

Welcome Back to Boom-Bust Oil Prices



Presentation to the New York Energy Forum
May 16, 2017

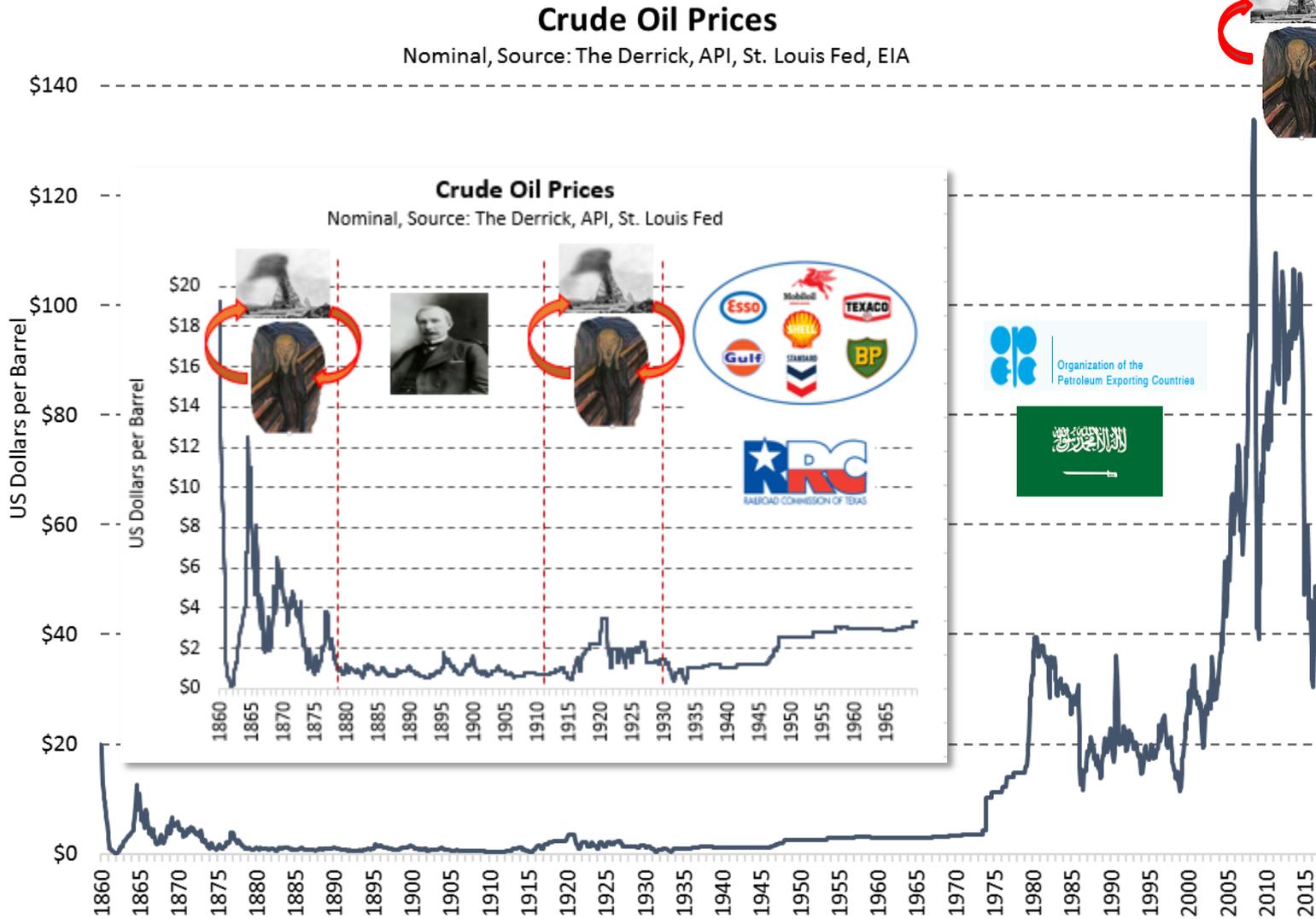
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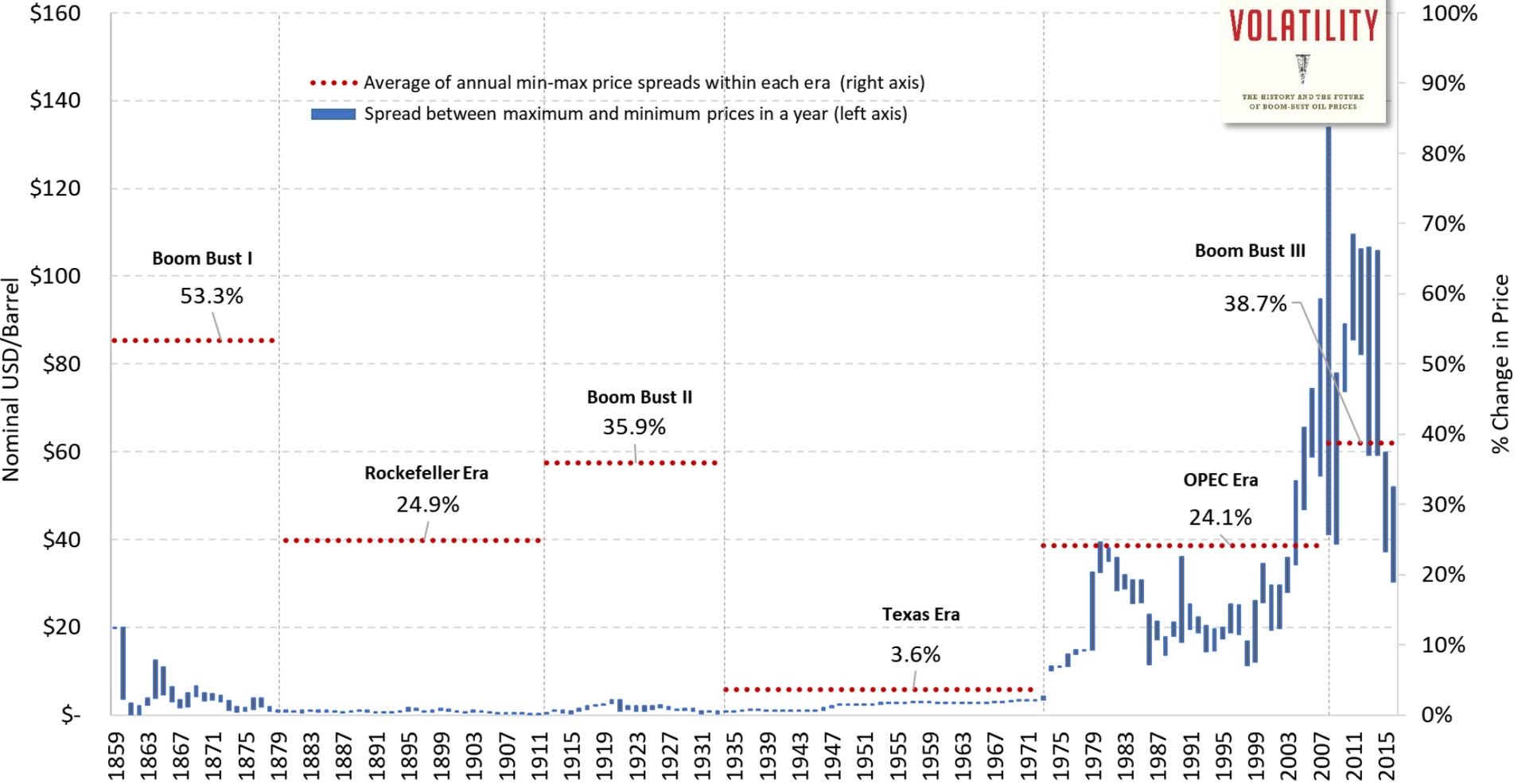
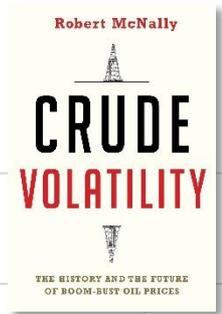
Unbalanced Market + No Swing Producer = Boom and Bust Price Cycles

