

# Oil Price Outlook

**BBVA Research USA**

**Houston, TX**

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## Bottom Line:

- OPEC output deal could have a limited impact on prices
- Excess supply will take time to clear out
- Downward bias on demand due to slow economic growth and structural trends
- Baseline scenario: gradual increase towards \$60/bbl

# Summary

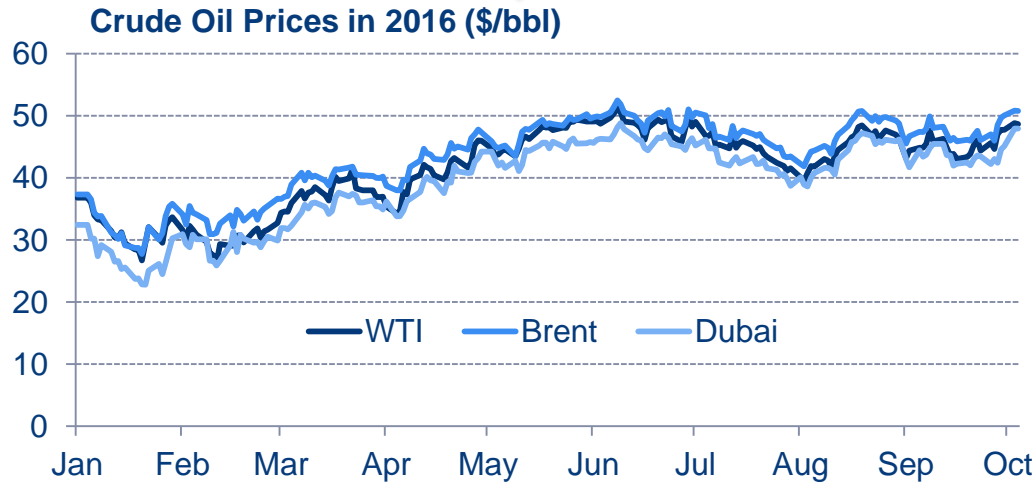
**Supply: Non-OPEC**  
Declining output from high-cost producers. U.S. rig count continues to increase

**Supply: OPEC**  
Output cuts could start in November. Big 4 currently producing at or near record highs.

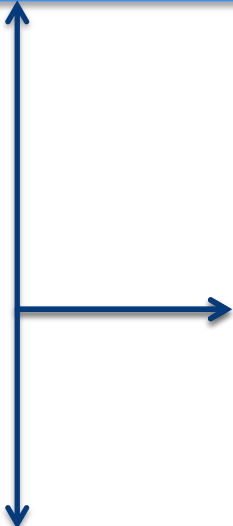
**Balance**  
Oversupply persists

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

**Demand: OECD**  
Demand of petroleum products supported by the U.S. High inventory levels of both crude and refined products



**Financial Markets**  
Dollar volatility

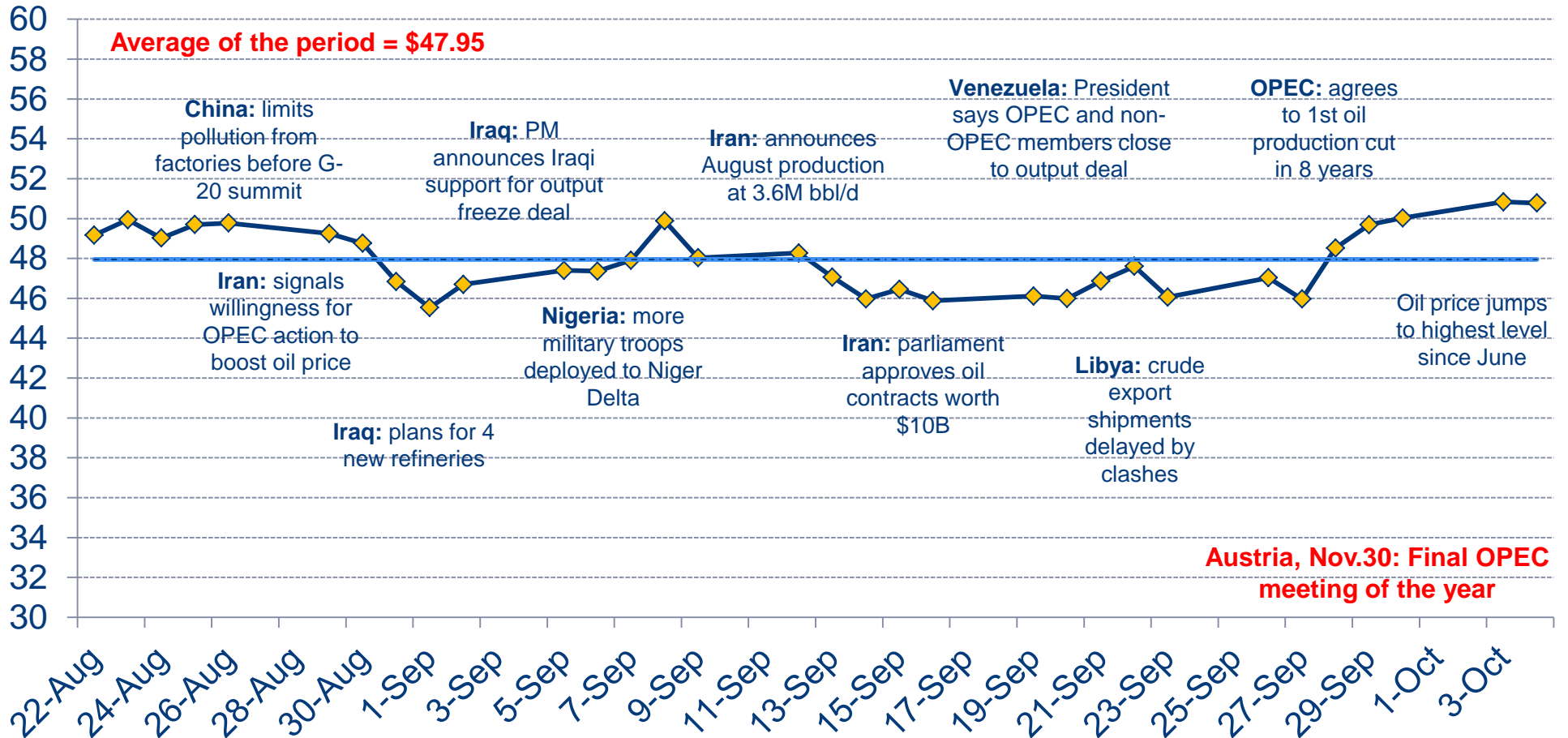


# Short-term volatility

Prices rise in response to announcement of production deal

## Brent spot price

\$ per barrel



# Short-term volatility

Slowdown in demand growth and rising supply in key markets preceded OPEC deal

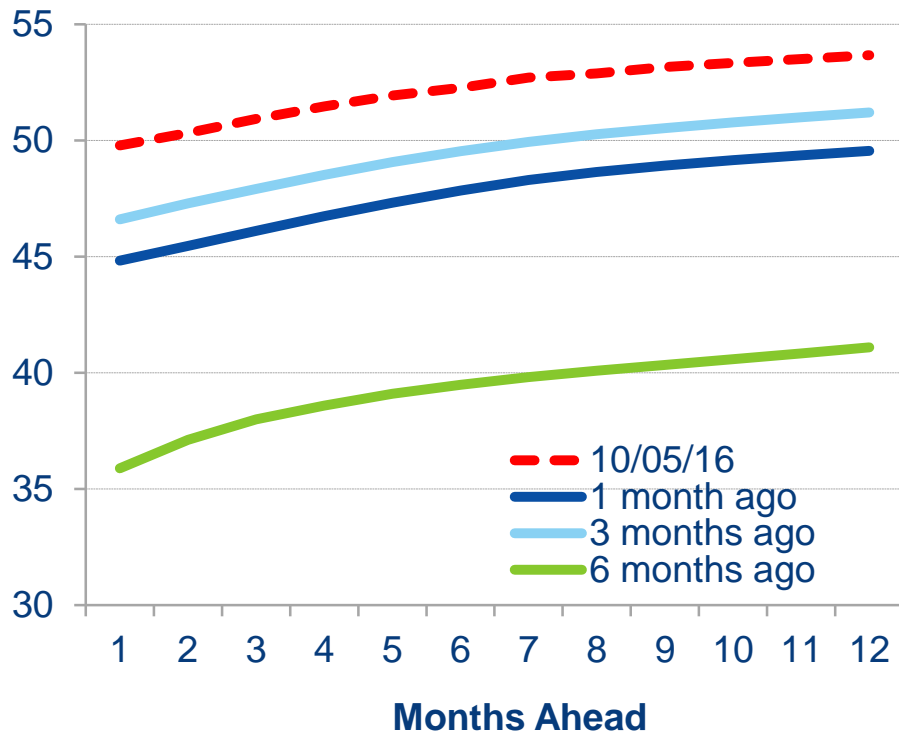
Event	Description	Price Bias
Declining demand from <b>China</b>	China limits pollution from factories before G-20 summit; has potential to cut Chinese oil demand by 250K bbl/d in 3Q16	
Higher investment and production in <b>Iran</b>	Parliament approved new oil contracts worth \$10bn; Aug. production at 3.6M bbl/d, close to pre-sanctions output of 4M bbl/d	
<b>Libyan</b> exports delayed	Crude shipments delayed by fighting over key Libyan oil port	
New refineries in <b>Iraq</b>	Iraq seeks to build four new refineries; invites international oil companies to invest in construction	
Pipeline attacks in <b>Nigeria</b>	Despite cease fire, pipeline attacks continue, and more air force personnel deployed to Niger Delta	
<b>OPEC</b> production deal	OPEC agrees to first production cut in 8 years in deal that would limit output to 32.5m b/d. Production limits for each country to be decided at Nov. meeting.	

