MASSIFCAPITAL

Monday, October 21, 2019

Dear Friends and Investors,

The core portfolio of Massif Capital was down -7.47% during the second quarter of 2019, bringing the year-to-date performance to -5.72%. In what has become an odd inter-quarter seasonality this year most of the losses came in the final weeks of the quarter and much of that sell off reserved itself in the first two weeks of the next quarter. A detailed report on individual account performance will be provided to investors in the coming days.

Portfolio Context

Looking around the world, we find ample reason to be optimistic about our portfolio. We will touch upon a few reasons below and discuss why we believe our expanding short book focused on US industrials is of particular interest.

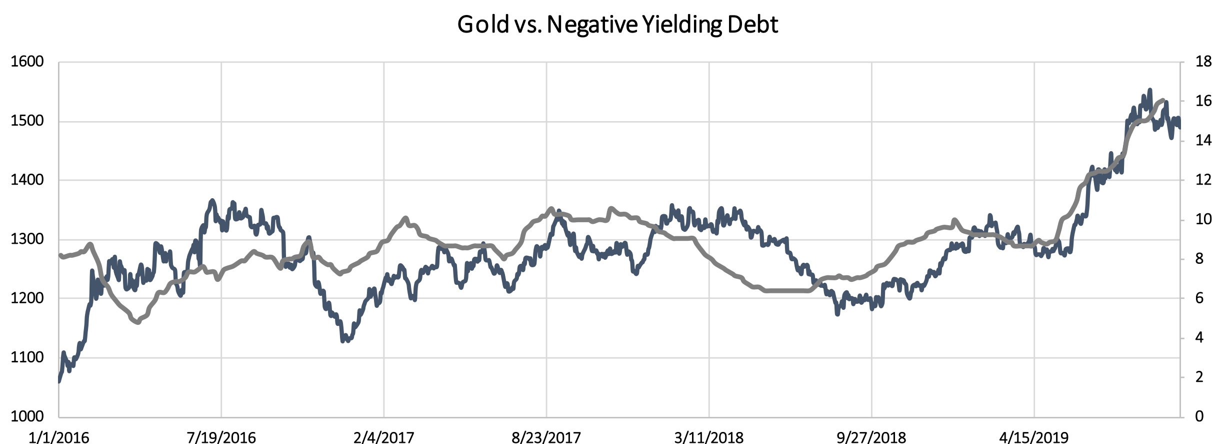
Oil prices continue to trade within their five-year range between $40 and $70 per barrel, despite notable increases in geopolitical risk and erosion of supply. Market participants are focused on slowing global growth expectations, principally viewed through the lens of a trade war between the US and China. The physical crude market, however, points in the opposite direction. There have been numerous supply disruptions in the last six weeks in the Middle East. The Abqaiq oil processing facility in Saudi Arabia sustained a volley of missiles in mid-September, removing roughly 5.7 million barrels of oil off the global market, representing the worst single supply disruption in history, surpassing the loss of Kuwaiti and Iraq petroleum supply in the early 1990s.[1] There have also been numerous tanker related incidents complicating transit through the Straits of Hormoz, a critical chokepoint in the world's global oil supply chain.

We estimate that roughly 16 million barrels of oil in the Persian Gulf are at risk from potential conflict with Iran, conflict in Libya, the never-ending unrest in Egypt, and a brewing conflagration between Syria, Russia, the Kurds, and Turkey. Furthermore, year over year OPEC production is down roughly 4 million barrels per day, and US production growth out of the West Texas shale basins is slowing. US oil rig counts have fallen by 131 rigs (from a peak last spring), and onshore oil production from the lower 48 states has seen a 42% decline year over year in growth rates. US inventory levels are also in a deficit year over year. We are not forecasting an increase in sustained supply disruptions but find the ‘ample’ global supply narrative that rests on a few counties in West Texas shortsighted. Global oil demand has only contracted twice in the past 35 years. The biggest decline, in 2009, was only about 1% globally. We believe that medium to long term global oil supply is one of the more underpriced risks in the market.

[1] Of note, global spare capacity was approximately 3% before the September outages, while spare capacity was around 5% in the 1990s with geopolitical risks arguably lower than they are today.

We added our first gold miner to the portfolio in October 2018 and have increased our exposure progressively throughout 2019. Thus far, it has been the best performing currency versus the dollar year-to-date. We believe it is appropriate and helpful in analysis to view gold as a currency. Of the 32 currencies we track, seven have appreciated against the dollar, and gold has outperformed the others by more than 2x. This is a bit of an oddity given that the US Dollar and gold tend to move in opposite directions. Unlike oil, where there appears to be little interest in pricing in geopolitical risk, gold appears to be doing what most think it should do in a rising risk environment, appreciating. As we outlined in the last letter, we think the narrative around gold will continue to trend positively as the supply constraints become more prominent.

As the supply story unfolds (which we wrote extensively about in our last letter), a slower burning narrative then some, we believe that increased geopolitical risk will maintain gold at its current price, if not result in some modest appreciation. One exception that may result in a more accelerated appreciation would be if the quantity of negative-yielding debt continues to climb. The correlation and rate of change between the two has been remarkably consistent since 2016. Gold does, after all, have a positive carry on a relative basis.



Source: Massif Capital, Thomson Reutors

An exception to our positive outlook is the US dollar, which remains a headwind to our portfolio and a drag on returns. The DXY, a broad market index that tracks the dollar against a basket of currencies, has hovered around 97 for the better part of five years. Is it going to break higher, or is it going to break lower? That probably depends on the demand for “safe assets” by the market. If the demand for “safe assets” (principally US treasuries) increases (which will result in treasury bond yields breaking the bottom of their recent range, roughly 1.5%), demand for dollars will likely continue to increase. This will sustain the dollar headwinds our portfolio is currently facing in the short term.

