



MASSIFCAPITAL

Monday, April 15, 2019

Dear Friends and Investors,

The core portfolio of Massif Capital returned 4.3% during the first quarter of 2019. A detailed report on our performance will be provided to investors in the coming days.

In our 2019 letters, we would like to share more of the research that goes into our investment decision-making process. This research is essential for understanding the context behind our investments but also lays the foundation for the intellectual capital we are building at our firm. Much of the research behind investment decisions does not percolate through into research reports but is often still worthy of focused commentary. We hope that throughout the year, coupled with our white papers we can increase your interest and knowledge in our industries and continue to demonstrate a clear and articulate framework for how we make decisions and measure value.

This quarter, our research shared will focus on a model that we use to evaluate capital intensive industries. It is a framework we have adopted that overlays traditional capital cycle analysis with behavioral finance. To frame the discussion, we will rely on two papers that address issues of significant concern for investors in real assets. The first paper is a 2013 paper entitled "*Waves in Ship Prices and Investment*" the second is an Oxford Institute for Energy Studies (OIES) paper entitled "*Energy Transitions, Uncertainty, and the Implication of Change in the Risk Preferences of Fossil Fuels Investors.*"

The Capital Cycle and the Market Sentiment Cycle

When evaluating an industry's supply and demand dynamics, our primary concern rests on questions of supply, and specifically supply as it relates to the industry's capital cycle¹. The capital cycle is a cyclical process, one in which high returns attract capital to industry; capital increases capacity and capacity growth foreshadows a subsequent decline in profits. The cyclical quality of this trend attracts our attention, precisely because of the investment opportunities it portends. It is in many ways a cycle that complements if not drives the adage, oft repeated by well-known resource investor Rick Rule, that bear markets are the authors of bull markets and bull markets the author of bear markets.

The capital cycle is not new. It is in many respects a specific case of the supply and demand response taught in economics 101. To it, we would like to add concepts from behavioral finance explored in *Waves*

¹ We are focused on understanding how changes in the amount of capital employed within an industry, and by individual companies, are likely to impact upon future returns. As Edward Chancellor and Marathon Asset Management put it in their excellent book *Capital Returns*: "capital cycle analysis looks at how the competitive position of a company is affected by changes in the industries supply side."

in Ship Prices and Investment. Specifically, we would like to look at the impact of competition neglect and how it impacts management decision making. Why are these interrelated concepts important?

As elegant as the capital cycle is, its important attributions and consequences assume perfectly rational actors in a highly simplified and closed economic model. Absent an injection of behavioral finance; we would expect a linear path to the mean reversion of earnings and constant expected returns throughout a cycle. Put another way, the market, made up of actors engaged in rational, forward-looking behavior would bring supply and demand into balance efficiently.

Financial reality is not nearly so neat. More often than not, especially in cyclical real asset businesses, a jump in demand (or a drop-in supply) produces a time-delayed supply glut as a result of overbuilding (or demand glut as a result of under-investing). Oversupply (undersupply) pushes prices lower (higher), often below (above) the level of “rational expectations” resulting in low (high) realized returns during the subsequent bust (boom). In short, rather than rationally responding to supply and demand dynamics, businesses have a rational response that they execute irrationally, mainly over-building (under-investing) and thus over (under) supplying the market. They are authors of their eventual demise.

There are a few industry dynamics we are confronted with repeatedly in focusing on energy, basic materials, and industrial companies. The one described above is the most frequent and almost always exacerbated by a frequently fixed short term supply: in the short run the supply of uranium that can be mined is basically fixed (you can’t quickly bring a mine online); in the short run the supply of oil that can be pumped is basically fixed (you can bring an individual well online quickly, but you can’t address shifts in aggregate demand quickly, we don’t find new super giant oil fields to tap quickly); in the short run the number of available offshore drilling rigs or shuttle tankers is fixed (neither is swiftly built, usually taking 2 or 3 years). The demand side for many of our investments is also highly inelastic in the short run. Much of this can be chalked up to the significant time-to-build problem. The result is that temporary imbalances between the demand for X and the supply of capital assets needed to supply X to market can result in substantial changes in the price of the goods or the services. **The combination of fixed short-run supply and relatively inelastic demand is a recipe for volatility.**

As *Waves in Ship Prices and Investment* notes, short term demand and supply in Dry Bulk Shipping is highly inelastic with lengthy build times for new ships driving significant day rate volatility. The short-run volatility of day rates in shipping provides very little insight into the expected returns of owning a vessel though, and the reason again rests on the behavioral response of investors in the industry. Industry participants struggle to forecast demand accurately and fail to anticipate the effect of endogenous supply responses on future earnings.

