



ENERGY UPDATE

EXECUTIVE SUMMARY

- ✦ **HISTORY SUGGESTS CORONAVIRUS IMPACT LIKELY TRANSITORY**
- ✦ **2019 WAS A STORY OF DEMAND DESTRUCTION FROM SLOWING GLOBAL GROWTH**
- ✦ **U.S. SHALE GROWTH WAS ROBUST BUT SHOWING SIGNS OF SLOWING**
- ✦ **WE REMAIN POSITIVE ON SELECT ENERGY PARTICIPANTS**

WEST TEXAS INTERMEDIATE (WTI) CRUDE OIL PRICE CHART

January 1, 2019 – January 27, 2020



Source: Bloomberg, Star Capital Inc.

The story in the oil market last year was demand destruction due to an economic slowdown in developed and emerging market countries late 2018 and 2019. Tightening credit, a fall-off in manufacturing, falling global auto sales, and a trade war were the main culprits.

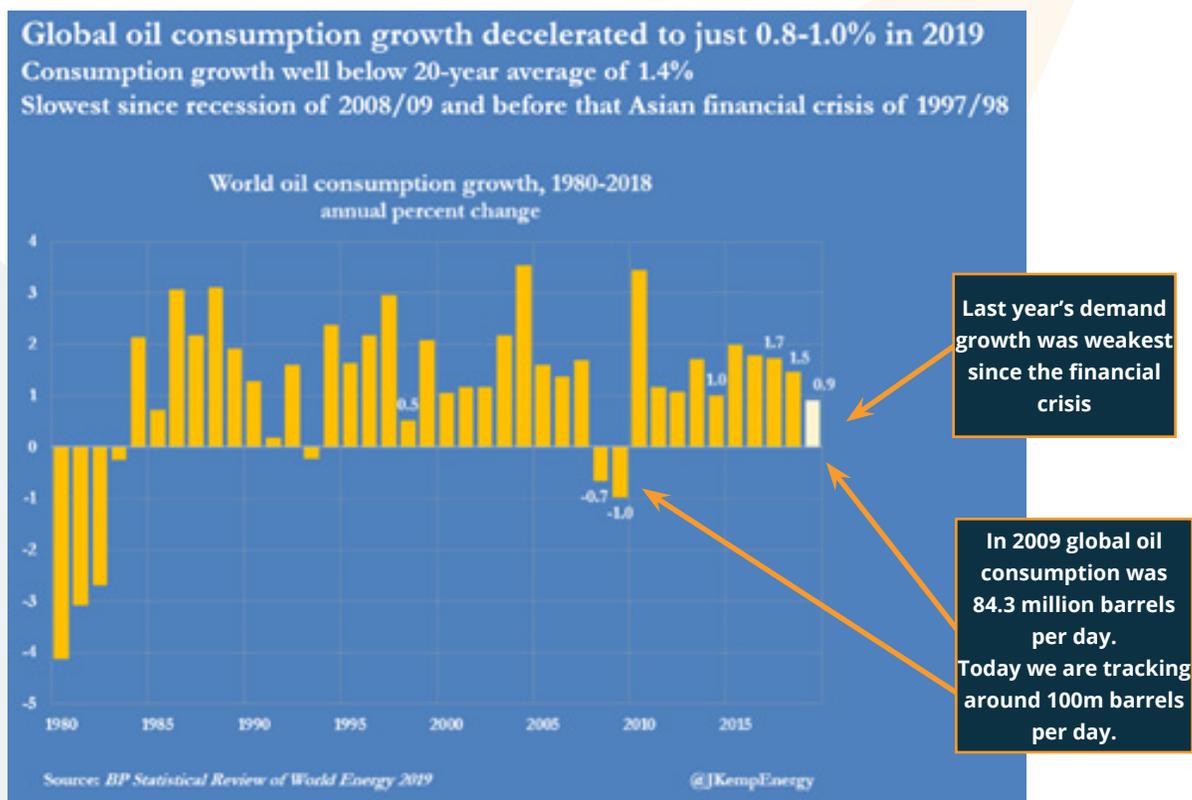
The International Monetary Fund (IMF's) forecast a year ago for global growth in 2019 was 3.7%. It looks like 3% is the final number which was the slowest global growth since the financial crisis. The World Trade Organization claim trade growth last year was the fourth worse since 1980.

Source: Bloomberg

The net impact for crude was only 900k barrel/day or .9% growth in 2019. This number was materially lower than the 1.3m barrel/day growth in 2018 and below the 1.4% average growth for the last 20 years.

Starting with the first confirmed case of Coronavirus on January 11th, headlines detailing the spread of Coronavirus have rattled the oil market. History would suggest any impact to be transitory. Both SARS in 2003 and MERS in 2012 lasted less than 6 months and only impacted global GDP by well less than a 1/3rd percentage point.

China has grown into a larger influence in the commodity complex than in the past. China constitutes 13.5% of global oil demand today versus 7.2% in 2003 when SARS spread. Expect developments in China and fellow Asian players to add drive volatility in all commodity prices, especially oil.



Source: John Kemp, Reuters, "Global Oil Market Outlook 2020/21rus", Jan 28th, 2020

The EIA's original estimate, before the spread of Coronavirus, for 2020 global demand growth in crude was an acceleration to 1.3m barrels/day (bpd) growth with China accounting for .5m barrels/day.

The most recent revision from EIA, accounting for the virus impact, suggest global demand growth at 1m bpd for 2020 with the Coronavirus accounting for most of the negative revision. China's contribution is now .3m bpd or a 200k bpd lower estimate than the original forecast.

British Petroleum's CFO was recently quoted estimating a 300,000-500,000-bpd range or approximately .5% global consumption.

Also, during the second week of February, OPEC's Joint Technical Committee concluded their assessment and recommended to OPEC+ to cut 600,000-bpd of production to prevent a significant build in inventory caused by the epidemic.

It is very difficult to estimate total impact until the contagion peaks and new cases descend but it will likely be another “weak” demand year.

We would encourage readers to step back and look at the big picture.

Can events like virus epidemics and recessions create acute demand shocks? Yes.

Are there reasons to be positive on the supply and demand picture long-term? Our opinion is yes.