# Futures

Futures rise as markets perceive that OPEC has retaken its role of market stabilizer

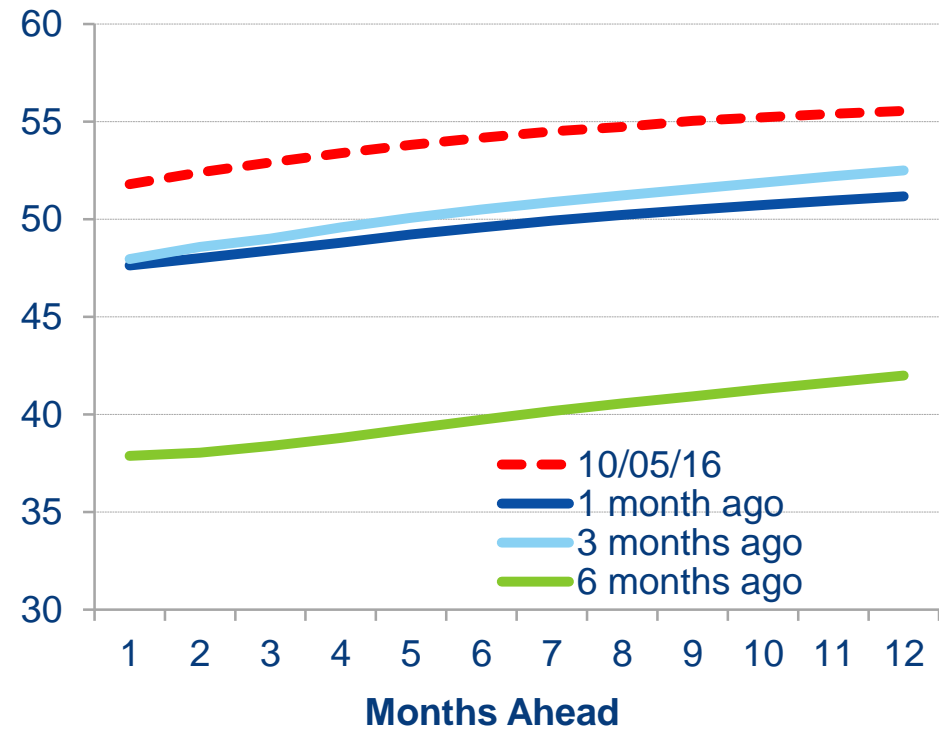
**WTI crude futures**

\$ per barrel



**Brent crude futures**

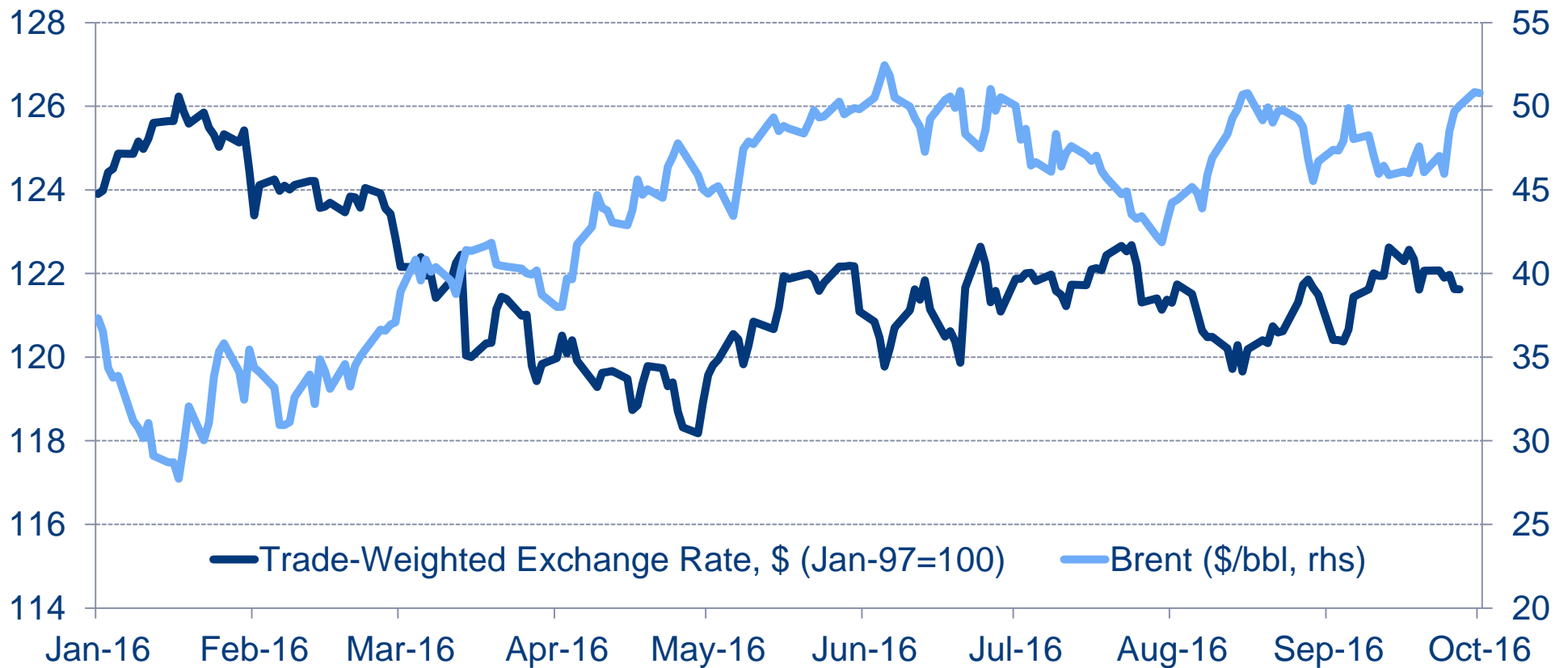
\$ per barrel



# Exchange rate

Weaker global economic growth and divergent monetary policies result in a less supportive dollar

