



11281 Kensington Road, Los Alamitos, CA 90720 | Phone: (949) 870-5365
E-Mail: nwu@opensquarecapital.com | Web: www.opensquarecapital.com

March 31, 2017

Dear Limited Partners,

As our quarter draws to an end, we sometimes cast about to find an idea that describes our journey thus far; a quote or a story that conveys what transpired during the quarter and why our portfolio was benefited or buffeted. For this quarter we're using this quote . . .

"How wild it was, to let it be." – Cheryl Strayed

This quote was the last line in Ms. Strayed's book *Wild*, in which she recounts her experiences hiking the Pacific Coast Trail. Her solo hike spanned from the Mojave Desert through California, Oregon and ended in Washington State. Ms. Strayed's story was one of self-discovery and healing, and this last line encapsulates what she learned: to accept her past, embrace the future unknown, and to be grateful for the actual journey itself. In many ways this quote conveyed much of how we view the portfolio today and our strategy in the current environment . . . let it be.

Our Quarter

For Q1 2017, our fund declined by 9.30% largely because oil prices (WTI) fell by approximately 6% in March. As our portfolio is heavily weighted towards energy stocks, oil prices will have an outsize impact on how we perform for 2017.

Date	Open Square Fund I Performance YTD*	S&P 500 Performance YTD*	Outperformance / (Underperformance)
January 1 – March 31	(9.30)%	6.03%	(15.33)%

* Prior to fees. S&P 500 is using ETF: SPY

We ended this quarter underperforming the S&P 500 by a wide margin as it raced ahead on enthusiasm for the new Trump administration's policies. The energy sector failed to keep pace and became the worst performing sector in Q1. As we turned the year, oil subsequently declined for a host of factors that we'll elaborate on below, factors that we believe are temporary. Contrary to how our fund performed, oil fundamentals have actually strengthened these past few months. So while we "gave some back" from the year-end, there are reasons to be optimistic that oil and our portfolio's trajectory will reverse itself. For this letter, we'll provide an update on our major investment themes for 2017 and also touch-upon Apple, which outperformed in our "value" basket. In the second quarter, we'll provide some more specific company updates as many of them have ongoing developments, the results of which will be clearer next quarter.

Opportunity and Fear

Our recent underperformance brought to mind two psychological tendencies that we all have that color our thinking. Whether it's a soft shade of pastel or a much bolder hue, these quirks of the human brain

play a large role in our decision-making. A whole field called behavioral science has been developed to explore these quirks and it's a fascinating subject that touches upon psychology, biology and economics.

The first of these natural tendencies is doubt avoidance. This is man's quest for certainty, and one of our favorites of that we're certain! Doubt avoidance and the quest for certainty drives us deeply. It's hard-coded into our brains and it's our natural ability to come to a decision quickly based on our own personal heuristics, social mores and past experiences.

Biologically speaking developing this tendency makes sense. As a caveman, you want to quickly understand that when the tiger is admiring you, it's likely for culinary reasons. On a higher level, this tendency also explains why people gravitate towards religion as religion satisfies the deep desire to explain the unexplainable. Fortunately, we've evolved quickly from the wild plains to our modern day lives, but unfortunately our brains haven't quite caught up. Although quick decisions save lives when it's Grog vs. the World, our default wiring leads to some surprising results when it's Grog vs. Wall Street.

Since we constantly seek a path of certainty, investing volatility can veer us off course because let's face uncertainty and stress love tagging along. Although we love hiking the path of opportunity, these are the worst traveling companions, constantly challenging our predilection for certainty. Over time, stress and uncertainty makes our investment journey far less appealing, and we're no longer keen on the trip. Our rational mind tells us one thing, but our companions tell us another. Eventually our investment journey reaches a crossroad, one where opportunity intersects with loss aversion.

