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MACROCOSM

The Crude Stocks Conundrum

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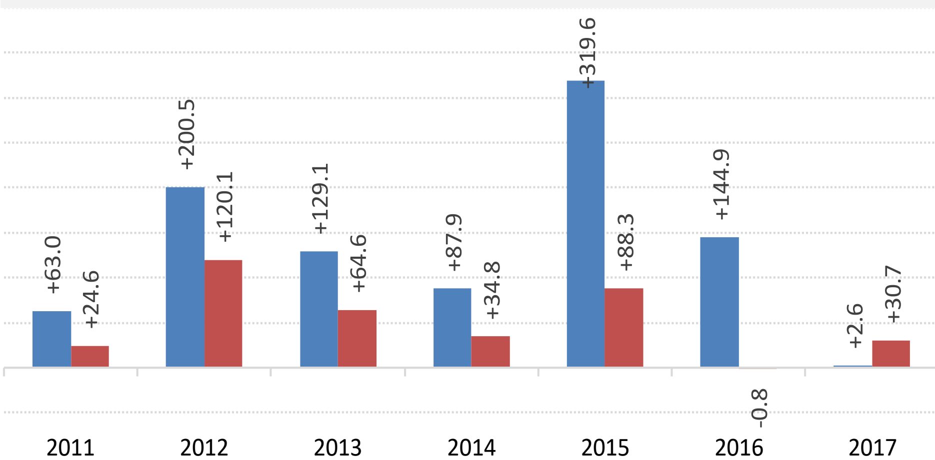
Markets remain hypnotized by distorted inventory statistics, ignoring the fundamentals.

We continue to feel challenged by oil, which has retreated further from our $65 target, the upper end of our forecasted trading range (see "How High Can Oil Go?" May 10, 2016). Instead, it has broken below $45, the bottom of that range. But we're sticking with the view that markets are failing to appreciate limits to continued production gains in the near term, and the complex impact on global inventories of the large and prolonged production cuts by OPEC and non-OPEC producers.

- *From here the question is not only whether or not $65 is still an attainable price target. It is also key to ask whether, from here, the oil price can go much lower. We don't think it can. If this is an over-under proposition, we will take the over.*
- It's hard to have complete conviction on anything in the crude market at this point. It seems to be dominated by what amounts to "fake news" – and it's maddeningly difficult to get at reality.
- *For example, global crude stocks statistics would have you believe that 30.7 million barrels have gone into storage in 2017, while global production growth has been only 2.6 million. Are we storing oil that wasn't produced?*
- That fantastical mismatch has no modern precedent (please see the chart below). To be sure, it could be explained by a

Global growth: Production Stocks Millions of barrels, YTD to April



Source: OPEC, JODI, TrendMacro calculations

Update to strategic view

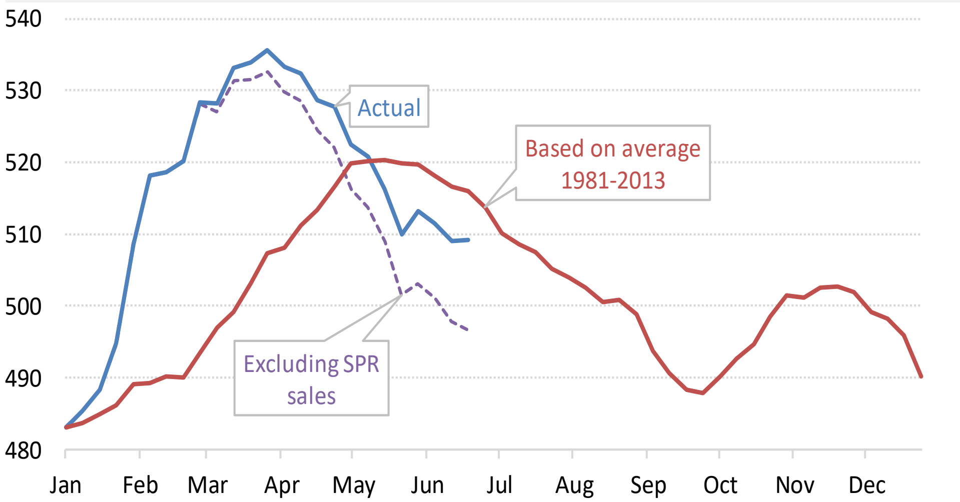
OIL: Markets hang on crude stocks statistics, yet they seem to imply that oil is being stored that wasn't produced in the first place. In the US, where inventories remain the most swollen, sales from the SPR are masking progress on expected drawdowns and adding to the illusion of a production miracle. Production in the Permian has to slow down now as it bumps up against takeaway capacity. Markets are assuming a return to peak production in Nigeria and Libya – we're almost there, and the downside risk is greater than the upside opportunity. In Saudi, the elevation of the aggressive young bin Salman is a wild-card. We still think oil can go to $65. We have greater conviction that, in the intermediate term, it can't go much lower than where it is now.