## Oil prices and U.S. dollar



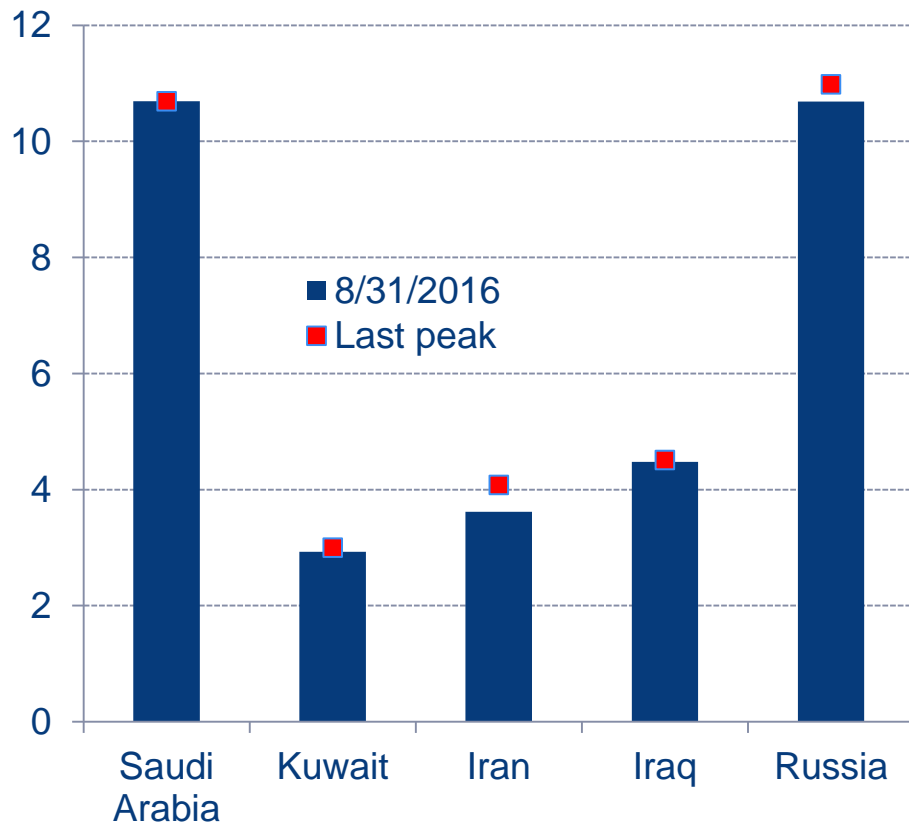


# Supply

Despite OPEC deal, no expectation of an immediate rebalancing of the market

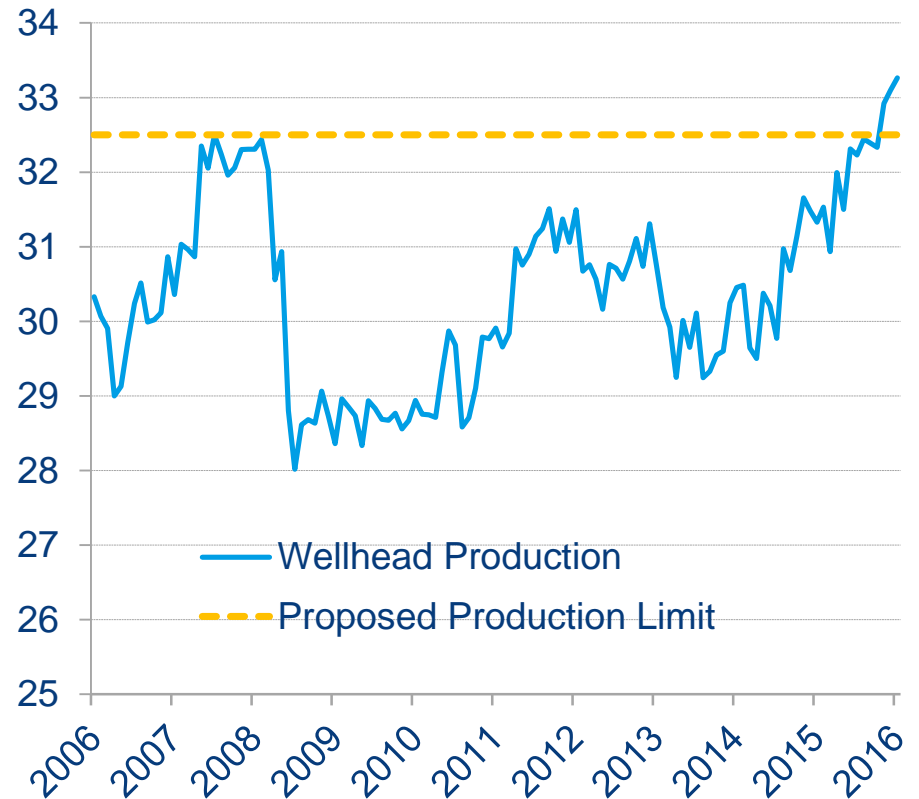
**Crude oil production in selected countries**

Million barrels per day



**OPEC: Crude oil production**

Million barrels per day



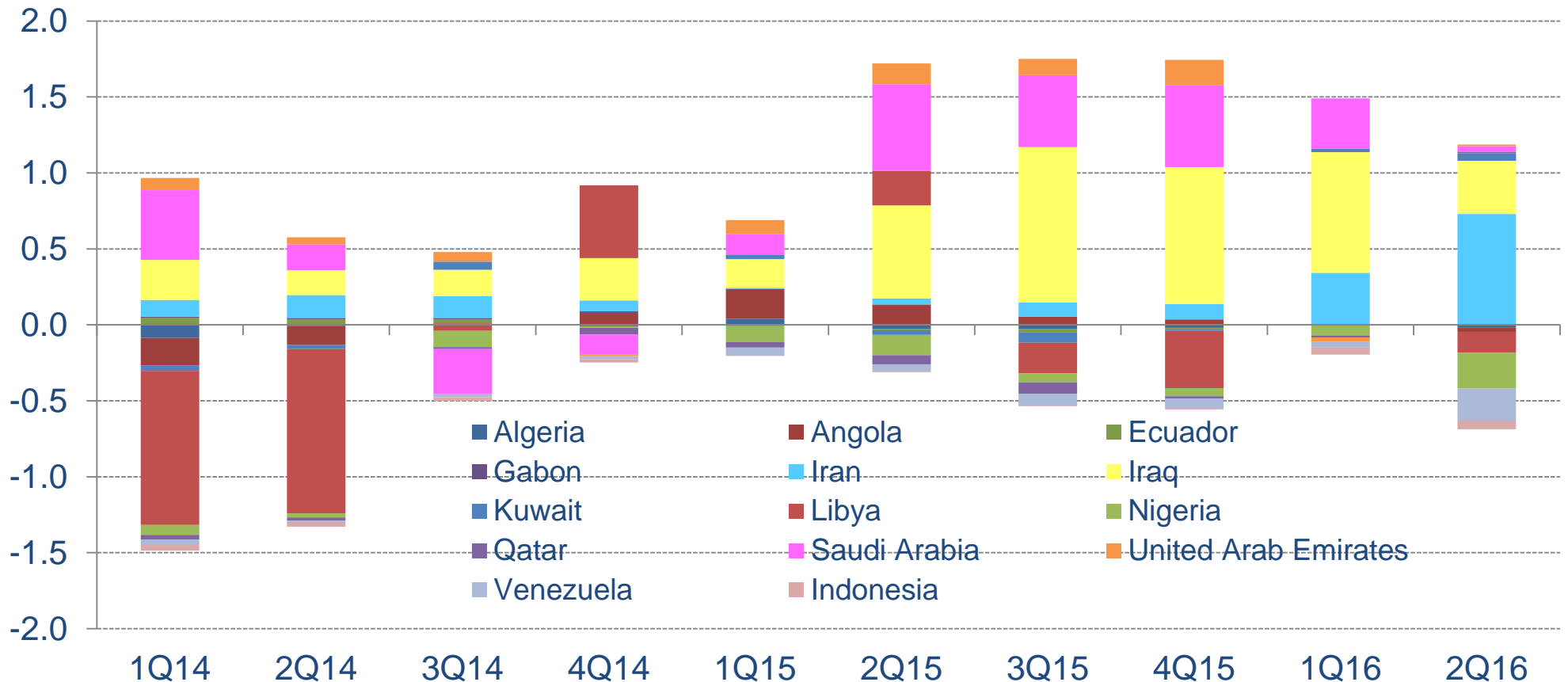
Source: BBVA Research, Bloomberg and Haver Analytics

# Supply

Some OPEC countries may not have to cut production under the arrangement, as is the case of Nigeria, Libya and Iran

## OPEC: change in crude oil production by country

Year-over-year, million barrels per day



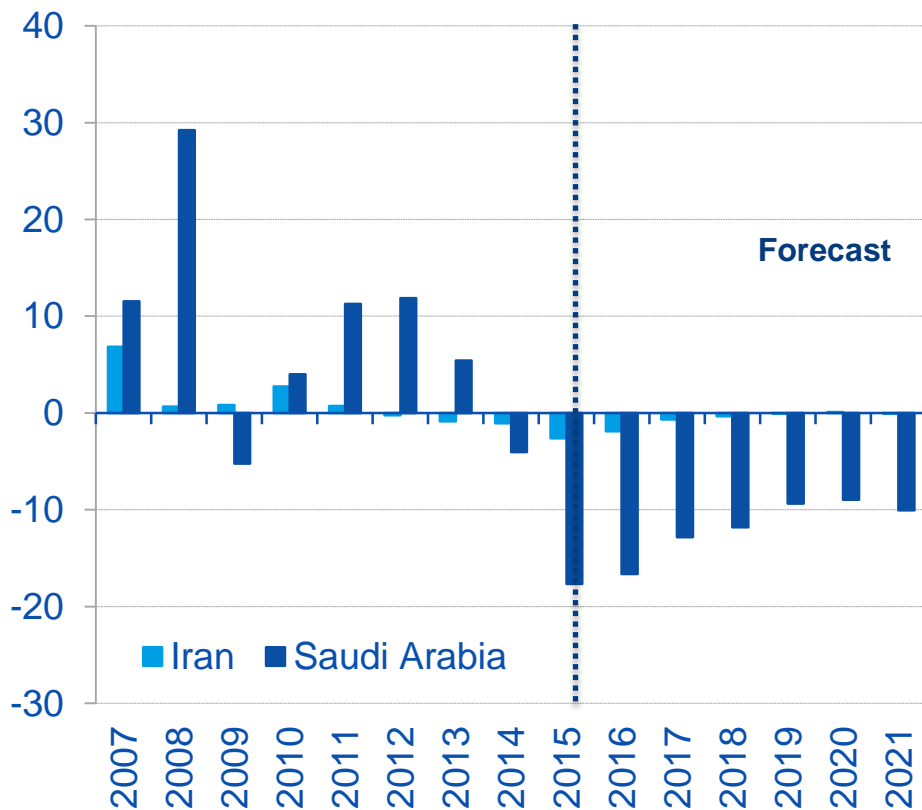
Source: BBVA Research and Haver Analytics

# Supply

Iran came in a better economic and fiscal position to gain concessions from Saudi Arabia

