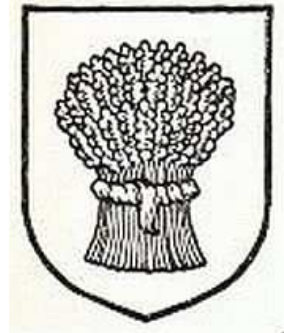


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# HALLGARTEN & COMPANY

Portfolio Strategy

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## Model Resources Portfolio: Silver Back in Contention

Performance Review – December 2022

# Model Resources Portfolio

## Silver Back in Contention

- + China has finally dropped its ridiculous Zero Covid but in a show of extremes it has now gone too far in opening and shall pay a heavy economic price
- + Silver is performing very well with an 8% gain for all of 2022 and an on-going upward momentum with the gold/silver ratio strengthening in the latter's benefit
- + ESG continues to be a target of rising scorn and backlash, particularly in the US
- + The Tin price continues its resurgence as China's bear trade involving selling down Shanghai stocks rebounds upon it
- + Oil prices may be a tad softer but there long period of outperformance for oil majors has dealt a brutal blow to asset managers who live by virtue signalling
- ✗ Lithium prices are finally correcting with seemingly softening demand for EVs being behind the trend
- ✗ Interest rate rises continue to work their way through the system with house prices being the next shoe to drop
- ✗ The only new prospect of production in the Antimony space has now lost impetus due to a change of management to "trader-types"

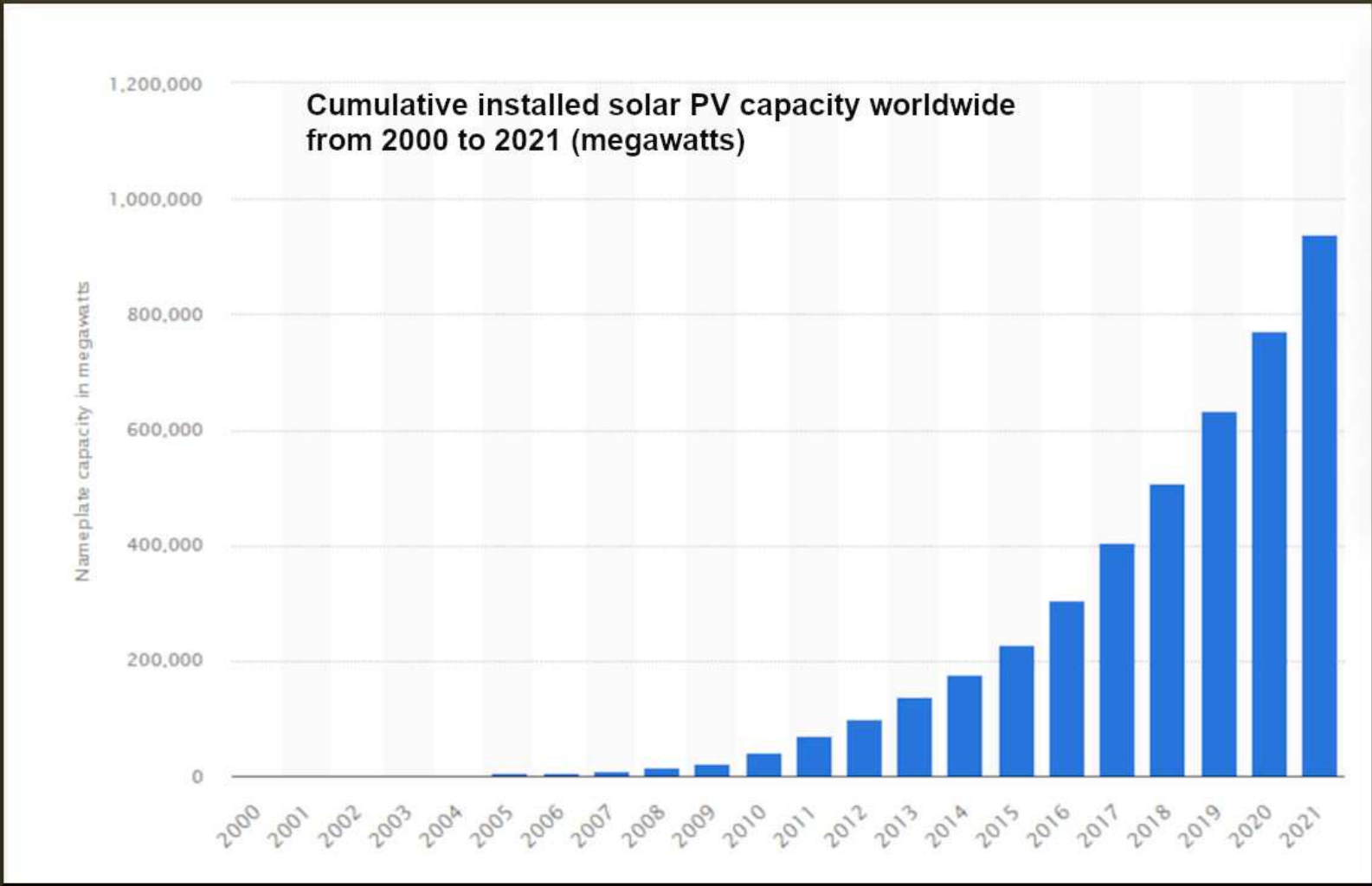
### Not Forgetting Solar

The resurgent energy crisis supposedly precipitated by the war in the Ukraine looks to many thinking observers like chickens coming home to roost, war or not.

