



MUSINGS FROM THE OIL PATCH

March 24, 2020

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Note: *Musings from the Oil Patch* reflects an eclectic collection of stories and analyses dealing with issues and developments within the energy industry that I feel have potentially significant implications for executives operating and planning for the future. The newsletter is published every two weeks, but periodically events and travel may alter that schedule. As always, I welcome your comments and observations. Allen Brooks

Summary:

Rhyme Of Oil History Should Be Heard And Studied - Part 11

The impact of the Covid-19 virus on oil demand coupled with the Russian/Saudi oil war may be accelerating the energy industry restructuring climax that will mark the next stage of the industry's history.

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The History of Russia/OPEC Oil Wars

The Russia/Saudi Arabia oil war may mark the end of OPEC's dominant role in managing the global oil market. We revisit the history of the battles between Russia and OPEC. In fact, Russian oil helped create OPEC.

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Rhyme Of Oil History Should Be Heard And Studied - Part 11

What will it take for the oil industry to recover?

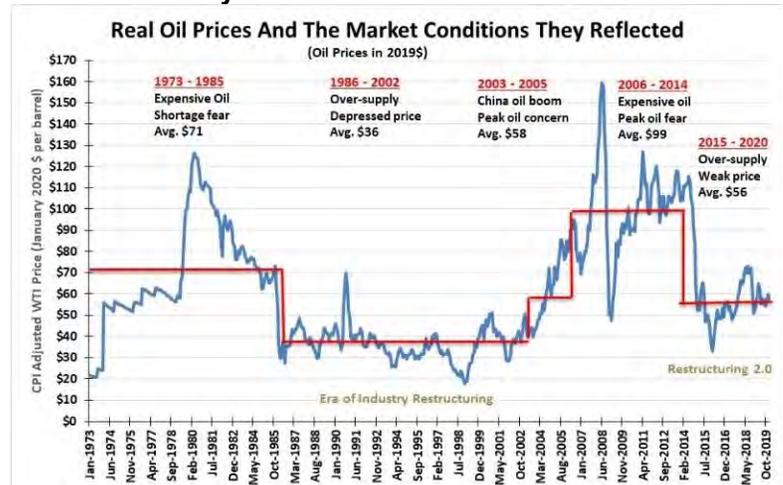
The double whammy of an oil supply shock coupled with a demand destruction event has sent oil prices to levels few thought possible merely a few days ago. The question now is: What will it take for the oil industry to recover? Offshoots to that question are: When will it happen, and what will the industry look like when it recovers?

We are sure anyone asked these questions will have answers. The range of answers will be broad. Attempting to assess the odds of any one outcome at this point is not worth the effort, despite the fact that everyone wants specific answers. In our view, people should be spending their time understanding the dynamics that will drive future industry changes.

There are estimates they may sink into the teens before this episode is all over

From the day the OPEC+ meeting ended on March 6th with no agreement among the key participants for cutting additional oil output, oil prices have been in a freefall. On March 4th, West Texas Intermediate' (WTI) price closed at \$46.78, according to the Energy Information Administration (EIA) website. By late last week, oil prices had sunk into the low \$20s a barrel – a drop of more than 55%. In fact, with the April futures contract expiring Friday, its price fell below \$20 at the close. The May contract immediately rebounded into the mid-\$20s. Estimates oil prices may settle in the teens before this episode is all over abound. Investment bank Goldman Sachs is projecting WTI will average \$22 a barrel for the second quarter of 2020, the lowest price since February 2002 – 18 years ago! Think about that! That was in the aftermath of 9/11.

Exhibit 1. History Of Real Oil Prices And Markets



Source: EIA, WSJ, St. Louis Fed, PPHB

Some people might say that the response to the Covid-19 virus has the feel of the days immediately following the 9/11 attacks. Realize how long ago that was, and that since then, other than for a very

Using June 2014 as marking the start of the current downturn, we are nearing the end of year six of its life

brief few days in February 2016 when oil traded at about \$26 a barrel, we have lived in a world of higher oil prices. Or at least we have lived with oil prices whose first digit began with a number greater than “2”. In fact, for some periods, the first digit was five-times that number!

As we have traced the history of oil industry cycles since the early 1970s in this series of articles, our focus has been trying to understand what was similar and different about the current industry downturn from previous ones, especially the cycle that spanned the 1980s and 1990s. It is often hard to comprehend that we already have lived for five years in the current downturn. Most people mark the collapse of oil prices following the disastrous ending to the November 2014 OPEC meeting in Vienna as the start of the downturn. However, WTI actually peaked in June of that year, and had already slid nearly 30% from over \$100 a barrel into the upper \$70s by the time of the OPEC meeting. Using June 2014 as marking the start of the current downturn, we are nearing the end of year six of its life.

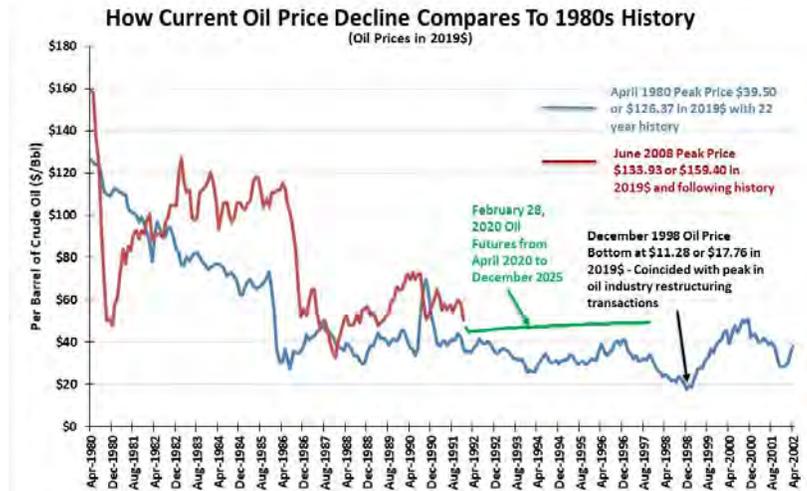
As the 2014 OPEC meeting disaster overhung the oil market, WTI quickly fell into the mid-\$40s a barrel by late January 2015. In the six months since June 2014, oil prices had fallen by 55%. Everyone wanted to know how the industry would survive in a world of \$40-\$50 a barrel oil. Oil production had already fallen from an April 2014 peak of 9.655 million barrels per day (mmb/d), when oil prices were \$104 a barrel, to 9.197 mmb/d in January 2015, with indications production would continue to drop. In December 2019, domestic oil production reached 12.779 mmb/d, despite oil prices, in the interim, never returning to triple-digits, or even exceeding \$75 a barrel for more than three days in October 2018. The oil industry proved more resilient than most experts predicted after the 2014 oil price crash. Low interest rates helped to keep financing costs low for many producers, enabling them to continue to invest in drilling and completing new wells.

The growth of oil and gas output over the past few years is another example of the oil industry’s ability to apply technology and efficiency to its upstream operations in order to reduce costs to survive an oil price drop

The growth of oil and gas output over the past few years is another example of the oil industry’s ability to apply technology and efficiency to its upstream operations in order to reduce costs to survive an oil price drop. If we step back and look at the bigger picture of this downturn versus the earlier one, there appears to be an interesting pattern developing. It shows up when we plot the real price of oil from its June 2008 peak through February 2020 against real oil prices beginning with the April 1980 peak. While the current downturn endured the impact of the 2008-2009 financial crisis, the resulting snapback in oil prices, although dramatic, still left them lower than the beginning point. That pattern was also seen during the 1980 cycle. What struck us as uncanny about the chart in Exhibit 2 (next page) was the timing of the oil price drop in 1985 and the 2014-2015 decline after the 2014 OPEC meeting. Since then, oil

prices have fallen lower and bounced higher, before seemingly heading lower in recent months. Again, that was a pattern experienced during the late 1980s.