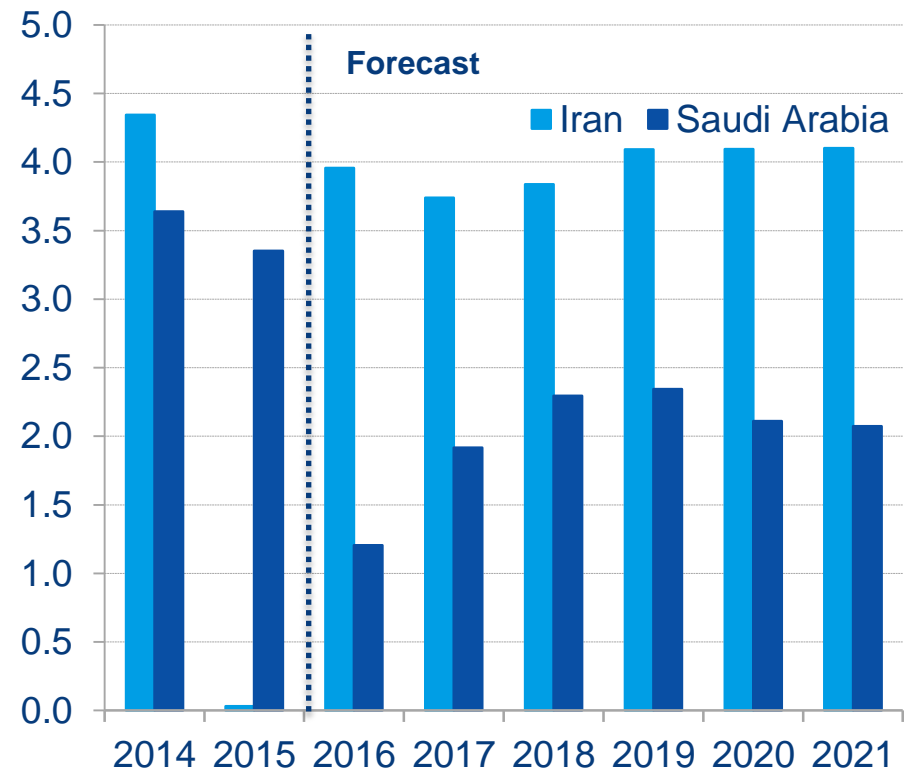
**General government primary net lending/borrowing**

% of GDP



**Gross domestic product**

Constant prices, percentage change

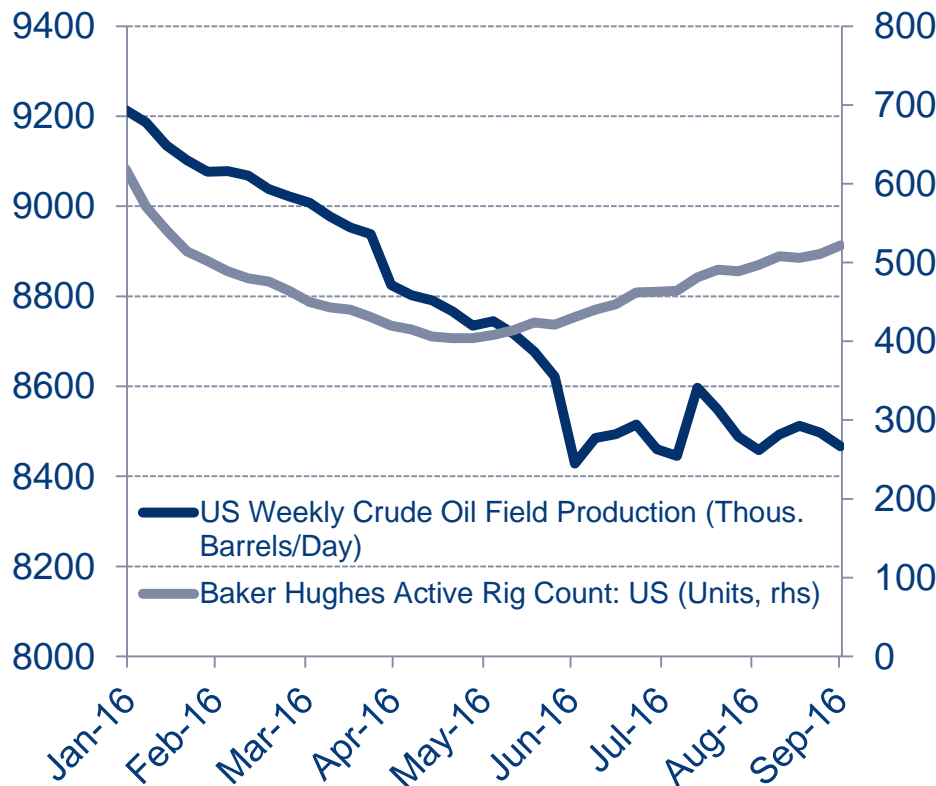


Source: BBVA Research and IMF

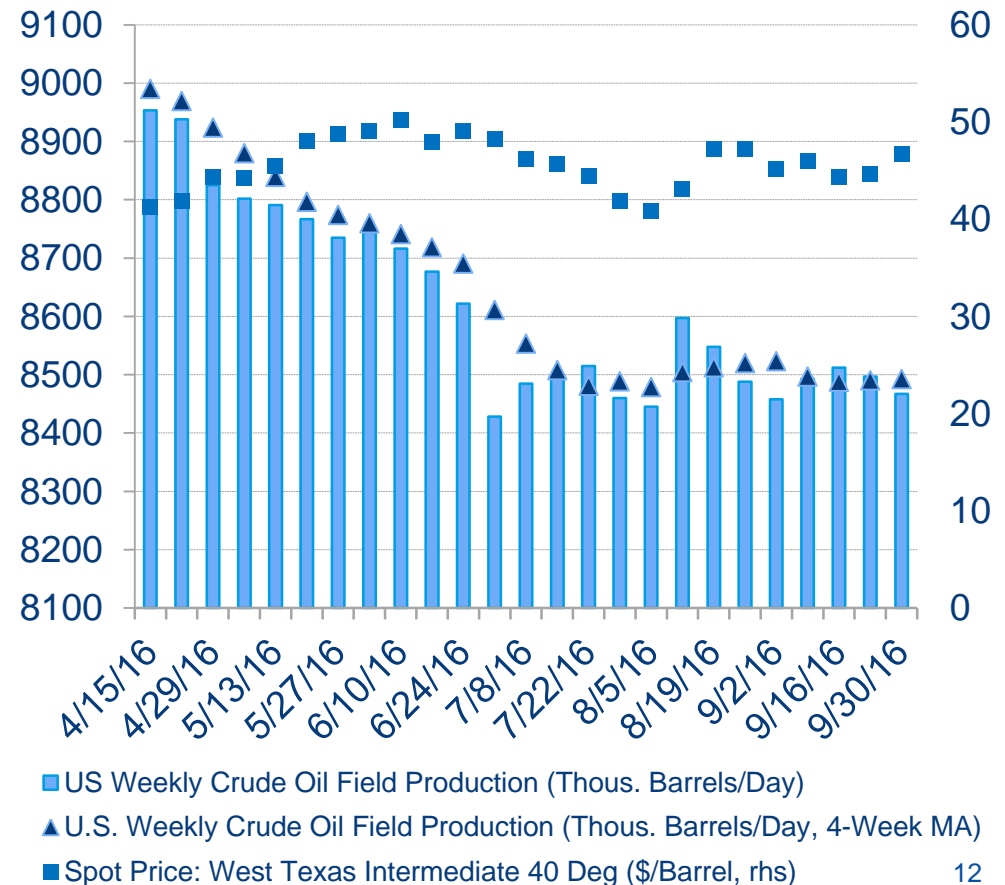
# Supply

Potential increase of production in the U.S. could restrict upward pressures on prices...

