



Dear Friends and Investors,

The core portfolio for Massif Capital was up 3.45% net of fees during the first quarter of 2021.

**PORTFOLIO ATTRIBUTION<sup>1</sup>**

The portfolio was highly volatile during the first quarter. Although we are rarely concerned with the portfolio’s daily price movement, the dispersion of returns was roughly two times the historical average. Figure 1 shows the distribution of returns from inception through 2020 as a backdrop to the distribution of returns during the first quarter of 2021. The primary reason for the additional volatility this quarter is our position Lithium Americas Corp (LAC). LAC had +/- swings of 10% or more on roughly 11% of first-quarter trading days (Figure 2).

**Distribution of Daily Returns**

Figure 1: Q1 2021 vs. 2016-2020

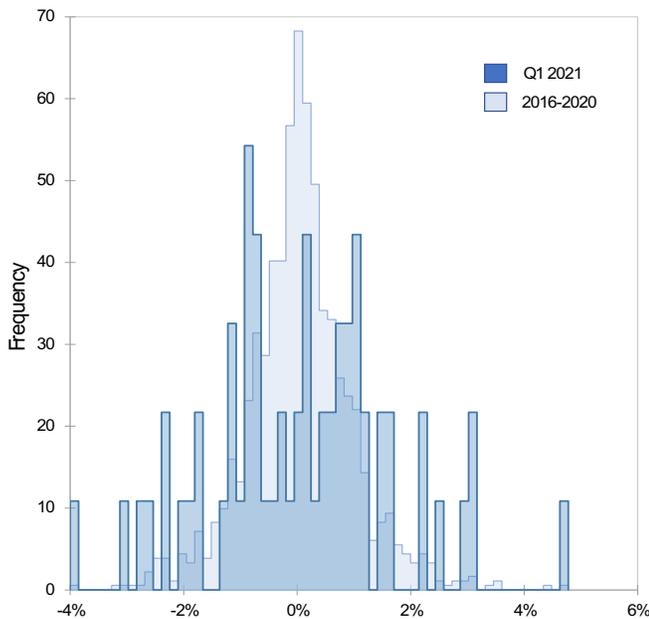
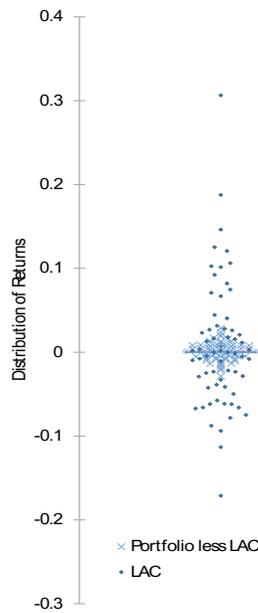


Figure 2: LAC vs. Portfolio less LAC



Note: Standard deviation of daily returns in Q1 2021 was 1.71x that of the previous 14 quarters.

By contrast, market volatility was not particularly abnormal. While the VIX experienced a wide range of absolute values, the variation throughout the quarter was equivalent to the index’s quarterly variation over the last four years.<sup>2</sup> With the VIX trading below 20, our tail risk hedge remains relatively cheap. At present, we cover ~100% of our notional long exposure at an annualized cost of less than 2% of the portfolio’s net asset value. As such, the tail risk hedge adds tremendous optionality to the portfolio’s return characteristics, which is not captured in static correlation or net exposures statistics.