Without roaming too far into the culture wars over closing down coal- or gas-fired power stations one might also note the limits of wind and solar power. To a certain degree, potential users of solar panels in domestic situations have taken their foot off the pedal over the past ten years. In many parts of the world solar adoption in domestic situations has ground to a halt. Seemingly many who were going to put panels on their roofs did so, and those that didn't have now discarded the option.

Many areas that would seem like obvious locations for domestic solar panels have a glaring absence of the technology, as a recent visit to southern Spain with its permasun made evident. Much of this phenomenon can be explained away by governments having allowed utilities to get away with paying paltry amounts for excess energy that residents send to the grid.

Despite slackening of domestic adoption the general pace of solar energy capacity growth is shown in the graphic on the page that follows. We would note that despite the steep chart the growth is more arithmetic than geometric.



Source: Statista

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Our focus though is on the metals that feed the solar energy complex. We still hear much about Rare Earths and wind turbines, but the more diffuse group of metals/minerals are consumed in the manufacture of your average solar farm (or mere roof panel) get far less press these days.

Basically, PV cells contain semiconductor materials that absorb light and transfer it to electrons that form an electric current. Solar cells use Silver, plus an array of minor metals such as Silicon, Indium, Gallium, Selenium, Cadmium, and Tellurium. As is well-known many of these minor metals are by-products from the refining of base metals such as copper, nickel, and zinc, and in the case of Tellurium a by-product of not only copper mining but gold mining.

Silver's eclipse in the photographic industry is well-known but its rise in the PV space is less-well focused and the longer term impetus for silver demand is oft underestimated. Silver is an excellent conductor of electric current and is used on the front and back of crystalline solar cells. Silver powder is turned into a paste which is then loaded onto a silicon wafer. When light strikes the silicon, electrons are set free and the silver (as a conductor) carries the electricity for immediate use or stores it in batteries for later consumption.

An average solar panel uses some 20 grams of silver (or around two-thirds of an ounce). Proportionally however silver's cost contribution to solar panels outweighs its proportional expense over virtually any other application it has other than perhaps jewelry, silverware, or in bullion coins/bars. For instance, the average cell phone has only 200 to 300 milligrams of silver (0.006 – 0.009 oz). An average computer holds about 1 gram of silver (0.032 oz).

