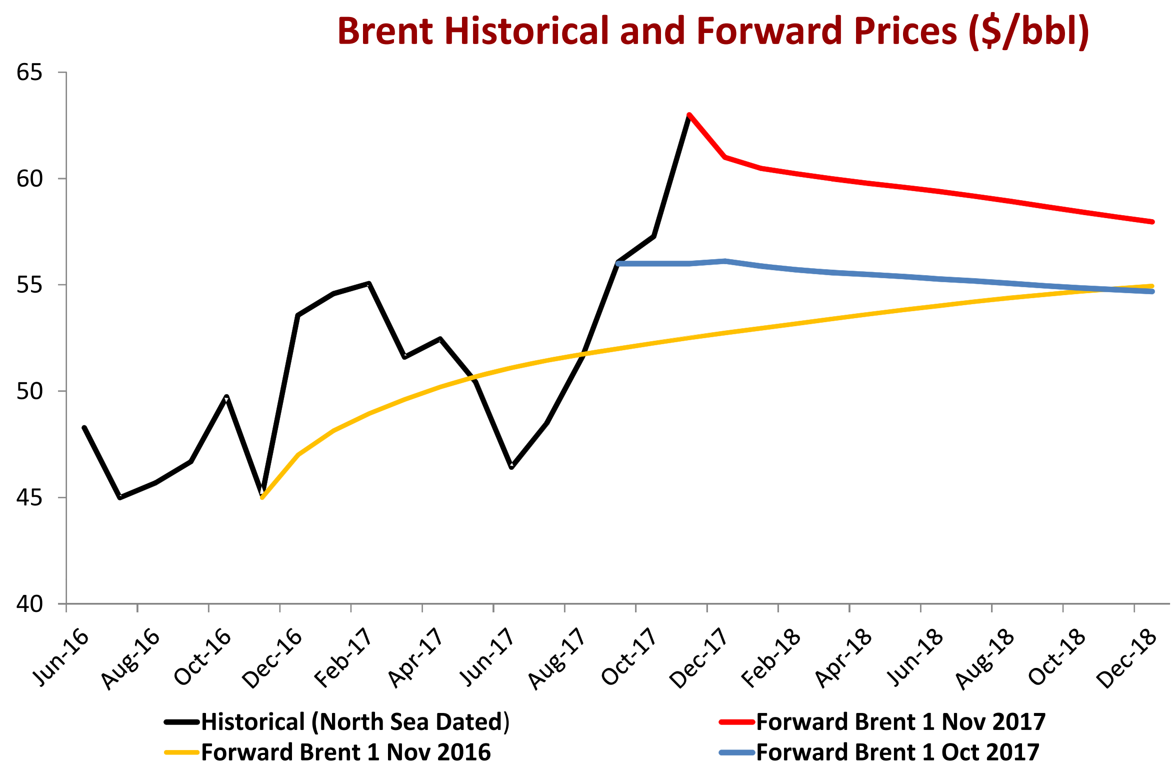
Oil Market: Short & Medium Term Perspectives

- Institute of Energy Economics Japan -

Neil Atkinson, Head, IEA Oil Industry & Markets Division, Tokyo 6 December 2017

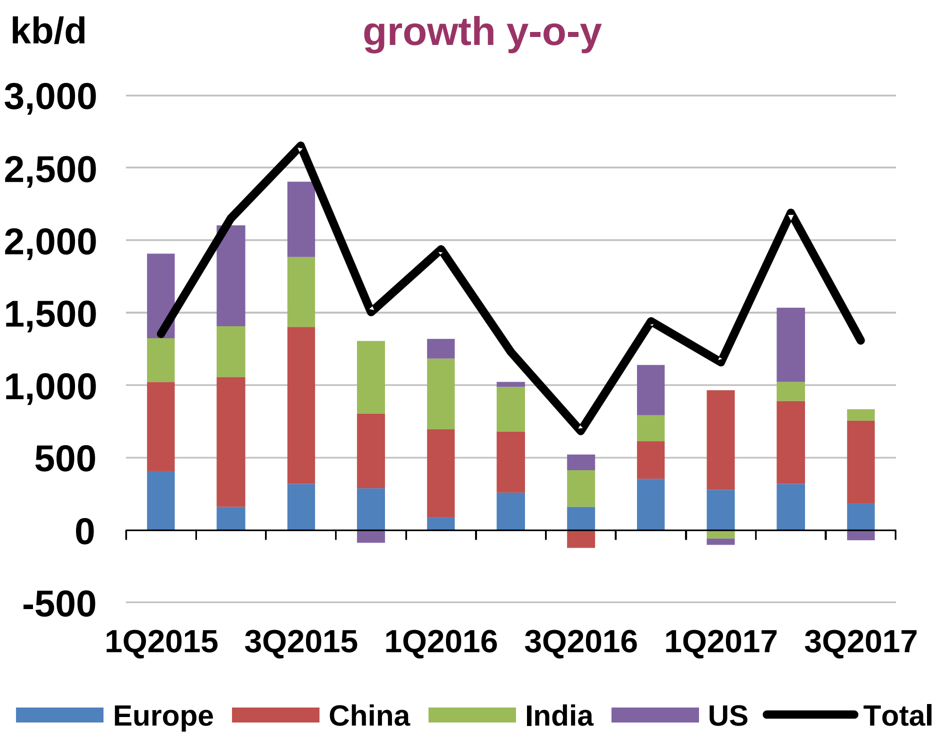
SHORT TERM: Price assumption for 2018 revised up



	Crurrent	1-Nov-16	1-Oct-17
1-Jan-18	62.38	51.12	55.89
1-Feb-18	62.08	51.36	55.71
1-Mar-18	61.76	51.60	55.58
1-Apr-18	61.49	51.83	55.49
1-May-18	61.25	52.05	55.39
1-Jun-18	60.97	52.26	55.27
1-Jul-18	60.68	52.47	55.18
1-Aug-18	60.34	52.65	55.07
1-Sep-18	60.01	52.82	54.95
1-Oct-18	59.61	52.97	54.85
1-Nov-18	59.30	53.09	54.77
1-Dec-18	59.09	53.21	54.69
Average	60.75	52.29	55.24
Diff		8.46	5.51
%		16.2%	10.0%
With 99 Mbd		(0.65)	(0.4)
and Ep -0.04			

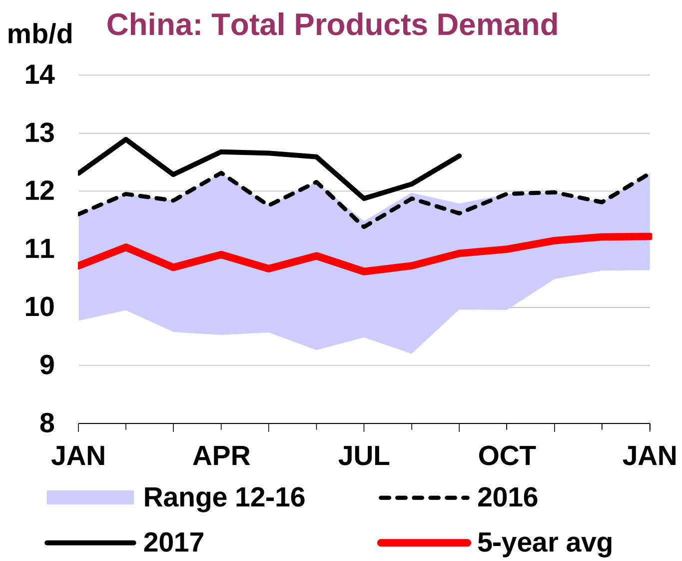
Price increases contributed to a 190 kb/d downward revision to our demand forecast for 2018

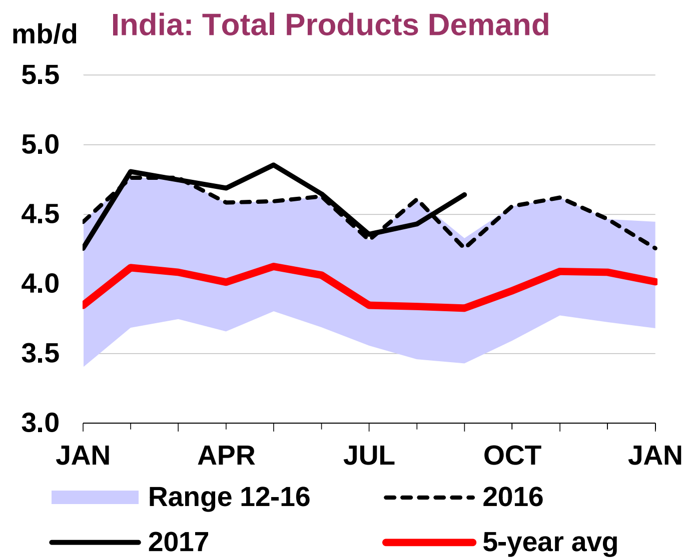
SHORT TERM: Demand growth dropped to 1.3 mb/d in 3Q17