Long term, the picture is less clear. On the economic front, there are weakening US corporate earnings across the board, near-record equity valuations across multiple measures, and an unprecedented amount of corporate debt. On the political front, impeachment hearings and a body politic that could only charitably be described as divided. Finally, on a political-economic front, the US has record deficits and no political party that represents limited government or financial prudence. Those on the left have drifted

further to the left, with many adopting so-called Modern Monetary Theory[2] , and the only thing conservative about the Republicans at this point is social policy, which frankly appears to put them on the wrong side of history. It seems prudent to ask a relatively unasked question: why would foreigners want to own this dollar?

In the first two weeks of the fourth quarter, the dollar has given up roughly two thirds of its gains for the year, and is now up only 1%, having peaked at up 3.3% YTD on September 30th. This sell off has coincided with a gain of roughly 3% in the core portfolio, which should be read as antidotal evidence of the significance of the dollar's strength as a negative macro-economic variable weighing on the portfolio's returns.

Industrial Shorts

Given our investing focus: Basic Materials, Energy, and Industrials, our portfolio is hardly immune to the vicissitudes of the global economy. We pay attention to various bits and pieces of economic data, which come in a variety of styles and thus require different interpretations.

We tend to think that most of the economic data that the market trades off is of little use in real-time. It is coincident or lagging and suffers periodic revisions. GDP is a perfect example; the Bureau of Economic Analysis prepares quarterly and annual estimates for GDP in three vintages: advance, second and third. All three are released after the close of a quarter, in a staggered sequence, one month after the end of the quarter, two months after the end of the quarter, and three months after the end of the quarter. The most obvious thing to note is the data is backward-looking, and thus, of more limited use, then the prevalence of the number would seem to indicate. Furthermore, each new release is a revision of the previous release, suggesting decisions informed by the data run the risk of being proven wrong shortly after being released.

For this reason, we prefer certain types of leading indicators that are specific to real-world activities, for example, building permits, the average hours worked, money supply, and ISM survey data. The reason to focus on these types of leading indicators was articulated very nicely by Tien Yang, head of research at Variant Perception, a research firm headquartered in Charlotte NC, on the excellent Macro Voices Podcast just recently:

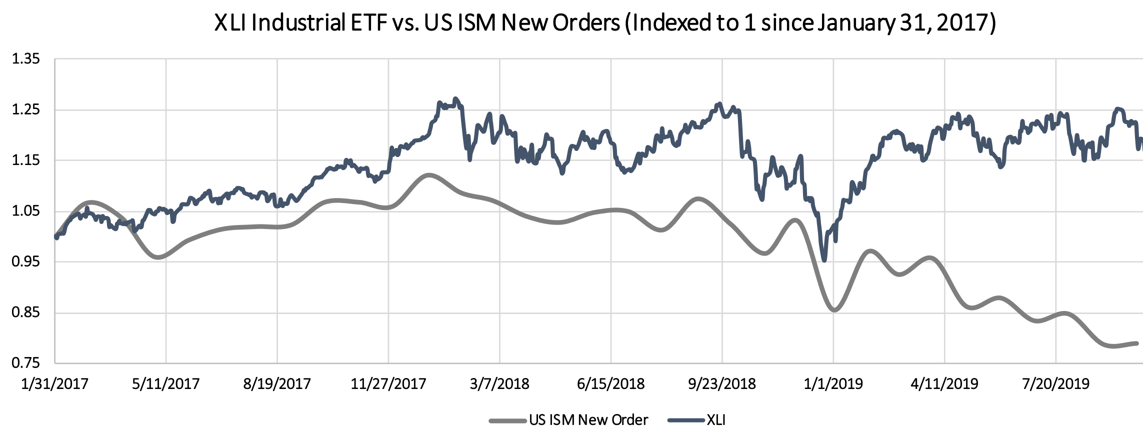
> When we are talking about leading indicators, we are talking about leading indicators of the economy and liquidity. So, the way the world works is markets are somewhat reflexive, so it is quite hard to mechanical predict it in a repeatable fashion, but the way an economy works is it's a lot more mechanical, so there is a certain sequencing that has to occur. For example, building permits must go up before construction activity can start; similarly, temp workers will generally be hired or fired first before the full-time workers. So, by thinking about what's leading and lagging and focusing on the leading parts of the economy, we can have a repeatable way of assessing the economy. Once we see that, we need to make a

[2] Modern Monetary Theory: MMT is an economic theory that is currently growing in favor amongst sections of the US political elite. At a very high level the theory argues that governments should use fiscal policy to achieve full employment and create new money to fund the fiscal policy. According to advocates, the traditional inflationary outcome of such a decision is easily managed by raising taxes and issuing bonds to remove excess money from the system.

> judgment about how much of this is discounted in the market and where the greatest divergences are, and that's the part where it's a bit more art.[3]

When a variety of leading indicators all begin to point in the same direction, we begin to take notice. In practice, this approach works as follows: At the current time, we are increasingly interested in shorting the US industrial sector having added three positions to the short book in the last two quarters. The companies appear to suffer from several exogenous and endogenous risks coupled with equity valuations that presume secular growth of results at cyclical peaks. We tend to think of endogenous risk as arising from business models that are inherently unstable, often expressed through the capital allocation decisions of the management team. The exogenous risks are often macroeconomic headwinds that can be seen in leading indicators and provide a challenging backdrop for even a well-run company to manage.