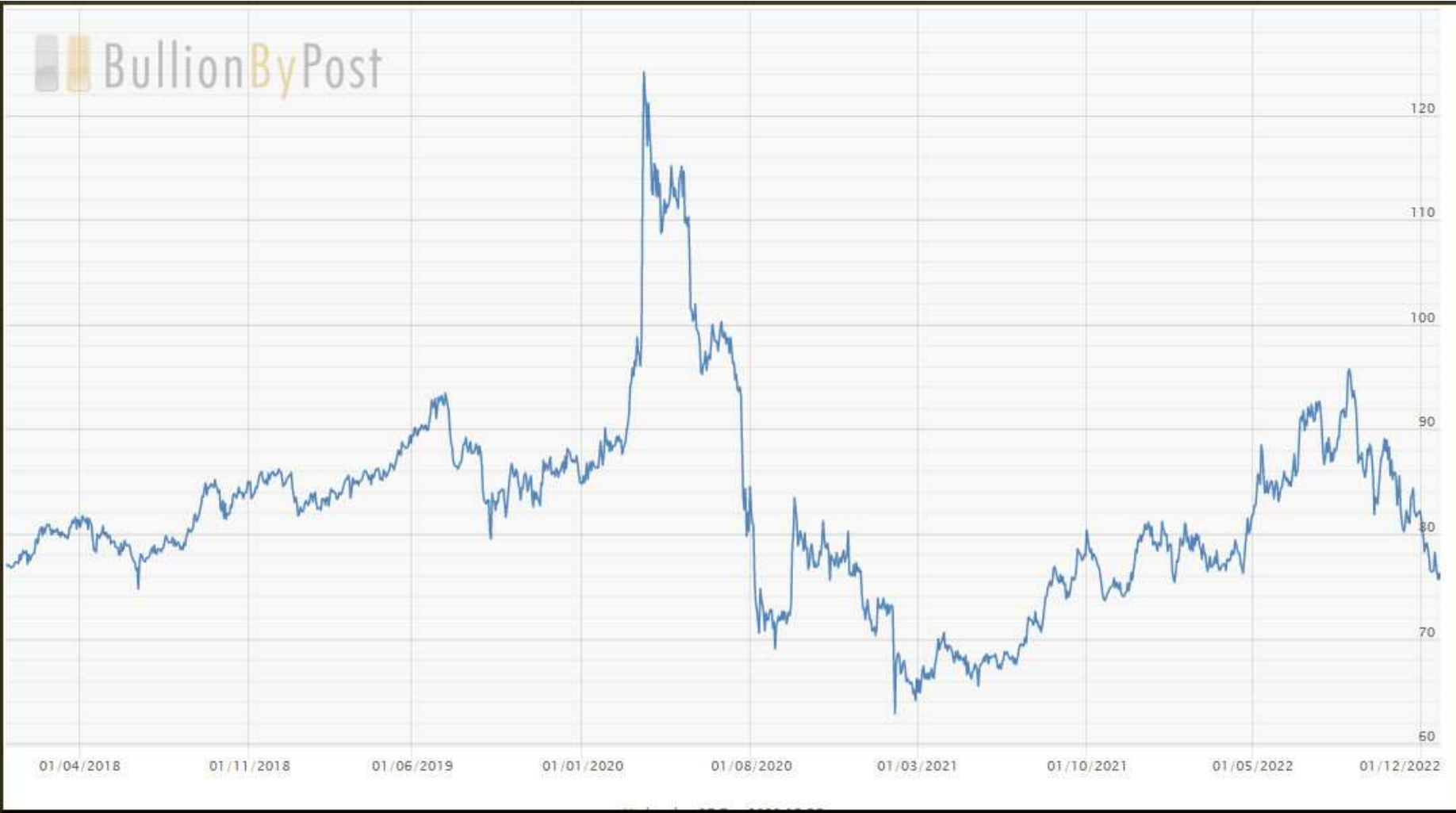
The Silver Institute noted (in a somewhat dated comment) that "it is of note that, despite COVID disruption, the PV market proved its resilience in 2020. Newly added solar capacity saw further growth, with the total estimated to have surpassed 130GW for the first time ever. Silver's use in photovoltaics increased 13% to 113.7mn ozs as global solar installations grew, while electronic and electrical demand overall rose by 9% to 330mn ozs in 2021".

The Institute's 2021 projection of installed capacity is quite a long way (over 30%) ahead of that shown in the Statista data. Does this imply that industry is underestimating the amount of Silver that is currently being taken up by the PV surge?

### **Silver – Back with a Vengeance**

Intriguingly, silver has been substantially outperforming gold in recent months. The Terrible Twins have been the bane of bulls' lives over the last twelve to 18 months as nothing short on a nuclear explosion (and maybe not even that) has been able to stir them.

The reality of soaring inflation and the grimness of the Russian invasion of the Ukraine have done nothing to restore the old "fear factor/premium" to the yellow metal in particular. Crypto was much to blame but gold by its very lassitude in the face of crisis continued to disprove the metal's role as a safe haven.



Source: BullionByPost

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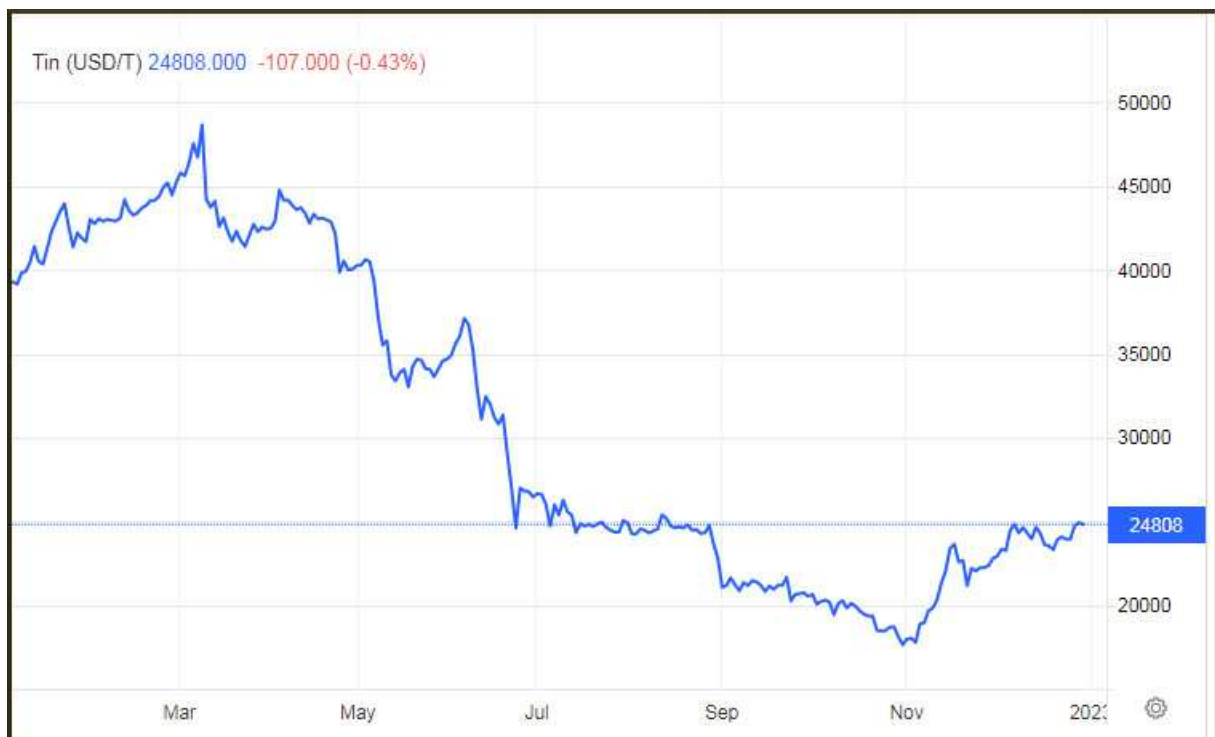
Silver suffered a similar fate but curiously has not broken loose and the silver gold ratio has been looking increasingly robust as one can note from the chart that follows. The best of (recent) times was March of 2021 as silver traded at 63 ounces to the gold ounce. This deteriorated massively to around 96 ozs to the gold oz, a decline of 50% before staging the latest comeback which has positioned silver at around 75 ozs to the gold oz. One might be so bold as to speculate that industrial usage of silver may be powering this dichotomy, while gold lies gasping like a fish on the dock.

