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MACROCOSM

Oilmageddon

Tuesday, December 16, 2014

Donald Luskin

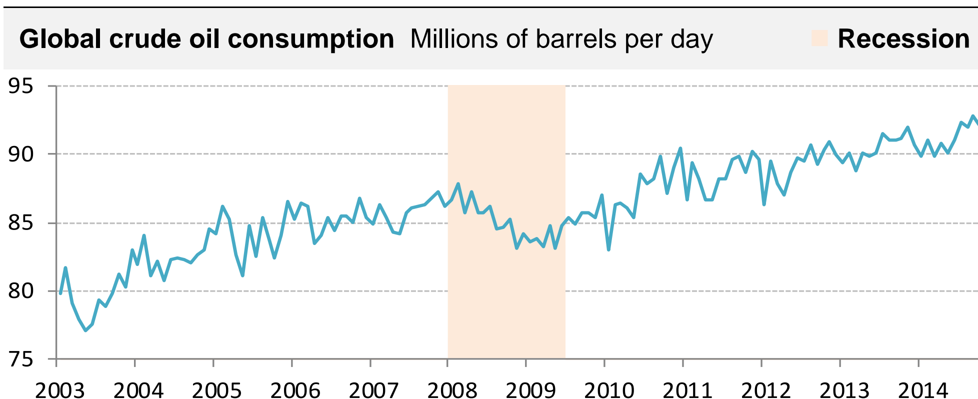
After the falling knife, a new equilibrium -- below the crippling oil prices of the last decade.

Our predictions for oil have all come alarmingly true. In early 2011 we predicted a secular bear market (see "The bin Laden Commodities Crash" May 6, 2011). This June we predicted a sharp price decline (see "The Stench of CrISIS" June 25, 2014). And in October we warned that while a lower oil price was a transformationally positive development for the global economy, in the short term there would be systemic instabilities -- this is a major regime change, and there will be big losers alongside the big winners (see "Don't Let a Good Oil Crisis Go to Waste" October 21, 2014).

The instabilities are upon us -- in spades. The big losers are identifying themselves. It seems that's all markets are focusing on now. But the instabilities are short-term, and we think we'll get through them without a lot of damage. On the other side beyond the instabilities is an enormous stimulus to global growth in the form of liberation from a decade of the highest oil prices in history. In the US, just the drop in gasoline prices represents a tax cut almost equivalent to abolishing the payroll tax. Be patient, be alert -- in this instability will emerge great opportunity.

We sense we're near the end of the present move for oil -- it's in that falling-knife phase that always climaxes major moves. We can't know what combination of panic selling-forward by producers and piling on by speculators is responsible for the hyper-cascade of the moment. We have no tool -- an equivalent of our equity risk premium model -- to tell us with any precision *exactly* when the knife is worth trying to catch. We know that

Global crude oil consumption Millions of barrels per day



Source: Bloomberg, TrendMacro calculations

Update to strategic view

OIL, US MACRO, US STOCKS, US BONDS, EMERGING MARKET MACRO, FX: Our prediction of falling oil prices has come disturbingly true, sending shock waves through the energy sector, S&P 500 forward earnings, the corporate and sovereign bond markets, and currency markets. Unless contagious credit events materialize -- which we don't expect -- then this is a race against time, with the here-and-now blow to the energy sector not yet offset by gains in all the oil-consuming sectors. We have no model to guide us, but it feels intuitively like the oil plunge has about maxed out. As drilling and capex plans are scratched, the oil price will rise short-term, bringing production back to life, and establishing a new equilibrium well below the growth-crippling levels of the last decade.

US FED: We don't expect the FOMC tomorrow to be fooled by oil's short-term impact on inflation. But given recent volatility, the Fed will want to tread as lightly as it can on any modifications to the "considerable time" language.

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there are forces both of equilibrium and disequilibrium at work. Let's review the bidding.