What this means is that management teams can’t forecast the future, which is by no means a new, unique or particularly exciting finding, but that they also significantly neglect competition and the impact of competitive supply additions on future earnings. Put more simply management teams act as if they are the only industry participants responding to a demand glut or supply glut, when in fact their competition is also responding to the situation. Management teams often believe that earnings and cash flow are exogenous² when in fact they are an “endogenous equilibrium outcome that is impacted by the industry supply response to a particular demand shock.”³ Commodity price movement may increase or decrease the overall earnings of an industry, but the distribution of that increase across an industry is driven more by how individual companies choose to supply the industry than it is the commodity price itself.

² A function of commodity prices they receive from the market; a price taker mentality.

³ *Waves in Ship Prices and Investment*

Again, what’s the point? The point is that the boom and bust nature of the industries we invest in may not be predictable, but it is foreseeable and is foreshadowed in a behavioral response by management. **The capital cycle may thus be augmented with a sentiment cycle which indicates the pace at which the cycle is turning.** The capital cycle gives us a discrete point in time that suggests specific capital allocation outcomes arising from industry decision making. The sentiment cycle demonstrates where an industries participant’s think they are in the cycle under the assumption that beliefs foreshadow actions. Finally, liquidity flows in an industry can help us evaluate the pace at which an industry is moving from one point to the next point. See the chart below:

The Risk Preferences of Fossil Fuels Investors

Let’s utilize this framework on a specific topic.

Energy transitions⁴ are often considered to be long term issues. Indeed, one of our recent white papers laid the groundwork for tempering expectations as it relates to the market deployment of energy storage - a critical component to achieving widespread renewable energy adoption.

That view, however, is imprecise.

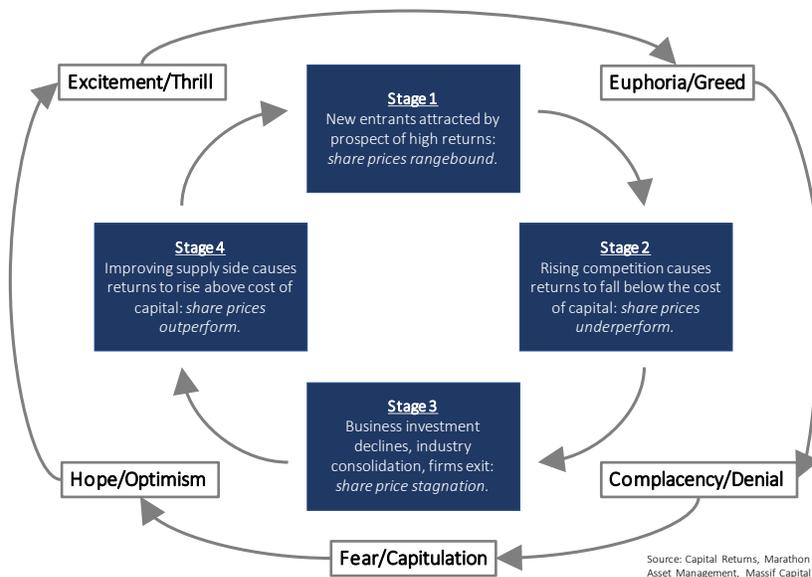
While the transition may take decades to materialize, the increased *uncertainty* around the transition manifests itself in energy markets on a much shorter time horizon. Modeling the impact of a de-carbonizing world is challenging. Cash flow projections are highly non-linear because of new regulations and new technologies. Discount rates, however, are a useful tool to understand changing risk preferences and sentiment.

The aforementioned OIES report, *Energy Transition, Uncertainty and the Implication of Changes in the Risk Preferences of Fossil Fuel Investors*, evaluates institutional investor hurdle rates on new energy projects and compares them against discount rates on completed projects along with their cost of capital. Specifically, the study asks:

“What base case Internal Rates of Return (IRR), or hurdle rate, must a new energy project generate, for you to prefer reinvestment in that project, rather than further growth in dividends and buybacks.”