Exhibit 2. Will Current Downturn Mirror 1980s-1990s?

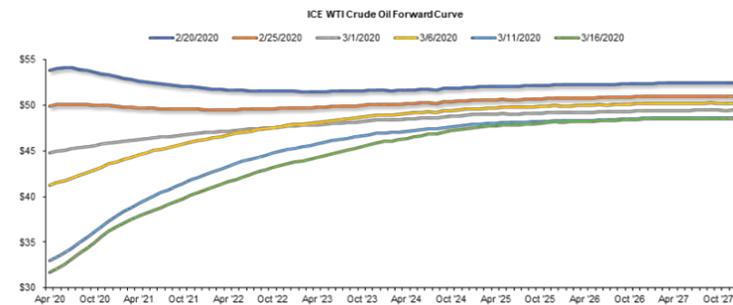


Source: WSJ, EIA, CME, BEA, PPHB

The oil futures price curve never reached \$50 a per barrel by the end of 2027

With 11 years of current downturn history plotted, the question is how might the future compare against the last half of the 1980s-1990s downturn? In Exhibit 3, we added the estimates for WTI as reflected by the oil futures price curve as of the end of February. The starting price was \$45 per barrel for April 2020. From the starting point, the oil futures price curve never reached \$50 a per barrel by the end of 2027.

Exhibit 3. How Front End Of Oil Futures Have Fallen



Source: CME, FactSet, PPHB

Between mid-February and mid-March, the only thing that appears to have changed is the shape of the front end of the oil futures curves

Some might be critical of using the end of February prices (which has April as the first price point), because the industry conditions were only just beginning to deteriorate. Therefore, we have included Exhibit 3 that shows the shape of weekly oil futures price curves beginning in late February through mid-March. As the chart shows, between mid-February and mid-March, the only thing that appears to have changed is the shape of the front end of the oil futures curves.

Apparently, the market sees little changing about future oil demand necessitating a material rethinking of oil prices in the distant future

The starting point has consistently moved lower, with the ending points in December 2027, seven years in the future, only varying between \$49 and \$52 a barrel. This suggests that near-term oil prices are reflecting traders' expectations for how much demand destruction and the resulting buildup in global oil inventories will impact prices over the next 24 months. Apparently, the market sees little changing about future oil demand necessitating a material rethinking of oil prices in the distant future. Of course, that sets off alarm bells in our head, as we know that long-term oil futures prices have little predictive value. The key point of this exercise is to demonstrate that professional oil investors see little reason to anticipate dramatically higher oil prices in the foreseeable future. The big question: Could prices be significantly lower at that point?

A critical difference in this cycle versus the prior one was the extensive use of public debt and private equity to finance the industry's growth

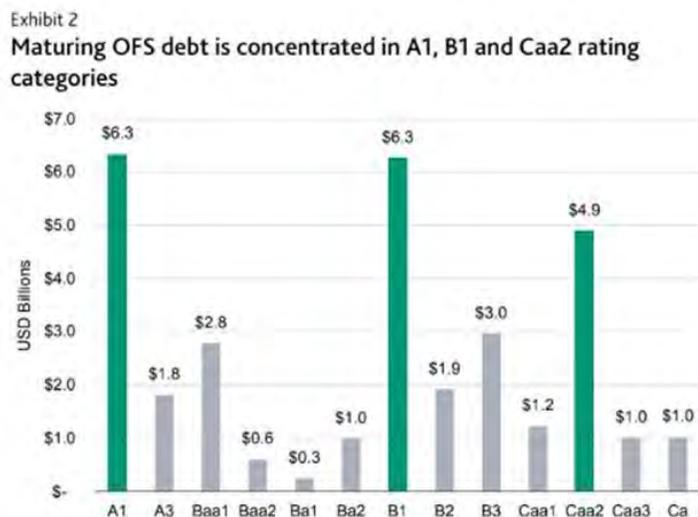
From a macro perspective, our green line (Exhibit 2, prior page), that shows the February 28 oil futures prices, merely reinforces the view that the current industry downturn may look exactly like the earlier one. Adding in the oil futures prices extends this cycle to 19 years duration. If that happens, it would mean that the two cycles would have similar lengths. That might be significant should this cycle last as long as the earlier one prior to meaningful industry restructuring.

This contrasts with the greater use of bank debt during the 1970s and 1980s boom to finance energy companies

The question we have is whether the industry will wait that long to undergo a significant restructuring? A critical difference in this cycle versus the prior one was the extensive use of public debt and private equity to finance the industry's growth. The 1980s downturn had to deal with drilling funds, limited partnerships and commercial bank debt as the primary funding sources. That difference in capital used to finance the energy business in this cycle likely has contributed to a difference in the willingness of the providers of this capital to work with managements to restructure companies. That may have reduced, or certainly altered, the motivations behind significant industry restructuring efforts.

Distressed debt investors are acquiring the public debt of energy companies as a play on cheap equity that can be inflated via strategic business moves. As Exhibit 4 (next page) shows, there is an estimated \$32 billion of oilfield service debt alone due to mature in the 2020 to 2024 timeframe. The value of this debt is severely depressed, as investors fear the companies will not be able to repay the money borrowed. This contrasts with the greater use of bank debt during the 1970s and 1980s boom to finance energy companies. When the companies got into trouble back then, banks looked to how they could quickly recover any money to repay some portion of the loans, understanding that they would need to charge off the remaining portion of the unpaid debt. The banks recovery efforts typically involved foreclosing on the assets and then passing them off to others, ranging from industry consolidators to scrap dealers. The greater use of bank debt partially explains why commercial banks in the Southwest region of the country who were heavily involved in financing the energy industry wound up failing.

Exhibit 4. \$32 Billion Of OFS Debt Due To Mature



Source: Company financial statements, Moody's Investors Service

Source: Cowan

It may prove more successful in restructuring the oil and gas producing sector, as the “rocks” do not go away, thereby always possessing some value

Today, debt is perceived as cheap equity, which can be made to be more valuable through industry restructuring and internal streamlining efforts that will improve profitability. To date, this business model has yet to be proven as a successful restructuring program, but maybe it is just too early. The current virus-related demand destruction plus the oil-price war calls into question whether distressed debt investments pave the way for remaking all segments of the energy industry. It may prove more successful in restructuring the oil and gas producing sector, as the “rocks” do not go away, thereby always possessing some value. For those oilfield sectors that depend on “iron,” this approach may not work, as time works against the functionality of the equipment, and its value.

One estimate says there may be upwards of 200 energy company bankruptcies yet to occur among companies headquartered in Norway and around the North Sea

Will distressed-debt buyers have to discover that not all of their purchases will prove profitable, before they decide to try something different? If so, then we may not be as close to the final industry consolidation phase as we have been hoping. Recent commentary from analysts suggests there is substantial financial pain yet to be inflicted on the energy business. One estimate says there may be upwards of 200 energy company bankruptcies yet to occur among companies headquartered in Norway and around the North Sea. Another projection calls for 55-60 U.S. oil company bankruptcies this year, up from 50 last year. The challenge for industry executives, investors and distressed-debt buyers is to understand that the energy business will be a smaller industry in the future than it is today. That is a function of the continuation of the energy transition underway, the response to climate change pressures, and evolving demographics that drive energy consumption.

