



MASSIFCAPITAL

Monday, July 15, 2019

Dear Friends and Investors,

The core portfolio of Massif Capital returned -0.8% during the second quarter of 2019, bringing the year-to-date performance to 3.5%. A detailed report on individual account performance will be provided to investors in the coming days.

Value Investors – Avoiding Mining at All Costs, But Why?

We recently had the pleasure of giving a presentation on our approach to investing in mining firms at a conference hosted by the Manual of Ideas in Zurich, Switzerland. For those not familiar with Manual of Ideas, it is a community of value investors that is run by the author of a book by the same name, a book we highly recommend to anyone who has not read it.¹ As far as investor communities go, Manual of Ideas is as good as it gets. John Mihaljevic, the author of the book, has managed to create a diverse community of value investors that we are privileged to be a part of.

Events are a rich mix of successful entrepreneurs turned private investors, fund managers, chief investment officers of foundations and endowments, venture capitalists, etc. We learn a great deal from the conferences and are often convinced that what the group gains from our attendance pale in comparison to what we gain. While there is a great diversity of thought and investment acumen at these events, investing in mining firms is a rarity.

At the start of our presentation, entitled “Beyond Commodity Prices: Finding Value in Mining Firms,” we asked the audience “who invests in mining firms?” In a group of roughly 25 people, about three people raised their hand. This ratio seemed to hold for the broader conference audience as well, about 100 or so individuals. We take no issue with investors choosing to avoid sectors based on a lack of opportunities or not being interested in spending the time to bring a company into their circle of competence (there is after all only so much time in the day), but we found the ratio sufficiently skewed to ask most attendees we spoke with why they choose to avoid mining. Based on our conversations, there are three areas of concern:

- 1) Mining was too volatile;
- 2) Mining was too technical, and;
- 3) Many felt uncomfortable forecasting commodity prices.

Regarding the first issue, volatility, we never really figured out how to respond to this concern. We like volatility; it creates opportunity even if it creates heartburn. Confusing the absence of volatility for the

¹ If you are an investor in Massif Capital and have not yet read this book, please contact us and we will send you a copy.

absence of risk is also not appropriate. Furthermore, much of the volatility in the mining sector is driven by commodity price movement. Often the impact of commodity price moves on the value creation of mining firms is illusory, or transitory, with minimal impact (we will show how this can be the case later). As for the technicality of the investment, we find little evidence to suggest mining is any more or less technical than numerous different areas in which people find high-quality investments.

The final issue, forecasting commodity prices, is an interesting concern. Regardless of the asset, an investment is always worth the present value of future discounted cash flows. This means that present value assumptions are always about events in the future and always about forecasts of some kind, which is to say an investment is always made in the presence of uncertainty about how future cash flows will unfold. The key then to the investing process is not the pursuit of a precise forecast, whether that be of commodity prices, demand for some consumer good, the stability of pricing for services, etc. but coming up with a method of gaining conviction about the potential value of a company across a range of potential futures. We do not claim to have the ability to forecast commodity prices, nor are we familiar with anyone who does, but we also don't see it as a key to successful mining investing, just as predicting the future price of advertising on Facebook or the future price of Tide detergent is the key to investments in the social network or in Proctor and Gamble.

We approach our due diligence of mining investment as follows:

First, we evaluate the management team, project risk, the balance sheet and finally, we assess the present value of the company using probabilistic scenario analysis within the context of the capital cycle of all the firms that mine for the target company's commodity. The front end of this process (management teams, project risk, balance sheet) is no different than the process one might take for any other company. The back end differs only insofar as we must seek to establish conviction around there being tailwinds for a company's industry in the form of both industrywide capital allocation and medium to long-term commodity price movements (i.e., higher probability of commodity prices moving up than down, that statement is the extent of our commodity price forecast).

A Brief Note About What Follows

We make no pretense to our methodology being a definitive methodology for mining company valuation; this is only our approach. It is an approach we have found some success with, but which we also recognize has room for improvement. In fact, this valuation methodology itself only represents a marginal improvement over other methods. In questions of valuation, we are skeptical that there can ever be anything but small incremental steps in process improvement. We are satisfied with such small incremental steps so long as we continue to make them, which we believe we will.

The strength in our approach is that it encourages conservatism in expectations, minimizes behavioral bias in assumptions, and invites caution in investor conduct. For many, it may overemphasize history even though valuation is a forward-looking exercise. We contend that seeing the past clearly can help us envision alternative futures better, but we are cognizant that certain backward-looking aspects of our approach may limit vision. In our investing practice, we believe caution is a virtue, even if it may sometimes come at the expense of missed opportunities our wary eyes cannot fully grasp.

Above all else, we encourage our investors to recognize that this approach, although producing a determinate value, is geared towards drawing on history, industrial context, and company fundamentals to frame sharper questions about a company's future in a systematic way.

Please note that we are not reviewing our sourcing of ideas in this discussion but rather the backend of our process.