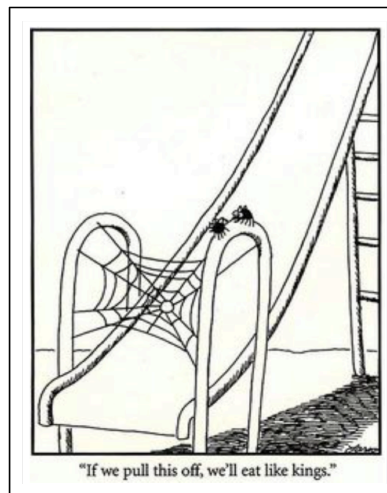
Unbeknownst to most investors, this is often the place where critical investing decisions are made. When faced with doubt and uncertainty, loss aversion seems like the right path. The café further down loss aversion road seems so attractive. How attractive? Usually twice as attractive. The adage "losses loom larger than gains" is true because as Professors Daniel Kahneman and Amos Tversky have demonstrated, losing is psychologically twice as powerful as winning. Here's an example from Dr. Kahneman:

"In my classes, I say: 'I'm going to toss a coin, and if it's tails, you lose \$10. How much would you have to gain on winning in order for this gamble to be acceptable to you? People want more than \$20 before it is acceptable. And now I've been doing the same thing with executives or very rich people, asking about tossing a coin and losing \$10,000 if it's tails. And they want \$20,000 before they'll take the gamble.'"

So even if the probabilities are the same (i.e., a coin flip), people will fixate on potential losses. It's innate and even makes sense. If Grog is living on the edge of survival, climbing a tree for an apple is a bad trade if breaking a leg means starvation. Thus, we default to loss avoidance when resources are involved, be it food or money. Add the constant chatter of stress and uncertainty; you can see why many investors end up exiting opportunity road.

Therein lies the conundrum of investing. Our brains are wired to forego gain when that gain will be hard won because of our evolutionary wiring. We rationally want outsized gains, but it's often uncertain and difficult. It's not just the challenge of correctly making a series of probability-based decisions; it's the psychological difficulty of holding your convictions amidst uncertainty.

Ultimately, we think that's where having a behavioral edge comes in. We have to be more patient and rational than our counterparties, so that we can control our human tendencies instead of it controlling us. Admittedly, that explanation is probably a little unsatisfactory when we underperform, because many investors want a smooth path to higher returns. We believe the opposite, if we accept and ignore the volatility it can allow us to outperform. At the end of the day, it isn't the volatility that dictates the return; it's whether our decisions were correct, and whether the odds are asymmetrically in our favor.



So with that in mind, let's give you an update on the three themes in our portfolio:

Our Three Themes

A. Oil

As you may recall, OPEC and Non-OPEC agreed to reduce oil production by approximately 1.7M bpd in a series of agreements last year (collectively "Vienna Agreement"). The two agreements began on January 1, 2017 and are scheduled to last for six months. OPEC will then decide in a May 25th meeting whether to extend the agreement. The six-month cut should have rebalanced the market and lowered inventories to its five-year average, and this potential outcome led oil prices to end 2016 on a high note. Three factors, however, forestalled the rebalancing and temporarily sidetracked oil prices in Q1.

1. OPEC Overproduction

First, OPEC and Non-OPEC participants separately increased production leading up to and immediately after the Vienna Agreement as part of their negotiating strategies to "cut" from a higher level of oil production and to front-run impending oil quotas once the group finalized its agreement.

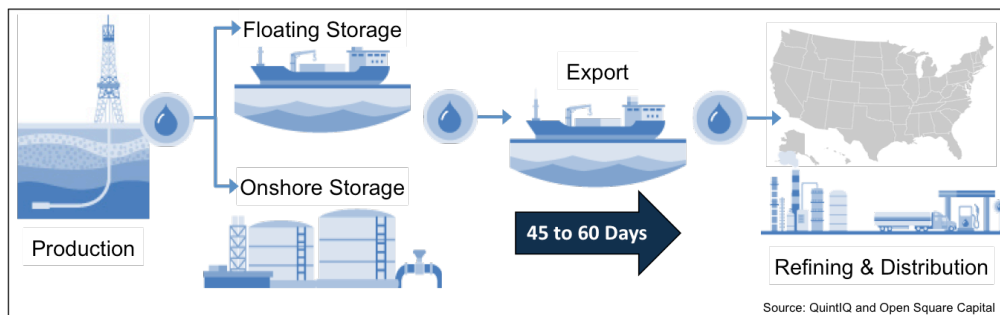
	2015	2016	2Q16	3Q16	4Q16
Algeria	1,106	1,088	1,084	1,090	1,089
Angola	1,753	1,730	1,772	1,761	1,623
Ecuador	544	546	550	547	543
Gabon	220	217	219	219	209
Iran, I.R.	2,838	3,502	3,539	3,646	3,725
Iraq	3,935	4,382	4,290	4,396	4,601
Kuwait	2,771	2,849	2,799	2,879	2,876
Libya	405	391	312	311	571
Nigeria	1,861	1,577	1,541	1,417	1,570
Qatar	666	656	662	652	645
Saudi Arabia	10,142	10,406	10,299	10,596	10,544
UAE	2,898	2,967	2,921	3,004	3,082
Venezuela	2,367	2,159	2,182	2,112	2,056
Total OPEC	31,506	32,470	32,168	32,629	33,135

