

Oil Price Outlook

BBVA Research USA

Houston, TX

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As expected

- High-cost production continues to adjust
- Further bankruptcies and declining investment
- Sustained demand growth, particularly in emerging markets
- Competition for market share continues

Major surprises

- Limited impact from Brexit vote
- Bearish markets due to high inventories of refined products
- Renewed expectations of a potential OPEC output deal

Upward bias in the short-term, but caution going forward

- Short-run risks persist such as financial volatility, further supply disruptions, and negative surprises to the global outlook
- Oversupply conditions remain
- OPEC production deal most likely to fail
- Inventories are still at historically high levels, limiting rapid price increases
- A sustained price rebound could halt further cuts in U.S. production

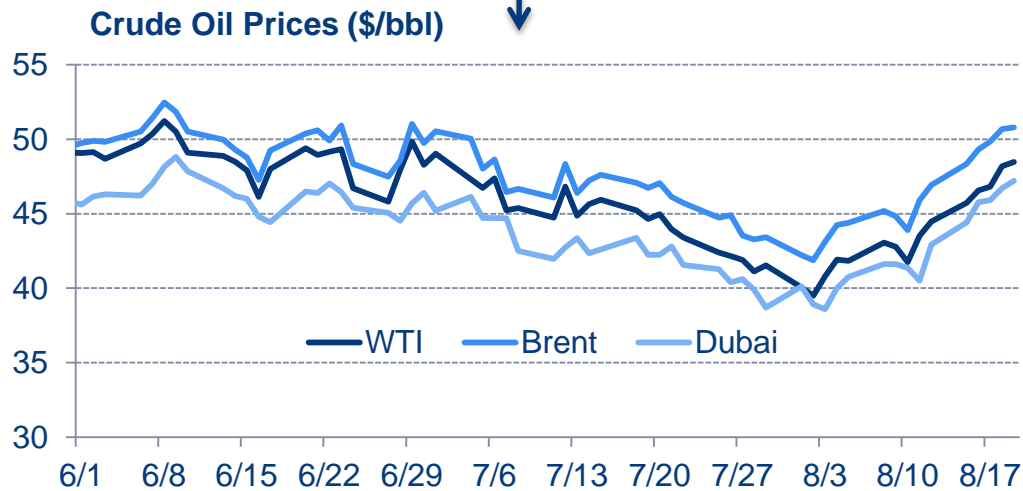
Summary (June-August)

Supply: Non-OPEC
 Declining output from high-cost producers. U.S. rig count increases for eight consecutive weeks

Supply: OPEC
 Expectations of output deal in September. Saudi Arabia producing at record highs. Iraq and Iran expected to continue expanding production.

Balance
 Oversupply persists, averaging 1.2 M. bbl/d in 1H16

Demand: Non-OECD
 Doubts about China's demand increase. Inventory accumulation soon to be over



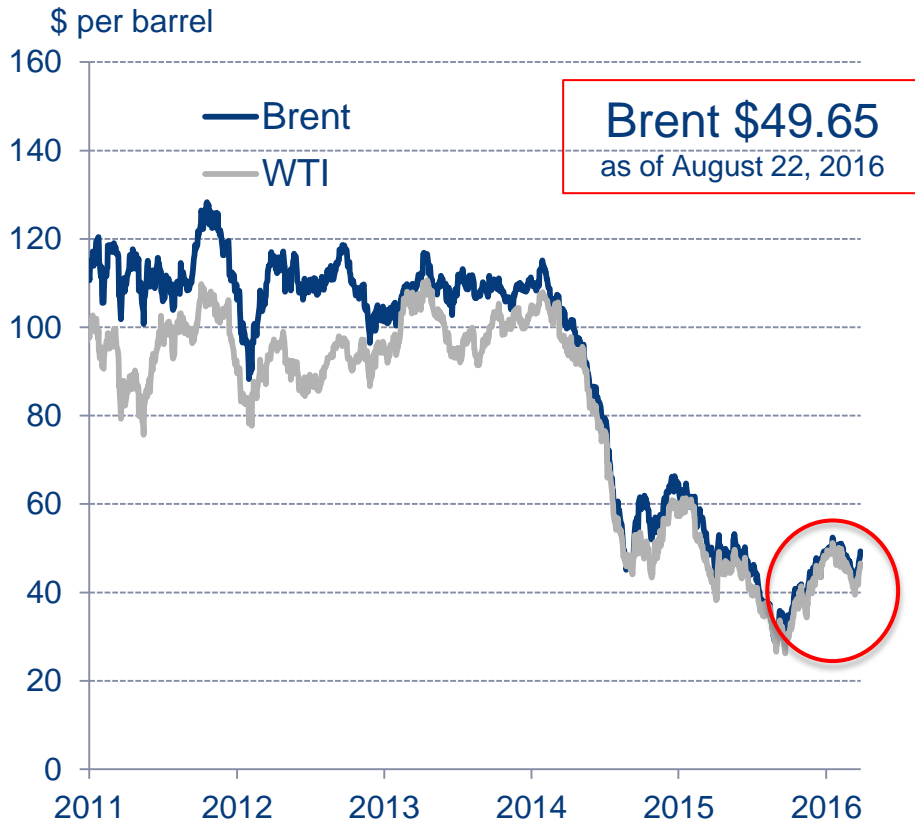
Financial Markets
 Limited impact from Brexit. Supporting dollar

Demand: OECD
 Sustained demand of petroleum products. High inventory levels of both crude and refined products