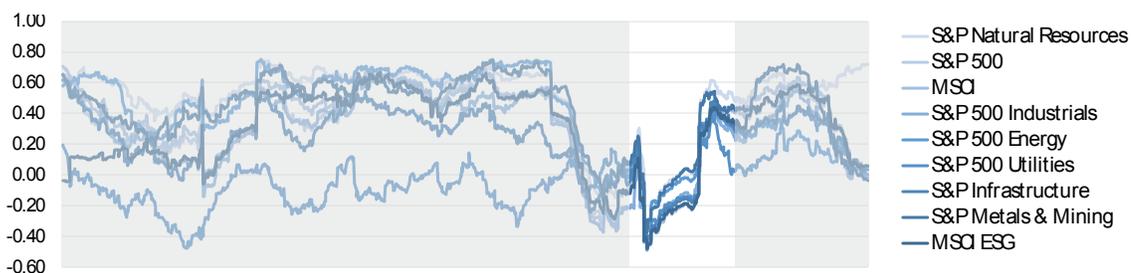
When we think about the portfolio's composition, we are only concerned with the volatility of individual positions if they are highly correlated to other positions, thus amplifying the portfolio's volatility in a way that may increase the odds of a permanent loss of capital. The same concept holds true for Massif Capital's portfolio as a diversification instrument relative to market alternatives. Our portfolio is uncorrelated to major indices, but it becomes highly uncorrelated in risk-off events when diversification is needed most.

Said differently, the Massif Capital portfolio serves to improve a broader portfolio's diversification in a significant sell-off while alternatives have worsening diversification features. Figure 3 below shows rolling correlations to significant indices for the last three years. As we entered the February 2020 timeframe and correlations went to 1.0 for major indices, our portfolio's correlation to those indices went zero and then negative. Note that the top graph shows our portfolio's correlation to alternatives, and the bottom chart shows the correlation between the S&P 500 and alternatives. We think it is also interesting that the MSCI S&P 500 ESG index, a dotted line in the bottom graph, has a perfect correlation to the S&P 500. As we have argued multiple times, taking into consideration the risks and opportunities associated with environmental and social issues is critical for investors that are interested in allocating capital to economically sustainable businesses, but ESG portfolios do not accomplish this.

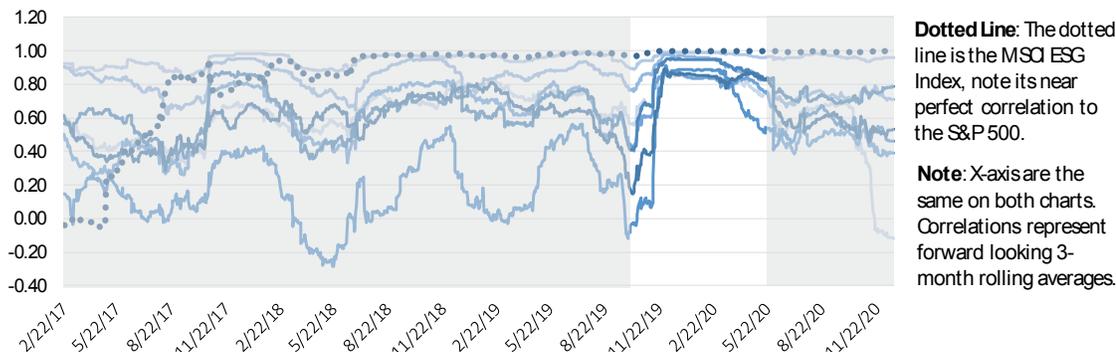
To operate without interruption, regardless of regulatory or social license to operate issues, a business's environmental sustainability is critical. ESG indices and ESG scores do not allow investors to make the fine distinctions between management teams capable of addressing these challenges and those that are not. Evaluating sustainability is a complex endeavor that requires analyst judgment. Indices and scores marketed as ESG allow large investment management shops to get credit for the hard work of assessing a firm's sustainability without actually doing the work and to greenwash activities they are already pursuing. See our report [Failure to Impact](#) for more on this critical issue.

**Figure 3: The Nature of Diversification Matters**

Indices Correlation to Massif Capital



Indices Correlation to S&P 500



We will use volatility to our advantage for individual positions (more on LAC below), but we are not concerned with the increase in daily volatility at the portfolio level until we see a growing cross-correlation among volatile positions. Should correlations across asset classes once again go to 1, as they did last year, we remain confident that our tail risk hedge, comprised of out-of-the-money put options on the SPY will continue not only to be a suitable insurance product but a good trade.