Note: Totals may not add up due to independent rounding.
Source: OPEC Secretariat.

Increased OPEC production in Q4

Notice the production spike in the last quarter? Eventually these extra barrels would show up as higher imports and inventories at the beginning of the year.

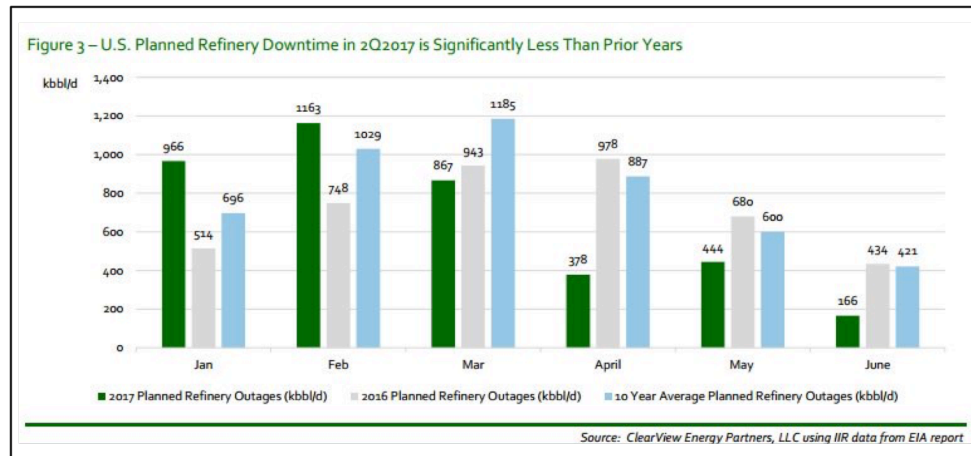
We've analogized the oil supply chain to a giant slow moving caterpillar before, where a move on one end takes awhile to show up on the other. Given the large number of oil producers, a concerted effort to increase production upstream will result in higher levels of oil downstream, but not immediately. This is because physical oil takes time to travel from the source to the market via supertankers (i.e., about 45-60 days from the Middle East to the US). Therefore, the oil consumed today was largely produced a few months ago.



Normally this time lag isn't much of an issue, but with the hyper-scrutiny on inventory levels after the Vienna Agreement, investors were already on edge. The market fixed its attention on US inventory data and while it expected an inventory build for the first two months (on account of the production increase), it expected a substantial draw 60 days later. When this failed to appear, the market prematurely began turning bearish, a sentiment that was compounded by two other reasons.

2. Refinery Maintenance

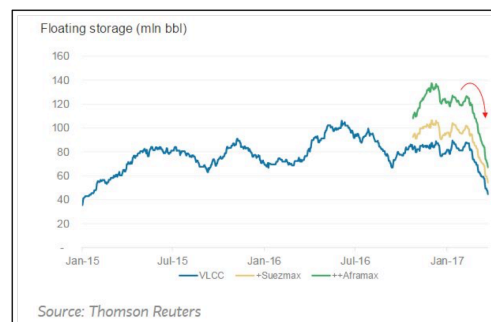
Refineries are often brought offline for maintenance during the first quarter of the year, but planned refinery outages in the US were much higher than normal in the first quarter thus tempering crude demand. In particular, look at the spike in planned refinery maintenance in Q1 vs. 2016 (in green below).



Although initially higher, refinery outages will progressively decline in Q2. When refineries are brought back online oil draws will accelerate the destocking. We know that end-user demand has stayed robust because products derived from crude oil (i.e., gasoline and diesel) have fallen steadily during this period even though we've yet to start the summer driving season. Consequently, this leaves refinery maintenance as the key culprit in keeping US crude oil inventories high.