He said, BP's oil and gas business would still be important two decades from now, but just not as large as today

Given the shifts underway in the forces that drive energy usage and the particular types of energy consumed, the reality is that the industry will not be what it was before this downturn started. In fact, in light of current conditions, the energy industry may be significantly smaller in the future. Bernard Looney, the new head of BP plc, in his introductory press conference, summed up the challenges for his company and his goals. He said, BP's oil and gas business would still be important two decades from now, but just not as large as today. His job as CEO is to take some of the money that would have been invested in traditional oil and gas and find a way to build a new business that provides an income stream to offset the lost income from a smaller fossil fuels business. What we do not know is how much smaller the current oil and gas business will be, or how quickly the shrinking may occur. These trends will happen, and possibly be hastened by the successful implementation of technology to reduce operating costs, something driven by the prospects for surviving in a low-oil price world.

The similarities in the cycles reflect how energy's role in the economy and society hasn't changed much over the decades

When we started this series examining the current boom and bust oil cycle with that of the 1970s, we knew history did not repeat. Our review has shown, however, that history does rhyme, as the saying goes. We have been fascinated by the frequency of events in the two cycles that almost exactly were replicated timewise. Those similarities probably come as a shock to newcomers to this industry who believe this had never happened before. The similarities in the cycles reflect how energy's role in the economy and society hasn't changed much over the decades. What has changed, however, is how companies have been financed. That change is a part of a larger story of how "cheap money" has distorted many things about the workings of our economy, but that's for another time.

At this point, it is our belief there remains at least one more chapter to be written about the rhyme of this energy industry downturn compared with the prior one. We envision the story will be a chronicle of the massive restructuring that brought the industry and market fundamentals in line. That chapter could begin next week, or maybe not for a few years. We look forward to chronicling it.

"The farther backward you can look, the farther forward you are likely to see"

In the meantime, retelling the industry history has been an enjoyable trip down memory lane. It was a journey we didn't fully appreciate as we lived it. We hope our younger readers have learned about the industry's past, something all of us should learn and remember. For, as philosopher Edmund Burke wrote, "Those who don't know history are doomed to repeat it." While that admonition is apt, we have looked upon this retelling of history from the perspective offered by the great World War II leader and chronicler, Winston Churchill, who stated: "The farther backward you can look, the farther forward you are likely to see."

The History of Russia/OPEC Oil Wars

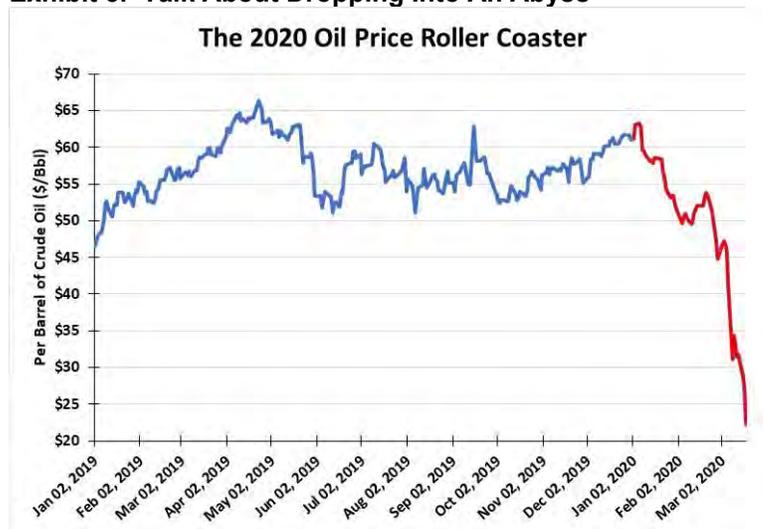
The surprise of March 2020 ranks up there with the Thanksgiving Day shock of November 2014

The gloom already overhanging the energy industry quickly turned to outright 'pitch darkness'

The failure of the OPEC+ group to reach an agreement to either significantly add to the current cut in output that was agreed to last year, or to extend the current output cut agreement for the balance of 2020, unsettled the energy world a couple of weeks ago. The shocking outcome of the OPEC+ meeting in Vienna on March 6th, and the subsequent announcements by the leading protagonists – Russia and Saudi Arabia – to aggressively target increased production and exports, each seeking to gain increased market share, sent oil prices into a death spiral. The surprise of March 2020 ranks up there with the Thanksgiving Day shock of November 2014. Both events reflected a standoff between two of the largest oil producers due to a divergence in strategies for their oil industries and their economies.

As oil prices collapsed over the weekend following the Vienna meeting breakdown, global oil producers reacted immediately with announcements of significant capital spending cuts, reductions in planned drilling and completion activity, cuts in dividends and share repurchase programs, and actions for streamlining organization structures. Global oil prices plummeted from the mid-\$40s a barrel, prior to the OPEC+ meeting on March 6th, into the low \$30s by the following Monday. The gloom already overhanging the energy industry quickly turned to outright 'pitch darkness.'

Exhibit 5. Talk About Dropping Into An Abyss



Source: EIA, PPHB

Following the OPEC+ meeting, Russia's energy minister, Alexander Novak told a reporter with *Reuters*: "From April 1, neither we nor any OPEC or non-OPEC country is required to make output cuts." In other words, it is every man for himself. As expected, company

Developing such an estimate requires understanding how much pain and suffering Russian and Saudi Arabian leaders are willing to inflict on their economies

managements, Wall Street analysts and investors had no confidence in projecting how low oil prices would fall, or could fall. Besides not knowing how low, they had no confidence in saying how long prices might stay down. That was because there didn't appear to be a timetable for resolution of the issues that sparked the meeting's failure, let alone a clear understanding of what those issues were. It meant observers could only speculate about how much financial pain the industry might be forced to absorb, because developing such an estimate requires understanding how much pain and suffering Russian and Saudi Arabian leaders are willing to inflict on their economies and citizens.

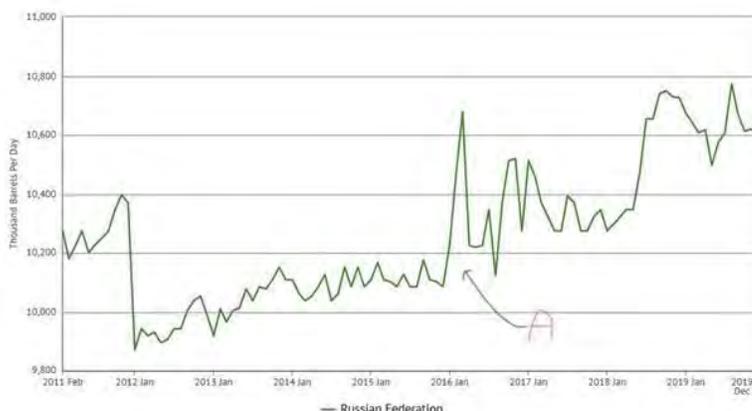
This is not the first time Russia and Saudi Arabia have clashed over oil, and it is important to understand the circumstances surrounding each event to appreciate how this episode potentially might play out. The most recent clash was in 2014. As described by longtime Saudi oil minister Ali Naimi, in his biography *Out of the Desert*, he met with Mr. Novak to ask for help in dealing with the growing 2014 oil glut prior to the OPEC November meeting. Joining in those talks was Igor Sechin, the CEO of Rosneft, Russia's largest oil company, and a close associate of Russian President Vladimir V. Putin. Those two Russian actors played a key role in 2014 and are doing the same this time. Is the 2014 playbook apropos for this time?