## THE PORTFOLIO

**Lithium Americas:** The volatility noted above in LAC has resulted in solid returns via our options trades around our core equity position. At the current time, we are short calls on LAC, as we have done multiple times throughout the position's life, expiring on May 21, 2021, at a \$17.5 and \$22.5 strike price. The volume of contracts sold at each strike corresponds to the size of the equity position we want should the calls expire in the money, and the underlying equity gets called away from us. The thought process behind this trade construction is that if we know the size of the position we want at a particular price point, there is no reason not to accumulate additional returns by pre-selling the stock we would have sold anyway.

High levels of volatility positively impact the price of options, increasing the premium we can earn from selling covered calls. To date, we have sold covered calls on LAC that have expired worthless four times, yielding a roughly 7% return on the equity position's current value or 71bps for the portfolio overall. The outstanding covered calls appear to be trending towards a similar worthless expiration. If they do, the covered call trades on LAC will result in us owning the shares with committed capital of -\$0.28 per share.

Although we believe in the fullness of time LAC warrants a \$30+ valuation, the prices achieved in early January of this year were not justified by the underlying fundamentals. Some will argue we should have sold down our position. We had already established our option positions and believe LAC is an emerging major in the lithium mining industry. Thus, we decided to maintain the position unchanged. Although still relatively high, the current \$15 per share valuation is not crazy compared to where we think the firm should be trading based on fundamentals, so we are no longer overly concerned with the position as is.

LAC management also took advantage of the volatility issuing stock on January 22 for \$22 a share. The ~\$400 million in proceeds will be used to develop Thacker Pass, the US-based clay lithium deposit, which will likely be the largest producing Lithium mine in America when turned on. In our opinion, the stock issuance could not have come at a better time. LAC management has advanced the project through various development stages (de-risking), but with the share issuance, they have significantly reduced the need to bring in an outside partner to develop the asset as the first phase of the project is expected to cost roughly \$581 million. After-tax and at an 8% discount rate, the Thacker Pass project's present value is approximately \$2.6 billion (the firm's current market capitalization is \$1.5 billion). Although the share issuance was dilutive, increasing the total shares by 17%, we believe it will, in the long run, prove a forward-looking, value-additive decision by management.

The lithium market remains an area of interest and focus for us. This reflects our belief that the most exciting investment opportunities to capture secular trends in EV's and

batteries are found upstream in the mining industry. It is also a reflection that there is a greater diversity of lithium investment opportunities relative to other battery metals.

Over the next ten years, we do foresee widespread adoption of EV's and even wide-spread adoption of batteries in different use cases, but we also envision the rollout being hampered by a shortage of essential metal inputs. VW, the world's largest car manufacturer, outlined an aggressive plan in the first quarter to build 240 GWh of annual battery production capacity across six European facilities. Those facilities would require ~60% to 70% of 2020 global lithium production if in operation today. Of course, VW is not the only firm building gigafactories. According to Benchmark Mineral Intelligence, China is building a Gigafactory every week. The US is building one every four months, and Europe is building them at some pace in between. Ganfeng Lithium, arguably the world's leading lithium processor, has committed to establishing no less than 600,000 tons of lithium processing capacity annually. Its current annual capacity is just over 120,000 tons, and the current world demand is just above 400,000 tons.

The development of the assets necessary to fill these factories with metal inputs is not proceeding at speed with the factory development. A shortage is looming, and it will likely slow the pace of adoption of EVs as auto manufacturers sort out supply chains and mining firms scramble to catch up. We anticipate that the price shock to many metals will be persistent, not transitory.

**Copper:** We entered two copper positions in early 2020, Turquoise Hill Mining (TRQ) and Ivanhoe Mining (IVN). Both firms are developing world-class assets in challenging jurisdictions. Both also benefited significantly from the move in copper over the last twelve months.