3. Offshore Inventory Destocking

Third, as the market rebalances, oil kept in offshore floating storage (e.g., rented supertankers) will work its way back onshore and show-up in inventory data. In Q1, offshore stocks worldwide halved, and some of this came onshore in the US, exacerbating the inventory build. Numerous third party oil firms have also begun confirming the destocking. Here's Thomson Reuters chart:



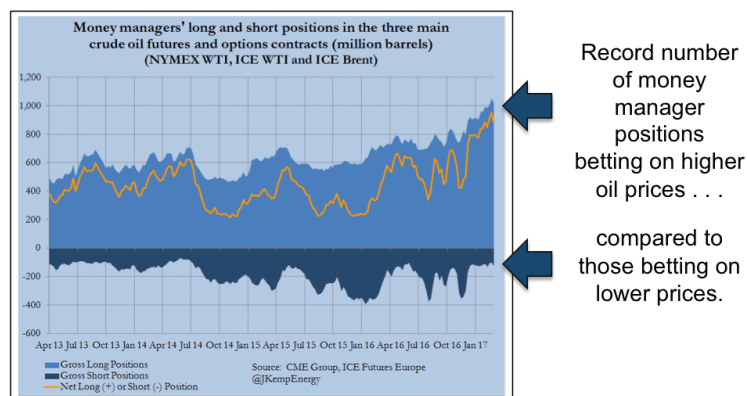
Morgan Stanley recently stated that floating inventory has decreased by 72M barrels in the past few months, crude that makes its way onshore, whether in the US or elsewhere. As a quick background, when

supplies exceed demand, the spot price for oil becomes cheaper than future prices, creating a price curve traders call “contango”. Traders capture this spread by buying oil today and simultaneously selling a futures contract. The trader then rents space to store the oil (e.g., onshore storage or a supertanker offshore) until delivery. When supplies tighten, the price curve enters backwardation as the spot price rises vs. future prices. Now unprofitable, traders abandon the trade and oil previously stored offshore destocks and onshore inventory rises.

This offshore destocking is largely a one-time event. It’s a sign that supplies are becoming tighter and backwardation is taking hold. Our more conservative view is that the market has absorbed close to 60M barrels of offshore oil in Q1, significantly reducing offshore inventories. Moreover, whether oil stocks are falling onshore or offshore, they are falling, and that’s what we fundamentally want to see.

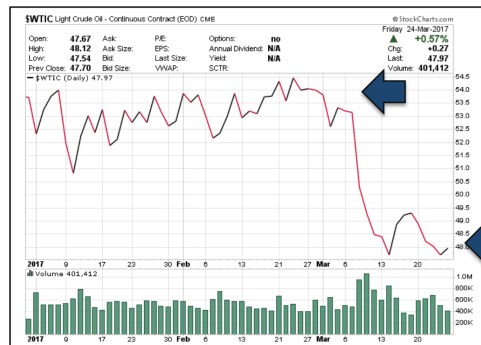
4. Price Reaction

Regardless of the reasons, the nuances were lost on the market. When met with higher inventory figures in the first week of March, the oil market sold off. The market shoots first and aims later when it encounters “bearish” data. This occurred in part because investors had bet heavily on higher oil prices, and by February money managers had placed record bets on the long side by a factor of 10:1.



It wasn’t surprising to us that inventories would increase in the first quarter. Combine overproduction, higher refinery maintenance and offshore destocking, and voilà, an inevitable post-holiday hangover. Kind of makes sense right? Not for the market because while it’s okay for oil inventories to build for 60 days, a build into March? Inconceivable!

Unfortunately, the market demanded that the oil supply chain operate with the precision of Oscar ballot counters. So like The Rock at the Oscars, the oil market slid into La La Land confusion.



US data continues to show oil inventories increasing (oil at \$53/barrel)

Oil falls +10% in days (oil at \$47/barrel)



As if on cue, doubt and uncertainty stepped onto the stage and the pundits began asking the “critical” questions. Did OPEC/Non-OPEC really reduce production? Where’s all this oil coming from? Have we all been duped? Has anyone really seen Moonlight??

Our oil investments, which are geared to oil prices, similarly swooned.