Prices immediately fell from the mid-\$70s a barrel into the \$50s, and eventually into the \$40s, before stabilizing slightly higher

According to Mr. Naimi, when the Russians refused to go along with Saudi Arabia's request to help manage the global oil supply, he packed up his papers, washed his hands of attempting to stabilize the oil market, and left oil prices to find their own level. Prices immediately fell from the mid-\$70s a barrel into the \$50s, and eventually into the \$40s, before stabilizing slightly higher. West Texas Intermediate (WTI) prices traded between the low \$40s and \$60 for much of the balance of 2014 and through 2015, but they started to weaken in early 2016, before recovering during the summer. The early 2016 oil price weakness happened as Russia began increasing its oil production (see A in Exhibit 6, next page.)

Russia had stepped up its production as 2016 began, as it saw the improving market as an opportunity to seize market share

WTI fell to a low of \$26 per barrel in February 2016 before recovering. By the end of that year, the sub-\$30 oil price had convinced Russia to join with Saudi Arabia and the rest of OPEC in managing the global oil supply to support, and eventually lift, oil prices. Russia had stepped up its production as 2016 began, as it saw the improving market as an opportunity to seize market share. We show that increase in Exhibit 6 (next page) by the annotation of "A" in the graph. It was only after oil prices dropped to a nearly 15-year low that Russia was convinced to change its position. That shift may have been helped by the positive working relationship that had developed between Saudi Arabia's new oil minister Khalid al-Falih, who succeeded Mr. Naimi as Saudi oil minister in May 2016, and Mr. Novak.

Exhibit 6. How Russia's Production Spiked In 2016

Source: JODI Oil Database

It believed U.S. shale oil had established an \$80 a barrel floor under global prices

Russia's belief about the state of the oil market had driven its reluctance to work with Saudi Arabia in 2014. It believed U.S. shale oil had established an \$80 a barrel floor under global prices. When that belief proved to be incorrect after nearly two years, the Russians realized it was in their best interest to work with OPEC and Saudi Arabia to help stabilize and boost oil prices. Russia desired higher oil prices, as it was increasing its output, which would help the government's budget and foreign currency reserves.

This cost differential between the two countries created the tension about the production cut agreement

The production cut agreement struck between Russia and Saudi Arabia in December 2016 was always fraught with tension. While the overriding point of cooperating was to boost oil prices, each of the leading producers had slightly different agendas. Russia's economy could function on a much lower oil price than Saudi Arabia's, something like \$45 versus \$85 a barrel, as its government needed less income to balance its budget. This cost differential between the two countries created the tension about the production cut agreement, as one country saw it as a very short-term need to stabilize the oil price, while the other considered it a necessary longer-term management tool to control global oil supplies and keep oil prices high. However, the agreement capped the growth of Russian oil companies, especially Rosneft, which hurt the interests of the company's leader who is a close friend of Russian President Putin. Moreover, the Russians were watching U.S. shale oil output continue to climb despite the lower oil price. As a result, the Russians expected the future would be dictated by continual oil output cuts, as opposed to growth, which was what they desired.

Saudi Arabia absorbed most of the output cuts necessary to stabilize oil prices and to appease the Russians

To keep the agreement going, Saudi Arabia absorbed most of the output cuts necessary to stabilize oil prices and to appease the Russians. In addition, Saudi Arabia's oil leadership changed. Mr. Falih was fired in September 2019, and replaced with King Salman's oldest son, Prince Abdulaziz bin Salman, a veteran oil official, but who does not appear to have a similarly warm relationship with Mr.

As a knowledgeable oil professional and an observer at the Vienna meeting put it, in January, Russia was the “most complacent participant” in the room during the OPEC technical committee discussions in January

This has clearly angered Mr. Sechin, giving rise to him becoming the “loudest voice” in the policy-setting room in Moscow

Estimates are that Russia believes oil output by the OPEC+ group has to be reduced in the vicinity of 4-5 million barrels a day (mmb/d), rather than the incremental 1.5 mmb/d cut the Saudis were proposing

Novak. The more important new dynamic in the relationship between Russia and Saudi Arabia has been the increase in influence of Mr. Sechin of Rosneft.

When the Covid-19 virus was first acknowledged as a serious health issue by Chinese government officials in mid-January, OPEC officials recognized there would need to be a cut oil output or risk a rapid increase in global oil inventories that would depress oil prices as economic activity fell. As a knowledgeable oil professional and an observer at the Vienna meeting put it, in January, Russia was the “most complacent participant” in the room during the OPEC technical committee discussions in January. They obviously believed the economic impact on global oil demand would be modest. They had China as their primary target, Saudi Arabia’s largest customer. Therefore, the Russians figured the Saudis could absorb the downturn in China’s oil sales from a demand falloff by merely cutting output a little more, as they had been doing to keep Russia satisfied over the past year. That judgement proved wrong, and it appears widely wrong.

There were some other factors that were missed by observers of the Russian/Saudi Arabian dynamics. First was the significance of the shifting interpersonal relationship between the oil ministers of Saudi Arabia and Russia. Additionally, and maybe more important, was the election of President Donald J. Trump. Despite all the Russian Collusion nonsense, the reality is that the Trump administration has leveled more and tougher sanctions against Russia, its top oligarchs (often associates of Mr. Putin) and the country’s oil and gas and financial companies. The latest significant sanction was leveled against Rosneft for helping Venezuela to export crude oil to market in contravention of U.S. sanctions. This has clearly angered Mr. Sechin, giving rise to him becoming the “loudest voice” in the policy-setting room in Moscow. Mr. Putin has also been upset with U.S. sanctions against anyone involved in the construction and commercialization of the Nord Stream II natural gas pipeline to boost supply into Germany and central Europe, while bypassing Ukraine with its geopolitical issues.

If one ignores the personal pique of Russian leaders toward the U.S., there is also the realization of Russian oil executives that the Covid-19 oil demand destruction is likely to prove to be much greater than many forecasters initially projected. Estimates are that Russia believes oil output by the OPEC+ group has to be reduced in the vicinity of 4-5 million barrels a day (mmb/d), rather than the incremental 1.5 mmb/d cut the Saudis were proposing. Taken together with the existing OPEC+ production cut agreement of 1.7 mmb/d, Saudi Arabia’s proposal would have lifted the total cut of the group to 3.2 mmb/d, well below Russia’s estimate of what is needed. Recent estimates are now suggesting that demand in 2Q2020 could fall by 7-10 mmb/d, an amount that OPEC+, even with some help from others, is unable to deal with.

A 10 mmb/d drop in demand, now becoming more generally accepted, means oil prices would have fallen on their own, even with an OPEC+ agreement

Given this disparity in demand loss estimates, the Russians thought (think) there is little OPEC+ could (can) do to stem the evaporation of oil demand the world is facing. Therefore, Russia thought the best strategy was to let the market force production cuts by targeting the world's highest-cost oil output first, leaving lower-cost Saudi and Russian oil to mop up the remainder of the supply reduction necessary to balance the global oil market. That means U.S. shale oil has a huge target on its back.