We believe copper's move above \$4 per pound during the first quarter was driven by speculative flows into physical markets. As such, we expect some near-term softness in the market. China was a significant physical buyer in the second half of 2020 and imported roughly 5 million tons of refined copper, much of which they stockpiled for strategic use. This demand was partly driven by a significant slowdown in the availability of scrap that occurred as a result (as best we can figure) of COVID-related disruptions in the global economy. According to Morgan Stanley, scrap imports have rebounded though and are up 61% year over year, suggesting that the demand for refined virgin copper will be more subdued globally, as China, consumer of fully 50% of the world's refined copper, works through overbuilt inventories.

One can juxtapose this likely subdued Chinese demand against accelerating demand globally driven by theoretical reflation or a return of global growth. We are less optimistic about this narrative; it seems more uncertain. Europe appears to have stumbled in the rollout of its vaccine, and while emerging markets appear on a better footing than one might have expected given the events of the last twelve months, they seem unlikely to be entering a near-term (12 months) growth trend. Steady global copper demand seems a reasonable possibility, with some potential growth out of the US. Still, the US demand (ranging from just below average to a modest surge) will likely depend on the federal government's infrastructure spending. Although the stars appear to be aligning, we remain skeptical of the potential for a large US infrastructure bill. It has been promised for what seems like two decades now, and at this point, we want to see results before we pencil them into our analysis.

We expect the possibility of a short-term copper price reversal to run into a balanced medium-term supply-demand picture supported by several projects coming online in the medium-term time frame. As we enter the second half of the decade, that balance will give way to a deficit with increasing technical complexity and permitting challenges leading to a very limited pipeline of shovel-ready projects.<sup>3</sup> We believe that between now and 2025, roughly 1.8 million tons of new supply will come online, keeping the market in balance. By 2023 supply from existing mines and committed projects not yet in operation should peak at around 21 million tons of copper a year. Production will then fall to ~18 million tons a year by 2030.<sup>4</sup> We do not explicitly forecast demand but find the odds of stable demand through 2030 at approximately 21 million tons a year improbable.

Although we have written about this before, it is worth repeating. We find producing an outlook for supply a relatively straightforward exercise. This is because operating mines is a known variable and potential mines/mines underdevelopment is a variable known with a high degree of certainty. While new mines not yet in development are unknown, it is much easier to guess than theoretical demand. Given the complication associated with new demand, we prefer to think about the intensity of copper heavy activities instead of absolute use. In short, rather than forecast supply and demand, we like to think about the forward-looking situation in terms of two questions:

1. Should copper demand stay flat, what happens to supply (the question discussed above), and;
2. Are we shifting towards a more copper-intensive economy or a less copper-intensive economy?

If the answer to the first question is that supply will fall relative to a static demand picture and the answer to the second question is, we are becoming a more copper-intensive economy, the outlook for copper (or any commodity for that matter) is positive. In such a scenario, copper prices can be a favorable tailwind for an investment thesis built on company fundamentals, and an exact demand outlook becomes superfluous. The key to this, of course, is investing in firms with distinct non-commodity price catalysts. In the absence of that, commodity producers have only one real equity price driver, commodity price, and we do not want to bet solely on commodity price direction.

In the case of copper, we do believe we are moving in the direction of a more copper-intensive economy. This assertion is based on a belief that we will be shifting towards a global EV fleet instead of an internal combustion engine automotive fleet (although the timelines associated with such a transition are unknown). It also assumes we will be increasingly reliant on a renewable-powered grid for electricity. In the case of cars, EVs tend to use about 4x as much copper as internal combustion engine cars. For every ICE car replaced by an EV, an additional 60 kg of copper must be dug up. To put that into context, a full keg of beer weighs 72kg or 160 pounds. So, for every new EV that hits the roads, an additional solid block of copper the size of a keg of beer needs to be mined.<sup>5</sup>

The copper intensity of the ecosystem associated with EVs extends to charging, all of which is a new demand. The average private charging unit consumes 2.5kg of copper, and the average public eight-vehicle charging setup requires about 25 kilograms of copper. The intensity of copper use in renewable energy ranges widely across different technologies and locations (which is also the case for EVs). In almost all cases, it is higher than traditional thermal generating units. At the moment, best estimates from the

International Copper Association, Wood Mackenzie, and Morgan Stanley are that onshore wind power is about 2.3x more copper intensive on an MW basis than conventional thermal generation and that utility-scale solar is about 2.6x more copper intensive on an MW basis. Offshore wind, which we believe has a bright future, is 6.3x more copper intensive on a MW basis. In short, we do not know if copper demand will grow, nor will we predict a specific outcome, but the future demand uses for copper are much more copper intensive than the current uses.