Oil prices in 2016

Momentum interrupted by renewed concerns on oversupply

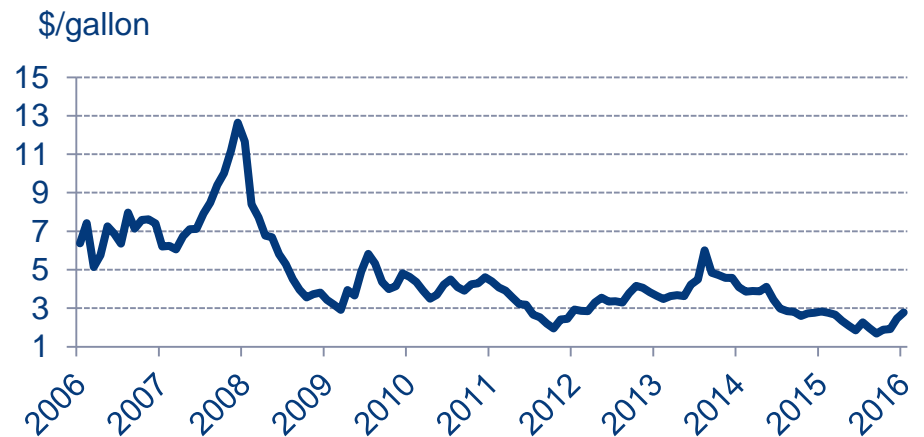
Crude oil prices



U.S. retail gasoline prices









U.S. natural gas, Henry Hub



Short-term volatility

Downward bias from recent events

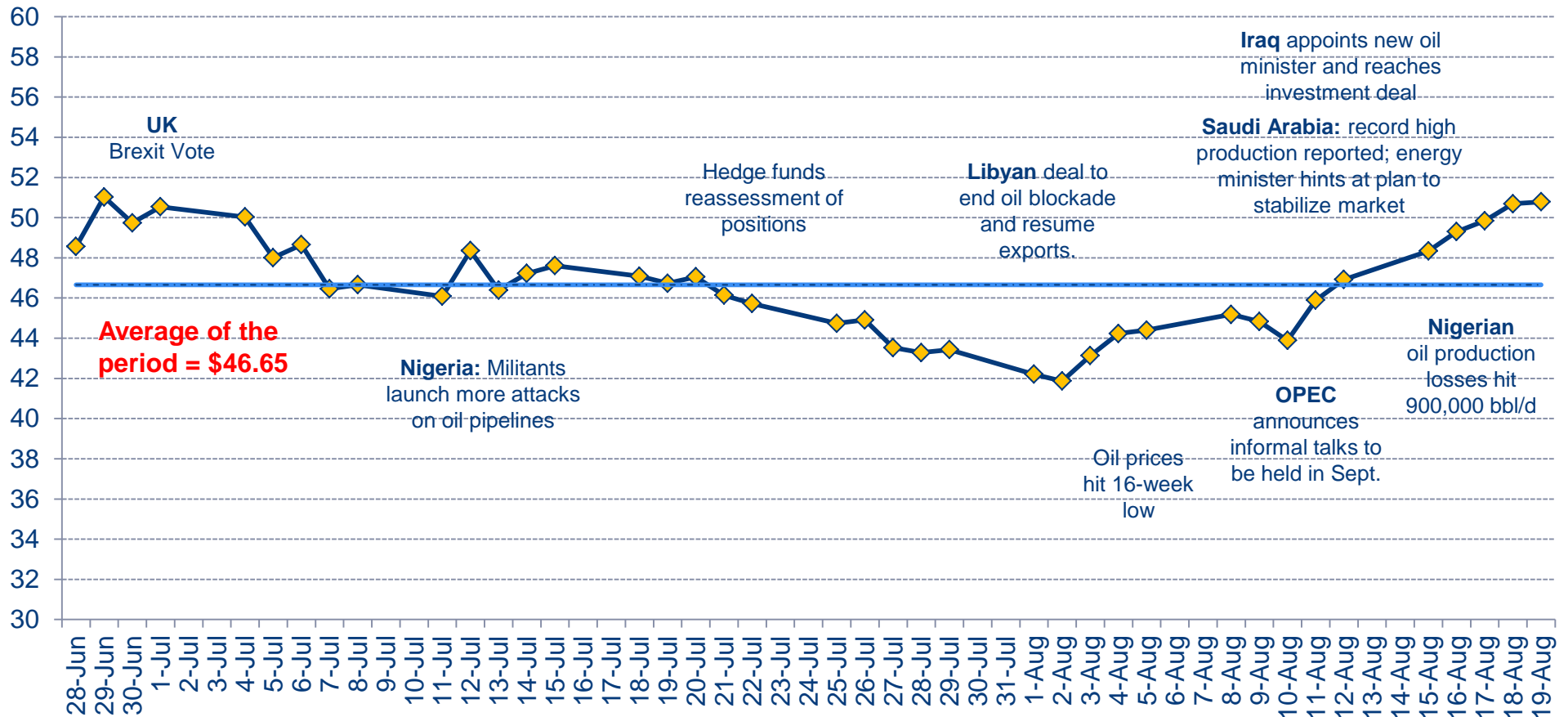
| Event | Description | Price Bias |
|--|--|---|
| Brexit | U.S. dollar rallies in Brexit aftermath |  |
| Hedge funds short positions | Hedge funds boost short positions in NYMEX WTI by nearly 88 million barrels in 7 weeks |  |
| Libya supply disruption deal | Oil production continued downward trend in July, but deal to pay local guards in order to end blockade and resume exports is signed |  |
| Iraq : investment deal and new oil minister | New deal with oil majors to restart investment in 2H16; new oil minister seeks for end to Kurdish dispute in order to boost output |  |
| Pipeline attacks in Nigeria | Militants have announced a conditional cease fire. Nigeria's production is at 20-year lows. |  |
| Mixed signals from Saudi Arabia | Energy minister signaled openness to market stabilization at Sept. OPEC and non-OPEC informal meeting; reports of record-high August production at 10.8-10.9 million bbl/d |  |

Short-term volatility

Late recovery driven by expectations of production deal

Brent spot price

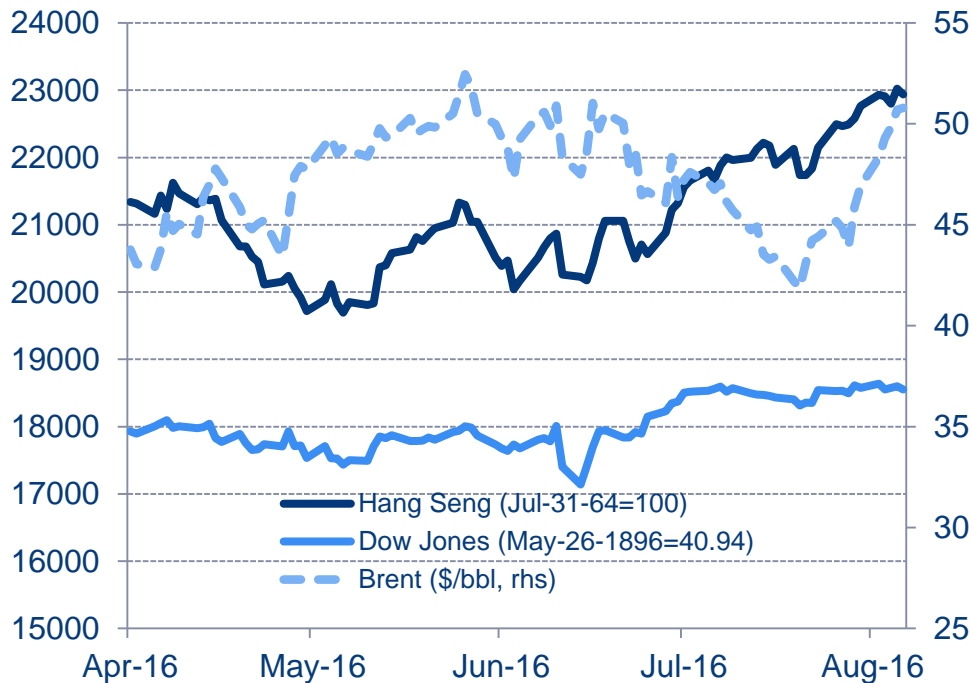
\$ per barrel



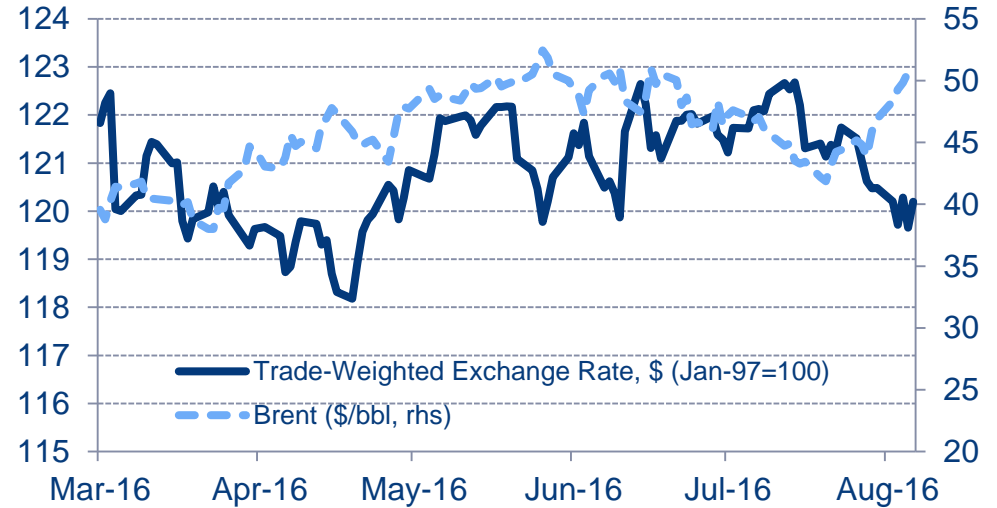
Financial markets

- The impact of Brexit was short-lived, with markets rapidly turning their attention to fundamentals.
- Recent upside also supported by a weaker dollar.