Maybe the Russians had a better handle on the global oil demand impact of the virus than the Saudis, but the impact is a moving target. What we don't know is whether the oil ministers of the two countries sat down and discussed their projection differences, let alone how those estimates might change as more countries reacted to the Covid-19 and shut down economies. A 10 mmb/d drop in demand, now becoming more generally accepted, means oil prices would have fallen on their own, even with an OPEC+ agreement. As countries close their borders, shut down air transportation, and in many cases force the closure of local shops, restaurants, schools and even businesses, we may soon find out how much energy a world with virtually no economic activity needs each day. It will be a lot less than we have been consuming, and the big question will be how much of this demand will return and how quickly, once Covid-19 is contained.

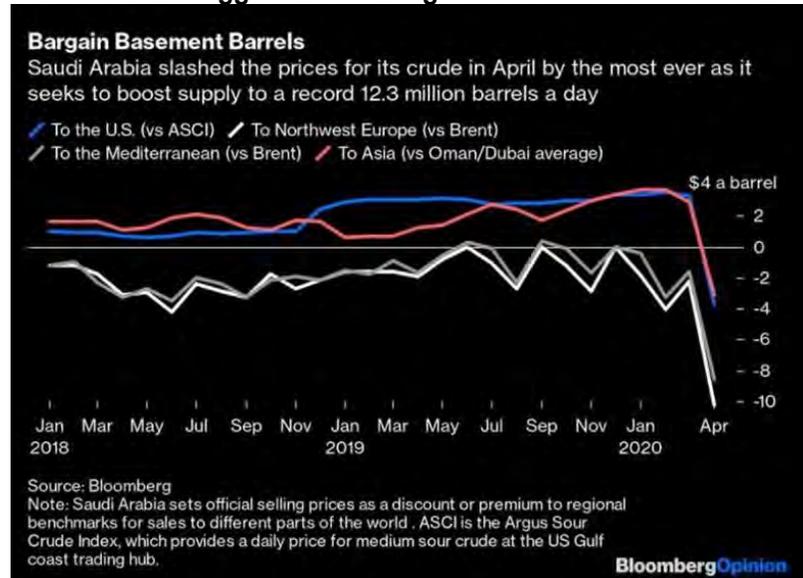
Energy company managers want to know when this oil price war will end. They assume that once the warring parties agree to cooperate in managing the global oil supply, oil prices will respond with a jump. Why not? It will be clear that the drop in prices have siphoned off substantial capital spending, which takes time to wind down, but longer to restore. Since spending and output are linked with a roughly six-month or less delay, the world will be looking at lower oil production beginning during the summer and continuing to fall as the spending hiatus exists. Since it takes longer to restart spending – largely because executives want to be sure that any oil price increase is sustainable – than cutting it, reversing the output decline won't happen until sometime in 2021, or possibly further out.

Will the oil ministers be willing to act in anticipation that global oil production will begin falling in the second half of 2020 and in 2021?

The probability is that Russia and Saudi Arabia will not consider moving forward on a new output management scheme before the June 9-10 OPEC meetings. The March technical committee meeting was cancelled, and there are no plans to hold meetings of this group during the May-June timeframe. Given that we are approximately 70 days away from the next OPEC ministerial and non-OPEC member meetings, one wonders how different the energy market will look at that time. Although U.S. shale oil producers have been quick to announce capital spending and activity cuts, it will take time for those cuts to be enacted and even longer before output starts to fall. Will the oil ministers be willing to act in anticipation that global oil production will begin falling in the second half of 2020 and in 2021? Or, will they need to see the output fall before acting?

A countervailing pressure is that once the larger output agreement cut, and even the current cut's life past March 31, died in Vienna, Saudi Arabia announced sharp cuts in its oil prices for buyers in Asia and Europe. The impact of the price cuts is clearly shown in the chart of discounts or premiums to regional benchmark prices for sales to different parts of the world.

Exhibit 7. The Aggressive Pricing Of Saudi Arabia



Source: *Bloomberg*

The Saudi government plans to raise its national oil production to an average of 12.3 mmb/d starting April 1st, up sharply from less than 10 mmb/d barrels in recent months

Saudi Arabia also announced it would ramp up its production capacity and exports starting in April. This was followed by an output increase from Abu Dhabi and Russia. The Saudi government plans to raise its national oil production to an average of 12.3 mmb/d starting April 1st, up sharply from less than 10 mmb/d barrels in recent months. Exports are targeted to rise to 10 mmb/d from the 7 mmb/d average of January and February. That will require drawing on crude oil in storage until production can be increased. Some additional export oil may come available from increased use of natural gas rather than oil to generate power for the Kingdom's water desalination plants. The government has also ordered Aramco, the national oil company, to boost its maximum production capacity to 13 mmb/d. The betting is that Saudi oil production will only be sustained at 12 mmb/d after the first 1-3 months of slightly higher output.

According to Mr. Novak, Russia can increase its oil output by 500,000 barrels per day

Abu Dhabi's production is targeted to increase output to 4 mmb/d by the end of 2020 and 5 mmb/d by 2030, after development of new oil discoveries. According to Mr. Novak, Russia can increase its oil output by 500,000 barrels per day, although there are serious doubts about that claim given pipeline and export bottlenecks. Russia has been operating with a 230,000 b/d cutback, which presumably can

Exhibit 8. Output of World's Biggest Producers

Source: The Motley Fool

Estimates are that the surplus of supply over falling demand will add one billion barrels of oil to storage by possibly the end of the second quarter of 2020

be restored fairly quickly. Combined, assuming Russia can meet the 500,000 b/d output hike, it looks like current world oil production might increase by roughly 3.5 mmb/d. With oil demand collapsing daily, any increase in oil supply will go virtually directly into storage, adding downward pressure on oil prices. Estimates are that the surplus of supply over falling demand will add one billion barrels of oil to storage by possibly the end of the second quarter of 2020. Where is the storage for such a volume of crude oil? All on land tanks will become full, and buyers will have to hire oil tankers, which can be exceedingly expensive. Once all storage is full, the pressure on pricing will become intense, potentially sending oil prices down into the teens during the summer.

By June, the world should possess a better understanding of the magnitude of oil demand destruction due to the virus. We should also know the status of the virus. Will it have been eradicated by the heat of summer, or will it be continuing? If the latter, will producers be more willing to undertake a substantially greater production cut than was proposed in March? The answer to that question may be tied to the financial condition of the two protagonists.

A recent news report claims a Chinese refiner has declined a Rosneft supply deal due to the U.S. sanctions

As of January, Saudi Arabia's foreign exchange reserves totaled roughly \$490 billion. That compares to Russia's \$570 billion. Russia is counting on its bulked up foreign reserves to provide a cushion to absorb the financial pain it will experience from lower oil prices, offset somewhat by slightly greater oil sales. A potential problem is that the projected 500,000 barrels per day of increased Russian oil sales may be more difficult to come by, not just due to logistical issues, but also given the U.S. sanctions on Rosneft and other Russian oil companies. A recent news report claims a Chinese refiner has declined a Rosneft supply deal due to the U.S. sanctions. Moreover, Saudi Arabia has targeted likely Russian markets with significant reductions in oil prices, which will place increased pressure on Russia's oil industry. These developments highlight significant differences between the two oil-war combatants,

Russia is hobbled by U.S. sanctions that have limited local companies and government access to credit markets

which relates to their respective financial health. Saudi Arabia has greater access to global credit markets because of its low debt/GDP ratio of 24%. Additionally, Saudi's currency, the riyal, is tied to the U.S. dollar, so its value floats with the dollar's movements. These characteristics provide the Saudi government with additional financial levers to pull to survive low oil prices, which are not available to Russia.