- *Structural growth shift to developing countries drives growth in oil consumption over the longer-term*
- *The hockey stick adoption estimates for electric vehicles appear to be at risk as subsidies roll off*
- *Phase 1 of the China-U.S. trade deal are agreed too*
- *Global central banks are in monetary expansion mode again*
- *Low gasoline prices encourage use of oil as preferred transportation fuel*

DEMAND

We believe that low gasoline prices only encourage more demand and only high prices can structurally alter consumption patterns. Recent data in the Electric Vehicle (EV) market is proof.

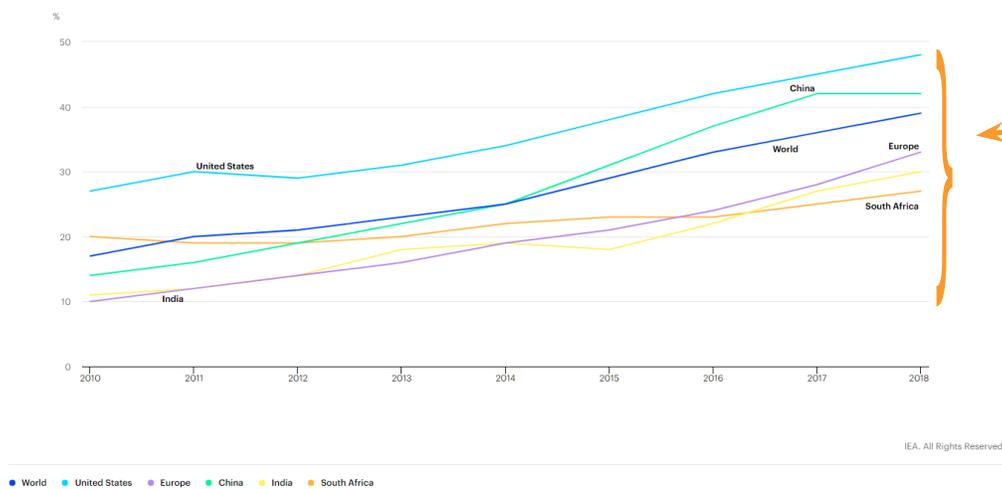
As government subsidies expire, EV adoption appears to be falling as the balance of cost versus benefit have not been triggered. Global sales of EVs are down in the last 3 months of 2019 with the last month showing dramatic fall-off. Global EV sales are down 25% in last month and down over 40% in China. This data is prior to Coronavirus outbreak.



Source: NBS, Bloomberg, Barclays Research

According to Edmunds, 45 new EV and plug-in hybrid cars were introduced in the U.S. last year but sold only 325,000 (down 6.8% from 2018) and equaled only 2% of 17 million of all types of vehicles sold. Meanwhile, SUV sales as percentage of light vehicle sales continue to rise. From 2010 to 2018 SUV sales went from 17% to 38% of the mix in key global markets. One hundred and sixty-five million SUVs have been added compared to only 5 million EVs in this timeframe. SUVs consume about 25% more gasoline on average than other light passenger vehicles.

Share of SUVs in total car sales in key markets, 2010-2018



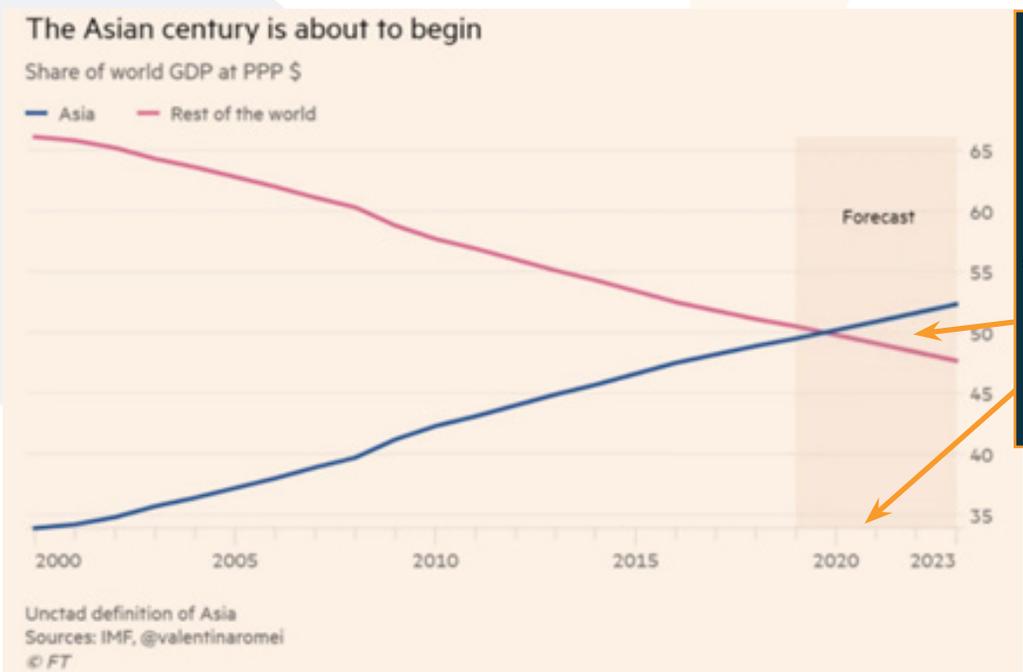
SUV sales as percentage of light vehicle sale in key global markets has gone up dramatically since 2010 – 17% to 38%.

165m SUVs versus 5m EVs added to the market between 2010-2018

Source: EIA, <https://www.iea.org/commentaries/growing-preference-for-suvs-challenges-emissions-reductions-in-passenger-car-market>

We offer these data points as many believe electrification will displace internal combustion engines (ICEs) at such a rapid pace that fossil fuel demand will be in steady decline. If anything, we believe the anticipated EV hockey stick adoption curve in many Wall Street models is way overestimated and the “surprise” is likely how resilient gas consumption remains in transportation markets.