- *We know what's* not *going on here. We know that the almost 50% drop in oil prices in less than six months is not the product of a new global slowdown.* There is simply no evidence whatsoever for a global drop in petroleum demand having developed in 2014 -- it has risen to all-time highs (please see the chart on the previous page).
- A slowdown isn't the *cause* of low oil prices, but some degree of slowdown could be the *result* of them, at least in the short term.
- *To be sure, in one very important sense demand has an important explanatory role: it takes time for new demand to be formed in response to a new regime of lower oil prices.* Consumers -- and especially investors -- need to acquire the confidence that low prices will be reasonably long-lived. And after ten years of excessively high prices, they may need some time to even decide what to do with low prices, such hopes and dreams having been ruled out for so long. *When that confidence is acquired and those decisions begin to be made, we will see a significant demand response which, on the one hand, will trigger an acceleration in global growth, and on the other hand will stabilize falling oil prices*.

But in understanding this year's plunge in oil prices, we think all the useful explanations can all be found on the supply side.

- *First, the geopolitical risk premium that had to be built into oil prices after the terrorist attacks of September 11, 2001, has now been dissipated as the wars in Iraq and Afghanistan have wound down into a terrorist-hunt in cooperation with leaders of the Middle East nations. This is a "peace dividend"* (again, see "The bin Laden Commodities Crash" May 6, 2011 and "The Stench of CrISIS" June 25, 2014).
- *Second, there has been a surge of new domestic production* thanks to horizontal drilling and hydraulic fracturing, bringing more than 3 million barrels a day to market in just three years.
- *Third, at the same time, expected production -- not just actual production -- has risen*, as oil fields in Iraq and Libya have remained surprisingly productive despite what had been expected to be disruptive rebel actions.
- *Fourth, OPEC has opted to not intervene in the face of all these developments with a production cut.*
- *We think OPEC's decision has perhaps been the most influential in changing market psychology on oil.* Some observers have opined that it is the clever move of the Machiavellian Saudis to force out lower-margin competitors in the US and Russia. Perhaps -- and it may do that. But this narrative treats a fractious plurality market-share cartel as having very special market powers, as though even in seeming defeat it is still controlling the levers of the world.
- We don't see it that way. OPEC may have the unique physical power to *increase* production in tight markets in order to rein in excessively *high* prices. But that power is not symmetrical for

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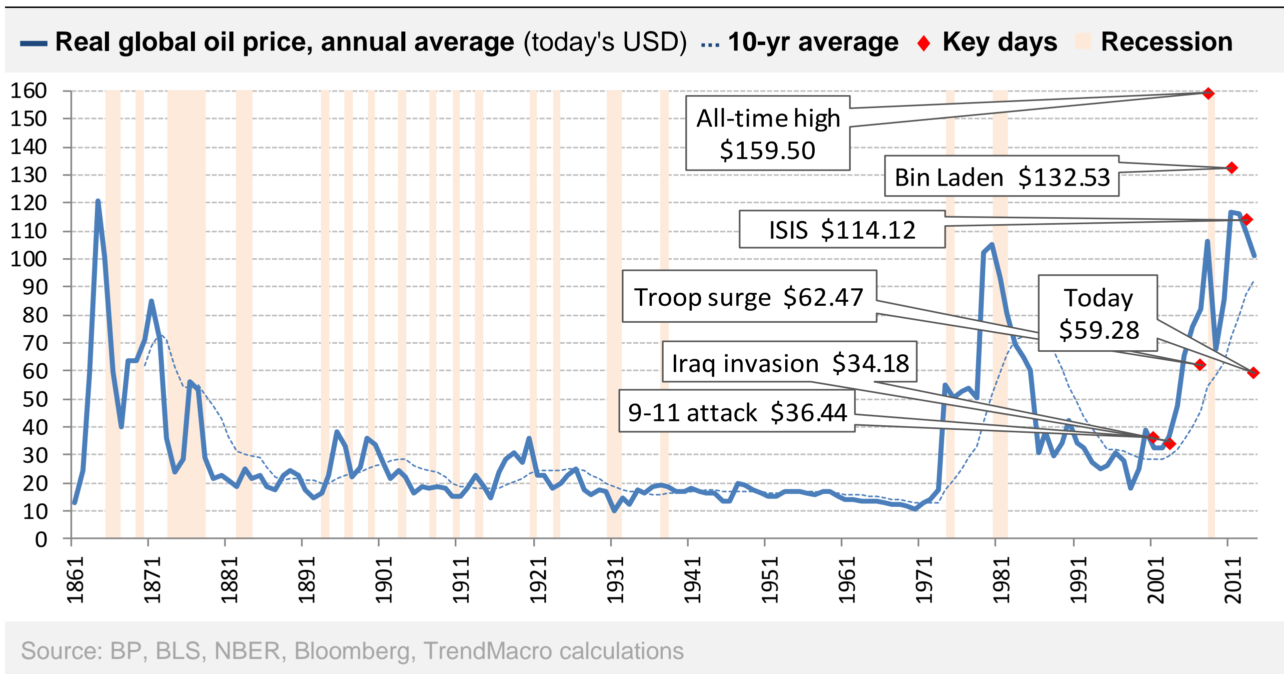
today's circumstances. An OPEC production cut may well raise prices to some extent and for some period, but that would only function as a price umbrella under which surging North American production could flourish, ultimately only adding to supply.