In another comparative measure gold was up slightly over 4% in 2022, while silver was up over 8%. This definitely counts as outperformamnce

Never say never.... but we feel tempted to see silver (even in our scenario of gold again challenging \$2,000 in 2023) as breaking through the 70:1 mark on the ratio and nearing the previous recent best. With many silver miners continuing to disappoint that leaves SLV (the physical Silver ETF) as the best hobbyhorse to ride in this race.

### Tin – Back from the Dead

You just cannot keep a good metal down... no matter how much the Chinese might try to. In the last week Tin futures were trading near the \$25,000 per tonne mark, recovering from a two-year low of around \$17,630 hit in late October. It was clear from the strange run-down in global Tin reserves, while prices were tanking, that the Chinese were using all the ammo they had to push the metal lower.



Source: Trading Economics

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Despite the recent rally, Tin prices are still down more than 50% from their March record peak though we had felt that prices over \$50k were definitely tempting fate. Who lost their shirts by being long at the peak remains unknown but we would not put it past Chinese traders to have been on the wrong side of both the bull and the bear ends of the Tin move of recent years.

amid weak demand from the consumer electronics sector and rising levels of production from major producers Indonesia and Malaysia. Malaysia Smelting, one of the world's biggest tin producers, said it would increase its output by 20% over the next couple of years. In the longer term, demand for Tin should benefit from the energy transition and green technologies, particularly in solar panels and EVs

We just have to ask, who in China was behind the ham-fisted sinking of the Tin price. What were they thinking? Using one's reserves to sabotage a metal's price for a very transitory short-term advantage looks so dumb!

### **Portfolio Changes**

Since our last Monthly we have added a position in Asante Gold to the **LONG** side of the Model Resources Portfolio.

### **Asante Gold (CSE: ASA) – Burgeoning Production**

A couple of interactions with management of this company over the last twelve months finally prompted us to pull the trigger on a LONG position in the Model Resources Portfolio during the month of November. It's not often we add stocks with half a billion dollar market caps to the Model Resources Portfolio. The stock first came to our attention several years ago and we were not sure if it had production intentions or not so did not warm to it. Those fears are now well allayed and indeed the stock price reflects the effect production has upon valuations.