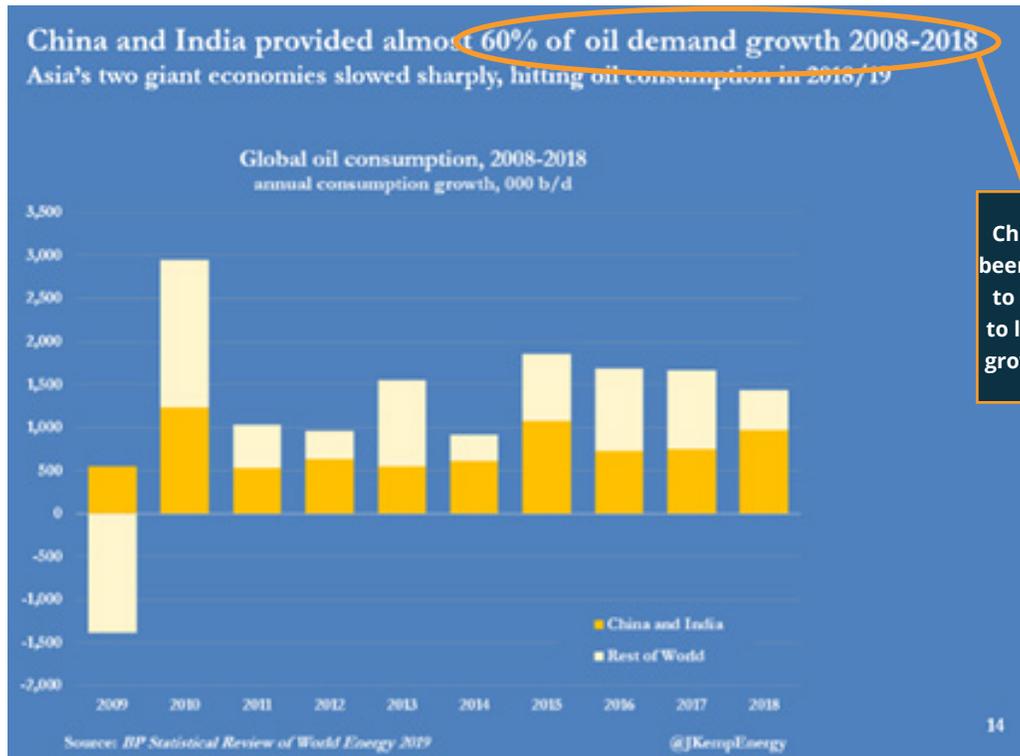
Longer-term, the demand for crude oil is benefiting from a shift in global economic growth dynamics to Asia. Developing countries are the incremental buyers of oil and will be a growth driver for decades to come, in our opinion.



Emerging economies governments are not afforded the luxury of high cost subsidies like developed nations. Large growing middle-classes are becoming more energy intensive. Their influence on the global economy are just beginning to be felt.

Source: Financial Times

Between 2008 and 2018, India and China alone have accounted for more than half of all growth in oil consumption.

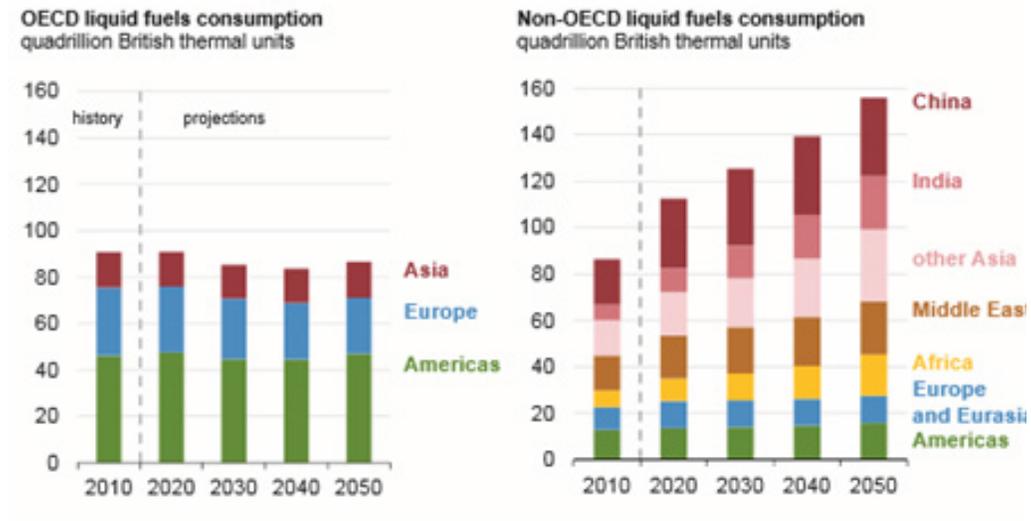


China and Asia have been and will continue to be critical drivers to long-term demand growth in oil markets

Source: John Kemp, Reuters, "Global Oil Market Outlook 2020/21rus", Jan 28th, 2020

Charts from the U.S. Energy Information Administration's International Energy Outlook 2019 quantifies and illustrates this growth in future demand the developing countries are propelling.

World petroleum and other liquid fuels consumption nearly doubles in non-OECD regions in the Reference case—

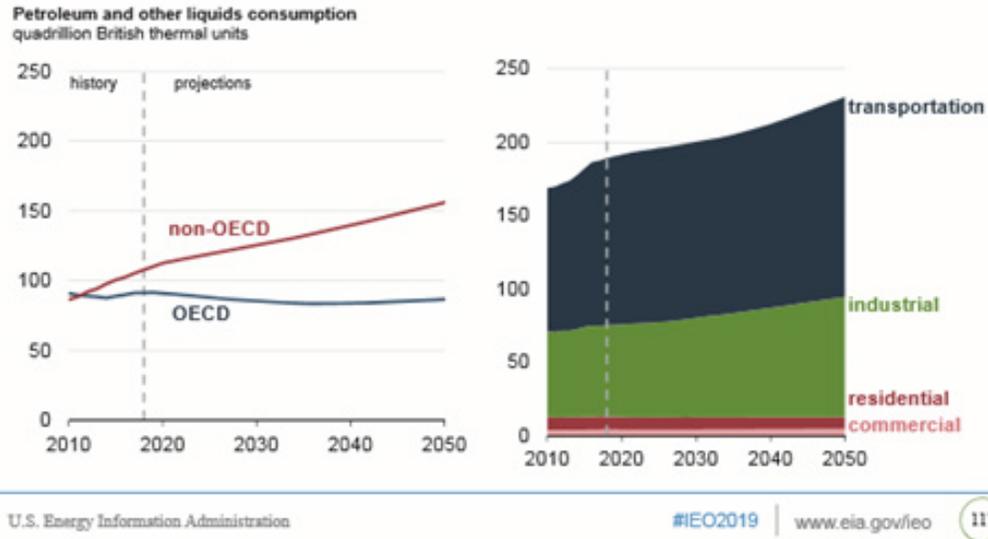


U.S. Energy Information Administration

#IEO2019 | www.eia.gov/ieo

Source: US Energy Information Administration

World petroleum and other liquid fuels consumption increases more than 20% in the Reference case—



Source: US Energy Information Administration

In the short-term, crude prices will act cyclically and be subject to economic woes and episodes of travel reduction. China and Asia economic activity remain key risks.