Partly reflecting impact of Harvey and Irma in the US

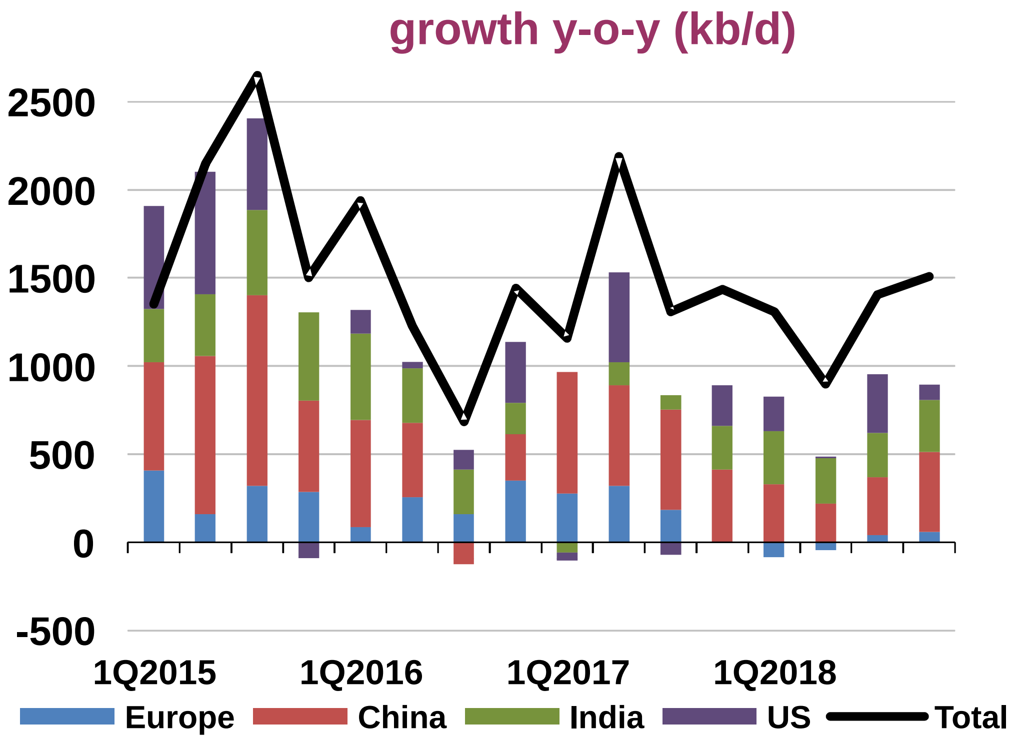
SHORT TERM: Strong Chinese & Indian demand in September





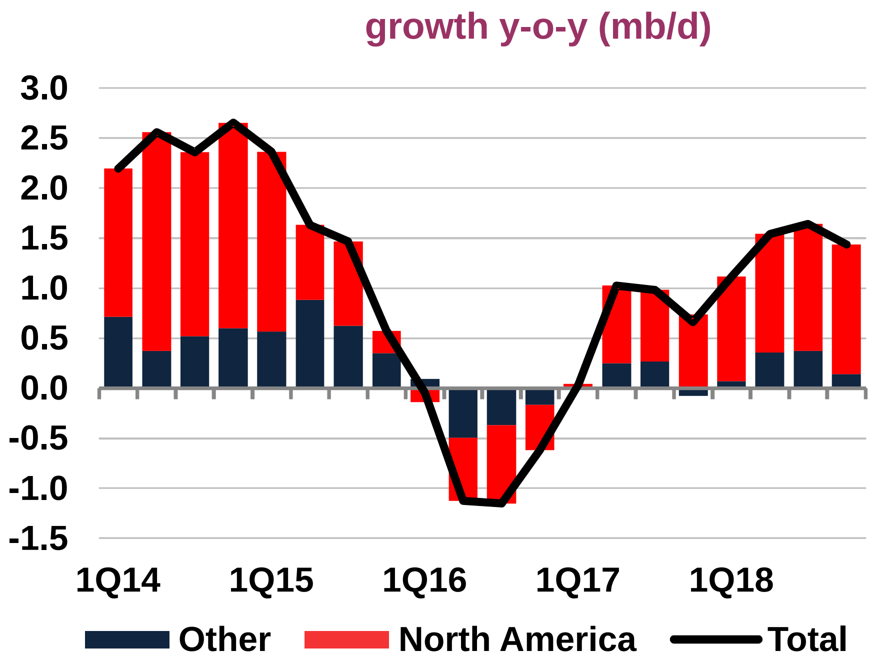
China and India on course for 43% of global growth in 2017

SHORT TERM: Oil demand growth 2015-2018



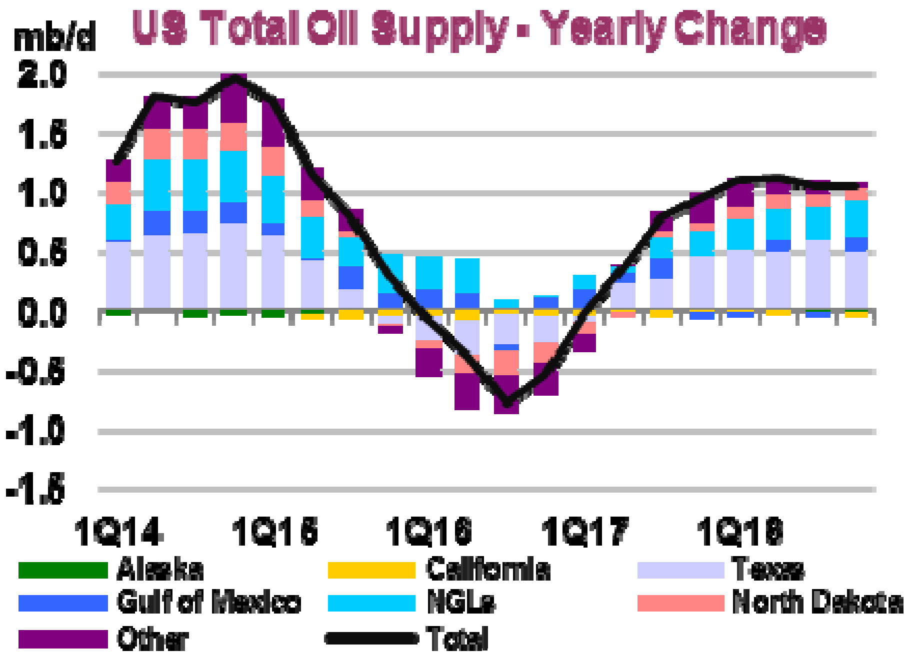
We now expect growth of 1.5 mb/d in 2017, slowing to 1.3 mb/d in 2018

SHORT TERM: Non-OPEC supply growth accelerating through 2018



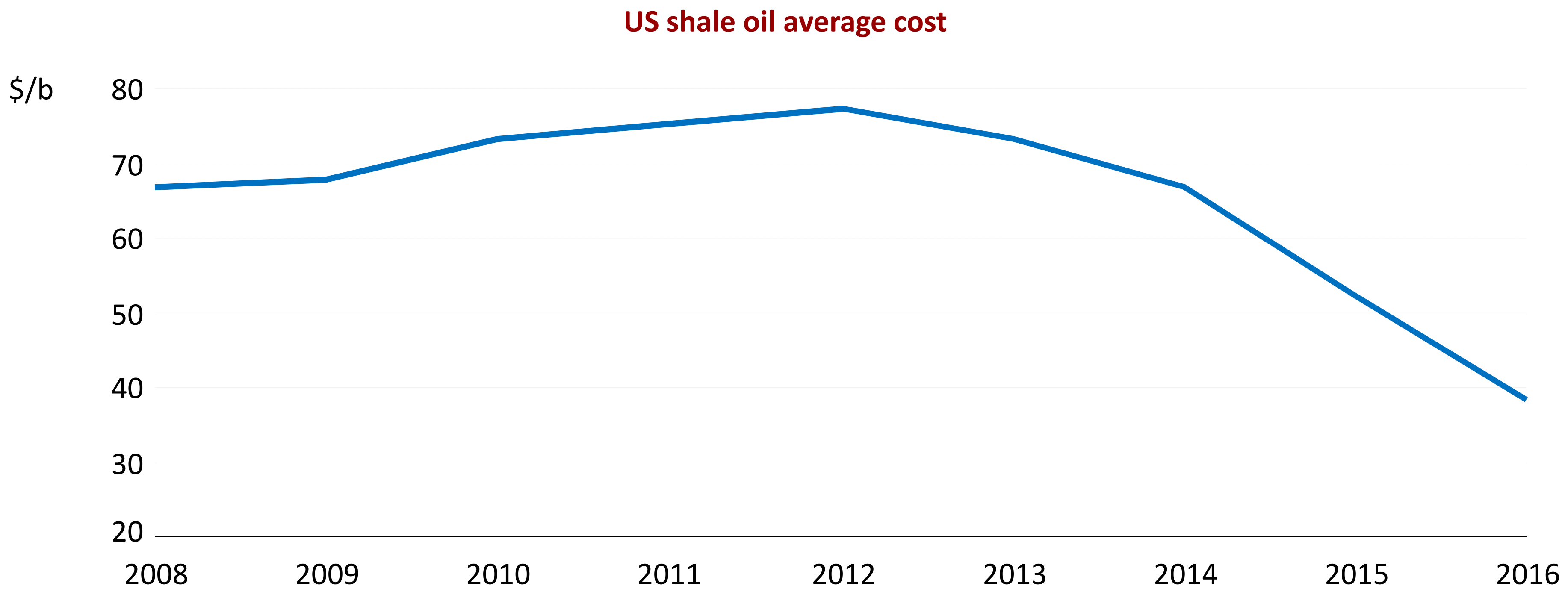
US, Brazil & Canada dominate growth; Mexico & China main fallers