Results suggest that on average, hurdles rates are 10-11% for solar and wind, 14% for LNG, 15% for shale oil, 18% for U.S. Deepwater oil, 21% for emerging market ‘mega’ oil projects, and 40% for coal. We find that the risk tolerance for wind, solar and LNG have remained quite stable, while there is a significant

Capital Cycle and Sentiment Cycle



Source: Capital Returns, Marathon Asset Management, Massif Capital

⁴ Broadly defined here as the political and economic intention to reduce atmospheric emissions by transitioning to lower carbon emitting generation

increase in the level of return required for the US and global offshore oil and new coal projects. While this preference may seem obvious, the consequences of these preferences are less well discussed.

What are the implications of the aforementioned hurdle rates?

First, the extension of project payback periods is not only dis-incentivizing long term projects but concentrating upstream oil and natural gas investment into short term projects with quicker payback periods. (As discount rates rise, future cash flows decrease in a nonlinear fashion, placing greater importance on near-term cash flows.). This is anecdotally evident in the renewed rush by oil majors into the West Texas shale basins.

Second, higher project hurdle rates incentivize firms to adopt a lower risk operational model, shifting capital towards the harvesting of existing assets and moving capital away from exploration and development. The life-cycle of a typical oil and gas asset is such that value is created when the field is discovered and appraised. Value is then unlocked when capital is invested in developing a project. Once the field starts, however, little value is created, only drawn down, with each year's cash flow depleting the asset base. Survey results would suggest that there is an increasing concentration of listed oil and gas companies focused on the 'harvesting phase' and limited capital being deployed to create value through exploration, appraisal, and development.

Third, underinvestment in long term projects impacts future supply with consequences on market prices. Exploration and development of long-lived reservoirs has historically been essential to meeting global energy demand. Fracking may provide the marginal barrel of oil in the near term, but only because there is a foundation of high-volume fields below that in the supply stack. Long run commodity prices typically converge on the marginal cost of supply for any given level of demand. Exogenous shocks may create periods of exception; however, structural deficits in supply caused by years of underinvesting in exploration may increase price volatility unless demand falls at a similar rate. From the supplier's vantage point, if a 10% hurdle rate is adjusted to a 20% hurdle rate, the marginal cost to break even on a project requires, roughly, a doubling of oil prices.

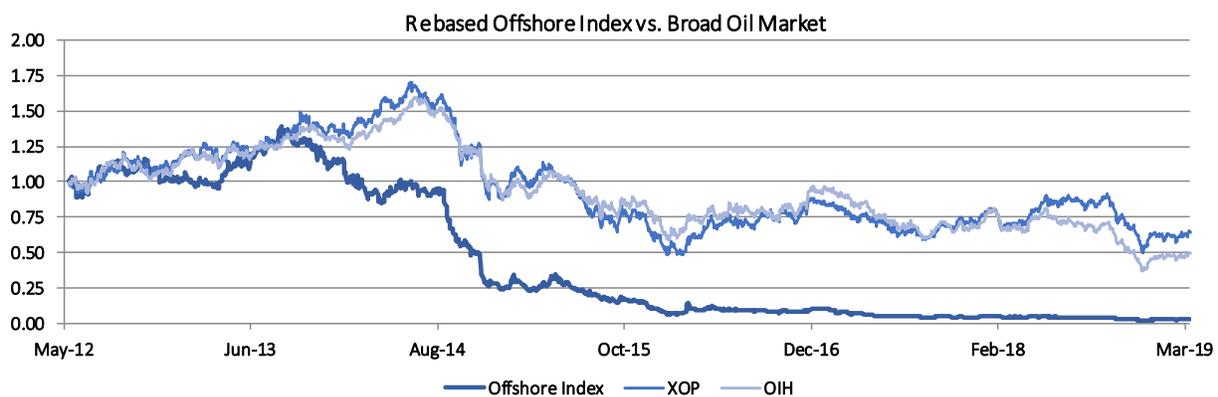
Based on the work done in *Waves in Ship Prices and Investments* we feel comfortable concluding that management and investor "beliefs exaggerate true patterns in the data, or, in a dynamic context, they [investors] overreact to information."⁵ Put another way, judgment is frequently directionally correct but the over or underestimation of time horizons and the magnitude of impact a change in supply or demand has on an industry introduces non-linearity to an otherwise linear relationship between capital cycle stages. This is particularly true in industries that have an inelastic short-run supply and a time-to-build problem.