We believe structural underpinnings on oil demand are positive for decades to come. Maybe crude consumption won't grow at an annualized rate of 1.4% like it has for the last 20 years but it should be robust enough to soak up existing slack in the market and incent prices for new discovery and extraction, in our opinion.

If the rate of growth is 1m bpd during "weak" years like 2019 and 2020, what will consumption grow in a "good" year?

If demand continues to grow longer-term, will oil supply continue to be abundant enough to keep prices low at the pump? Approximately 70% of our daily oil supply comes from fields discovered prior to 1970.

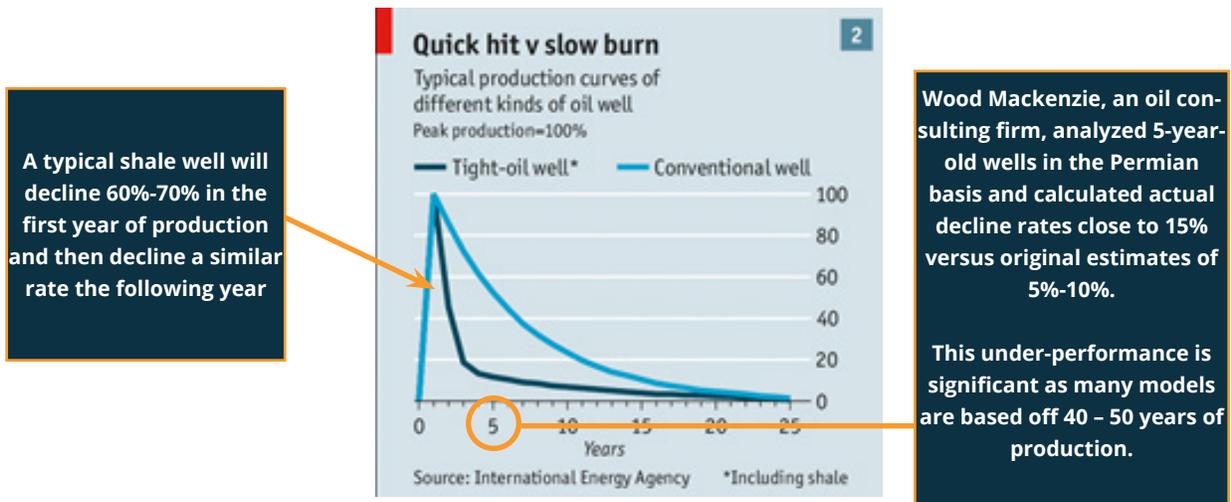
SUPPLY

Growth in oil supply headlines continue to be dominated by U.S. shale production. The graphic below demonstrates how rapid shale growth has been - over 6m barrels in 7 years. It is hard to imagine where prices would be without this supply.



Source: Bloomberg, Star Capital Inc.

Our issue with shale oil production is amount of recurring capital required each year to offset well decline rates. Well production usually falls 60%-70% the first year and continues a rapid decline thereafter. The chart below demonstrates how dramatic production falls off in unconventional, shale wells. Analysis of older wells has been disappointing.



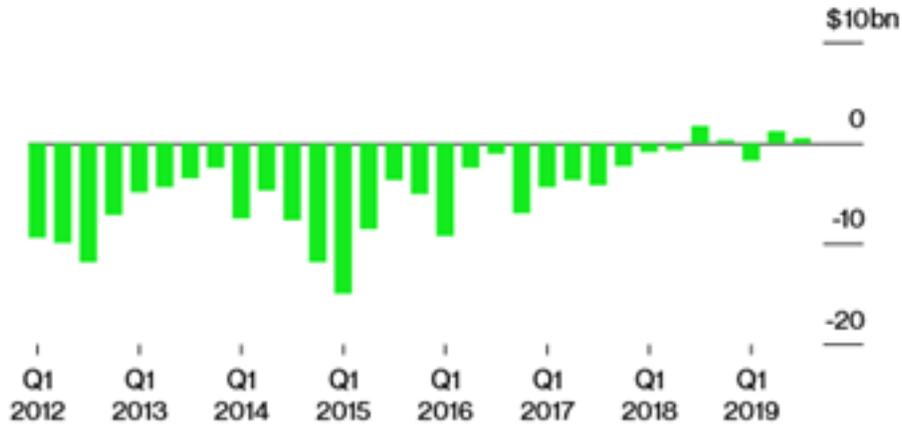
Source: Financial Times

A shale oil company can report positive earnings but a closer look at cashflow is worrisome as every penny that comes in the door (plus some) goes right back into the ground. This scenario questions durability of production over time as a company, or industry, will have to invest within its own means as there are limits to borrowing.

