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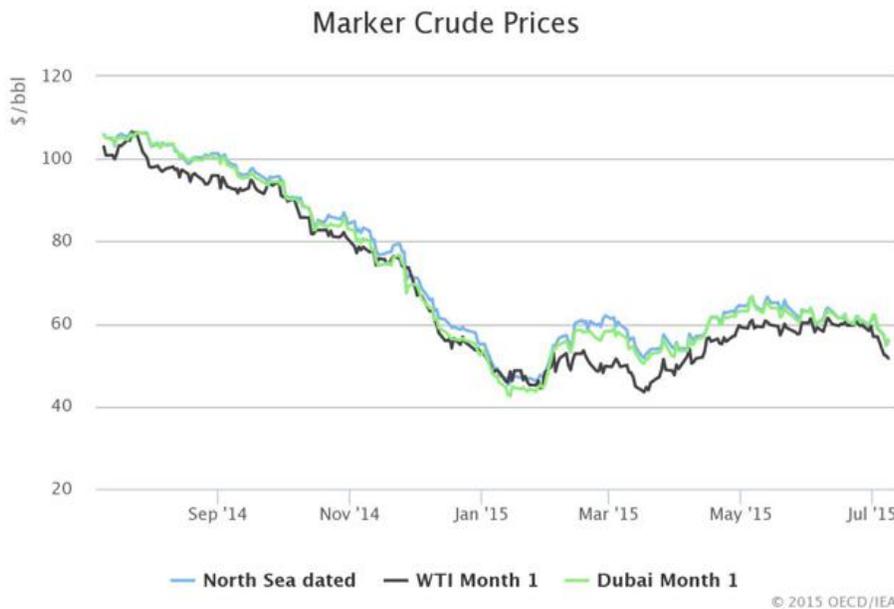
Oil: Prices Will Rebound

Jul. 27, 2015 7:30 AM ET | [254 comments](#) | About: [The United States Oil ETF, LP \(USO\)](#), Includes: [APA](#), [CHK](#), [CLR](#) by: Eliot Murray This article reprinted from Seeking Alpha

Summary

- US shale boom increases worldwide oil supply.
- A temporary setback in global economic growth taps the brakes on oil demand.
- Neither should explain a 50% price drop in 8 months.
- Oil has dropped below marginal cost of production and will not stay there.
- China and other developing economies will drive global demand back up. Meanwhile, responsible spending cuts and low cash costs will win the day.

Just one short year ago, oil was trading above \$100. US shale was experiencing a revolutionary boom, demand was clicking along at expected levels, and analysts were calling for \$150 oil. Fast forward one year, and oil is trading at 5-year lows of \$48, while fears of \$25/barrel oil abound. What just happened? A perfect storm of disruptive technology increasing supply, decreased near-term demand, OPEC posturing and market share grabs, and the unwinding and loss-cutting in the financial markets has given way to a good ole' fashioned panic. The world is currently awash with oil, and the Street is awash with blood. What's an investor to do? Better grab a bucket.



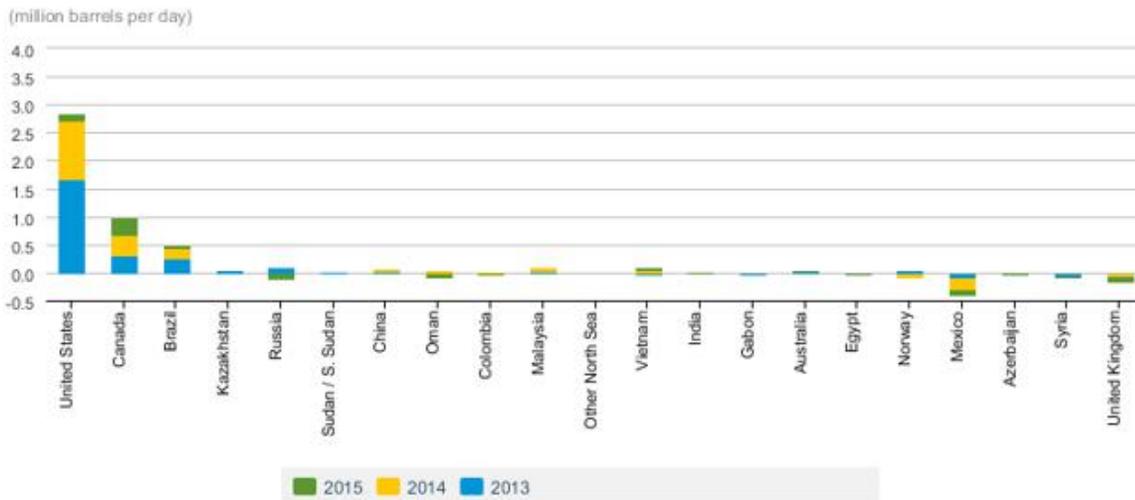
Why did oil prices tumble?