U.S. active rig count and oil prices



Crude oil production and oil prices

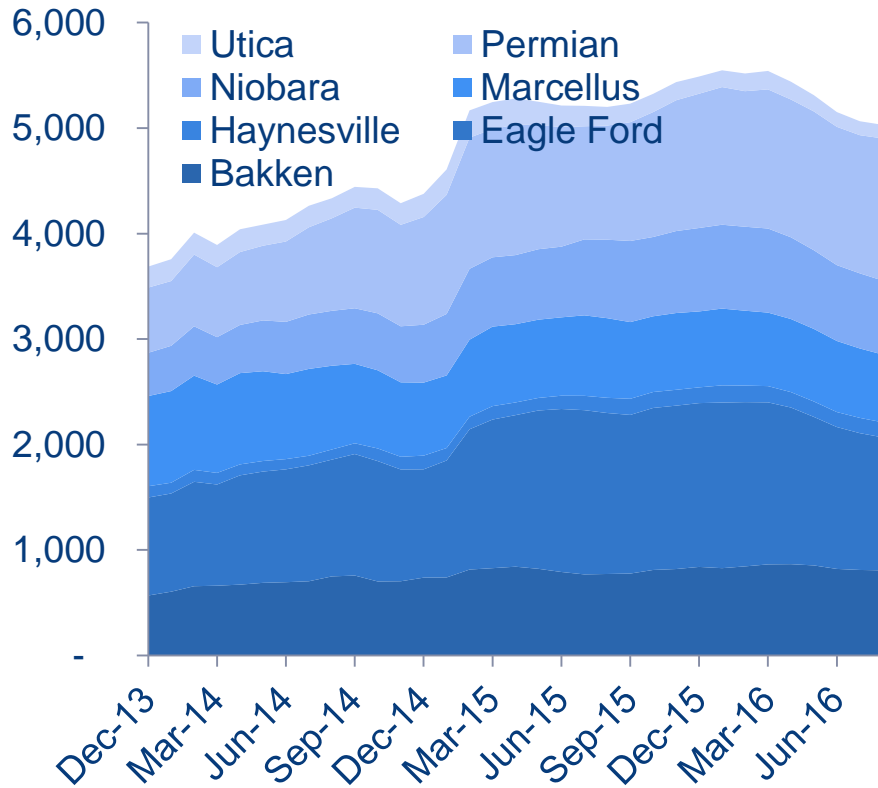


# Supply

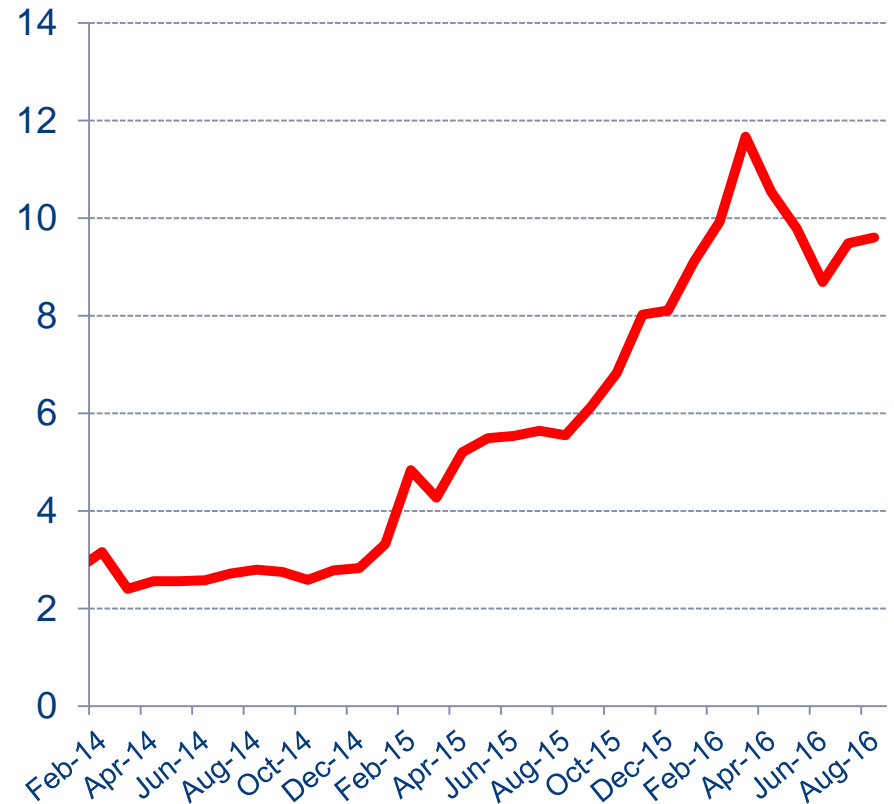
...however, signs of stress remain

## Drilled but uncompleted wells (DCU)

Selected regions, units



## DCU to complete ratio

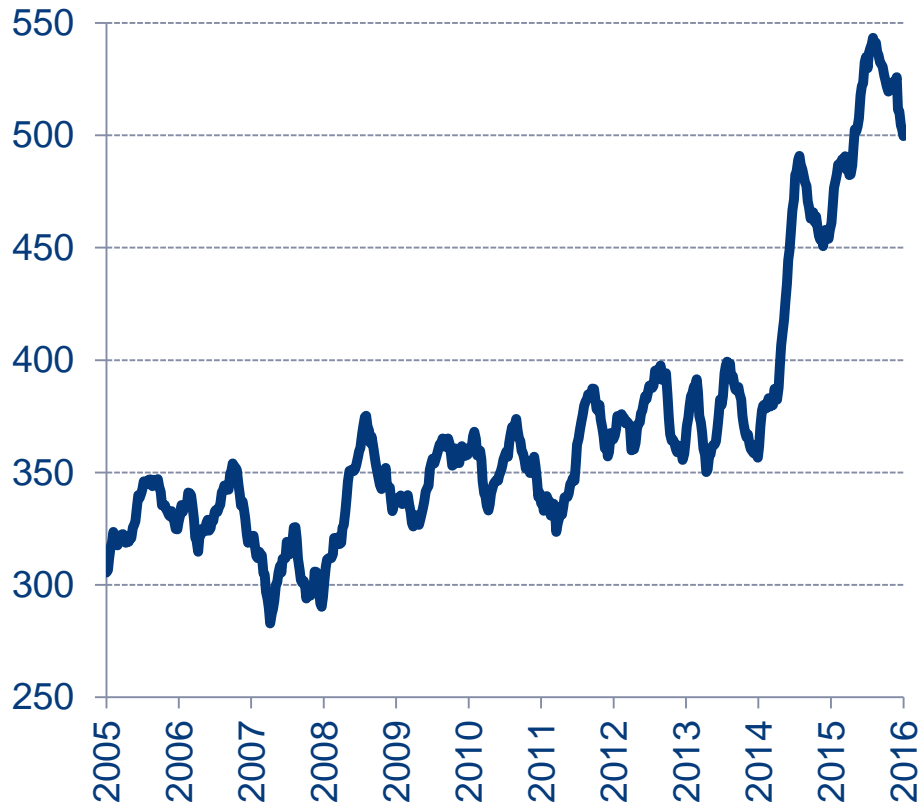


# Inventories

High levels of inventories would also prevent prices from rebounding quickly

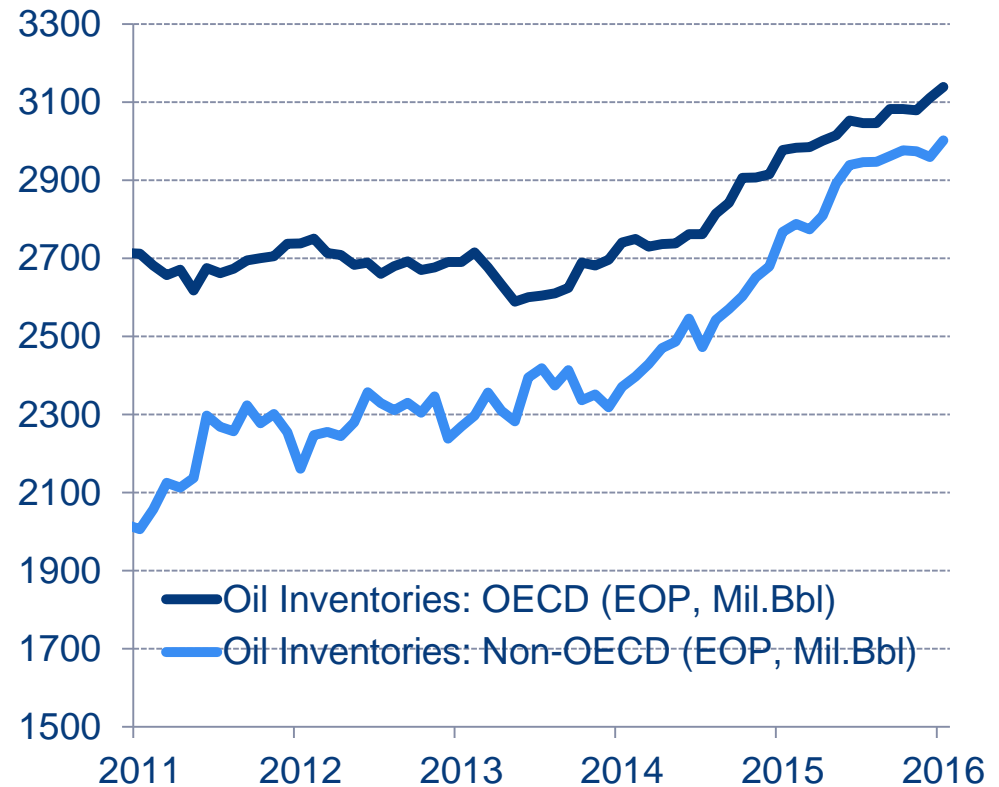
**U.S. stocks of crude oil excluding SPR**

EOP, Million barrels



**Global oil inventories**

EOP, Million barrels

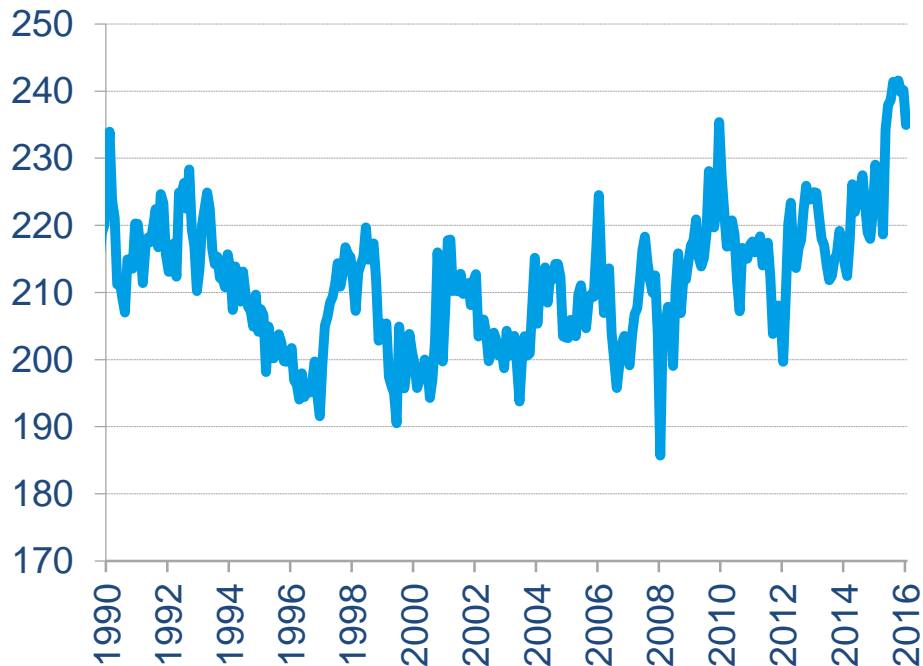


# Inventories

Concerns extend to stocks of refined products and their impact on refineries' demand of crude oil

