

Oil Prices Outlook 2018-2022

December, 2017

United States

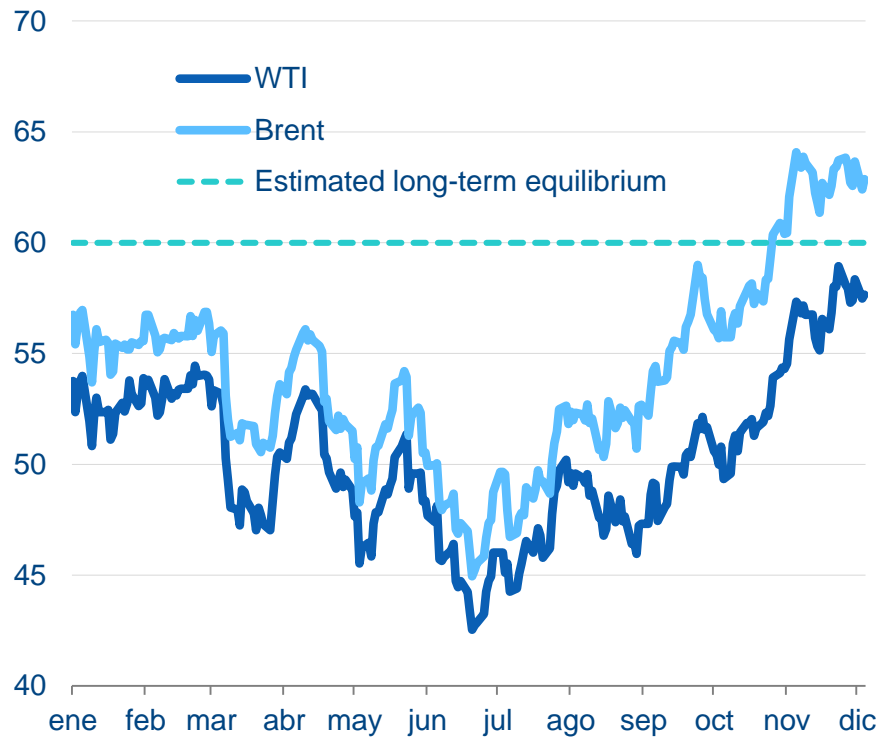


Key Messages

1. Further price increases in the short-run supported by robust demand and inventory correction
2. Geopolitical factors could lift prices further
3. In the mid-term, supply is expected to catch up with higher prices, intensifying the fight for market share
4. A more competitive environment and structural changes in energy markets will make it difficult to keep prices above \$60/b for a prolonged period
5. The main uncertainty comes from the lagged effects of CAPEX cuts and the impact on future supply

Sustained price increases in 2H17 reignited a bullish sentiment. Is the worst finally over?

Crude oil prices
(2017, \$ per barrel)



Crude oil non-commercial long contracts
(2017, light-sweet, futures only)



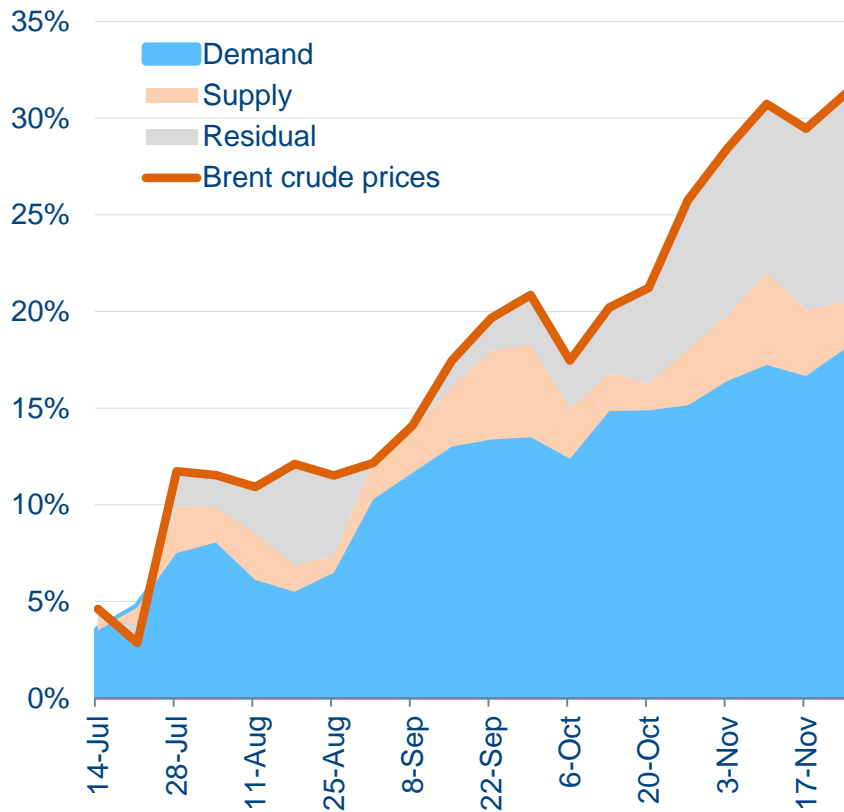
Source: BBVA Research and Haver Analytics

Source: BBVA Research and Haver Analytics

Higher prices have been supported mainly by demand

NYFed: cumulative weekly decomposition

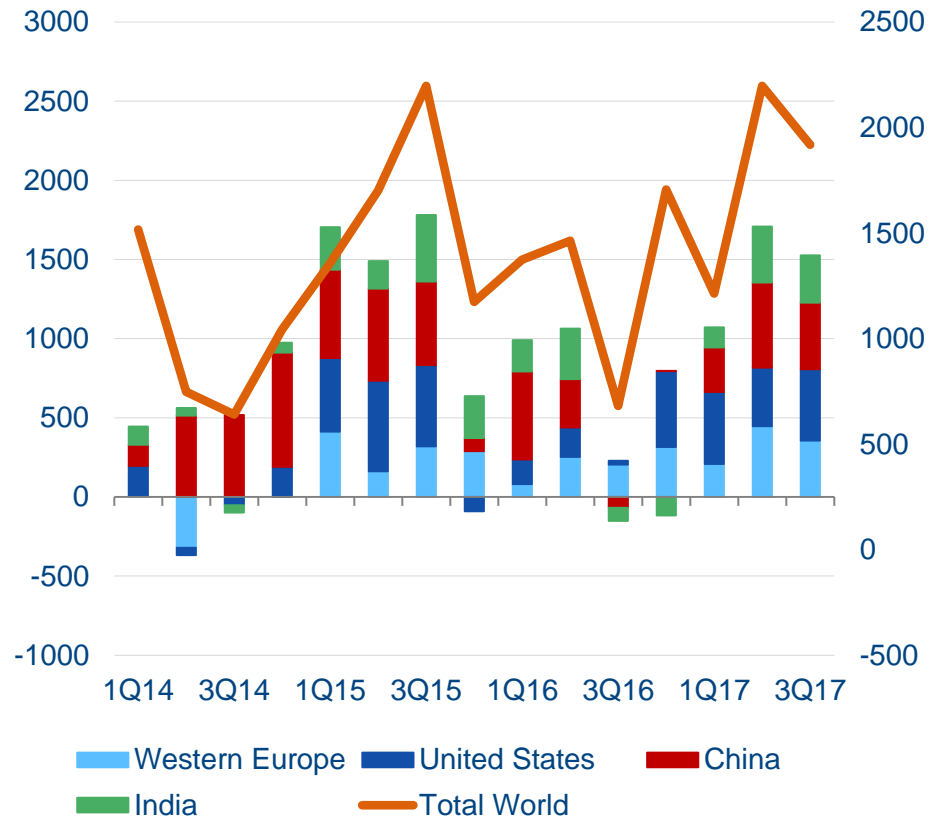
(Jul 07- Nov-2017)