Yet for all the drama, we believe the price action makes little sense, and much of it is sentiment driven. Just because physical oil takes 60 days to travel from the Middle East to the US, it doesn’t mean that production cuts beginning January 1st would lead to imports suddenly plummeting in the first week of March. Moreover, higher refinery maintenance coupled with offshore destocking means imports will increase in the short-run, but that’s the key . . . the short-run.

The oil market and supply chain is exceedingly complicated, and while rebalancing will take time, it will occur. We’ve said before that sentiment and fundamentals are two different things. Fundamentals drive sentiment, and not the other way around. If fundamentals continue to indicate an inventory drawdown, then sentiment will eventually swing back. We believe the recent air pocket only helps the oil market rebalance faster as it discourages needed investment. In truth we’re much more bullish on oil today than we were last quarter because here’s what we’re seeing . . .

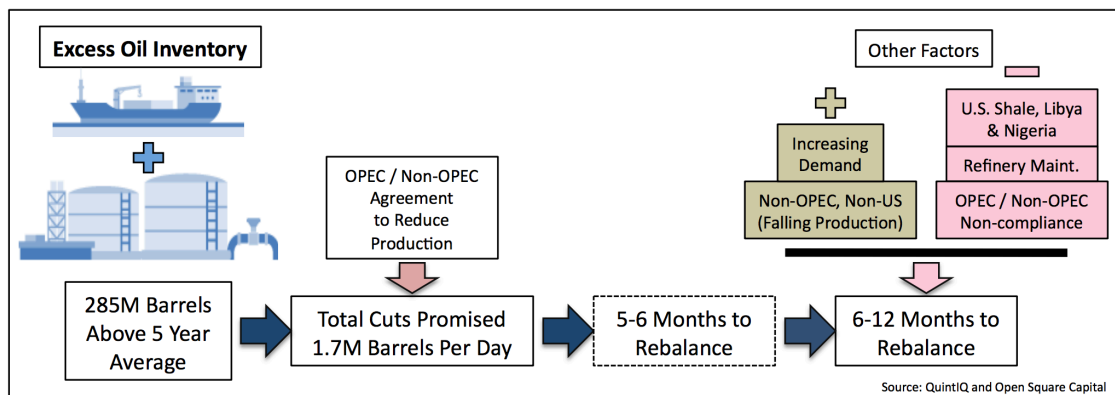
5. Fundamentals

First things first, oil data is a mess. It's opaque and incomplete because countries clutch their data tightly for competitive and national security reasons. The US, via the Energy Information Agency ("EIA"), is perhaps the best source with weekly releases of petroleum status reports that track the US market, and provide useful data on supplies, demand and inventory. For worldwide data, the International Energy Agency ("IEA") and OPEC are great sources, and include data from OECD countries (e.g., US, Canada and much of Europe) and non-OECD countries (e.g., China and India). No matter the source, frequent "true-ups" are made to the data when new information is available or when things need to balance properly. Throw in a mix of third-party information/subscriptions there's no dearth of information, but insights are harder to come by.

EIA data garners significant attention from the media and money managers because of its regularity, despite the fact that the weekly information can be noisy. When US inventories failed to drop in March, both US and global oil prices subsequently fell. The US, however, represents only a tenth of global supply and demand, so a singular focus on US data can distort your perspective on the underlying trends. So if we know much of the recent US inventory build is caused by temporary factors, what is the longer-term broader data telling us? For all of the temporary issues and turmoil above, the long-term fundamentals are improving.

a. Those Who Suffer Together, Stay Together

In order to appreciate what's really happening to oil, we need to step back a bit, so here's a big picture view for you:



The general consensus is that there are 285M barrels of excess oil in storage and the Vienna Agreement was designed to whittle down the excess in 2017. Although various factors weigh on the speed of rebalancing, the production cuts (if extended) should substantially reduce inventory by year-end. Market pundits originally predicted OPEC's compliance would hover around 60-70% based on prior OPEC agreements. Since implementation, OPEC compliance has been exceedingly high and Non-OPEC compliance is beginning to ramp up.

