Oil Exporters Need Action, Not Wishes for Higher Oil Prices

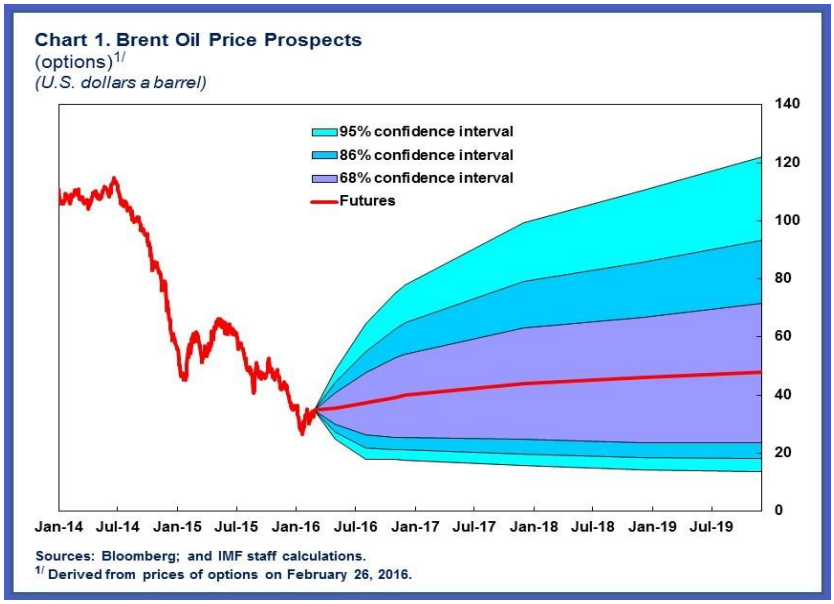
By Alberto Behar and Carlos Caceres

June 16, 2016

Oil prices are not expected to recoup their dramatic and prolonged drop since mid-2014 in the coming years. In this context, many oil exporting countries are starting to adjust through less generous energy subsidies, lower government spending, and alternative revenue sources, and some have launched ambitious plans to diversify their economies away from oil. This is in line with IMF advice, but adjustment is hard. Wouldn't it be easier for policymakers to cross their fingers and hope that oil prices bounce back? As we argue below, this strategy is unlikely to succeed.

Oil price uncertainty

The baseline Brent oil price underlying the April 2016 *World Economic Outlook* is $42 per barrel in 2017 and $48 per barrel in 2019 (Chart 1). However, there is considerable uncertainty around the baseline. For example, the purple confidence bands imply a one-in-six chance that oil prices will exceed $70 in 2019.

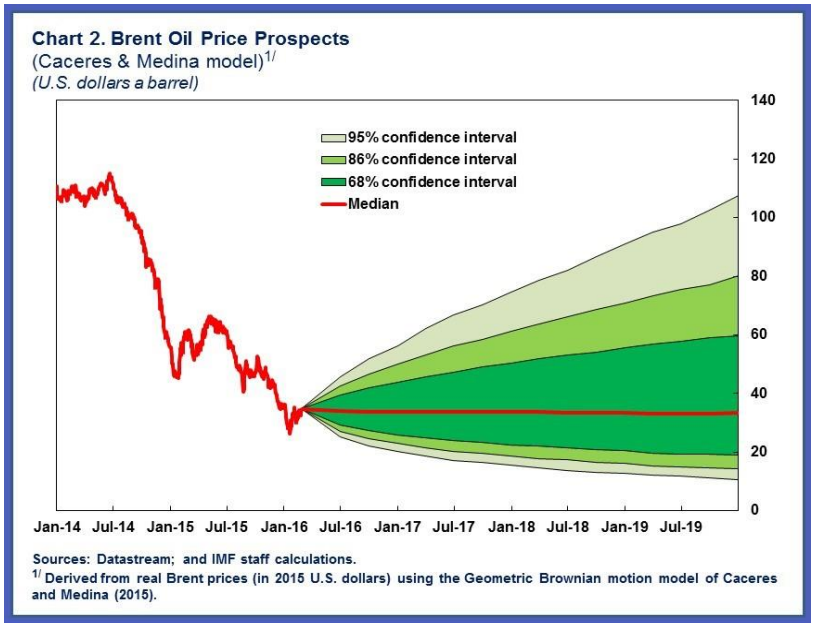


The confidence bands are based on the cost of an option to trade oil at a certain price on a certain date. The main advantage is its depiction of forward-looking expectations by market participants, but options markets can be thinly traded and the assumed underlying distribution can diverge from reality.

