

Oil Price Outlook

BBVA Research USA

Houston, TX

May 2016

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Bottom line: April-May 2016

As expected

- U.S. production continues to adjust
- Further bankruptcies and declining investment
- Oversupply conditions remain

Major surprises

- Supply disruptions in Nigeria, Libya and Canada
- Dollar weakness despite solid US performance and aggressive ECB accommodative actions
- Saudi Arabia's new oil minister confirmed current strategy of maintaining market share

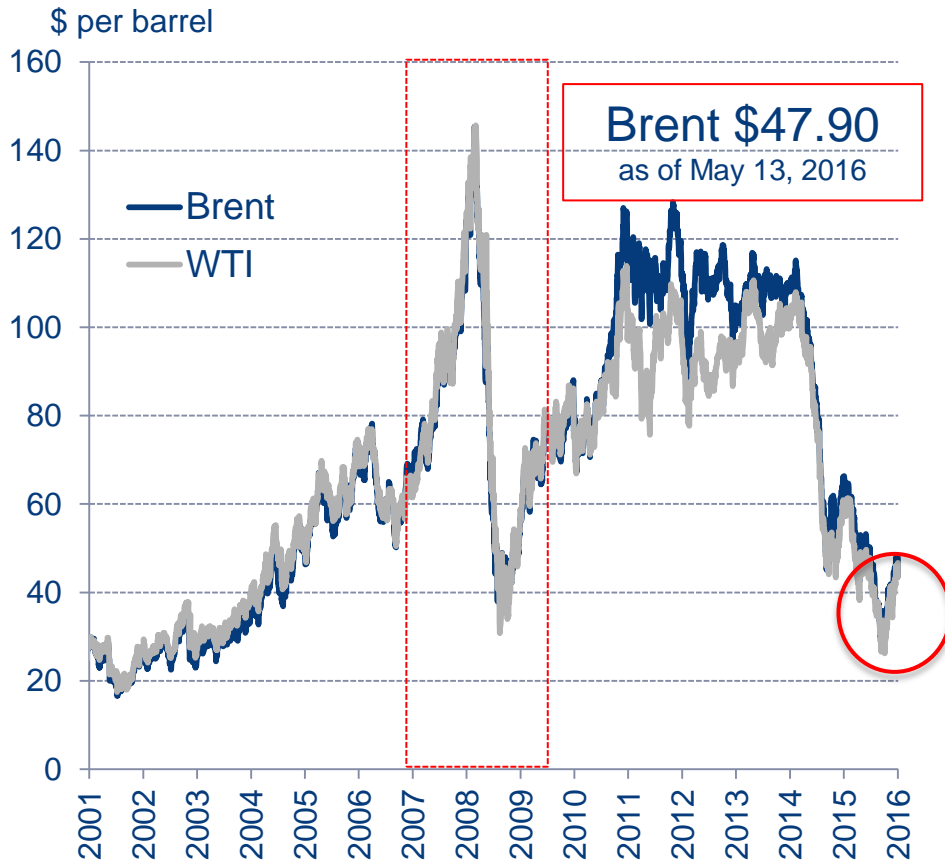
Moderate upward bias in the short-term, but caution going forward

- Oversupply persists, estimated between 1.5 and 1.9 million bbl/d
- Crude oil inventories still at record levels
- Low probability of an output deal during next OPEC meeting (June), limited impact
- Short-run risks persist such as financial volatility and negative surprises to the global outlook
- A long-lasting rebound could halt further adjustments in U.S. production

Oil prices in 2016

After hitting a bottom in February, oil and gasoline prices are on the rise

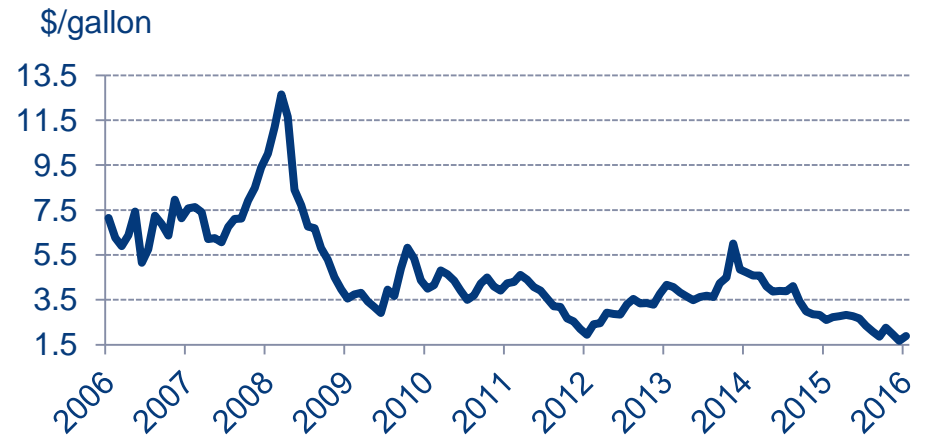
Crude Oil Prices



U.S. Retail Gasoline Price



U.S. Natural Gas, Henry Hub

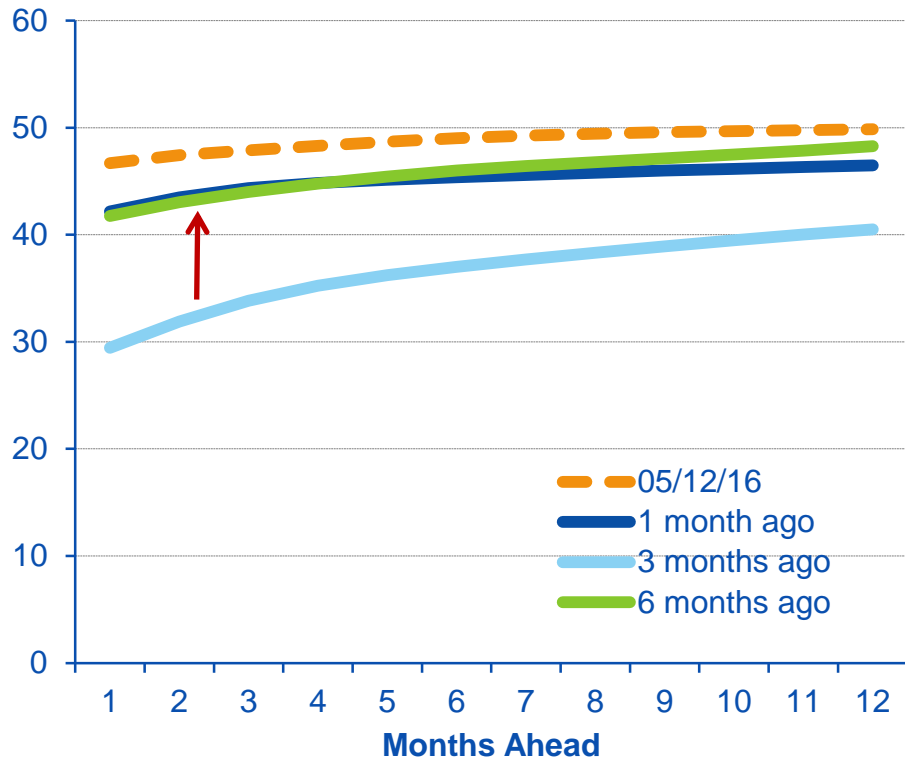


Futures

Markets have begun to reassess expectations to the upside, but the forward curve has also flattened

