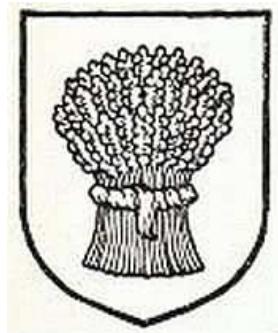


Tuesday, January 5, 2021



HALLGARTEN & COMPANY

Portfolio Strategy

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Model Mining Portfolio: Hindsight is 2020

Performance Review – December 2020

Model Mining Portfolio

Hindsight is 2020

- + The year starts on a rather positive note for metals and minerals with prices rising in a seeming divorce of sentiment from that in the broader global economy
- + Copper sustained itself above \$3.50 per lb but Zinc slipped back slightly
- + Gold has started the year strongly on scant political developments suggesting trading strategies are taking the upper hand
- + Tin broke higher moving definitively above \$20,000 per tonne
- + The gold/silver ratio returned to a favorable trend for silver
- + A shift of emphasis away from services to the “productive” economy might be a lasting effect of the pandemic
- ✗ Global economies are weak with no end in sight to the pandemic and its devastating effects
- ✗ Vanadium continues to wallow, pricewise, even as interesting vertical integration developments multiply
- ✗ The Rare Earth space is now a heaving mass of wannabes with investors again falling into the same traps laid for them in 2009-11

Mandarin's Gambit Declined

Seemingly all the world is chess-obsessed these days. Tis not a bad thing. Russia, besides its brutal winters, had the fact that all its leadership were avid chess players as (maybe) a decisive factor in repulsing the Germans in the darkest days of World War II. Having ourselves revived the chess habit in recent months it does have the effect of changing the way one thinks, particularly with regard to strategy. In applying chess logic to various scenarios we can't help but all draw parallels with China and its recent strategy failures. The Chinese could do with brushing up their gambits.

The wake-up call to China's machinations has boomed forth loud and clear first with Trump's Trade War and then the pandemic. The process of re-onshoring is being sped up even though it may just be a variation on a theme (i.e. out of China, in to Vietnam or Bangladesh). China is just not cheap anymore and carries with it all sorts of event risks for all except the



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most desperate (i.e. Apple). This process is heightened by various governments subsidizing (or using high level suasion) to “encourage” their companies to shift production out of China (Japan being one of these). The matter is further muddied/compounded by actions such as China’s aggressive trade attack on Australia, revenge arrests of Canadian citizens, rising Baltic Dry shipping rates, the ever murkier situation in the South China Sea and the fading of the Belt & Road Initiative. China has even forgotten its ancient sage’s warning against having too many enemies at once. The headlong rush has resulted in stepping on too many toes simultaneously.

For example, it has managed to get itself into spats with four out of the five members of the Five Eyes consortium, all at once. Well done....

Back to the chess analogy, China has advanced too many of its major pieces into positions of vulnerability and ended up capturing only pawns. On its international capital projection it has started to look a lot more like Japan 1989, just with less golf courses, Sunflowers or the Rockefeller Center.

Contrary to Chinese triumphalism there have been more setbacks for China’s board domination strategy in 2020 than it would care to admit. Introspection though is not on the official agenda of meetings of the Central Committee in Peking these days.

We need only look at some of the small victories of those pushing back against the Panda’s embrace to see that resistance is gaining traction. We have the success of the Tungsten pushback, the renewed sense of purpose in breaking the Chinese stranglehold on Rare Earths and actions being taken in Canada and Australia against Chinese mineral acquisitions.

Some of the actions of the Chinese regime appear to be akin to the own goals we have seen so frequently over the last decade in Turkey. This involves turning upon successful entrepreneurs that do not entirely toe the line and in the process blowing up “champions” and replacing them with lapdogs. Now, in turning upon Jack Ma, the Peking leadership looks more like Erdogan than anyone else. Take gun... target foot..... fire....