Capital Cycle Analysis – Seeing the Forest Before the Tree

Valuation is a conviction building exercise. By that we mean we have reviewed a company and it appears to have the ingredients necessary for a good investment, and now we must build conviction in that claim. Conviction building begins by asking whether the industry the company operates in is creating a headwind or tailwind for the company. Keep in mind we don't believe we can prove our thesis, but we can increase our conviction by eliminating errors in our understanding or limiting the damage those errors in understanding can create. Any industry today is the result of a historical branching process that results in operating environments with attributes that are difficult to reverse. Positive trends beget further positive directional movement; negative trends beget further negative directional movement. In short, the phenomenon of momentum.

We see a link between market momentum and an industries capital cycle, to the best of our knowledge this a new claim.² The capital cycle, which we discussed at length in our previous letter, is a type of feedback loop, but unlike many economic models, it is a feedback loop that lacks a fixed equilibrium point. What this means is that rather than finding a balancing point, it is a cycle that is constantly cycling between extremes. As a cycle with a trailing feedback loop, it has a self-reinforcing quality that drives them to extremes and pulls the underlying stocks to extremes.³

If we invest in a company that is strong and supported by a strong capital cycle trend, we can gain additional conviction in our overall thesis playing out because the structural industry trend acts as a form of additional unpriced margin of safety.

So, we always seek to understand the trends at play, to see the forest before the tree if you will.

The second reason we want to focus on these issues is related to a firm's future margin and return on invested capital prospects. Within an industry, competition continually drives down the rate of return on invested capital towards an industries floor rate. Thus, an understanding of supply and investment within an industry is of significant concern for investors as they seek to understand future profitability. It is not issues of demand, even for commodity producers, that determines a firm's structural ROIC and margin potential, but rather industry competition. Firms within an industry are mutually dependent, which is to say the actions of one firm impact the position of another within the industry landscape.

This is especially true of mining firms, or any basic materials firm. Geopolitical events, short term concerns about demand, logistical challenges, these are the types of events that can create volatile swings in short-term prices. Importantly, volatile short-term price swings are not the same as fundamental changes to industry dynamics. Fundamental changes to a mining industry require the addition or subtraction of capacity (new mines coming online or mines being shut down). The timelines

² Our understanding of momentum is shaped by white papers produced by AQR and by the book Quantitative Momentum by Wesley Gray, as such it is limited in diversity of perspectives. We hope that any readers who have seen a discussion of the link between the capital cycle and momentum will reach out so we can investigate this link further.

³ Those well versed in the thinking of Karl Popper and George Soros will see a direct link to the General Theory of Reflexivity in this understanding of the capital cycle.

on which these different types of events impact markets can be very different. Commodity price volatility is short term by nature, supply shifts which change industry competition and impact margins occur in the medium to long term.

It's important to recognize that this analysis is not a macro-economic forecast about the state of the economy or a forward-looking demand forecast for a commodity. Both approaches involve a vast array of diverse assumptions that we believe make for a toxic mix of behavioral bias and compounding errors.⁴

The key question for investors is thus not one of demand (which drives short term price action), but rather of competition and supply (which create structural price floors for commodities). As such, we ask: is capital flowing into the industry and flowing into projects that are going to bring on significant supply, depressing industry returns.⁵ On a timeline of several weeks to years, this flow of capital is positive for equity investors as it is positive sentiment about the industry made real. Balance sheets expand, and asset values get bid up. In the long run, excess supply creates structural changes within an industry that will drive down the industries base rate of return and results in liquidity flows out of an industry.

Timing is a tricky issue, and we were hesitant to even mention the word in our letter, after all, no one knows how to time the market, although some people seem to be good at it (Warren Buffett, despite his protests, has the best timing of any investor we have ever seen, Stanley Druckenmiller also comes to mind). For many value investors the idea of timing the market is blasphemy, we would counter that although timing the market is beyond our ability (and most everyone else's), investing capital in the absence of timing considerations is to invest without considering opportunity costs. We are not suggesting that one attempt to pick bottoms and tops, its subtler than that, but rather we seek an answer to these questions:

- 1) Why do we think now is a good time to establish a position in company X?
- 2) How long do we think we will need to hold our position to achieve our target return, and finally;
- 3) Why do we think now is a good time to exit our position in company X?

In these questions, we consider timing not so much as a function of the market conditions, but rather consider timing within the context of a specific company's unique industry environment and position within the industry.

We have slowly begun to add gold mining companies to our portfolio over the last six months. Why are we compelled to add now? To answer that question, we will first look at the 2003 – 2011 mining boom and then evaluate where in the capital cycle we currently are for the gold mining industry.

⁴ By compounding errors, we mean erroneous assumptions or conclusions made on the basis of erroneous assumptions or conclusions, the end resulting being an exponential growth in the overall error of the forecast.