SHORT TERM: US production rising through 2018 …



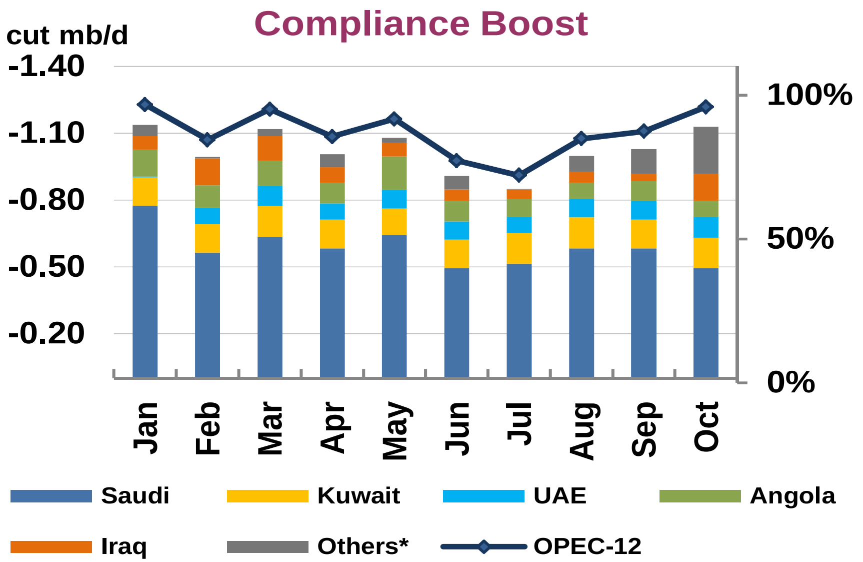
Crude production up 370 kb/d in 2017, accelerating to 790 kb/d in 2018

SHORT TERM: ... Resilient at much lower prices than before



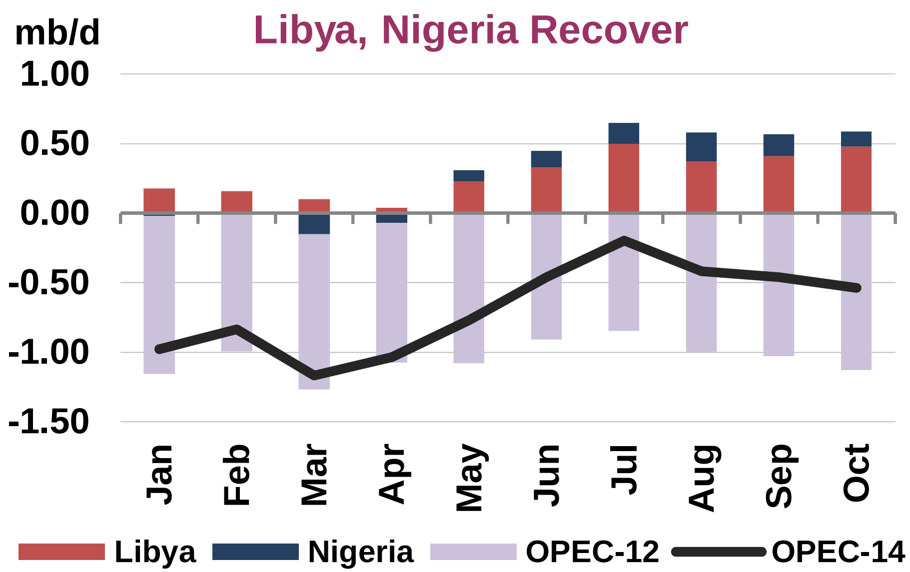
US shale oil can continue to deliver impressive growth, reflecting enormous cost savings & technological/productivity improvements

SHORT TERM: OPEC quota compliance solid ...



In 2017 YTD average compliance = 87%

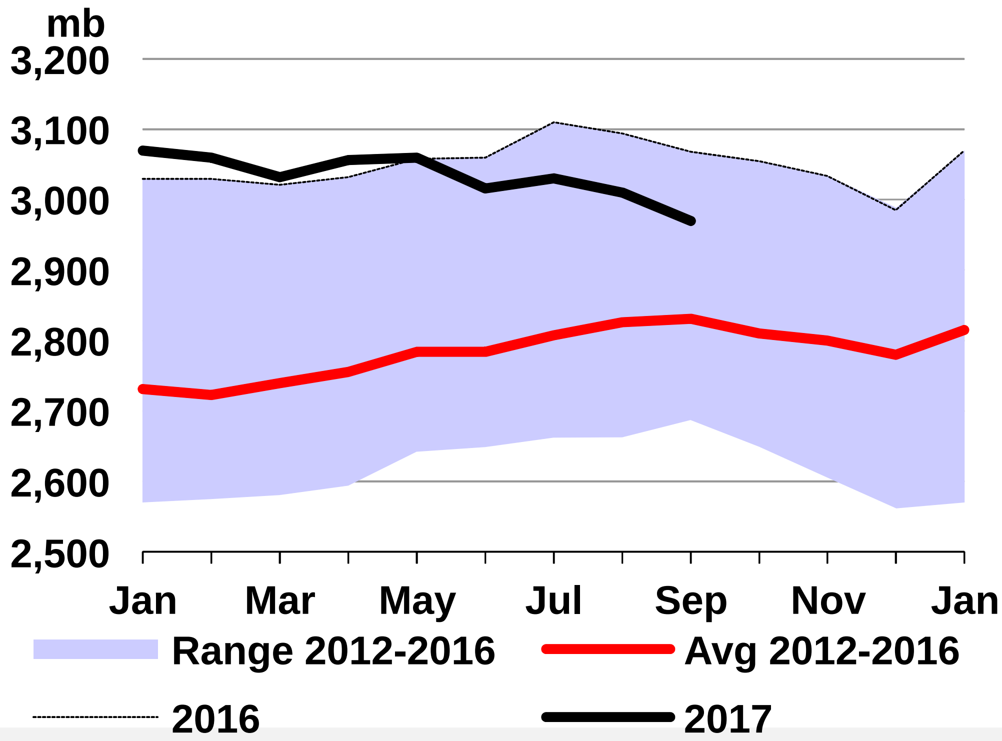
SHORT TERM: … But diluted by Libyan & Nigerian comeback



** Output change vs Oct baseline*

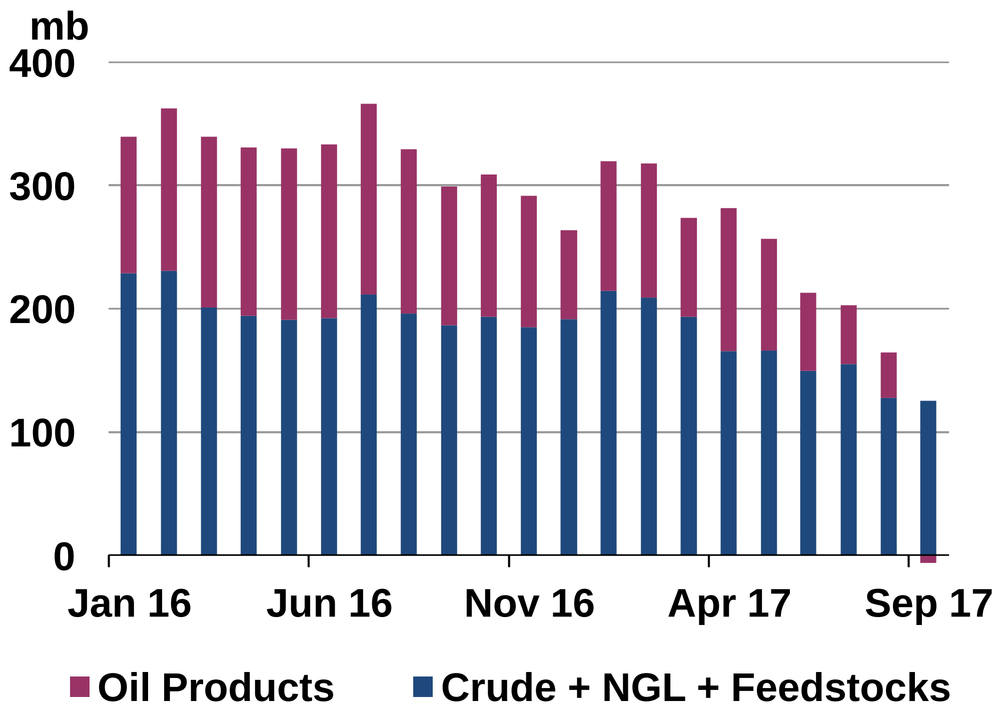
Since the low point in spring 2017, joint output up by 700 kb/d