Increasing global demand for oil from 77.2 million barrels per day in 2000 to 88.7 million barrels per day in 2010 fueled all-time high prices in 2008 of near \$150. From 2010 to early 2014, E&Ps enjoyed prices that ranged anywhere from \$80-\$110 per barrel. High prices, in turn, enticed eager entrepreneurs to begin using unconventional techniques like hydraulic fracturing to

lift shale oil from areas thought to be untouchable just 5 years ago. Indeed, these techniques proved to be a truly formidable, disruptive technology to the oil industry, which led to an explosion in productive

capacity amongst US and Canadian producers, equating to 45% and 25% increases, respectively. 20,000 new wells have been completed since 2010. This increase in production came out of left field and was unexpected even by those "in the know."

Non-OPEC Crude Oil and Liquid Fuels Production Growth



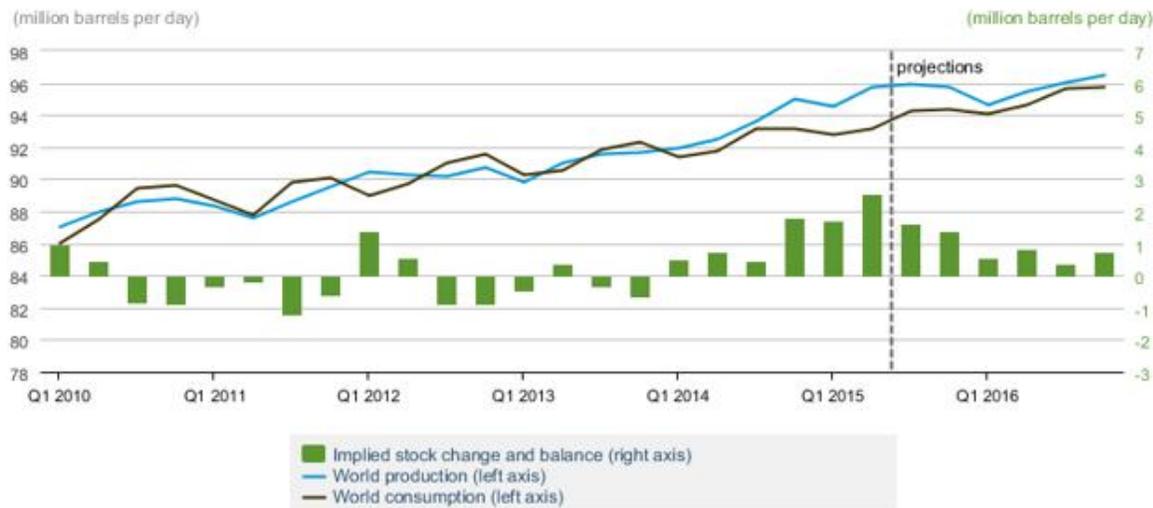
Source: Short-Term Energy Outlook, July 2015

IEA, in their [Medium-Term Oil Market Report 2014](#), admitted to not foreseeing the boom, stating that "the baseline of US and Canadian production for 2013 is... 3.21 million barrels per day above 2010 projections." Over the course of the last 4 years, North America added an incremental 5 million barrels of oil per day to the global supply, versus 4 million barrels of additional demand. This translated to North American oil production outpacing global demand by about 38% since 2010, according to Forbes.com. However, due to above-ground reasons (geopolitical conflicts in the Middle East) such as sanctions on Iran, civil war, ISIS insurgency, and general unrest in Iraq, an offsetting reduction in OPEC crude oil production occurred, taking over 2.5 million barrels per day off the market. Thus, the price of oil remained precariously high.