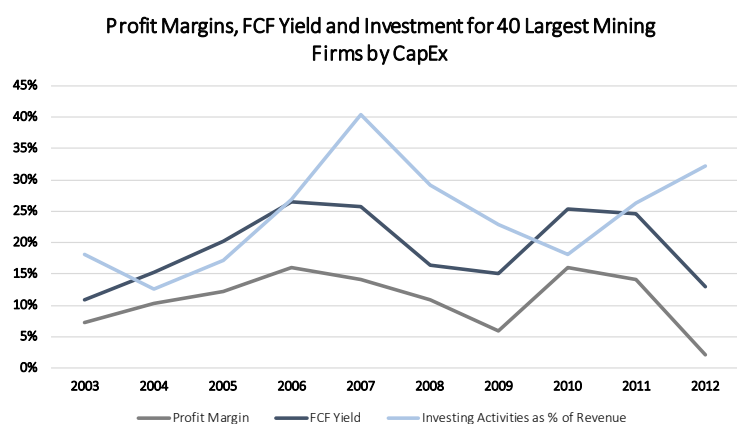
⁵ The viciousness of turns in commodity cycles has much to do with the fact that what depresses the returns of producers (new supply) also depresses the price of commodities, creating a double impact on a firm's financials. In this way the capital cycle takes on additional importance for commodity firms in that where an industry is in the capital cycle is telling of the likely medium to long term direction of the commodity price due the link between price and supply.

Historical Context: 2003 - 2011

The last commodities supercycle lasted from roughly 2003 to 2011 and was characterized by a drive for volume, with management teams generally focused on increasing output at the expense of productivity. The result was over-optimistic forecasting/planning and runaway costs of building/operating mines that squeezed profit margins to unacceptable levels despite record high commodity prices. Within this context, the price of gold peaked at a high of \$1,906/oz in 2011, the same year that M&A also peaked. In 2011 annual acquisitions within the gold industry hit \$38 billion, or ~30% of all M&A for a ten-year period from 2001 to 2011. To put that into context, the industry in 2011 spent 40% more on M&A than occurred in the entire ten-year period from 1990 to 2000. The boom in M&A is a classic sign of a capital cycle peak.

Higher levels of M&A can be a sign of high returns on capital attracting more capital (spurring on more M&A activity), but likely producing a dampening effect on returns over a medium to long term period absent a structural shift left in the demand curve.⁶ Total deal volume had two peaks in the most recent cycle interrupted by 2008-2009: one peak in 2006/2007 and another in 2010/2011. In both instances, peak deal making occurred at the same time as local peaks in returns on capital employed (ROCE). Between 2002 and 2007, ROCE within the industry went from 5% to 22% before diving to 9% and rocketing back up to 18% in 2010 and then falling to below 8% in the post 2011/2012 period. In both cases, the M&A splurges presaged falling returns on assets.

One of the reasons that M&A can be indicative of a capital cycle peak is because increasing asset prices tend to result in lower margins.⁷ The average price paid per ounce of reserves during the peak period was more than 300% higher than deals executed a decade earlier.⁸ Given the move in gold prices, some willingness on the part of management to pay up for ounces in the ground can be forgiven. A company cannot afford a 300% increase in the cost of reserves at the same time as the all-in sustaining cost of pulling gold out of the ground increases by ~1,000%.



Source: Company filings, Massif Capital

Value insensitive M&A was not the only capital allocation transgression of management teams. Capital expenditures by large gold miners increased tenfold between 2000 and 2012, with aggregate spend exceeding USD \$125 billion on several occasions. Even more inexplicable was the degree to which management teams executed capital expenditure plans poorly: McKinsey estimates that two-thirds of projects exceed budgets by 60% when compared to initial estimates and half of the projects

experienced delays of between one and three years.⁹ We can see the combined impact of capital

⁶ High levels of M&A do not always indicate this, as with all things market related the rules are not hard and fast.

⁷ Can Gold Industry Return to Golden Age, McKinsey

⁸ Ibid.

⁹ Ibid.

allocation mistakes on the industry in the chart above which shows the profit margins, free cash flow yield and investing actives as a percentage of revenue for the period 2002 to 2012. As spending increased, much of which was M&A, and costs increased, margins declined, at the same time the commodity price continued to trend higher, suggesting that commodity prices are at best a lagging indicator of the health of an industry, and at worst can be completely disconnected from the health of an industry for long periods of time.

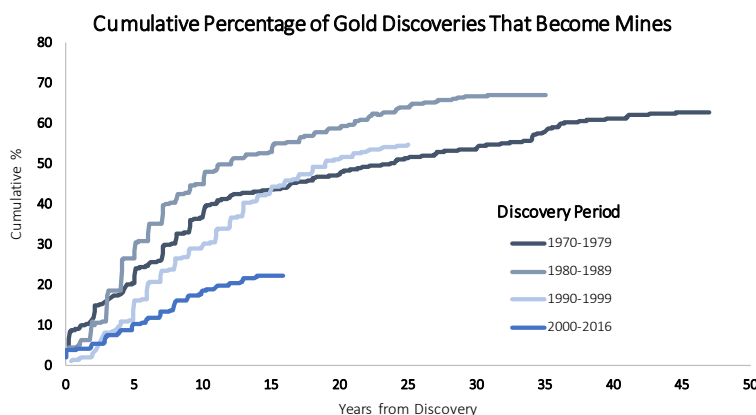
So what lessons can we learn from the 2001-2011 period? The primary lesson is to constantly be on the lookout for an industries capital allocation error trifecta: value insensitive purchases combined with irresponsible levels of spending, and poor execution on the spending. Signposts include rising levels of M&A, falling levels of ROCE, project slippage, and cost increases. Unfortunately, few saw the signs at the time, we of course now benefit from hindsight. As Paulson & Co. have noted, gold mining shareholders were “like sheep being led to slaughter.” Although not a guarantee, we feel comfortable suggesting that by the time an industry has engaged in all three of the aforementioned activities, there is a higher probability the path forward is bleak, as was the case with gold miners.