Russia is hobbled by U.S. sanctions that have limited local companies and government access to credit markets. Remember, also, that Russia's currency is not tied to the U.S. dollar, although its oil sales are made in dollars. Thus, the government may encourage its oil companies to aggressively price its oil exports as a way to secure more dollars, which could aggravate the oil price decline. Thus, despite a significantly lower breakeven oil price to meet budgetary needs relative to Saudi Arabia, Russia's ability to withstand an extended period of low oil prices may be more limited than suggested merely by the relative size of its foreign reserves.

Some people believe Russia is better off than Saudi Arabia because its economy is more diversified. It is becoming a grain exporter that may improve its foreign income. Also, Russia depends less on its oil exports as a share of government spending than does Saudi Arabia.

This goodwill may prove important if he is forced to ask them to sacrifice some in the pace of social liberalization due to a lack of government funds

The political position of the two countries respective leaders, however, is very different. Crown Prince Mohammad bin Salman of Saudi Arabia, the titular head of the government, appears to have sizeable support from the younger segment of his country's population due to the social liberalization program he has been putting in place in the country. This goodwill may prove important if he is forced to ask them to sacrifice some in the pace of social liberalization due to a lack of government funds. Over the past several years, and including very recently, perceived dissidents and potential threats to the power of MBS, as he is known, have been detained by the government. This has diminished any possible coup element in Saudi Arabia. As a result, MBS may be better positioned to navigate his country through a low oil price environment that lasts for an extended period than the leadership in Russia.

The country continues to depend on oil exports for much of its foreign currency, and the Russian oil industry accounts for nearly a third of the country's GDP

Mr. Putin, despite his recent maneuvers to change Russia's constitution enabling him to remain as president for another 12 years after his second term ends in 2024, must still rely on authoritarian power for governing, which makes him more sensitive to citizens upset by weak economic conditions. The country continues to depend on oil exports for much of its foreign currency, and the Russian oil industry accounts for nearly a third of the country's GDP. The failure of Russia to diversify its economy, as Mr. Putin had promised in earlier times, will weigh on his efforts to navigate low oil prices. Moreover, the trust his countrymen have in his leadership has fallen in recent years from 60% at the time of his last election in 2018 to 35% today. The upcoming April election may demonstrate

There is little incentive for the two warring parties to reach an accommodation anytime soon

greater dissatisfaction amongst the local Russian population. If Russia runs through its foreign exchange reserves and is unable to borrow in the credit markets, Mr. Putin may be forced to seek a compromise with Saudi Arabia sooner, rather than later. Thus, the answer to how long this oil price war continues may depend on which country's financial health forces it to blink first.

European oil and gas analysts, speaking at a webinar recently, assessed all the above points. Their view is that there is little incentive for the two warring parties to reach an accommodation anytime soon. In fact, they think the standoff could last for upwards of 24 months. In their analyses, the analysts have concluded that both countries can sustain low oil prices for extended periods. They believe Russia can survive \$30 a barrel oil for five years, not the 6-10 years government officials have suggested. On the other hand, they believe Saudi Arabia could withstand such low oil prices for 5-8 years. At the end of the day, in their estimation, Saudi Arabia's higher government expenditures will force a compromise.

This is not the first time Russia and Saudi Arabia/OPEC have clashed

As readers may know, this is not the first time Russia and Saudi Arabia/OPEC have clashed. Most people likely remember the 2014-2016 struggle. That clash resulted in the cooperative production cut agreement of 2017, which will now end on March 31 as a result of the current disagreement. Whether an extension can be resurrected is unlikely. But let's look further back in oil industry history to see the role Russian crude oil played in reshaping the global oil business. At that time, Russia was merely the dominant (90%) economy within the Union of Soviet Socialist Republics (USSR). In other words, we have to go back to prior to 1989 when the USSR disintegrated under economic pressure from the West.

Under his control, the USSR developed a "coal-steel-based economy" geared to support a policy of economic isolation

Russia has an interesting history, replete with colorful leaders. It was often a key player in Europe's history, yet at other times it was totally remote. After World War II, Joseph Stalin continued to rule Russia and the USSR. Under his control, the USSR developed a "coal-steel-based economy" geared to support a policy of economic isolation. That isolation policy answered the demands of the Cold War and the containment philosophy that characterized the foreign policy of the United States and its Western allies. Following Mr. Stalin's death and several years of internal political struggle, Nikita Khrushchev emerged as Premier of Russia in 1958, a position he held until 1964.

Under Mr. Khrushchev's guidance, Russia's economic development approach shifted

Under Mr. Khrushchev's guidance, Russia's economic development approach shifted. Known as the "Soviet Economic Offensive, it reintroduced into world, and especially European, markets previously unavailable items such as Russian crude oil. More importantly, Soviet trade arrangements involved both barter and credits, which often obscured the true costs of the deals. At the 21st Party Congress in 1958, Mr. Khrushchev announced new economic goals, including increased production of oil and gas and

The raw material Russia most possessed to trade was crude oil, largely because the country's refining industry had fallen behind the growth in crude oil production, and its internal oil consumption was not mature

greater emphasis on lighter industry – a shift away from coal-steel and toward more sophisticated products. It was thought this would free up manpower and capital, thus enabling the development of new industries such as petrochemicals. The new development also meant trading with non-Communist countries for many products needed in the Communist world. The Russian satellite countries applauded the policy change.

In the West, this shift was viewed as a threat. The raw material Russia most possessed to trade was crude oil, largely because the country's refining industry had fallen behind the growth in crude oil production, and its internal oil consumption was not mature. In 1955, before Mr. Khrushchev had attained his leadership position, he had stated, "We value trade least for economic reasons and most for political reasons." This view was embraced in the United States and Western countries as a fundamental tenet of the Cold War struggle. Every Russian economic move fed into the paranoia that was governing the West's counter moves. Russian oil sales became a significant target, even though Exxon (then Standard Oil of New Jersey) geologists and explorationists had concluded that Russia barely possessed sufficient petroleum resources to satisfy its internal needs, let alone to flood the world. Unfortunately, those internal studies either were never shared with government officials or were discounted, given the paranoia about the USSR's power.

By the early 1960s, Russia was operating 1,000 seismic crews, approximately half the world's available supply

In 1953, Russia produced 400 million barrels (mmbbls) of crude oil and exported seven. By 1961, it produced 1,211 mmbbls, a threefold increase in eight years, and exported 222.7 mmbbls, nearly 20% of its total output. By the early 1960s, Russia was operating 1,000 seismic crews, approximately half the world's available supply. It had 1,000 drilling rigs working, representing 20% of the world's active fleet. Prior to the war, the country's seismic equipment and drilling rigs were based on European designs and technology. Following the war, petroleum industry technology that was transferred to Europe from the United States eventually migrated onward to Russia, helping it to dramatically improve its oil and gas exploration and development capabilities.