However, worldwide demand began to linger behind production in Q1 2014, as seen in the chart below. Some attribute this to slowing economic development in China or Europe, although it is impossible (and imprudent) to try to diagnose a reason for this imbalance inside such a narrow time frame. True, China demand tapered off in recent months, but who's to say this is the new normal? An ocean liner can't turn on a dime, and something as enormous and far reaching as global oil demand will not change within a couple of fiscal quarters. Coupling this short-term slowdown in demand with increasing stock inventories, prices began to fall. The price decrease in WTI from \$100 in July '14 to \$80 to November '14 at least *appears* to make some sense if you overlay it on top of the last half of 2014's supply/demand imbalance below.

If that weren't enough, in a startling answer to falling prices, OPEC chose to keep pumping full throttle. This sent a message to the market that more over-supply was on its way, and prices again retreated. Iraq and Russia both responded with equally surprising news actually expanding their production. Finally, in the first week of July, news broke that an Iranian nuclear deal is increasingly likely. This sent oil prices down another 8% in one day. However, Iran won't immediately resume exporting the 1 million barrels per day that it used to.

World Liquid Fuels Production and Consumption Balance

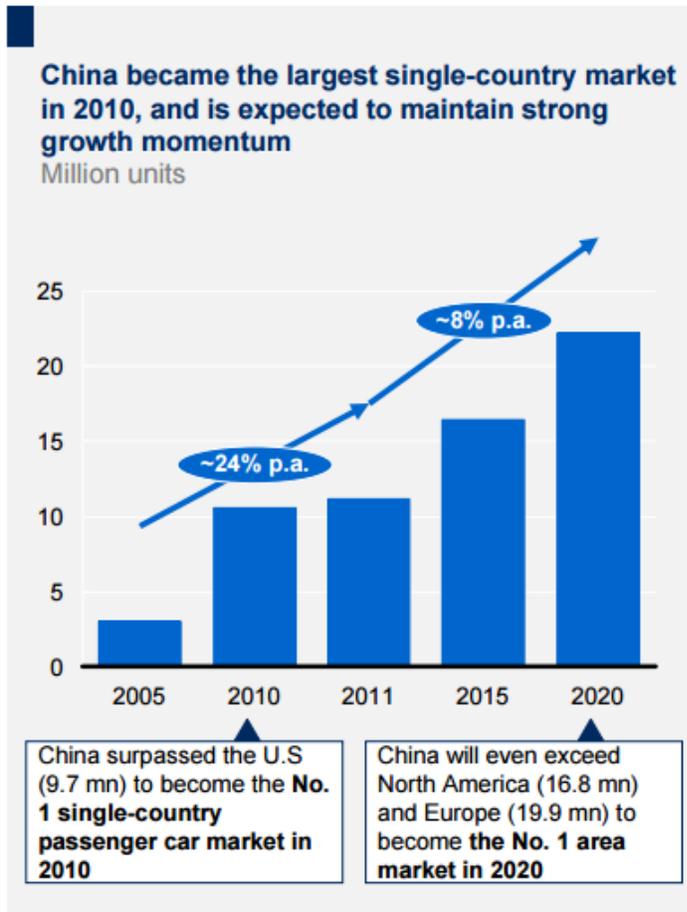


eia Source: Short-Term Energy Outlook, July 2015

So today, we find ourselves in the midst of a market share battle - a price war. Is the Middle East trying to put higher cost US shale producers out of business? Probably. I love this quote from the [Economist](#): "Saudi Arabia, the leading member of OPEC, has made clear it will tolerate lower prices in order to do to shale firms' finances what fracking does to rocks." If OPEC continues to pump 30 mb/d (1/3rd of the world's demand), this may shove higher-cost drillers out of business, or at least force some spending discipline. When this happens, production will hit the skids, supply decreases, and price will come up. Or, if OPEC comes to their sense and backs off production, supply decreases, and price will come up. Either way, the buyer who is long on oil wins.