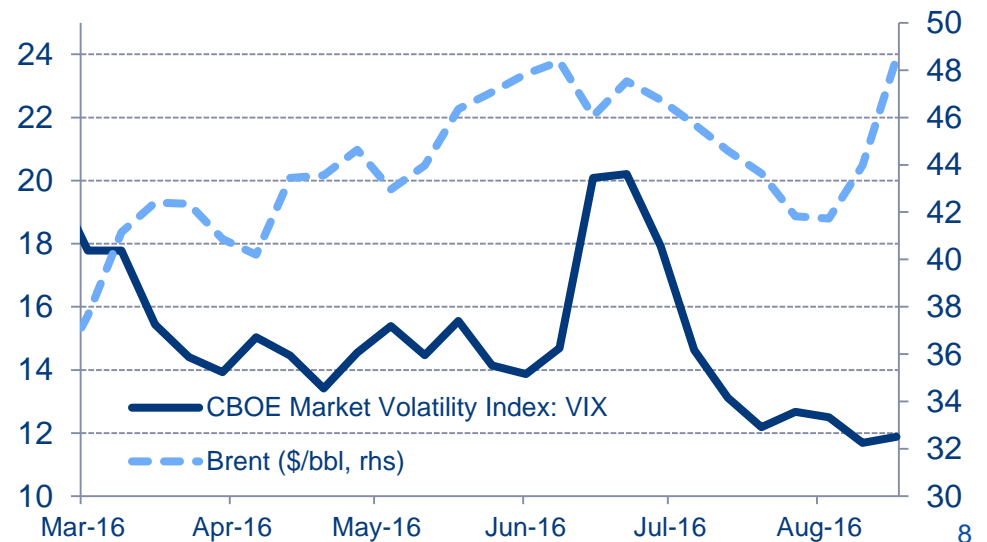
Oil prices and stock market



Oil prices and U.S. dollar



Oil prices and volatility index

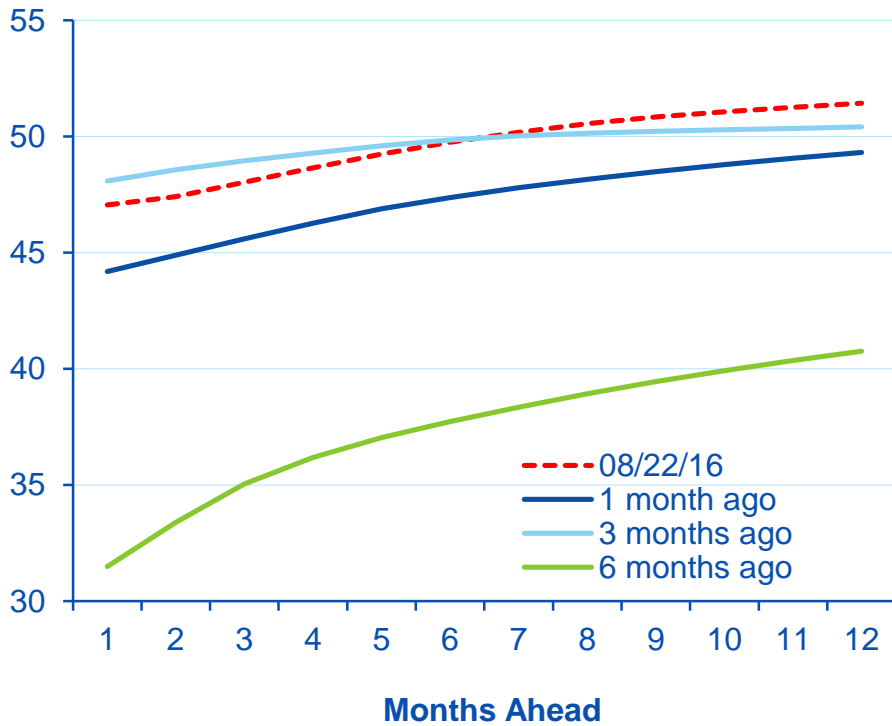


Futures

Crude futures rise on hopes of a production freeze from OPEC; however, markets still discount low prices

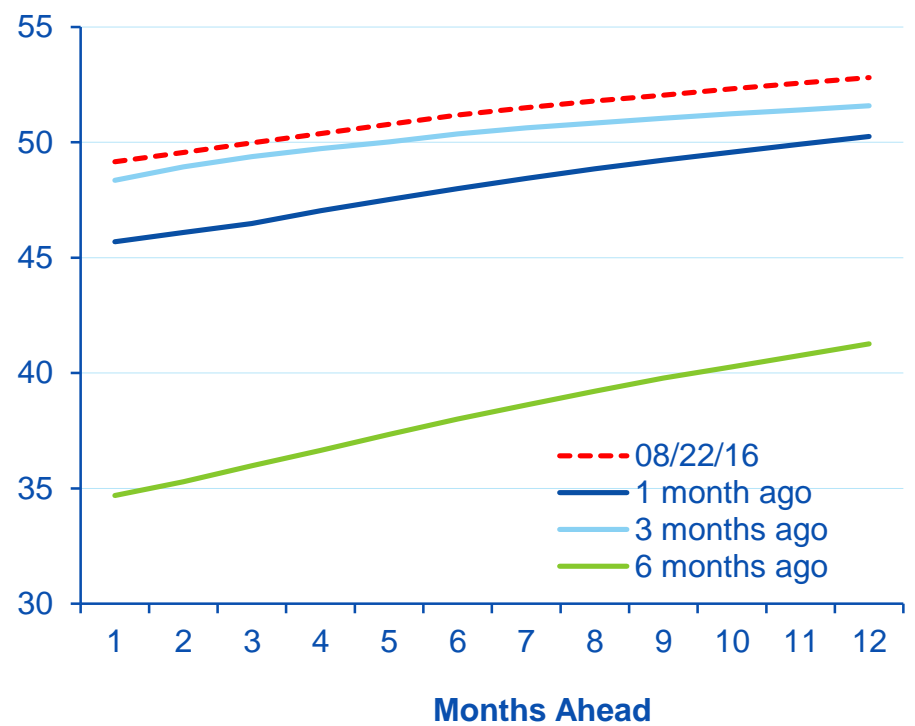
WTI crude futures

\$ per barrel



Brent crude futures

\$ per barrel

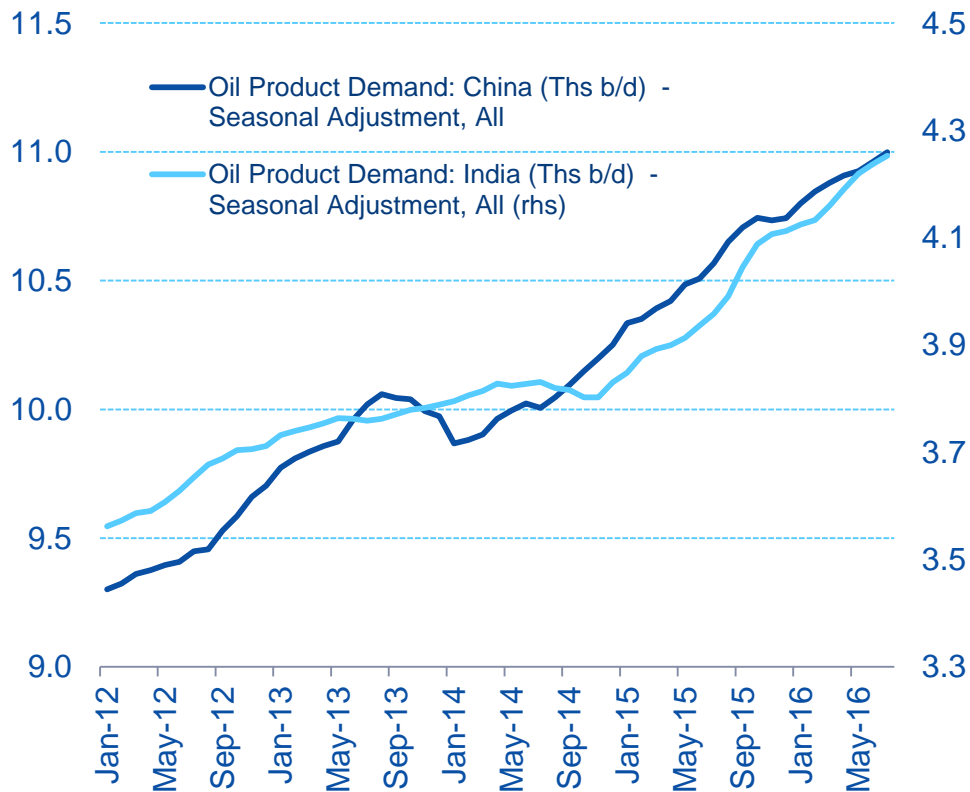


Demand

Demand growth continues to be supported by emerging markets and the U.S.