The offshore oil and gas industry has been working through Stage 3 of the capital cycle, as measured by capital expenditures, reinvestment rates, and total market supply relative to demand. The sentiment of increasing future risk driven by the introduction of new energy technologies and global emission standards has raised the required return to place capital at risk in these projects. This, in turn, has changed liquidity flows which ultimately change the supply side of the equation. Capital into the industry has slowed. As a result, the supply glut of equipment is resolving itself, and the lack of investment in replacing reserves is beginning to be felt in the supply of available offshore oil, a reality currently overshadowed by the growth in oil from fracking. Fracking is a source of oil that for operational reasons is

⁵ A Crisis of Beliefs, Nicola Gennaioli and Andrei Shleifer

not a substitute for the currently necessary supply of offshore oil that global energy consumption currently demands. We believe this is evidence that we are transitioning from Stage 3 to Stage 4.

Investors have been aggressively negative on the offshore space for several years, as 18% to 21% hurdle rates imply. At the same time, 30% of global oil comes from offshore production, production that is highly inelastic in the short run.⁶ The time to build problem in offshore oil and gas is significant, with lead times for a project of 5 to 10 years. The failure of investors and firms to properly calibrate return expectations during an earlier boom cycle (2010 to 2014) and neglecting the competitive response from industry participants at the time, has resulted in several years of firms and investors ignoring or moving away from investment in an essential resource category. The result has been that the offshore oil and natural gas companies, and pure plays such as service providers, are being punished for both fundamental oversupply in equipment and, seemingly, overextrapolation of future risk. We can see that the sentiment shift persists in the broader market even today, the chart below plots a general oil and natural gas ETF (XOP) and an Oil Service Providers ETF (OIH) vs. a custom index comprised of companies that either only provide services to the offshore industry or predominantly pump oil and natural gas from offshore reserves:



Source: Massif Capital

Our framework suggests a pivot is beginning to occur. Interestingly, there is an increasing divergence between operator sentiment and investor sentiment. We believe this often presages a shift from stage 3 to stage 4 as operator sentiment must turn before investor sentiment, lest the sentiment change not be accompanied by a change in company fundamentals. Several data points indicate that feeling in the offshore industry among owners and operators has turned positive, while the investor class remains negative. One can look to either individual cases, such as Exxon Mobile's increased focus and commitment to offshore Guyana or more industry-wide trends such as the rise in the number of open tenders for offshore production blocks, which are up 25% year over year, with a commensurate pickup in participation in those tenders, especially in the Gulf of Mexico.

We also observe that the industry is acting upon this sentiment (actions following stated beliefs) with increased capital spending. Offshore investing among operators grew for the first time in five years in 2018. We are still in the early innings of this turnaround, peak offshore spending occurred in 2014 and was \$329 billion, more than double our expected industry spend this year of \$160 billion, but that would still represent an improvement of 7% year over year.

⁶ [EIA Offshore Production Data](#) & [The Quite Rise in U.S. Offshore Oil Production](#)

As we evaluate the landscape for secular opportunities, misallocations of capital which create structural supply deficits are fruitful places to look. Survey results such as those presented above are important pieces of information that prepare us to provide liquidity where it is most needed. At the current time within the energy industry, offshore oil and gas is a candidate for such an opportunity.

Uranium mining would be another industry with highly inelastic demand and a shrinking supply which will create, in our estimation, an even more dramatic response than if supply were just tight and inelastic. The diamond industry is yet another example. Although the demand side of the equation is more elastic given that the final product is a consumer discretionary product, the supply is perhaps the most inelastic of any industry we are invested in given the rarity of finding economic diamond-bearing kimberlites. The supply outlook from new and existing mines also looks likely to shrink through 2026, at which point new mine production should return supply to recent peaks but not before 2030. The point here is not to suggest that every investment we make has the same qualities but that as a framework for analysis, our capital cycle approach is broadly applicable and highly relevant to real asset investing.