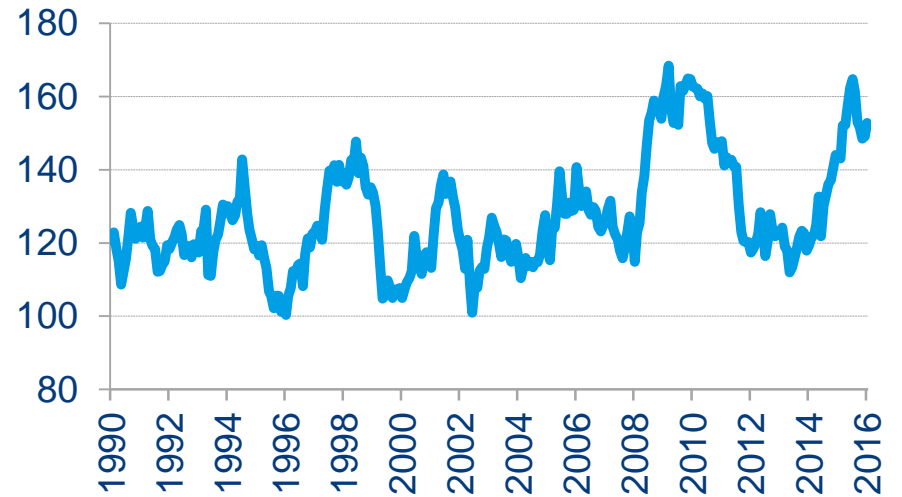
**U.S. stocks of motor gasoline**

SA, EOP, Million barrels



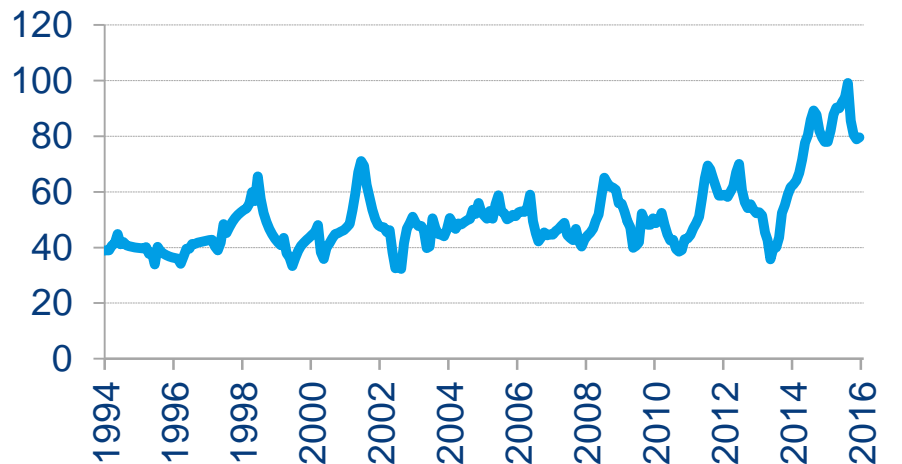
**U.S. stocks of distillate fuel oil**

SA, EOP, Million barrels



**U.S. stocks of propane/propylene**

EOP Million barrels

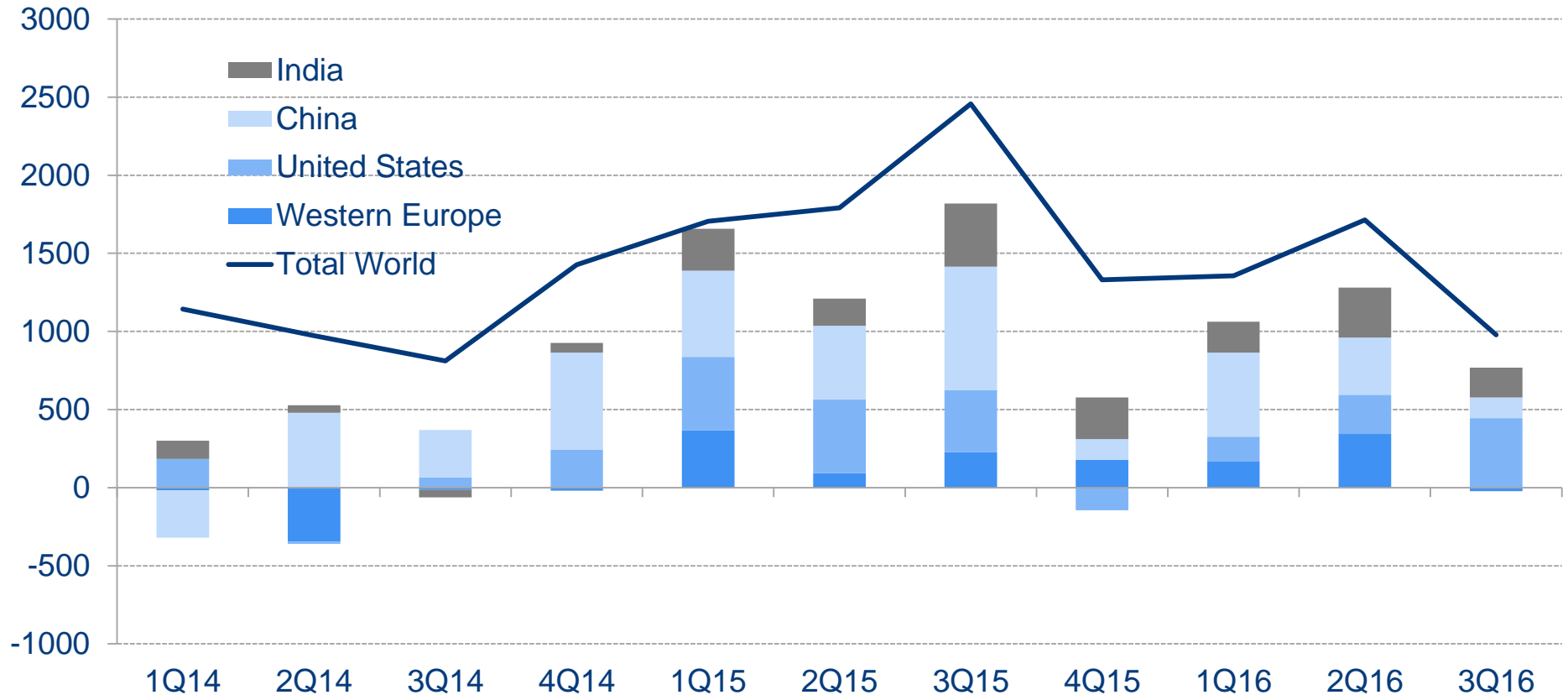


# Demand

Demand growth continues to be supported by emerging markets and the U.S.; however, it is decelerating due to slower economic growth

## Oil product demand

Year over year change, thousand bbl/d



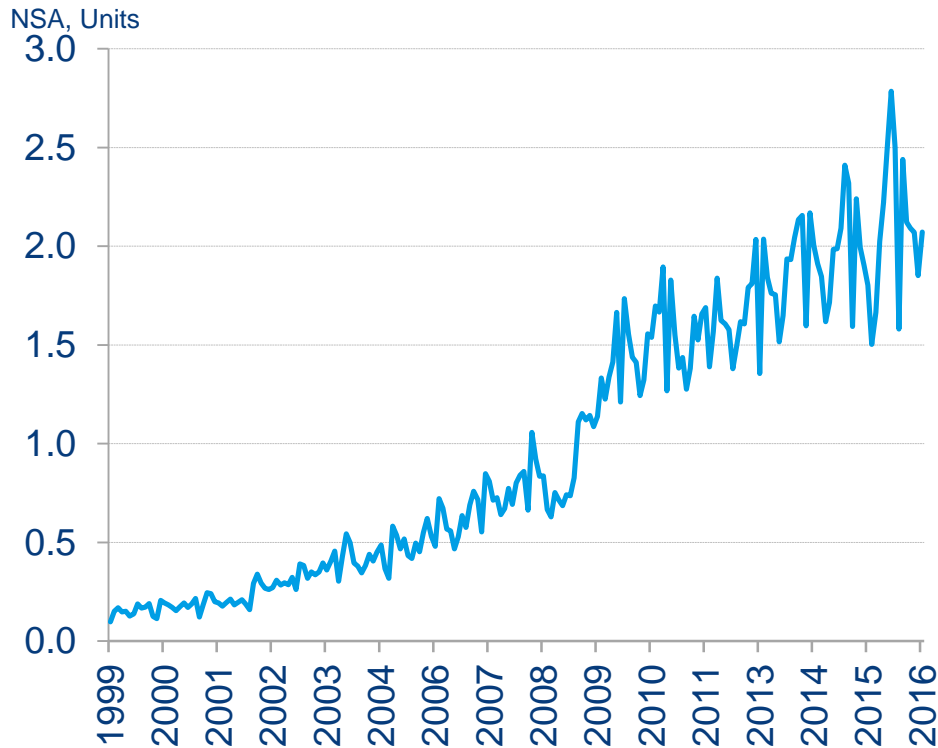
Source: BBVA Research and Haver Analytics