Oil product demand

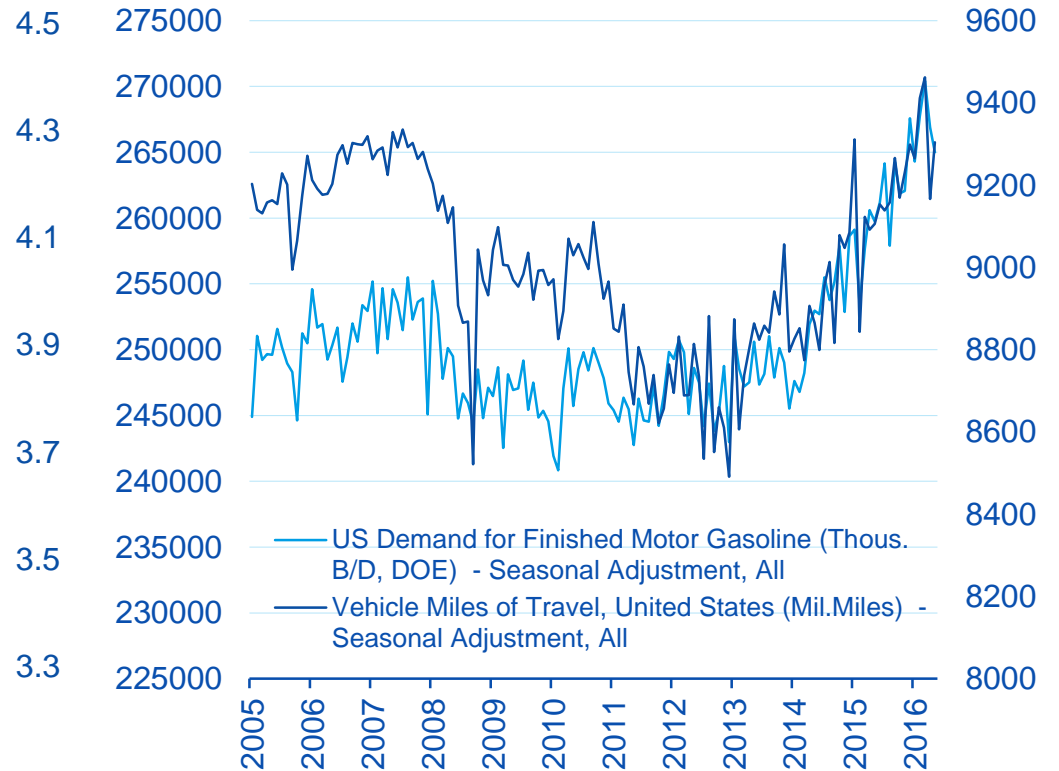
Million bbl/d



Source: Haver Analytics

U.S. demand for finished motor gasoline

Million bbl/d, seasonally adjusted



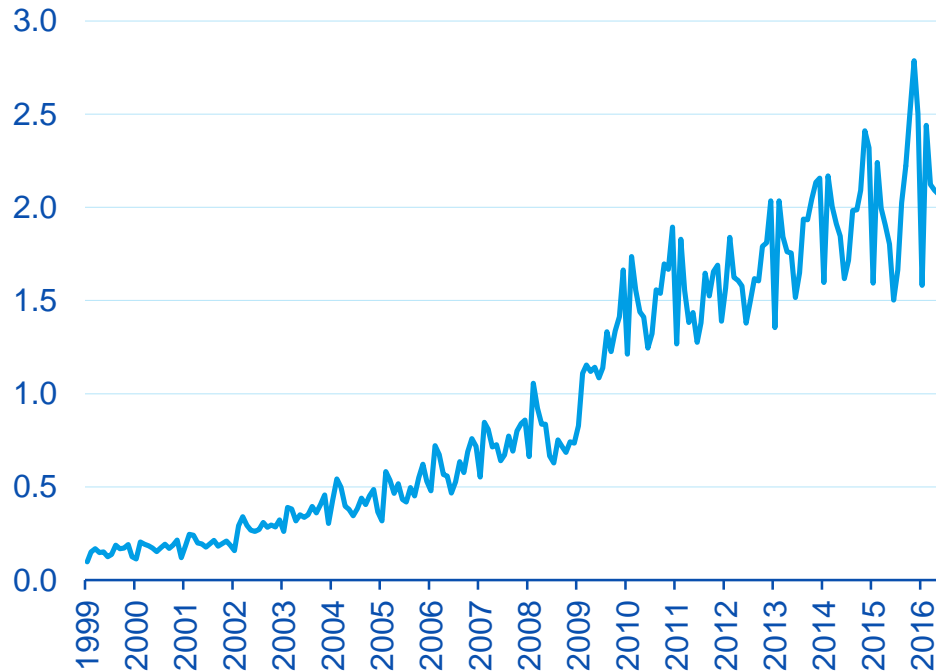
Source: Haver Analytics

Demand

- Uncertainty arising from China and the impact of the rebalancing on global crude oil demand
- Rapid inventory accumulation may come to an end soon

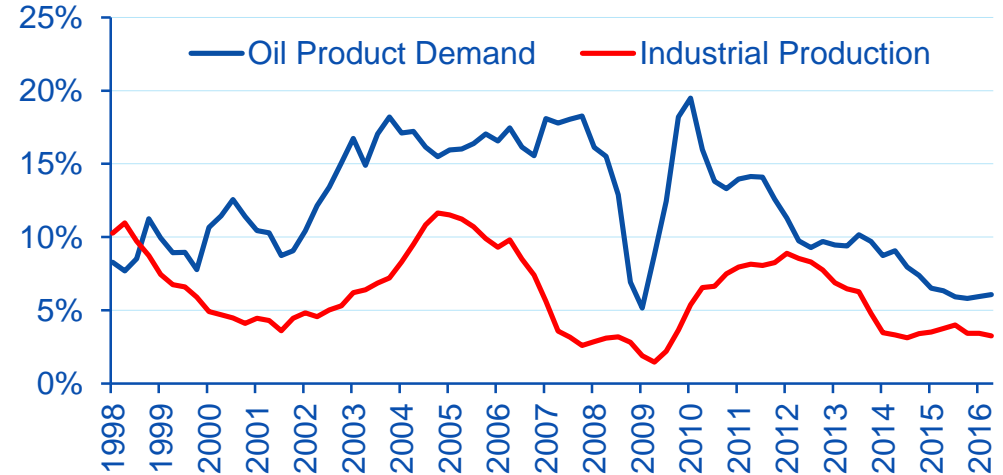
China: automobile sales

NSA, Units



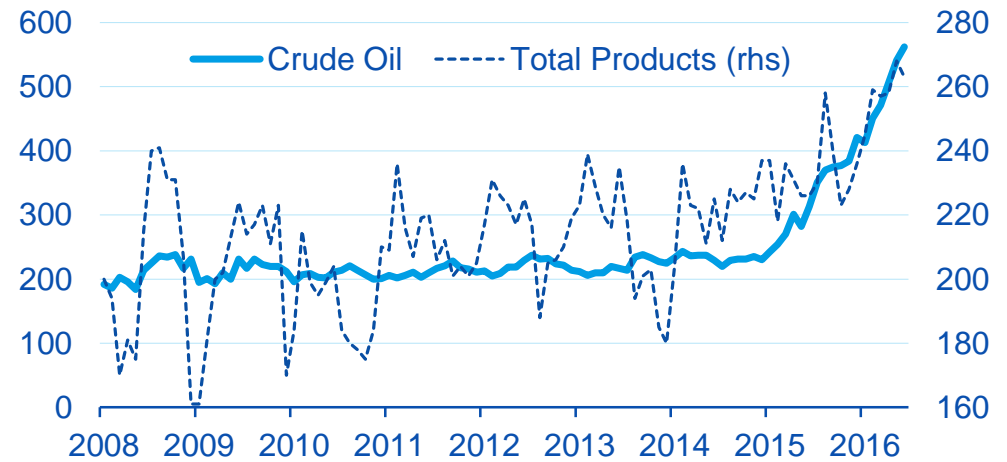
China: oil product demand and industrial production