The chart below shows the XLI industrial-focused ETF and ISM New Orders data.

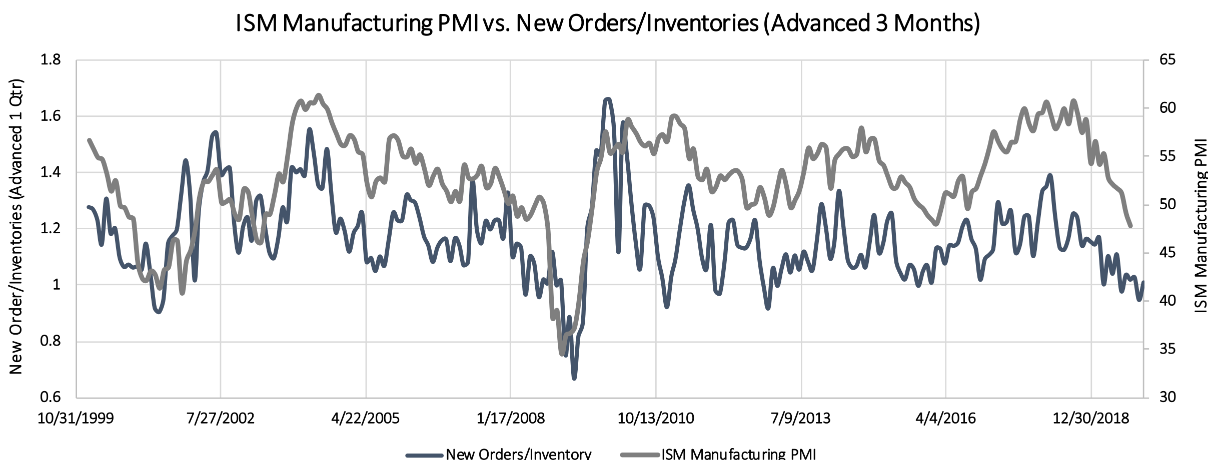


Source: Massif Capital, Thomson Reutors

A divergence in equity performance and new orders has widened considerably since February. This separation can only be sustained for so long as a lack of new orders will eventually manifest itself as declining industrial revenue and earnings. This is a leading indicator with the historical precedent of foreshadowing an eventual fall in the XLI. In the period preceding 2008, a similar divergence started towards the end of 2005, about 20 months before industrials started to sell-off. A multi-year lead time suggests that further leading indicators are helpful to corroborate our read of this divergence as problematic.

The chart below shows the new orders-to-inventory ratio and the ISM Manufacturing PMI. Historically whenever the ratio of new orders to inventory has dipped towards one, the ratio has either rebounded or signaled a recession.

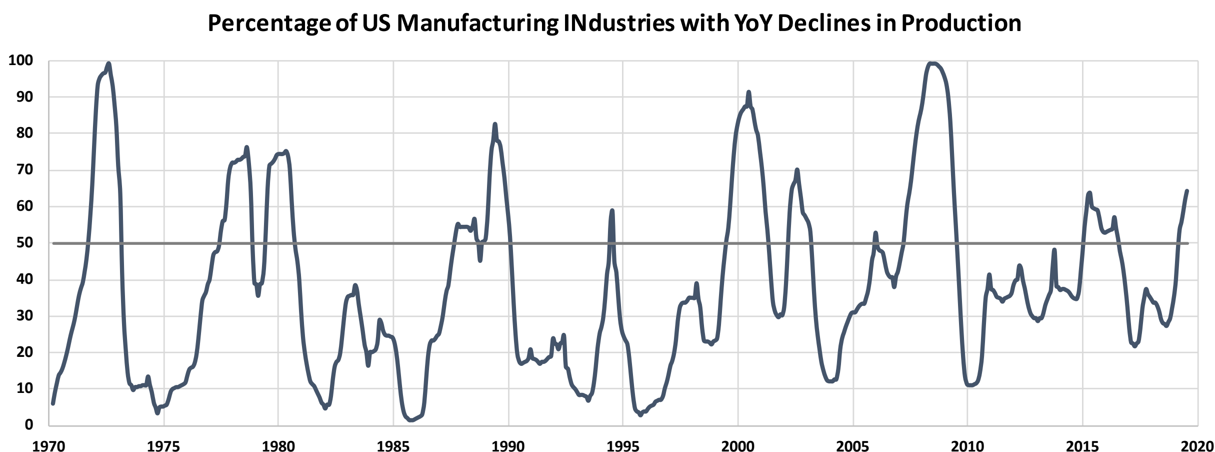
[3] Macro Voices #188: Variant Perception's Tian Yang on Tail Hedges, Oct 10, 2019.



Source: Massif Capital, Variant Perception, Thomson Reutors

Taken together, these indicators seem to suggest that fundamental manufacturing data is not healthy. More than 60% of manufacturing industries are seeing year on year declines in industrial production.

Looking at the chart below, one can see that the percentage of US manufacturers experiencing year over year declines reached similar levels to the present in 2016/2015. One of the explanations for the subsequent reversal, strengthening of the US manufacturing industry, which we consider somewhat explanatory and causal but not a wholly satisfactory explanation, is the expansion of credit in China at the time, which boosted demand for US goods. Given the potential for a repeat of this event, we are keeping a close eye on Chinese import data, which has historically mapped closely to the country's credit expansion and contraction, and the government's plans for potential stimulus. To date, we have seen no evidence of a repeat of the 2015/2016 events.