OPEC & Non-OPEC Production Cut Compliance			
(Millions bpd)	Promised Cuts	January	February
OPEC	(1,164)	(1,286)	(1,078)
<i>Compliance %</i>		111%	93%
Non-OPEC	(558)	(248)	(270)
<i>Compliance %</i>		44%	48%
Total	(1,722)	(1,534)	(1,348)
<i>Compliance %</i>		89%	78%
Bloomberg, March 17, 2017			

We wrote in the last quarterly letter

“For us, it’s important to remember a key idea in the prelude leading up to the OPEC agreement and its aftermath, and that is this: [s]elf- interest will broker the deal, and self- interest will enforce it.” – *The Oil Deal – Pay Attention Because the Game Just Started* (12/2016)

High compliance rates aren’t surprising with the severity and length of today’s oil price declines. Many countries can’t fulfill their political promises at \$40-\$50/barrel, thus better to share some painful cuts in hopes of shortening it. When OPEC meets again on May 25 they’ll only have 4.5 months of lackluster inventory data. Given the continuing weak oil prices and high compliance rate, we believe OPEC/Non-OPEC will extend the Vienna Agreement until year-end and put rebalancing on a much firmer footing.

b. Inventories

Even without the Vienna Agreement, it’s becoming clearer that oil inventories worldwide are drawing down. Inventory levels, based on import/export data, help us to interpret the mosaic of supply/demand information. IEA and EIA data have been reporting a glut of oil because supplies have exceeded demand in 2016 (i.e., by 700K bpd or 250M barrels over the year), yet if supply/demand figures were correct, inventories levels should have increased substantially. The opposite is occurring, which likely means IEA and other agencies may have underestimated demand. Here’s the 2016 monthly data from the IEA’s Oil Market Report, notice the accelerating decrease in inventories?

(Millions bpd)	June	July	August	September	October	November	December
Total Oil	0.19	1.05	-0.32	-0.57	-0.90	-0.39	-1.16

According to this, OECD inventories have been decreasing by approximately 700K bpd since August 2016. Now certainly OECD stock doesn’t contain non-OECD countries (e.g., China and India), but as OECD countries account for close to half of worldwide oil consumption and have a sophisticated storage infrastructure, it’s a solid indicator for where oil is headed directionally. IEA has also historically underestimated demand, and if supplies actually exceeded demand, where’s the extra 250M barrels (e.g., equivalent to 125 large supertankers)? It’s likely these “missing barrels” don’t exist and will be cleared

when the IEA adjusts its demand figures. This is one of the key reasons why we believe that the oil market was already balanced by mid-2016, and since then, demand has eclipsed supply.

What's also interesting is that OECD crude inventory "only" increased in January and February by 45.2M barrels and 16.3M barrels, or a total of 61.5M barrels. Remember this build occurred despite US inventories increasing, OPEC's overproduction, floating storage destocking of over 70M barrels and higher refinery outages. This likely means that the underlying inventory draw has carried over from 2016 and should accelerate in 2017 when the Vienna Agreement's impact is felt and the temporary factors masking the decline fades away.

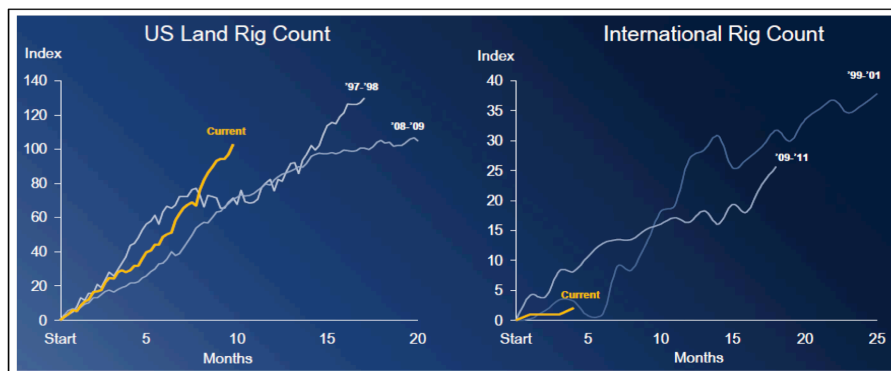
c. International Production

As always I like to use my daughter's affinity for desserts to explain an oil concept, and she's a bit of an expert when it comes to understanding decline and depletion rates.