Fast Forward to The Present

Fast forward to the present, and the gold miner’s capital cycle took a vicious turn. Management teams at major gold mining firms were replaced (although we suspect few lessons have really been learned) and the capital allocation decisions made during the previous boom have been written off, to the tune of \$129 billion. A renewed focus on efficiency and cash flow has come to the forefront and resulted in a fall in the cost of production across the industry by 20%. At the same time, CapEx has trended down, with spending by the 20 largest gold miners falling from \$30 billion a year in 2012 to just \$12 billion in 2016. Exploration budgets have been slashed from \$20.5 billion in 2012 to \$8.7 billion in 2016. Balance sheets have been significantly de-levered with net debt to EBITDA falling from 1.6x to 1.1x in 2018.

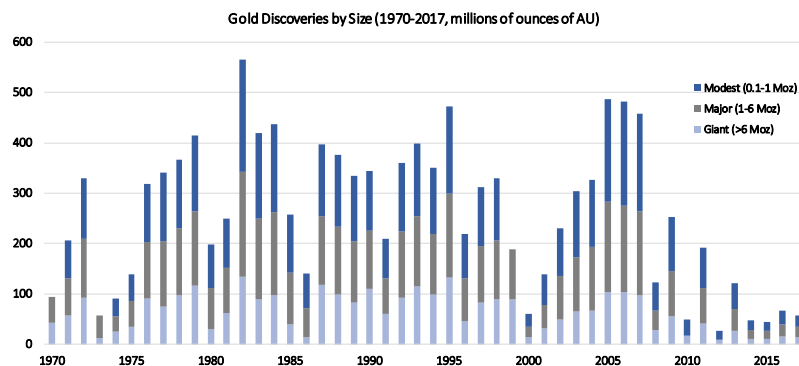
Most importantly, the industry supply, in this case, reserves, have shrunk, and not just relative to the cycle peak, but relative to before the headiest times of the last boom in gold. In 2007, the reserves of the world’s major gold miners were 790 million ounces. In 2017, reserves were just 713 million ounces, down nearly 26%. Meanwhile, demand, which peaked at 151 million ounces in 2011, has declined 13% and is now just 7% below the 2011 peak. Assuming demand falls to 2017 levels, 130 million ounces a year, 7% below current levels, and 35 million ounces a year comes from secondary supplies (recycling), current reserves will last roughly 7 years. This is roughly 3 years less than it would take a top tier deposit from discovery through to commercial production, assuming nothing goes wrong.

At this point you must be saying, miners must surely be replacing reserves though? Well, they are certainly trying, but as previously noted, they have failed at it quite badly over the last ten years. The outlook for the next ten years does not look any better. Much of our pessimism is driven by the low conversion rate of discoveries into producing gold mines, and the poor greenfield discovers track record of the last decade. The graphs to the right and below, when taken



Source: MinEx Consulting, Massif Capital

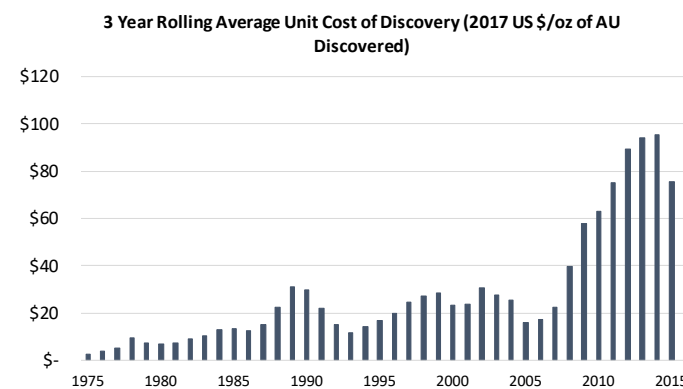
together, indicate that minable deposits are getting harder to find and even when gold is found, fewer of the deposits are being turned into mines. In short, replacement rates are falling.



Source: Company Filings, MinEx Consulting, Massif Capital

These trends can be looked at via another lens. If we take the number of discoveries and combine it with exploration budgets, what we find is that the unit cost of discovery has increased dramatically for gold. We believe this to be particularly telling because all else being equal it means the incentive price to find and bring into production a gold mine must increase.

The present paints a picture of an industry with steady demand and decreasing supply due to a lack of both exploration success (the actual job is getting harder) and a lack of spending. As such we think that it is reasonable to assert that directionally, gold miners are likely to experience improving margins and that gold is also more likely to rise than it is to fall in the medium to long term as we are clearly in the structural trough of the capital cycle. Beyond that, though we are not going to speculate on the actual price movement, nor are we going to pick a price. Instead, we are going to take a probabilistic approach to our valuation using a combination of history and Monte Carlo simulations.