Source: Massif Capital, Varient Perception

Despite the underlying fundamentals, markets are pricing US industrials at near all-time highs. The XLI ETF peaked at around $80 in late 2017/early 2018 and has since traded sideways for the last 24 months. If we look at an index of the earnings per share over the last twelve months of the top 10 holdings of the XLI ETF, which account for 44% of the ETF's holdings, we find that there have been four consecutive quarters of declining EPS at a rate of roughly 7.3% a quarter. Earnings contractions, coupled with declining leading

indicators, suggests that now is an appropriate time to be increasing our short exposure to the US industrial sector.

Select Portfolio Review

Diamond Offshore (Long): Diamond has been a painful investment for our portfolio. We invested too early in the cycle for offshore equipment, and the trough of the cycle has been extended beyond our modeled scenarios. Capacity utilization throughout the industry has suffered, which has created an extended drag on lower day-rates for forward contracts, we would note though that capacity utilization remains high at Diamond, it is the only driller with a fully contracted fleet of drill ships. One of the challenges the industry faces is that a shrinking contracted backlog at most drillers has negative implications on balance sheets and credit ratings. Diamond does not face this issue. The firm has even been able to counter-cyclically increase capital expenditures this year, largely for two rig reactivations, which we view as a net-positive. While their cash position has deteriorated. As a result, their balance sheet remains the strongest in the industry.

The firm has no debt maturities until 2023, and they have access to $1.2 billion under a credit facility. There are no liquidity issues, and all their drill-ships have long term contracts. A decline in capital expenditures in 2020 should improve their cash position, yet we believe it will likely be offset by their final legacy contracts rolling off the books at the end of this year. The forward strategy is clear. The firm will sit through the trough of the offshore market cycle with ~$300,000-day rates, far above the current spot price averages, and try to capture the upside in the moored rig segment, a rig segment that Diamond has little competition in. Critically, the company can financially implement this strategy and is not dependent on a quick pace of recovery, as some of their peers may be.

At today's prices, our potential expected return has increased substantially, and we expect to average down to capture this reality. Our industry rig tender database indicates that utilization has picked up in several critical markets. Competitive utilization across the industry has increased ten percentage points over the calendar year. Should this trend continue, we expect day rates to appreciate. When we see evidence that the offshore market has turned a corner, specifically sustained utilization rates above 80% with further recovery in day rates. we will look to add to our position. We will aim to reduce our average cost between 20% and 30%. Once done, we expect to exit the position with a 10%-15% annualized return three to four years from now.

Teekay Offshore (Long): The waiting game with Brookfield Business Partners (BBU) appears to be over. To review, we made our investment in Teekay following a balance sheet restructuring of the company by BBU in 2017. We built a large position at a cost below that of BBU and following months of work done by BBU and TOO management to set the company on the right course. Because of the progress made by management, which includes a reduction of the leverage ratio from 7.4x to 4.5x, a restructuring of the debt such that there are no meaningful debt maturities until 2022, and a 64% improvement in EBIT from 2017 to 2018, BBU is now attempting to buy the company from minority shareholders. Despite the operational progress made, the stock did not respond, presenting BBU with the opportunity to pursue a takeover at a roughly 38% discount to their initial investment. Unfortunately, the recently accepted $1.55 offer (currently 38% below the initial purchases of TOO by BBU) is "significantly improved" on relative to BBUs initial offer, which was 58% below their initial investment and at the time of the offer roughly 9% below where the company traded in public markets.

The result of the initial $1.05 offer was to drive the stock down roughly 9%, which of course, makes the $1.55 offer BBU has now made seem much more generous, but only if judged next to the artificially suppressed price of $1.05. Either way, we believe BBU is attempting to abscond with the company in a way that they would not do if it were a large-cap company, and the transaction was taking place on the front page of the Wall Street Journal. They are not doing anything illegal, but we are disappointed in how minority shareholders have been treated in this process. As we noted in our second quarter letter, an important take away from this investment has been that although Private Equity can make for an interesting strategic investor, they have incentives that can be very different than minority equity investors.

We wrongly viewed Brookfield's involvement in the company, at the time of investment, as a positive. They are largely well respected and have an excellent operating track record in many of the fields we invest in. Their initial statements suggested that they were investors with interests well aligned with minority shareholders, which has unfortunately turned out not to be the case.

We expect to to close out the position in the fourth quarter of this year. We will incur a 28.9% loss in the position when we are bought out by BBU.

Graftech (Long): On a rolling twelve-month basis, EAF is trading at 4x earnings, has a 22.4% free cash flow yield, and has returned 51% on its invested capital. The recent weakness in the equity price is very much at odds with the operational success and financial results of the firm. Not only is 70% of their graphite electrode capacity sold at ~$10,000 per ton on long term contracts through 2022, but management has continued to secure high prices (~$10,000 a ton) on the spot market. If EAF traded at the same price/earnings (PE) ratio as the US steel industry, an industry that EAF's price action correlates[4] with, but also an industry more indebted, with lower free cash flow yields, higher PE ratios and generally significantly lower returns on invested capital, then EAF would be priced at around $27 a share or roughly 132% greater than the current share price.

Market narrative and sentiment are likely culprits weighing on the equity price. Continued geopolitical uncertainty with the world's two largest economies often places stubborn downward pressure on businesses related to steel and copper, irrespective of the physical market balances. Furthermore, many are concerned that if China makes meaningful progress towards the ability to produce UHP graphite electrodes that the regional pricing premiums and competitive advantage of companies such as EAF may be jeopardized. We are not convinced of the threat and have no evidence of meaningful change in Chinese production.