Source: New York Fed

Oil product demand

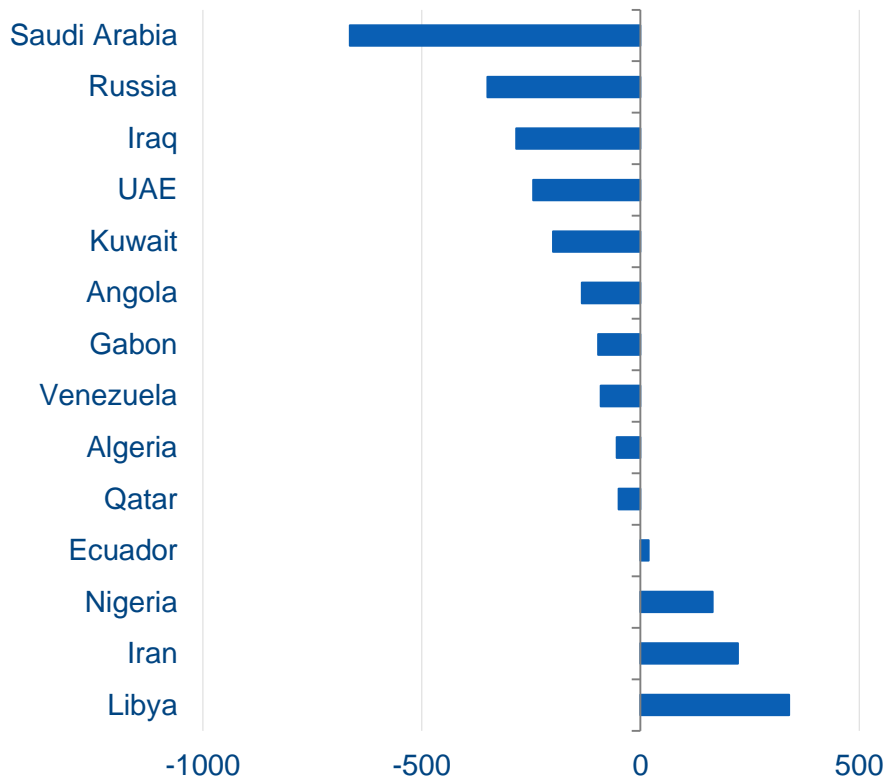
(YoY % change, million barrels per day)



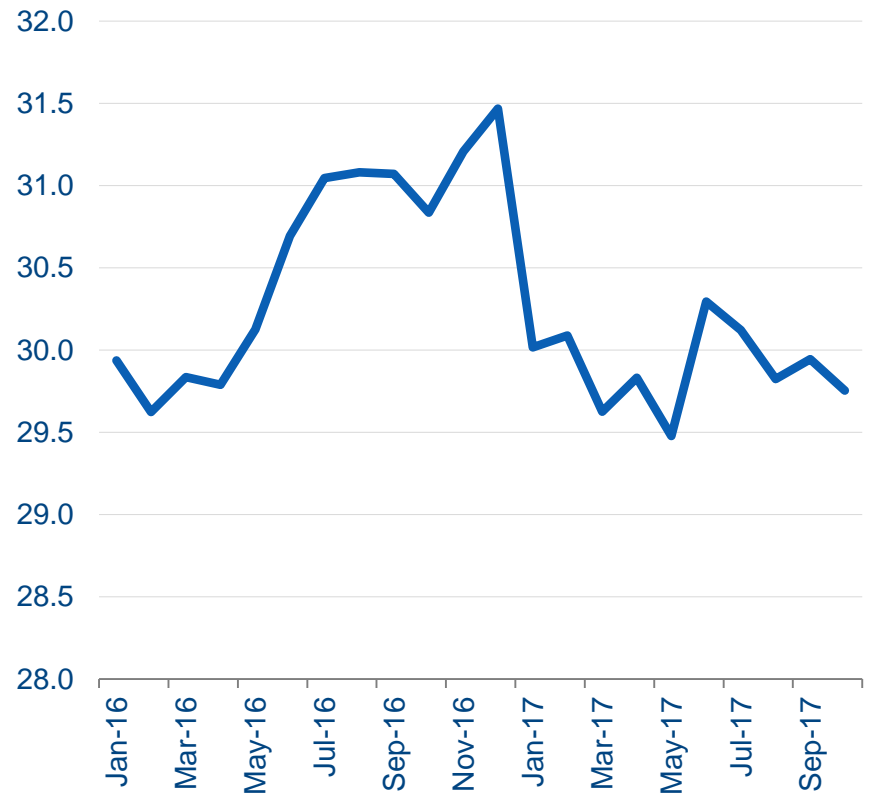
Source: BBVA Research and Haver Analytics

OPEC and Russia's commitment to the output deal have also helped. The deal was extended for the entire 2018.

Change in crude oil production
(Dec-16 to Nov-17, thousand barrels per day)



OPEC crude oil production*
(Million barrels per day)



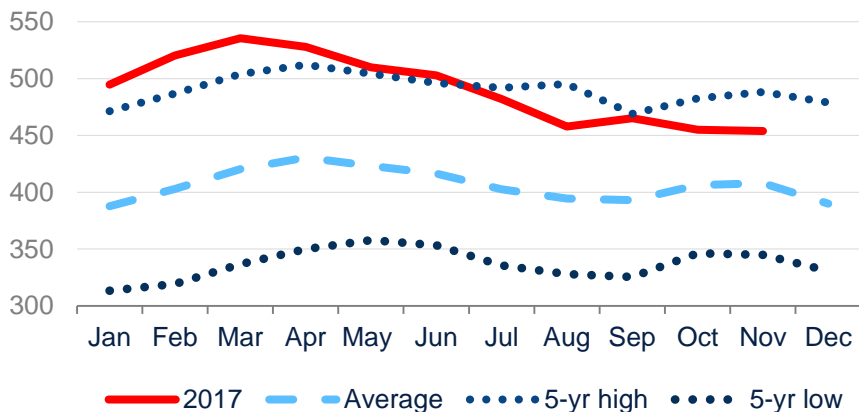
Source: BBVA Research and Haver Analytics

*Excluding Libya and Nigeria

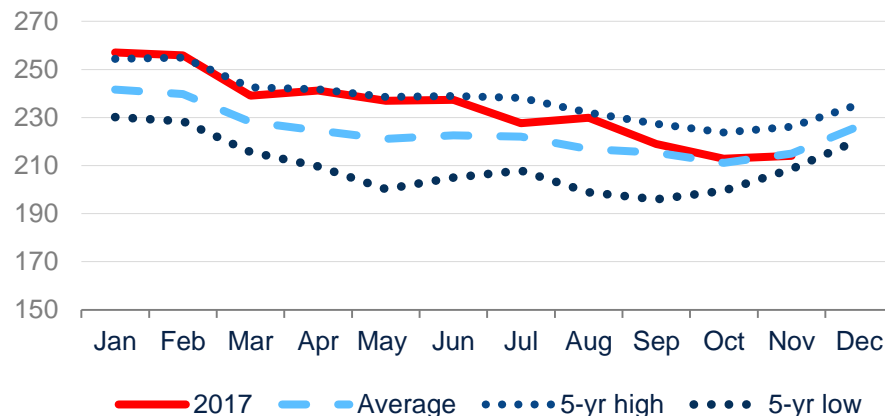
Source: BBVA Research and Haver Analytics