- *Thus OPEC's seeming forbearance here is really an act of submission and helplessness, signaling to the market that the global energy industry has entered a new phase of world-wide "perfect competition" ushered in by disruptive new technologies.*
- Where will it end? Again, while we lack any way to be precise about the current move, it feels to us like it's about over. *But long-term -- that is, over the next two to five years, as production costs fall -- we expect the oil price to mean-revert to where it's been for most of its 153-year history as an industrial commodity: in a range between $15 and $40 in today's dollars* (please see the chart below).

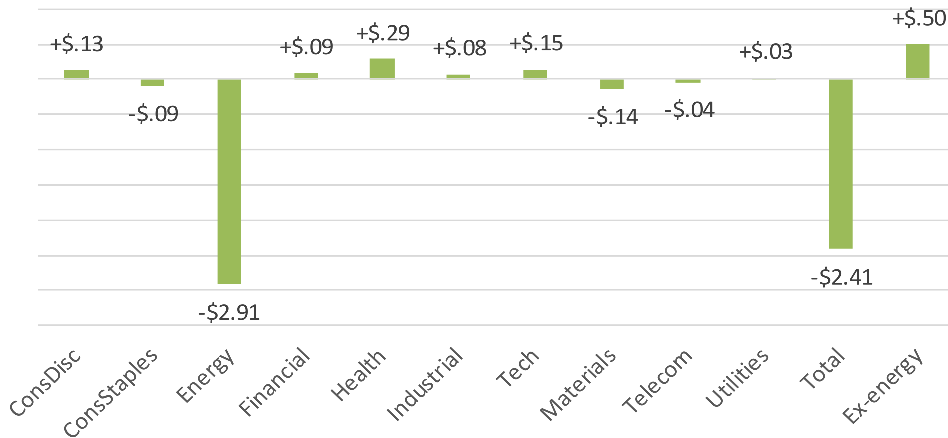


Now let us turn to the instabilities and potential systemic risks that have been set in motion by falling oil prices. We'll say at the outset that this will involve many imponderables. Most important, we'll want to know which ones will lead to equilibrium, and which to disequilibrium. So we'll have to make guesses about system fragility, supply responses and demand responses, and geopolitical calculations and geopolitical errors.

- *Until consumers and investors react to lower oil prices by either buying more oil or buying something else, falling revenues in the energy sector will be a deadweight loss to global output* (in this statement we are speaking of output measured in nominal money, not produced units -- and we assign no value to additional saving).
- In the US, arguably some demand response has already begun to materialize, with some of the best output, jobs and PMI data in this business cycle (please see "Data Insights: GDP" October 30, 2014 "Data Insights: Global PMI" December 3, and "Data Insights: Jobs" December 5).