The threat of Chinese production of graphite electrodes is on par with those produced by EAF is limited by their inability to consistently produce high-quality petroleum Needle Coke, a significant bottleneck that is under appreciated by the market. Most Chinese electrodes are made from a needle coke derived from coal, which is not equivalent to needle coke derived from petroleum. Petroleum needle coke, the precursor to electrodes that Graftech uses, requires decant oil (sometimes called Fluid Catalytic Converter Slurry) from a petroleum refinery, and the refinery needs a dedicated needle coke coker. The refinery also has to load the right oil into the refinery at the front end of the facility, and because good needle coke is produced from low sulfur FCC that means you also need low sulfur oil. Additionally, the

[4] We looked at the correlation between EAF and 18 US Steel industry participants and found an average correlation of 0.7.

process is complicated by IMO 2020 rules, which kick in shortly, and require ships to use lower sulfur marine fuel. The result is that sweet crude, which also tends to be higher in high value-added products like gasoline, various aromatics, and products like jet fuel, now have other large demand-pulls, so decant oil production will likely fall on the priority list of refiners. The ability for the Chinese to 'switch' or 'ramp up' a critical feedstock to produce quality needle coke is not as easy as it appears on paper.

Despite the strong performance and fundamentals, our primary concern currently is that Graftech shares a similar majority owner to Teekay Offshore in Brookfield Business Partners (BBU). There is no evidence to suggest at this time that BBU is interested in taking Graftech private. The company went public last year, which makes the situation slightly different then TOO and hopefully means they are uninterested in bring the entity back in house, but only time will tell.

Graftech is our largest position at the current time. We entered the investment with an expected timeline of three years and have been invested for roughly one and a half. We have extended the timeline to four years but have left our valuation unchanged, which, coincidently, is an estimated intrinsic value of roughly $27. At our average entry price, given the new timeline, we expect to exit the position in just shy of 2.5 years with an annualized return over the life of the position of 19%. Should the timeline slip another year (meaning we hold the position for five years), we would still have a healthy annualized return of roughly 14%.

Gold Positions (Long): We are currently invested in three gold companies: Barrick Gold, Continental Gold, and Equinox Gold. We consider all three to be worth at least 38% more than they are currently trading for, at an average gold price of ~$1,300 per ounce of gold. With gold currently trading around $1,500 an ounce, we believe positive sentiment and momentum may take all three to prices significantly over their intrinsic value. Included in this collection of three gold miners is the world's second-largest producer (Barrick), an up and coming mid-tier producer with two operating assets and a third mine coming online within the next two years (Equinox) and a junior miner with a world-class asset in Columbia that will go into production next year (Continental).

All three positions will require careful capital cycle analysis for us to maximize returns. The reason for this is that after reaching a value that could be justified by the economics of the mines at a historically defensible gold price, the stocks will trade with the momentum and sentiment surrounding gold. Selling out of any of the three positions just because they hit our intrinsic value estimate would be a mistake that threatens to leave significant cash on the table. Our goal will be to maximize the return on the levered gold exposure imbedded in the portfolio via direct ownership of mines; in essence, we will need to time our sales carefully.

We encourage our investors and readers to think of timing considerations as risk management considerations; we want to study the market, the industry, and the specific company for signs that it is time to increase or decrease our exposure as a function of risk relative to probable return. We will begin considering adjustments to our gold positions when either the individual business fundamentals start to deteriorate or, if we are really at the start of a new bull market in gold, when we see the sanctioning of projects within the industry in difficult operating locations that are only justifiable at gold prices in excess of $1,400 gold.

Lucara (Long): Lucara has posted excellent operating results while unfortunately selling into a market with softening prices. It is our second-largest position now and has suffered from two ongoing issues. The first

is general negative sentiment in regards to the diamond market, and the second is a just ended effort to reorient the disposition of the open-pit mine, which was originally planned to occur later in the life of the mine but due to the richness of one specific area of the kimberlite ore was brought forward in the life of the mine.

The first issue is a complex one driven by a mix of economic and industry issues. Unfortunately for our investment, 2017 proved a record year for diamond production, but it was largely a result of significant growth in low-quality diamonds. The hangover from the supply glut was in the process of being worked through in 2018 when several defaults of midstream diamond cutters in India (the largest cutting market) forced banks to tighten credit. With limited credit, midstream players struggled to work through inventories and did not restock in 2018; in short, softness in the market due to production in 2017 has lingered for longer than would have been expected.

On top of structural supply and demand issues, the emergence of relatively cost-effective lab-grown diamonds has created a narrative about the end of natural diamonds; the narrative is unfortunately short on facts. The narrative starts with consumer concerns about the providence of natural diamonds, which is a straw man argument. The providence of diamonds has historically been an issue but since the establishment of the Kimberly Certification process in 2003 has been largely resolved for buyers of diamonds in the developed world. Blood diamonds are by no means unheard of, but the odds of walking into an established jeweler (especially one of the many publicly traded chains) and buying a blood diamond is zero.