SHORT TERM: OECD total oil stocks fall below 3 billion barrel mark



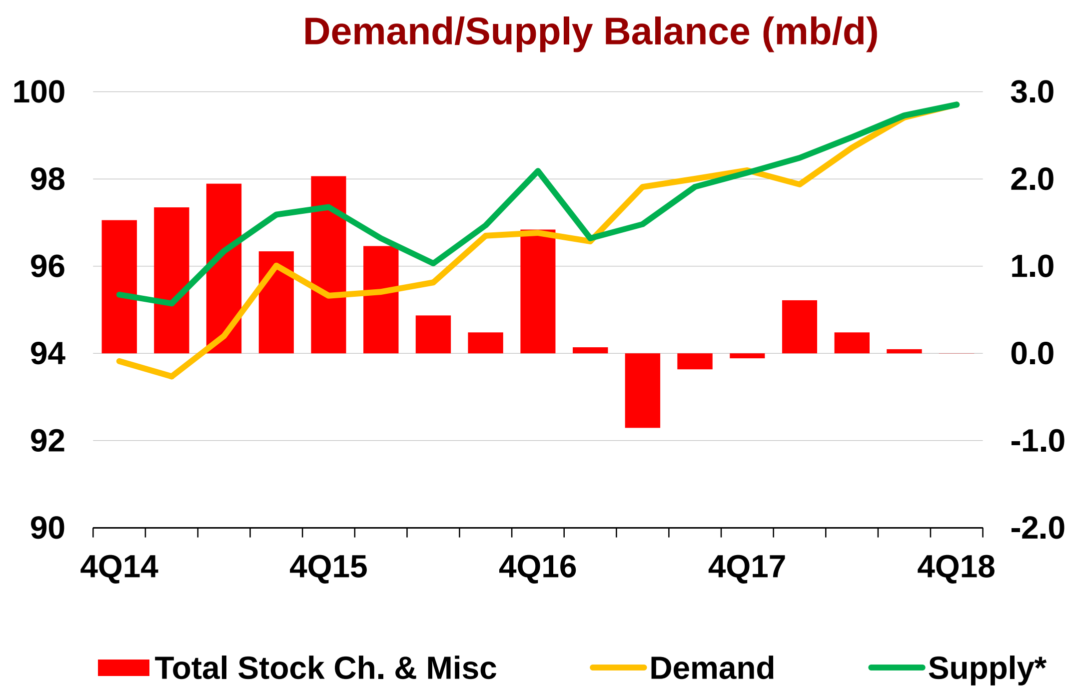
OECD industry stocks were down 40.3 mb to 2 970 mb in September

SHORT TERM: OECD product surplus evaporated vs 5-yr average



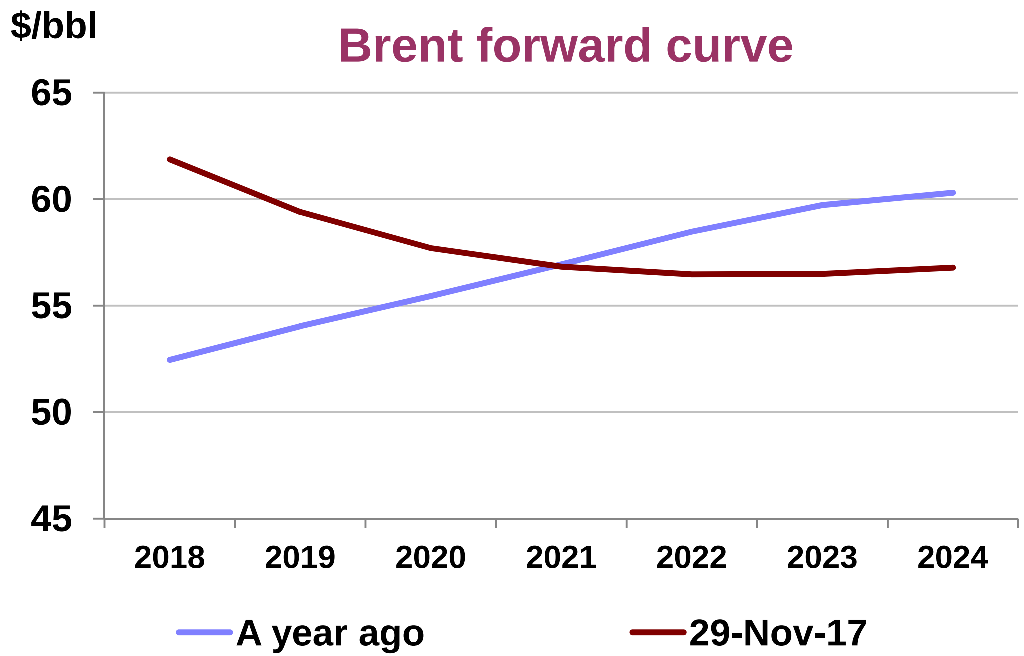
At end-September, total OECD stocks were 119 mb above the five-year average

SHORT TERM: Implied stock changes to 4Q18 – not a tight market



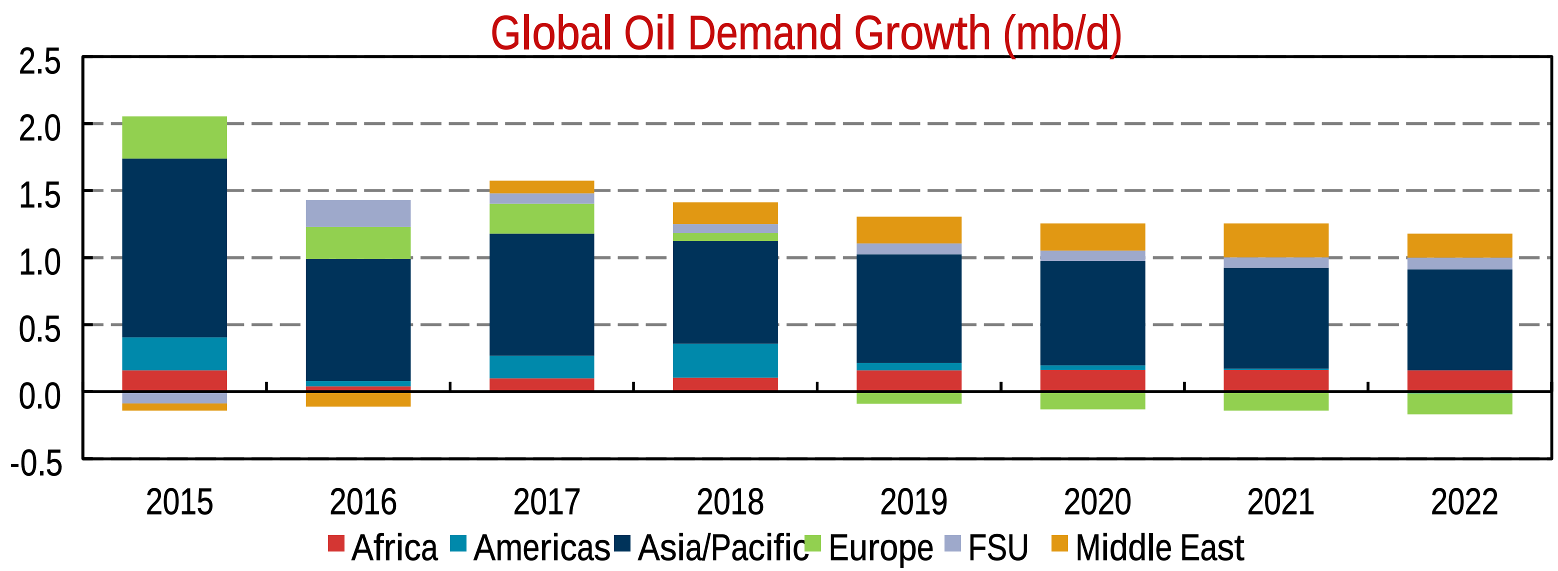
*Assumes OPEC production constant at 32.6 mb/d