- Yet recent very strong macro data points have not been matched by upgrades to forward earnings -- which we think can be more sensitive indicators. Since the all-time high in S&P 500 forward EPS on October 2 at $127.57, the energy sector has shaved off $2.91, with the other nine sectors only offsetting that by $0.50 -- for a net EPS drop of $2.41 (please see the chart below).

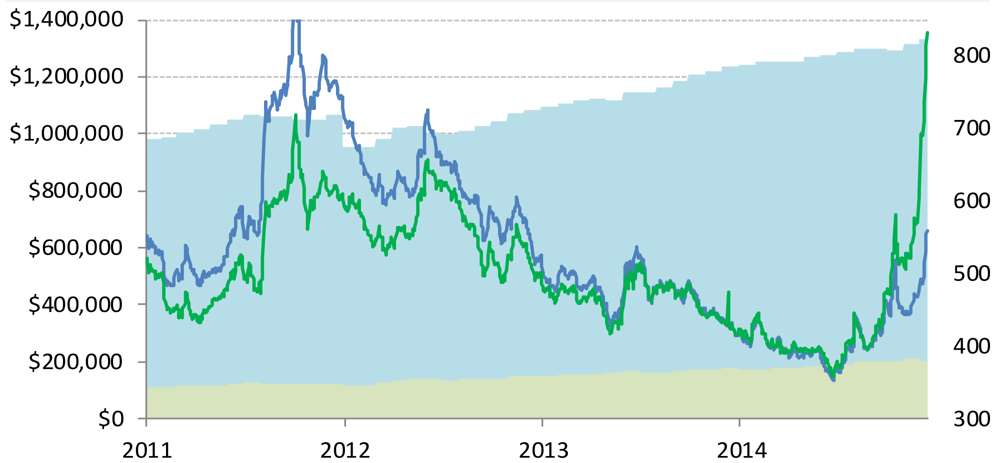
S&P 500 consensus forward EPS Change from October 2, 2014 all-time high



Source: Bloomberg, TrendMacro calculations

- It's as though the consensus is *not only* expecting no earnings offset in non-energy sectors, *but instead* an outright decline, presumably spilling over from hard times that can be expected in the coming year in the energy sector. We got a nice piece of color on this last week visiting with a wise investor in Texas, who listed some local shocks that could emanate from an energy retrenchment -- all the way to falling prices for Western art.
- If we are trying to understand the dynamics of adjustment in this episode, then in the short term we would have to put this aspect of it on the side of disequilibrium. There is to some extent a vicious cycle when, all else equal, spillovers from difficulties in the energy sector diminish the wealth of other sectors, which in turn causes those sectors to use less energy, and so on.
- But this risk is only a time-disconnect. Again, it takes time for demand to develop in response to a downside oil shock, while the pain in the oil sector itself -- and in radiating circles around it of intensity that diminishes with distance and time -- is immediate.
- *Financial contagion could be another channel by which the energy sector could transmit difficulties to the rest of the economy.*
- Over the last three years -- while US frackers have added more than 3 million barrels a day to domestic oil production -- the face value of non-investment grade bonds issued by the energy sector has risen to $202 billion, growing from 11.4% to 15.2% of the total junk market. Spreads in the energy sector have widened dramatically, with an especially alarming move in the last week as domestic crude prices have fallen below $60 (please see the chart at the top of the following page).