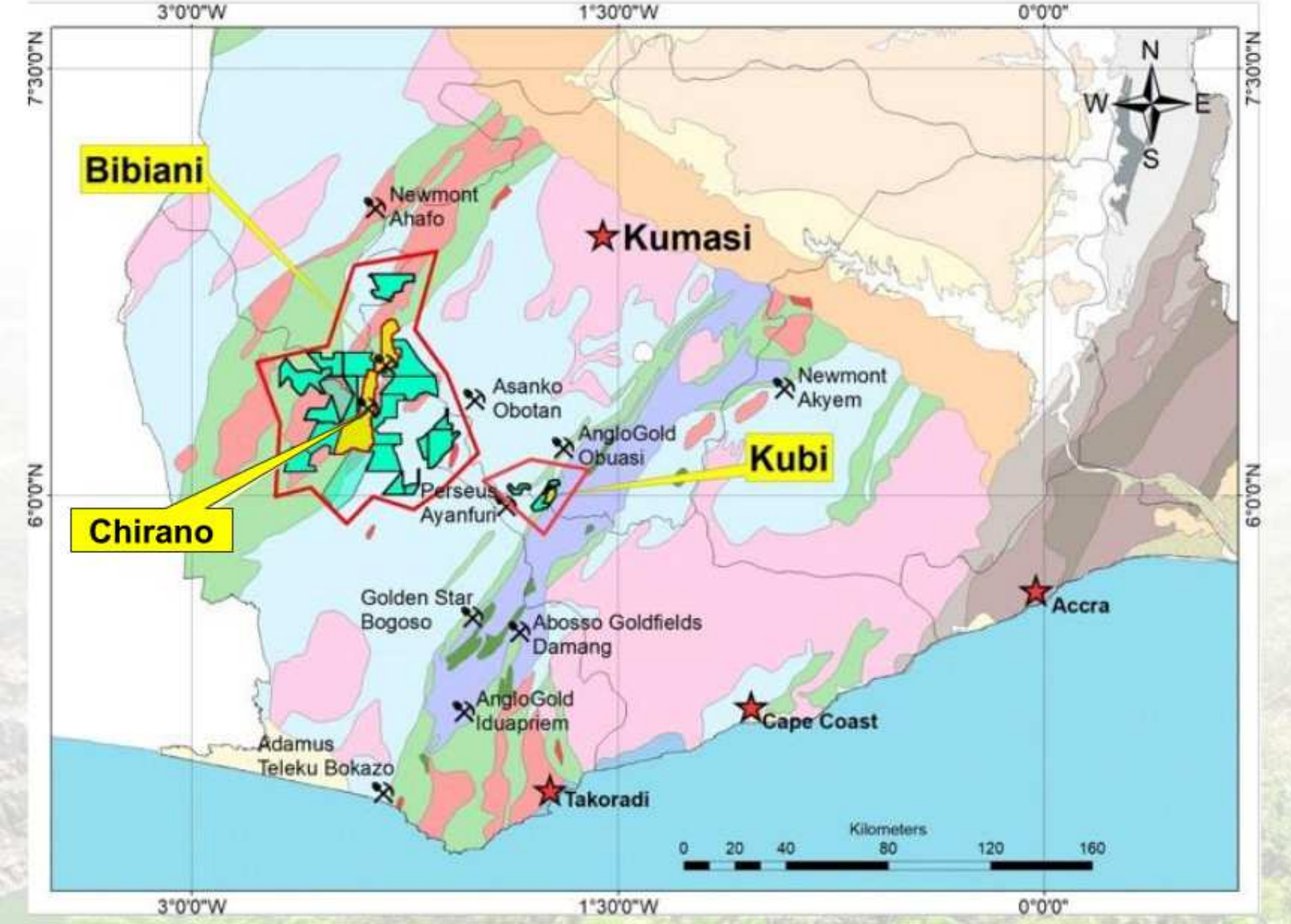
Asante, in short, is a gold exploration, development and operating company with a portfolio of projects and mines in Ghana with all of its mines and projects located on the prolific Bibiani and Ashanti Gold Belts.

The stock is listed on the Canadian Securities Exchange, the Frankfurt Stock Exchange and interestingly the Ghana Stock Exchange, with a significant amount of the shares having migrated to local holders over the last two years. It is estimated that Ghanaian retail holders make up around 33% of the register.

### **The Bibiani Mine**

Bibiani is a historically significant gold mine situated in the Western Region of Ghana. Gold was initially discovered around 1900 and >2.2mn ozs produced up to 1957.

Ashanti Goldfields acquired the mine in the mid-1990's and constructed a 2.7mn tpa CIL plant and commenced open pit mining in 1997.





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However geotechnical issues in late 2003 led to the commencement underground development to 9 Level and mining of lower-grade satellite deposits (e.g. Strauss, Walsh)

In total some 1.8mn ozs Au was produced (1997-2005) for cumulative historical production of >4mn ozs.

The mine passed through a number of hands before ending up with Resolute becoming the operator in 2014. Asante Gold acquired Bibiani in Q3 2021 from Resolute.

The mine is fully permitted with available mining and processing infrastructure on-site consisting of a newly refurbished three million tonne per annum process plant, and existing mining infrastructure.

Mining commenced in late February with the first gold pour announced in the first week of July 2022, with forecast 12-month gold production of 175,000 oz.

### **The Chirano Mine**

Chirano is an operating open-pit and underground mining operation located in Western North region of Ghana, immediately south of the Bibiani Gold Mine. Chirano was first explored and developed in 1996 and began production in October 2005.

Chirano is a gold mining operation that has produced nominal 200,000oz per annum and over 2.6 million ounces of gold since Kinross assumed ownership in 2010. The purchase immediately added 2.2 million ounces of gold resource to Asante's global resource profile. The Au equivalent production in 2021 was 154,668 oz on a 100% basis, when still under the control of Kinross Gold.

The mine comprises the Akwaaba, Suraw, Akoti South, Akoti North, Akoti Extended, Paboase, Tano, Obra South, Obra, Sariehu and Mamnao open pits and the Akwaaba and Paboase underground mines.