Standard Oil, Texas Railroad Commission, Seven Sisters & OPEC regulated wellhead supply to stabilize prices



Exited OPEC Era and Returned to Boom-Bust in 2008 (not 2014)

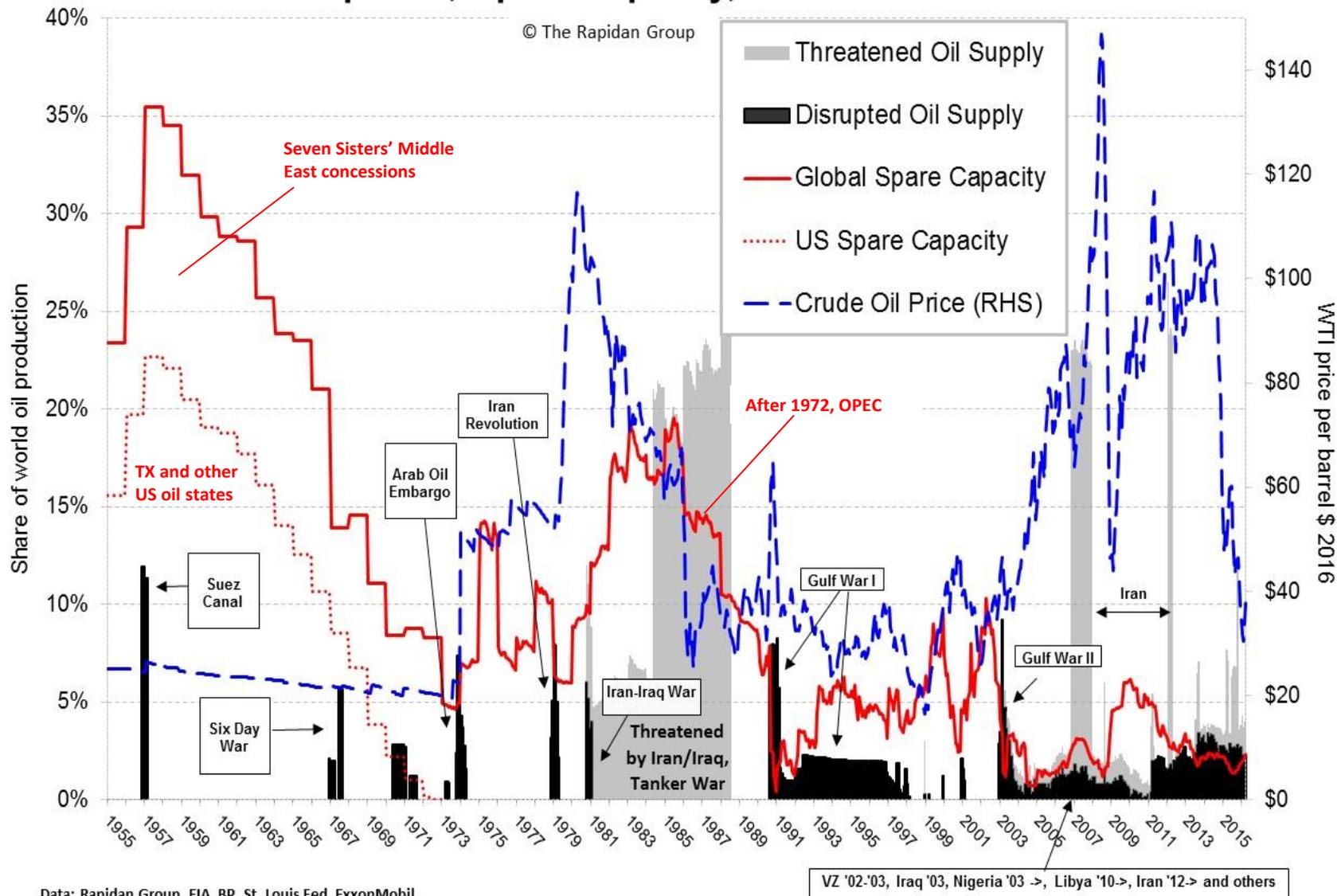
Annual Ranges of Monthly US Crude Oil Prices, 1859-2016



