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FAR EAST CAPITAL
The Mining Investment Experts

Weekly Commentary

18 March 2023 — *Chart comments at Friday's close* — Analyst : Warwick Grigor

Rare earth prices and supply chain issues

At the moment, with investors trying to figure out what the Silicon Valley Bank failure really means, we have a new factor out of left field that was causing anxiety in the market last week.

Anxiety feeds fear, and fear drives markets lower. If this is indeed a regional bank problem and not the start of something bigger, the market will revert back to normal when the fear fades. In the meantime, it gives the market and brokers/advisors something new to talk about. The speed at which everyone is embracing the developments has been quite dramatic.

Failure of banks is nothing new in the USA. As one US commentator said "*it is a run-of-the-mill bank failure*" and "*It is just taking out the trash*". We are seeing a typical reaction in the stock market that is discounting all things financial. However, the fear can escalate as we have seen with headlines regarding Credit Suisse and the possibility of large losses on its bond portfolio.

The US doesn't have the Australian psychology of our banks being too big to fail, so they do fail from time to time. Back in his day Greenspan would have stepped into the market to quell investor concerns, but the Fed doesn't have the luxury of this methodology when interest rates are rising and the economy is overheated. The US government will protect depositors' accounts up to $250,000 each, but the bank investors are not being given a safety net.

The silver lining of this bank failure is that the rhetoric on interest rate raises has become less vocal. The talk is now about a 0.25% increase in US interest rates rather than the previously expected 0.5%. Also, the gold price is strongly higher, so it is not all bad news.

As SP Angel opined in its Morning View, "*Banks are far more risky than mining companies*", saying;

- miners normally have far greater real asset value in ground relative to their liabilities, and
- miners don't buy bonds and lose money on bond price differentials as interest rates rise.

Taking stock of the rare earths narrative

We had the run up in rare earth company share prices last year, and the almost daily occurrence of new discoveries by explorers saying "*hey, we've got rare earths too!",* but the sector has come off the boil in 2023. Is it because there are too many players in the sector now, or because rare earth oxide prices have halved since this time last year? Maybe it is both, but we offer a few more thoughts below.

Rare earth pricing - obvious manipulation

The heavy falls in rare earth prices have certainly dampened enthusiasm for the sector, with NdPr prices falling 27% since January 2023. Obtaining reliable statistics on a market that is dominated by China is not easy, but we can achieve some insight by looking at the recently released Chinese production quotas.

The price movements don't necessarily correlate with what we intuitively understand is happening in the physical markets, but there is nothing new here. It is universally accepted that the Chinese play around with prices, motivated by its desire to confuse market pricing signals.

Chinese H1 2023 production quotas just released

With these comments in mind, we note that China has just released the latest batch of mining and separation quotas that give an indication of Chinese production volumes. The H1 2023 mining production quota has been increased by 19% over H1 2022, but the mining production quota for heavy rare earths targets ionic clay operations and has been decreased by 5%. The H1 2023 separation production quota has been increased by 18% year-on-year. Light rare earth production quotas remain unchanged.

Wood Mackenzie's believes that the latest information could help stabilise prices, but presumably it means around these lower price levels. Another source of research, Argus Media, is looking for prices in 2023 to be relatively flat. While these comments may not be stimulating for speculators, you can almost guarantee that reality will be different.

Reaction to Tesla's news has been excessive

We recently saw the stock market take fright with the news that Tesla is moving away from rare earth magnets in its EVs, presumably in favour of ferrite magnets. Whether or not this is a smart move remains to be seen, but even if it does happen, the reduction in demand for the rare earths will be less than 4%, according to commentators.

Lynas still has problems in Malaysia

While Lynas's operating licence in Malaysia has been renewed for another three years, it is still not allowed to import and process lanthanide concentrates after 1 July 2023. Its cracking and leaching component of the facility will need to be closed beyond July, and Lynas will not be able to import raw materials containing naturally occurring radioactive materials into Malaysia.

In 2022, Lynas produced 16.3 kt REO including 5.7 kt REO of neodymium and praseodymium oxide, equivalent to 8% of global supply. Disruptions to its production from July until the commissioning of its new cracking and leaching facility in Kalgoorlie, in December, will likely have an impact on rare earth prices for a time.

Developing the supply chain is a global challenge

The trend away from globalisation and a reduced dependence on China is an overriding thematic affecting many industries. The global rare earths refining capacity is

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dominated by China with 87% of the market, raising concerns especially when you consider the role rare earths play in enabling renewable technologies and military and defence equipment.

