-gold target.
- Almadex Minerals (DEX.V) - There was a lack of newsflow from this Mexico-focused prospect generator, despite having a good working capital position, several royalties that could potentially be monetized, and a proven group of explorers at its helm.
- IAMGold Corp. (IMG.T, IAG.NYSE) - The underwhelming announcement by this Canadian gold producer, which I had purchased in December 2018 for leverage to the gold price, that it may build a marginal deposit in Ontario during a low-gold-price environment, added to a pair of dismal quarterly performances and the temporary suspension of one of its operations.
- Fireweed Zinc (FWZ.V) - I was a reluctant seller of this base metal (lead and zinc) explorer in the Yukon, but the turn in the zinc market forced my hand. Since my sale, the company has returned encouraging results, but I suspect the end-of-the-field-season treasury will be insufficient to fund another field program, which will likely prompt another financing early in 2020—not atypical for many Canadian explorers. For those keen on the zinc market, Fireweed still represents a viable exploration story, though you may want to wait for the next financing event.
- GT Gold (GTT.V) - This exploration team did an excellent job discovering a high-grade zone of porphyry-related copper-gold mineralization, but I sold my position as the tonnage and grade I estimated for both an open pit and an underground resource was, in my opinion, not big enough to generate a stand-alone project for its strategic investor.
- Minaurum Gold (MGG.V) - Despite this company's project in Mexico being highly prospective for precious and base metals and the management team doing a great job of maintaining its valuation in a volatile market, the drilling progress has been slow due to the fact that part of the project falls within a natural reserve. My February 2019 sale provided the funds to purchase another copper-gold explorer.
- Tinka Resources (TK.V) - This former *Top Pick* had provided a double on our original investment by the end of 2017, during a period of buoyant zinc prices combined with the discovery of a new mineralized zone in its flagship project. Unfortunately, I failed to take some money off the table, and since then, the share price has underwhelmed. That said, when I sold my position, I didn't think the zinc market was

poised to improve sufficiently in the near- to medium-term to prompt a bid for the project from a potential suitor. Yet, the company proved me wrong when a local miner placed a bid to purchase a big swath of its shares. For those still keen on zinc, Tinka Resources may represent a good investment as its management team is very sound technically.

Overexposed to prospect generators?

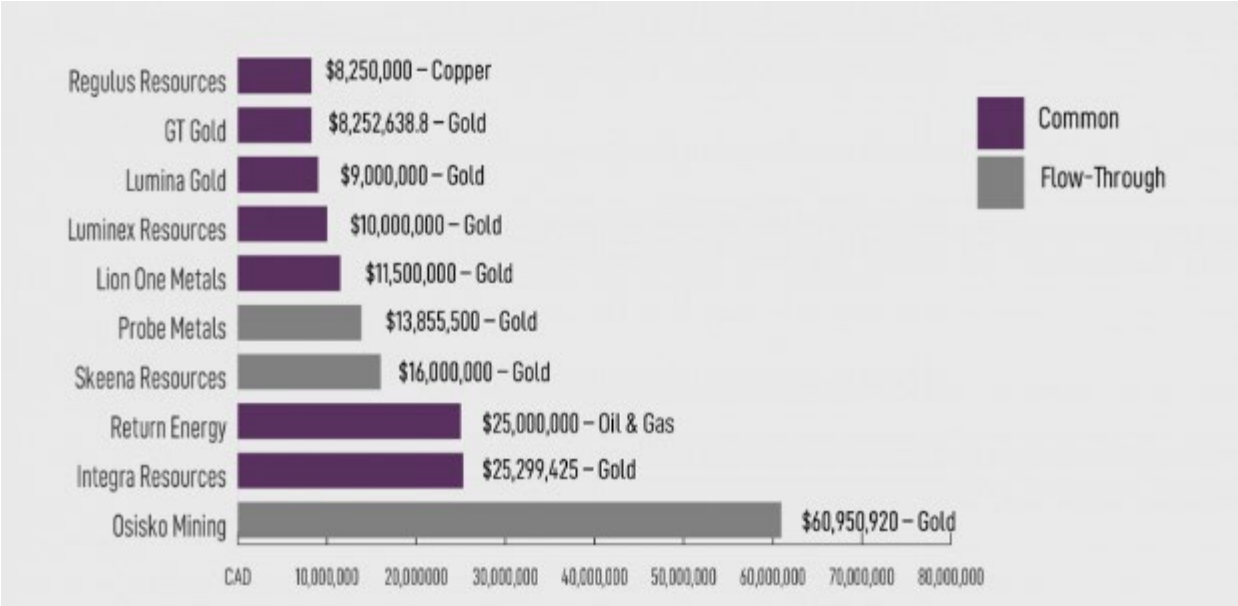
As pointed out earlier, about half of the portfolio open positions are in **prospect generators**, whose underlying strategy is:

1. to maintain a relatively tight share structure during periods of high financing risk by joint venturing their projects, and

2. employing their partner's money to fund exploration for precious and base metals.