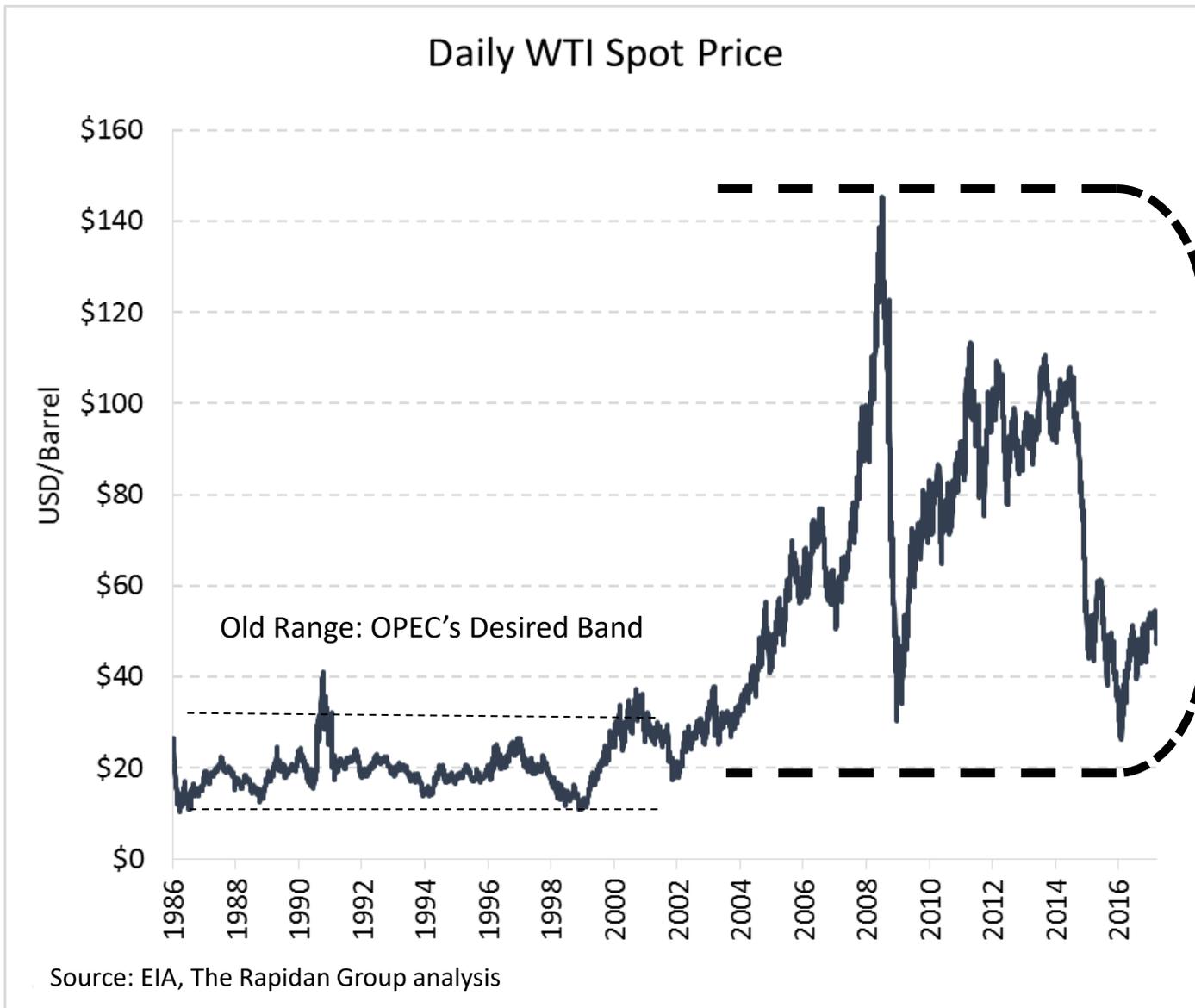
Data Sources: The Rapidan Group, based on The Derrick, API, St. Louis Fed, EIA, and Bloomberg

No Spare Capacity, No Peace

Oil Disruptions, Spare Capacity, and Crude Prices



Like the Texas Railroad Commission, OPEC Lost Control Amidst a Boom



New Range:
Demand destruction/
recession &
high opex
shut in

At Best We Have an Emergency, Ad Hoc Cartel

Emergency cartels popped up after busts since 1861

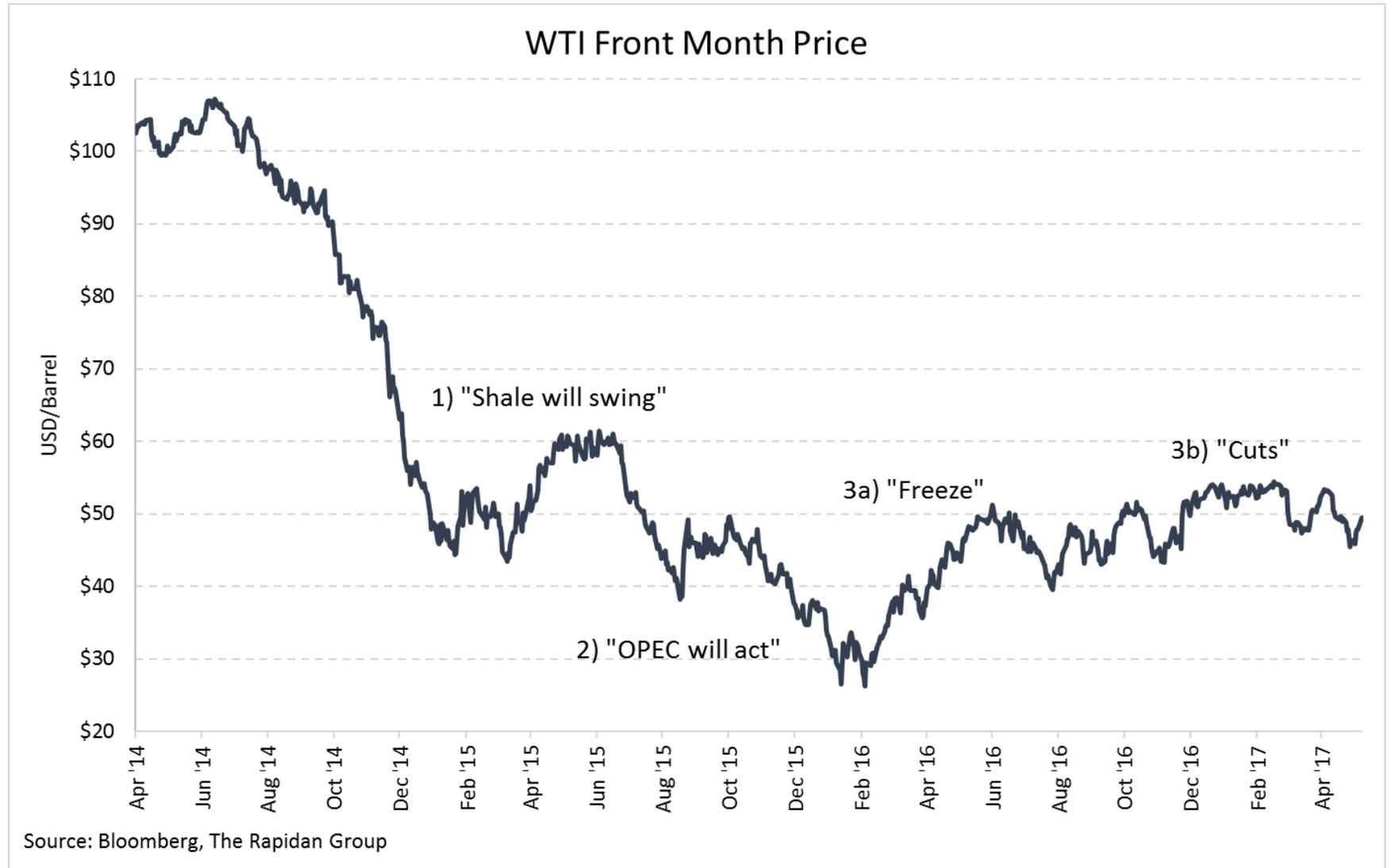
Remarks by Saudi Arabian Energy Minister Khalid al-Falih, CERAWEEK, March 7, 2017:

time around, we made it clear that we will not bear the burden of “free rides,” and both groups are reinforcing one another through voluntary management of their production. All of us realize that such an expanded network of producers with a larger share of global production is the only way to achieve a constructive, stable market for all. Having said this, OPEC remains an important catalyst to the stability and sustainability of the market, which remain the Organization’s highest priorities and have brought its members into greater alignment than at any time in recent memory. But history has also demonstrated that intervention in response to structural shifts is largely ineffective, and I believe we’ve learned that lesson. That’s why Saudi Arabia does not support OPEC intervening to alleviate the impacts of long-term structural imbalances, as opposed to addressing short-term aberrations such as financial crises, economic recessions, unforeseen supply disruptions, or the like. As for the current agreement, it is keeping with Saudi Arabia’s policy of seeking a collaborative framework of production management for a restricted period, with the aim of accelerating rebalancing, and then allowing the free market to work.



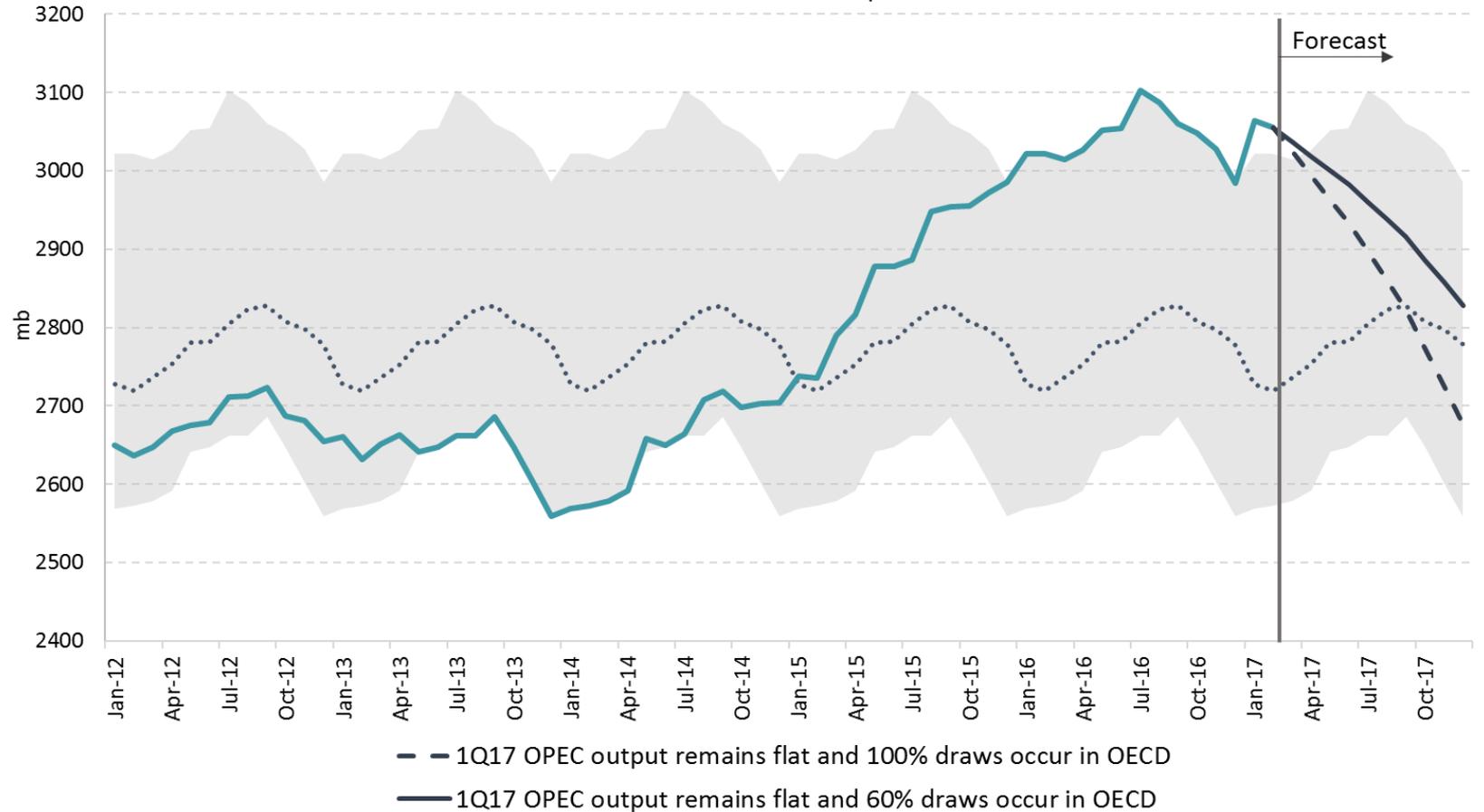
<http://www.reuters.com/article/ceraweek-saudi-speech-idUSL2N1GK132>