MEDIUM TERM: Forward curve in backwardation



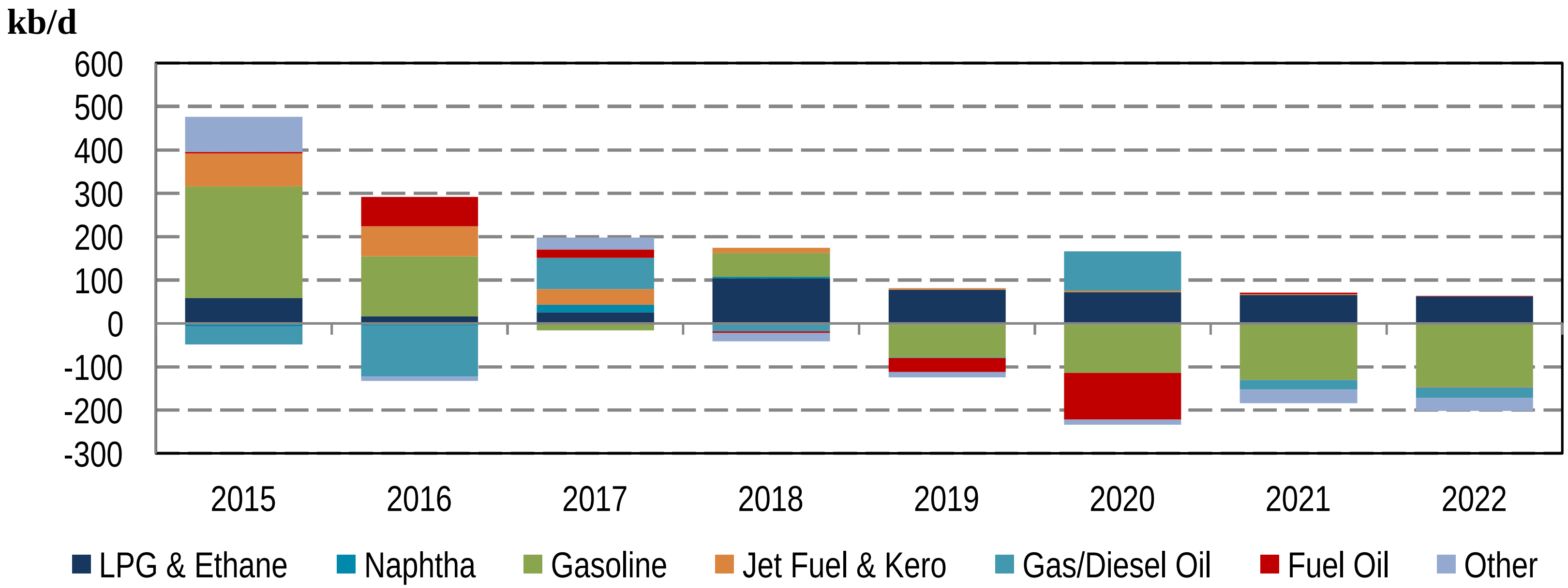
Futures curve has flipped compared to a year ago

MEDIUM TERM: Demand *growth* slowing, but still solid



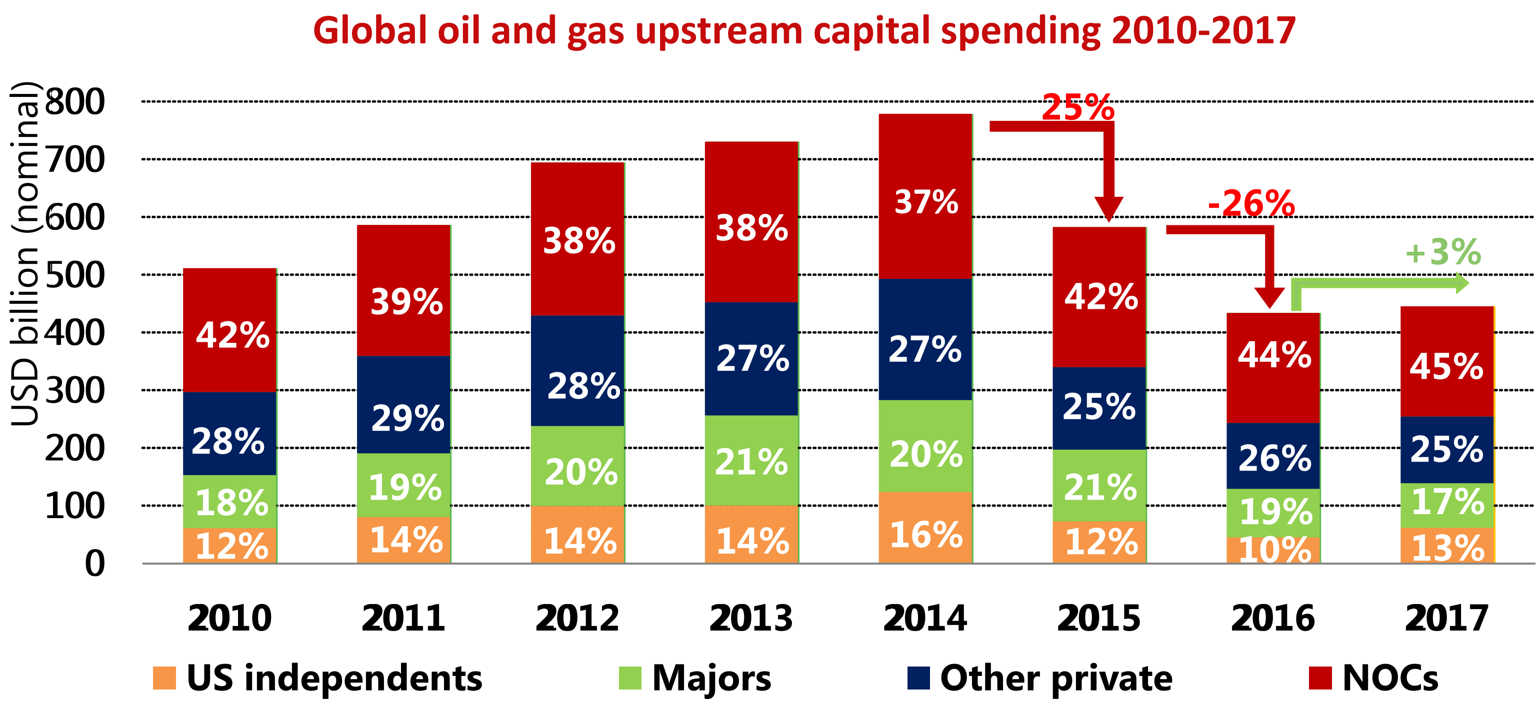
Roughly 70% of 5.9 mb/d oil demand growth comes from Asia/Pacific, mainly China and India (48%)

MEDIUM TERM: US oil demand changes 2015-2022



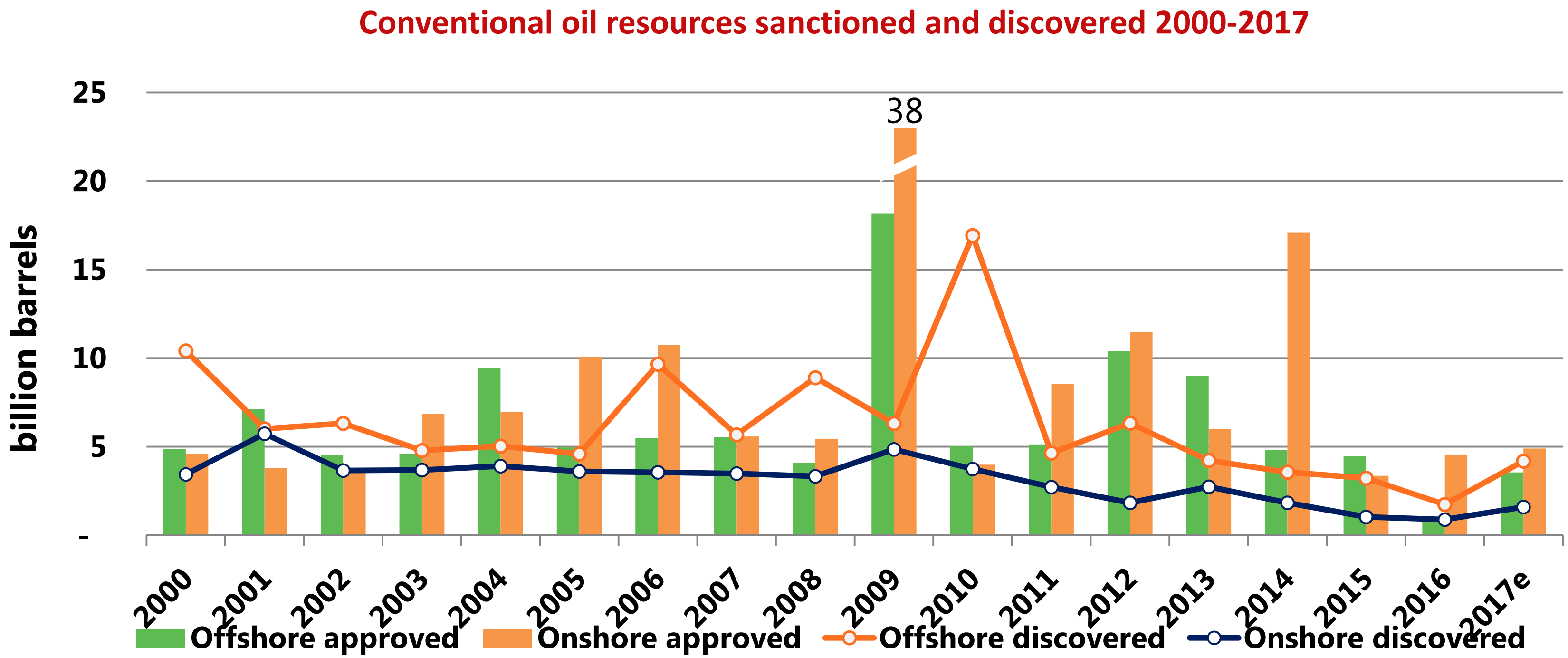
Total demand in 2022 0.3 mb/d below 2017 level: gasoline demand expected to decline from 2019.