There has been plenty of rhetoric around the world about establishing more diverse and secure supply chains for rare earths, including the introduction of the US Inflation Reduction Act and EU Critical Raw Materials Act, but a cohesive plan of attack is yet to be formulated. Significant new investment is needed across all stages of the value chain to incentivise development of non-Chinese projects.

There a many companies that intend to produce a mixed rare earth concentrate (MREC) as a more valuable product than simple mineral concentrates, but this needs to be fed to refineries that complete the supply chain. These are yet to be constructed (ex China).

Implications for companies like Ionic Rare Earths

IXR has been one of our preferred rare earths companies for some time with its advanced Makuutu Rare Earths Project in Uganda (51-60% IXR). It was early on the scene with ionic rare earths and it has been the inspiration for many other companies chasing similar style deposits. The current Mineral Resource of 532 Mt at 640 ppm TREO, with no radionuclides. The Indicated Resource of the central licence under MLA is 259 Mt at 740 ppm TREO which will be the first phase of mining at Makuutu. Another five licences will add to the numbers in time.

IXR hopes to release its Feasibility Study within a month. We are expecting numbers to be similar to those of the earlier Scoping Study, with capex of around US$130-150m for its first two production modules. The next step would be the operation of a Demonstration Plant with a view to making a Final Investment Decision by the end of 2023. There is the matter of a final grant of the mining licence, but that is progressing slowly through the Ugandan bureaucratic processes.

Ionic is positioning itself at the front end of the rare earths supply chain with an intention to develop and operate a mine, but where to after this? Who will buy its product and where will it be refined? There is great appeal for a supply that circumvents Chinese operators but the ex-China facilities are yet to be built. While there is plenty of expressions of interest, particularly from political circles, it seems like the overemphasis on due process is slowing things down. Things need to speed up for early movers like Ionic, who will need clear visibility of the supply chain in order to obtain development finance.

Drawing parallels with the uranium boom

Looking back to the uranium boom in the noughties, the real issue was not how much uranium you had, or the grade, but how were you going to enter the supply chain with commercial effect. In uranium it is all about who is going to buy your product. Stock market investors assume an orderly path to profitability based on technical parameters and skill levels underpinned by good promotion, almost as simplistically as night following day. However, my experience with Peninsula Energy, one of only two companies to achieve commercial production in the noughties, was in getting buyers to commit to long term sales. There was very little correlation to the quoted uranium price of the day, that is determined by short term speculators, yet it is this figure that determines investor enthusiasm. Whatever the price point, it is irrelevant if you can't find buyers.

How this relates to the rare earths sector today

Recent discussions with some of the more advanced emerging rare earth companies have pointed to similar issues in the delivery into the supply chain, complicated by the dominant position of China. There may be the desire to circumvent China but so far there is very little progress on the mechanics of how this is going to happen.

How do you make money in the sector, now?

It is not unusual for the market in any sector to peak just when everyone is trying to get involved. Good paper profits can quickly evaporate in the scramble to lock-in profits. Those punters who are slower to react and have waited until the surge in stock prices is already documented are often equally as slow to sell, so they become longer term investors by default. Does it have to be a case of the quick and the dead?

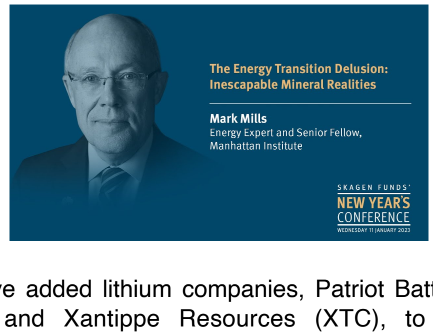
AUKUS submarine program gets the tick

One of the best things about the AUKUS submarine deal is that the media's attention has been diverted from woke social issues, for the time being. Rather than touchy feely social issues, we are talking advanced technology working with metals and other advanced materials to supply Australia with the most complicated war machines ever made. One would hope that these submarines are the ultimate deterrents to war that Australia could possess (not having nuclear weapons), as preferential to actual combat action. (My confidence in the Virginia Class nuclear submarines is biased, owing to a family member who serves on these in the US Navy).