Three Rebalancing Rallies Peter Out



The Consensus Expects Massive 2H17 OECD Stock Draws

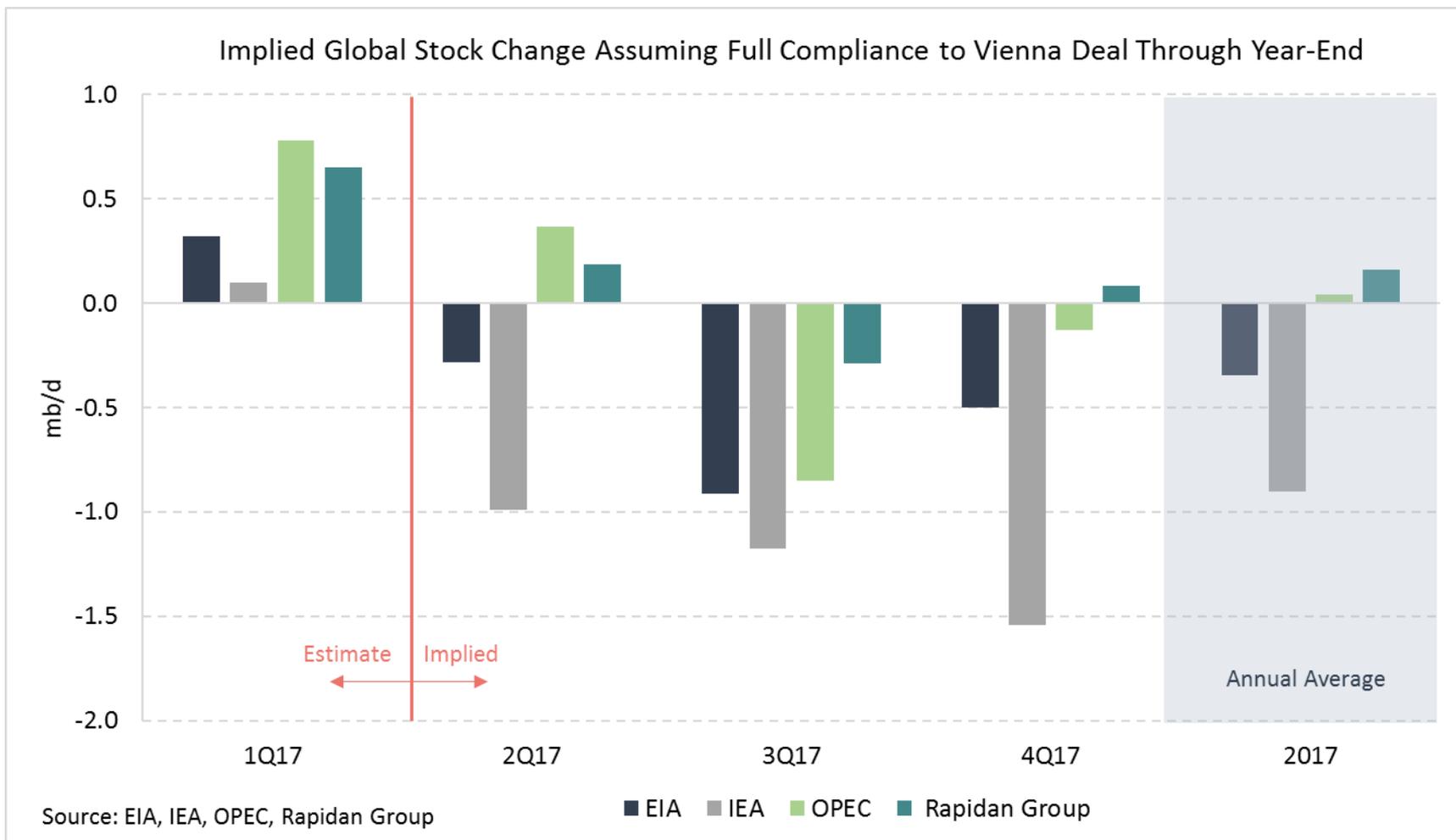
IEA Balance Implies A Massive Inventory Dive If 1Q17 OPEC Production Remains Flat
 OECD Commercial Crude and Liquid Inventories



Source: IEA, The Rapidan Group

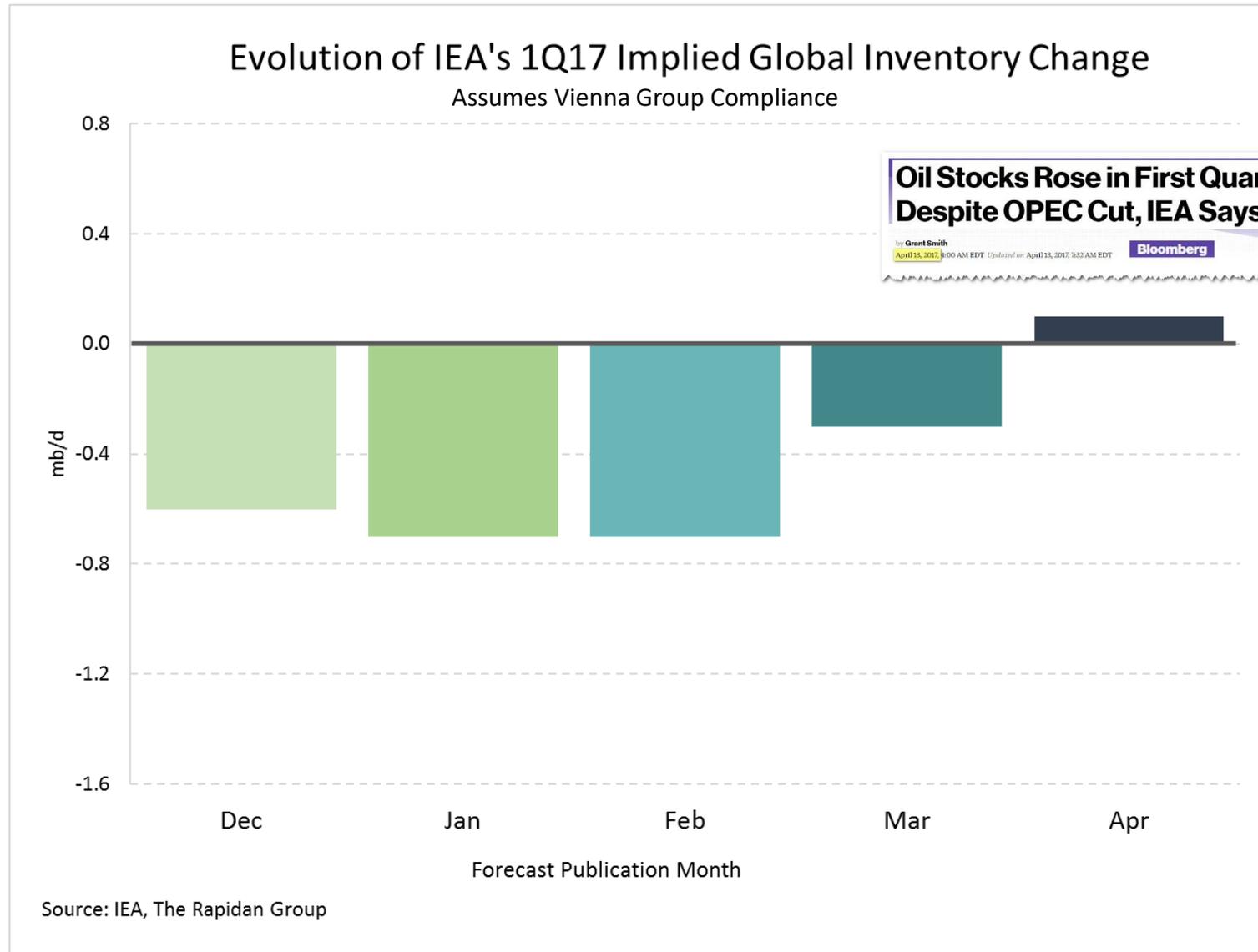
IEA and EIA See Big Stock Draws if Vienna Group Sticks to Deal