Like any oil producer with a new oil field, whenever she gets a big bowl of ice cream she dives right in. Big scoops of "where has this been all of my life" fly into her mouth. As her bowl of ice cream dwindles (depletes) her scoops begin to shrink (decline) as she tries to savor the last mouthfuls. Like a good little oil executive she usually tries to find more capital to replenish her finite bowl of ice cream and stem depletion ("More Daddy?"), but when the capital markets don't cooperate ("Daddy says no. #sad"), then the ice cream enters terminal decline. Tough life kid, but that's the way the ice cream melts.

Today's oil producers can keep pumping at high volumes, but that merely increases depletion rates, or pump at lower volumes to stem depletion and preserve the reservoir, but that increases decline rates. Oil companies have tried to balance the two, but it's a Sophie's choice in today's oil prices. Low oil prices means many oil producers have elected to keep pumping at high volumes (because they need the cash), but that sacrifices the longevity of their reserves. As we enter the third year of low oil prices, we're starting to see that there's just not enough capital to even stem decline rates let alone depletion.

Just take a look at international rig counts. Rigs, the machinery that drills the wells are leading indicators for production.



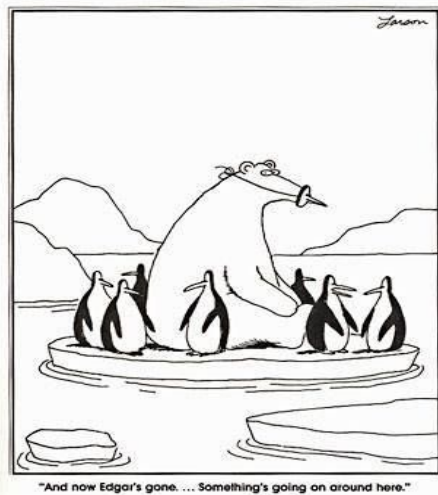
While rig counts in the US have recovered dramatically, rig counts worldwide have remained at all time lows, which means wells aren't being drilled outside of the US. US production accounts for about 10% of worldwide production. Invert that and 90% of worldwide production comes from outside of the US. With international rig counts hovering near all time lows, many of these countries will be subject to faster declines simply because new oil wells aren't being drilled. So even if 60% of the world's producers hadn't agreed to cut/freeze oil production under the Vienna Agreement, Non-US oil production will likely continue to fall.

On the flip side, will US production increase? Yes, but the 400K bpd of US production increase (mostly from shale) has already inflated services costs, which will cap US production growth. Furthermore, keep in mind that global demand is expected to rise 1.4M bpd. In the end, it's ill advised to think this 10% production base alone can make up for falling international production in the next few years.

d. The Third Year of Low Oil Prices

So we're a bit at a turning point. It's been many moons since we began our journey, and 2017 will be very interesting for our oil thesis as reality is beginning to bite. The decline in worldwide production indicates that producers are no longer able to keep up the charade. There simply isn't any profit at \$45-\$55/barrel to reinvest and stem both decline and depletion rates. As the temporary factors impacting US inventories wear off, the market should begin to turn and really focus on the bigger picture. We anticipate inventory draws will approach 1M bpd for the entire year and inventories will be slightly below the five-year average by year-end. Inventory draws, however, will accelerate thereafter in 2018-2019.

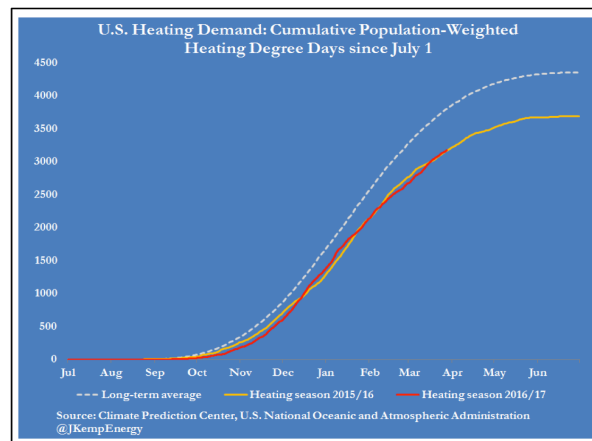
Ultimately, the data lag effect will work both ways. It took time before oversupplies showed up in the data, and it's taking time before the undersupply will as well. By the time the information is clear, the world will have walked into an oil shortage. This is why we've stayed patient with the volatility. Our thesis and portfolio may be whipsawed by oil prices today, but that's noise and sentiment. Fundamentals matter, and no matter what your sentiment on oil is, the world will rediscover an inescapable truth . . . if oil prices aren't high enough, then oil supplies won't be enough.