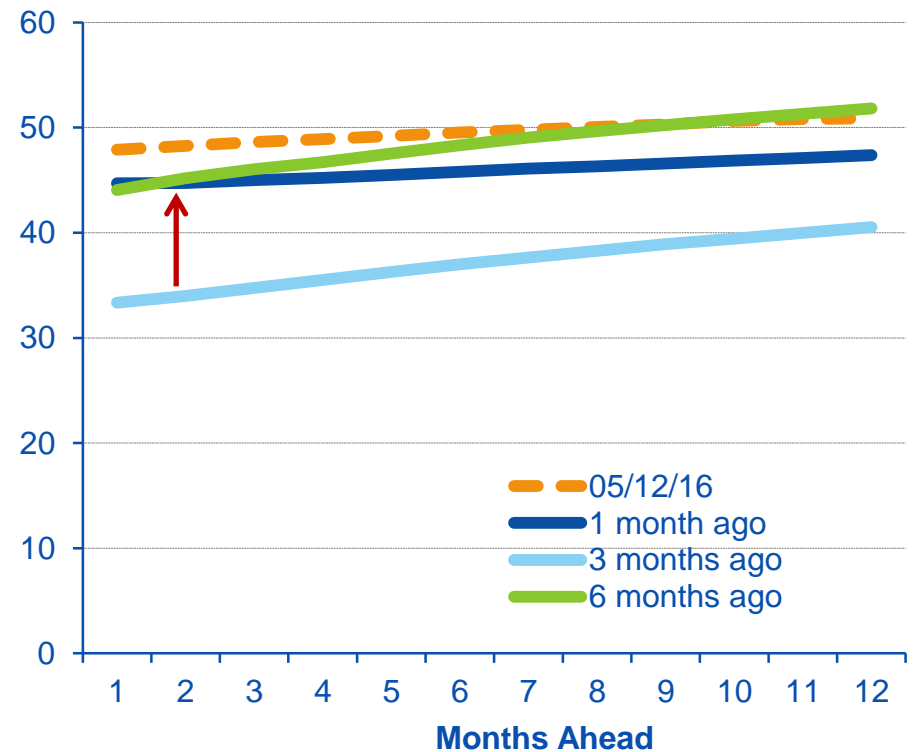
WTI Crude Futures

\$ per barrel



Brent Crude Futures

\$ per barrel

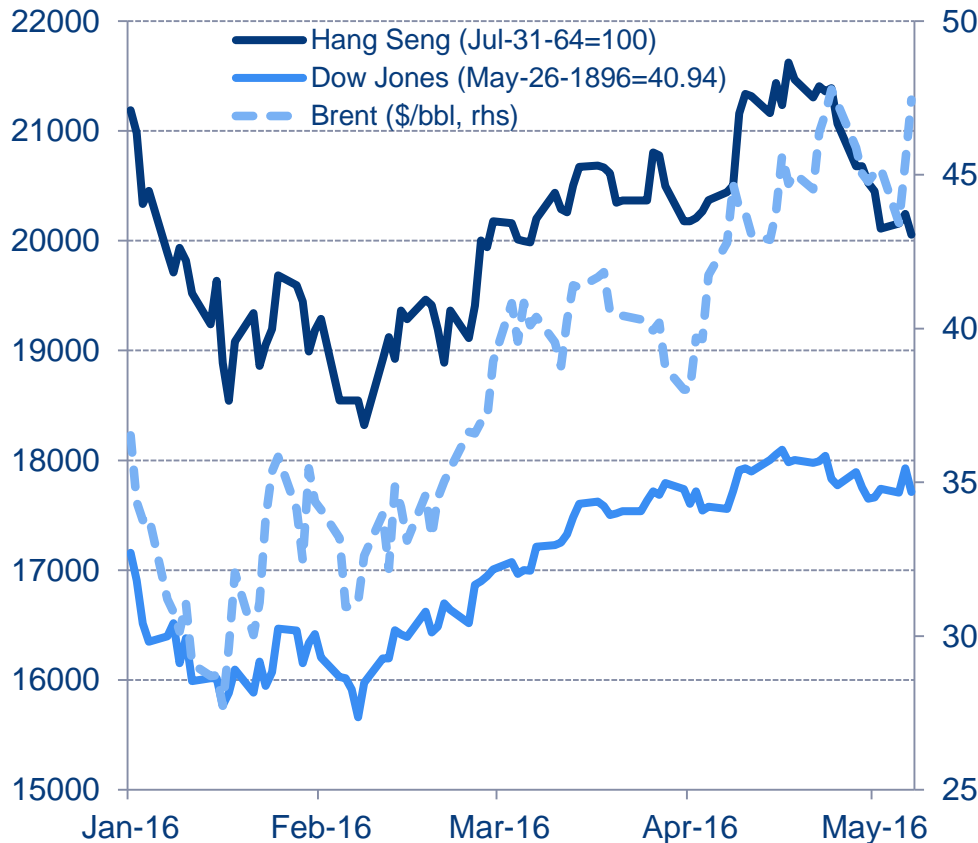


Financial markets

Dollar depreciation and improving financial markets supported the upturn

Oil Prices and Financial Markets

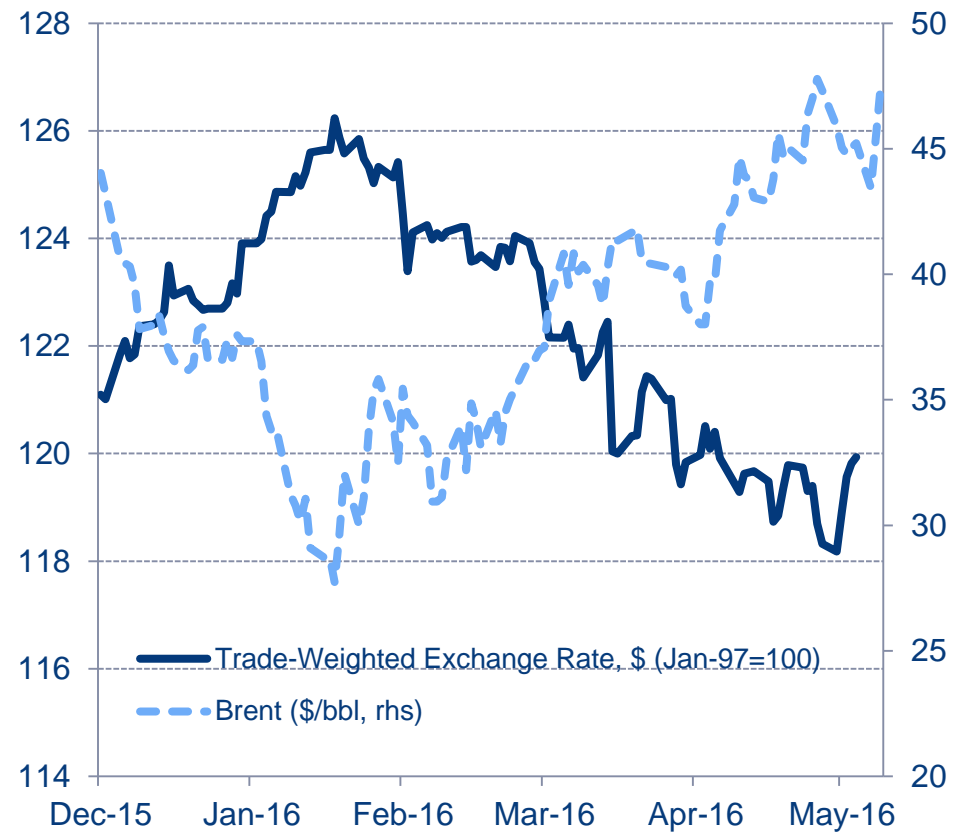
2016



Source: Haver Analytics

Oil Prices and U.S. Dollar