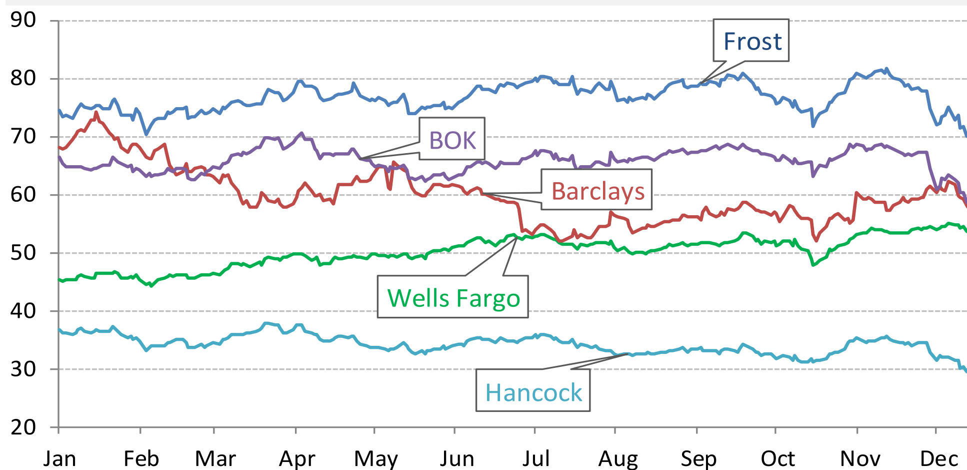
US non-investment grade bonds: Merrill Lynch High Yield Master Index
Face value (bil): Total Energy Spread: Total Energy



Source: Merrill Lynch, TrendMacro calculations

- Regional banks with [disproportionately large energy portfolios] such as Cullen/Frost, BOK and Hancock are on the hook for loans to the energy sector that looked sounder at $100 oil than they do at $56 oil. Their stock prices have fallen to their lows for the year, but they are not in death spirals (please see the chart below).
- Two larger banks -- Wells Fargo and Barclays -- are [stuck with bridge loans] to the energy sector for a deal that made more sense at $100 oil than it does at $56 oil. So far their stock prices have not been especially affected (again, please see the chart below).

Stock prices of banks with notable loan exposure to the energy sector
Barclays shown at quarter-scale



Source: Bloomberg, TrendMacro calculations

- We have highlighted to clients that Russia will be the biggest loser, caught in a pincer action between falling energy revenues and western sanctions. It now widely assumed that Russia is headed for a severe recession. [Now the ruble has crashed], and expensive attempts to support it have so far failed. Other large nations highly

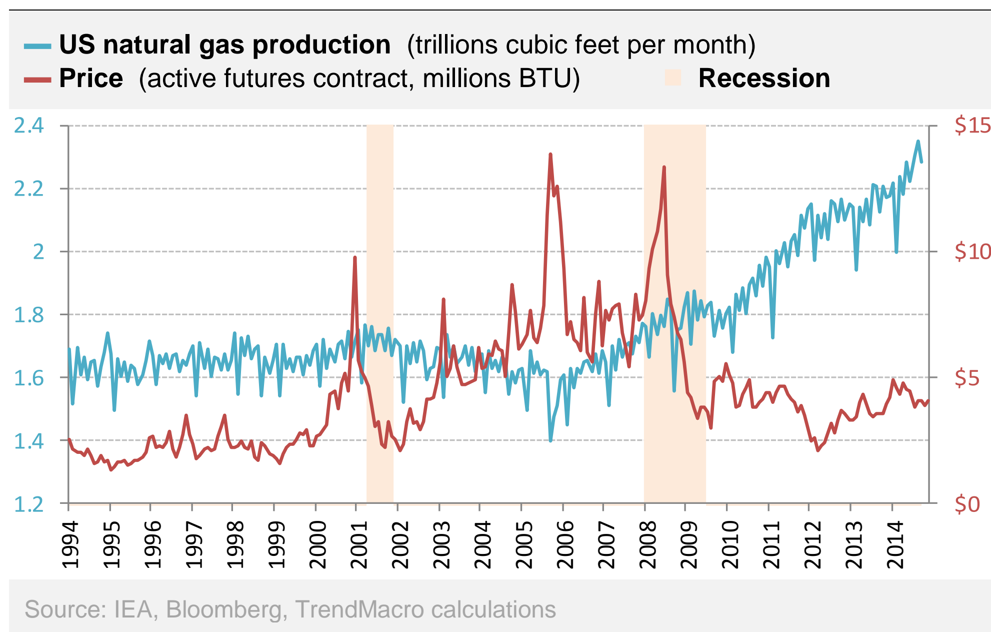
dependent on oil revenues are also vulnerable -- Brazil and Venezuela come to mind.