B. Natural Gas

The winter of discontent, that's what we'll call this winter. Our natural gas investments have proven disappointing. We recently trimmed about 20% of our natural gas investments because our winter thesis failed to prove out. This came in the form of selling our stake in Cabot Oil & Gas (COG). It's not that we've lost faith in the company, more that the recent oil swoon gave us an opportunity to acquire some beaten down oil companies at attractive prices, particularly as natural gas price increases have leveled off.

In our Q1 letter from last year, we said that the supply/demand imbalance for natural gas would eventually spike prices. This continues to stay true as evidenced by the winter we've just had, but it's been gradual. If winter had turned out to be at historical norms, natural gas prices would have spiked. Instead this winter was one of the warmest ever, following last year's incredibly warm winter.



So for the past two years we've had record warmth, which leads us to ask, "what's the past tense of global warming?" Going forward though, base demand is certainly higher because of higher LNG demands, higher gas exports, and the shift from coal power plants to natural gas plants. So while inventories are slightly higher than the 5-year average, on a demand-adjusted basis, inventories are actually running quite low. Now that we've exited the withdrawal season (November 1 – March 31), we're now into the injection season (April 1 – October 31) where supplies typically exceed demand. If natural gas prices don't continue increasing during the injection season (contrary to historical norms), we'll enter the next withdrawal season (November 1, 2017) with an undersupply of natural gas. Thus, natural gas prices either rise now to incentivize production, or it spikes later in November when inventory is insufficient. Either way, natural gas prices need to increase to address the higher demand going forward, which is why we've kept 80% of our natural gas holdings.

C. Apple

Lastly, a quick update on Apple. Ironically our investment in Apple was also both benefited and "Buffeted" this quarter. The big "B" in Buffeted, however, meant all the difference. We've held shares in the company since the inception of the fund believing it to be severely undervalued as the ecosystem

evolves and its financial strength further increases. In January, Berkshire Hathaway disclosed that it had doubled its stake in Apple and now owns 2% of the company. We believe Warren Buffett's lieutenants purchased the shares, but shortly thereafter Mr. Buffett appeared on television and touted that Apple's business model had "incredible stickiness." Apple stock is now one of Berkshire's larger equity holdings, and this disclosure bolstered the sentiment surrounding the stock. By the end of Q1, Apple stock had increased by approximately 25%.

The reality is that Apple didn't fundamentally change much in Q1. The company was going to earn what it was going to earn, and it was and has always been a very solid company with a great ecosystem. What shifted was market sentiment, and Buffett's investment helped to change that sentiment.

We think this is largely the issue with oil in Q1, except in the reverse. Fundamentally, the macro picture on oil became better (high OPEC/Non-OPEC compliance, robust demand, and tempered shale production) in Q1, but sentiment shifted. Worries simply swamped fundamentals, but we believe investors have misweighed legacy data, and mistakenly concluded current inventory builds to be continuing inventory builds. Eventually as the timing difference gives way to the real inventory fundamentals, the sentiment will once again shift. We remain steadfast though, checking and rechecking the fundamentals because eventually that drives sentiment.

As for Apple? Well there's really not much to say since our Q4 letter that lists what we think are great catalysts for the stock in 2017. Fortunately, Warren Buffett and his investing lieutenants agree. It's always nice to have a little confirmation bias (ok a lot of confirmation bias in this case) along for the ride.

Parting Thoughts

Even though we don't fancy reporting a loss, we believe a falling oil price today is a good thing overall for our portfolio. As longer-term oil investors, the current low prices simultaneously increases demand and prolongs the industry's underinvestment; two factors that stretches the rubber band tighter.

If the fund suffers temporary underperformance, we accept that because eventually the world needs more oil, and our companies have it. Short-term returns can be delicate, but having a mind-set to own companies for a longer-term period cannot be. 2017 will no doubt be interesting, and with a little luck and a lot of grit, we'll hopefully be reporting much better performance in the quarters to come. As always thank you for investing and please let us know if we can explain any of our ideas above in more detail.

Sincerely,



Nelson Wu
Managing Director