Another element to the narrative is the environment, and here the lab-grown diamond manufactures have spun a tall tale for buyers and are engaged in deceptive marketing practices. The story is not complex to understand, after all, a lab-grown diamond is produced without producing a giant mine, so how could it not be more environmentally friendly? What lab-grown diamond producers fail tell you is that they use a lot of energy in the production of diamonds, the result is that the carbon admissions from the average lab-grown diamond are three times more than produced by mining natural diamonds.[5]

Nevertheless, lab-grown diamonds are here to stay. At the same time, we don't understand the line of thought that suggests the existence of lab-grown diamonds spells the end of the market for natural diamonds. Diamond equities are currently trading as if that is the near-term outcome, yet a bifurcated market is much more likely, especially when it comes to the unique size and quality of diamonds produced by a firm such as Lucara. Speaking recently with the Lucara management team, they pointed out to us that there is room in various retail (principally fashion markets) for a diversity of both high end and affordable products. As Eria Thomas, the CEO of Lucara, has noted, not everyone can afford to buy a Birkin Purse by Hermes[6] , but that does not stop a woman from buying lower-priced knock offs as they save for the real thing.

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[5] Chemical Vapor Deposition (CVD) and High Pressure High Temperature (HPHT) processes (the two approaches used commercially to produce diamonds) emit an average of 511kg of carbon per polished carat of LGD, according to estimates compiled by Trucost, an independent firm that is a part of S&P Global. By comparison, 160kg of carbon are emitted per polished carat of natural diamond produced.
[6] A Birkin is a classic handbag produced by Hermes that start at around $10,000 but can cost as much as a few hundred thousand.

We believe the emergence of lower-cost lab-grown diamonds does not mean the end of demand for the real thing but rather an evolution of the market and a bifurcation of the market. We believe the right comparable is emeralds. Lab-grown emeralds have been around since the late 1980s, and you can now buy nine-carat lab-grown emerald necklace for $399. Loose (not part of a piece of jewelry) natural emeralds of less a carat generally cost more than $1,000 and grow in cost exponentially with size.[7] In short, our investment has been subject to a narrative shift, which we think will pass with time.

Regarding the second issue, the reorientation of the pit has largely been completed. The impact of the project was to increase operating costs for roughly seven quarters due to increased stripping costs. The timeline for the project was longer than it should have been due to issues with the mine contractors. Nevertheless, the process of expanding the pit to allow better access to what is called the EM/PKs area of the mines kimberlite pipe, the primary source of the mines extremely large stones, has now been completed and the effort is beginning to show in the operating results.

Not only has the operating cost per ton of ore decreased by 14% in the first half of 2019 vs. the first half of 2018, but carets mined has also increased by 35%. Furthermore, the volume of special's (diamond over 10.8 carats) recovered is on pace to be roughly 8.1% of the total volume of carats mined, a record set last year that appears to be holding steady. Although we do not expect further efficiency improvements, we do expect the gains made thus far to be sustained, and as such expect the stellar operating results to begin to filter through the cash flow statement, returning the company's free cash flow yield to the mid to low teens, similar to what we saw in 2015 and 2016.

U.S. Railroads (UNP & CSX) (Short): We initiated two short positions in Union Pacific Corp (UNP) and CSX Corp (CSX) in the third quarter. By volume, the two railroads constitute roughly 40% of the total U.S. rail traffic. UNP principally operates west of the Mississippi, and CSX is predominantly east of the Mississippi, sharing the eastern seaboard with Norfolk Southern. Our thesis is a confluence of three factors: first, both companies have engaged in an operating model that requires continuous cost reduction to enhance margins, often at the expense of either customers, employees, or both. We do not believe this is sustainable. Second, the underlying market in which both companies serve is contracting. Third, both companies are experiencing what we believe to be credit-driven equity inflation, funded by debt that is used in a way (share buybacks) that produces no cash flow to service the debt. The current value of the companies reflects a rather muted view towards the above factors and assumes that the U.S. railroad industry maintains its recent secular growth. We do not share the view.

Business & New Operating Model

Railroads are a mature, cyclical business. Freight revenues are generated by transporting agriculture, energy, and industrial products across rail networks. Revenues vary by volume (carloads) and average revenue per car, both of which are tightly correlated to the broader business cycle or specific commodity cycles.

Locomotives have run the same way for about a century. Cars wait for cargo at a rail yard and then depart after a supplier finishes loading them. This started to change in 1989 when Hunter Harrison served as COO of the Illinois Central Railroad and began implementing what he called Precision Scheduled Railroading (PSR). When the Canadian National Railway purchased the ICR, Harrison and then CN CEO

[7] We have seen 10 carat loose emeralds sell for in excess of $500,000.

Paul Tellier instituted PSR in Canada. At each subsequent stop in Mr. Harrison's career, first Canadian Pacific and then CSX, PSR was implemented. The primary difference between PSR and historical approaches to railroad management is that traditionally, railroads employed a hub and spoke network, much like airlines do, under PSR railroads employee a point-to-point network.

PSR is an effort to streamline the internal logistics of how the railroad routes its traffic. For example, as a result of implementing PSR, CSX has eliminated 40% of its routes since 2017, resulting in significant service and contract issues but also significant cost reductions.[8] PSR also frequently results in running fewer but longer trains along busier routes to reduce total personnel costs. The success of PSR is measured by management via a railroad operating ratio: operating expenses divided by revenues. The lower the number, the better. Financial results, where PSR has been implanted, have been positive thus far. For example, CSX has seen its pre-tax earnings margins expand from 42% in 2016 to 51% in 2018.