The media has reported that there will be at least 8,500 permanent jobs created. That will be a good old fashioned stimulus that will increase the skill levels of our workforce, but there is something more. That is the creation of a nuclear power capability that Australia currently does not possess. I would expect that this will be a useful springboard to nuclear power generation for general use, at some point, when the politicians realise that the most efficient path to atmospheric pollution and carbon emission reductions is the introduction of nuclear power.

It's all about the supply chains

A few weeks back I referred to a clip in which Mark Mills from the Manhattan Institute raised concerns about the inability of the world to meet projected demand for alternative energy ambitions. Following a request from readers, I have included a link below.



We have added lithium companies, Patriot Battery Metals (PMT) and Xantippe Resources (XTC), to the chart coverage.

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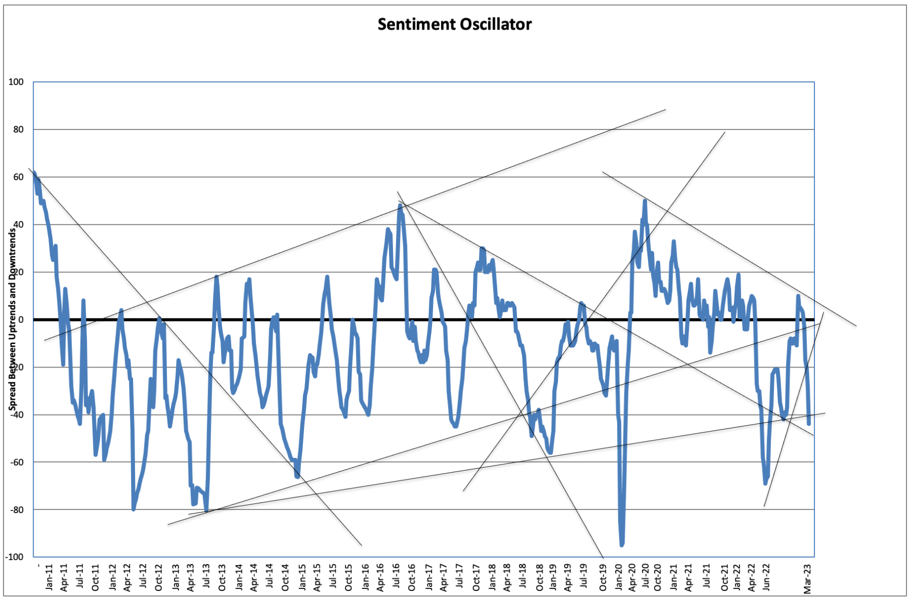

Sentiment Oscillator: Sentiment slipped further last week with only 15% (20%) of the charts in uptrend, and 59% (49%) in downtrend. The breach of the support line observed a week ago, leading to a a fulfilment of the expectation of further falls, is what happened. More falls can be expected.

Detailed Chart Comments

NB. Only the bold comments have been updated. Comments in grey type are from previous weeks and will be less relevant. Please note that this list is a cross section of the market. It IS NOT a list of recommendations.

Indices	Code		Trend Comment	
All Ordinaries	XAO		falling	
Metals and Mining	XMM		falling	
Energy	XEJ		down	
Information Technology	XIJ		rising	
Stocks	**Code**		**Trend Comment (updated comments in bold)**	**Main Interest**
92 Energy	92E		down	uranium
A-Cap Energy	ACB		back to recent lows	uranium
ADX Energy	ADX		sideways	oil and gas
Alpha HPA	A4N		approaching highs again	HPA
Adriatic Resources	ADT		new high	zinc, polymetallic
Advance Metals (was Pacific American)	AVM		off its lows	coal, gold exploration
Alkane Resources	ALK		sideways	gold
Alicanto Minerals	AQI		still down	base metals, silver, gold
Altech Chemical	ATC		sideways	HPA, anodes
Anteotech	ADO		at lows	silicon anodes, biotech
Alto Metals	AME		at resistance	gold exploration
American Rare Earths	ARR		breached support line	rare earths
Antilles Gold	AAU		testing resistance line	gold
Anax Metals	ANX		testing downtrend	copper