- We do not have a house view as to whether there will actually be any defaults. There might be -- probably will be, here and there -- but there doesn't need to be. In situations like this, at least on the corporate side, potential defaults are often an invitation to consolidation.
- *But let's say there will be defaults. Here, too, the risk points to disequilibrium. Investors have learned that corporate and emerging market sovereign bond defaults can be contagious. A daisy-chain of defaults -- or even just an interruption in capital flows for fear of defaults -- could start a vicious cycle in which the global economy would slow, thus slowing energy demand, thus putting more downward pressure on the oil price, and so on.*
- While such things can be entirely non-rational -- merely self-fulfilling prophecies based on nothing but scary headlines -- their actual impact is mediated by system robustness. Surely the post-crisis global banking system is not as fragile as it was in 2008 when Lehman Brothers failed -- if nothing else, central banks and other authorities have acquired experience in deploying safety nets should anything go terribly wrong. And surely the emerging markets have also learned from experience -- when Russia defaulted in 1998, bringing down Long Term Capital Management, it had substantially no foreign reserves -- today it has about $400 billion.
- For Russia, there's a unique geopolitical risk. On the upside, its financial distress points to a more compliant neighbor for Europe. Surely with revenues now so desperately needed, Russia wouldn't cut off natural gas to Europe as a move in its Ukrainian game -- indeed it might even have to agree to ease its blockade on coal for Ukraine itself. On the downside, a damaged Russia -- especially one with a sharply weakened ruble -- is a poor trade partner for Europe, which derives 1.4% of GDP from exports to Russia.
- The worst potential non-linearity here is that President Vladimir Putin is arguably a "cornered rat," increasing desperate to shore up his power with ever more reckless military gestures. One of these gestures, even a seemingly trivial one, could inadvertently trigger a crisis -- much as the accidental downing of a Malaysian Air passenger flight finally moved a reluctant Europe to impose sanctions (see "On MH17" July 18, 2014). Don't rule this kind of thing out -- over the weekend, a Russian military plane with its transponder turned off narrowly missed a mid-air collision with a Swedish passenger jet.
- *Perhaps oddly, it's not so clear whether such things are on the side of disequilibrium or equilibrium in the current situation -- at least if we define "disequilibrium" as a vicious cycle leading to even lower oil prices. We can think of plenty of geopolitical crises -- especially those that involve Russia -- that would lead to* higher *oil prices.*

Many of the considerations we have just reviewed hinge on the operational and financial well-being of US oil producers. On the face of it, the sudden large drop in prices is a deadweight loss that will be very damaging to them. It seems certain that the smallest and least efficient will get swept

away. It wouldn't be the first time in the history of technology innovation and global markets that such a thing has happened.

- *But let us say at the outset that this points very much in the direction of equilibrium. If domestic producers slow or reduce production, then -- considering that it was their more than 3 million barrels a day of new production in just three years that is primarily responsible for the present price collapse -- prices should stabilize and move somewhat higher in the short to intermediate term.*
- We don't question that some producers will have to give up, and that some will have to cut back their capital plans or their production. But we will be quite surprised if this is the oilmageddon that some commentators are now expecting.
- For one thing, that hasn't been the case in the domestic natural gas industry, even though prices have undergone a secular collapse in this business cycle versus the prior one, just as the gas fracking boom took hold, and has stayed at very low levels for many years now.
- Yet production continues to increase -- and rapidly -- seemingly almost insensitive to price (please see the chart below). We don't know much about the details of the industry, but it must be the case that producers are managing to keep their costs under the low price. Years of experience will do that.