Up in Smoke

North American oil producers have burned through \$150 billion since 2012

■ Free cash flow

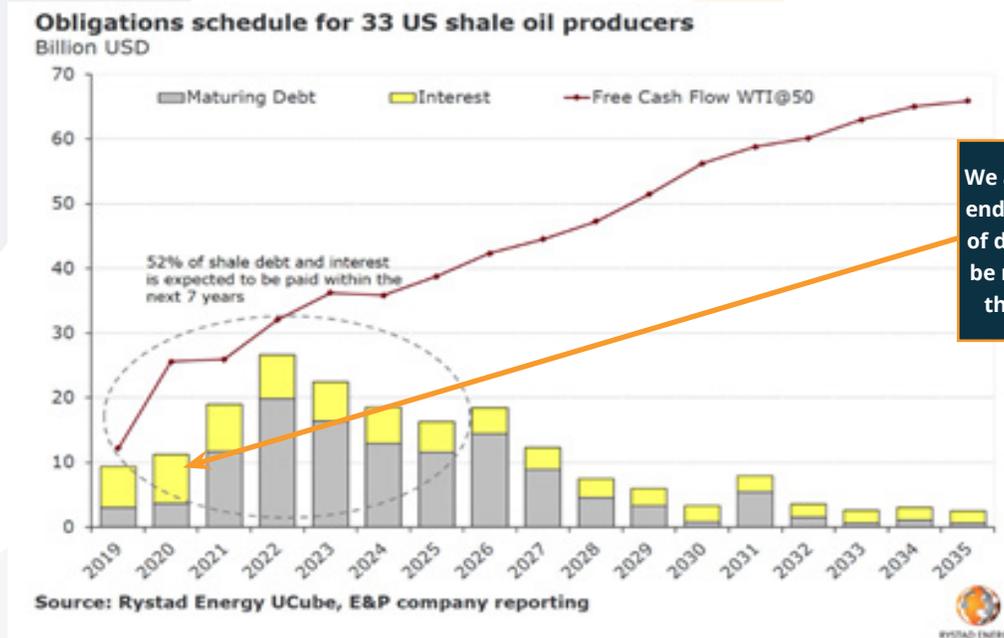


Source: Bloomberg data

Rystad Energy estimates top shale producers were \$4 billion negative cashflow in the 1H 2019 despite \$50-\$60/barrel oil price

Source: <https://www.bloomberg.com/news/articles/2020-02-13/america-s-oil-boom-feels-more-like-bust-in-the-shale-patch>

In a year with steady pricing, Rystad Energy estimates that shale producers overspent cashflow in the first half of 2019 by \$4 billion. The shale industry has been overspending cash flow since day one. We believe eventually lenders and Wall Street will demand to see cashflow profitability which will slow or reverse production growth. This inflection point is close at hand, in our opinion, as the chart below plots annual debt maturities for top 33 shale producers.



We are at the front-end of a large bolus of debt which must be refinanced over the next 7 years

Source: Rystad Energy UCube, E&P company reporting



Source: <https://www.rystadenergy.com/newsevents/news/press-releases/Shale-companies-struggle-to-please-equity-investors-and-reduce-debt-simultaneously/>

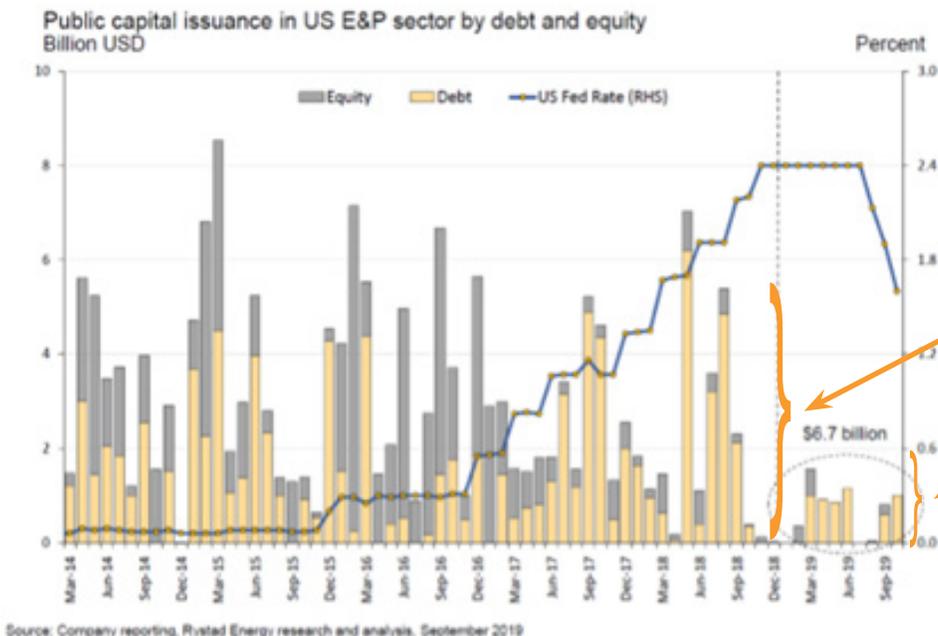
The Wall Street Journal cites higher figures than Rystad's bar chart above depicts. They estimate \$200 billion in debt maturing in the next 4 years with \$40 billion in 2020. The debt markets started to anticipate refinancing risks last year as energy high yield bond performance was dismal.



The returns on energy bonds were slightly negative going into the end of 2019 versus High Yield average up 13% plus.

Source: Bloomberg, Star Capital Inc.

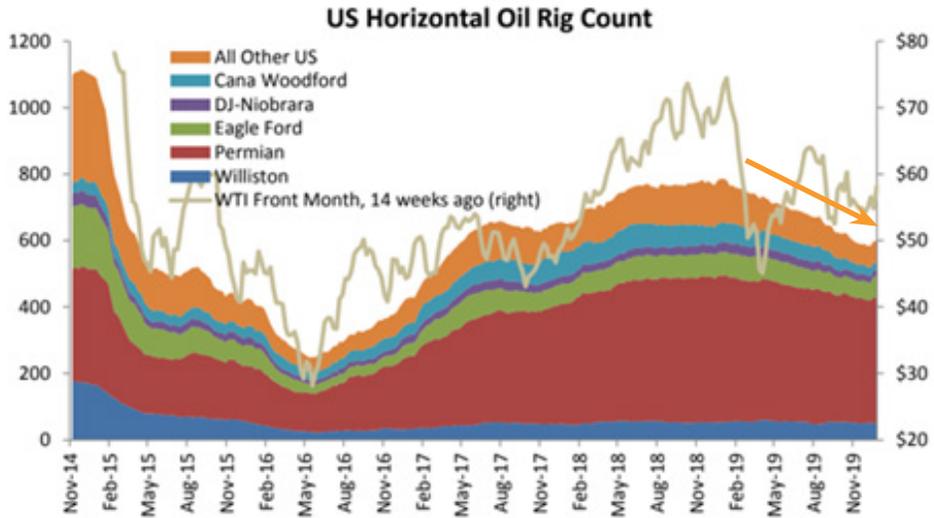
Funding has already started to stall as investors appear to be more diligent than in the past. For an industry accustomed to burning significant cash, this potential change in financing may force behavioral changes at the drill bit - only drill if profitable.



Wall Street funding slowed dramatically last year versus prior levels

Source: Company reporting, Rystad Energy research and analysis

We are seeing behavioral changes on the ground. Despite oil prices being range-bound between \$50-\$60/barrel, rig counts were down 25% last year. Drill But Uncompleted Wells (DUCs) are elevated and serve a reservoir for producers but a falloff in rig activity signals that either oil prices must go higher to incent acceleration in rig activity or it may portend a moderation in production.