OPEC and The Rapidan Group, not so much



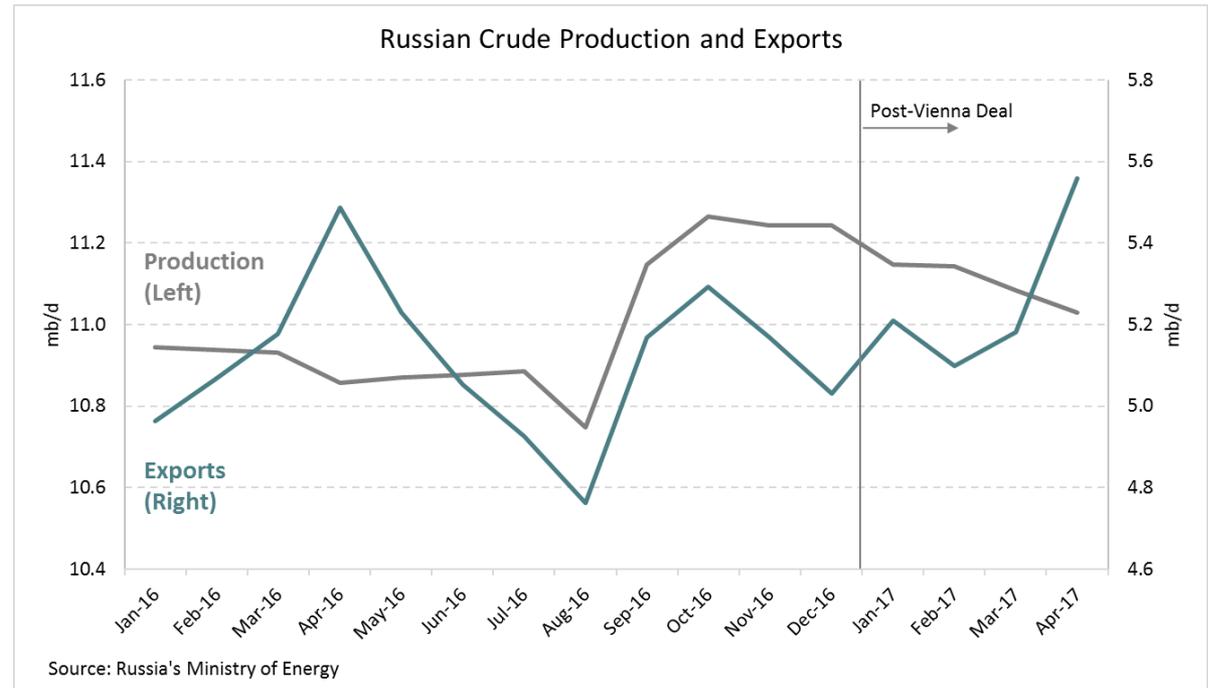
Instead of Drawing Heavily, 1Q17 Stocks Increased

Partly due to an export tsunami OPEC unleashed late last year



Vienna Group Production Compliance Good if Uneven So Far, but Easier Options are Exhausted and Exports Still High

- Bring forward field maintenance
- Run down internal stocks
- Seasonal (cold weather) production declines



OIL REPORT | Tue Apr 25, 2017 | 1:01pm IST

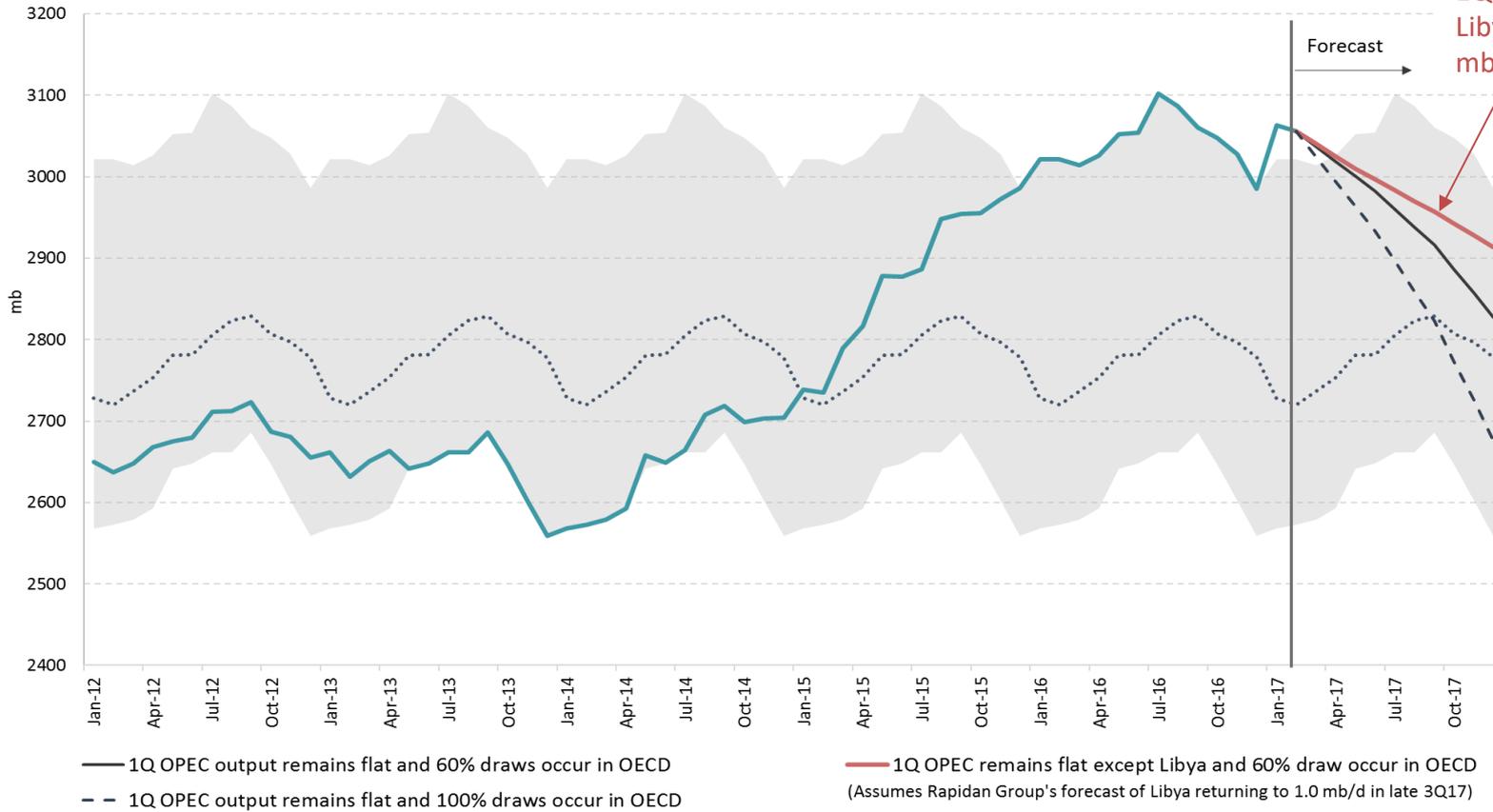
COLUMN-OPEC heads for failure as crude shipments overwhelm cut rhetoric: Clyde Russell



Global oil shipments by tanker are at a record high in April, according to vessel-tracking data compiled by Thomson Reuters Supply Chain and Commodity forecasts.