Brent and Fed's Broad Index



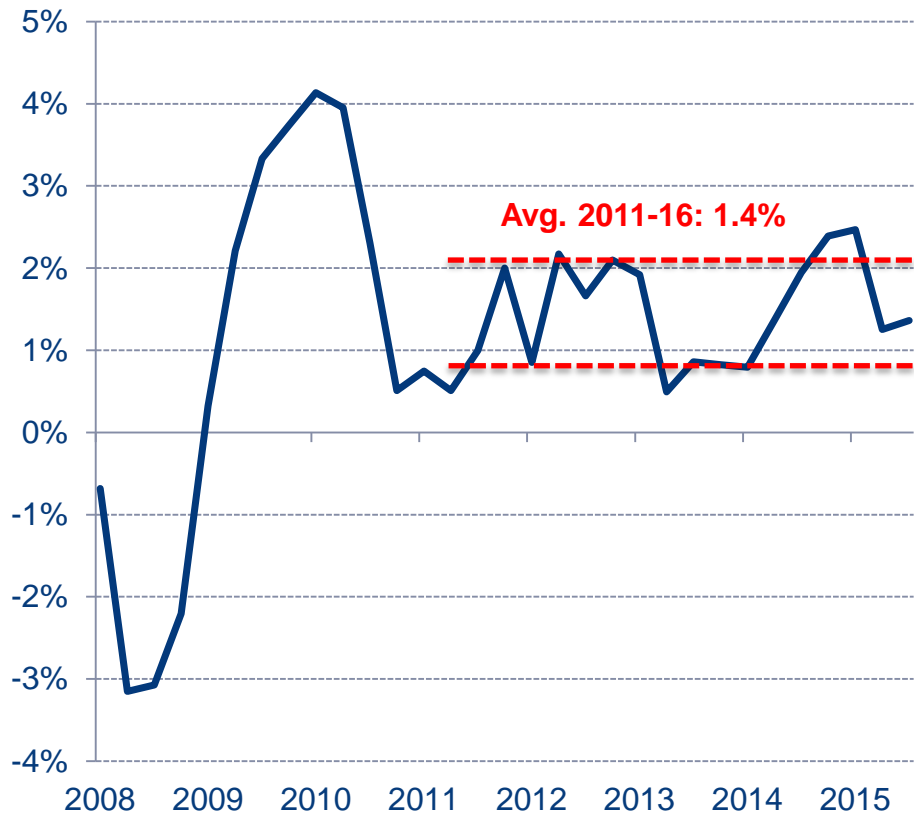
Source: Haver Analytics

Demand

Demand remains solid, with Chinese imports and inventories reaching record highs

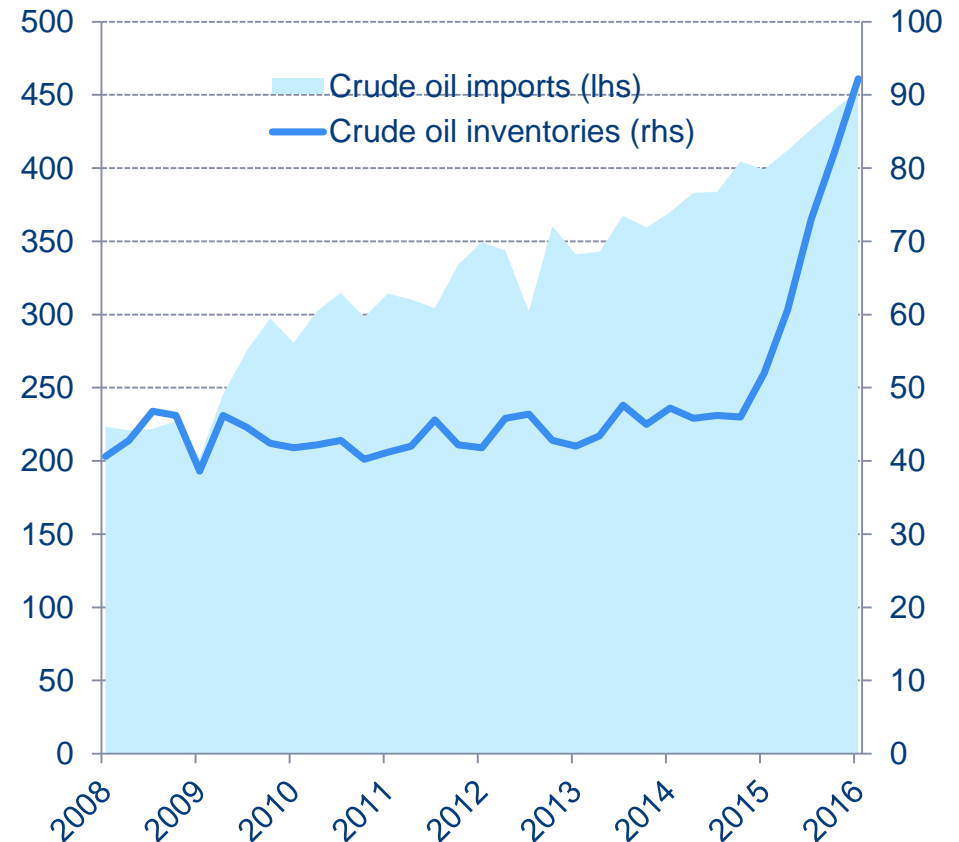
Global Crude Oil Demand

SA, Million Tonnes



China: Crude Oil Imports and Inventories

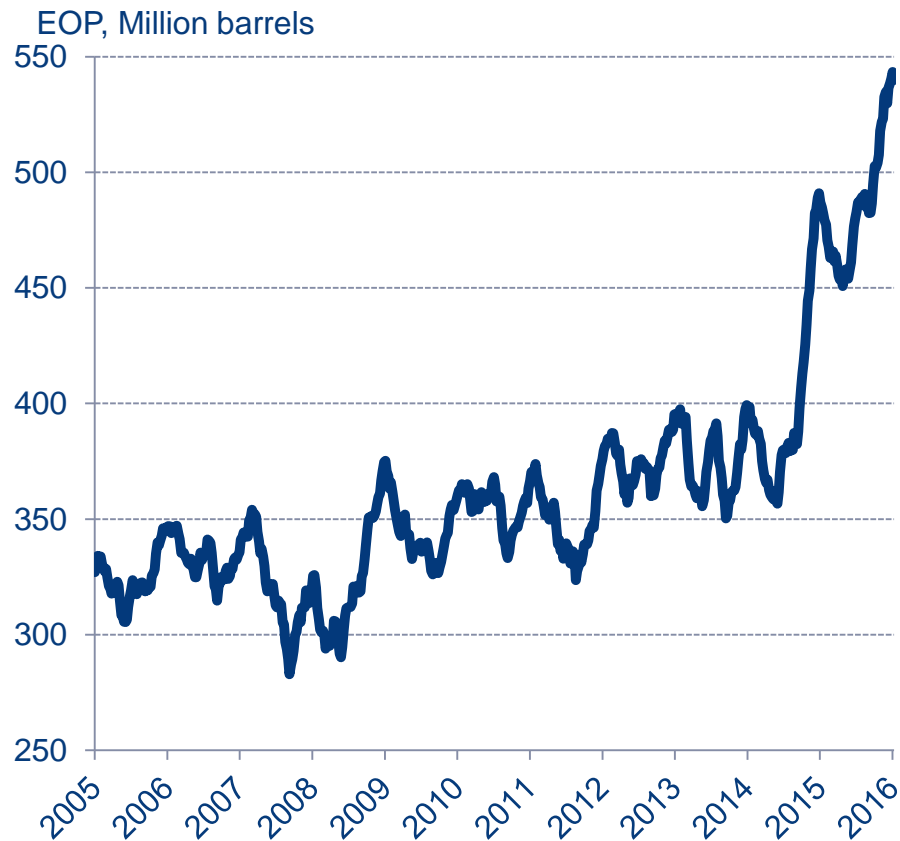
(NSA, Million Tonnes & EOP Million barrels)