YoY % change



China: crude and total petroleum products inventories

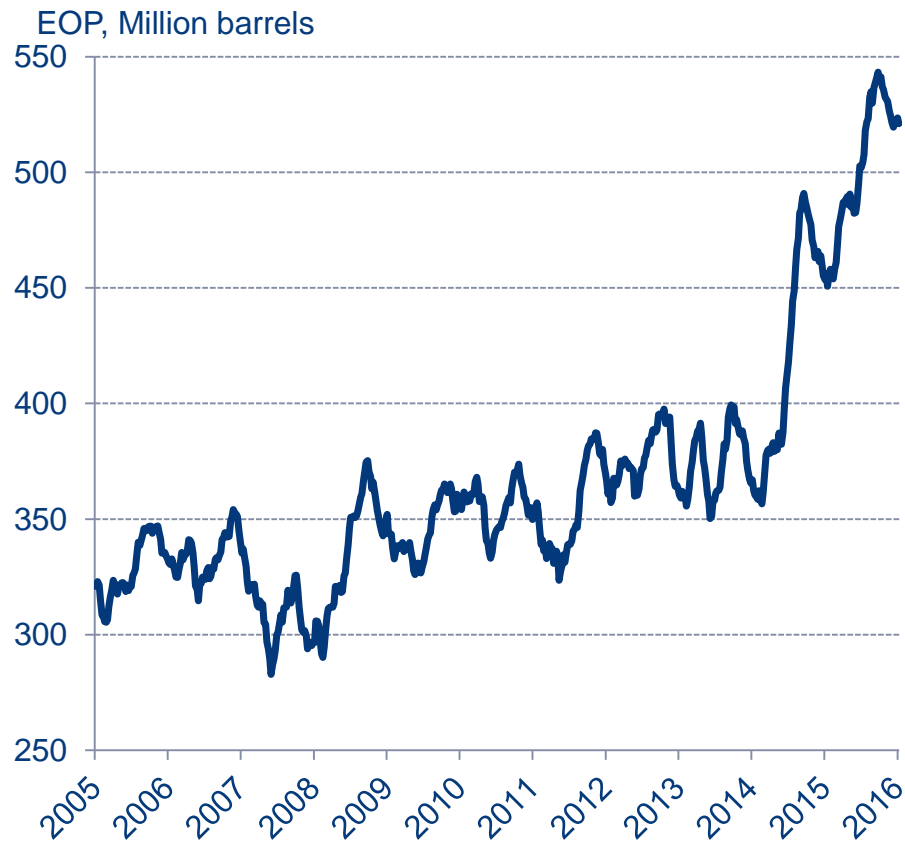
EOP, Million barrels



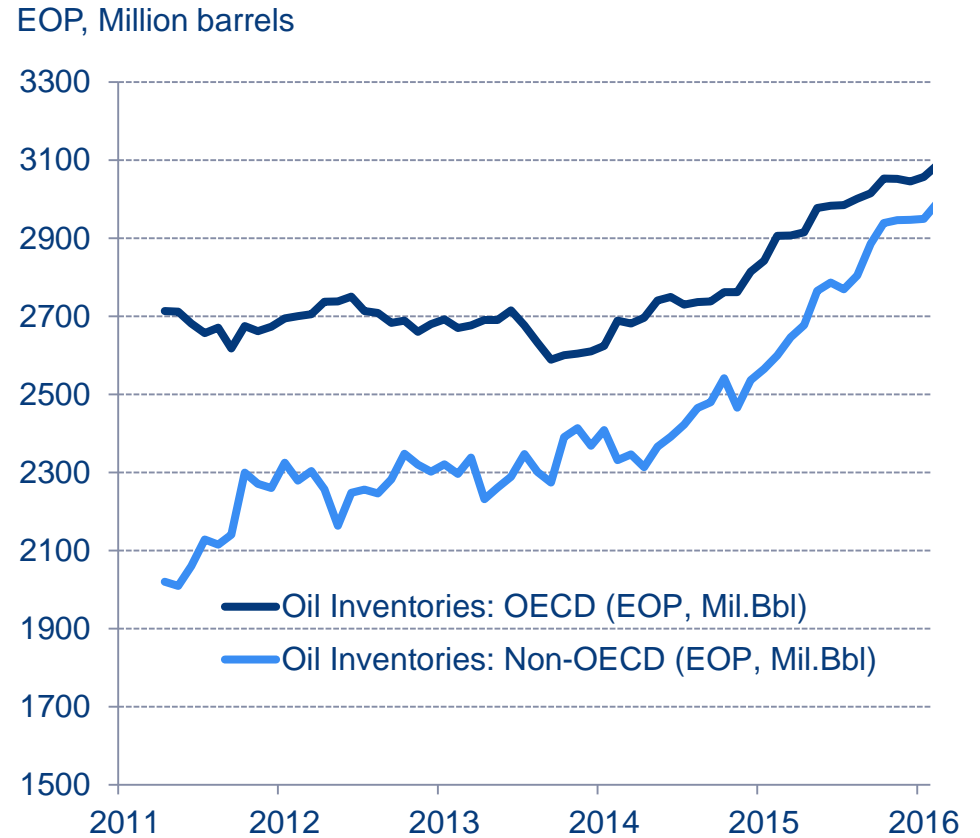
Inventories

High levels of inventories prevent prices from rebounding quickly

U.S. stocks of crude oil excluding SPR



Global oil inventories

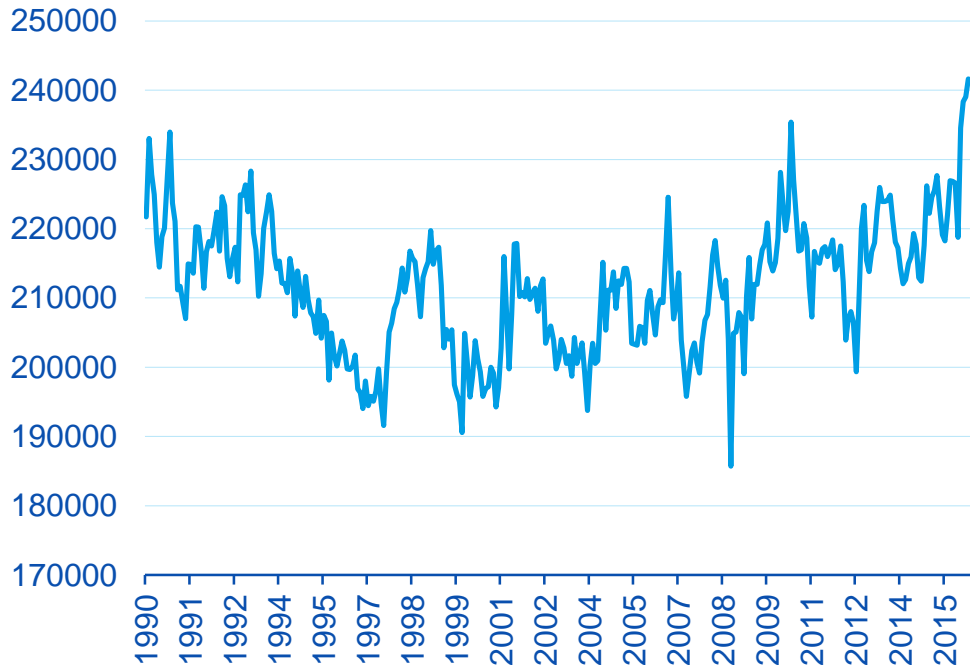


Inventories

New concerns on high stocks of refined products and the impact on refineries' demand of crude oil