China has not had such a concentrated circle of power since the days of Mao... and as we well know Mao was prone to strategic errors and when he made errors, he made them on a truly epic scale. Clearly Xi is a poor strategic thinker and is currently blowing his game, blundering all over the global chessboard. He is not in checkmate yet and probably won’t be. But the time has come to seek a draw and rematch.

Gold vs Silver

Precious metals roared back into focus in 2020 after coming back in from the cold over the last two years. It seemed to be that neither the two usual pillars of a gold turnaround, inflation or political insecurity, powered the surge. No-one is complaining though that the rally lacks much underpinning.

Few know that for a long, long time (indeed centuries) a ratio of 15 to one between the silver price and the gold price was regarded as fit and proper. It is seldom that the ratio got as out of whack as it did in

early 2020, soaring to 128 to one.



The trend has generally been downwards since that time and (except for one reversal) it has powered down to levels not seen for several years now. We would expect this trend to continue. Our 2021 year-end projections have the ratio at 67 to one and at year-end 2022 at 63 to one.

Despite this one still might get a surprise and one is more likely to see silver in the high \$30s than one is to see gold at over \$2,500 in the next twelve months.

Portfolio Changes

During the month we added LONG positions in Hochschild (HOC.L) and in Elemental Royalties (ELE.v).

Hochschild Mining (HOC.L) – Seriousness Does Not Pay

In a market that has more hand-wavers than a Bay City Rollers concert (dating ourselves there..) some of the more serious or dare we say, the most serious players are not only ignored but actively punished. We took the opportunity during the month to add a **LONG** position in Hochschild Mining to the Model Resources Portfolio after its price was brutalized due to a substantial disposal by an insider. This only went to shows that all the self-styled sophisticates in the precious metals space don't amount to more than a hill of beans.

The specifics of the transaction were that Eduardo Hochschild sold 15.5m shares (3.1% of the company) at a price of 270p raising £41.9m via JP Morgan Securities. After the sale he owns 51% of Hochschild's equity. Bizarrely the FT described him in its headline as the founder (when the company was founded in 1913).

The simplistic response of observers was “something must be wrong”, but from our vantage when we see a rather elderly veteran of the company selling a big stake we think “estate-planning”, “tax-planning” or, perish the thought, “divorce”. But the Know-Nothings think that a veteran exec, that has seen silver at \$7 per oz, is spooked by silver going from \$27 to \$23 per oz. Give us a break....

As the chart that follows shows there was a steep drop in price in the early days of December with a massive surge in volumes:



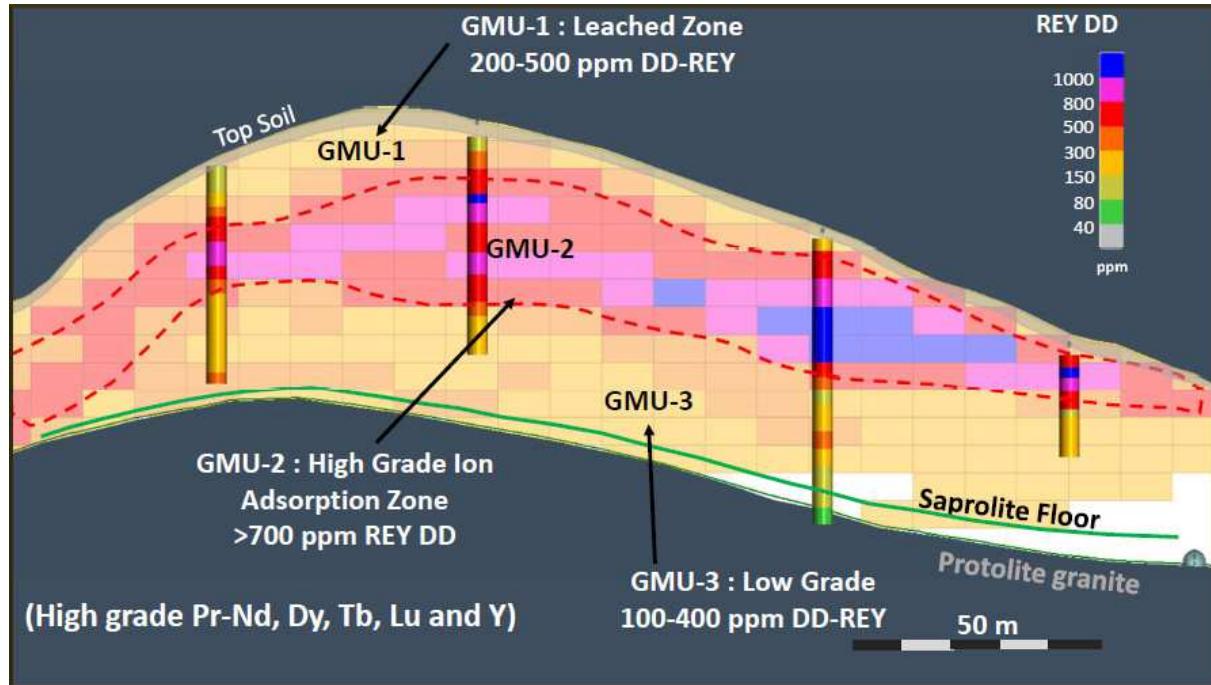
Hochschild Mining plc is a LSE-listed silver and gold mining business operating in North, Central and South America. It is headquartered in Lima, Peru, with a corporate office in London. The company currently operates three underground mines (two located in southern Peru and one in southern Argentina). All of its underground operations are epithermal vein mines and the principal mining method used is cut and fill. The ore at these operations is processed into silver-gold concentrate or doré. It has another mine mothballed a handful of

In 2019, we produced 16.8 million attributable ounces of silver and 269,900 attributable ounces of gold (approximately 37 million attributable silver equivalent ounces or 477,000 gold equivalent ounces).

We were seemingly one of the few impressed by the earthshaking announcement of Hochschild acquiring the part of Biolantanidos in October of 2019. The target being an advanced development stage Ionic Clay miner in Chile.

Hochschild had previously invested US\$2.5mn in the project during 2018 and early 2019 in exchange for a 6.2% equity stake with an option to increase ownership. It was this option that was exercised in the last quarter of 2019, finally acquiring the remaining 93.8% stake for \$56.3m. The BioLantanidos brought

with its ownership of approximately 72,000 hectares of concessions and an initial modular project developed in the Penco area in an area of 300 hectares, approximately 15km from Concepción in Chile.



The fascinating thing is that we have a mid-sized cash-flowing miner as an interloper entering a subspace widely regarded as blighted and snapping up one of the few assets capable of being added to the thin ranks of HREE producers. Biolantanidos had prepared a feasibility study (positing 1,700 tpa of mixed REO concentrate) before its takeover but Hochschild signaled its intention to revise the study over the following 18 months, as well as appointing a dedicated management team to oversee development of the project.

NI 43-101 Resource Estimation (Penco)⁽¹⁾

Cutoff (ppm REO)	Tonnes (Mt)	Average grade (ppm REO)	REO in- situ (ton)
150	20,9	629	13,150
120	21,4	618	13,210
100	22,2	600	13,300
0	23,0	580	13,360

⁽¹⁾ NI 43-101 Resource Estimation update as of September 2016

Oh, and look, a real life pilot plant that isn't just a chemistry set in the CEO's kitchen!



The combination of our bullish perspective for the silver price and somewhat of a gold rush (excuse the mixed metaphor) in the Rare Earth space implies to us that Hochschild is exceedingly undervalued at the current levels. While so-called pundits muse upon which no-hoper in the United States might be the next to produce a tea-cup worth of Rare Earths, the prospect is definitely better than Biolantanidos (either within Hochschild or spun-out) will be producing Heavy Rare earths within the next three years than virtually any of the other current non-producers. With a sound jurisdiction and well-padded owners, the project does not have to scrabble around in the dirt for drachma like so many others we might name.