Inventories will continue to decline, but are likely to remain above their 5-year average for some more time

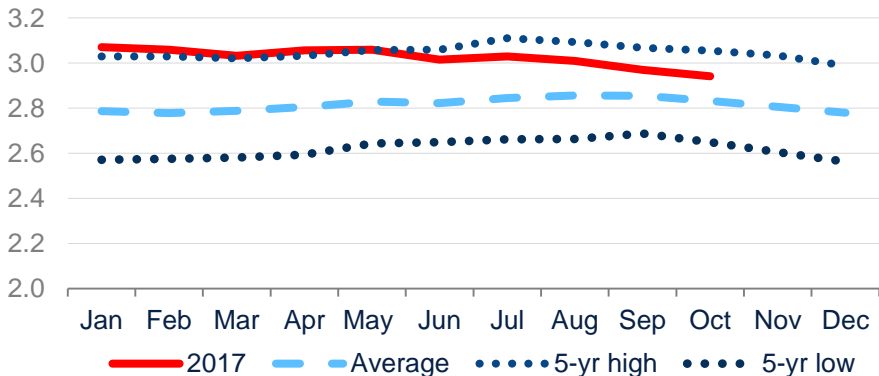
U.S. Stocks of crude oil
(Excl SPR, eop, million barrels)



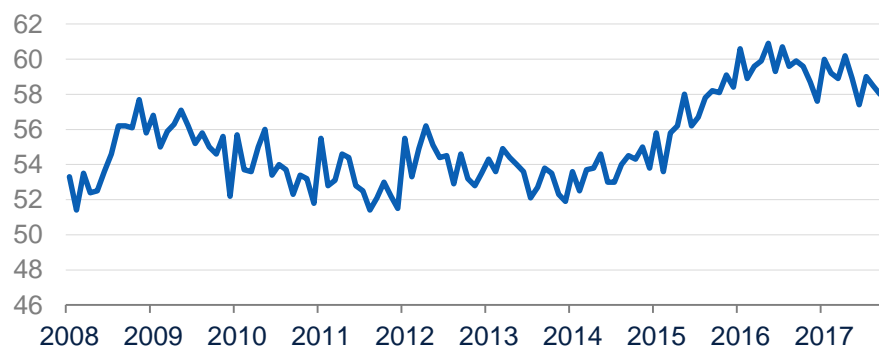
U.S. Stocks of motor gasoline
(Eop, million barrels)



OECD Oil inventories
(Eop, billion barrels)

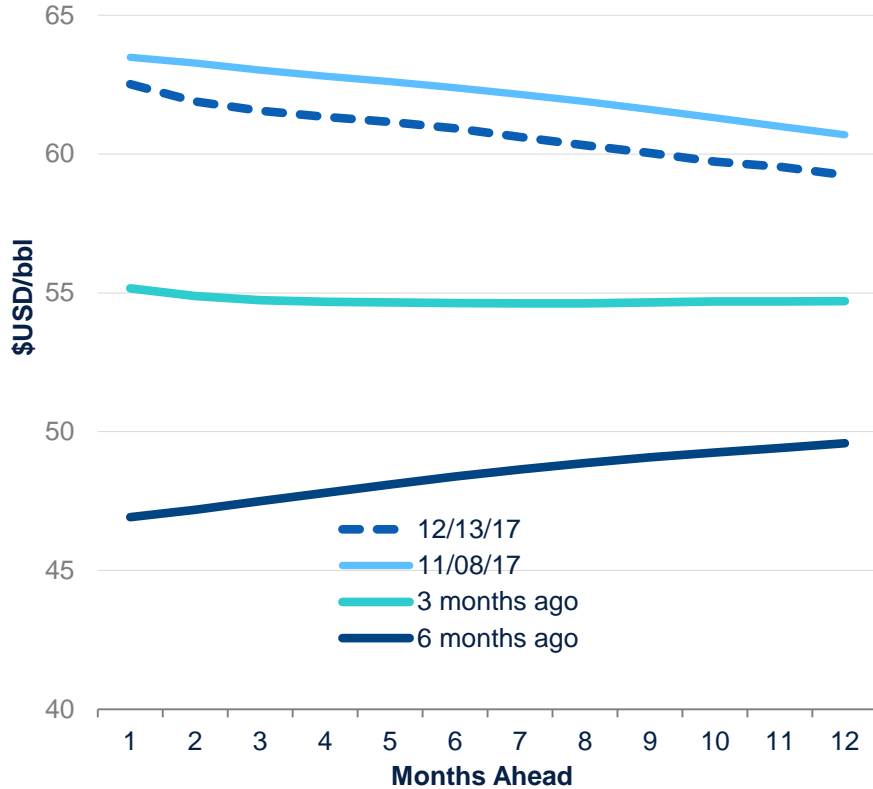


Global commercial oil inventories: days supply
(Eop, number of days)

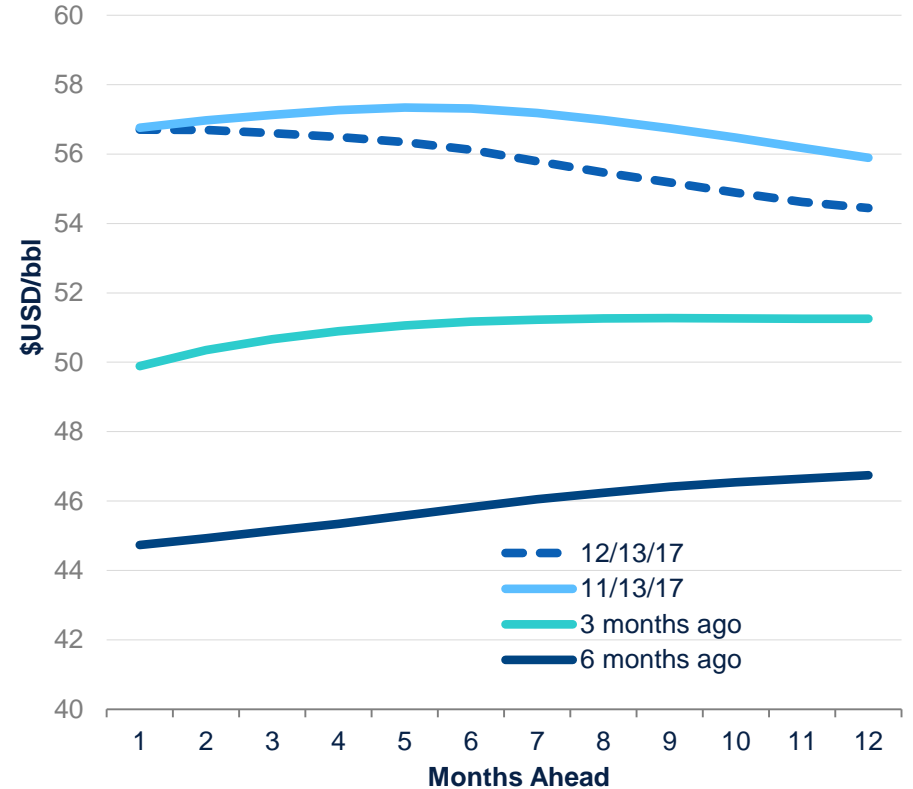


The forward curve is in backwardation, implying stronger demand and further destocking in the short-run