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Arafura Resources	ARU		breaching uptrend	rare earths
Ardea Resources	ARL		new low	nickel
Aurelia Metals	AMI		at lows again	gold + base metals
Australian Rare Earths	AR3		good rally	rare earths
Auteco Minerals	AUT		down	gold exploration
Arizona Lithium	AZL		new low	lithium
Azure Minerals	AZS		struggling at resistance line	nickel exploration
BHP	BHP		down	diversified, iron ore
Barton Gold	BGD		testing uptrend	gold exploration
Beach Energy	BPT		down	oil and gas
Bellevue Gold	BGL		off its highs	gold exploration
Benz Mining	BNZ		slump	gold
Black Cat Syndicate	BC8		testing uptrend	gold
BMG Resources	BMG		down	gold exploration
Boab Metals	BML		down	silver/lead
Breaker Resources	BRB		slum	gold exploration
Buru Energy	BRU		strong rally	oil
Calidus Resources	CAI		new low	gold
Caravel Minerals	CVV		down	copper
Castile Resources	CST		still in downtrend	gold/copper/cobalt
Celsius Resources	CLA		sideways	copper
Chesser Resources	CHZ		breaking downtrend	gold exploration
Cobalt Blue	COB		down	cobalt
Cyprium Metals	CYM		slump on funding failure	copper
Dateline	DTR		back to lows	rare earths
Ecograf	EGR		new low	graphite
Emerald Resources	EMR		rising, new high	gold
Empire Energy	EEG		down	gas
Euro Manganese	EMN		down	manganese
Evolution Mining	EVN		down	gold
First Graphene	FGR		down	graphene
Fortescue Metals	FMG		off its highs	iron ore
FYI Resources	FYI		collapse on Alcoa withdrawing fromJV	HPA
Galena Mining	G1A		falling back to trend line	lead
Genesis Minerals	GMD		down	gold
Genmin	GEN		down	iron ore
Gold Road	GOR		back to support line	gold
Great Boulder Resources	GBR		sideways	gold exploration
Hastings Technology Metals	HAS		recovering	rare earths
Hazer Group	HZR		down again	hydrogen
Heavy Minerals	HVY		slump back to trend line	garnet
Highfield Resources	HFR		down	potash
Hillgrove Resources	HGO		slump	copper
Iluka Resources	ILU		breaching support line	mineral sands

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Image Resources	IMA		still down	mineral sands
ioneer (was Global Geoscience)	INR		down	lithium
Ionic Rare Earths	IXR		down	rare earths
Jervois Mining	JVR		new low	nickel/cobalt
Kaiser Reef	KAU		sideways through downtrend	gold
Kalina Power	KPO		new low	power station additive
Krakatoa Resources	KTA		new low	rare earths
Kingfisher Mining	KFM		heavy fall	rare earths
Lepidico	LPD		down	lithium
Lindian Resources	LIN		rising again	bauxite
Lion One Metals	LLO		down	gold
Li-S Energy	LIS		down	Lithium sulphur battery technology
Los Cerros	LCL		down	gold exploration
Lotus Resources	LOT		down	uranium
Lucapa Diamond	LOM		down again	diamonds
Lunnon Metals	LM8		resumed uptrend	nickel
Lynas Corp.	LYC		turned down at resistance line	rare earths
Magnetic Resources	MAU		surge on REO news, then retracement	gold exploration
Mako Gold	MKG		sideways	gold exploration
Marmota	MEU		drifting lower	gold exploration
Matador Mining	MZZ		down	gold exploration
Mayur Resources	MRL		rising	renewables, cement
Meeka Gold	MEK		down	gold
Megado Gold	MEG		down	rare earths, gold exploration
MetalsX	MLX		down	tin, nickel
Meteoric Resources	MEI		consolidating beneath recent highs	rare earths
Metro Mining	MMI		still down	bauxite
Mincor Resources	MCR		down	gold/nickel
Mithril Resources	MTH		sideways	gold/silver
Musgrave Minerals	MGV		still falling, gently	gold exploration
Nagambie Resources	NAG		down	gold, antimony
Neometals	NMT		new low	lithium
Northern Star Res.	NST		rallying with the gold price	gold
Nova Minerals	NVA		new low	gold exploration
Orecorp	ORR		down	gold development
Pacific Gold	PGO		bounced to meet resistance line	gold exploration
Pantoro	PNR		new low	gold
Panoramic Res	PAN		down	nickel
Parabellum Resources	PBL		down	rare earths
Patriot Battery Metals	PMT		heavy slump after raising	lithium
Peak Resources	PEK		on trend line	rare earths
Peninsula Energy	PEN		sideways through downtrend	uranium
Perseus Mining	PRU		off its highs	gold
Poseidon Nickel	POS		at lows	nickel