We have added a **LONG** position to the Model Resources Portfolio with a 12-month target price of £3.40.

Elemental Royalties (ELE.v, OTCQX: ELEMF) – better late than never

Our scepticism on royalty companies has not been rewarded in recent years as investors have decided that owning a royalty on a mine that will never be built is better than owning the company that owns the mine that will never be built. But what do we know...

Then there is the sudden enthusiasm from Canadian investors for yield stocks. The same investors that cower from demanding that First Majestic share some of its loot with someone besides just management (though we concede they have recently relented) are now eager to tout the virtues of revenue streams at royaltycos.

Our particular opprobrium is reserved for Metalla, the closest we have to a parable of Stone Soup, in the space. If it were to fall 75% in value we might be tempted but otherwise, we remain deeply unimpressed.

One of the more recent (or is it late) arrivals on the royalty scene is Elemental Royalties, a gold-focused royalty company, with management based in London, that listed on the TSX-V in August. We have known some of the leading lights for several years no. Moreover the company has been a functional royalty company in its unlisted guise for a number of years now having built up a portfolio of high-quality royalties. The evolution of the portfolio is shown below:

Portfolio Evolution		
Vendor	Acquired	Package
Pan American Silver	July 2016	13 royalties
Goldfields	December 2016	11 royalties
Couer Mining	July 2017	3 royalties, 1 stream
Newmont	May 2018	54 royalties
Alamos Gold	April 2019	15 royalties
Kinross	December 2019	20+ royalties
Yamana Gold/Orion	February 2020	10 royalties, streams & gold loans
South32	December 2020	3 royalties

The company's stated aim is to enable investors to benefit from ongoing royalty revenue, future exploration upside and low operating costs. However we would note that dividends are still not on the agenda, which generated (as always) lively discussion at a recent London investor lunch.

As for the targets the company aims to secure royalties in advanced precious metals projects, run by established operators, from its pipeline of identified opportunities. We would note however the outlier to this theory is the royalty, shown in the table below, on Base Metals' mineral sands mine in Kenya.

Main Royalties				
Project	Operator	Location	Mineral	Royalty Type
Wahgnion	Treanga Gold	Burkina Faso	Gold	1% NSR
Amancaya	Austral Gold	Chile	Gold/silver	2.25% NSR
Kwale	Base Resources	Kenya	Ilmenite, Rutile, Zircon	0.25% GRR
Mercedes	Premier Gold Mines	Mexico	Gold/silver	1% NSR
Mt Pleasant	Zijin Mining	Western Australia	Gold	A\$10/oz or 0.5% NPI
Panton Sill	Panoramic Resources	Western Australia	PGM	0.5% NSR

This would suggest that the company is not as purist in its attachment to precious metals as it might claim. In our opinion, specialty and base metals are going to be the runners in 2021, so this ability to go intellectually *off-piste* is welcomed by us.

In late November 2020 announced that it had agreed to acquire a portfolio of three gold royalties in Australia from a wholly-owned subsidiary of South32 (S32.ax) for consideration of US\$40 million in cash and US\$15 million in equity.

South 32 Royalties						
Asset	Operator	Location	Mineral	Stage	Royalty	
Karlawinda	Capricorn Metals Ltd	Western Australia	Gold	Construction	2% NSR	
Laverton	Focus Minerals Ltd	Western Australia	Gold	Development	2% GRR	
Western Queen	Rumble Resources Ltd	Western Australia	Gold	Advanced Exploration	A\$6-20/oz	

Management sees the addition of Karlawinda, in particular, as a transformative transaction with a 2% NSR royalty over a construction-stage gold project with commissioning targeted for the quarter ending March 2021. It expects that from mid-2021 onwards, the acquisition is forecast to nearly double royalty revenue with continuing revenue growth in 2022 and 2023.

While the deal was done with South32, it diversified the array of operators to which Elemental is exposed: Capricorn Metals Ltd, Focus Minerals Ltd and Rumble Resources Ltd, all ASX-listed.



