

## Global Crude Oil Supply Issues Reconsidered

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On June 28, Reuter's knowledgeable commodities writer, John Kemp, published an intriguing *Op-Ed* entitled, *OPEC should let oil prices rebalance the market: Kemp*. The article provides a provocative application of game theory to crude oil production and market share "war games" underway between OPEC and U.S. shale producers. Kemp observes that if Saudi Arabia acts as a swing producer—cutting its production to lift global oil prices—it not only loses market share but forfeits the prospect of higher prices as shale oil producers lift production to make up the difference. Kemp sees this as an exercise in futility. Consequently, he goes *laissez faire* and recommends that Saudi Arabia abandon output restraint after March 2018, thus normalizing OPEC output and allowing oil prices to decline further. In this scenario U.S. shale oil production sags because of price pressures, thus allowing Saudi Arabia, as a lower cost producer to hold its market share. Herein lies the problem: there is much more at stake for humanity in crude oil production games than Saudi Arabia's market share, or the market share of the U.S., for that matter.

Mr. Kemp may be right in his diagnosis of how crude oil market competition is playing out so far in 2017, but brilliance aside, his prescription is mistaken and not in the public interest. Kemp errs because he fails to marshal former President Bill Clinton's strategy of triangulation. As long as Kemp makes a normative argument about what "should" be done, others have good warrant for alternative arguments about what "could" be done if the U.S. would use will, wit and wisdom.

### Crucial Crude Oil Production Issues

The challenge with crude oil is that the world needs an enormous amount on a daily basis, the need is inflexible, demand is growing, global dependency will remain high for at least the next fifteen years, and a substantial sustained shortfall would create catastrophic human suffering and conflict, probably leading to global war. *A mere 10% global production decline for three calendar quarters would drain all of the world's commercial inventory—onshore as well as offshore in oil tankers.* The only stored oil remaining would be in Strategic Petroleum Reserves. The international commercial buffer against disaster is modest, not large. While a global production disruption of a 10% magnitude is unlikely, a looming tragedy of the commons in terms of conventional oil production is probable around 2020, unless oil prices come back to a sustainable range of \$60 to \$75 a barrel, sooner rather than later.

Mr. John Kemp is correct that the declining cost of fracking in North America creates difficulties for OPEC in restoring oil prices to a level sufficient to sustain the budgets of OPEC countries. Granted, the costs of drilling for oil are set to rise steadily beginning in the second half of 2017, thus dampening the rate at which shale oil production will grow—an idea that justifies OPEC in continuing with its production caps well beyond March 2018. What Mr. Kemp fails to mention is that new oilfield investment and maintenance expenditures for high production oil projects have fallen substantially below what is necessary to sustain global oil production at levels sufficient to meet oil demand after 2020. The longer low oil prices persist, the higher prices will rise a few years from now. Already, more than \$1 trillion in needed conventional oil investment has been lost since 2014, according to Saudi Aramco's chief executive officer, Amin Nasser.

It is ludicrous for the world to continue to allow crude oil prices to swing wildly from high to low and back to high

again as a result of laissez faire government policies in commodities combined with easy money policies still supplied by central banks. Super cheap money from the Federal Reserve combined with the emergence of new fracking technology produced a North American oil boom that was too fast and furious for its own good. As a result, a massive amount of investment capital was wasted, especially in the offshore space where older rigs were scrapped.

New efficiency fracking arrived in North America in the 2010–2015 period. It came at the expense of conventional oil field projects that are more capital intensive and time consuming to develop. In spite of the fact that fracked production falls sharply after three years (i.e., a short-cycle oil play), it makes sense to producers to frack if they can get a profit. Conversely, it makes no sense for global energy security when fracking outlays come at the expense of investment in longer-play, higher production conventional oil projects.

### **Guarding the Global Good From Unnecessary Risk**

There are some things that governments of the world must regulate closely from here on out. Crude oil production is near the top of the list. The burden for balanced world oil production should not fall to OPEC alone, even though its original mission was to enhance oil price stability. All nations that produce significant amounts of oil—about fifty—must develop a mutually sustained and pragmatic global policy stance that smooths oil production investment and output metrics. The idea is to prevent huge speculative booms and busts in oil prices. Most dangerous of all is a structural or secular deficit in oil production that could bring substantial economic hardships worldwide while increasing the financial inequality gap as speculators with mega-capital become rent-seekers at the expense of working class people worldwide.

The first matter that needs to be addressed is that of conventional oil storage. While it is true that stored oil in the U.S. and in developed nations is high relative to the preceding ten-year period, the world economy is much larger as well. A higher level of oil storage is needed not only because of a larger global economy but because hundreds of millions of families in developing countries have come into a condition of considerable dependency upon oil. These families can no longer live in traditional subsistence routines. A doubling or tripling of crude oil prices could have a devastating impact on their quality of life. Yet, this is where the world is headed unless oil prices increase sooner rather than later. The problem is that private investment in conventional oil projects has dropped dramatically.

Viewed from a world security perspective, commercial oil storage is not high. Storage capacity needs to increase because the consequences of a prolonged shortfall would have more serious global consequences than in former times. Storage levels are only moderate in view of a global economic and industrial fragility that lies only slightly below the surface of world enterprise. Comparing stored oil levels to historic benchmarks as a means of claiming a dangerously high level of storage is irresponsible from a humanitarian viewpoint. The pretense that oil storage is high relative to world needs and future security is a preposterous game promoted by short-sellers who care little about humanitarian issues and the security of the world.

