OPEC PRODUCTION AND CONSEQUENCES FOR SHORT TERM OIL PRICE

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Introduction to Rystad Energy – an energy database and advisory firm

- Independent energy database & advisory firm established 2004

- Headquartered Oslo, Norway with offices in major oil & finance hubs globally.

- Vendor of business intelligence databases for the global oil & gas industry

- A leading energy advisor within E&P, MIDSTREAM and OFS strategy, market analysis and business development

- Publishing a number of industry reports on high impact topics

Source: Rystad Energy
Our approach and heritage: A bottom-up database of ~65,000 upstream oil and gas projects.
2017 OPEC cutting growth, Non-OPEC/shale oil is responding immediately to the cuts

Change in liquids production year on year
Million bbl/d

OPEC
Non-OPEC

Historical oil price (Brent*), 1980-2017
Dollar per barrel, real December 2017

1. OPEC decided against cutting supply at Nov 27, 2014 meeting
2. ...and instead started a volume war
3. ...shale oil expanding, no Y/Y cut from OPEC
4. ...Non-opec is stabilizing the market, the largest cut since 1992

Source: Rystad Energy UCube
Despite no Y/Y cut from OPEC, the OPEC communication matters and moves the market

ICE Brent crude front month contract price and OPEC policy announcements (2015-to-date)
USD per bbl

- OPEC boosts production
- OPEC meeting No deal, but agree to monitor market closely
- OPEC meeting No policy change
- OPEC meeting Target cuts introduced
- OPEC reintroduce target range
- Non-OPEC agreement
- OPEC meeting Cuts extended 9 months
- Non-OPEC agreement
- OPEC/non-OPEC status meeting in Kuwait
- JMCC recommends 6-month cut extension
- KSA announces producer talks in Sep-16
- Doha production freeze talks end without agreement
- Nigeria production cap agreed
- Production freeze agreement announced (KSA, RU, QA, VZ)
- Production freeze agreement (KSA, RU, QA, VZ)

Source: Bloomberg, Rystad Energy research and analysis
March 2017 - OPEC needed to continue the cuts, if not 2014/15 all over again, 40 USD/bbl not clearing the market

World liquids supply and demand, quarterly
Million bbl/d

But are the OPEC cuts large enough?

Note: The 1Q drop in global supply in 2017 and 2018 is partly driven by the ~400 kbbld seasonal drop q/q in biofuels production in Brazil.
Source: Rystad Energy research and analysis
Spending vise the cycle turned in 2016

Change in upstream capex budgets, year-over-year
Billion USD real terms

Source: Rystad Energy UCube
Driven by shale oil – already more than a doubling in spudded wells

US shale oil activity (LHS) and associated DUC inventory (RHS)

Number of wells

- DUCs (RHS)
- Spudded Wells (LHS)
- Completed Wells (LHS)

More completed than spudded

More spudded than completed. Delays due to bottlenecks and price expectations OFS

Source: Rystad Energy NASWellCube
Main driver for shale comeback – significant reduction in breakevens and oil price above 45

Average wellhead breakeven oil price, by play and spud year*
USD/bbl

*Does not include test activity, where well was shut-down after completion
Source: Rystad Energy NASWellCube Premium
Total US supply up by 1.0 mbbl/d Dec17 vs Dec16 – first time EIA is overestimating
Stock draws through 1Q 18, OPEC will need to continue the cuts 2H 18 due to US shale surge.

Source: Rystad Energy research and analysis, IEA OMR