Source: IEA, Bloomberg, TrendMacro calculations

- Shale *oil* producers don't have as many years of experience as shale *gas* producers do. But already, the most efficient operators with the most experience in the most seasoned geologies are using new productivity tools such as multi-drill pads and walking rigs to move breakeven prices lower and lower, some well below even today's low oil price.
- We are willing to bet that some producers -- many perhaps, but not all -- will be able to continue to innovate their cost structure lower. Remember, some, not all, semiconductor producers learned to live

under the competitive rigors of Moore's Law. Some, not all, retailers learned to live with competition from Walmart.

- There have been many cruel shake-outs in semiconductors and retail, and the process of creative destruction there is ongoing -- which is as it should be. But once technologies like integrated circuits and managerial techniques like supply-chain optimization permanently enter the capability-set of the global economy, no mere shake-out can dislodge then.
- OPEC may be able to send a shock through the domestic fracking industry, and slow the adoption of fracking in Mexico, the United Kingdom, Argentina and Poland, and the many other parts of the world with significant undeveloped shale oil resources. But the new knowledge of how to coax oil from rocks cannot be unlearned. *And if lower oil prices today slow the proliferation of that knowledge and lead to higher oil prices as supply slows, then those higher oil prices will just draw in the frackers again. And therein lies the ultimate source of equilibrium here.*

Finally, a few words about how this fits into the FOMC tomorrow.

- We don't think Fed Chair Janet Yellen is likely to worry too much about the effects of falling oil prices on inflation -- even if tomorrow's monthly Consumer Price Index data shows a month of outright deflation, which it very well might.
- At the prior FOMC, at which point there had already been a substantial effect from oil on reported inflation, the statement said, "Although inflation in the near term will likely be held down by lower energy prices and other factors…the likelihood of inflation running persistently below 2 percent has diminished somewhat since early this year (see "On the October FOMC" October 29, 2014).
- But given the recent volatility associated with falling oil prices, and the debt market uncertainties we have mentioned here, the FOMC may be at pains to be as reassuring to markets as possible as it considers modifying the "considerable time" language that sets expectations for the fed funds rate to lift off from zero.
- It's a logical necessity that there be at least a technical change in the language. After all, asset purchases have now already ended as of the October FOMC (see "On the October FOMC" October 29, 2014), so it would be an anachronism to keep using that past event as a reference point for timing liftoff. *That's not to say that the actual words "considerable time" could not be preserved. And given the recent volatility, offering that kind of continuity wouldn't be an unwise move for the FOMC.*
- *Even if some substitute language is swapped in, it will mean the same thing. Until further notice, lift-off from zero will be at mid-year.*
- Funny thing, actually. The very first time the "considerable time" language appeared was at the September 2012 FOMC, the same meeting at which QE3 was announced (see "On the September FOMC" September 13, 2012).
- Then it was "a considerable time after the economic recovery strengthens" -- and that was to be "at least through mid-2015." So the Fed got it exactly right from the very beginning. Who knew?

Bottom line

Our prediction of falling oil prices has come disturbingly true, sending shock waves through the energy sector, S&P 500 forward earnings, the corporate and sovereign bond markets, and currency markets. Unless contagious credit events materialize -- which we don't expect -- then this is a race against time, with the here-and-now blow to the energy sector not yet offset by gains in all the oil-consuming sectors. We have no model to guide us, but it feels intuitively like the oil plunge has about maxed out. As drilling and capex plans are scratched, the oil price will rise short-term, bringing production back to life, and establishing a new equilibrium well below the growth-crippling levels of the last decade. We don't expect the FOMC tomorrow to be fooled by oil's short-term impact on inflation. But given recent volatility, the Fed will want to tread as lightly as it can on any modifications to the "considerable time" language.