Brent crude futures

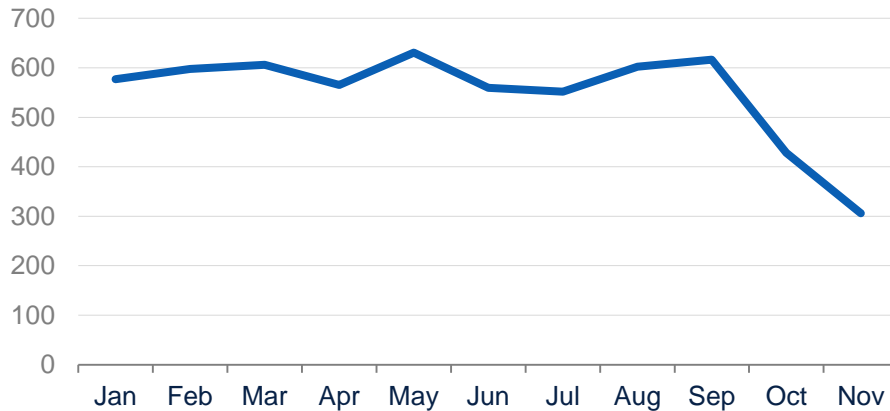


WTI crude futures

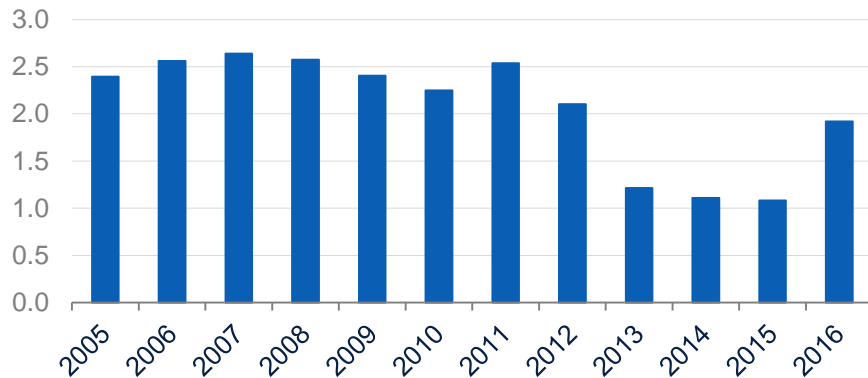


Geopolitical factors could lift prices further in the short-run

Iraq: Crude oil exports to the port of Ceyhan
(kb/d)



Iran: Crude oil exports
(Mb/d)



- **Saudi Arabia.** There is uncertainty on the success of the Crown Princes' anti-corruption crackdown and his plans for major reforms such as Vision 2030, which includes the Saudi Aramco IPO.
- Intensification of proxy-conflict between **Iran and Saudi Arabia** (Syria, Lebanon, Yemen, Qatar, Pakistan, etc.).
- **Iraq.** The Kurdish independence referendum and the attack on Kirkuk could anticipate a more open conflict that could escalate into military confrontation. In such scenario, the oil fields within the Kurdish area and the pipeline to Ceyhan, Turkey would become targets.
- **Iran.** President Trump's decision not to certify Iran's compliance with the 2015 nuclear deal adds uncertainty about whether the U.S. will impose fresh sanctions on Iran, limiting its capacity to export crude.

Expect higher prices in the short-run, but convergence to \$60/b thereafter

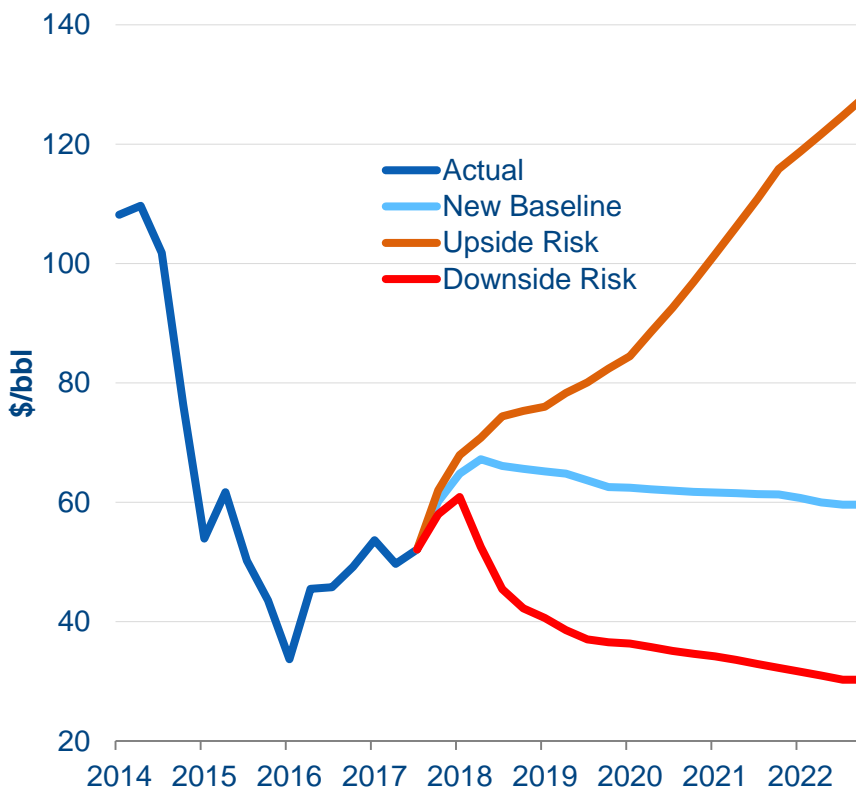
Crude oil prices forecast

(Brent, \$ per barrel, avg.)

	Baseline	Upside	Downside
2015	52.8	52.8	52.8
2016	45.2	45.2	45.2
2017	53.9	54.4	53.4
2018	65.9	72.1	50.3
2019	64.1	79.2	38.2
2020	62.1	90.6	35.5
2021	61.5	108.6	33.2
2022	60.0	123.3	30.8

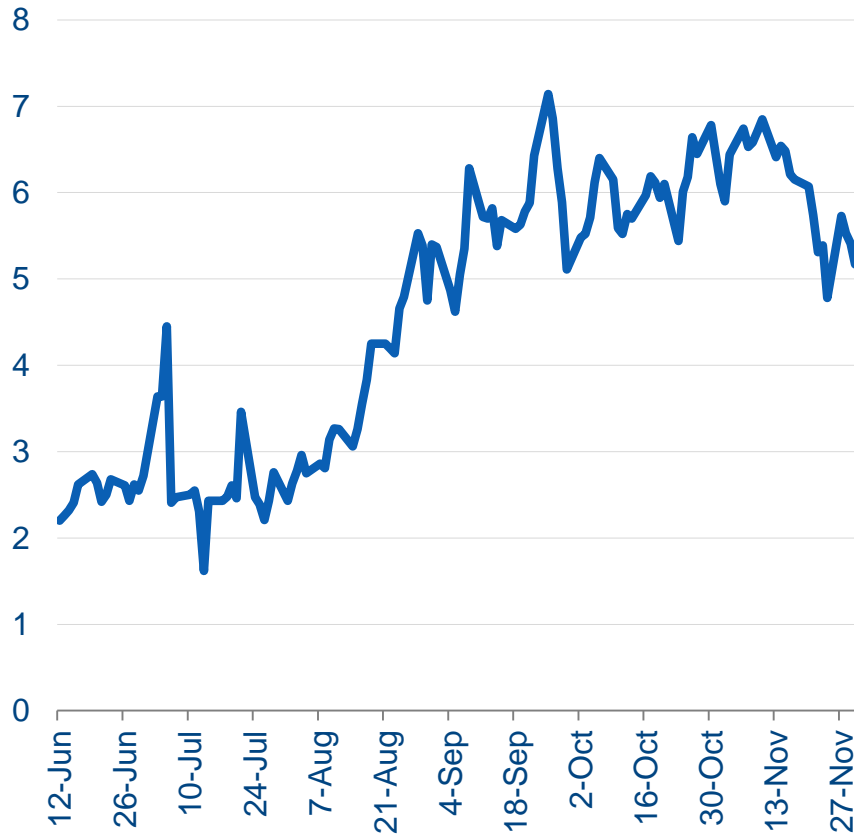
Crude oil prices forecast

(Brent, \$ per barrel, avg.)