# Demand

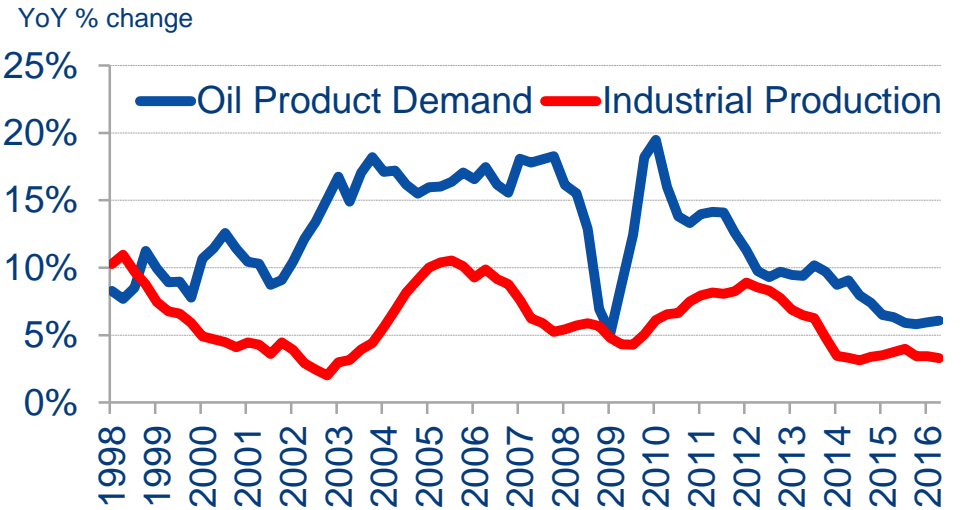
- Uncertainty arising from China and the impact of the rebalancing on global crude oil demand
- Rapid inventory accumulation may come to an end soon

**China: automobile sales**

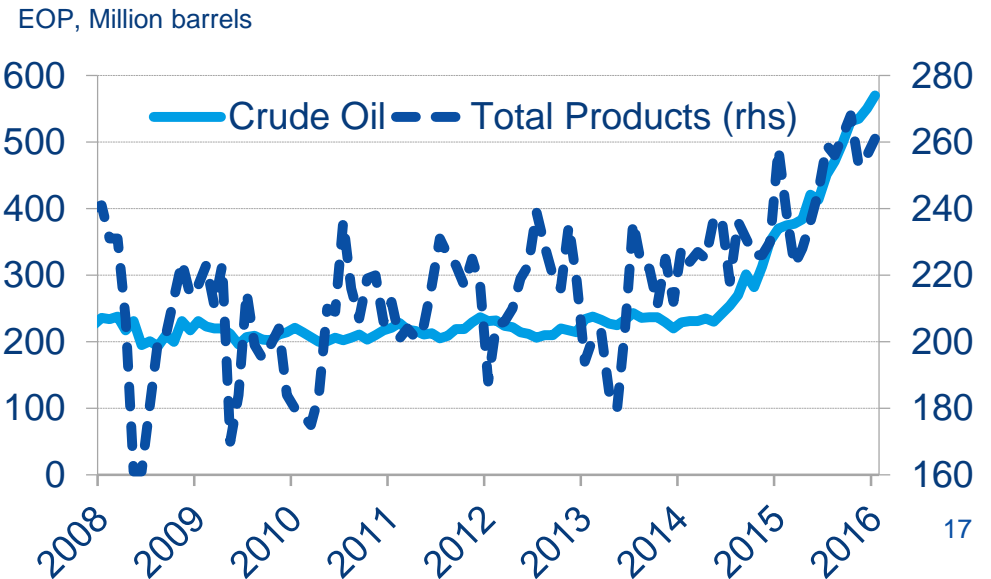


Source: BBVA Research, Bloomberg and Haver Analytics

**China: oil product demand and industrial production**



**China: crude and total petroleum products inventories**

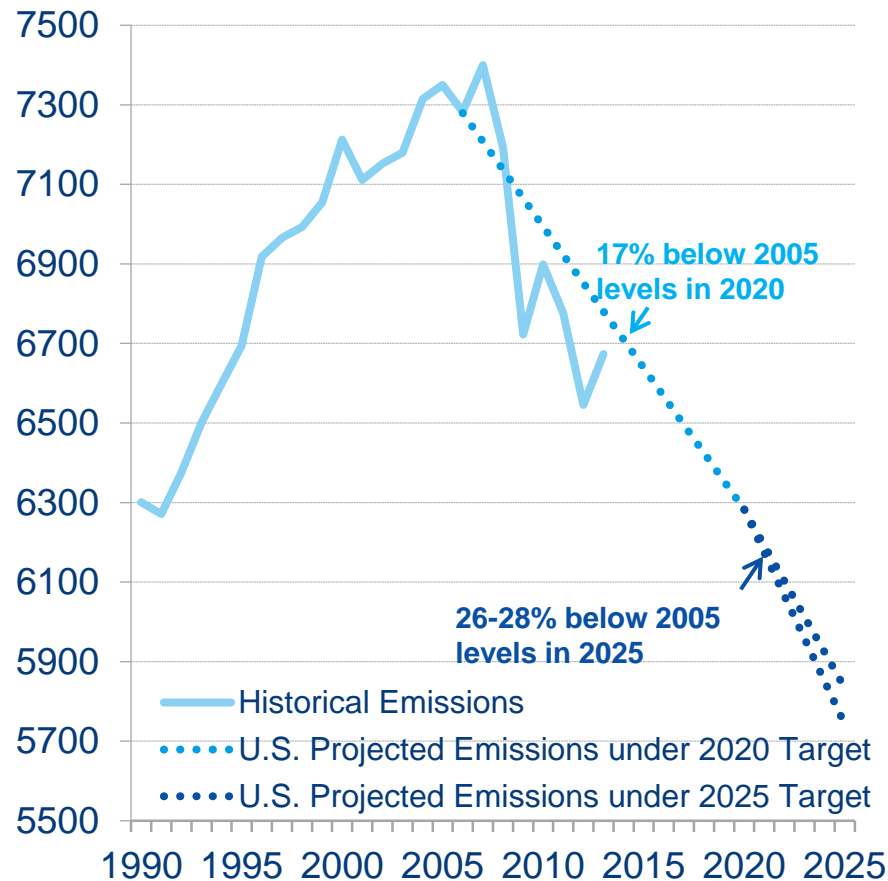


# Demand

In the long-run, COP21 pledges to reduce or moderate emissions could impact oil and gas demand from top emitters

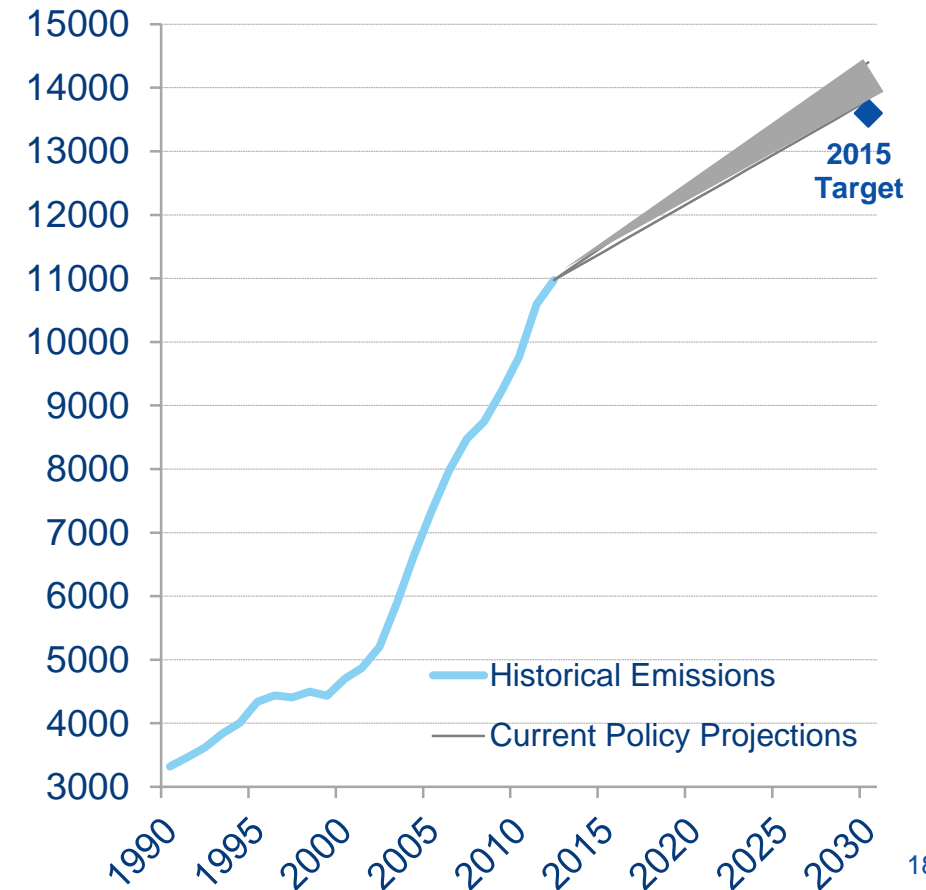
## U.S.: historical and proposed greenhouse gas emissions