*Nonetheless, until a substantial amount of new crude oil storage capacity is added, it makes sense to reduce oil production to allow stored oil levels to be drawn down far enough that oil prices climb into the \$60-\$75 range. A sweet spot of oil pricing (i.e., Goldilocks pricing) is high enough to stimulate a necessary level of private investment in long-term conventional oil production. At the same time, sweet spot pricing is low enough not to create the type of inflationary pressure that could damage the world economy or create considerable hardships. A proper policy triangulation strategy could bring about international agreements in support of moderate, constructively priced oil.*

## Policy Recommendations

Several policy steps could be pursued in the U.S. with proper political leadership and responsible media attention.

**For starters**, the U.S. could establish a federal policy stance in which it commits to policies supportive of reasonably stable oil prices, while expressing a willingness to limit speculative price swings and disequilibrium. By advertising this pledge internationally the U.S. could align itself conceptually with the recent efforts of OPEC and other cooperating nations. It should be remembered that the early mission of OPEC was oil price stability.

**Debt limits.** The U.S. could begin enforcing debt limits on upstream oil producers. The goal would be to limit borrowing relative to equity. As long as the U.S. remains in an artificially cheap money environment due to central bank policy, it will be tempting for oilfield development companies to borrow more than they should, especially if oil prices come up a little. Heavy debt loads in the oil sector contribute to boom and bust cycles, as marginal oil producers live on the cusp of disaster. It is in the national interest to reduce the boom and bust cycle dynamic by creating conservative national standards on allowable debt for firms involved in the production of crude oil. By taking this step the U.S. government could temper the amount of shale oil production growth that would occur with higher oil prices. As a result, U.S. policy could contribute to oil price stability and insure America's energy security well into the future. It is all about stimulating rational and sustainable investment levels in raw commodities.

**Import limits.** The federal government could limit the amount of oil imported into the U.S. any time the price of oil falls below \$45 a barrel, WTI, and stays there for two weeks. Anytime this happens, the U.S. could instigate an oil import limit on that would constrain imports to 70% of the previous twelve-month average. Once constraints are applied, they stay in place for the following 30 days, and are maintained as needed on a rolling basis. Plausibly, the import limit would not be needed very often as short-sellers of oil would be taken out of the game every time oil approached \$45 a barrel. The power of short-sellers to create panics would be gone, as \$45 is high enough to prevent most well-managed firms from sinking into insolvency concerns. One benefit of this approach is that OPEC and other large producers would have a clear incentive not to over-produce oil, as over-production could reduce the availability of the U.S. market. With a U.S. policy to limit imports in place, crude oil would probably trade in the \$50-\$70 range. Investment for the future could proceed more rationally and efficiently, as the boom and bust cycle which is the bane of commodity production would be moderated.

**Create a Flex Storage Depot (FSD).** In conjunction with debt limits for oil U.S. oil producers and import limits if oil prices drop too low, it is important for the U.S. to create the third feature of its triangulated policy strategy. The objective here is to create a new flex storage system for the U.S. that has one-third the capacity of the U.S. Strategic Petroleum Reserve (SPR). While the SPR ought to hold its reserves intact as a buffer against a crisis that could threaten the national interest, the new Flex Storage Depot could *draw or build* its capacity quickly to smooth out bumps in commercial oil availability. Under normal circumstances the Depot would be 50% full. In times of excess oil supply the oil depot could absorb excess production up to 90% of capacity. In times of a lack of available oil it could draw down its storage to 10% of capacity. The availability of this buffer would allow opportunity for the debt limit and import limit mechanisms to be fine-tuned on an ongoing basis to keep prices moderate and production aligned with future needs and technological progress. A goal of maximizing efficiency and minimizing politics would probably mean that the FSD would be managed by an advanced computer system utilizing algorithms and artificial intelligence. In short, the idea is to use a set of manageable checks and balances to maximize the efficiency by which the world produces and consumes crude oil. The U.S. has an important role to play in this process.

## Conclusion

If the three-pronged recommendation were to be implemented and properly managed, its effect would be to enhance business efficiency, reduce the amount of time and money spent on risk management, and protect capital from flowing unproductively into leveraged speculation. In an age of growing economic inequality one important humanitarian benefit of the plan would be to reduce the concentration of wealth in the hands of the few while increasing prosperity for the many. Another effect would be to reduce the financialization of the economy where speculation in derivatives becomes almost more important than production of the underlying natural resources.

The laissez faire economic policies of less informed times are destined for rejection by educated leaders who accept their fiduciary responsibility to demonstrate a benevolent and principled political leadership. It is past time for the U.S. to provide a good example of national rectitude in natural resource management. If it seems fitting for nations like Libya or Nigeria to cooperate with OPEC in the ongoing endeavor to balance global oil supply with demand, then it behooves the United States to be responsible as well. The U.S. has no right to laissez faire natural resource policy while other countries endeavor to secure a price balance for the good of all. If the objection to a teamwork approach is that the U.S. ought to produce more oil to meet its own consumption demands, then import limitations should be given more attention as part of a global oil production balancing strategy.

*Any idea that OPEC should abandon its production cut in March, 2018 should be dropped.* Individuals who argue for the idea will increasingly become suspects as shills for short-selling hedge funds and the investment banks that service them. The better way is for the United States to become a team player with other nations, working to better match oil output and global demand. While the U.S. could endeavor to put a cap on private sector production, a less invasive and problematic approach is to limit the amount of debt oil producers can carry relative to their equity. By implementing this step, the U.S. preserves the best of its open market system. Likewise, since OPEC countries tend to use state capitalism approaches, they are better positioned to implement national oil production caps.

In the final analysis the goal is a shared responsibility between the nations of the world for responsible energy security. Unfortunately, policy makers in the U.S. have been misled into thinking that the free market will work things out satisfactorily. This is not so. The U.S. must do its part to help crude oil prices return to levels that stimulate an appropriate amount of investment worldwide in crude oil security.

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