There are physical limits to efficiency gains via cost-cutting, though, and such efforts do not grow the business. We know this because the strategy pioneered by the Canadian railroads in 2011 has never seen operating ratios fall below the mid-50 percentiles. Furthermore, there are implementation, customer relationships, and long-term growth issues to contend with that make the singular dedication to lowering an operating ratio questionable. One of the few railroads to not implement PSR to-date is Berkshire Hathaway's BNSF Railway Co. Their recently retired CEO, Matt Rose, had this to say:

"The easiest way to reduce the operating ratio is to take out track and reduce maintenance expenses. That is hardly the deal that the industry implicit struck with the government and the public in the run-up to the landmark 1980 deregulation. The Staggers Act wasn't, railroads, haul only what you want to haul on your network, its haul everything, and you have the ability and flexibility to deferentially price on your network. That's the deal, and it's in the public's best interest to move more tons to the railroad network, not to move tons off the railroad network."

The labor side of the business also seems concerned. A UNP employee has publicly written that:

"…the operating ratio is only sustainable by driving headcount down and labor cost. But to continue cutting, you will not have enough train men to run the volume we have. So, velocity and safety will slowly start to suffer. We lost half of the car departments system-wide, which means less box car inspection. We've lost 20% in mechanical, so eventually, we will run less efficient power(locomotive). Because they are extending out suggested repair, just to keep the locomotive we have in service, so expect more breakdowns which slow velocity. They have mothballed over 1,000 units already, and the stated goal is to continue that."

Less is not necessarily better, particularly at the expense of customers and employees. UNP and CSX are not just cutting the fat off the bone; they are cutting the bone itself.

Supplier Market & Competition

CSX CEO Jim Foote has noted that precision railroading should provide better on-time service, which means that shipment demand should grow. That's possible, but it seems increasingly unlikely when their

[8] The industry friendly Surface Transportation Board was pushed to criticize delays and demand regular reporting on performance following CSX's implement of PSR in 2017.

customer market is contracting and the railroad's primary freight competitor, the trucking industry, is reducing shipping rates.

In 2019, U.S. freight volumes have contracted month over month for the entire year. The rate of volume growth year over a year started slowing in July of 2018 and has been in contraction since December of 2018. Following a 3% drop in August, volumes have been contracting for nine consecutive months. If one disaggregates US freight volume and looks at Rail volume, one finds it has contracted 4% year-to-date, and the contraction appears to be accelerating. In the third quarter, rail volume contracted 5.6%, and a four-week rolling average shows a contraction of 6.4%. Unsurprisingly, UNP and CSX have experienced volume contractions of 4.7% and 3.2% respectively in 2019.[9]

Although the implementation of PSR by CSX and UNP should provide some cushion to profitability as volumes contract, it depends on pricing holding up. It is also worth noting that while PSR improves the efficiency of the railroad, it also increases the fragility of the system. Just as just in time supply chains that stretch around the globe have improved margins for various goods producers, the leanness with which these operations are run reduces the ability of the system to absorb shocks. We believe PSR does something similar to railroads and that a price shock may be on its way.

Returning to pricing, it is worth observing that the direction of pricing in trucking often provides a leading indicator of the direction of railroad pricing; truck pricing currently suggests that lower prices are on the horizon. The trucking industry competes with the railroads for nearly every commodity and industrial good.[10] Trucks are more flexible than railroads and have historically enjoyed a pricing premium for transportation due to speed, service, and flexibility. Railroads and trucks move roughly the same volume of freight on an annual basis, but the trucking industry enjoys a disproportionate share of the revenue, upwards of 80% of the total revenue generated in the freight industry. Pricing trends for the railroads have historically lagged the trucking industry, and the railroads are often incentivized to hold prices lower than their truck counterparts to ensure their volume does not get cannibalized.

Spot truckload rates have declined 14% year over year, and contract rates are generally flat. As a result, certain shipping markets are experiencing a historically unique inversion where the regional inter-modal rail is now more expensive than trucking freight. Analysis conducted by the JOC Group[11] found that the price saving differential on intermodal shipments utilizing rail as opposed to trucks has dropped from 20% five years ago to 5% this summer. PSR tends to push Class I railroads out of secondary markets, as secondary markets are lower margin and don't fit with the high-efficiency model of PSR, but lower prices in the trucking market might push them out first.

Once PSR implementation has reached a point of saturation, rates or volume must increase if CSX and UNP want to grow their business. Neither an increase in volumes or rates appears very likely.

Operating Results & Financial Engineering

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[9] Volume contraction has not been driven by a singular product or event. There appears to be remarkable consistency with every major product transported contracting in 2019 with the exception of chemicals. Grains, forest products, metals, coal, autos and inter-modal all have year-to-date volumes contracting by more than 2%.
[10] Exception here would be petroleum which can be transported by pipeline, and coal which, due to volume requirements, is almost exclusively transported by rail.
[11] A provider of business intelligence, data and events covering the global container shipping and logistics market.

Since 2014, UNP has progressively carried less cargo, primarily due to a steep decline in coal haulage. Non-coal haulage is flat over the last six years. In the last nine months, the volume has contracted further. UNP has papered over its loss of coal revenues through changes in product mix and pricing, but revenue has struggled, shrinking at a rate of 1% a year since 2014.

Meanwhile, operating results have largely been stagnant for the last six years, but debt issuance and share buybacks have exploded. From 1998 – 2013, the firm had roughly $10 billion in debt on the balance sheet; in the last six years, total debt has expanded by 135%. UNP's debt to equity ratio has jumped from 0.7x to 1.3x in the last twelve months. UNP re-invests about $3.8 billion per year to support the rail network, but capital expenditures have stayed flat for the last decade.