Operational Updates on Portfolio Holdings:

Our portfolio was relatively quiet on the news front over the first quarter of the year, the exceptions being Barrick Gold and Graftech.

Our investment in Barrick Gold was made late last year before the announced merger with Randgold. Overall, we are pleased with the merger and are very positive on the reshuffle of management and the corporate structure. We believe both will help the business unlock significant value over time.

There are concerns about the growing political risk embedded in the new Barrick Gold portfolio because of the heavy African exposure added to the company through the merger. We do not foresee this being a problem. As we outlined in a recent white paper focused on political risk, we believe the key to success in difficult locations is a management team with a proven ability to manage political risk as an ongoing operational concern. The Randgold team has a successful track record and proven capability of doing just that.

We will admit to having been concerned when management launched a hostile takeover effort of Newmont, the world's largest gold miner. Barrick, having just absorbed a near-peer, was not, in our estimation, positioned to integrate another larger peer intelligently. The hostile bid was little more than a tactic though and brought the Newmont management team to the negotiating table to strike a deal to rationalize the operation of assets both companies have in Nevada, all of which are within driving distance of each other. The new Nevada joint venture (JV) offers significant opportunities to benefit from the reduction of duplicated ore processing activities resulting in long term cost savings and real synergies. As with all JVs, there is the potential for leadership issues and a failure to live up to the potential value outlined on paper. As such, we await news of progress before penciling the proposed cost savings into our core valuation.⁷

Unlike Barrick, Graftech experienced a very volatile quarter because of what can only be considered poor planning by the largest shareholder, Brookfield Business Partners (BBP). BBP owns 75% of the company

⁷ We are often highly skeptical of value being added to firms through 'synergies', traits typically attributed to joint ventures. That said, in cases where value is being extracted from assets that have unique locational proximity to each other, cost synergies are often possible.

and has a stated interest in reducing their position and increasing the liquidity of Graftech to improve the firms trading characteristics, which to date have been very poor. BBP has sold stock historically, at the IPO price of \$15 and around \$21 in a secondary offering in late 2018. The secondary last year was poorly executed and resulted in a significant swoon in the stock price. In 2019, BBP's attempted secondary offering was far worse, not only confusing the market and ourselves, by trying to sell a large block of stock at \$14.23, which is below the IPO price, but also driving the stock down to \$11.61, before reversing their decision.

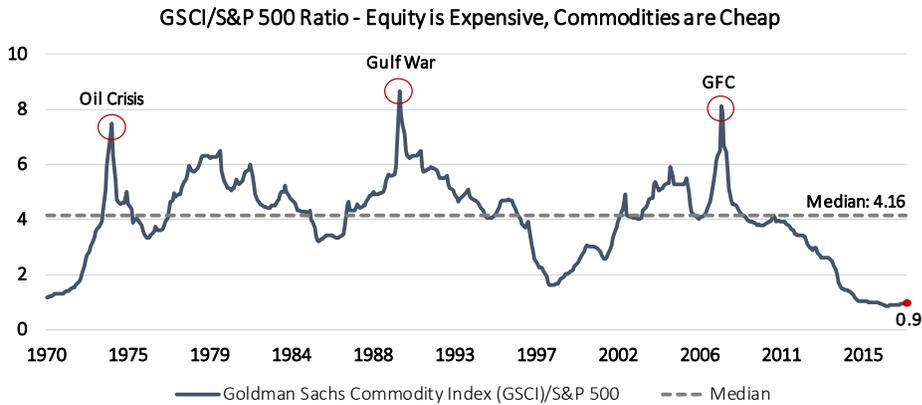
We spoke with BBP twice in an attempt to get an understanding of their thought process and both times walked away from discussions disappointed. Our first conversation occurred before they pulled the deal and prompted us to return to our valuation for a reassessment as they stated they thought they were getting good value for their shares, despite the price being below both the IPO and the previous secondary. The second conversation, which occurred after they pulled the secondary, revealed that BBP did not believe they were getting good value for the stock but that they had been sellers due to the need to generate cash for two other investments that they were making later in 2019. In short, value agnostic selling for reasons not attributable to Graftech.