Source: Company Filings, MinEx Consulting, Massif Capital

Historically Informed Valuation – Mining Firm Values in the Absence of Commodity Price Forecasts

Having established what we believe to be a reasonable case for the medium to long term health of the industry (a higher probability that industry health will improve rather than weaken, and a higher probability that gold is trending higher than lower), we can move on to a valuation of a gold miner. We do so without consideration that gold appears more likely to move up than down. This is a tailwind we want to have but not the basis for either valuation or ownership.

Rather than pick a gold price we must ask ourselves an important question: do we think the future will be different than the past? For us, the answer is yes; the future will be different than the past but not so different than the historical price action of gold will look nothing like the future price action of gold. Put another way, if we look at the price of gold over the last twenty years, and a mine is profitable across all the historical gold price scenarios embedded in the twenty-year history (of which there are thousands upon thousands) can we have a reasonable basis for asserting that it will be profitable in many (perhaps not all) of the scenarios that might occur in the future? In our opinion, the answer is yes, especially if there is a capital cycle tailwind.

There are obvious limitations to this approach, the most glaring of which is when the past looks nothing like the future. This is of no concern to us if the price of gold goes up, it is a concern if the price of gold drops through the floor though. What this means is that there is no panacea for valuation of companies with commodity price inputs that drop to historical extremes. Price action rarely has a normal probability distribution, and so drops to historical extremes will occur. If we consider a long enough period, between 10 and 20 years, for example, we inevitably capture a few such historical situations and can gain conviction around what the downside in those scenarios might look like though. Remember, the goal is to be able to ask sharper questions about the company and increase conviction, not a determinate valuation. What the company might look like is thus enough for our analytical purposes.

Rather than toss out a superior valuation approach because of a shortcoming present in any method of valuation (inability to consider unprecedented low commodity prices or extreme events), we need to recognize the shortcoming and fold it into our qualitative analysis. We consider the risk associated with extreme events to be directly related to the ability of a given management team to handle those events, as such, it must be part of qualitative analysis, not quantitative analysis.

Given that the goal in our valuation is not precision but rather understanding the impact of risk and uncertainty, we consider the Monte-Carlo based approach superior to the more common three-point approach of most sell-side analysts.¹⁰ A high, medium, and low commodity price forecast fails in several respects.¹¹ For starters, although tail events must be assessed within the context of a management

¹⁰ We utilize Palisades @Risk software for our Monte Carlo Simulations. We integrate it into standard DCF analysis by substituting variables that might traditionally be forecasted on the basis of historical averages with variables that are actively changed across thousands of scenarios that mimic a sequence of random historical pricing events for a given variable. The result is a more multifaceted valuation output.

¹¹ A three-point valuation is a sampling approach, in the language of stochastic processes, it creates alternative sample paths, meaning we see only one possible outcome among a collection of many possible outcomes. Furthermore, in the case of valuation it is a deterministic outcome because primary variables are decided ahead of time by the analyst. Monte-Carlo creates a random sample path, meaning the output is a succession of virtual events subject to varying levels of uncertainty.

teams' ability to handle them, quantitative valuation work must make such events apparent for analysis, a three-point approach does not. Furthermore, a three-point approach produces a deterministic, rather than probabilistic, view of the future, and thus limits the opportunity to ask questions about future scenarios which go unseen. Finally, the Monte Carlo simulation approach allows for the introduction of uncertainty into more than just commodity prices. We may use it with production volumes, COGS, and discount rates. All benefit from implementing a stochastic empirical framework.¹²

We are not new in employing this approach, it is commonly employed at corporate offices of mining firms or oil and gas firms, but it is uncommon in the world of fundamental investing and not something we have come across in any actual equity research we have seen. One reason for this is the common approach to the interpretation of results.

Most Monte Carlo simulation results end with a conclusion such as there is a 50% chance that given a particular probability distribution of variable X, the value of the company is going to be greater than Y. This is the wrong way to interpret the results. Rather, the right interpretation is that the mean valuation is suggestive of what a company/mine might be worth if the future looks anything like the past, which is to say the correct interpretation is of a value that is historically informed in the truest sense. Many will argue that these are the same interpretation, and on a strictly mathematical basis, they are. At issue is that we are not operating in the realm of mathematics, behavior, and emotion also have a say. The second interpretation considers the weaknesses of the analysis and puts them front and center in a way that the first interpretation does not.

Because investing decisions always draw on the past, whether it be conscious or unconscious, we believe it best to make it conscious in all cases; an assumption made explicitly is an assumption that can be challenged. An assumption that can be challenged is an opportunity to eliminate error and eliminate behavioral bias. The benefit of Monte Carlo simulations is not only the explicit nature of the assumptions but that they also produce a measure of an assumption's contribution to value. What this means is that we can look at a company and a valuation and say that the most important assumption in this scenario to the valuation was the production volume in year 2 of our analysis. That specific assumption can now be challenged: What are the odds of production being within the range of X and Y over the next two years? If the range X to Y is, for example, 10% below the historical average, we can have a high degree of conviction. If it is a new mine that has no history, how does that range compare to similar mines at similar stages in their history?