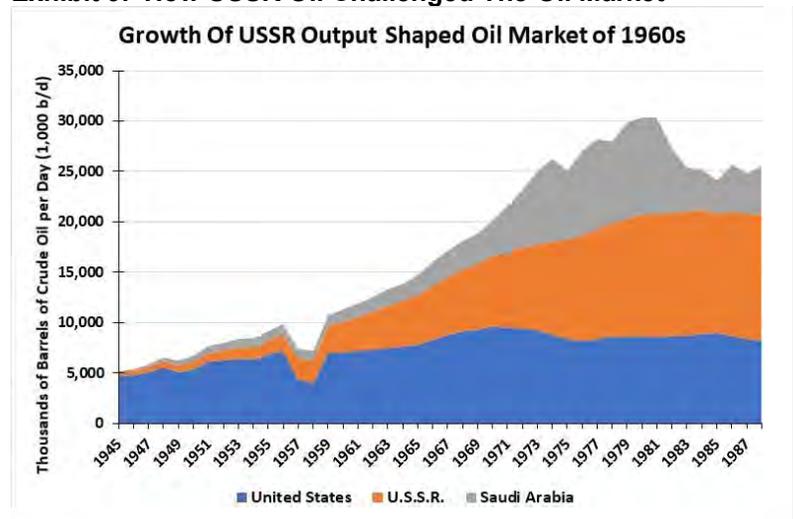
The USSR goal was to boost its crude oil output by 1965 to 2,000 mmbbls, with targets for 1970 and 1980 of 2,800 and 5,000 mmbbls, respectively. This data was contained in testimony by Samuel Nakasian, an international attorney specializing in the Soviet oil and gas industry. He was testifying about "Soviet Oil in East-West Trade" during hearings before the United States Senate Committee on the Judiciary, Subcommittee To Investigate the Administration of the Internal Security Act and Other Internal Security Laws, on July 3, 1962. In the hearing transcript, there was an extensive discussion about the history of Russia using cheap oil to secure strategic advantages in trades with targeted countries. For example, in 1960, Russian crude oil was being sold to its satellite countries for 22.2

As USSR output rose steadily under the government's new economic development plan, the number of countries receiving favorably-priced crude oil expanded from 20 to 30

rubles per ton (R/t), which was equivalent to the then-world oil price, while exporting oil to targeted European, Asian and Latin American countries at a price of 10.3 R/t.

As USSR output rose steadily under the government's new economic development plan, the number of countries receiving favorably-priced crude oil expanded from 20 to 30. Countries such as Cuba and India received their first shipments of Russian crude oil in 1960, while the USSR sought new markets among Canada, Ceylon, Ethiopia and Australia. Other new markets for Soviet oil included Brazil, Ghana, Lebanon, the Republic of Guinea and Tunisia.

Exhibit 9. How USSR Oil Challenged The Oil Market



Source: Dept. of Energy, D&M, PPHB

USSR oil was taken as a threat to the future success of international oil companies

The problem of the growing supplies of crude oil from the USSR was that they were arriving at the same time Middle East producing countries, where the international oil companies had recently made commitments, were demanding annual production increases. Note the rapid growth in USSR oil output while Saudi Arabian production grows at a steadier pace of increase in Exhibit 9. USSR oil was taken as a threat to the future success of international oil companies. As the testimony before Congress indicated, oil companies operating in the Middle East and in Venezuela had to pay a royalty plus taxes equal to 75-cents per barrel to the host countries. With production costs estimated at 25-cents per barrel, and reserve replacement costs of another 25-cents, the total cost amounted to \$1.25/barrel.

The impact of the competitive pricing by the Soviets was explained by Mr. Nakasian. He cited Italian oil company, ENI, who was buying crude oil, priced at freight-on-board (fob) the Black Sea (Russian oil), which was delivered in Italy at about \$1/barrel less than Persian

With the oil company having to pay 75-cents in royalty, it would only net about 5-cents per barrel on the sale

Gulf crude oil would deliver based on the Middle East posted price. At \$1/barrel less, Middle East oil would sell at the equivalent fob the Persian Gulf of roughly 80-cents per barrel. With the oil company having to pay 75-cents in royalty, it would only net about 5-cents per barrel on the sale, clearly below its production cost and replacement expense. At that time, depending on the quality of the crude, Middle East oil was selling for \$1.60-\$2.00 per barrel. That pricing generated a profit per barrel for the oil companies of anywhere from 35-cents to 75-cents per barrel.

How to combat the threat of Russian oil was the dilemma the international oil companies debated. Outside of convincing Western governments to implement restrictions against buying Russian oil, the only way was to reduce oil prices. If the market price was cut, the oil companies would be absorbing all the pain. Could they risk cutting the posted oil price? BP made the first cut in early 1959, reducing the posted price by 18 cents a barrel, about a 10% reduction. Its action set off a firestorm of denunciation by the oil exporters. With the stroke of a pen, BP had just cut the income of every oil-producing country, risking the industry's relations with its host governments.

He had studied the workings and success of the Texas Railroad Commission as a pro-rationing agency and conceived of a way to create a similar structure for the global oil industry

Without attempting to tell the entire story, it should be noted that Russia's growing oil production and the dilemma for oil pricing, coupled with a move in early 1959 by the Eisenhower administration to place quotas on foreign oil imports into the United States, which severely impacted Venezuela, set in motion the forces that led to the formation of OPEC. Pérez Alfonzo, the Minister of Mines and Hydrocarbons for Venezuela, recognized that the world was moving into an oversupplied oil market. He had studied the workings and success of the Texas Railroad Commission as a pro-rationing agency and conceived of a way to create a similar structure for the global oil industry. He saw it as not only a way to protect the market position of Venezuela, but also as a way to help lift costs among Middle East oil producers. This organizational structure would actually help Venezuela by protecting it from a flood of cheap Middle Eastern oil.

Mr. Alfonzo's first effort was to venture to Washington, D.C., with a proposal to create a Western Hemisphere oil system run by the governments

Mr. Alfonzo's first effort was to venture to Washington, D.C., with a proposal to create a Western Hemisphere oil system run by the governments. In that system, Venezuela would be guaranteed a share of the U.S. oil market, and would no longer be subject to the oil companies deciding from which country to import petroleum. While largely based on the workings of the Texas Railroad Commission, the proposed system was also similar in how the American sugar quota system worked. Not surprisingly, the U.S. had no interest.

Mr. Alfonzo then turned his attention to the Arab Oil Congress scheduled for a few months later in Cairo in April of 1959. There, with the help of Wanda Jablonski, a correspondent for *Petroleum*

He was a graduate in geology and chemistry from the University of Texas

Week, and the most influential oil journalist of her time, Mr. Alfonzo was introduced to Abdullah Tariki, the head of the Saudi Arabian Directorate of Oil and Mining Affairs.

Mr. Tariki was a son of a camel owner who ran caravans back and forth between Saudi Arabia and Kuwait. He was a graduate in geology and chemistry from the University of Texas. He was the first Saudi trained in both disciplines, and completed an internship with Texaco. When he returned to Saudi Arabia, he was appointed the head of the Directorate. In that role, he was prepared to challenge both the basis of the Aramco concession and the Western oil companies.

They also wanted their governments to jettison the 50-50 oil price split that then existed with the oil companies, to be replaced with a 60-40 split in their favor

Once introduced by Ms. Jablonski, the two oil experts agreed to work together to gain support for greater control over oil producer resources. Following meetings with representatives of the rest of the Middle East oil producing countries, an agreement was reached amongst them to push their governments to establish an Oil Consultative Commission, defend the oil price structure, and establish national oil companies. They also wanted their governments to jettison the 50-50 oil price split that then existed with the oil companies, to be replaced with a 60-40 split in their favor. They also suggested building up their local refining industries and to become more integrated in order to “assure stable markets” for themselves and to better protect their governments’ revenues. From this agreement, OPEC was born. The rest, as they say, is history.