Our assessment of the company's value and potential remains unchanged. At the same time, we worry that this aborted secondary will extend the timeline on the investment. We have trouble envisioning a scenario in which the market is not left with a bad taste in its mouth due to poorly timed and poorly communicated secondaries made by a primary owner.

The remainder of the Massif portfolio performed adequately during the quarter but failed to keep up with a hot market which still appears to favor growth stories, regardless of how tenuous the balance sheet is that supports the growth and irrespective of the actual profitability of that growth. We have added one long position to the portfolio during the first quarter, Kazatomprom, and added one short position to the portfolio on the first day of the second quarter. You will all receive a research report on the short position during the second quarter and should have already received a report on Kazatomprom some weeks ago.

Relative Pricing – A Compelling Opportunity

While a majority of our research, and subsequent commentary, is focused on long term value and the preservation of capital, it is worth returning to the market to understand how our assets are being priced relative to the basket of investment opportunities open to equity investors. We find that energy, basic materials, and industrials are a compelling purchase. Examining monthly EV to EBIT ratios from 2001 to 2018, we find that energy, basic materials, and industrials are trading at a 30% discount to U.S. equity markets. As of late 2018, the relationship is approaching a 20-year low, levels previously seen in 2005 and 2014.

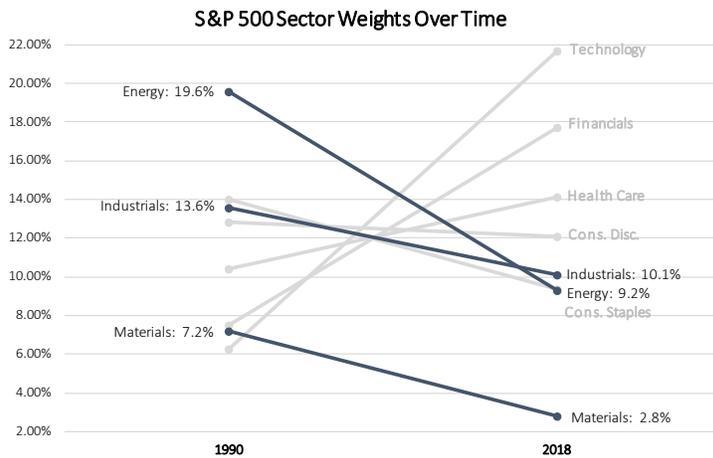


Source: Invrementum AG, Massif Capital

The long-term relationship between the S&P 500 and the Goldman Sachs Commodity Index (GSCI) tells a remarkably similar story. See the chart on the left.

We also see a similar story playing out in the supply and demand for stock in

the market. If we assume that the market cap weighting of industries within the S&P 500 indicates the interest level of market participants in individual sectors (under the assumption that one sector will be bid up or down based on investor interest/sentiment) what we see in the sector weightings of the S&P 500 is a lack of interest in our areas of focus. Since 2009, the weight of the energy sector has halved and is currently just a bit more than 9%. At the beginning of 1980, the energy sector was the largest sector, making up 25% of the S&P 500. Also, material companies are now just a fraction of what they used to be 35 years ago, accounting for less than 3% of the index, even industrial companies as a sector have taken a



Notes: We view Utilities as part of the Energy Complex, so we have combined the Energy and Utilities Sectors. Both sectors have fallen more than 50% between 1990 and 2018. We have excluded telecommunications from the sector weightings as the sector was phased out in 2018.
Source: Massif Capital

hit. In short, opportunities exist, and we are moving to deploy capital. That being said, we remain highly conscious of the overly lengthy bull market cycle.

Conclusion

From time to time we like to recommend a book to our investors. This quarter we would like to suggest two books. The first is The Big Score: Robert Friedland and The Voisey Bay Hustle, the second is Political Risk: How Businesses and Organizations Can Anticipate Global Insecurity. The Big Score should be read for pleasure,

amusing you like to read books about nickle mines in Canada, and is one of the better business books we have read in the last few years. Political Risk, on the otherhand, is essential reading for anyone investing internationally, although we would also suggest it is vital for anyone investing domestically, as it presents a useful framework for understanding and dealing with political risk, which is increasing where every you invest.

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

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