Again, the goal is sharper questions: if a hoped-for situation never existed before, why not? If something like it did exist, why? Investing options are weighed based on pros and con; the pros and cons rest on assumptions. The assumptions have to do with cause and effect. Many such assumptions are shot through with behavioral bias. Either way, the assumption needs to be exposed and tested. What are the assumptions behind the pros and cons for favored options, what experience, if any, validates those assumptions?

¹² Stochastics is a branch of probability mathematics that concerns itself with the study of the evolution of successive random events, Nassim Talab refers to Stochastics as the mathematics of history.

Portfolio Review

Over the last quarter, the portfolio has experienced a fair degree of volatility principally due to oil and driven largely by movements in Diamond Offshore and Teekay Offshore, two of our big four positions (those over 10% of the portfolio). The oil sector overall has been plagued by a tussle between bulls, confident that the price is due for further appreciation given various supply factors, and bears convinced we are heading for a recession and thus decreased demand in the presence of easy supply conditions created by US Shale. We are somewhat conflicted in our beliefs. On the one hand, global industrial growth appears to be slowing notably, with many manufacturing and chemical companies pointing to near term contraction and rising uncertainty. On the other hand, we are skeptical that we have the supply to meet future demand. The US energy renaissance has more fleas on it than many would like to admit.

Many of our positions currently remain at or around the lows reached during the fourth quarter of last year. When and where possible we have endeavored throughout the year to take advantage of that fact to add to positions. We have been somewhat handicapped in those efforts by the fact that a few of our larger positions are as large as we are comfortable with, usually around 12%. With that in mind, combined with the events of the fourth quarter of last year, we endeavored over the last six months to reevaluate our approach to portfolio management. That review has prompted us to make a few changes to our methodology. Going forward, we will attempt to establish most positions at around 4% of the portfolio, allowing us to average down where necessary at larger intervals than we have done in the past. We believe this approach will result in better average entry prices, will dampen overall portfolio volatility and still allow us plenty of room to take the occasional overweight position (10% to 12%).

In terms of what has worked well this quarter, we have seen positive results in our two gold positions, as well as a lot of volatility, but mostly positive price action, in our limited short book. At the current time, our two gold positions (Barrick Gold and Continental Gold) are both trending in the right direction, and we believe still have a way to go before they are fully valued at today's gold prices, let alone if gold moves significantly higher. The successful conclusion of the Barrick joint venture with Newmont, to combine both companies Nevada assets, occurred towards the end of the second quarter and will be a boon for shareholders of both companies for many years to come. Continental Gold, which is a pre-production mine in Columbia, remains on track for commercial production in 2020 and has produced excellent drill results from further resource delineation.

Graftech, another of our big four positions, has price action that continues to disappoint, a fact that confounds our best efforts to understand. At the current time, Graftech is on track to earn ~\$750 and ~\$850 million in free cash flow this year, which would mean it is currently trading at a roughly 24% free cash flow to market cap yield. Furthermore, Graftech is currently trading at 16x last quarter's earnings, not a full year's earnings, one-quarter earnings. A PE of 16 is cheap in the current market, let alone the yearly PE of 4.2x, which is the full year PE implied last quarter's earnings.¹³

¹³ Graftech is an interesting case of both the bull and bear arguments being about the supply side of the industry. The bear argument currently rests on the proposition that the graphite electrode industry may currently be tight but will soon be swamped by cheap Chinese electrodes, unfortunately the bears fail to differentiate between ultra-high-powered (UHP) electrodes, high power electrodes and ladle electrodes. The bull argument is more nuanced and suggests, as we have been told by industry participants, that not all graphite electrodes are created equal, and that while there may be a glut of cheap Chinese ladle electrodes and high-power electrodes, these are not electrodes that can be used in state-of-the-art electric arc furnaces, and the Chinese have not yet produced a viable UHP.

Lucara, our diamond miner, is currently languishing in an industry-wide slump that has seen a significant sell-off in all publicly traded diamond miners. Although some have critiqued us for taking such a large position in African based diamond miner, we continue to have high conviction in this company, the phenomenal management and ownership team and the moves they are making to both broaden their revenue base, in the form of the diamond sales platform Clara, and extend the life of the Karowe mine. Rumors currently swirling in Canada are that Lucara may be in the market for Stornoway Diamonds, a Canadian diamond miner that Eira Thomas, the current CEO of Lucara, was previously the CEO of. It is a potentially interesting opportunity, but we will have to wait and see what happens.

The most pressing issue for our portfolio currently is events at Teekay Offshore where Canadian Private Equity firm Brookfield is attempting to steal the company from the minority shareholders. Brookfield is acting well within their legal rights, but their actions are less than honorable. Brookfield originally took a position in the company in 2017 at \$2.50, recapped the balance sheet enabling the delivery of over \$1.5 billion in newbuild assets that generated \$200 million a year in cash flow and expanded the existing shuttle tanker fleet with low-cost financing. Furthermore, since Brookfield took a position, adjusted EBITDA has increased by 50%, and the leverage ratio has improved by 38%. Despite the much-improved company, and Brookfield's commitment to "maximize shareholder value" when they first invested, they are now claiming Teekay is a distressed asset in need of new ownership.