The portfolio's current copper exposure includes two positions, one that we have held since the first quarter of last year, Ivanhoe Mining, and a new position we added this year, Cornerstone Resources. Cornerstone Resources was added to the portfolio in place of Turquoise Hill Mining, which we sold out of for a total return of roughly 200%. Our decision to sell TRQ was primarily driven by our belief that there was little in the way of positive catalysts for the next 12 to 24 months to drive the stock price higher other than copper prices. The mine will produce a record volume of gold this year, but management has done their best to make sure the market knows that. Additionally, although we do not believe the Mongolian government intends to scuttle the project in the long term, we were due for the government to make some noise to extract a better deal, which they have done. Given that backdrop, we felt exiting the position in under twelve months, with what we had envisioned a multi-year return on the position was likely to be when we entered it, a wise idea.

We decided to redeploy the capital into a half position (roughly 3% of the portfolio) in Cornerstone Resources, a project generator with a significant stake in a world-class deposit in Ecuador. Cornerstone aims to sell its stake in the SolGold managed Alpaca project and could do so depending on the market's enthusiasm for as much as \$12<sup>6</sup> a share vs. the current market price of \$3.5. We do not believe Cornerstone will achieve that high a return in sale for its stake in the Alpaca project, but we do think it reasonable to assert our investment is at least a double in twelve to twenty-four months.

**Tin:** We added a position in niche metal miner Alphamin this quarter. Alphamin operates the world's highest-grade tin mine in the Democratic Republic of Congo. With ample brown field expansion opportunity, the firm's high-grade tin mine is currently trading at a discount to a stable state cash flow at tin prices well below the current spot price and tin recovery levels below what the firm recently reported achieving as a steady ore recovery rate.

Furthermore, the global supply of tin is deteriorating against a backdrop of rising demand. Indonesian state-owned tin miner PT Timah (the world's largest producer of refined tin in 2019) is showing signs of fiscal prudence and supply discipline under new management. Additionally, production out of Myanmar is rotating away from cheap alluvial deposits to more expensive underground operations. We may see new alluvial output from Nigeria, but not soon. Underinvestment in tin exploration has consequences. We anticipate that prices need to stabilize above \$30,000 for a few years before banks will lend against a new price floor for development projects. Solder, tinplate, glass making, and lead-acid battery consumption are all highly inelastic. We expect new support levels for the tin price and would not be surprised if we continue to see price appreciation. Alphamin supply is a critical feedstock to refiners increasingly starved of material, and the company can bring this supply to the market with one of the lowest sustaining cash costs of production.

Our investment in Alphamin is somewhat instructive of our evolving perspective on portfolio construction. Value investing, which we define as the allocation of capital to opportunities in which you are buying a dollar for fifty cents with a credible and defensible thesis, often produces portfolios that are concentrated in what appears to be less than constructive ways.<sup>7</sup> Value can be found in a wide range of risk/return profiles (which defines absolute returns) and may or more not have a catalyst contextualizing the thesis (which informs time-to-realization and ultimately annualized returns). Diversity among these factors is vital so one does not end up with a portfolio overly weighted towards large asymmetric bets or deeply value opportunities with no catalysts. Either could be a portfolio of value investments, but not necessarily one you want to hold even if each stock pick makes sense on a standalone basis; after all, we as investors collect the portfolio returns, not just the returns of individual positions.