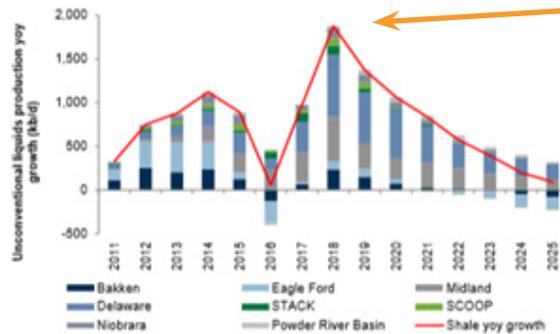


Shale rig counts down 25% in 2019 despite \$50-\$60/barrel price

Source: Princeton Energy Advisors

Estimates range from 1.1m to 1.7 b/day growth in shale oil production in 2020. We are skeptical and suspect growth is likely to disappoint. As the Goldman chart below depicts, we peaked in 2018 and have started a trend of decelerating growth unless Wall Street reverses course and starts a new funding cycle.

Exhibit 3: We estimate that 2018 saw peak shale growth, and expect a rapid slowdown in the next five years
YoY growth by shale play in kb/d

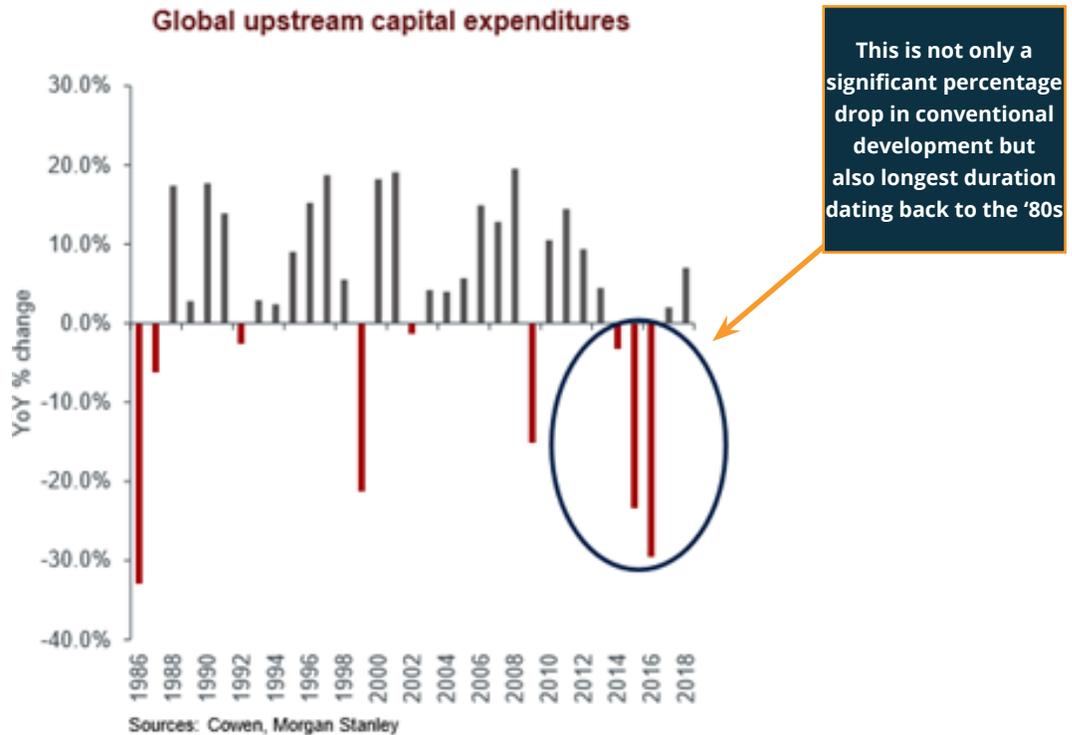


If Goldman Sachs estimates are correct, 2018 was peak growth in shale production

Source: Goldman Sachs Global Investment Research

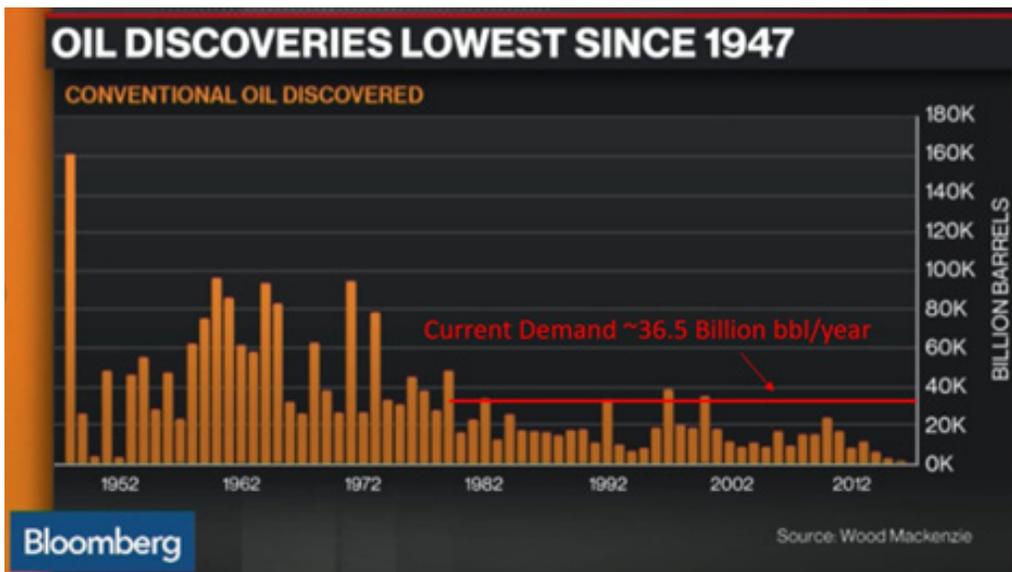
Source: Goldman Sachs, End of Non OPEC Growth

Meanwhile, the consequences of years under investing in conventional oil projects that supply 70% of the world's appetite will eventually impact the market.