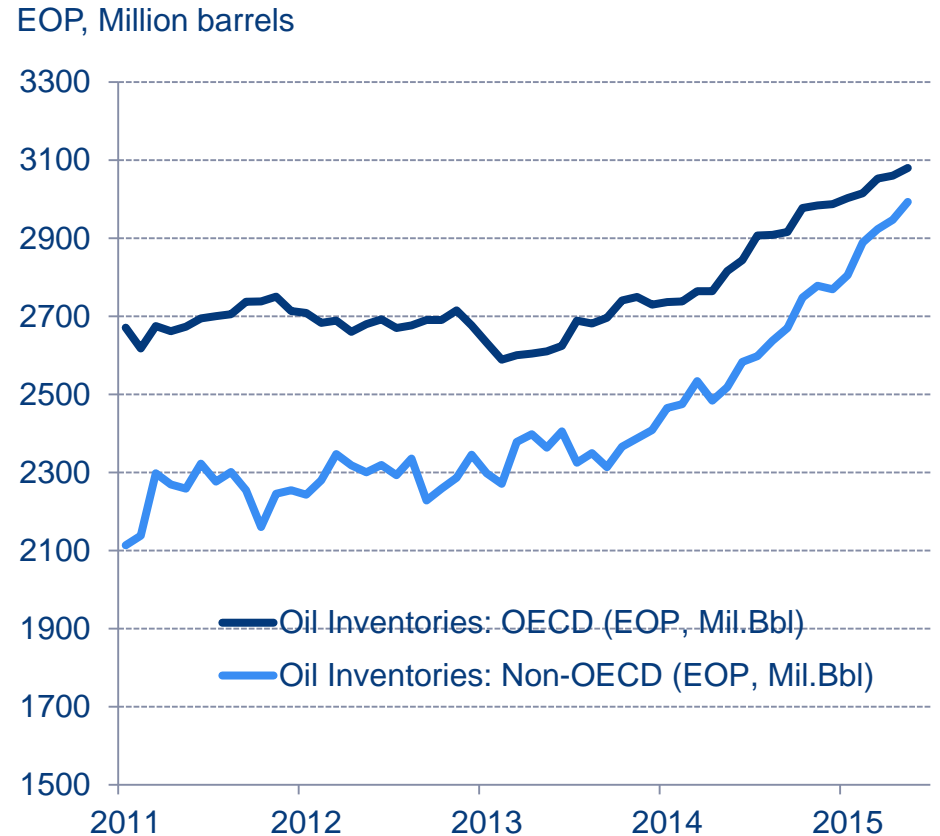
Inventories

Inventories have not shown signs of correction and remain at record highs

U.S. Stocks of Crude Oil Excluding SPR



Global Oil Inventories

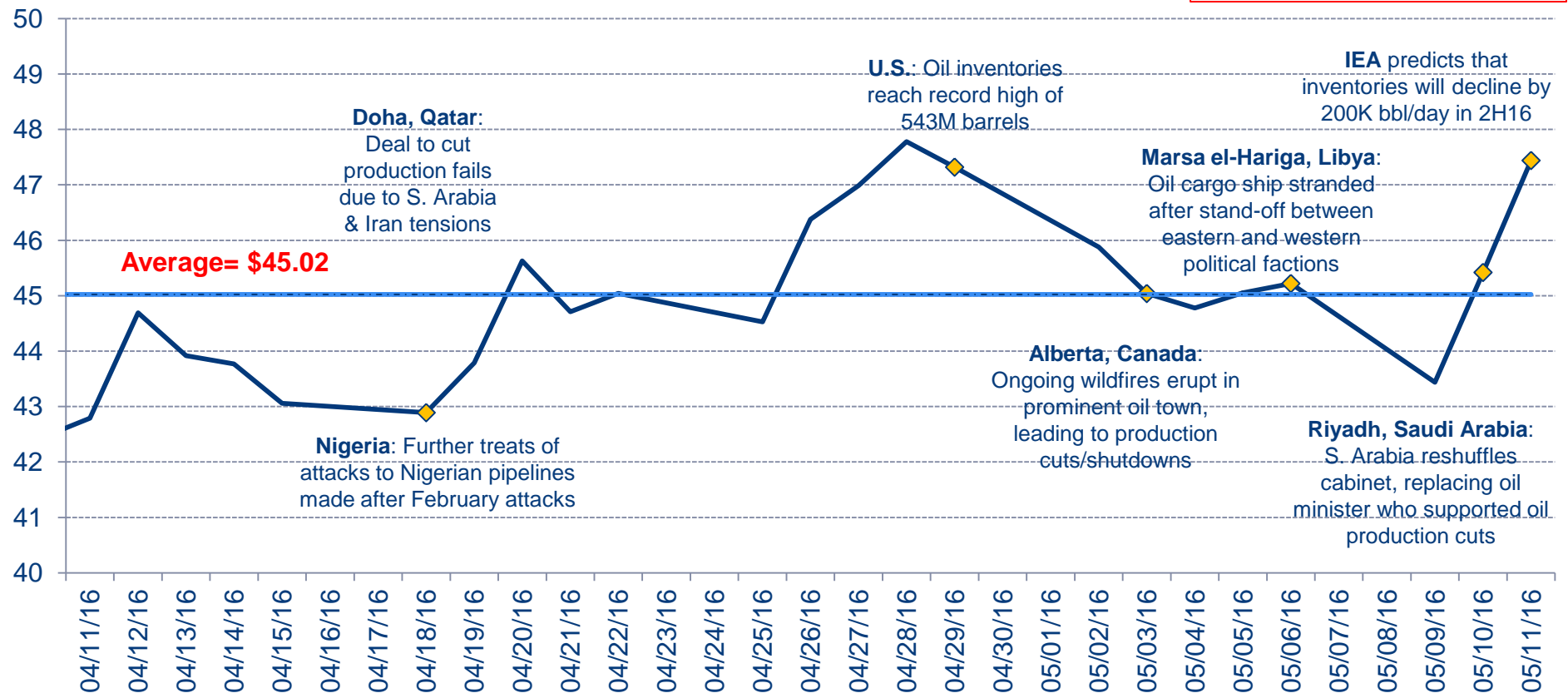


Short-term volatility

In addition, unplanned disruptions to production and other events have added to price fluctuations






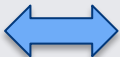
Brent Spot Price

\$ per barrel



Short-term volatility

The price impact of events in Libya, Canada and Nigeria is likely to be short-lived

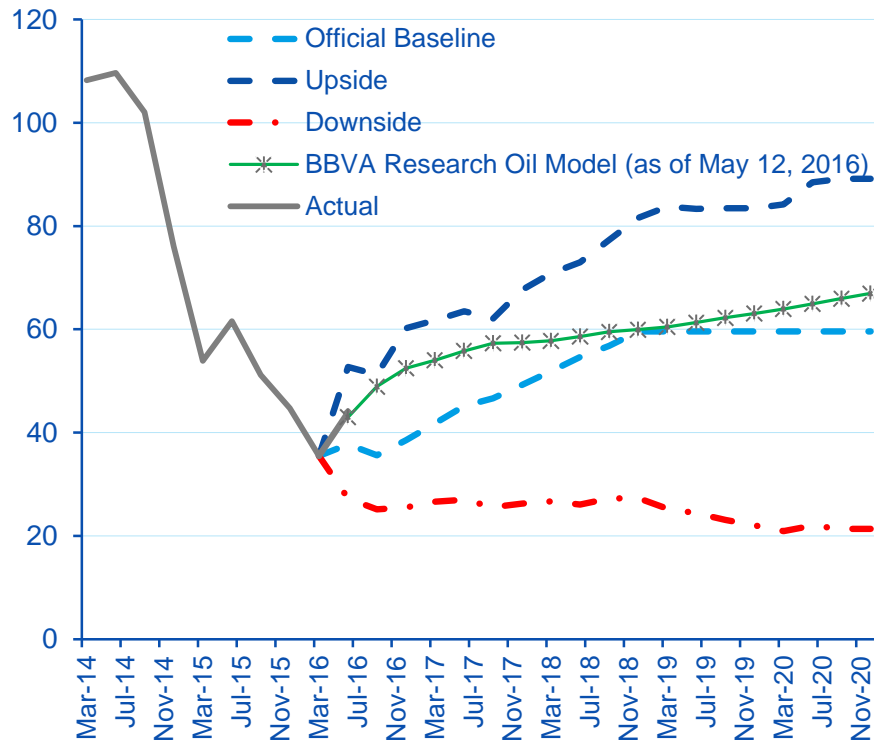
Event	Description	Bias
Wildfires in Canada	The fires affected about 1.07 million bbl/day of Alberta’s oil sands capacity. Operations in some areas are still on hold	
S. Arabia’s Oil Minister Replacement	Confirmation of intent to keep production level high, currently at 10.2 million bbl/day, and maintain market share	
Pipeline attacks in Nigeria	Pipeline attacks and violence have risen in response to political turmoil. Production is at levels not seen since 2009	
Increase in U.S. Oil Inventories	At 543.4M bbl, crude inventories reach historically high levels again	
Civil Unrest in Libya	Political conflict preventing loading of Libyan oil cargos and leading to output cuts. Current production at just over 200K bbl/day	
Next OPEC Meeting	No proposals to cut production on the table for next OPEC meeting (June 2)	

What's next for oil prices?