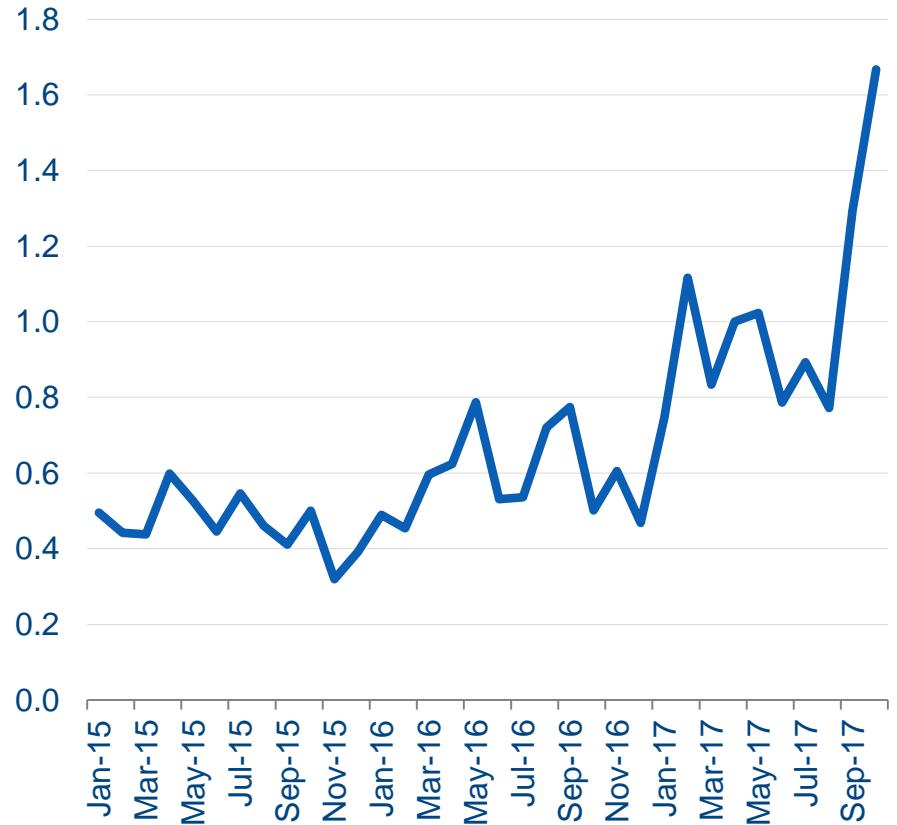


The gap between WTI and Brent has widened, creating arbitrage opportunities

Brent-WTI gap
(\$ per barrel, 2017)

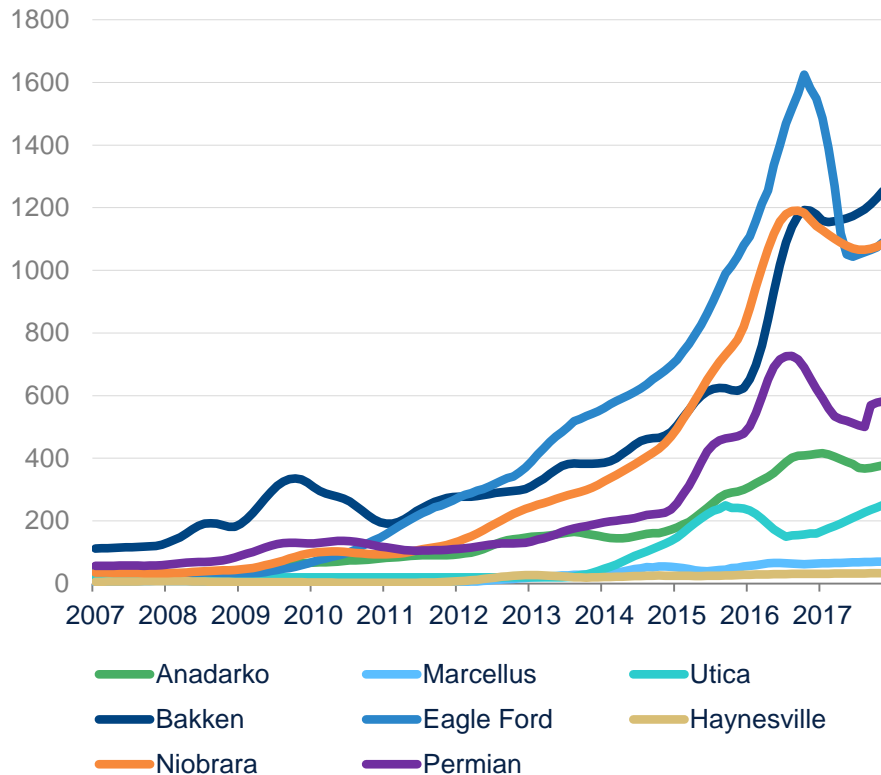


U.S. Crude oil exports
(Million barrels per day)

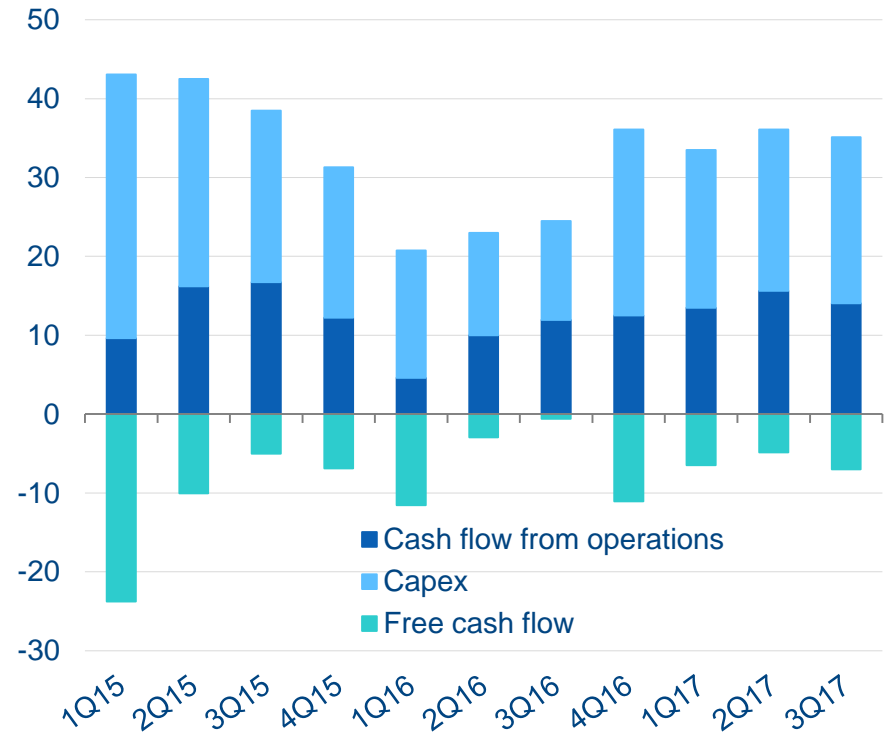


U.S. supply may not catch up quickly with higher prices. Productivity has eased while investors are seeking profitability rather than growth