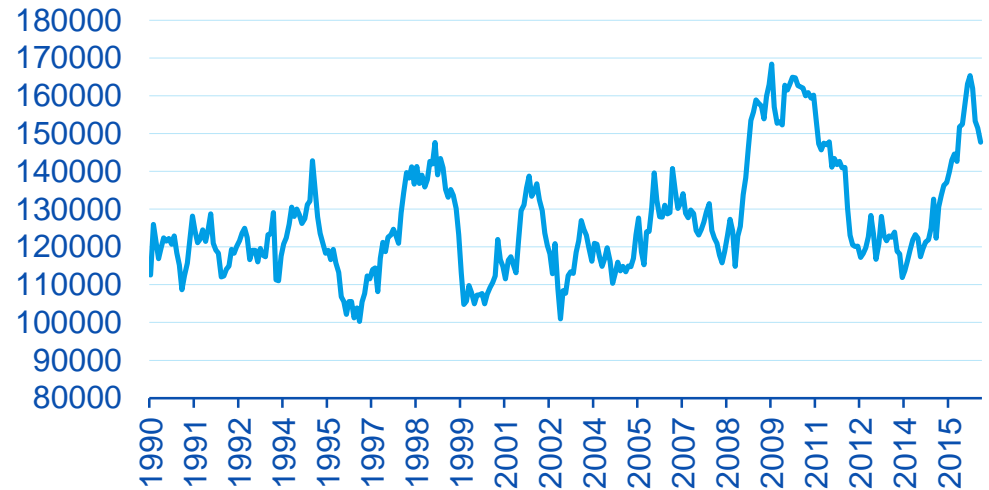
U.S. stocks of motor gasoline

SA, EOP, Thousand Barrels



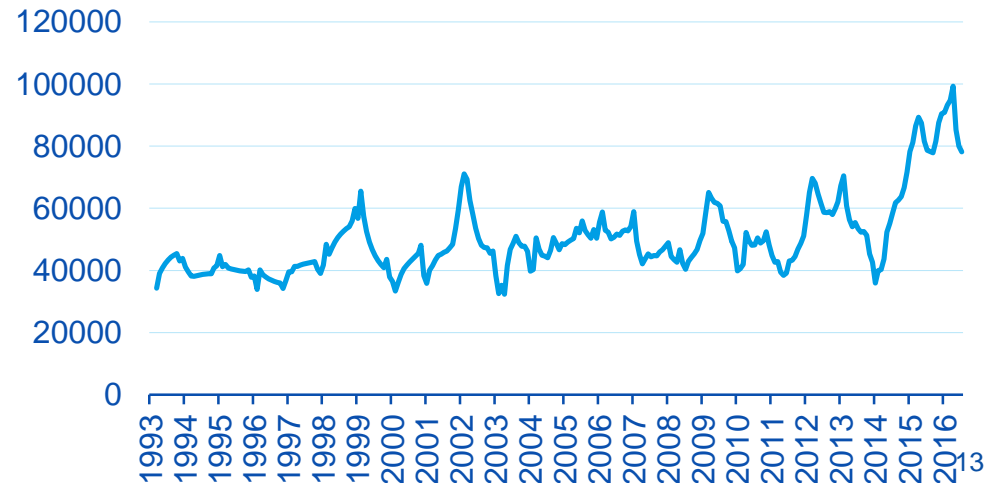
U.S. stocks of distillate fuel oil

SA, EOP, Thousand Barrels



U.S. stocks of propane/propylene

EOP Thousand barrels

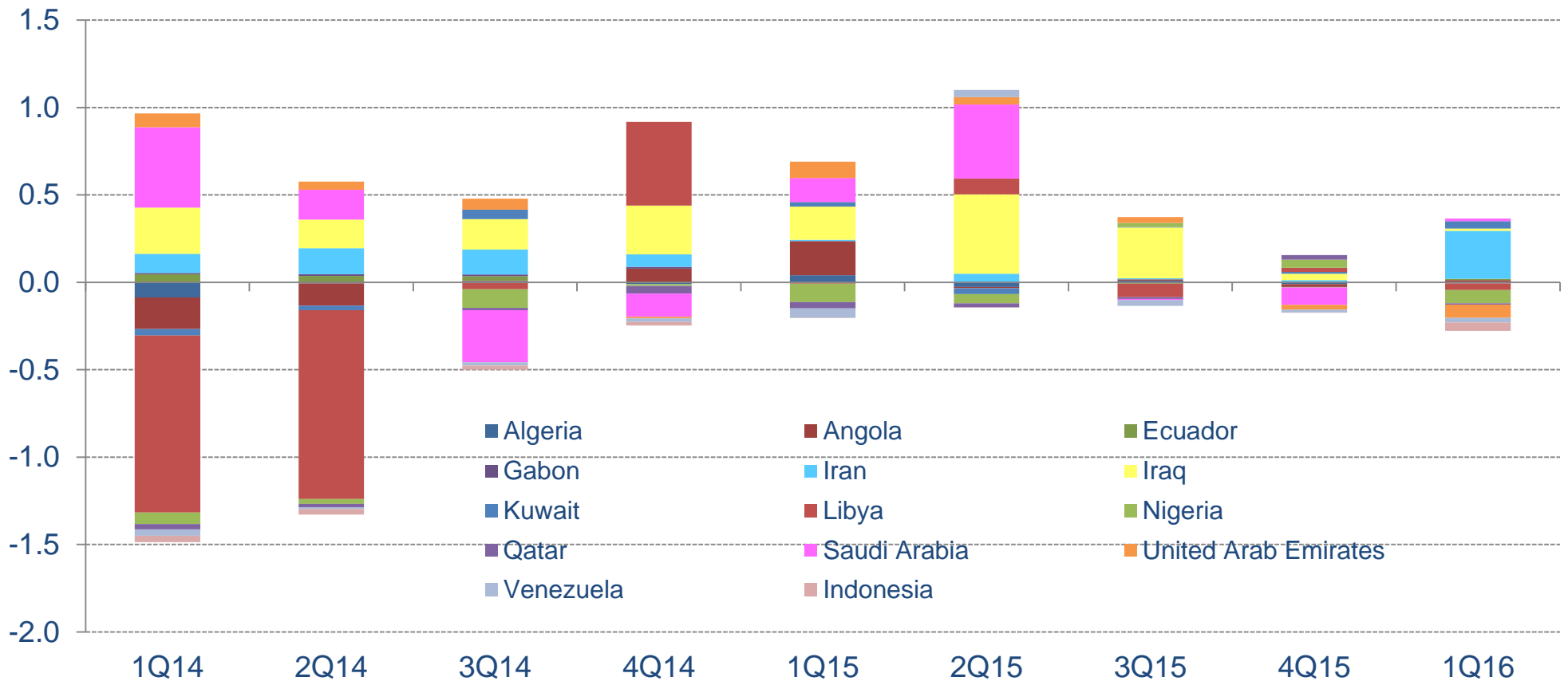


Supply

Despite low prices, Iraq and Iran have consistently added to OPEC production. Libya, Nigeria and Venezuela continue to struggle

OPEC: change in crude oil production by country

Million barrels per day

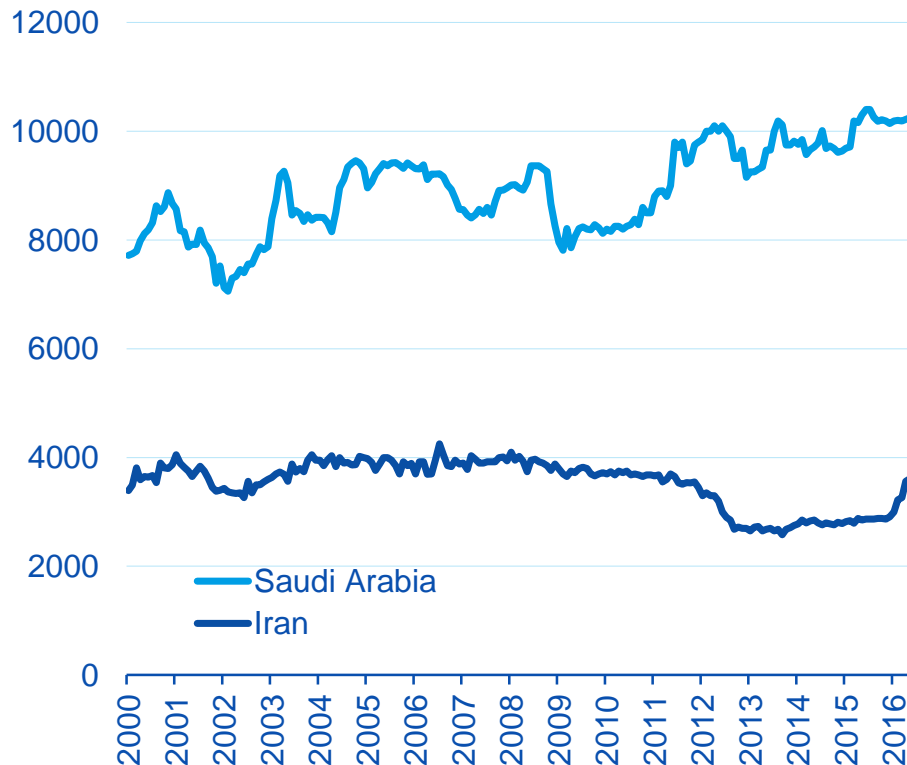


Supply

A less elastic supply makes a production agreement less likely

OPEC: crude oil production

Thousand barrels per day



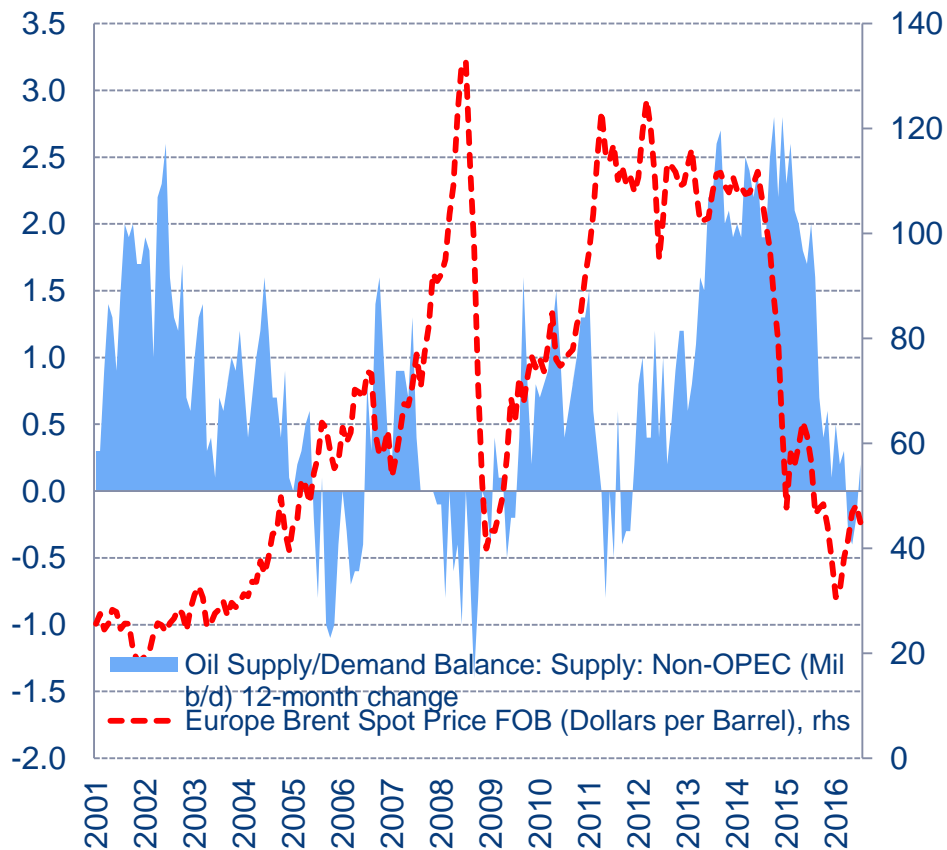
- Iranian production is rapidly reaching pre-sanction levels, suggesting that the country could eventually join negotiations to freeze production
- In the meantime, Saudi Arabia continues to produce at record highs in order to expand its market share
- The probability of an output deal next month is low as Iran has not confirmed its participation