MEDIUM TERM: Upstream investment rebounds modestly in 2017



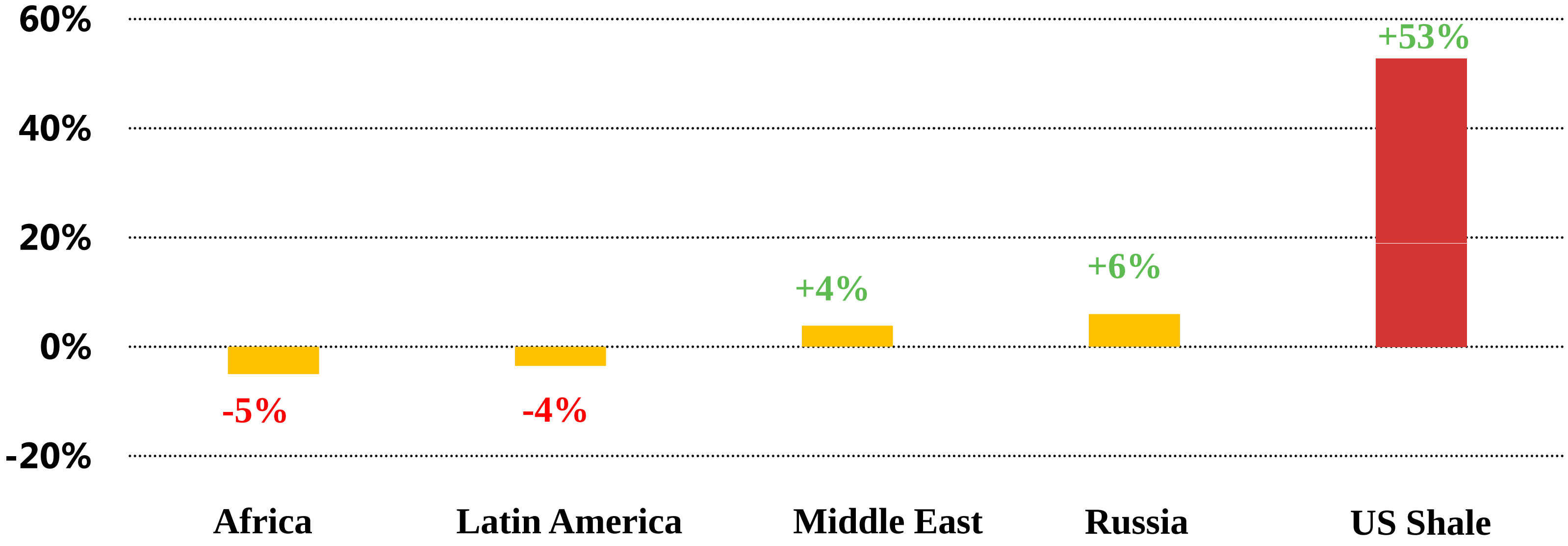
Ramp up of activities leads to cost inflation in US tight oil but elsewhere upstream costs decline further.
NOC share in total investment reaches another record high.

MEDIUM TERM: New projects recovering from historic lows



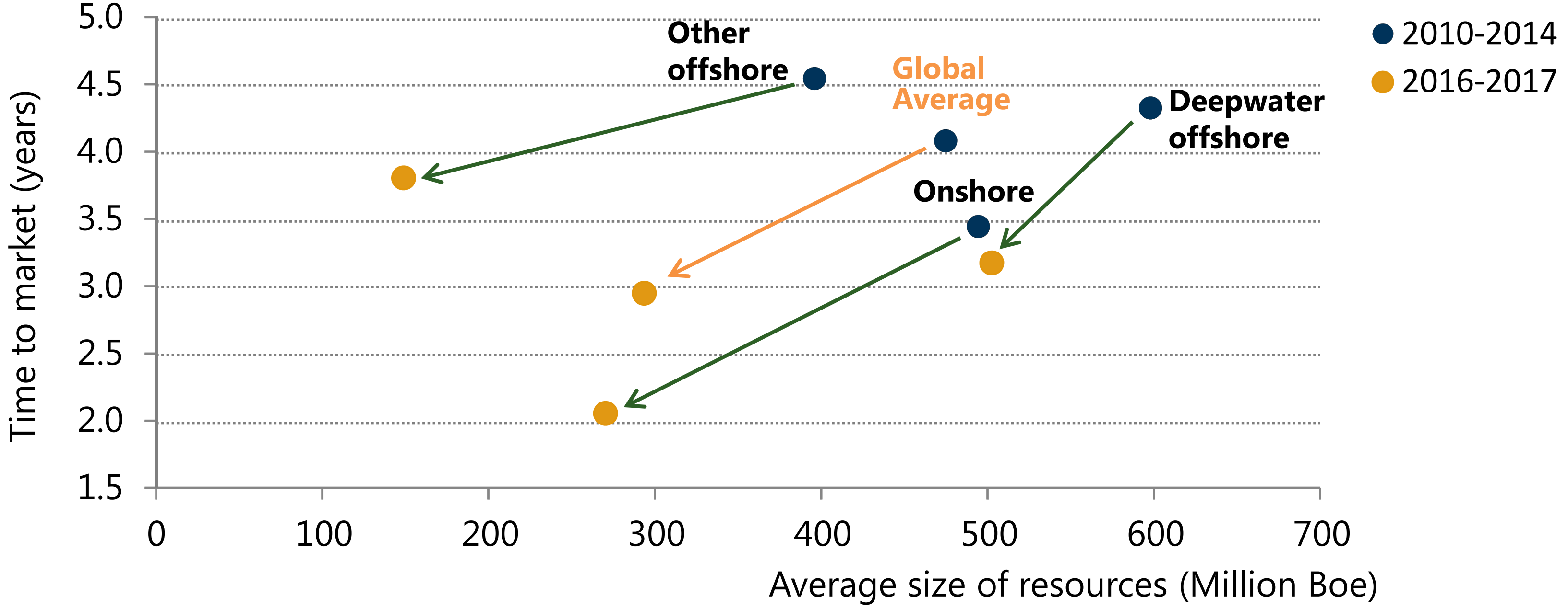
Conventional oil resources sanctioned in 2017 remains subdued compared to historical average but expected to grow by more than 50% compared to 2016, mainly due to offshore projects .