U.S. New well productivity per rig
(Barrels per day)

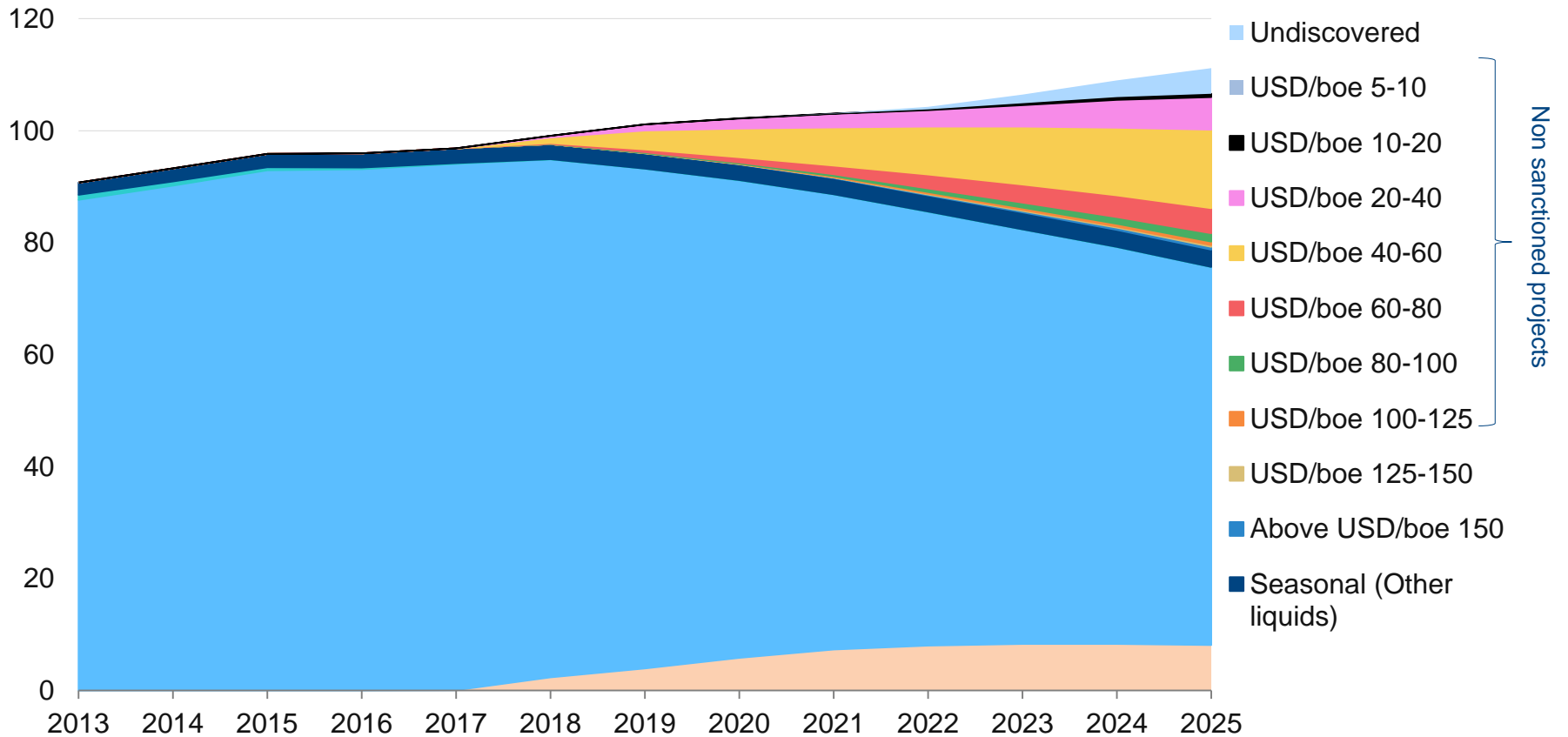


U.S. shale operators cash flows
(\$ bn)



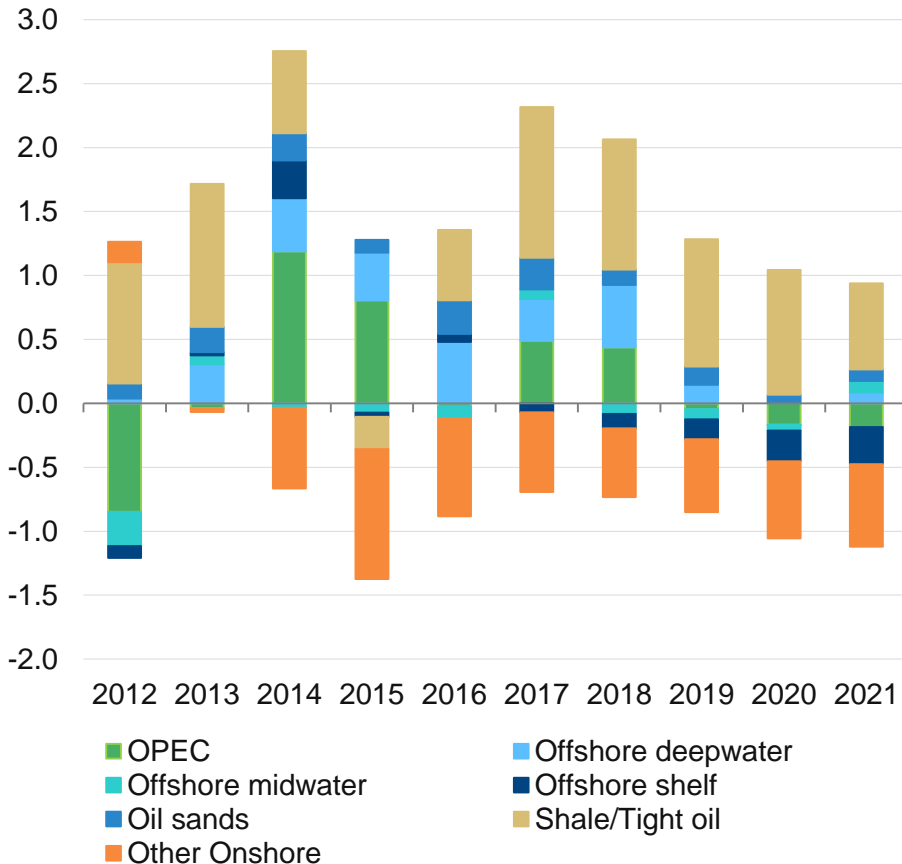
More than half of liquids from new supply sources are expected to be commercial at less than \$60/b

Global liquids production by life cycle and breakeven price
(Million barrels per day)