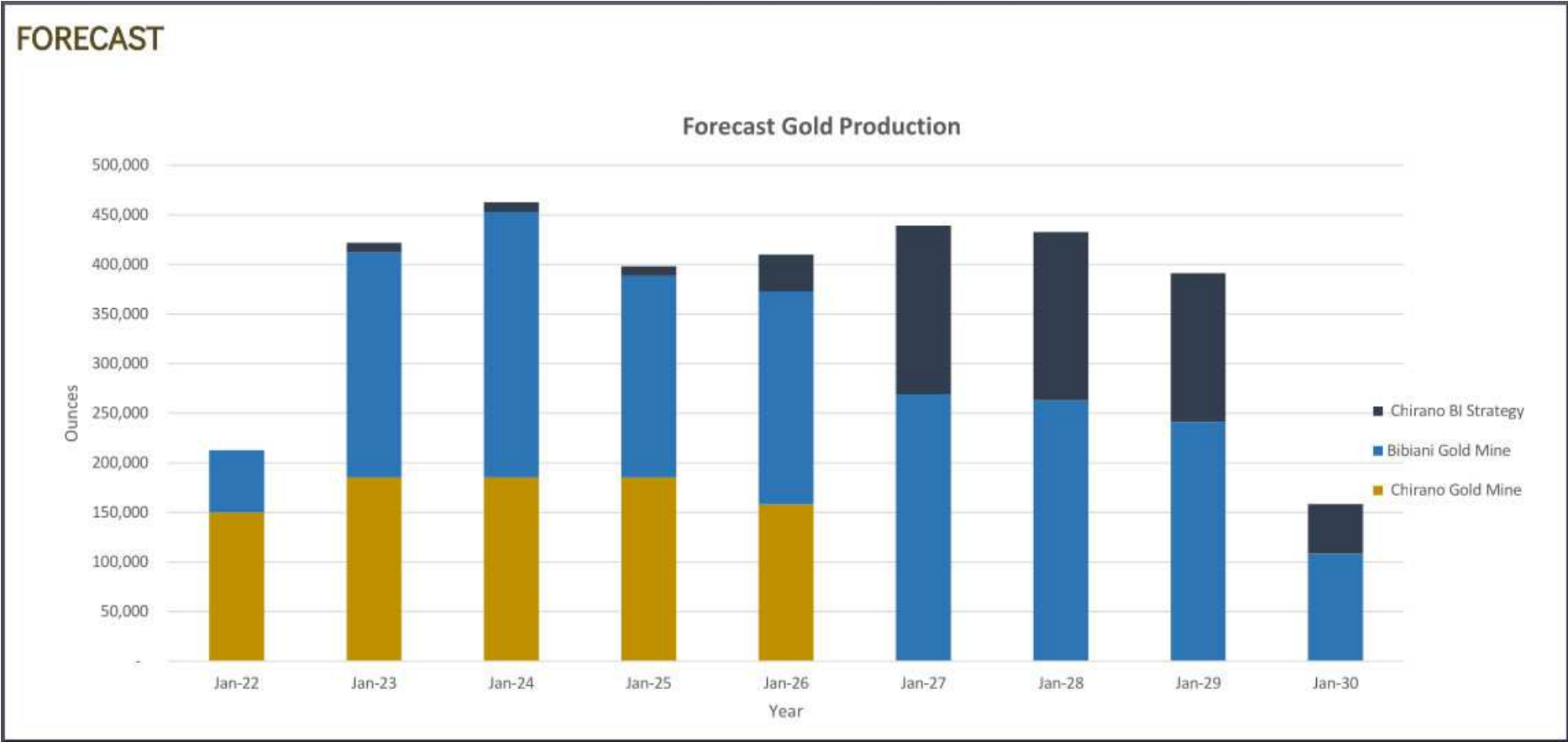
### **The Deal with Kinross**

The total consideration of US\$225mn consisted of:

- Upfront consideration of US\$36mn in common shares of Asante shares (subject to a 12-month lock-up) and US\$60mn in cash
- Deferred consideration of US\$55mn in cash at 6 months and US\$74mn in cash, 50% payable upon the first anniversary of the closing and 50% payable upon the second anniversary

### **Goals**

Obviously to achieve a seamless transition, Asante had to keep running the mine as Kinross had been operating but that does not preclude aspirations to enhance productivity/returns. On the wish-list of improvements are increasing gold recovery from 87% to 92%. Concurrently with this, there is a goal of improving the mill feed grade from 1.38g/t to 1.60g/t during 2022 and from 1.60g/t to 1.85 g/t in 2023.



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The intended increase in gold production would be from 152,000 ozs in 2022 to 185,000 ozs in 2023 and then 200,000 ozs per annum from 2024. On the operating cost side the company is targeting a quantum reduction in AISC from US\$1,359 to US\$1,100 by 2024. This would provide a significant fillip to the bottom line.