We provide this color to point out that Alphamin does not have a clear catalyst, in our opinion. The firm is small and operating in a niche metal market. Despite the record low levels of inventory at various metal warehouses worldwide and the firm increasing production by 30% from debottlenecking their processing plant, it is not entirely evident when/if the market will recognize the business's embedded value. We are happy to own it, but only if it is sized correctly (as just plain cheap companies with no catalysts come with an opportunity cost) and, importantly, in a portfolio with a multitude of ideas with diverse return drivers.

**Metal Streaming/Gold Swap:** In addition to exiting TRQ and adding Alphamin to the portfolio this quarter, we trimmed our position in Altius Minerals and reinvested the capital into Equinox Gold. Altius Minerals has been a medium-term holding for us that responded very nicely to the reflation in commodity prices during the second half of last year. At the time of sale, we were up a little more than 100% in the position. As the firm approached our intrinsic value estimate, we decided to reduce what had become a roughly 8.5% position down to 6% and redeploy most of that capital into Equinox Gold.

Equinox Gold remains one of our higher conviction positions. Not only does the management team fill us with confidence because of their continuously thoughtful moves to build the business, but within the gold industry, we struggle to find any firm with comparable growth potential from existing assets. The transactions the firm has undertaken over the last three years to build the business have all come at the market and with either significant shovel-ready brownfield expansion potential, most of which management is undertaking, or greenfield opportunities. Between now and 2025, Equinox will more than double its current annual gold production. By comparison, Altius, which remains a great company with a thoughtful and creative management team, is unlikely to grow its core business much, if at all.

## **PORTFOLIO EVOLUTION OVER THE NEXT FEW QUARTERS**

As we look forward, we are pleased with the current portfolio holdings but do see room to high grade its composition. Two positions, Altius Minerals and Polaris Infrastructure, seem positions that we can swap out for higher return opportunities elsewhere. Furthermore, in addition to believing there are higher return opportunities elsewhere, the opportunities we are currently finding the most potential in are not in either renewable energy development, which we already have significant exposure to via our two

utilities (RWE and AES), and our position in Equinor, or mining, which currently comprises 55% of our portfolio. As such, we believe swapping these positions out for higher return opportunities makes sense from a position and portfolio perspective.

Both Altius and Polaris appear to have bright futures, Altius because of its capable management team operating in a business that is all about the management team's judgment, and Polaris because of its long-term market growth potential. Both firms are entering a phase of consolidation, in our opinion though. Altius does not have any significant chunky royalties or streams coming online anytime soon. In fact, it does not expect to earn anything from one of its more important royalties this year because of brownfield expansion at the mine. Polaris appears to have reached a point in its maturation as a firm in which it needs to grow into its balance sheet a little least management threaten the entire business by overextending itself.

We will allow the facts on the ground to dictate our decision-making but expect to hear more about new positions during the second quarter.

Two areas of research focus this past quarter were EV charging infrastructure and carbon pricing. Neither present investable opportunities at the moment (for different reasons), but both are very young, dynamic markets that we expect will present investment opportunities in the future.

We are far from a consensus on how best to build and operate EV charging infrastructure. Evidence for this is in the sheer diversity of business models that are being sold (mainly via SPACS) to an eager public looking to capture secular EV momentum. This is not an indictment of individual companies; we simply do not have any clarity on policy, consumer preferences, and the technology that will shape how a profitable business operates in the space. ChargePoint is the clear front-runner for the moment. It has a ~75% market share in North America, growing at a compounded annual rate of 60%. Their network is ~2x the size of Tesla's in North America and ~5x as large globally. They have seen a 28x increase in customer spend over the last four years. ChargePoint is a vendor, not an operator, and is aiming to achieve a 1:1 upfront to reoccurring revenue ratio with a B2B sales model minimizing the capital expenditure required for scaling.

We like ChargePoint, but it is trading at over 100x 2025 earnings. Far too little real-world uncertainty is priced into their valuation. We think we will have several opportunities to enter an investment within the EV charging infrastructure industry with better pricing, decreased operational risk, or likely both in the future. There is a 94% correlation between all public companies in the EV charging landscape today; we read this as meaning there is no discernment between individual ventures' prospects. It is a bet that EVs will grow, and thus EV charging infrastructure must grow. We agree with that assertion, but we are not interested in swimming in those waters at this stage.

