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By Scott Nyquist

Black swans and barrels: How to think about the future of oil prices

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No one can be sure where oil prices are headed. McKinsey's Scott Nyquist answers the questions business leaders are asking about the state of the market.

With the intensity of ancient seers examining runes, policy makers, analysts, and economists watch every squiggle of movement in the oil markets, scrutinizing rig counts and poring over the footnotes in annual reports to glean portents of the future. With crude oil now hanging in there around $50 a barrel—a significant jump from January and February, when it lingered below $30—there is a sense that the price of crude is recovering.

That makes sense. But it could still be wrong. The track record of oil-price predictions is not great, even among specialists. Very few people—possibly none—saw the run-up to $107.95 a barrel in June 2014 and the dive to less than $30 for much of February 2016. So I am not going to make any predictions. But I spend a lot of time talking with business leaders. Here are some of the questions I am hearing, and my answers.

It looks like equities are following oil prices. Why?

In the past, falling oil prices were seen as a net benefit for the global economy, and stock values therefore rose when prices fell. Cheap oil is a form of consumer stimulus; the rule of thumb has been that a fall in price of $10 a barrel boosts global GDP growth by about 0.2 percentage points.[1] Importers benefit a little more than exporters suffer.

This time, though, the market saw trouble in the form of a slowdown in China (a huge importer) and other developing markets, as well as in generally unexciting global economic conditions. And the slump was worse than usual for exporters. Russia and Saudi Arabia are both cutting public spending, for example, and diminished oil sales are another blow to struggling Brazil and Venezuela. Also, oil companies have cut back on investment sharply, with almost $400 billion in projects set aside. That has knock-on effects for manufacturing. Finally, because energy companies are a major factor in equities, when they suffer, so do other stocks.

The stimulus effect of cheap oil has not vanished, but it is not enough to outweigh the general pessimism. In a sense, the fact that prices fell so far, so fast, was the problem: it hinted at deeper worries about the global economy—worries that also showed up in the equity markets.

[1] "Who's afraid of cheap oil?," *Economist*, January 23, 2016, economist.com; Sam Ro, "UBS: Here's what a $10 move in oil does to GDP around the world," *Business Insider*, December 7, 2014, businessinsider.com.

What has happened (or not happened) since the trough in February has changed the dynamics. Specifically, the economies of China and of the major oil-producing countries have not fallen off the cliff, so demand hasn't suffered as much as feared. As confidence has recovered to some extent, both oil prices and equities have risen. The correlation is not exact, but it remains broadly relevant.

Why aren't more oil companies going out of business?

Oil executives have learned from their experience of previous price swings, and many have hedged prices. McKinsey looked at a sample of 25 US exploration-and-production (E&P) companies and saw that around 30 percent of production was hedged through 2015 and about 15 percent was hedged through 2016. This gives companies time to wait out the cycle. Canceling projects and cutting capital investment will also help many stay afloat. Investors, for their part, have proved willing to bet that prices will not stay low forever and have injected both debt and equity into the sector. There has been a great deal of bottom-fishing, particularly from private equity. Between November 2014 and September 2015, North American E&P companies issued more than $23 billion in equity, and an estimated $20 billion of asset sales has been injected into the system over the same period, according to the *Oil & Gas Financial Journal*.[2]

That said, there are only so many tools in the kit, and most have been used. Debt in many energy companies is trading below par, and prolonged low prices will certainly begin to drive some players into bankruptcy—sooner rather than later. "At $40 [a barrel], the [US] industry doesn't work," Steven Woods of Moody's told the *Financial Times*.[3] "Companies can't earn an adequate return on capital." And in fact, there have been some notable bankruptcies of late. At $50 a barrel, there is more breathing room, but companies with weak balance sheets remain vulnerable, and a number have missed payments, filed for bankruptcy, or publicly warned of bankruptcy.

Why is production running higher than consumption?

Global demand growth dropped by half between 2013 and 2014, to 0.7 percent. At the same time, supply stayed strong because the Organization of the Petroleum Exporting Countries (OPEC), in a bid to maintain its market share, continued to pump lots of low-cost oil. Supply growth rose to a record 2.2 percent annual rate in 2014. Demand growth recovered to some extent, rising by 1.7 million barrels in 2015, or 1.8 percent per year. However, new supply, both from OPEC and from non-OPEC projects that began when prices were higher, kept capacity growing, to a record 97.2 million barrels a day in the fourth quarter, according to the International Energy Agency.[4] In 2015 and in the first quarter of 2016, the global market was oversupplied by 1.5 million to 2.0 million barrels a day. That figure has diminished slightly as a result of growing demand, lower production from mature fields, and supply disruptions in several oil-producing nations.