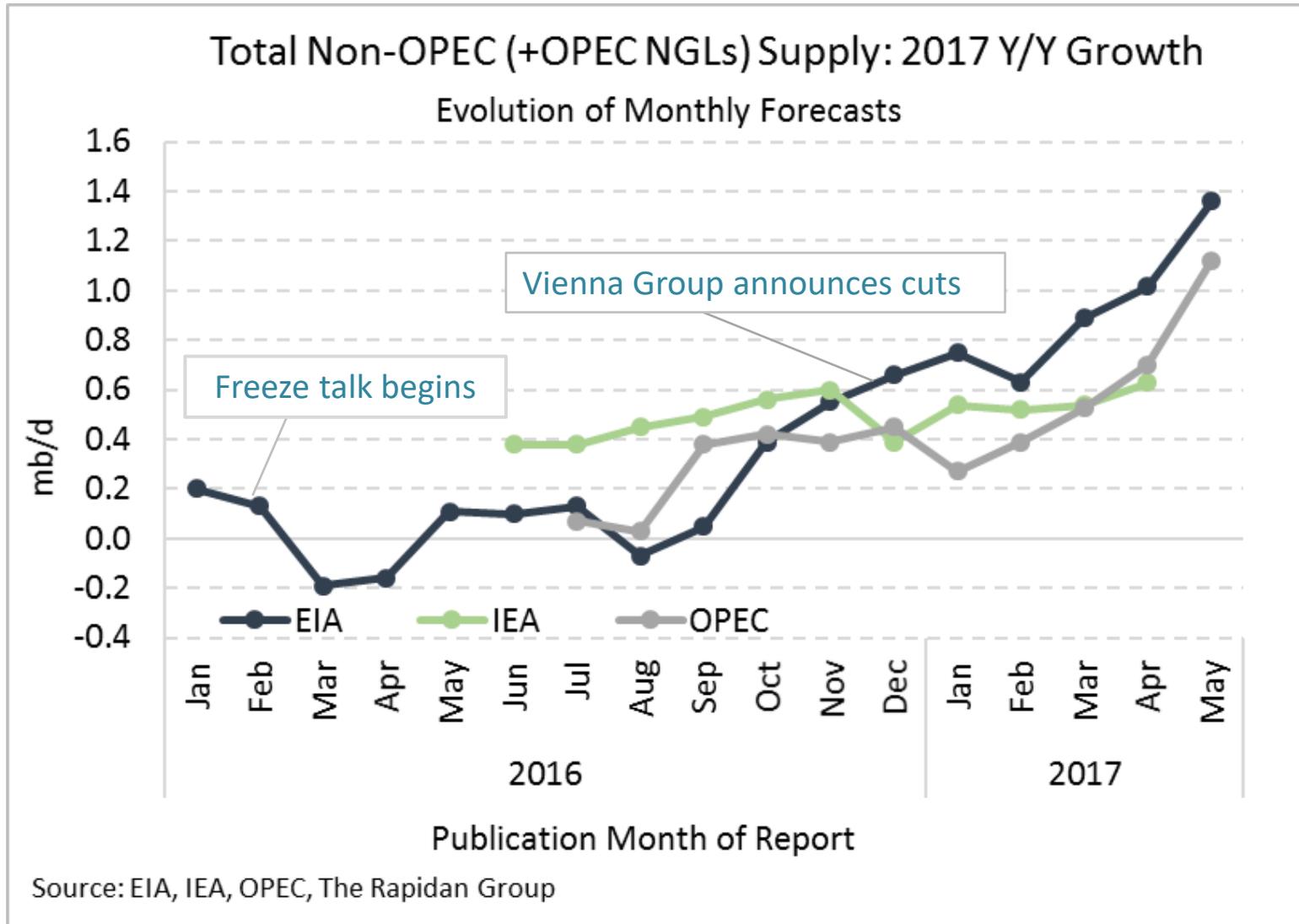
Returning (Exempted) Libyan and Nigerian Production

Libya's Return Could Derail Vienna Group's Goal Even Assuming IEA Bullish Balance and Deal Extension
 OECD Commercial Crude and Liquid Inventories (IEA data unless stated otherwise)