Source: Mark Gordon, Ascent Oil: Macro Voices Presentation

This lack of investment has resulted in a lack of conventional discoveries. In 2017, exploration success rate was 5%, a record low. Traditional resources can take 5-7 years or longer to develop after discovery. On the other hand, unconventional shale oil is more like just-in-time inventory with short lead times but fast depletion rates.

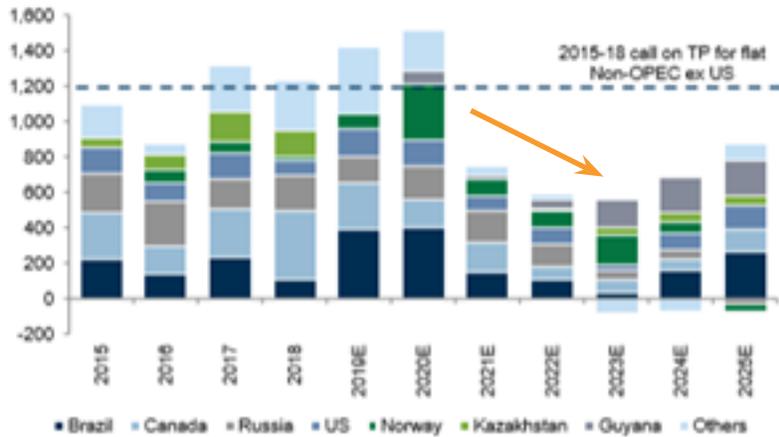


Unconventional resources offer new supply source but, as this graph depicts, exploration for traditional large and slow decline resources has waned significantly

Source: Bloomberg

After new supply enters the market this year, growth falls off dramatically in the second half of 2020 and beyond.

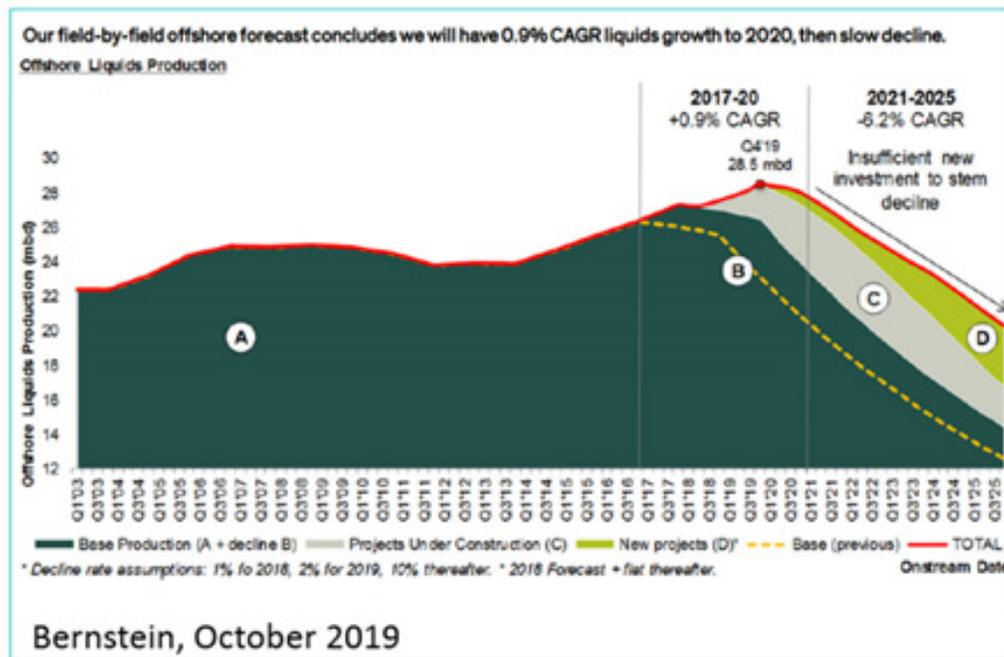
Exhibit 2: From 2021, we expect long-cycle project additions to be insufficient to fill in decline rates, leading to c.0.5 mn blsd net declines in non-OPEC ex-shale
Top Project (ex-shale) YOY oil growth kb/d



Several projects sanctioned back in \$100/barrel plus(North Sea, Brazil, Guyana) era come online 1H 2020 then growth from long-cycle, conventional sources fall dramatically

Source: Goldman Sachs Global Investment Research

Source: Goldman Sachs Global Investment Research



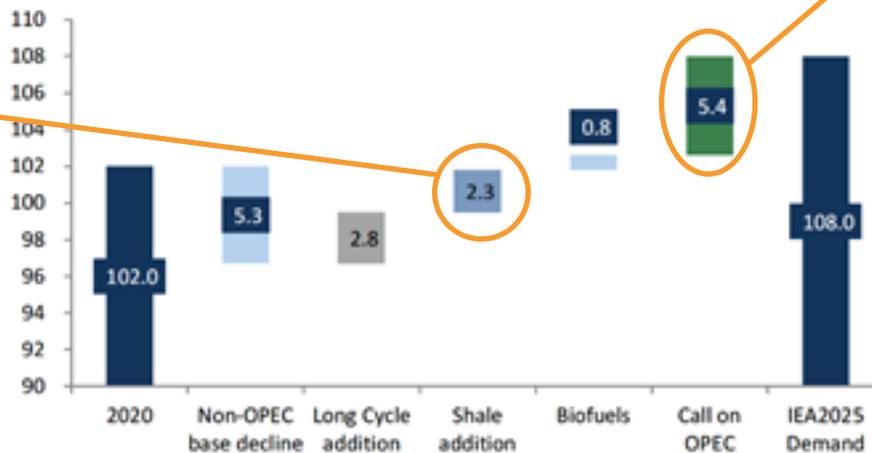
Source: <https://www.ninepoint.com/commentary/commentaries/2019/112019/energy-fund-112019/>

Now the question over the next several years will be can shale oil discovery and extraction fill this void? Goldman Sach's research department is estimating an incremental 5.4m bpd growth in demand between 2020 and 2025. Without higher prices, we are concerned about shale's ability to add new barrels as well as OPEC's production capability.

2020 and 2025 to meet IEA 'current policies' demand forecasts...

Key variables in the global supply and demand forecast out to 2025 (mln b/d)

We call into question shale oil ability to add an incremental 2.3m barrels to fill Goldman's supply/demand model



OPEC+ currently withholding 2.2m barrels from the market so an additional 3.2m would be needed if Goldman's estimates are correct.