Since 2015, UNP has bought back, on average, 35 million shares per year. In 2018, buy-backs increased to 57 million shares. Share repurchases in 2018 were roughly equivalent to the firm's net income of $5.9 billion. Shares outstanding have shrunk from 1 billion in 2010 to 750 million in 2018. This is a 5% reduction in total outstanding shares per year. The current dividend is 1.85% on a trailing twelve-month basis and looks to be roughly 2% on a forward-looking basis. UNP is aiming to return about 7% of the value of the company a year to shareholders via dividends and buybacks. Absent further debt issuance, it does not appear that cash flows and earnings are enough to sustain shareholder returns at this level. This is also evidenced by the fact that UNP has already begun borrowing money to buy back its stock. They are also choosing to buy back their stock at a peak in their equity price, an equity price that has appreciated ~400% since 2010 or twice the average of the major US equity indices.

CSX paints a remarkably similar picture. Revenue has grown at just 0.4% annually over the last five years with flat volumes. Debt issuance has expanded dramatically, growing from $100 million in 2014 to $4.9 billion at the end of the first half of 2019. In 2018, CSX spent the equivalent of 9% of the firm's market capitalization on buybacks, roughly equivalent to the firm's net income.

We believe UNP is worth $85 per share, and CSX is worth $36 per share.

Deere & Co (Short): Outgoing Deere CEO Samuel Allen recently noted that a "high degree of uncertainty" continues to overshadow the agriculture sector. We couldn't agree more; he also stated that export market access, near term demand for agriculture commodities, and overall crop conditions have led to farmers postponing major purchases of equipment. We again find little to quibble within in this statement, the market does not seem to care though, as Deere's stock is currently trading at or near all-time highs. But the negativity does not end with the commentary of the former CEO, Deere's summer earnings reflect his evaluation of the market. Companywide revenue dropped 3% year over year, and a disastrous quarter was only averted by financial services revenue, which jumped 10% year over year, offsetting an 18% decline in all other revenue sources.

Further evidence emerged in early October of market trouble with Deere announcing layoffs of 163 workers in their US manufacturing facilities. This comes a mere month after the firm announced a 20% production cut for the second half of the year at facilities in Illinois and Iowa. Following the 2008 recession, Samuel Allen pushed hard for the firm to grow into the expanding middle-class markets internationally, opening factories in South America, Russia, China, and India. The plan was to have $50 billion in annual sales by 2018. Decelerating growth internationally has been an issue. In 2018 the US and Canada still accounted for close to 60% of the firm's $33 billion in equipment sales. Coupled with slowing demand domestically, the incoming CEO John May has been tasked with cutting costs and adding new

technology and services to their equipment to rationalize the high price of the equipment. The goal of achieving $50 billion in annual sales has been quietly abandoned.

A revitalized focus on US markets may prove as challenging in the short term for Mr. May as the international expansion was for Mr. Allen. Farm loan delinquencies are rising in several Midwest states, a trend that does not bode well for new equipment purchases. Wisconsin, a state where one in nine jobs are tied to the $88 billion agriculture industry, now has the highest non-delinquency rate going back to 2001.

We will continue to hold our short position on Deere & Co. The opportunity is still evident to the downside.

Norwegian Cruise Line Holdings (Short): Our thesis with NLCH remains in-tacked. Recent operating results continue to demonstrate that the firm cannot grow revenue faster than costs. Gross revenue per capacity day increased by 7.5%, while gross cruise costs per capacity day increased by 8.3%. The firm continues to enjoy pricing power, but the expenses relative to bringing new capacity online and marketing its product has outpaced its revenue gains. Returning capital to shareholders remains a big question mark. A dividend appears unlikely, but management continues to re-iterate returning between $1 billion and $1.5 billion in 2020 via share buybacks.

Thus far, they have not executed on this, and while the management team has a stated belief that the current price is an excellent buying opportunity, they are not buying back stock, and continue to sell. Furthermore, the port of call risk seems to be a growing operational concern. Over the summer, the cruise line was given 12 hours' notice of a travel ban placed on Cuba. This comes after several years of enthusiasm, marketing, and recently significant revenue from the new market. Management estimates a 20-25% impact on earnings per share from the ban. For a business model that has a fixed cost structure at odds with their product pricing, and is highly levered with significant capital commitments, geopolitical risk in the form of restricted travel is not something the firm can continually absorb.

The primary risks to our short thesis include continued expansion of pricing power and an aggressive share buyback program in the face of an improving economy. We believe that downside risk is still evident and will hold the position for the foreseeable future.

Consol Coal Resources LP (Closed Position): We closed out our position in Consol Coal Resources LP this quarter. We exited the position due to the deteriorating outlook for thermal coal in the US along with the potential for supply growth in the export of US metallurgical coal in the short to medium term, which has been a strong market for CCR in the last few years. It is worth noting that the US metallurgical coal market is currently experiencing a significant influx of capital directed at expanding the mine footprint of the industry, as such, from a capital cycle perspective, we have grown warry of the near-term outlook for that market.

CCR was not a position held in every portfolio for various reasons associated with our outlook for coal, the capital appreciation in the position, and decisions we made about how to allocate positions to new SMA's. We had previously decided to not invest every new SMA in full appreciated positions, which at the time of the vast majority of new SMA's joining Massif, was the case with CCR. CCR was one of the initial positions in the portfolio and has returned, including dividends, 147% since we put the position on,

producing an annualized return of roughly 33%. Since the funds inception we have closed out eight positions, two for a loss and six for a gain, with an average annualized return of 78%.

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. Additionally, please keep an eye out for upcoming trip notes and updates on the Uranium market arising from our recent trip to Kazakhstan and meeting with the management team at Kazatomprom.

Best Regards,

Will Thomson

Chip Russell

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