However, when markets rebound and junior miners have the ability to re-capitalize, prospect generators are less popular with retail investors. Right now, there is no denying the interest level of retail speculators in junior explorers.

According to Oreninc, Canadian listed companies with a market capitalization of less than C$1.5 billion raised C$188 million in December 2019 alone, with the vast majority (>80%) accounted for by gold companies, led by Osisko Mining Corp. (OSK.T), (Fig. 19).



(Figure 19: Canadian market's top ten equity financings of companies with less than C$1.5 billion in market capitalization during December 2019, Source: *Oreninc*)

- One of my *Top Picks* is a prospect generator focused on precious metals and copper in South America, with an asymmetrical risk to reward ratio, several joint ventures with major companies, active drill programs, and minimal financing risk. Again, for those attending the *Metals Investor Forum* in January, its CEO will be presenting and taking questions.

- The underlying value of another prospect generator I hold is being supported by a healthy working capital and a 2% net smelter return (NSR) royalty on a gold-silver project in Mexico. Besides, the company is one of the best-managed; therefore,

worthy of a long-term approach.

- One of my better-performing stocks in 2019 was a prospect generator that discovered high-grade precious metal mineralization in a joint venture with a Canadian miner in Mexico. Its management team will also attend the *Metals Investor Forum* in January.

  The joint venture, which is now operated by the major precious metal producer, would need to find substantially more mineralization to satisfy its goals. Failing that, the project may be returned to the junior, who would have to find a partner with more modest expectations.

  Still, the prospect generator, who currently has an enterprise value of US$12-14 million (C$16-18 M), is undervalued for an exploration play with two prospective, relatively virgin epithermal precious metal projects in two prime mining jurisdictions.

- Another company I placed in the prospect generator bucket has 24 precious metal projects in southeast Asia and will need partners with deep pockets to advance them. The junior explorer is currently focused on low sulfidation epithermal prospects and has an active drill program on a couple of them, so I anticipate not only assay results but also news on its potential first joint ventures.

- The remaining prospect generators in the portfolio are focused on base metals. The potential reward in owning one of them is the discovery of a significant economic copper deposit in one (or more) of several joint ventures it holds with major base metal players in Eastern Europe. The company recently raised C$1.5 million in gross proceeds and its low enterprise value (<C$10 M) limits its downside risk.

- I also continue to hold a South American prospect generator as it has a low enterprise value of C$22 million (US$17 M) with upcoming drilling catalysts from a copper joint venture in Brazil and a precious metal joint venture in Peru (it has a fully-carried 30% interest in the former and a 2% NSR royalty in the latter). Furthermore, in early December 2019, the company announced that one of its copper projects in Brazil may begin mining activities by the first quarter of 2020 and hit commercial production by the middle of 2020.

  The company has a 5% carried interest in the project as well as a 2% NSR royalty on all the metals extracted. On a 500-tonne-per-day scenario, the royalty alone has the potential to cover 35% to 70% of the company's annual burn rate.

To summarize the current state of the *Exploration Insights Portfolio* and my actions moving forward:

- My current ***Top Picks*** are a major precious metal producer in a joint venture with a prospect generator in Mexico, a copper exploration company focused on exploring and developing a mining district in Alaska, and a prospect generator focused in South America.

- My commodity ***focus*** is on gold, silver, copper, nickel, palladium (though difficult), and less so lithium and uranium.

- Although the investment theses for the majority of them are still valid, I may need to reduce the number of ***prospect generators*** in the portfolio (47%) to better align myself to the rising interest of retail speculators in junior explorers.

That's the way I see it,

Joe Mazumdar

To find out more about the themes that I discussed in this report and the companies in the portfolio, consider subscribing to the newsletter.

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