Not only is Brookfield stretching the truth in claiming that Teekay is a distressed asset, but they also have the gumption to make an offer for the company at less than the open market price, bidding \$1.05 for the entire company when it was trading at roughly ~\$1.15. Since the offer was made, Teekay has mostly traded in the \$1.15 to \$1.30 range. We believe the company is worth north of \$4.0 a share. We have engaged with management along with 18 other funds and investors to derail the takeover, or at the very least improve the terms. At the current time, it has become a waiting game as a committee comprised of independent board members evaluates the offer and the firm's value. For those interested in learning more, we refer you to the [letter](#) delivered to the Teekay Board of Directors that was drafted by JDP Capital Management and co-signed by Massif Capital and 18 other funds.¹⁴

New Position: Long Cobalt 27 Capital Corp.

Cobalt 27 is a nickel and cobalt royalty and streaming (R&S) company. When a mine is in pre-production, traditional avenues of capital can be quite expensive. R&S companies will provide capital to mines in return for either a royalty or streaming interest in the future production of the mine. A royalty agreement stipulates that the mine agrees to pay a portion of their revenue to the royalty owner. The owner of the royalty never actually receives a physical product. Under a streaming agreement, the company acquires the right to future deliveries of the actual metal production. For investors that do not feel comfortable underwriting the operational risk of a single asset mining firm, or do not have the expertise to value pre-production mines, R&S companies can offer a unique investment opportunity at the right price.

¹⁴ An important take away from this investment has been that although Private Equity can make for an interesting strategic investor, they have incentives that are very different than traditional equity investors. For right or wrong, we initially viewed Brookfield's investment as a positive for us as investors, they are after all a well-respected, knowledgeable and capable organization. Their initial statements suggested that they were in fact investors with interests well aligned with minority shareholders, that has unfortunately turned out to not be the case.

We evaluated Cobalt 27 over a year ago and passed on it as an investment as the firm was no more than a proxy to the price of cobalt. One year later and after a string of compelling acquisitions, the underlying value of the firm has changed dramatically while the published financials and the equity value still suggest little more than a shell company. At the time of our investment, the firm held a physical supply of cobalt worth roughly \$100M USD, streaming and equity interest's worth \$441M USD and 12 royalty contracts that held a carrying value of \$23M USD. The firm had no debt, cash of \$50M, and traded at a market capitalization of \$250M USD. Both nickel and cobalt are trading at, or near, ten-year lows and both markets have a high probability of experience significant supply side growing pains over the next ten years should any fraction of the electric vehicle industry materialize.

The firm owns interests in one of the few nickel sulfite mines capable of producing Class 1 nickel (the type need for batteries) and is one of the largest holders of cobalt outside of the Democratic Republic of Congo. We believe the company represented an excellent opportunity to buy fractions of several world-class mines at compelling prices with strong capital cycle tailwinds.

Not two months into our investment, Pala Investments, a private equity firm in Switzerland, announced their interest to acquire 100% of Cobalt 27 for C\$501M. At C\$5.75 per common share, this represented a 43% premium to our average purchase price. The offer, however, comprised of C\$3.57 of cash and shares in a newly listed company, Nickel 28, with an implied value of C\$2.18 per share. For the C\$3.57 of cash, Pala wanted the physical supply of cobalt, and the streaming interest in Voisey Bay (a nickel/cobalt mine in Canada run by Vale, set to begin cobalt production in early 2021). Nickel 28 would hold the remainder of the portfolio, principally the 8.6% interest in a producing nickel/cobalt mine in Papua New Guinea and 12 royalty interests. The market reacted to the news with mixed enthusiasm. The stock appreciated, but only to \$C4.12 per share, implying a market valuation of the new entity, Nickel 28, of roughly \$C0.55.

We are not thrilled with the announcement as we were looking forward to holding the entire portfolio of assets for many years before exiting at a much higher valuation. Furthermore, although both nickel and cobalt are essential resources for the expansion of battery supply chains and have strong tailwinds, monetization of Cobalt 27's nickel assets, which would comprise much of the asset base of Nickel 28 are much longer-term stories, whereas the physical cobalt and Voisey bay stream would create near term cash flow. Our preference is thus for the deal to not go through and given the market reaction; we think there is a reasonable probability that it does not. In this scenario, we are likely to be able to add to the position below our average entry price.

If the deal goes through, and Nickel 28 stabilizes at the implied valuation of C\$2.18 per share, we will have made a quick return, some of which is cash for redeployment, and will still hold shares of assets we intend we like. If Nickel 28 craters to its current implied price of C\$0.55 per share, we'll have a compelling buying opportunity of assets we value at \$C3.13. At a C\$0.55 per share, the market believes Nickel 28 is worth only \$33M USD right now. At today's commodity prices, just one of Nickel 28's assets (the Ramu mine in Papua New Guinea) likely generates \$10M USD in EBITDA annually. As such, for the Ramu asset to be worth the implied valuation of the entire company, a 35% discount rate would need to be attached to a fully operating mine that has a 30-year life and very little political and governance risk. This seems highly unlikely, and we would be happy to add generously to this position should we have an opportunity.