Supply

The U.S. accounts for most of the downward adjustment outside OPEC

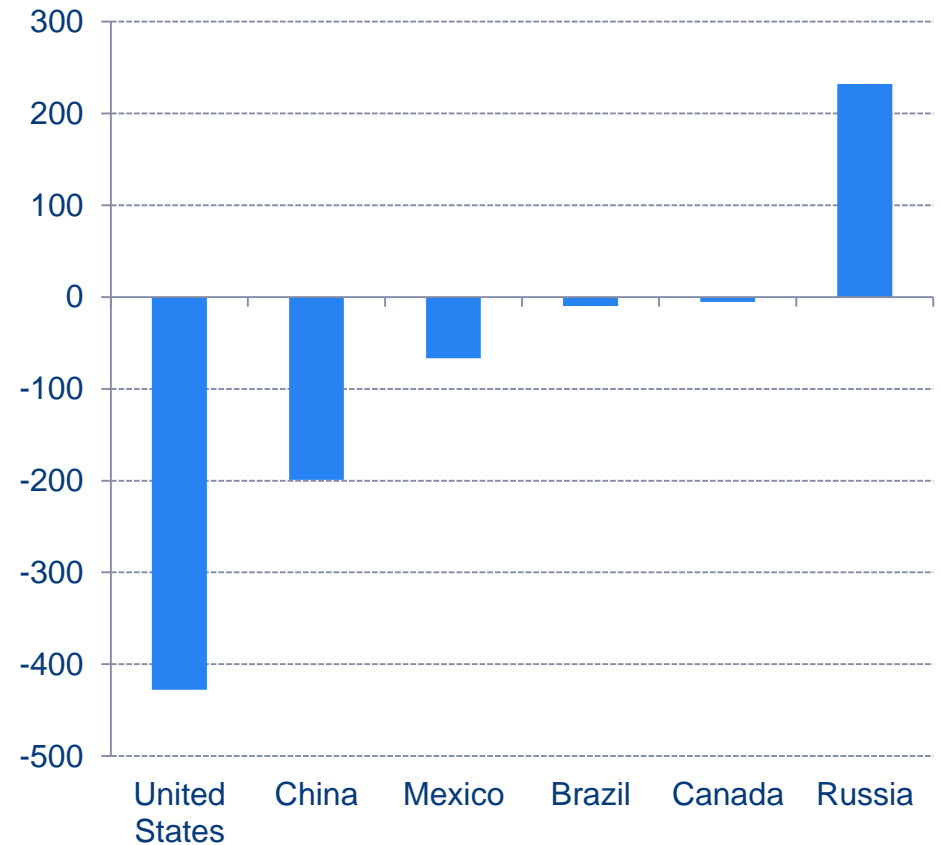
Non-OPEC: oil supply and Brent

Million barrels per day 12-month change & \$/bbl



Wellhead crude oil production

Change, May-2015 to July-2016, thous. barrels per day

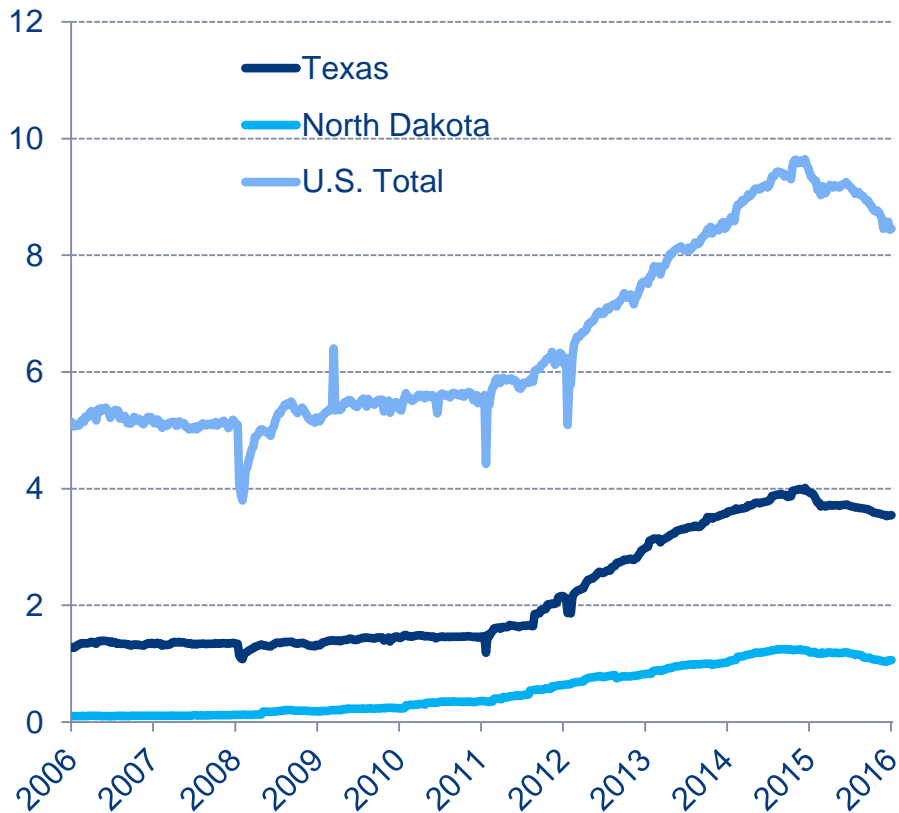


Supply

U.S. production adjustment differs across regions

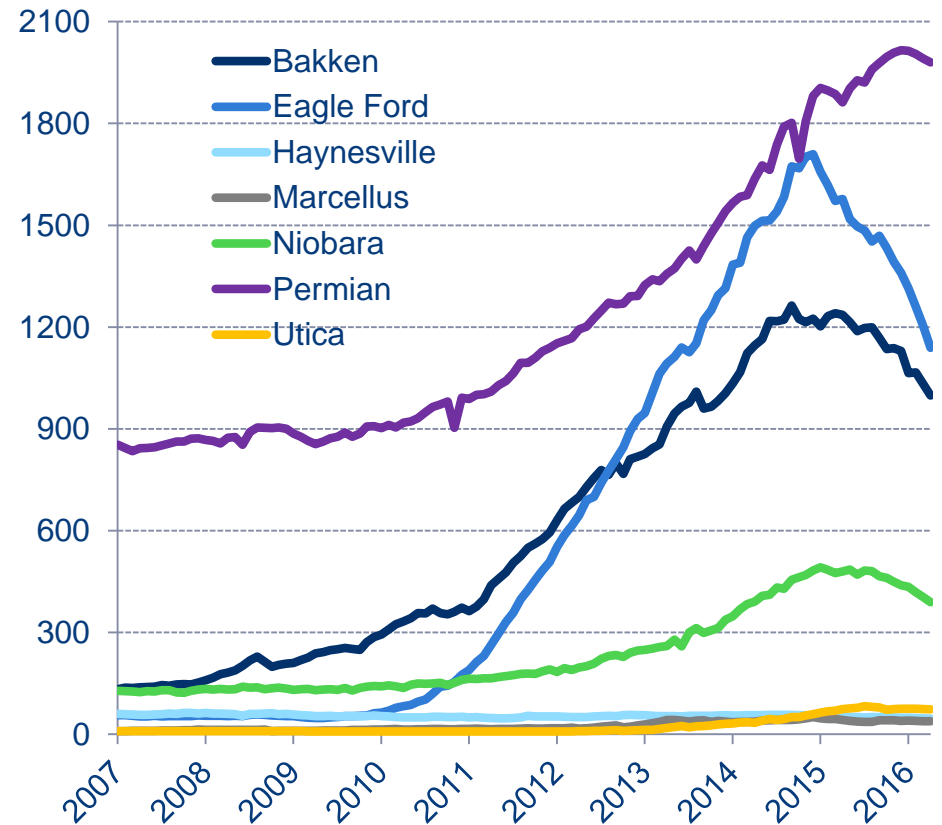
U.S. crude oil production

Million barrels per day



Total oil production by shale play

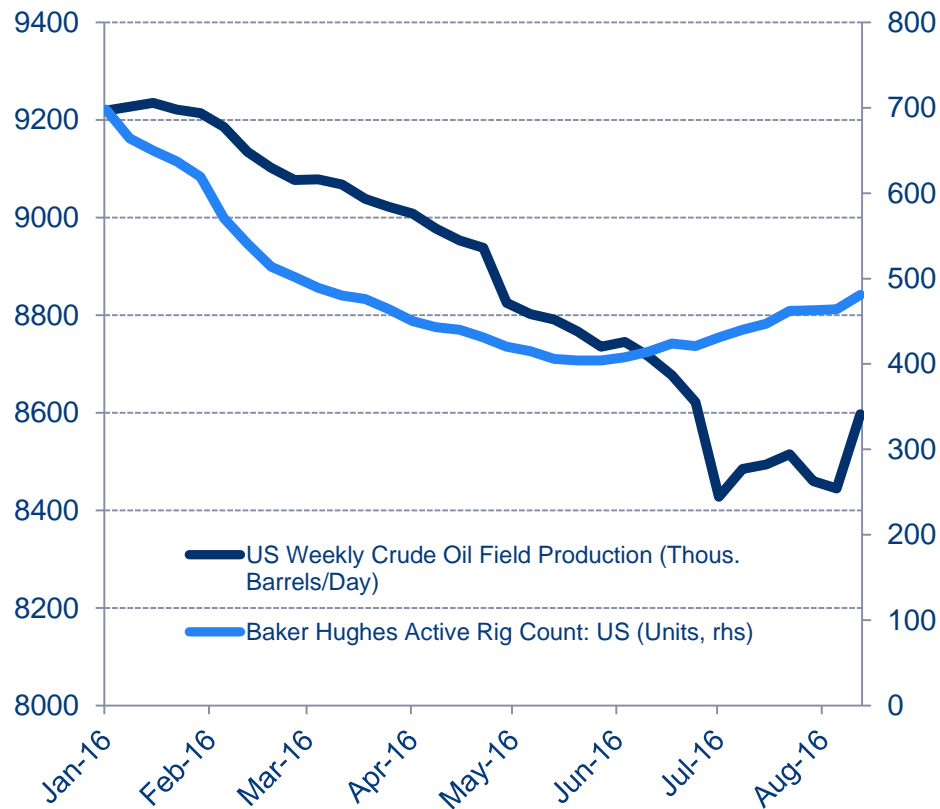
Thousand barrels per day



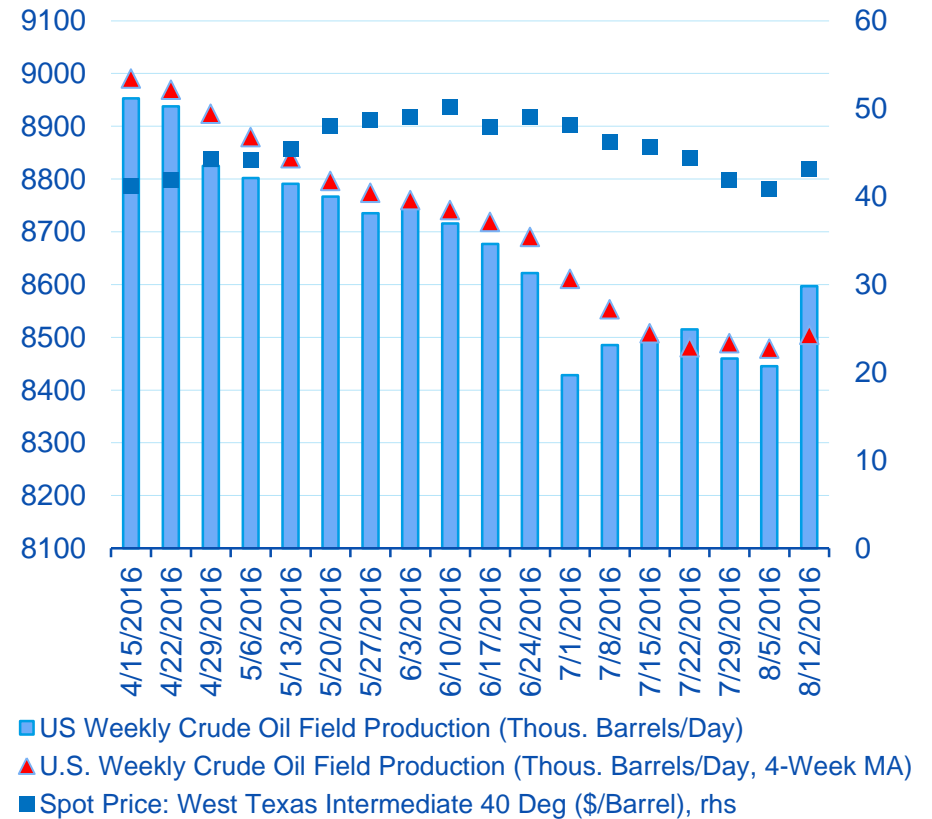
Supply

However, slight surge in the rig count raises questions about how long the decline in production could last

U.S. active rig count and oil prices