[Strategy dashboard]

catastrophic fall-off in global demand. But there hasn't really been any sign of unusual slowing in macro-economic activity that would, of necessity, have to accompany such a fall-off.

- *At the same time, US commercials stocks look more bloated than they are because of the little-appreciated fact that the Strategic Petroleum Reserve has started selling oil into private storage, starting in late February.*
- Even abstracting from this, just by the headline numbers, US stocks have come down by 26.3 million barrels since the end of March. *This takes them 6.8 million barrels below historical norms for this time in the year, given the 2016 year-end starting level* (please see the chart below).

US commercial ending stocks Millions of barrels



Source: DOE IEA, TrendMacro calculations

- *And today's US stocks would be 12.6 million barrels lower still if the US hadn't sold volumes from the SPR* (again, please see the chart above). By the end of September, 2017 SPR sales will increase to 18 million barrels, all of which will be transferred into commercial ending stocks.
- This year's sales are, in part, to self-fund modernization of the SPR's infrastructure, with additional sales for this purpose recurring over the following three years (please see the chart on the following page).
- *Beyond that, it seems the SPR has become something of a honey-pot for federal spending.*
- The majority of this year's sales are earmarked to pick up the tab for cancer research funding under the 2016's 21st Century Cures Act. Similar sales will occur in the two following years.
- Next year, and every year through 2025, SPR sales will fund general "deficit reduction" under a 2015 budget act.
- Then from 2023 through 2025, SPR sales will fund transportation infrastructure projects under 2015's F.A.S.T. Act (again, please see the chart on the following page).

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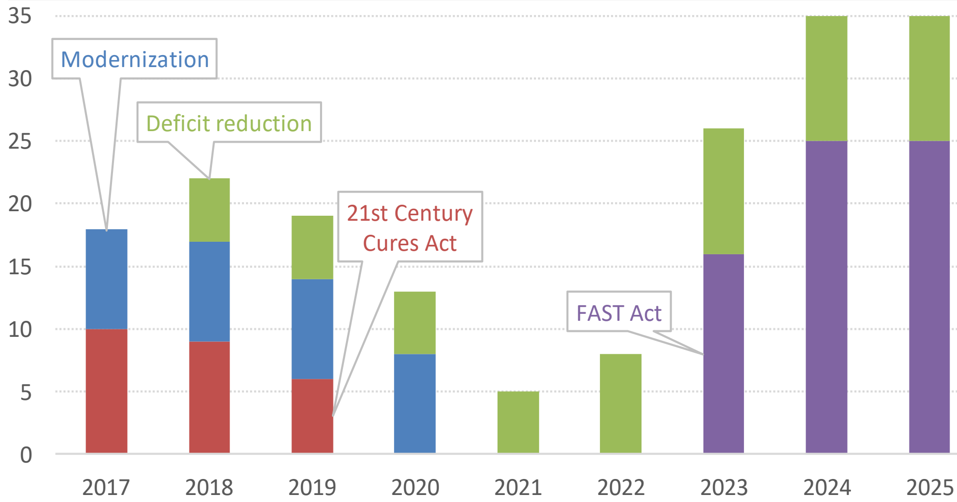
[About us]

Strategic Petroleum Reserve, planned sales Millions of barrels at $50



Source: DOE, US Congress, TrendMacro calculations

- The exact volumes of future SPR sales are unpredictable, because the legislative authorization for them is framed in terms of money raised, not barrels sold. If the oil price is higher, fewer barrels would have to be sold to meet the funding mandate – if the price is lower, more would have to be sold. This introduces a pro-cyclical dynamic into the crude market, by which a decline could be turned into a self-feeding cascade, the way the "portfolio insurance" fad arguably drove the stock market crash of October 19, 1987.
- *That nightmare scenario aside, the current SPR sales are somewhat worsening the slack in the US crude markets, by contributing to commercial inventories just when drawdowns are needed to push prices higher. But once commercial stocks are worked down to more historically normal levels – as we are certain they will be – the SPR sales will seem quite trivial in flow terms – less than 50,000 barrels per day.*
- *Whatever the exact extent, markets are making a mistake if they interpret the mere transfer of inventory from public hands to private hands as evidence of a production glut.*
- Perhaps markets are unimpressed by the progress made so far in slimming US stocks because, after all, they started the year at a near-record level, and then rose from there to all-time highs. But that starting point and that surge were, to a large extent, the one-off consequence of OPEC and Russia producing and exporting – and US refineries eagerly laying away – a tsunami of crude to get ahead of the implementation of production cuts.
- US stocks are still about 100 million barrels higher than their five-year average – which is the target of OPEC's production cuts (please see the chart on the following page). That's a long way down, and will take a lot of resolve by OPEC to achieve.
- But markets would be much more sanguine if their focus were on OPEC and non-US OECD closing stocks. As of April, the most recently available global measure, non-US OECD stocks are only