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Provaris Energy	PV1	down	hydrogen
PVW Resources	PVW	new low	rare earths
QMines	QML	down	copper
Queensland Pacific Metals	QPM	slump. still in downtrend	nickel/cobalt/HPA
RareX	REE	down	rare earths, phosphate
Regis Resources	RRL	breached support line	gold
Renergen	RLT	down	gas, helium
Resource Mining Corp.	RMI	gently down	nickel exploration
Richmond Vanadium	RVT	recovering	vanadium
RIO	RIO	breached uptrend but strong rally	diversified, iron ore
Rumble Resources	RTR	secondary downtrend	gold exploration
S2 Resources	S2R	sideways	gold exploration
Sandfire Resources	SFR	breached uptrend	copper
Santos	STO	softer	oil/gas
Sarama Resources	SRR	sideways through downtrend line	gold exploration
Sarytogan Graphite	SGA	on support line	graphite
Siren Gold	SNG	down	gold exploration
South Harz Potash	SHP	new low	potash
Southern Cross Gold	SXG	breached uptrend	gold exploration
Stanmore Coal	SMR	surge higher	coal
Strandline Resources	STA	down	mineral sands
Sunstone Metals	STM	new uptrend forming	exploration
Suvo Strategic Minerals	SUV	risen to meet resistance line	kaolin
Talga Resources	TLG	slump on $40m placement	graphite
Tamboran Resources	TBN	breached downtrend	gas
Technology Metals	TMT	down	vanadium
Theta Gold Mines	TGM	sideways	gold
Thor Mining	THR	down	gold exploration
Tietto Minerals	TIE	down	gold
Vanadium Resources	VR8	new low	vanadium
Venture Minerals	VMS	down	tin, tungsten
West African Resources	WAF	breaching downtrend	gold
Westgold Resources	WGX	good rally	gold
West Wits Mining	WWI	down	gold
Whitehaven Coal	WHC	down	coal
Xantippe Resources	XTC	sideways	lithium
Zenith Minerals	ZNC	down	gold exploration

Totals	15%	21	Uptrend	
	59%	82	Downtrend	
		138	Total	

Guides to Chart Interpretations

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- Charts usually go pass from one trend (up or down) into the other via a period of indecision and uncertainty during which the trend can either recover or change. This period is signified by the orange colour. The orange represent both the greatest risk and greatest reward possibilities.
- Once a chart is in confirmed up or downtrends it is not uncommon for 10-20% of that trend to have already transpired.
- There are trends within trends. The focus of this chart review is the immediate trend that affects the sentiment i.e. it can be a downtrend within a long-term uptrend.
- Not every chart warrants a new comment every week. The new comments are in bold type. Grey type comments may be dated.
- Individual charts provide a single view. It is valuable to look at charts of other companies in similar commodities, and the overall sentiment is also very valuable. Not many stocks can swim against the tide.
- We periodically add or delete charts, some times for obscure reasons. If a chart consistent gives poor signals or is very erratic, we may delete it. Sometimes we add a chart because we want to see what all the fuss is about. We do have a preference for charting stocks that we cover in our research as well.
- Errors and omissions may occur from time to time, especially in fast moving markets.

Amber Lights in Tables: Just a reminder if when the amber light is used in the table – it is when the charts are ambiguous or when there is a change of trend taking place. If a chart is breaching a downtrend it can either be a positive sign or a trap. Only once it has done more work can it be confirmed as a new uptrend. Maybe it is a new uptrend (or conversely a new downtrend); the risk takers can decide to jump on board early (or sell). They will maximise their profits (or minimise their losses if indeed it is the start of the new uptrend (downtrend). More risk-averse investors should wait a little longer, being prepared to give up some of the gains in return for greater certainty.

Weightings of Sectors Represented in the Company Charts

Sector	No. of Companies	Weighting	
Gold	27	19.6%	
Gold Exploration	22	15.9%	
Rare Earths	15	10.9%	
Oil/Gas	10	7.2%	
Nickel	8	5.8%	
Copper	8	5.8%	
Iron Ore/Manganese	5	3.6%	
Uranium	4	2.9%	
Zinc/Lead	3	2.2%	
Lithium	6	4.3%	
Graphite/graphene	4	2.9%	
Coal	3	2.2%	
Mineral Sands	3	2.2%	
Potash/Phosphate	2	1.4%	
Silver	2	1.4%	
Bauxite	2	1.4%	
Vanadium	3	2.2%	
Cobalt	1	0.7%	
Tin	2	1.4%	
Diamonds	1	0.7%	
Other	7		
Total	138		

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