Crude oil production and oil prices



Source: Haver Analytics

Oil price forecasts

Gradual increase after 2016 with risks tilted to the downside

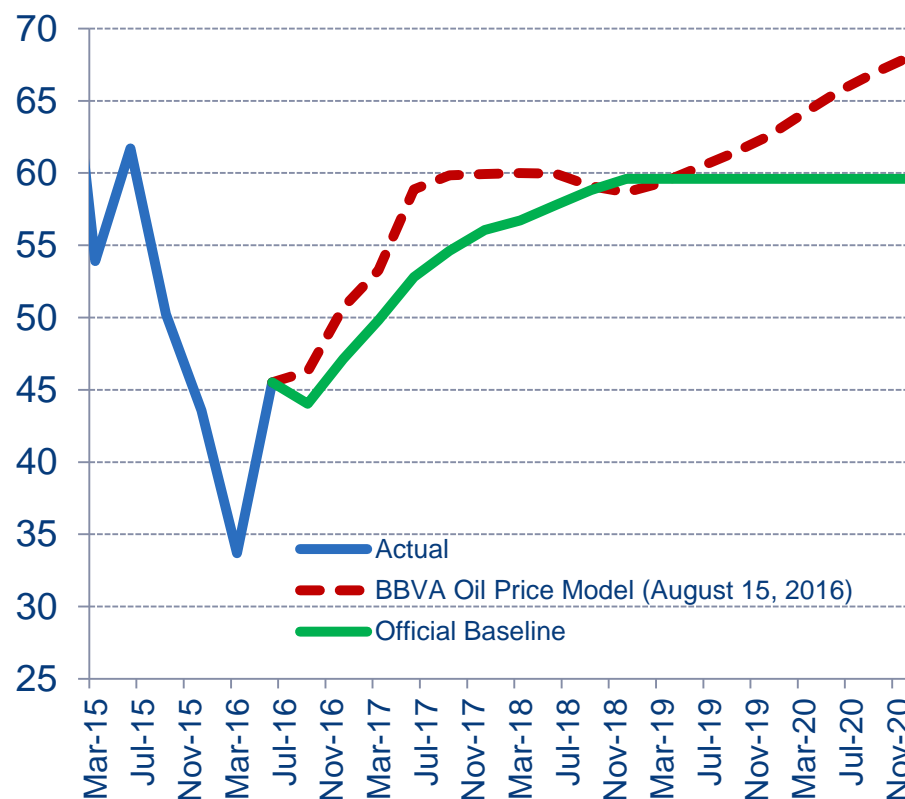
Crude oil price forecasts*

Brent, \$ per barrel, avg.

| | BBVA Oil Price Model (August 15, 2016) | Official Baseline | Risk |
|------|--|-------------------|--------------|
| 2015 | 52.85 | 52.85 | 52.85 |
| 2016 | 44.04 | 43.42 | 41.32 |
| 2017 | 57.97 | 53.32 | 49.63 |
| 2018 | 59.42 | 58.23 | 55.42 |
| 2019 | 60.89 | 59.60 | 56.02 |
| 2020 | 66.19 | 59.60 | 56.02 |

Crude oil price forecasts*

Brent, \$ per barrel, avg.



*Forecast may be subject to change.

Source: BBVA Research & Haver Analytics

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