New Position: Short Deere & Co

Over the last three years, John Deere's equity valuation has moved in the opposite direction of the health of the underlying market. The sell-side is extrapolating steady earnings growth, which is a mistake. The firm has benefited from equipment sales being fueled by cheap credit, above average crop prices (hitting historical highs in 2012) and increasing farmland values. Furthermore, we believe that their captive finance arm is now one of their largest end-market buyers for their own equipment. Signs of trouble began to emerge in 2013 with softening commodity prices, weakening the purchasing power of their core customers. From 2013 to 2016, the firm's equity value stayed roughly constant, exchanging hands at \$80 per share. The last two years, thanks to several acquisitions¹⁵, the tail end of a \$17B share buyback program and \$500M in cost-cutting measures, the firm has doubled its market capitalization. We applaud their cost-cutting abilities but are concerned that growth supported only by acquisition and purchases on credit by balance sheet weak farmers is not sustainable.

Operationally, John Deere divides their business into equipment operations and their financial services division. Deere sells most of their products through independent dealers who subsequently take on a large portion of the inventory (and risk of falling second-hand values). Through their finance division, Deere helps dealer networks facilitate new tractor sales by offering loans and leases on equipment. Since 2004, Deere has grown its credit book by 300% while boosting operating profit by only 70%. The growth in the loan book suggests that more sales are being financed than are being paid in cash. There has also been substantial growth in operating leases. While the loan book and operating leases have ballooned, sales of farm equipment have dropped by 40% since 2013. Since 2016, cash flow from operations has fallen in half, and the firm has been free cash flow negative for the last two fiscal years. Meanwhile, the share price has appreciated over 90+%.

While farmer demand for new equipment has contracted, Deere's financing arm has stepped in to pick up the slack in demand by taking leases on to their balance sheet. We trace the move into leases back to John Deere's overproduction of equipment relative to retail sales. Although this lowers Deere's unit cost it does boost inventory, and inventories are now as high as they have been at any point in this cycle or any other we studied.¹⁶ A positive balance sheet checkup for the US farmer seems necessary for this situation to change. We, unfortunately, think farmer balance sheets are heading in the opposite direction.

Debt levels for US farmers are at 30-year highs, and low commodity prices have significantly reduced net farm income. Recent weather events have exacerbated the issue with large swaths of the central U.S. experiencing "once in 100-year storms" that have wiped out the 2019 planting season. Cash receipts have fallen as a result which, historically, have been highly correlated to tractor sales. In real dollars, capital consumption has been falling since 2015. Tractor CAPEX shows a similar expenditure pattern with a sharp downward move in real dollars since 2015. Total farmer equity has started to fall continuously (the last

¹⁵ John Deere has historically not been an acquisitive company; the acquisition of Wirtgen is thus a major strategy shift for the firm. Wirtgen is not only in a new industrial machine segment (road construction machinery) for John Deere, but it highlights management's focus on creating a growth story for Wall Street, as opposed to generating cashflow for investors. We believe the idea of this acquisition as a "growth story for Wall Street" is well justified by management's economic rationale for the deal, which largely rests on 2022 synergies. Furthermore, we see it as evidence management has little faith in the ability of core Agriculture Equipment division to maintain the company in the next down cycle.

¹⁶ Over the last ten years Deere have grown inventories at a CAGR of 7.29% a year, vs. 5.37% over the previous 25 years. The 7.29% statistic is deceptive though as inventories grew 57% from 2017 to 2018.

four years) for the first time since 1988. Debt to asset ratios have been falling precipitously since the mid-80's as land value makes up a large portion (and an increasing portion) of a farmer's asset base. In more troubling news, there is multiyear evidence now (since 2013), that this trend is reversing. Combined with falling income levels, the overall balance sheet of the farmer looks to be facing some headwinds.

We established our position in March. The market received a taste of the forward-looking pessimism in the Q1 2019 earnings, with the share price falling from roughly \$165 to \$135 over a one-month period straddling their earnings. The stock has pulled back towards \$165 over the last month on the coattails of an equity rally, but our conviction remains unchanged. We admire the John Deere brand, however, believe the stock price has marched too high, and the firm has too much-leveraged exposure to an increasingly unhealthy customer. The downside opportunity is fruitful, and we will be looking for this short to really take off once John Deere starts cutting production.¹⁷

As always, we appreciate the trust and confidence you have shown in Massif Capital by investing with us. We know that entrusting hard-earned capital to a young emerging fund is difficult and hope that you will never hesitate to reach out if you have any questions or concerns about what we are investing in.

Best Regards,



Will Thomson



Chip Russell

¹⁷ Cutting production is an important indicator for John Deere, or any cyclical for that matter, because when we see a production cut, the unit cost of production will go up just as the firm experiences pricing pressure due to the decreasing demand that prompted the production cut in the first place. We expect to see this combination hit the financial statements in the second half of this year and early next year.

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