While it may be true that the list of events just detailed hasn't done any favors for the price of oil, prices don't tank by 50% in a few months because some over-zealous fracker from North Dakota dials up the spigot. The reasons for the free-fall have more to do with short-term financial markets than long-term supply and demand. Supply and demand alone would never force oil down below the marginal cost to produce. Operators would stall production before that happens. Think about it, why would you keep buying \$90 widgets only to sell them for \$50? No, the selloff is the work of our dear friend, Mr. Market. He has gotten worked up into such a panic that he has priced the commodity below its own value. In the short term, the market is a voting machine, but in the long term, the market is a weighing machine. More on marginal cost of production later.

While the magnitude of the Great Oil Crash of 2014 may have been a surprise to all, the direction of price moves were inevitable. The IEA, in their [2014 Medium-Term Oil Market Report](#) (written in June 2014, 2 short months before prices started to slide), said that with US production at all-time highs, "oil prices have remained stubbornly elevated." Prices may have remained so high for so long because no one wants to bet against worldwide demand growth. Sure, growth may *decelerate*, but no one really expects oil demand to *shrink* anytime in the next decade. China will experience the most growth, exceeding North America as the largest vehicle market by 2020:

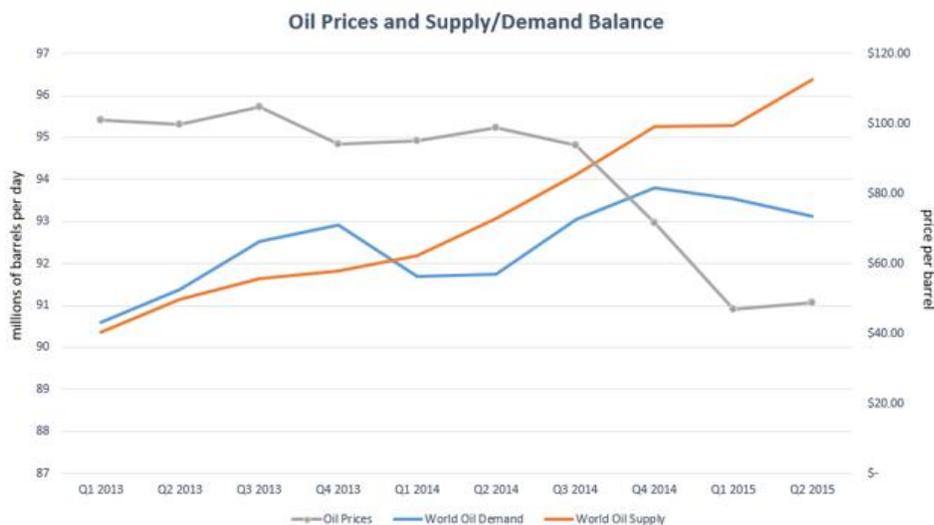


SOURCE: McKinsey GOG analysis; McKinsey Insights China; team analysis

If China doubles the size of its vehicle market from 2010 to 2020 as expected, where does oil demand go? Chinese oil consumption was about 9 mb/d in 2010 and 10.7 in 2014, up about 4% from 2013. The [EIA](#) expects China demand to reach 13.1 mb/d by 2020, but they'll need more if vehicle sales forecasts are met. If consumption doubles, this adds 10 million barrels to current worldwide demand for oil - an increase of 11%.

While the Middle East is the world's largest producer of oil, their own local demand is also growing. They may supply 33% of the world's consumption, but they cannot supply all of the world's demand, and are actually consuming 33% of their own oil, with that consumption only set to [increase](#) as population continues to grow and living standards rise. Although it may experience short-term turbulence, demand for oil is going nowhere but up. Supply has to follow, but it won't at these current prices.

Looking at a price chart overlaid with the last 12 quarters of supply and demand, you can see that prices started to dislocate in Q4 of last year. That means that until then, managers of oil companies really didn't have any incentive to halt or stop production.