Oil prices have been moving closer to our upside scenario. Our model shows an upward bias for the short-run, but no significant bias for the long-run

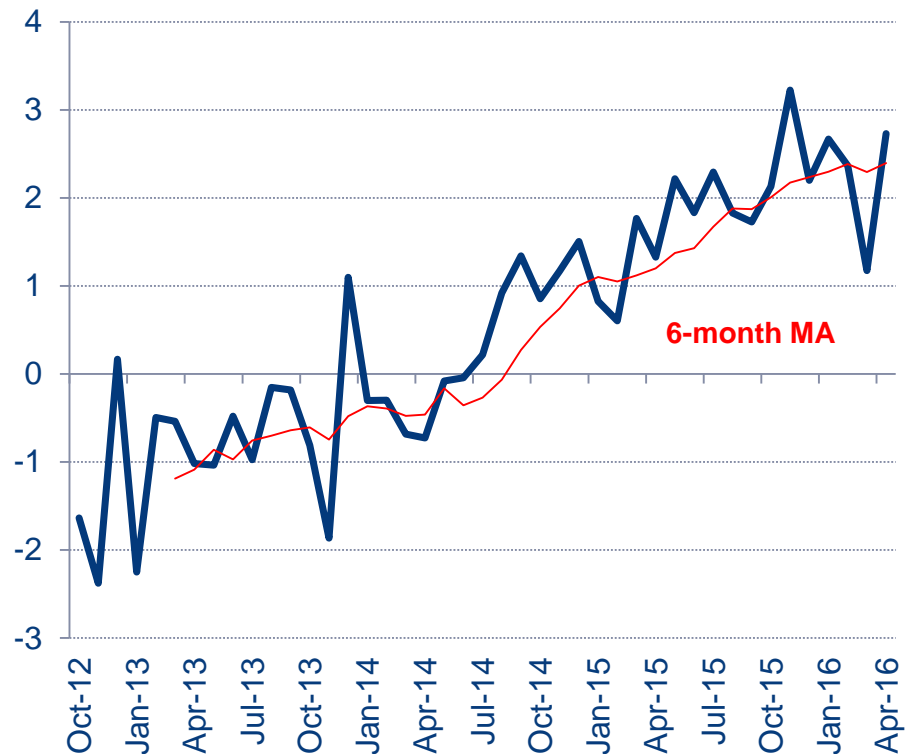
Crude Oil Price Forecasts*

Brent, \$ per barrel



Stock Change Needed to Balance the Market

Barrel/day



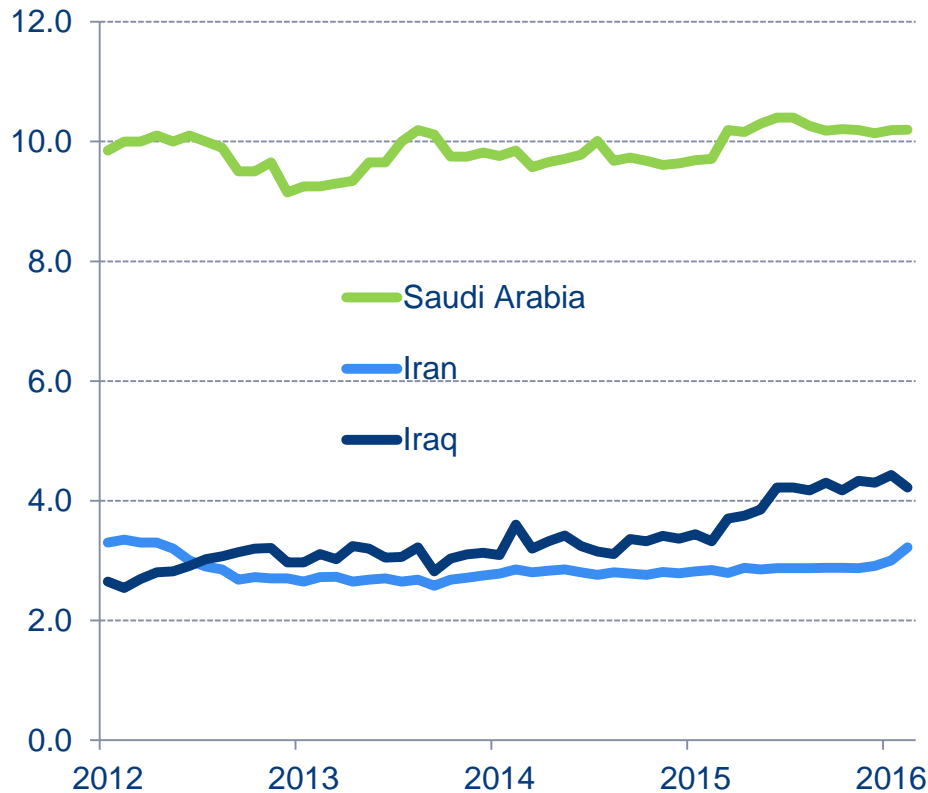
*Data for 2Q16 is average as of May12. BBVA Research Oil Model results are not official and may be subject to change. Source: BBVA Research & Haver Analytics