Source: IEA, Goldman Sachs Global Investment Research

Unconventional (shale) is, without doubt, a new source of oil for the world but we believe the price profile must be higher to cover "all in" costs and able return capital to investors and lenders – a scenario we haven't seen yet.

We are starting to see more articles and research like this Wall Street Journal article critical of the economics and performance of these shale sources. One of the key claims in the article is oil companies originally promised investors about 15% more oil extraction (1.4 billion barrels over 30 years) than Rystad's well performance data has tracked so far.



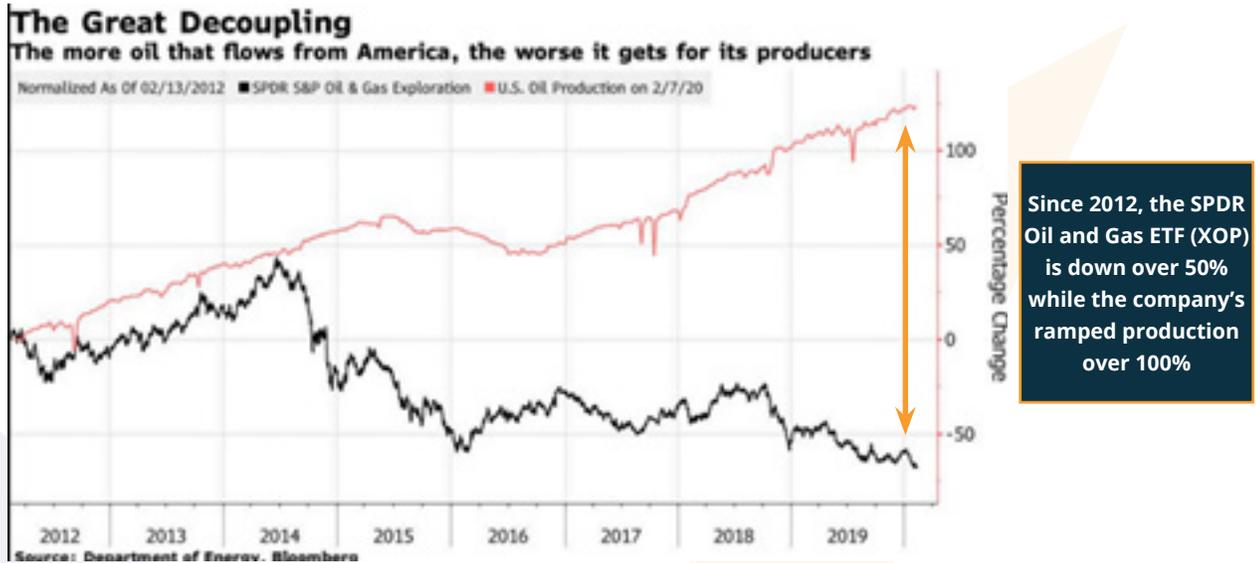
BUSINESS

As Shale Wells Age, Gap Between Forecasts and Performance Grows

Thousands of shale wells are on track to produce less oil and gas than companies projected to investors, a Wall Street Journal analysis shows

We believe supply consequences of years of underinvestment in traditional sources of oil are going to collide with shale companies having to prove positive cashflow. These converging dynamics suggest lower production over time or a price deck that can provide attractive economics for producers.

Since 2014, it has not served the shale oil producer's stock price to sacrifice cashflow for production growth. This priority has only resulted in equity value destruction for shareholders and company management teams. We expect this reality will force a change in incentives at the board levels.



Source: <https://www.bloomberg.com/news/articles/2020-02-13/america-s-oil-boom-feels-more-like-bust-in-the-shale-patch>

CONCLUSION

Converging pessimism of weak future demand combined with optimism of a never ending abundance of shale oil have driven investor sentiment on the energy sector too extreme lows. The energy sector weighting as percentage of S&P index is below the late 90's weighting when oil prices were in the teens.



Source: Goldman Sachs, 2020 Outlook: The Fight For Sustainability – 4 drivers of leadership on the Road to Shale Tail

As of late last year, the Financial Times calculated Apple's market cap as being greater than the entire U.S. publicly traded energy sector. This gap has only widened this year. Apple's products have impacted the daily lives of society significantly but so does energy.



Source: Financial Times

The U.S. listed energy explorers and producers have been hit much harder than the commodity.



Source: Bloomberg, Star Capital Inc.

We believe the energy sector offers an attractive contrarian investment. Our research has led us to the conclusion that demand for oil will remain robust enough to soak up extra production capacity over time despite investor and public perception that oil is a dying fuel.

We also believe optimism on unlimited supply of cheap oil will be soon tested. Conventional oil supply growth will start to decline later this year, there are no real big discoveries in the pipeline, profitability in the shale patch is not there, and we believe growth in shale oil in the 2H 2020 could disappoint investors. Like any commodity market, the risks can be high. Global economic growth (especially Asia) may be persistently weak with epidemics like Coronavirus only deepening the demand destruction. It is hard to predict the duration and magnitude of suppressants.

Low rates may extend the financing cycle for shale producers too. This “get-out-of-jail” card would allow them to continue to place uneconomic barrels on the market.

For investors who have a long-term horizon and risk appetite, it is hard to find such and under-loved, under-owned sector with a reasonable case for higher oil prices and an earnings recovery.

THANK YOU

Star Capital Inc.

Concentrated energy sector funds are inherent to substantial risk and are not for every investor. An investor could potentially incur substantial losses on such a sector focused investment. Risk capital is money that can be lost without jeopardizing one’s financial security or lifestyle. Only risk capital should be used for investments and only those with sufficient risk capital should consider an investment in a concentrated energy portfolio. Past performance is not necessarily indicative of future results.

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Portfolio performance is shown net of the advisory fees of 1.0% the highest fee charged by Star Capital Inc. and sample trading costs based on our Custodian TD Ameritrade’s trading costs. Performance does not reflect the deduction of other fees or expenses, including but not limited to brokerage fees, custodial fees and fees and expenses charged by mutual funds and other investment companies. Performance results shown include the reinvestment of dividends and interest on cash balances where applicable. The data used to calculate the portfolio performance was obtained from sources deemed reliable and then organized and presented by Star Capital Inc.

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Return Comparison: The benchmark gives investors a point of reference they can use to measure how a fund has performed relative to the segment of the market it invests in. It contains the 500 largest companies in the United States.

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