MEDIUM TERM: … Limited recovery in investment outside US …



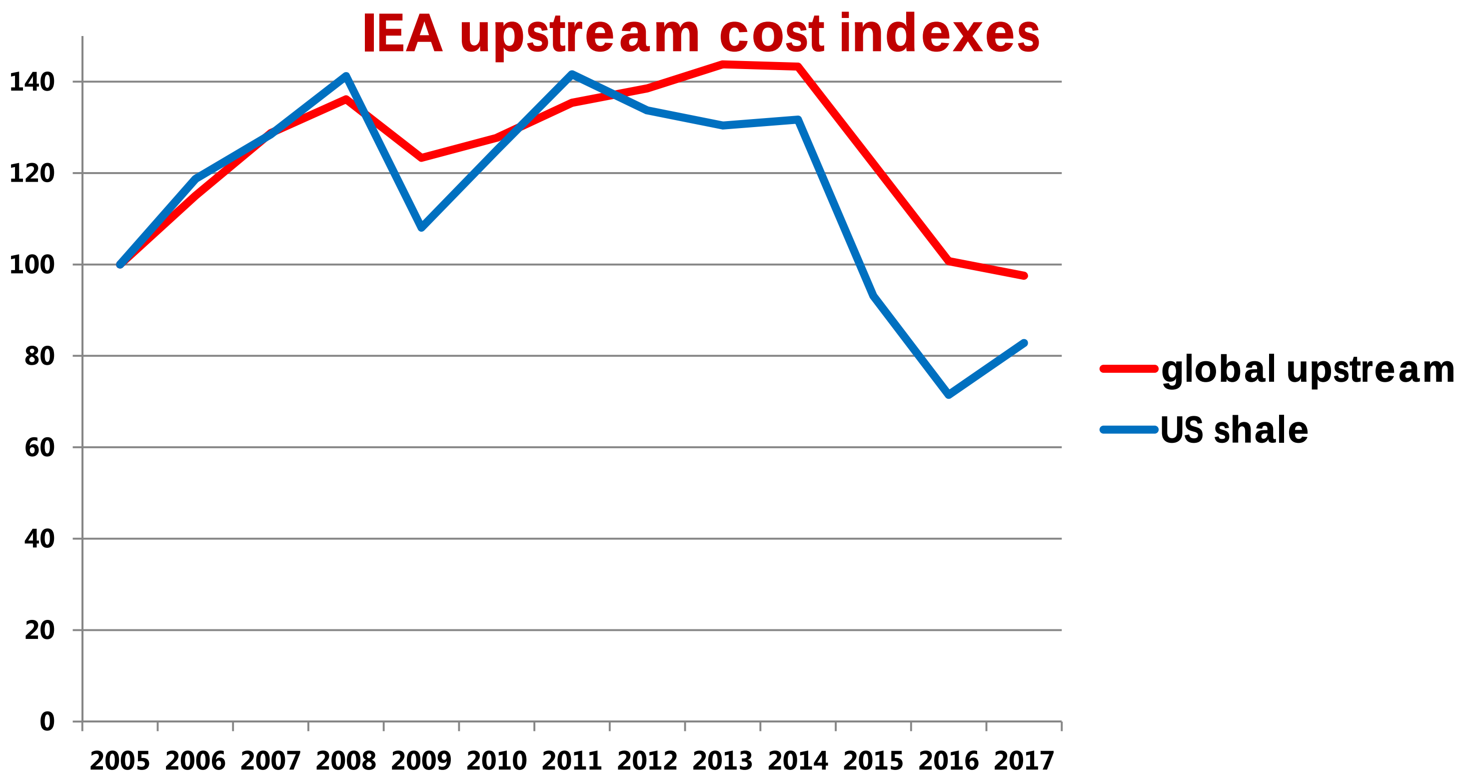
After two years of unprecedented decline, global upstream investment up by 3% in 2017

MEDIUM TERM: … Although conventional projects faster & smaller



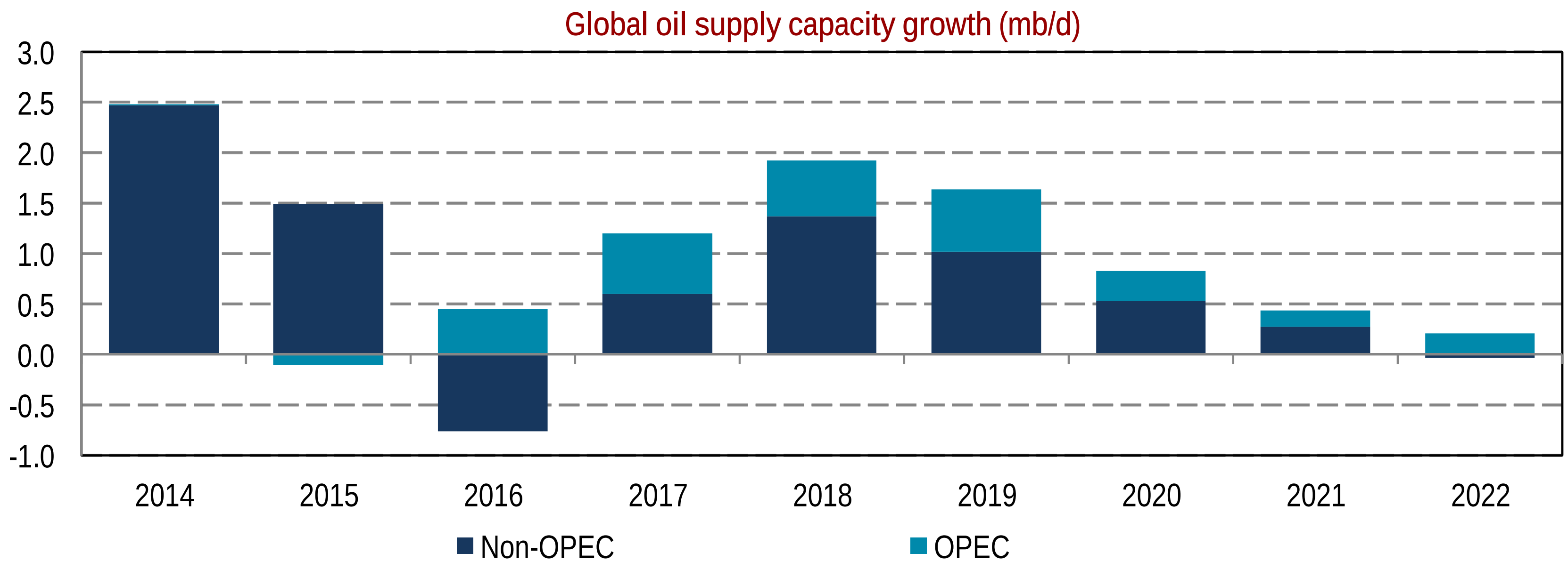
Shorter project cycles across all the oil and gas industry

MEDIUM TERM: 2014 price collapse led to efficiency drive



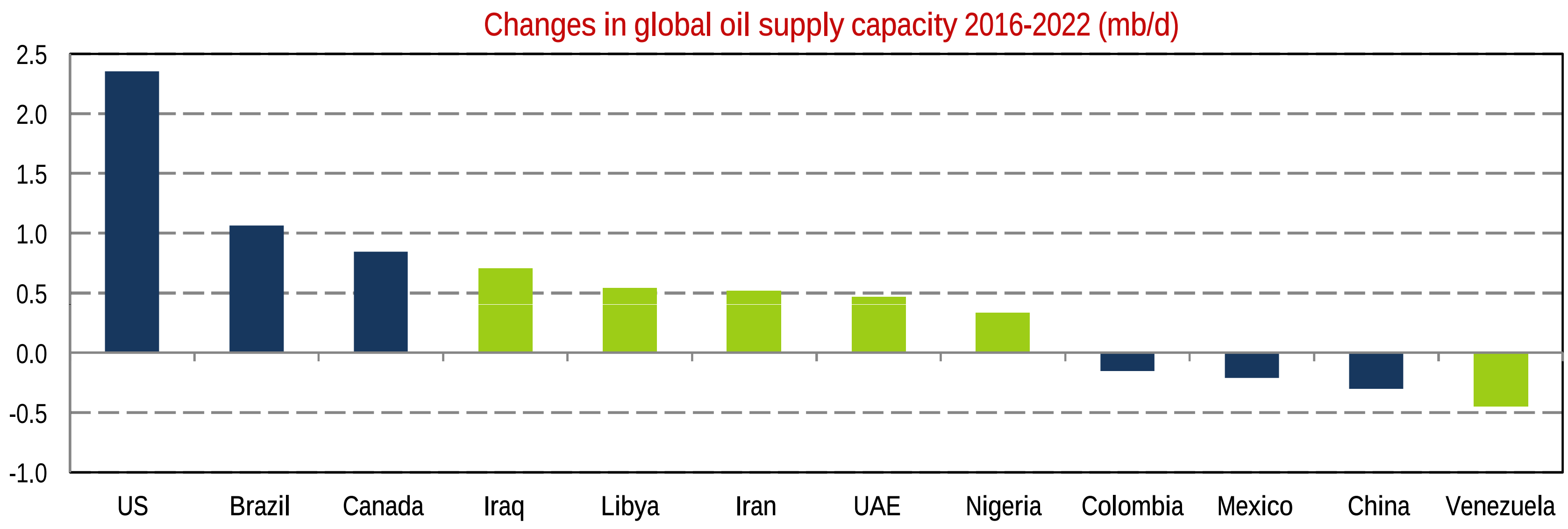
In the US shale industry a rapid investment upswing led to the re-emergence of cost pressures