Global production

OPEC production cushions the effect of non-OPEC declines

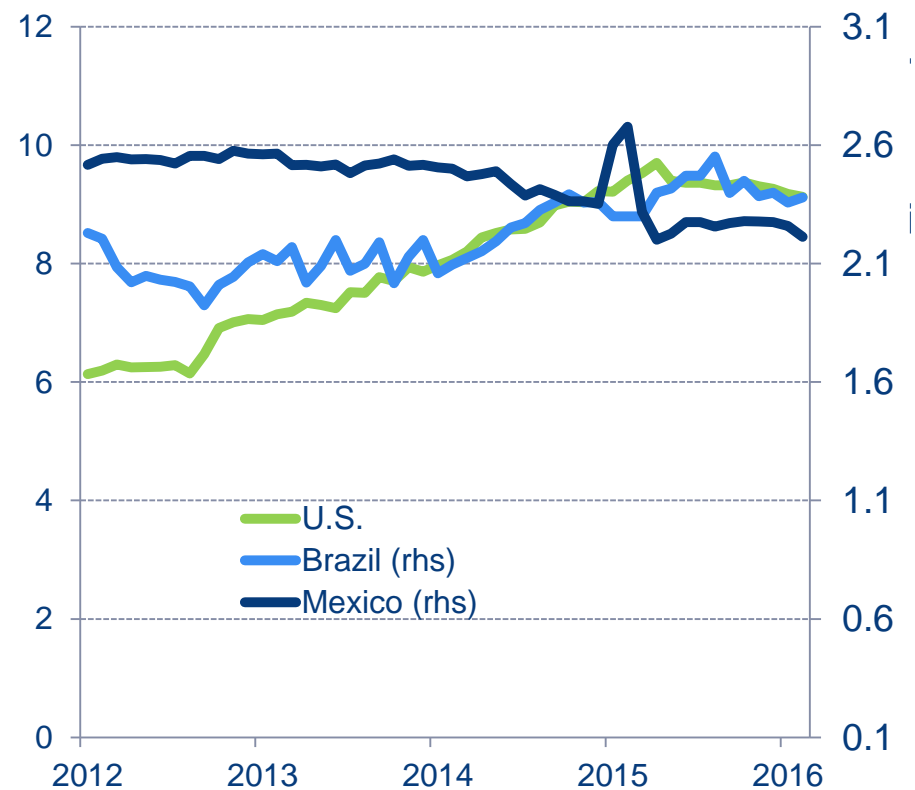
Crude Oil Production by Country

Million barrels per day



Supply of Crude Oil

2004 = 100

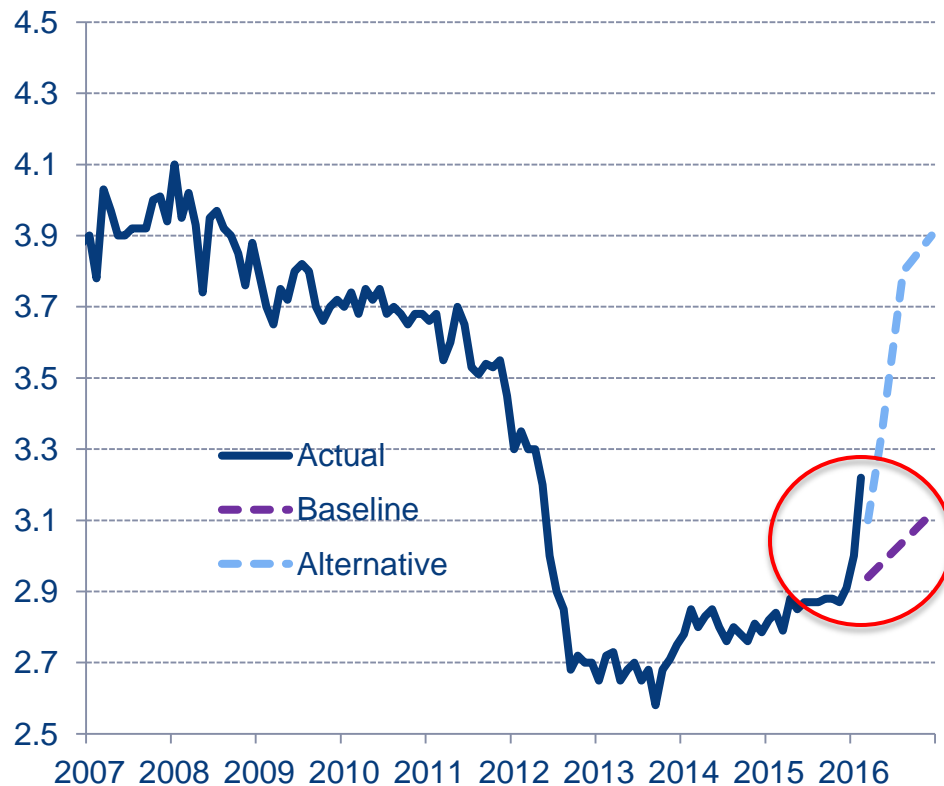


OPEC fails to cut production

Rising production and exports from Iran remain a downside for prices

Iran: Crude Oil Production

Million barrels per day



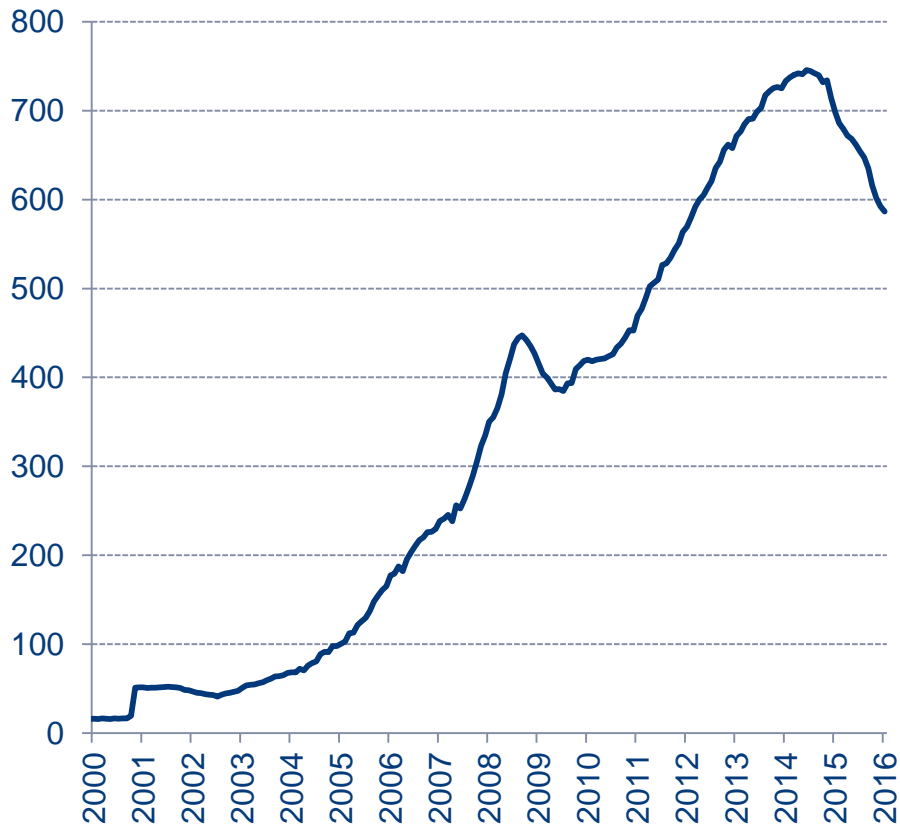
- After failure of Doha meeting, Iran/Saudi Arabia rivalry could hinder potential deal in June OPEC meeting
- Tehran has said that it would not engage into any production deal unless sales have reached pre-sanction levels (between 3.6 and 3.8 million bbl/day)
- It is expected that Iran will increase crude exports to 2 million bbl/d this month, a similar level as before sanctions (2011)

OPEC fails to cut production

Despite mounting pressures on public finances, Saudi Arabia's best option is still not to cut production

Saudi Arabia: Foreign Reserves

Total minus gold, EOP, Billion US\$



Source: IMF and Haver Analytics

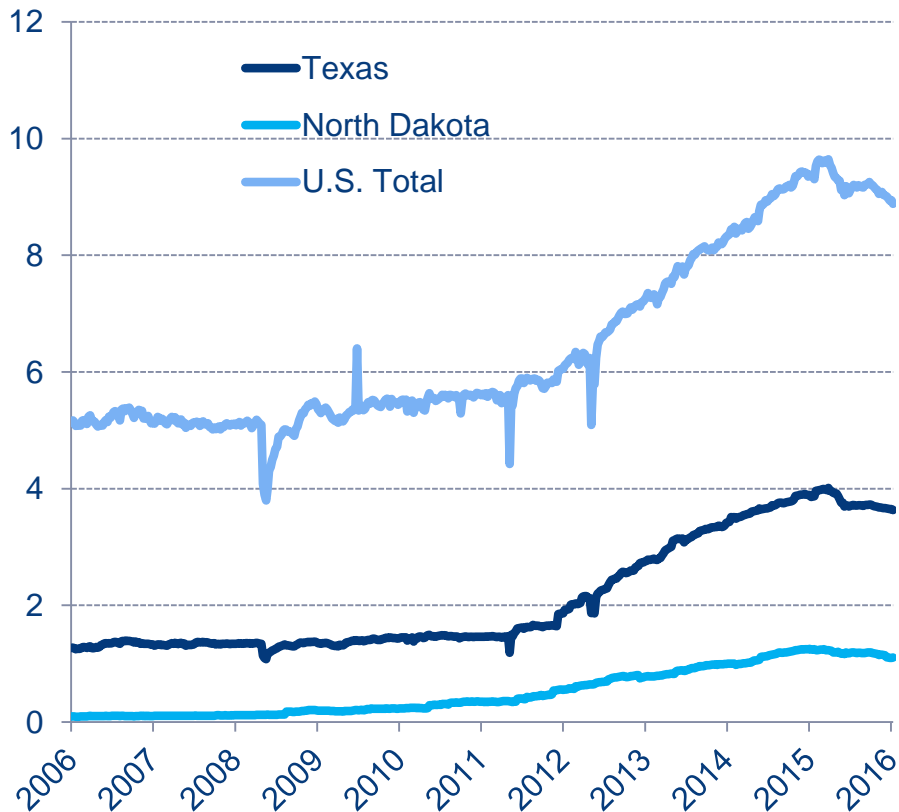
- The newly appointed petroleum minister, Khalid al-Falih, has confirmed the strategy to continue producing until high-cost producers are out of the market
- In the meantime, the Kingdom has announced a strategy to reduce its dependence on oil by selling a small fraction of Saudi Aramco, creating a Sovereign-Wealth Fund to invest in different assets, and boosting strategic non-oil industries (mining, military hardware).
- In the near future, Saudi Arabia may spend less time and effort dealing with OPEC and more on internal reforms.