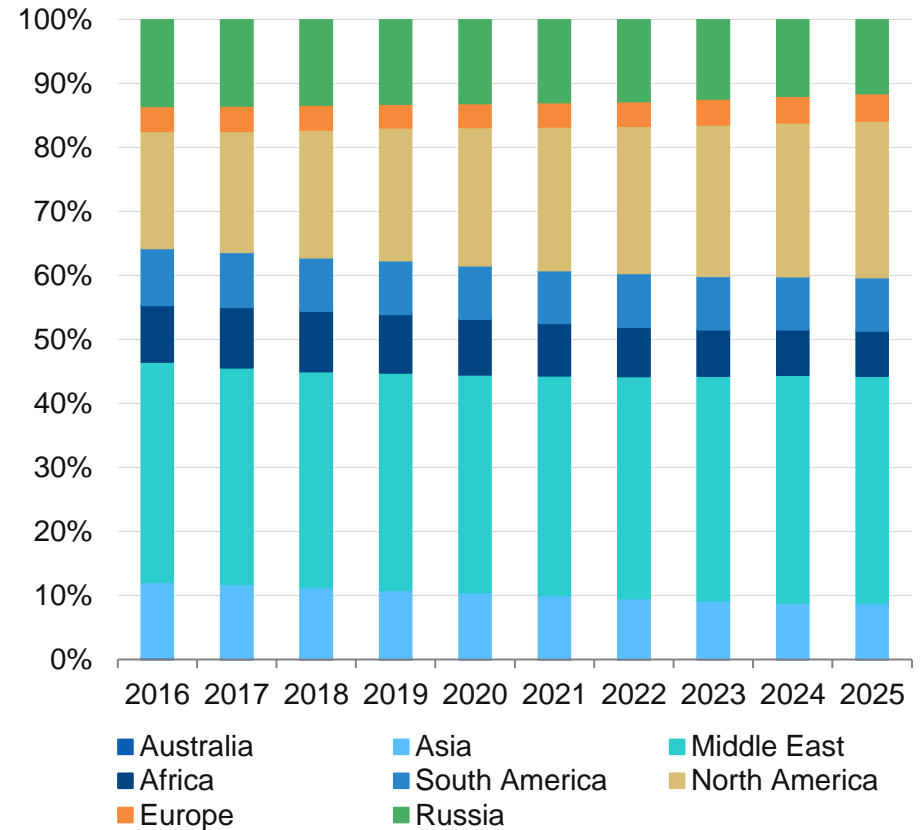


An intense fight for market share would make it difficult for prices to remain above \$60/b for a long period

Net additions in crude oil supply
(By segment group, yoy change in million barrels per day)



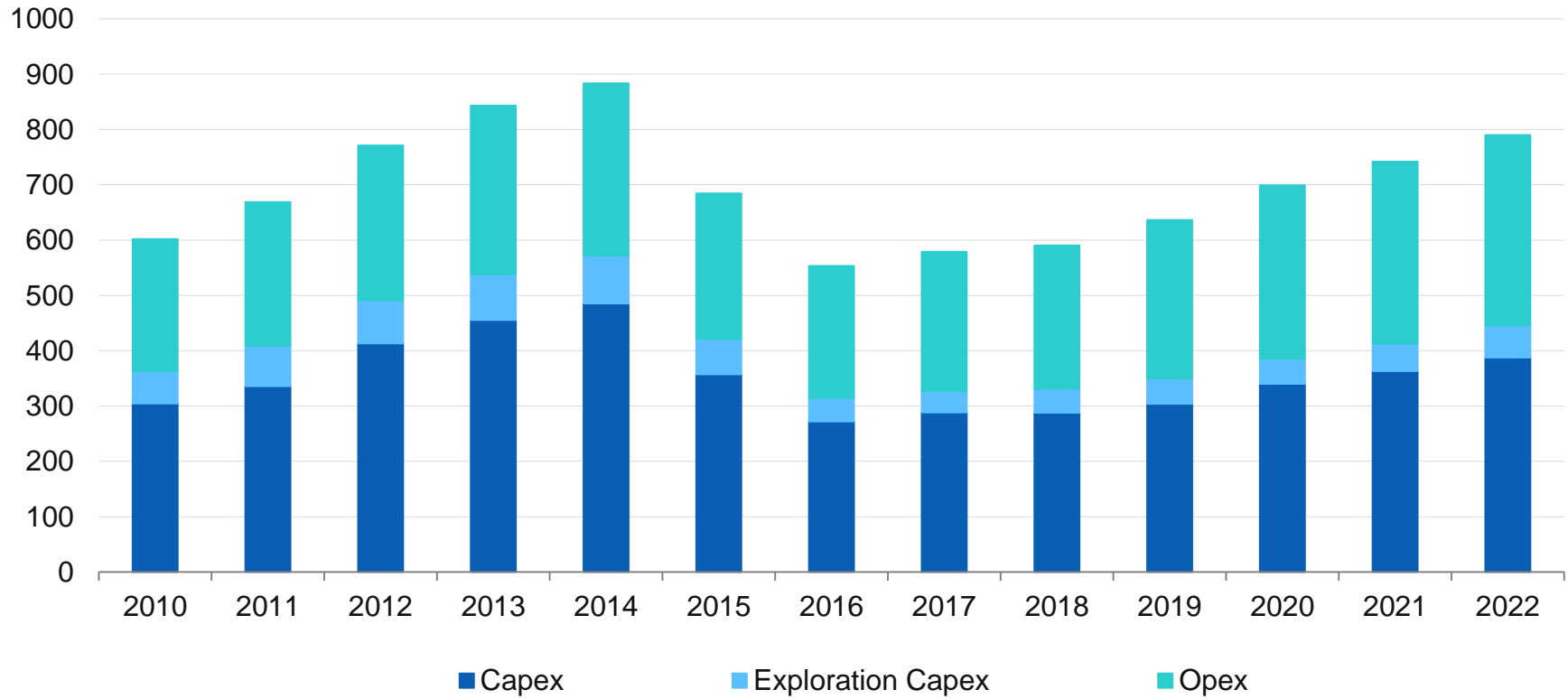
Crude oil production by region
(Share of total)



Source: Rystad Energy

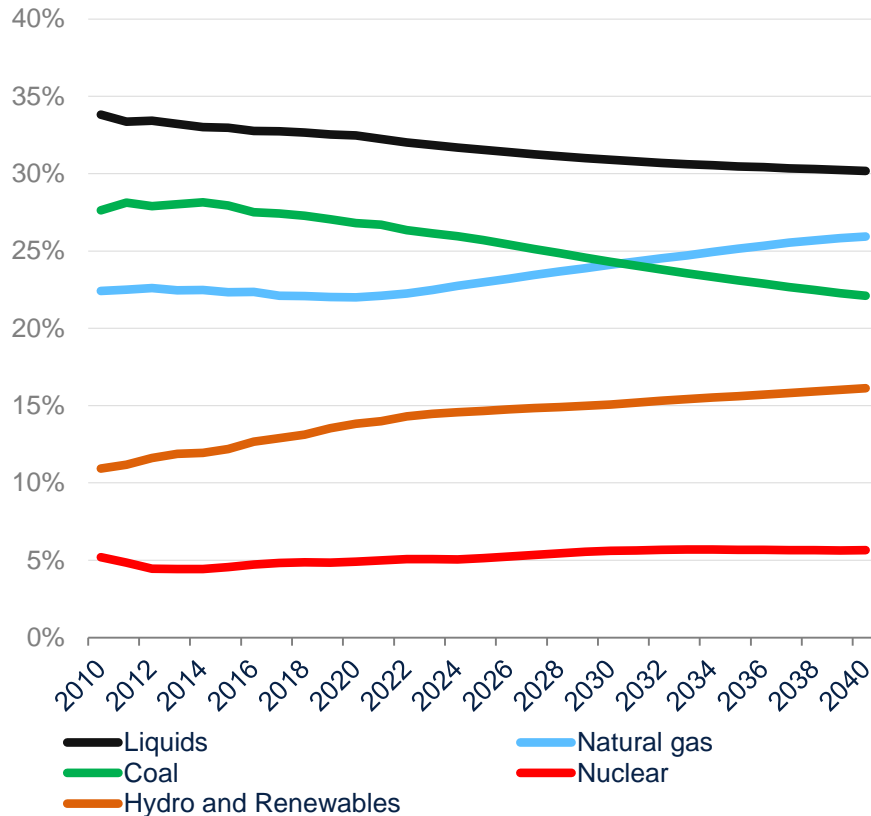
However, from a cyclical perspective, the main uncertainty is the impact that subpar CAPEX could have on future production