In mid-December 2020, the company announced that it had completed a private placement offering of

10,748,132 subscription receipts at a price of \$1.50 per Subscription Receipt for approximately \$16.1 million in aggregate gross proceeds.

As can be noted from the chart the stock has suffered surprisingly during the period since its listing and this is wholly undeserved. Few probably believed they would get a second bite at this apple but the choppy performance since debut has allowed those who missed the ship originally to still enter the picture. Verily this has occurred as the picture has become enhanced for Elemental. We added a **LONG** position to the Model Resources Portfolio with a 12-month target price of \$2.30.

Parting Shot

Usually the end of the year edition has bemoaned a diabolical year behind us. At least that has been the case since mineral prices went south in 2012 and had scarcely come up for air since, and certainly not all together. Now we can complain about a dire year behind us in terms of everything else BUT mineral prices. Sure there are still a few dull spots amongst our favoured metals (e.g. Vanadium & Tungsten) but all the base metals are in profitable territory (for managements with even a modicum of cost control ability) and gold is at best levels in a decade and silver is perky (even if far distant from its 2011 highs).

In October we finessed our base metals estimates with most coming down slightly. We still see a recessionary global economy in 2021 so the recent ebullience in base metals is hard to ascribe to economic activity, though we suspect that supply is more the motor for higher prices than demand. Long term underinvestment in new production is starting to bite.

Slightly higher prices for base metals, than in 2020 are possible due to tightening up of supplies/production. Iron ore is one commodity we do not cover but its resurgence is poignant and cannot be viewed in isolation as the implications are evident for those metals in which it is alloyed or coated with such as Manganese, Chrome, Nickel, Zinc or Vanadium.

Precious metals we see slightly higher in FY21, but nothing like the move of this year.

Specialty metals we see higher in varying degrees. Our projections for Antimony, Vanadium and Tin we are higher than where they currently trade, with more subdued moves in Cobalt, Moly and Tungsten.

We have added Dysprosium and Erbium, our two favoured REE to the estimates table going forward.

Below can be seen a table with our projections:

Hallgarten & Company - Metals Estimates

	Unit	End 2020 Estimate	End 2020 Actual	Undershoot/ Overshoot	End 2021	End 2022
Lead	lb	\$1.00	\$0.89	-11.0%	\$0.93	\$0.95
	tonne	\$2,204	\$1,962	-11.0%	\$2,050	\$2,094
Zinc	lb	\$1.35	\$1.28	-5.2%	\$1.45	\$1.62
	tonne	\$2,975	\$2,821	-5.2%	\$3,196	\$3,570
Copper	lb	\$3.20	\$3.53	10.3%	\$3.85	\$4.17
	tonne	\$7,053	\$7,780	10.3%	\$8,485	\$9,191
Gold	oz	\$1,580	\$1,874	18.6%	\$2,100	\$2,250
Silver	oz	\$21.00	\$26.07	24.1%	\$31.00	\$33.00
Uranium (spot)	lb	\$35.00	\$30.00	-14.3%	\$32.00	\$42.00
Antimony	tonne	\$7,300	\$6,800	-6.8%	\$7,900	\$8,600
Tungsten APT	MTU	\$280	\$232	-17.1%	\$290	\$355
Tin	tonne	\$19,000	\$20,027	5.4%	\$21,500	\$22,800
Cobalt	lb	\$20.00	\$14.52	-27.4%	\$17.40	\$19.30
Vanadium	lb	\$13.00	\$5.40	-58.5%	\$9.80	\$13.00
Nickel	lb	\$6.50	\$7.70	18.5%	\$8.50	\$9.20
	tonne	\$14,326	\$16,971	18.5%	\$18,734	\$20,277
Molybdenum	lb	\$10.50	\$9.29	-11.5%	\$9.90	\$10.50
Dysprosium	kg		\$296.00		\$345.00	\$380.00
Erbium	kg		\$26.60		\$45.00	\$62.00

It is poignant to note that gold's overshoot of our 2020 estimate was the same as that for Nickel. Once again our hopes for Zinc were only partly satisfied and even now it has slipped back slightly again at the end of the year.