An alternative derivation of confidence intervals estimates a distribution of oil prices into the future based on historical patterns (Chart 2). In particular, it uses a "Geometric Brownian Motion" (GBM) model to estimate the underlying trend and volatility of oil prices (see Caceres and Medina, 2015). A drawback is that the

model assumes that the distribution of future oil prices will follow its past. Nonetheless, the range of possible oil prices is also wide; the dark green bands imply a one-in-six chance that oil prices will exceed $60 in 2019.

Breakeven oil prices



Does this uncertainty merit holding off on adjustment? One way to assess this is to compare the distributions with breakeven oil prices, which we do for the oil exporters in the Middle East and Central Asia (MCD). The fiscal breakeven is the oil price needed to balance the budget and the external breakeven is the price at which the current account balance is zero. Among many determinants, lower government spending or higher non-oil revenue lowers fiscal breakevens directly and, decreases external breakevens indirectly by improving the trade balance.

In the sample of countries we studied, the average fiscal breakeven price is $74 in 2017 and $70 in 2019. The external breakeven is $64 and $60 for the corresponding years. (You can find country-specific data and forecasts to 2017 through the data.imf.org portal.) Baseline oil prices are well below breakeven for almost all MCD countries. In other words, most IMF country teams expect deficits to persist. However, given the uncertainties indicated above, what are the probabilities that oil prices rise by enough to take care of these deficits?

Low chances of an oil price rescue

In 2017, there is a small chance that oil prices will be high enough to balance budgets. For half of our countries, options assign a less than 10 percent probability that oil prices will exceed their projected fiscal breakeven price. The average options-based probability across all countries is 16 percent. The average model-based probability is only 7 percent, including probabilities of below 10 percent for all but two countries. For external breakeven, the average probability is 26 percent using options and 16 percent using the GBM model.

Likewise, in 2019, there is only a one-in-five chance of balancing the budget and up to a one-in-three chance of balancing the current account. The probability that the oil price exceeds fiscal breakeven averages 22 percent using options and 17 percent using the GBM model, or about one-in-five across both approaches. For the external account, the probabilities are 32 percent (options) and 26 percent (model).

The probabilities rise over time—mostly because oil price confidence bands widen over the time horizon. There is a close correlation between methods across countries. However, consistent with options having more upside risk, options generally assign higher probabilities than the GBM model.

Hoping for sufficient oil price recovery is not feasible

Options and models have been wrong before; after all, in early 2014 they assigned very low probabilities to today's oil prices. Yet oil prices could also come in below the baseline. Moreover, the oil price is generally not something a country can control, while spending and non-oil revenues are part of the policymaker's toolkit. Specific policy options are available in the *Middle East and Central Asia Regional Economic Outlook Update* and *World Economic Outlook* but our main message is that, rather than *hope* the oil price goes *up*, policy-makers must *act* to bring breakeven prices *down*.

****

Alberto Behar is an Economist in the IMF's Middle East and Central Asia Department, where he works on oil-exporting countries. His current research topics include external adjustment in oil exporters, labor economics, and international trade. He has published in *The Review of Economics and Statistics, The Oxford Bulletin of Economics and Statistics*, and other journals. At the University of Oxford, Mr. Behar earned a doctorate in Economics from Nuffield College, was the *Biegun Warburg* Junior Research Fellow and Lecturer at St Anne's College, and completed a post-doctoral research fellowship in the Economics Department.

Carlos Caceres, an Italian citizen, is an economist in the Regional Studies Division of the IMF's Western Hemisphere Department. Previously, he worked in the Monetary and Capital Markets, the Fiscal Affairs, and the Middle East and Central Asia departments of the IMF. Prior to joining the IMF in 2009, Mr. Caceres worked in the department of economic services of the European Investment Bank in Luxembourg. Before that, he worked as an economist at Morgan Stanley in London. He received his doctorate from Oxford University (Nuffield College).