Declining U.S. production

U.S. production continues to decline in line with expectations. The adjustment differs significantly across regions

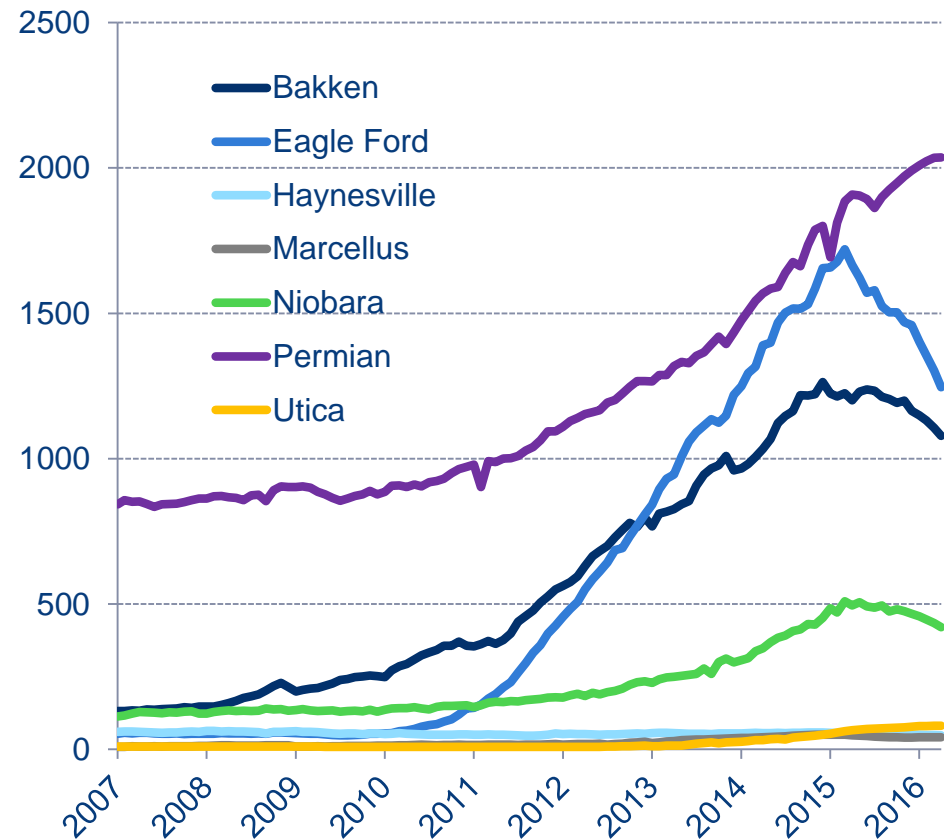
U.S. Crude Oil Production

Million barrels per day



Total Oil Production by Shale Play

Thousand barrels per day

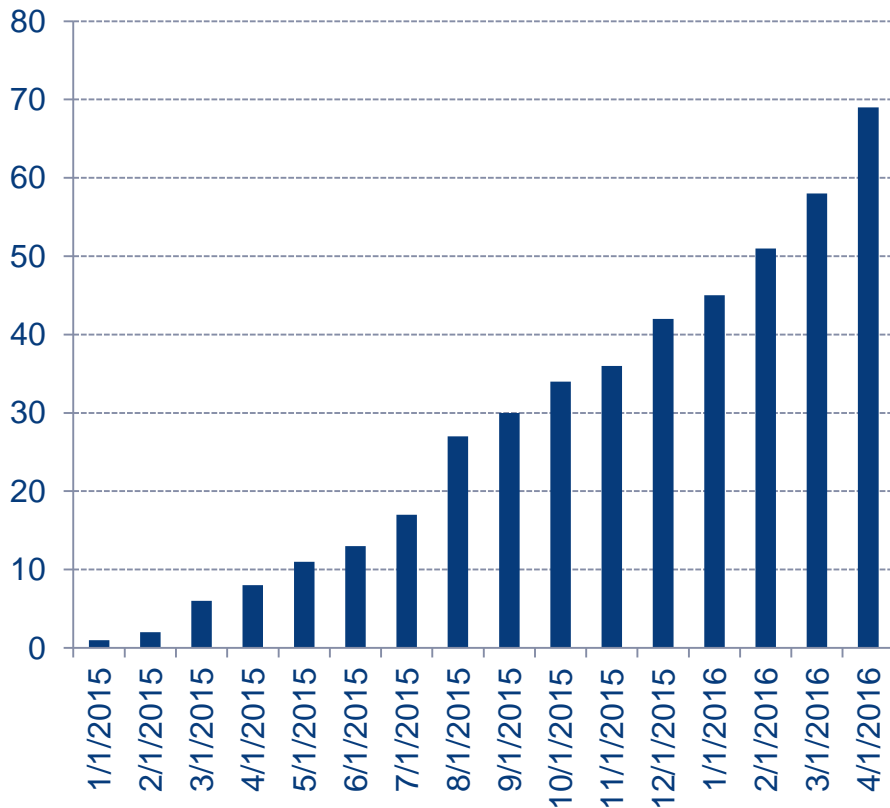


Declining U.S. production

Adjustments to production will continue to be reinforced by bankruptcies and lack of investments in the industry

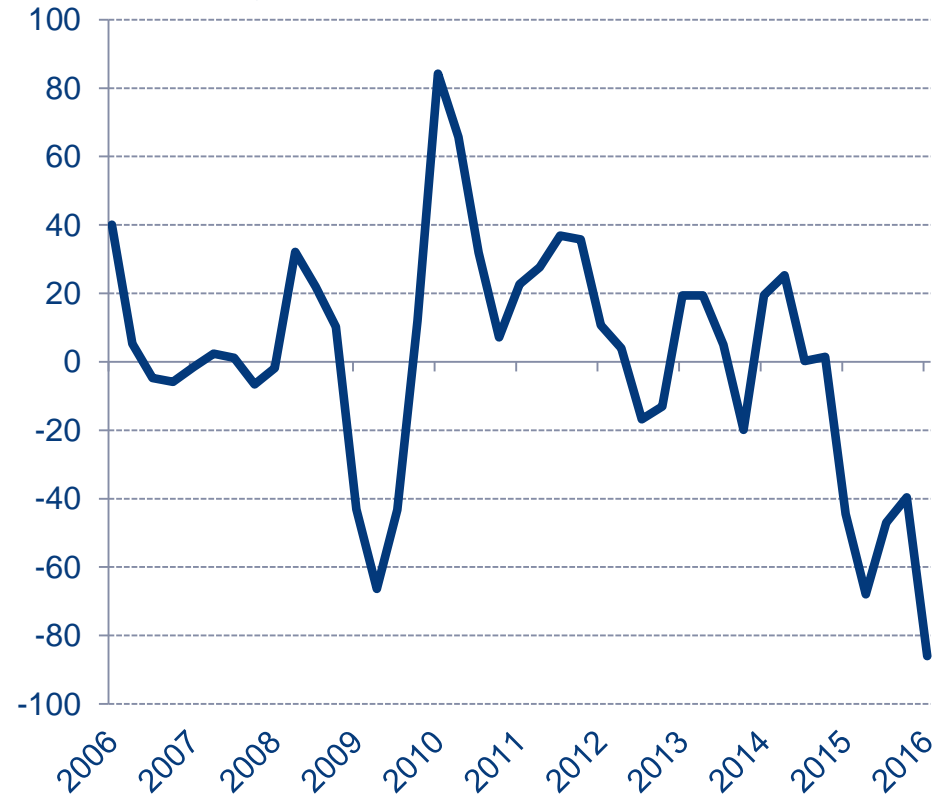
Cumulative North American E&P Bankruptcy Filings