Global capital expenditures in crude oil
(Billion USD)

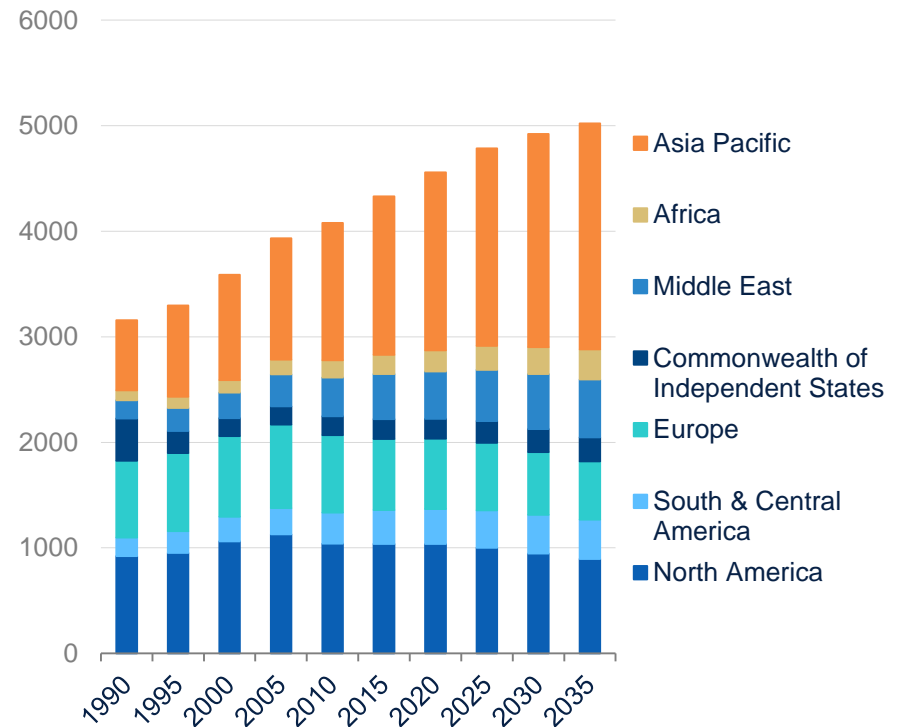


Demand will continue growing but its pace may ease over time. Most of the expansion will be concentrated in Asia

Energy consumption by fuel
(Quadrillion BTU, Reference case)



Total liquids consumption by region
(Million tonnes of oil equivalent)

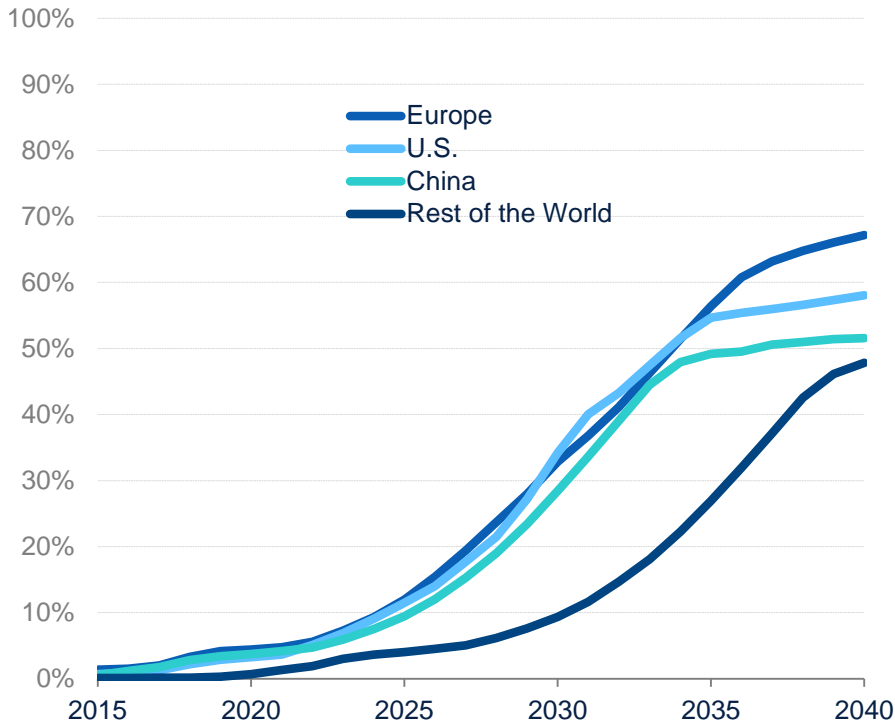


Source: Energy Information Administration and Haver Analytics

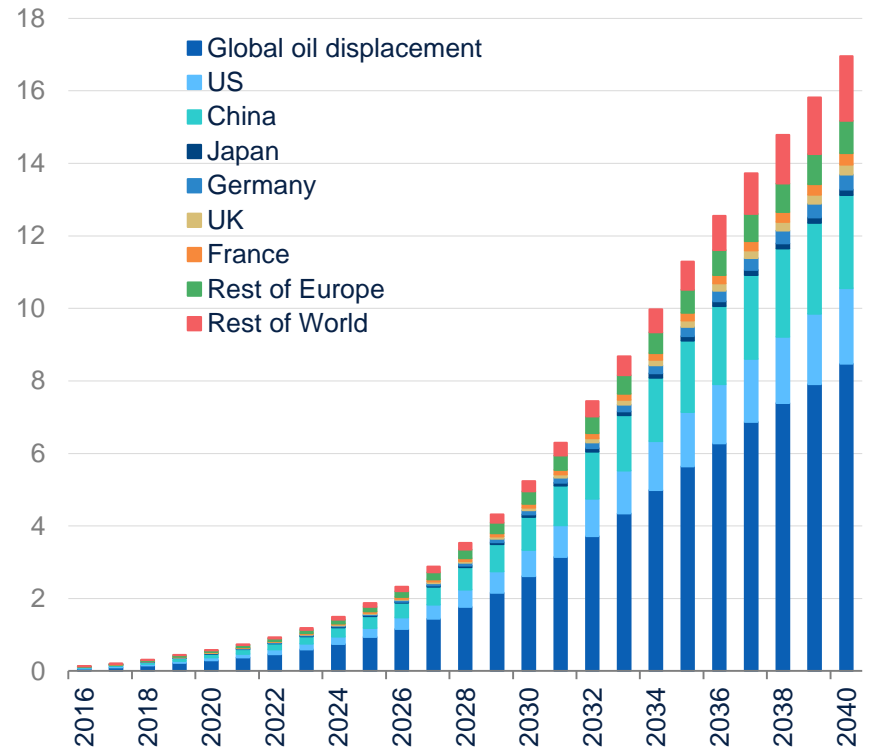
Source: British Petroleum and Haver Analytics

The electrification of transportation could displace several million barrels from the market

Electric vehicle sales projections (Share of new car sales)



Global fuel demand displacement from electric vehicles (Million barrels per day)



Oil Prices Outlook 2018-2022

December, 2017

United States