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MODEL RESOURCES PORTFOLIO @ END DECEMBER						
	Security	Currency	Price	Change	12-mth	
				last 12 mths	last mth	Target
LONG EQUITIES						
Diversified Large/Mid-Cap	Teck Resources (TECK.B)	CAD	23.1	3%	3%	\$22.00
	Hochschild (HOC.L)	GBP	2.078	19%	-6%	£3.40
Uranium	Uranium Participation Corp (U.to)	CAD	4.91	20%	20%	\$6.00
	GoviEx (GXU.v)	CAD	0.23	44%	53%	\$0.17
Zinc/Lead Plays	WisdomTree Zinc ETF (Zinc.L)	USD	8.47	15%	-1%	\$9.00
	Myanmar Metals (MYL.ax)	AUD	0.1	100%	25%	\$0.15
	Telson Mining (TSN.V)	CAD	0.28	133%	12%	\$0.50
Silver Producer	Excelon Resources (EXN.to)	CAD	3.78	267%	8%	\$5.50
Silver Explorer	Southern Silver Exploration (SSV.v)	CAD	0.83	102%	12%	\$0.80
Silver ETF	iShares Silver ETF (SLV)	USD	24.57	47%	10%	\$26.00
Gold Producer	Soma Gold (SOMA.v)	CAD	0.31	158%	3%	\$1.20
	McEwen Mining (MUX)	USD	0.99	-1%	0%	\$1.60
Coking Coal	Colonial Coal (CAD.v)	CAD	0.88	175%	14%	\$1.10
Project Generator	Altus Strategies (ALS.L)	GBP	0.796	1174%	38%	£40.00
Copper Explorers	Panoro Minerals (PML.v)	CAD	0.17	113%	42%	\$0.30
	Phoenix Copper (PXC)	GBP	0.404	285%	-8%	£0.65
Tungsten Producer	Almonty Industries (AII.v)	CAD	0.64	52%	-3%	\$0.90
Vanadium Developer	Vanadium Resources (VR8.ax)	AUD	0.03	0%	0%	\$0.05
Lithium	Neometals (NMT.ax)	AUD	0.28	40%	17%	\$0.45
	Lithium Power Intl (LPI.ax)	AUD	0.22	-19%	-21%	\$0.30
Scandium Developer	Scandium International (SCY.to)	CAD	0.22	120%	5%	\$0.16
Gold Explorer	Cabral Gold (CBR.v)	CAD	0.71	492%	27%	\$0.60
	BTU Metals (BTU.v)	CAD	0.17	-67%	-6%	\$0.42
	Gunpoint Exploration (GUN.v)	CAD	0.57	10%	-7%	\$0.75
Fertilizers	Verde Agritech (NPK.to)	CAD	0.83	102%	12%	\$0.90
Cesium et al.	Essential Metals (ESS.ax)	AUD	0.08	700%	-11%	\$0.30
Rare Earths	Northern Minerals (NTU.ax)	AUD	0.04	-33%	0%	\$0.08
	Neo Performance Materials (NEO.to)	CAD	13.78	12%	8%	\$14.00
Tin Miner	Alphamin (AFM.v)	CAD	0.39	129%	39%	\$0.48
	Metals X (MLX.ax)	AUD	0.14	75%	56%	\$0.14
Oil & Gas	Shell A (RDSA.L)	GBP	12.978	-44%	-4%	£14.90
Royalties	Elemental Royalties (ELE.v)	CAD	1.67	n/a	-5%	\$2.30
SHORT EQUITIES						
Shorts	NioCorp (NIO.to)	CAD	0.81	-1%	5%	\$0.40
	Texas Mineral Resources (TMRC)	USD	1.77	471%	10%	\$0.30
	Abdn Standard Palladium Trust (PALL)	USD	229.56	28%	6%	\$180.00

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