MEDIUM TERM: Oil supply growth falls away



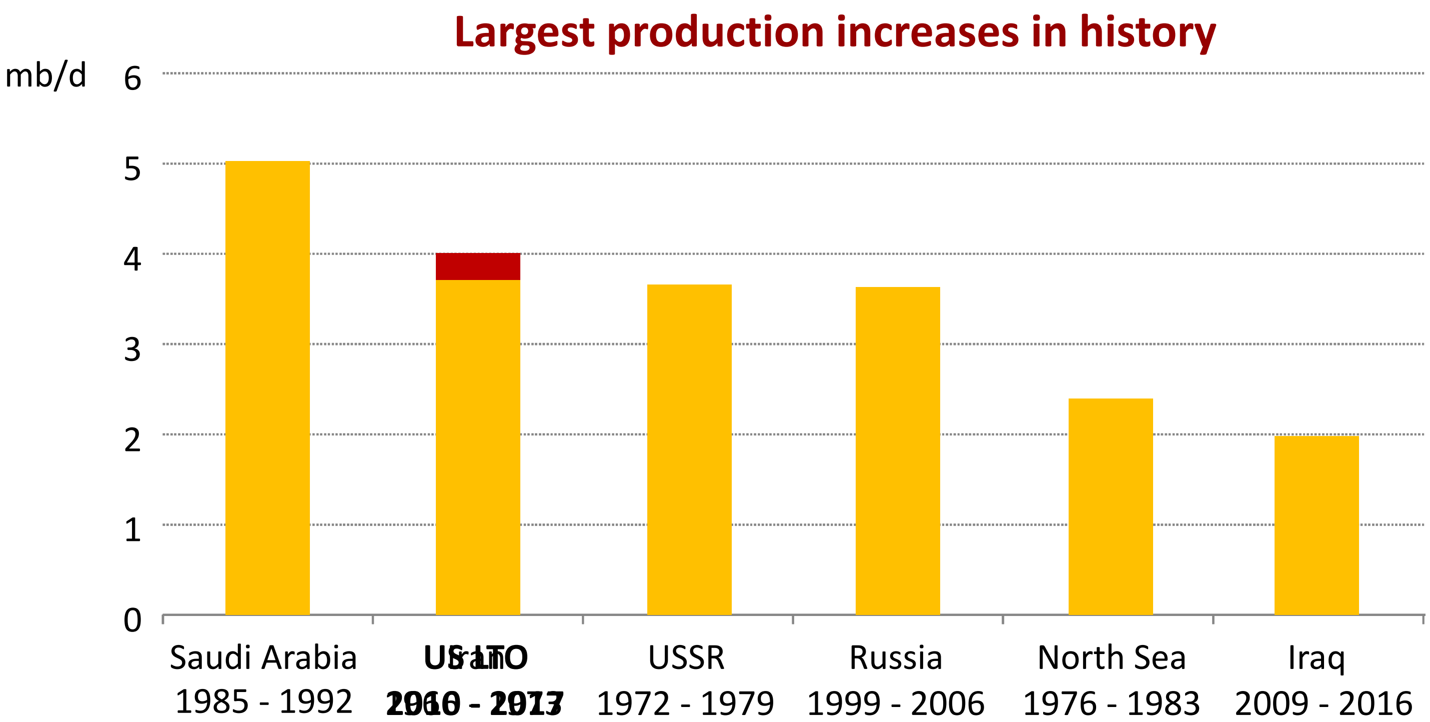
Unless significant new projects sanctioned quickly, growth all but stalls by 2022.

MEDIUM TERM: US leads capacity growth of 6.2 mb/d



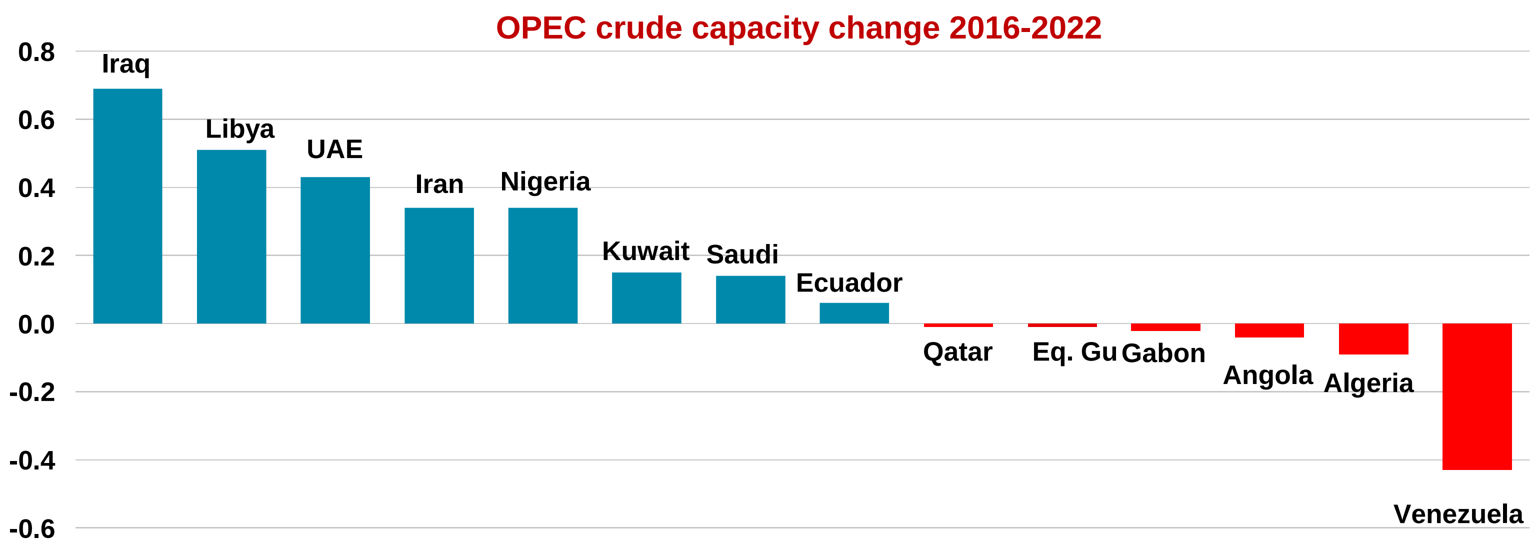
Growth highly concentrated: three main non-OPEC countries = 69% of total

MEDIUM TERM: Historical context for US shale growth



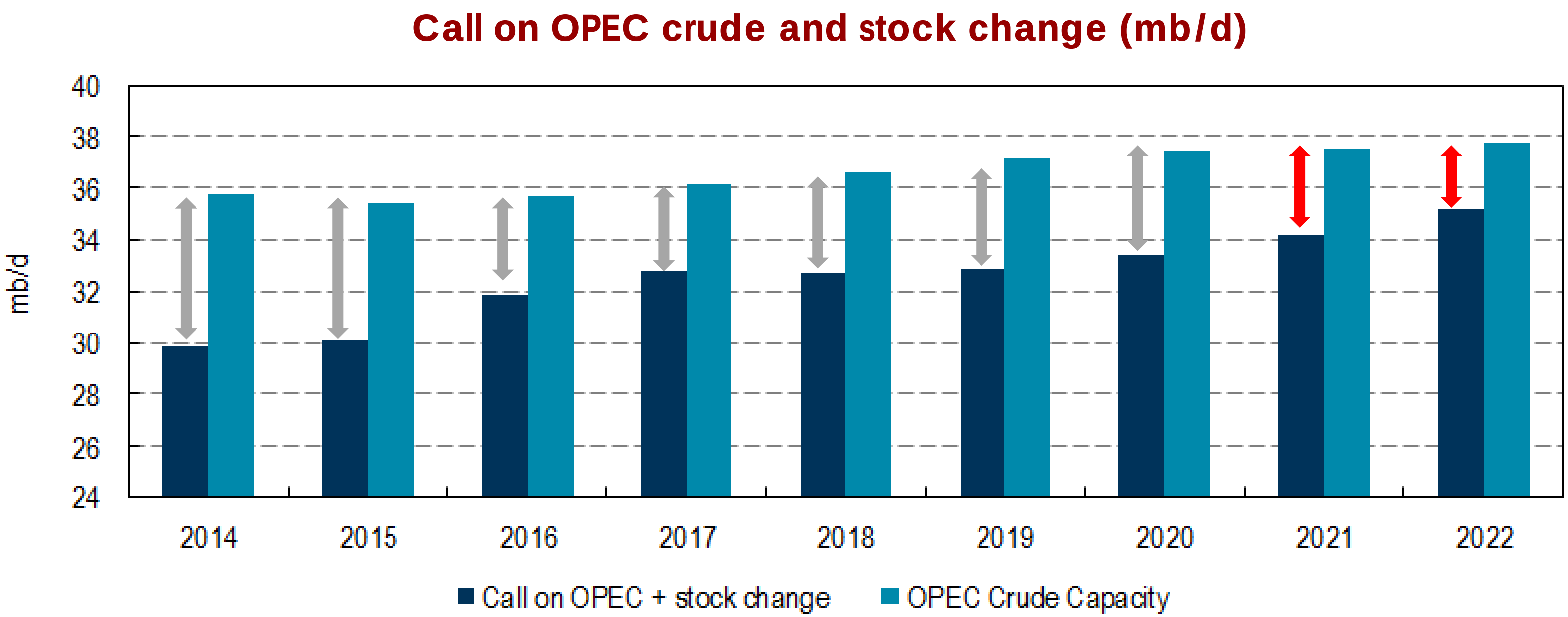
US shale oil growth results from technological progress rather than the discovery and deployment of huge oil resources

MEDIUM TERM: Low-cost Middle East drives OPEC capacity growth



OPEC builds 2.1 mb/d of new capacity by 2022. Iraq leads gains, Venezuela is big loser.

MEDIUM TERM: Oil market grows tighter & risk of rising prices



Spare capacity shrinks without further investment: less than 3% in 2022 vs 3.7% in 2008 when prices rose sharply.