Recommended Reading

Minimum Wage Increases, Wages, and Low-Wage Employment: Evidence from Seattle
Ekaterina Jardim, Mark C. Long, Robert Plotnick
Emma van Inwegen,
Jacob Vigdor and Hilary Wething
NBER
June 2017

Seattle's Minimum Wage Experience 2015 - 16
Michael Reich, Sylvia Allegretto and Anna Godoey
UC Berkeley Center on Wage and Employment Dynamics
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Koch Group Says Republican Health Plan Doesn't Go Far Enough
John McCormick
Bloomberg Politics
June 25, 2017

Why Grenfell Tower Burned: Regulators Put Cost Before Safety
David D. Kirkpatrick, Danny Hakim and James Glanz
New York Times
June 24, 2017

Grenfell Tower Fire: Mindless Deregulation, Senseless Harm
The Editorial Board
New York Times
June 22, 2017

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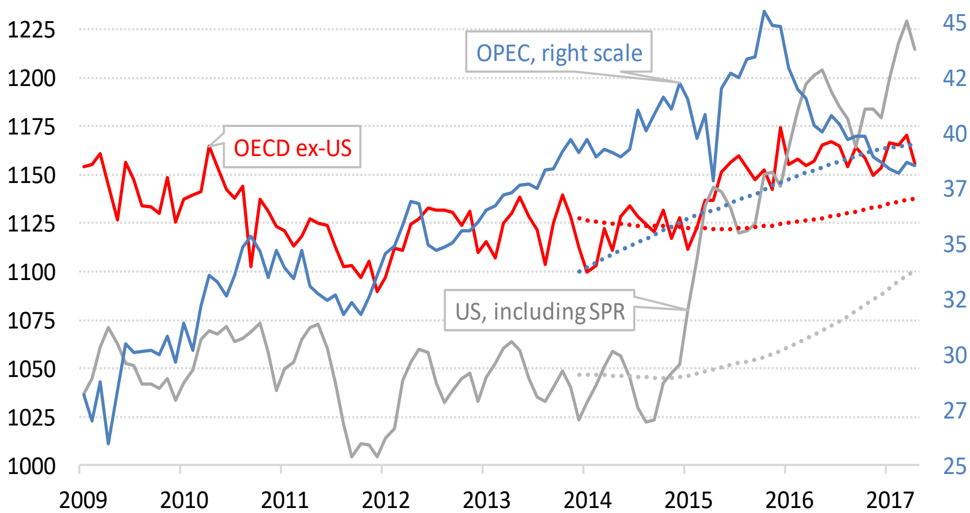
24 million barrels above their five-year average. OPEC stocks are 6 million barrels *below* (again, please see the chart below).

Ending stocks **··· 5-year average** Millions of barrels, as of April 2017



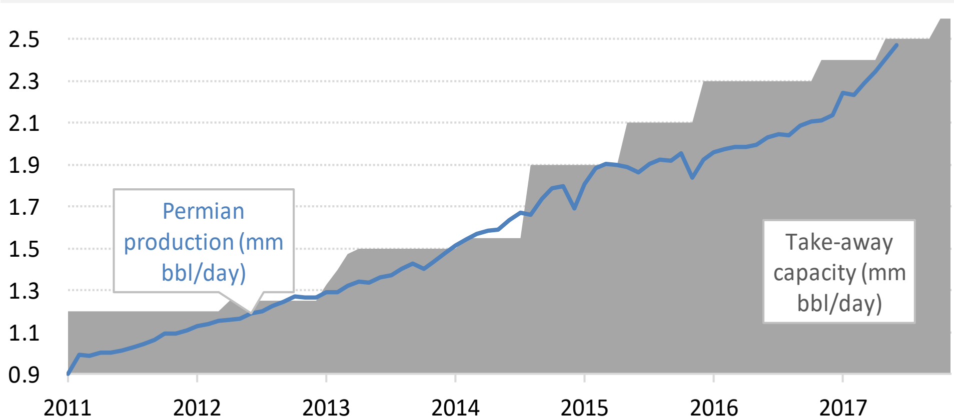
Source: JODI, TrendMacro calculations

- Earlier this month, the Saudis – in what seems to us like a [blinding glimpse of the obvious]() – turned their fire on the right target by [announcing a reduction]() in oil exports to the US, from over 1 million barrels per day in May to as low as 750,000 in August.