### **Going District Scale**

The company is proselytizing the view that there is district-scale gold potential exceeding 53 km in length by combining Chirano and Bibiani. This would achieve the consolidation of the highly prospective and historically prolific Bibiani-Sefwi Belt where 8mn ozs of gold have been produced to date.

The discovery of Bibiani-South Russell is being viewed by managed as indicative of the potential within the combined trend

The two process plants within 15 kms allow for exploration success to be rapidly converted to producing status.

### **The Earnings Outlook**

It is currently operating the Bibiani and Chirano Gold Mines with a combined forecast production of 335,000 oz of gold over the next 12 months. Clearly this will result in burgeoning cashflow, even without factoring in any move higher in gold or the still imponderable improvement in AISC per oz.

### **Other Targets**

The company is undertaking detailed technical studies at its Kubi Gold Project for early production. This is a mine where AngloGold Ashanti previously mined 58,696 oz Au @ 3.65g/t from surface oxides ore. There are backfilled pits though. The M&I resource is around 133,000 ozs at over 5g/t.

It is also exploring its Keyhole, Fahiakoba and Betenase projects for new discoveries.

### **The Investment Thesis**

What can we say.... Production, production, production... our three Ps are being delivered in spades, literally, by Asante. It has scavenged assets from larger companies much less committed to mid-tier mines or to Ghana. The price was not low in the case of Chirano but it meant that Asante has now bulked up and is a player to be reckoned with in the Ghanaian space.

At the recent launch there were hints of an opportunistic acquisition. One could not imagine them straying too far from Ghana at this point, particularly with their large domestic shareholder base. In any case cashflow is ramping up from here on out and if the opex per ounce can be lowered to the range they speak of, even with stable gold prices, the cashflow will start to soar. Then we will be looking for a dividend.

It's worth noting that the company has 47mn warrants outstanding at 22-25cts which represents a

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potential source of future funds but is more dilutive than anything else.

Then in a late development, the AGM near the end of the year brought a boardroom revolt, which potentially might turn into a takeover offer as the rebels are the two large Middle Eastern shareholders that collectively own nearly 25%. This alone fired up the share price from around \$120 to nearly \$150. The two ornery parties hold enough clearly to get a concert party together and it may be music to shareholders ears (though clearly the longer term prospects would be for a valuation of over CAD\$1bn).

The current market capitalization is around CAD\$525mn. During November we instituted a **LONG** position in Asante Gold and in light of events we are suggesting a 12-month target price of \$2.40 cts.



### Parting Shot

The tax-loss selling season in Canada is now behind us. Was there ever more of an own-goal than the failure to reform Canadian tax calculating losses and gains on some other basis than one that provides the almost certainty that markets in the last six weeks of any year will be mushy and usually to the downside?

In a good year there are dogs to be sold (accentuating their fall) to generate a loss to offset against gains taken and in bad years it's just misery upon misery. Indeed, with lots of losses and few gains the

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temptation is to sell some of the few winners one might have to have something to offset the losses against. A lose-lose situation.

In theory, tax-loss selling permits capital losses from equity investments to be applied against taxes paid on capital gains as far back as three years, or into the future indefinitely. Because half of capital gains in a non-registered trading account are taxed, half of capital losses can eliminate the taxes on capital gains dollar-for-dollar. Clearly tempting....

If one accumulated \$10,000 in capital gains during a preceding year's up-market (or if one was just a smart investor in a bad year) and claimed the required \$5,000 as income, as an example, \$10,000 in capital losses the taxpayer would get a full refund. If you haven't paid tax on capital gains this year or the previous two years, those capital losses can be used to lower or eliminate tax on capital gains at any point in the future. Quite clearly this is a potent temptation to indulge in tax loss selling

It's not like tax-loss selling is an unknown to us. The UK used to have a practice called bed-and breakfast trades, which involved selling across the end of a financial year and buying back straight away. However, the authorities at the Canada Revenue Agency (CRA) seem to have weaponized tax-losses and then shot longer-term shareholders in the head with it.

The CRA apparently has strict rules when it comes to tax-loss selling and buying back. This is covered by the "superficial loss rule", which prohibits the repurchase of the same stock within 30 days of the tax-loss sale. The superficial loss rule applies to repurchases in any registered or non-registered account in the name of the account holder, and even the account holder's spouse. If one wanted to repurchase the same stock then one must wait at least 31 days from the sale.

One of our market maven cronies posited that a change in the rules only allowing positions (either winning or losing) that have been held for at least two years be available for tax-offsetting. He pointed out that in the US, a one-year hold rule was in place, while in Canada at the moment all one needs to do was hold a stake for mere seconds.

In any case, there is scope for debate here as clearly something is defective in CRA rules and its negatively impacting the whole universe of "buy and hold" investors to the benefit of traders and other fly-by-nighters.

## **Recent & Upcoming**

Since our last Monthly we have published our Initiation of Xantippe Resources and a review of Soviet Resource classifications. Imminently we shall be putting out a Thinkpiece on AISC and launching coverage on A.I.S. Resources.