If OPEC does fall apart, it would be ironic that Russia played a role in both OPEC’s formation and its eventual demise

Some analysts have suggested it was Saudi Arabia who miscalculated in starting the current oil-price war. Other petroleum observers believe it was Russia who made the biggest mistake. Many are suggesting that this oil price war runs the risk of destroying OPEC, although the organization has been depending on the largess of Saudi Arabia for decades to sustain its market power. If OPEC does fall apart, it would be ironic that Russia played a role in both OPEC’s formation and its eventual demise. As Fatih Birol, the executive director of the International Energy Agency said about the oil-price war when it first broke out: “Playing Russian roulette in oil markets may have grave consequences.”

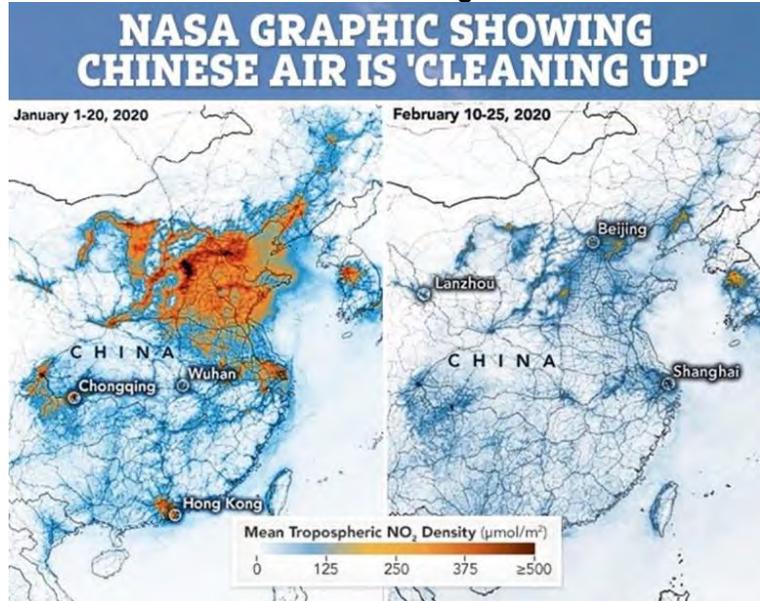
Dealing With Covid-19 May Empower Climate Change Push

Does the willingness of the public to accept extensive government intrusion and control over everyday lives during this pandemic represent a “gamechanger” for climate change?

As food for thought, we wonder whether the willingness of the public to accept extreme measures by governments in the fight against Covid-19 will be mobilized in the fight against climate change. Admittedly, neither we, nor anyone, knows what fighting Covid-19 will cost either directly through government spending to support people and fight the virus or indirectly from the virtual shutdown of global economic activity. Does the willingness of the public to accept extensive government intrusion and control over everyday lives during this pandemic represent a “gamechanger” for climate change? It is certainly beginning to look that way.

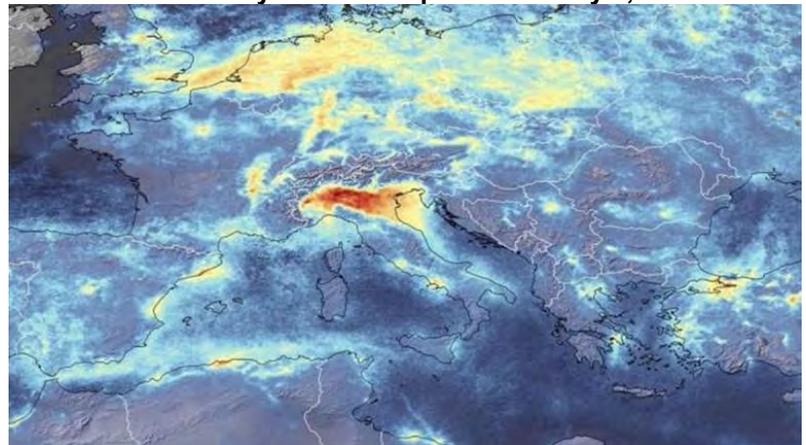
Therefore, you should be prepared for climate change advocates to seize on the pictures of cleaner air during the war on Covid-19 as justification for embracing similar restrictions on our economic and personal freedoms. The cleaner air photos highlight how we can successfully fight the existential threat of carbon dioxide. The following pictures will form that playbook.

Exhibit 10. China Before And During Covid-19 Lockdown



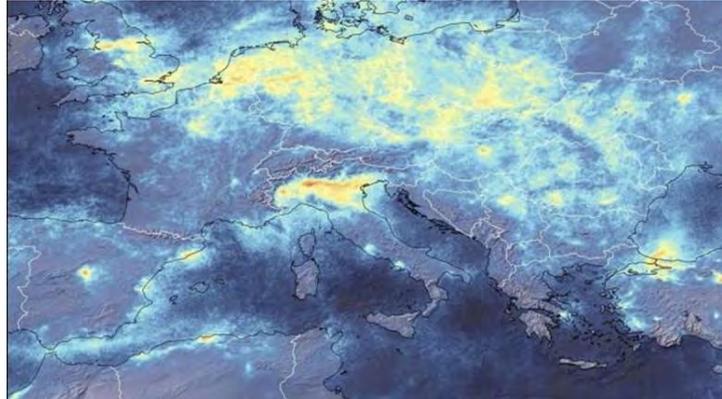
Source: NASA Earth

Exhibit 11. The Dirty Air Of Europe On January 1, 2020



Source: Reuters

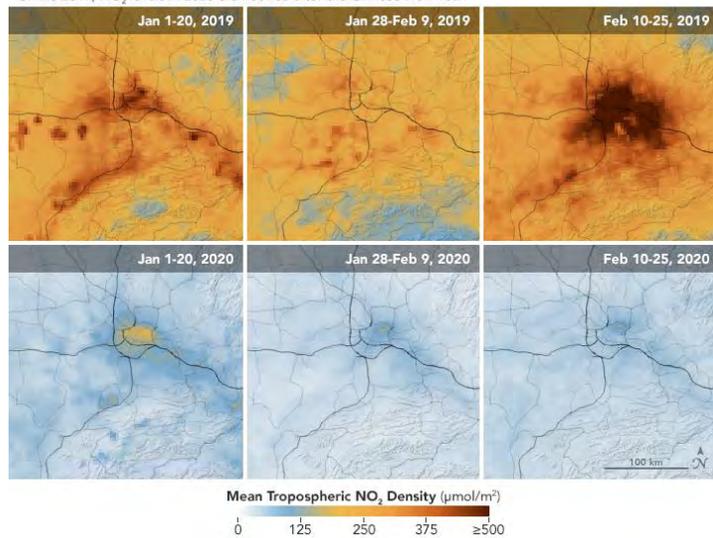
Exhibit 12. Cleaner Europe And Italy Air March 11, 2020



Source: Reuters

Exhibit 13. Cleaner Air In Wuhan From Fighting The Virus

Pollutant Drops in Wuhan—and Does not Rebound
Unlike 2019, NO_x levels in 2020 did not rise after the Chinese New Year.



Source: NASA Earth

Exhibit 14. Loss Of Personal Freedom In Covid-19 Fight?



Source: Business Insider

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