Million metric tons of CO<sub>2</sub> Equivalent



## China: historical and proposed greenhouse gas emissions

Million metric tons of CO<sub>2</sub> Equivalent

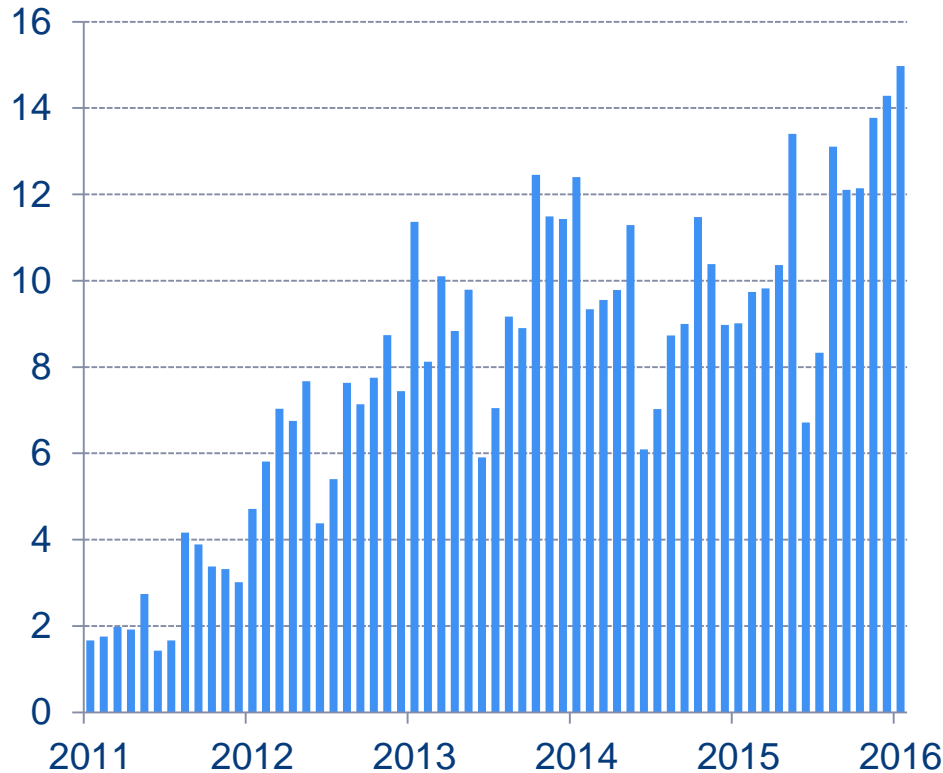


# Demand

As cost of EVs decline and technology improves, less demand for petroleum products?

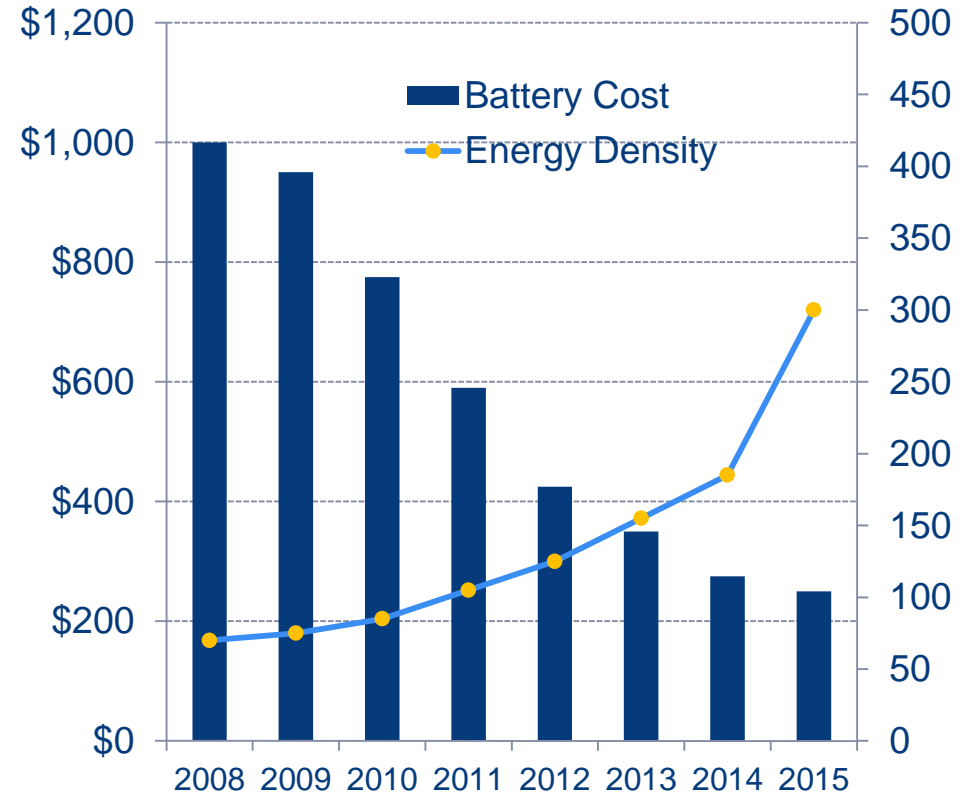
**U.S. New plug-in vehicle sales**

Thousands



**PHEV\* battery energy cost and density**

\$USD/kwh & Wh/L



\*PHEV=Plug-in hybrid electric vehicle

Sources: Electric Drive Transportation Association, U.S. Department of Energy, International Energy Agency

# Oil price forecasts

Our baseline remains unchanged: gradual increase after 2016 with risks tilted to the downside

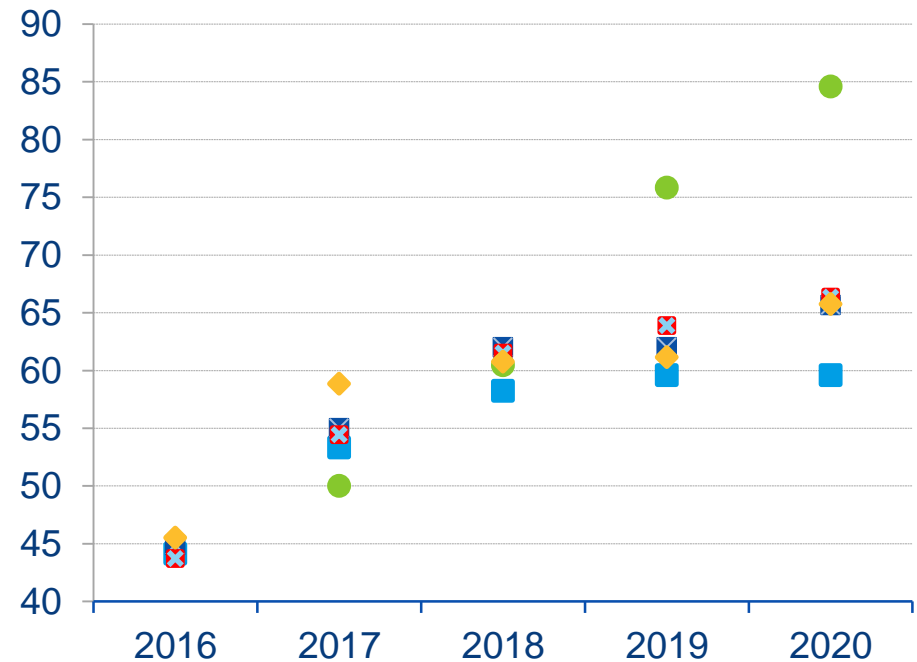
## BBVA Research crude oil price forecasts\*

Brent, \$ per barrel, avg.

	Baseline	Risk
2015	52.85	52.85
<b>2016</b>	<b>44.14</b>	<b>43.02</b>
2017	53.32	49.64
2018	58.23	55.41
2019	59.60	56.02
2020	59.60	56.02

## Crude oil price forecasts

Brent, \$ per barrel, avg.



- BBVA Official Baseline
- ⊠ Bloomberg (09/29/16)
- ⊠ Consensus Forecast (09/19/2016)
- EIA (Annual Energy Outlook, 09/15/16)
- ◆ BBVA Oil Price Model

\*Forecast may be subject to change.

Source: BBVA Research & Haver Analytics

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