Finally, we are bullish on EU carbon market pricing, an admittedly highly consensus opinion in a niche space. After several iterations, the EU has created a robust, well incentivized, and liquid carbon credit system. Increasing demand paired with a capped supply may lead to meaningful price appreciation. Governments support the system as it gives them a revenue source (and solves the need for extensive subsidies) and helps the EU work toward meeting their environmental goals. Currently, Massif Capital is not registered to trade and manage future contracts, so purchasing credits on the EU

exchange is not an option. We have explored ETF alternatives such as KRBN, which provide exposure to various carbon markets but are not comfortable with the structure's shortcomings. Whether carbon pricing becomes an investable opportunity or simply an exogenous variable of increasing importance to multi-national institutions, we will continue to follow this market.

As always, we appreciate the trust and confidence you have shown in Massif Capital by investing with us. We hope that you and your families stay healthy over the coming months. Should you have any questions or concerns, [please don't hesitate to reach out.](#)

Best Regards,



WILL THOMSON



CHIP RUSSELL

## FOOTNOTES

<sup>1</sup>Attribution of the core portfolio, gross of fees. Results in individual managed accounts will vary.

<sup>2</sup>This holds true for the standard deviation and the median absolute deviation

<sup>3</sup>How complex and difficult has project permitting become? Freeport McMorans CEO Richard Adkerson recently went on record saying that even if copper prices soared to \$10 a pound, his firm, the world's largest copper miner, would still need between seven and eight years to bring new production to market.

<sup>4</sup>Although we think about things in terms of capital cycles and prefer to value assets under the assumption of stable demand there is a consensus opinion that copper will be in shortfall relative to demand by 2030. Consensus opinion is always tricky. Sometime the consensus is the consensus for a reason, and sometimes it pays to be contrarian. Based on all the available information we tend to think that divergence from the consensus regarding copper is likely a case of being "contrarian wrong" as opposed to "contrarian right." The consensus position is well articulated with the following factoids: CRU Group estimates that the copper industry needs to spend upwards of \$100 billion to close the annual supply deficit it foresees in 2030 of 4.7 million tons, and Trafigura Group, the commodities trading firm, sees that annual shortfall expanding to as much as 10 million tons if no new mines are built. BHP put the shortfall it sees another way, unless the industry builds eight projects the size of the firm's Escondia mine in Chile, the world's largest copper mine, the market will be in a state of significant shortfall by 2030.

<sup>5</sup>It is worth noting that to dig up 60kgs of copper, the average copper mine needs to move roughly 10,000 kgs of material as the global average copper mine grade is about 0.62%.

<sup>6</sup>This price would mean that Cornerstone sold their stake in the Alpaca project for the average price of a pound of copper in the ground from a selection of comparable pre-production copper assets.

<sup>7</sup>Credibility and defensibility are the key variables in determining if something is or is not a value investment, as we believe that whether something is or is not a value investment depends largely on the thesis, not on some factor like P/B. One way of think about credibility and defensibility is as follows: A market price is defined as being comprised of three factors that can be referred to as the price stack: Fundamental Value (the present value of future discounted cash flows from existing assets), Future Growth Value (the present value of future discounted cash flows from growth projects) and Pure Narrative & Sentiment. If a thesis is based on nothing but the top layer of the price stack (Pure Narrative and Sentiment) it may be defensible (although it might not be, for example see [Christopher Bloomstran's recent twitter critique](#) of Ark's valuation of Tesla's Insurance segments valuation) but is it likely to be credible, after all it is just a story? So, a pure narrative/sentiment thesis is unlikely to be a value investment. Is the thesis based on nothing but fundamental value? That likely produces a credible value, but not a defensible one. After all time marches forward and with it changes in a firm's assets and operations. A value investment typically needs to include elements of at least two aspects of the price stack to be both credible and defensible.

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