## MODEL RESOURCES PORTFOLIO @ END DECEMBER

	Security	Ticker	Currency	Price	Change		12-mth Target
					last 12 mths	last mth	
<b>LONG EQUITIES</b>							
<b>Diversified Large/Mid-Cap</b>	Hochschild	HOC.L	GBP	0.7025	-52%	1%	£1.00
	Sherritt International	S.to	CAD	0.52	6%	2%	\$0.95
<b>Uranium</b>	Sprott Physical Uranium	U.UN.to	CAD	15.83	12%	4%	\$20.00
	GoviEx	GXU.v	CAD	0.18	-60%	-18%	\$0.45
<b>Zinc/Lead Plays</b>	WisdomTree Zinc ETF	ZINC.L	USD	9.63	-5%	3%	\$14.00
	Altaley Mining	ATLY.v	CAD	0.49	14%	-28%	\$0.70
<b>Silver Explorer</b>	Southern Silver Exploration	SSV.v	CAD	0.20	-33%	0%	\$0.40
<b>Silver ETF</b>	IShares Silver ETF	SLV	USD	22.02	-1%	8%	\$24.00
<b>Gold Producer</b>	Soma Gold	SOMA.v	CAD	0.33	-11%	22%	\$0.85
	Asante Gold	ASE.cn	CAD	1.37	7%	5%	\$2.40
	Orvana Minerals	ORV.to	CAD	0.21	-43%	17%	\$0.60
<b>Gold/Antimony Developer</b>	Perpetua Resources	PPTA.v	CAD	3.95	-31%	40%	\$7.50
<b>Metallurgical Coal</b>	Colonial Coal	CAD.v	CAD	1.28	-54%	-22%	\$2.45
<b>Royalties</b>	Elemental Altus Royalties	ELE.v	CAD	1.31	-3%	7%	\$1.52
<b>Copper Explorers</b>	Panoro Minerals	PML.v	CAD	0.14	-22%	8%	\$0.30
	Phoenix Copper	PXC.L	GBP	0.2895	-61%	27%	£0.54
	C3 Metals	CCCM.v	CAD	0.06	-71%	-14%	\$0.20
<b>Tungsten Producer</b>	Almonty Industries	AII.v	CAD	0.68	-24%	-3%	\$0.95
<b>Graphite Developer</b>	Blencowe Resources	BRES.L	GBP	0.0413	-30%	-31%	£0.09
<b>Cobalt</b>	Jervois Global	JRV.ax	AUD	0.28	-53%	-28%	\$1.00
<b>Vanadium Developer</b>	Vanadium Resources	VRB.ax	AUD	0.06	-25%	0%	\$0.22

MODEL RESOURCES PORTFOLIO @ END DECEMBER							
Security	Ticker	Currency	Price	Change		12-mth Target	
				last 12 mths	last mth		
<b>LONG EQUITIES</b>							
<b>Lithium</b>	Neometals	NMT.ax	AUD	0.80	-22%	-22%	\$1.50
	Lithium Power Intl	LPI.ax	AUD	0.44	-12%	-17%	\$0.80
<b>Cesium/Lithium</b>	Essential Metals	EXX.ax	AUD	0.33	50%	-23%	\$0.55
<b>Scandium Developer</b>	Scandium International	SCY.to	CAD	0.07	-61%	0%	\$0.15
<b>Gold Explorer</b>	Cabral Gold	CBR.v	CAD	0.14	-63%	17%	\$0.60
	Gunpoint Exploration	GUN.v	CAD	0.50	-17%	0%	\$0.75
	Desert Gold	DAU.v	CAD	0.06	-54%	-14%	\$0.32
	MetalsTech	MTC.ax	AUD	0.52	53%	33%	\$0.68
<b>Rare Earths</b>	Rainbow Rare Earths	RBW.L	GBP	0.0998	-34%	-2%	£0.30
	Neo Performance Materials	NEO.to	CAD	9.60	-50%	-4%	\$24.00
<b>Tin Miners</b>	Alphamin	AFM.v	CAD	0.87	-5%	9%	\$1.35
	Metals X	MLX.ax	AUD	0.39	5%	39%	\$0.38
<b>Mineral Sands</b>	Sheffield Resources	SFX.ax	AUD	0.57	49%	-3%	\$0.72
<b>Helium</b>	Desert Mountain Energy	DME.v	CAD	2.77	11%	-15%	\$3.70
<b>Oil &amp; Gas</b>	Shell	SHEL.L	EURO	23.27	41%	-5%	£24.00
<b>SHORT EQUITIES</b>							
<b>Shorts</b>	NioCorp	NB.to	CAD	1.00	6%	-9%	\$0.40
	Golconda Gold (ex-Galane Gold )	GG.v	CAD	0.31	138%	-3%	\$0.25
	Cleantech Lithium	CTL.L	GBP	0.39	n/a	-7%	£0.25
	Texas Mineral Resources	TMRC	USD	1.30	-42%	-30%	\$0.30

## Important disclosures

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