In late February 2016, Saudi Arabia's longtime (and now retired) oil minister, Ali Ibrahim Al-Naimi, stated that cutting production "is not going to happen."[5] His successor, named in May, Khalid Al-Falih, former chairman of Saudi Aramco, has not said or done anything different so far.[6] In

[2] Hanwen Chang, "There will be blood," *Oil & Gas Financial Journal*, October 14, 2015, ogfj.com.

[3] Ed Crooks, "US oil and gas sector reboots to survive," *Financial Times*, April 4, 2016, ft.com.

[4] *Oil market report*, International Energy Agency, April 4, 2016, iea.org.

[5] Tom DiChristopher, "Saudi oil minister Naimi: Oil production cuts won't happen," CNBC, February 23, 2016, cnbc.com.

[6] Wael Mahdi and Nayla Razzouk, "Saudi Aramco chief named oil minister as energy policy firms," Bloomberg, May 9, 2016, bloomberg.com.

effect, Saudi Arabia is going to let the market do the rebalancing, and if that means that high-cost producers, such as those reliant on shale, oil sands, or deepwater resources, cannot keep going, so be it.

That sorting out is under way. Deepwater projects are prominent among canceled new capital projects. And US production has begun to decline, as low prices have taken some of the highest-cost assets out of production. Relatively high costs and aging assets are affecting fields in Colombia, Mexico, Nigeria, the North Sea, and Russia. All are hurting, and declines in production in these markets are adding up. The US Energy Information Administration projects that non-OPEC production will fall by 400,000 barrels per day in 2016, which would be the first such decline since 2008.[7] With production exceeding consumption, inventories grew. At the end of 2015, commercial inventory for crude oil and other liquids reached a record three billion barrels.

Where is the market going?

Left alone, the market will balance demand and supply; that is what markets do. And in the unlikely event that OPEC and Russia manage some kind of production freeze, this will happen faster. One way or another, though, the factors that sent oil prices way down are changing. Drawing on the work of my McKinsey colleagues, here are two possible scenarios. One is that the current price rally continues and prices, now around $50, creep upward this year and next. The other scenario is that supply disruptions get worse, and inventories begin to decline. In that case, prices would rise faster.

Of course, there are many variables that could upset any scenario. With the easing of sanctions, Iran could return to the market in a big way. That has not happened yet—in part because of logistical obstacles, including the resistance of Saudi Arabia—but it still could. Another wild card is Iraq, where production could fall if the giant oil fields in the south are threatened. China could hit a rougher patch, with a devastating effect on demand. On the other hand, low prices could trigger strong economic growth and lift demand. And so on.

Is there a 'black swan' scenario—something that is unlikely to happen but that would be a big deal if it did?

If supply disruptions ease, and production rises, that could drive prices back down. In that case, it's not impossible, paradoxically, that they will eventually fly up. That would happen if so much production gets shut down that spot shortages result, sending prices sky-high.

For consumers, this would be extremely unpleasant. But a fly-up could hurt producers, too. The risk to OPEC and other producers is that, in response, governments could accelerate alternative kinds of production and displace the use of oil altogether, curbing long-term demand.

In a sense, the only thing worse for OPEC than very low prices is very high ones—a counterintuitive idea that is often underestimated. "We need to remember that low oil prices are

[7] "Petroleum & other liquids," US Energy Information Administration (EIA), eia.gov; *Short-term energy outlook*, EIA, May 10, 2016, eia.gov.

bad for producers today and lead to situations that are bad for consumers tomorrow," OPEC Secretary General Abdalla S. El-Badri said earlier this year.[8] "And high oil prices are bad for consumers today and lead to situations that are bad for producers tomorrow." □

A version of this article was originally published on LinkedIn. For more of Scott Nyquist's columns, visit his LinkedIn Influencer page.

Scott Nyquist is a senior partner in McKinsey's Houston office.

[8] Abdalla S. El-Badri, "Outlook for global oil markets," Organization for the Petroleum Exporting Countries, January 25, 2016, opec.org.

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