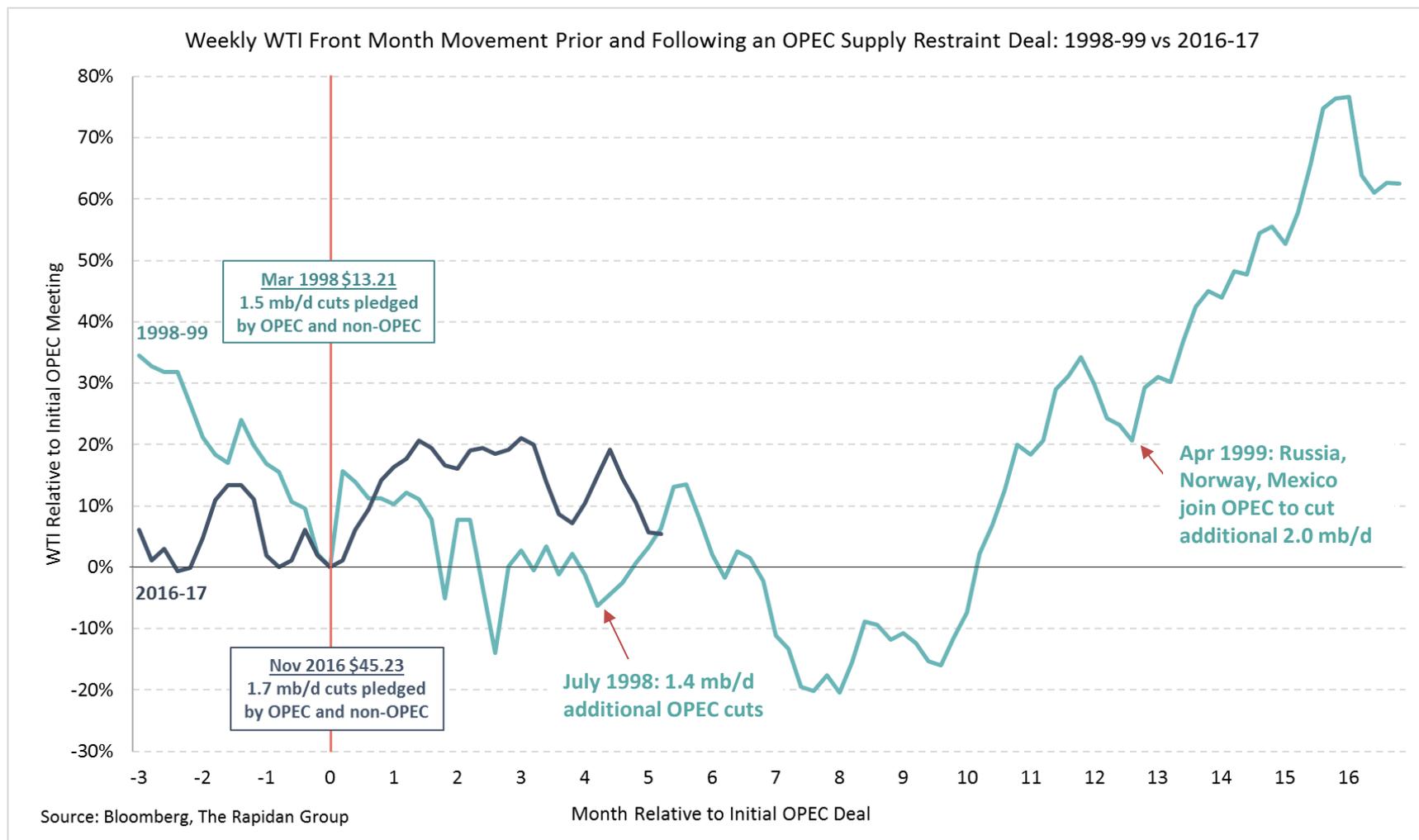


Source: IEA, The Rapidan Group

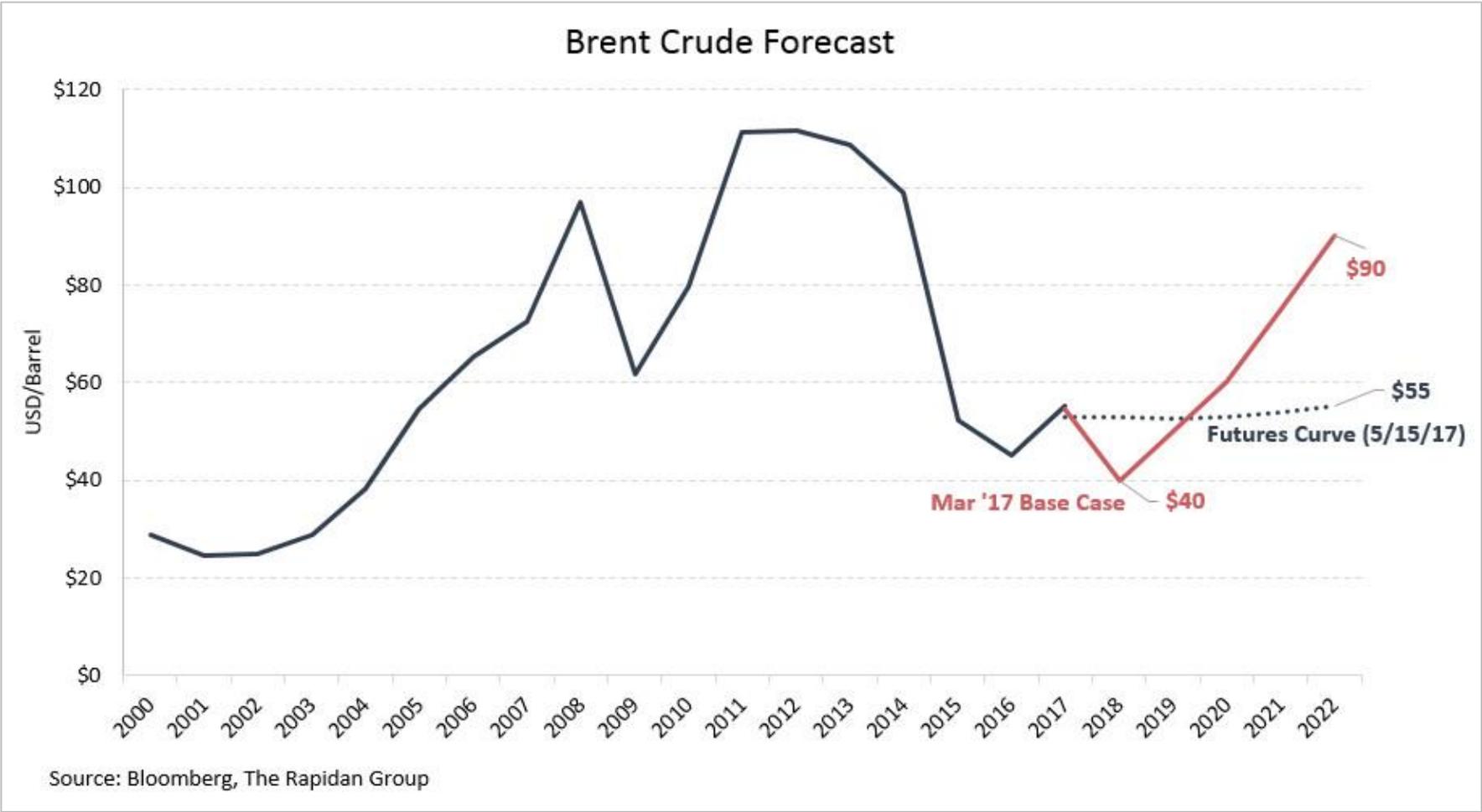
Soaring Non-OPEC Production, Mostly US Shale



1998-1999 Took >12 Months & Two Rounds of Cuts to Induce Sustainable Rally



Oversupply Triggers Bust, but Subsequent Underinvestment and Robust Demand Spark Price Boom



CONCLUSIONS

“Lord Make Me Bullish, But Not Yet”

- We are ~10 years into history’s third boom-bust era
- Saudi Arabia/OPEC neither talking nor acting like swing producer needed to ensure price stability when fundamentals structurally unbalanced
- Current crude rally expected on (prolonged) Vienna Group extension and seasonal, visible stock draws
- But a sustainable rally requires big stock draws in 2H17, which the consensus expects but for which skepticism is warranted
- Prolonged inventory glut likely to strain Vienna Group cohesion, trigger another down leg before boom phase starts