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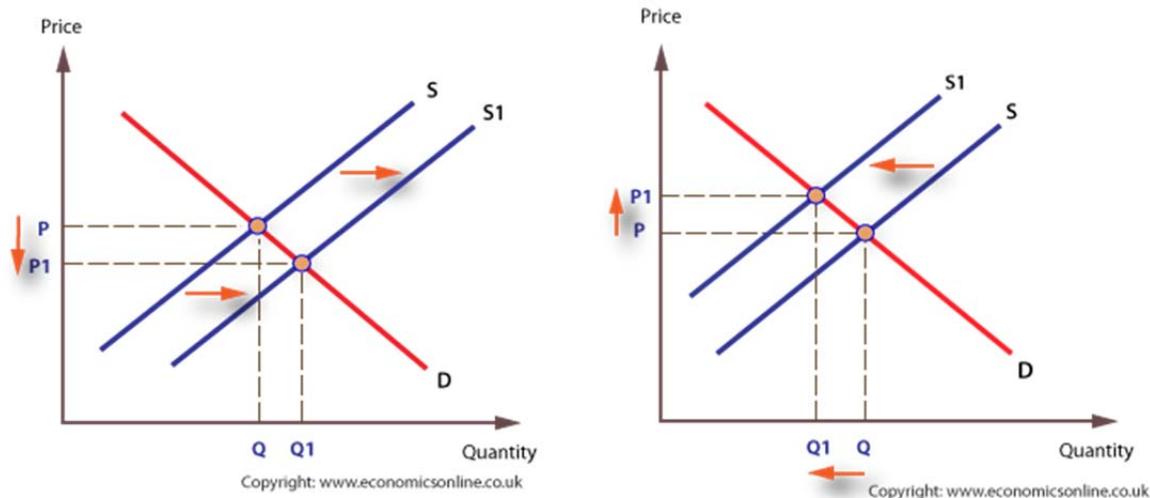
Now they do. Rig counts are down by [half](#), year over year. Management everywhere is cutting spending, reducing CapEx forecasts by [41%](#), [shedding](#) non-core assets, and even [cutting dividends](#) in some cases.

Marginal Cost and Break-Even

The reason for the cuts is that the crash in oil price has fallen so low that it is now unprofitable for producers to extract the oil from the ground. Break-even price is hard to peg accurately since there are so many variables including location of the many different oil plays, and individual companies' cost structure, but a triangulation of difference [sources](#) pins the break-even at around \$70-\$90 per barrel, for US producers. According to Bernstein Research, "about a third of U.S. shale production would be uneconomical if oil prices were to fall to \$80 per barrel." Morningstar states that, "Our analysis suggests that the average breakeven for our E&P coverage is \$70 per barrel.... Our estimate of the marginal cost for oil remains \$90 per barrel WTI and \$100 per barrel Brent." The list goes on and on with Wells Fargo, Goldman Sachs, and Credit Suisse all recording their estimates at between the \$70-\$100 levels. Even OPEC, the so-called low-cost producer at \$27/barrel, needs \$90 to balance budgets:

The point is that, at prices of \$48 per barrel, very few people are making money in the oil business right now. At marginal costs of \$70-\$90 per barrel, price wars can only last so long. As uneconomical projects are shelved, the market will harden and prices will come back.

Over the past few quarters, we've simply seen a shift in the supply curve to the right:



As production grinds to a slower pace, the supply curve will shift back to the left and take its rightful place at an equilibrium price, which allows for a tidy profit for operators.

By the way, that equilibrium price should land at around \$80-\$90 in the medium term, depending on whose estimate of marginal cost you want to use. T. Boone Pickens has gone [on record](#) calling for \$70 prices before year-end. Bill Nygren [assumes](#) "that producers need a price in the \$70s to earn an adequate return on new investment." Morningstar sees US marginal costs of production as \$90 and sees oil rising to that level eventually, although not immediately.

And let's not forget Charlie Munger's words during a round table discussion 2 years ago: "Oil is absolutely certain to become incredibly short in supply and very high priced.... The oil in the ground that you're not producing is a national treasure ... It's not at all clear that there's any substitute [for hydrocarbons]. When the hydrocarbons are gone, I don't think the chemists are going to be able to just mix up a vat and create more hydrocarbons. It's conceivable that they could, I suppose, but it's not the way to bet."