The build-up in US commercial crude ending stocks is occurring at a time when Permian Basin production has also rebounded strongly, increasing by about 364,000 barrels per day since the cartel announced the output cut agreement at the end of November last year (see ["While the World Cuts, the US Pumps"]() December 12, 2016). *But the Permian has run out of immediate pipeline capacity to carry crude to the Gulf Coast* (please see the chart below, and ["Is Oil Priced to Perfection Again?"]() May 9, 2017).

- Pipeline takeaway capacity is now about 2.5 million barrels per day,

Permian production and transport dynamics



Source: DOE IEA, TrendMacro calculations which leaves little room ahead of today's 2.47 million barrels production.

- There is some higher-cost rail capacity available, and Energy Transfer Partners has announced a new pipeline for 100,000 barrels to the Nederland, Texas market to come into service sometime in the 4th quarter. *Other than that, Permian producers will have to wait for pipeline projects not scheduled until 2018 and 2019. No wonder Midland crude is trading at a discount to Cushing.*
- The Midland to Sealey pipeline will initially push 200,000 barrels to the Gulf Coast in the 1st half of 2018, and ultimately expand to 440,000. The Epic Pipeline will initially transport 200,000 barrels to Corpus Christi by the 1st quarter of 2019, and ultimately expand to 440,000.
- While the Permian has been blowing-and-going since the OPEC-led output cut, Bakken production is actually down about 6,000 barrels per day, and Niobrara is up only 39,000. The Eagle Ford has picked up production by about 181,000 barrels in order to source condensate and light crude to markets in Asia (along with Permian) after the cartel cut production, but the rate of growth has been tapping off lately.
- *All told, we don't see 2nd half 2017 US shale production rising nearly as much in as the 1st half.*
- *Pointing in the other direction, however, are upside production surprises in strife-torn Libya and Nigeria.*
- Libya's national oil company chairman Mustafa Sanalla has done an incredible job protecting and restoring production and exports in the face of multiple armed groups that have shut down ports, pipelines and fields.
- As a result, Libyan production has returned to within 170,000 barrels per day of its post-Qaddafi peak at 887,000 barrels. But Libyan production is arguably just a shot away from falling back to lows seen less than a year ago at just 270,000 barrels.
- In Nigeria, the Christian acting president Yemi Osinbajo – the vice president, filling in for Muslim Muhammadu Buhari who is being treated in London hospitals – has reversed Buhari's directive to stop paying Christian rebels, the Niger Delta Avengers, to "protect" the pipelines. While not being paid to "protect" them, the NDA have been blowing them up.
- Nigerian production has returned to within 250,000 barrels per day of the 2015 peak at 1.93 million. It is presenting about 250,000 barrels above the 2016 lows, at the height of NDA destruction.
- Our sense is that markets have fully discounted the best-case scenarios – assuming that Libyan production will grow by 170,000 barrels per day, and Nigerian by 250,000. *We think markets are underplaying the downside possibilities that Libyan production could fall by 616,000 barrels per day, and Nigerian by 250,000.*
- At the same time, in Saudi Arabia, the elevation to Crown Prince of young Mohammad bin Salman raises risks in the region. MBS – as he is called – has been a vocal militarist, taking an overtly aggressive tone with Iran, engineering a proxy war in Yemen (see "Domestic Crude: Getting More Refined" March 26, 2015) and now doubtless leaving his fingerprints on the blockade of Qatar.

- MBS is a strong champion of the planned initial public offering of Saudi Aramco, as a cornerstone of the long-term economic reinvention of the Kingdom (see “PIF the Magic Aramco IPO” April 4, 2016). That means MBS has to be focused on getting the oil price higher, to enhance the value of Aramco’s assets. On the one hand, that implies that MBS’s ascension underscores Saudi’s whatever-it-takes commitment to the OPEC-led production cuts. *On the other, it means MBS wouldn’t necessarily mind a regional conflict that temporarily disrupted global oil supplies.*

Bottom line

Markets hang on crude stocks statistics, yet they seem to imply that oil is being stored that wasn’t produced in the first place. In the US, where inventories remain the most swollen, sales from the SPR are masking progress on expected drawdowns and adding to the illusion of a production miracle. Production in the Permian has to slow down now as it bumps up against takeaway capacity. Markets are assuming a return to peak production in Nigeria and Libya – we’re almost there, and the downside risk is greater than the upside opportunity. In Saudi, the elevation of the aggressive young bin Salman is a wild-card. We still think oil can go to $65. We have greater conviction that, in the intermediate term, it can’t go much lower than where it is now.