2015-2016



U.S. Real Private Fixed Investment: Mining Exploration/Shafts/Wells

(SAAR, % change)

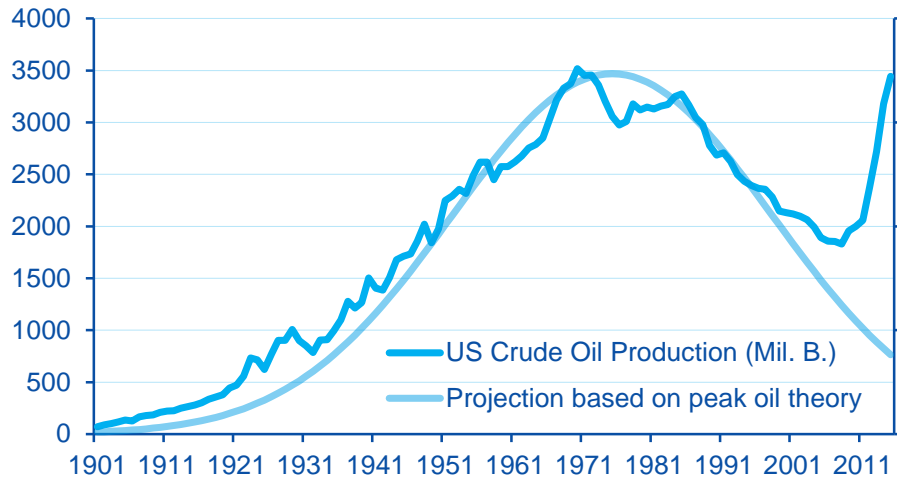


Source: Haynes and Boone

Source: Haver Analytics

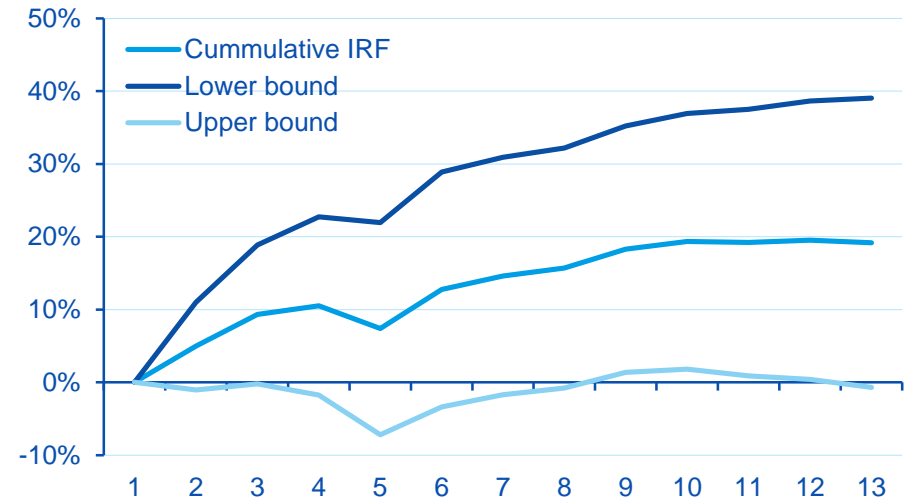
Geological: shale revolution challenges models incorporating “peak oil” assumptions

U.S. Crude Oil Production vs. Peak Oil



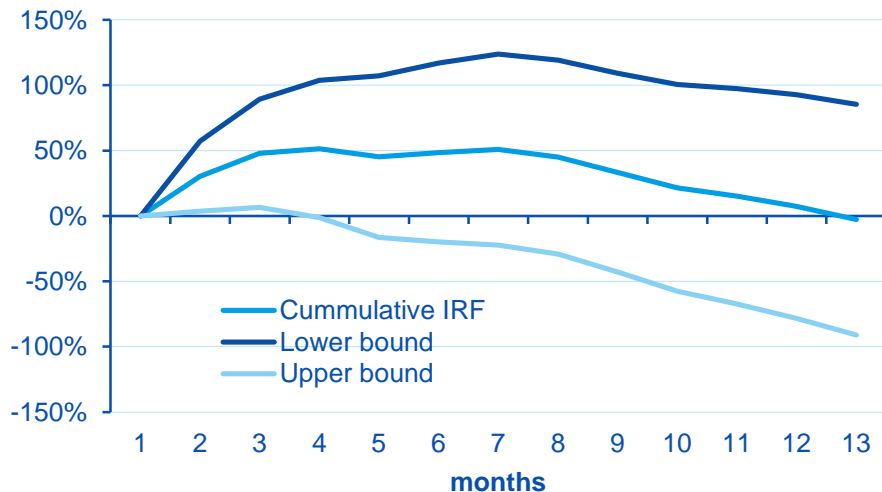
Geopolitics: a supply reversion to pre-2014 levels would lift prices to \$50/bbl by 1Q17

Impulse-Response: Supply to Oil Prices (\$40/bbl @ t=0)



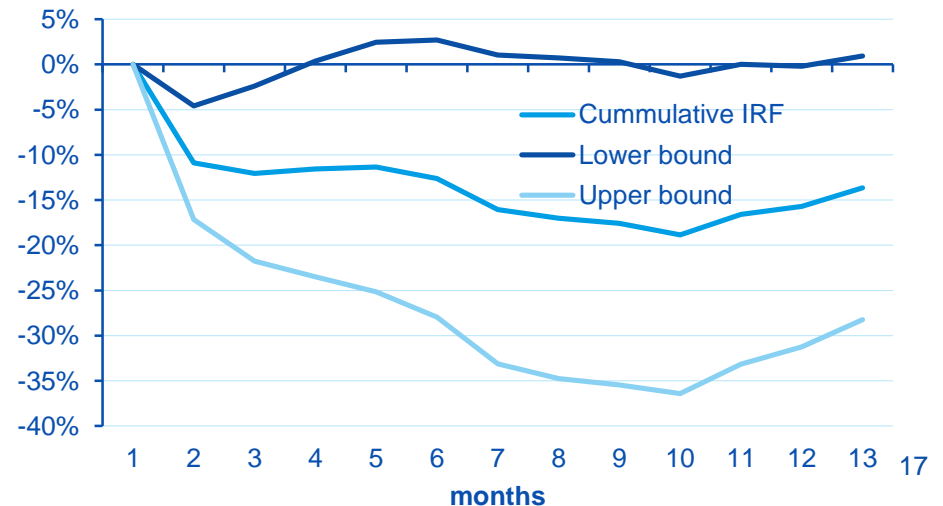
Financial: A 20% dollar depreciation would bring prices up to \$60/bbl in a short period of time

Impulse-Response: USD to Oil Prices (\$40/bbl @ t=0)



Global recession: A sharp drop in demand would send prices back to \$30's/bbl for a prolonged period

Impulse-Response: Demand to Oil Prices (\$40/bbl @ t=0)



Forecasts

Crude Oil Price Forecasts

Brent, \$/barrel, EOP

	Baseline	Upside	Downside	Market Consensus
2015	44.7	44.7	44.7	44.7
2016	38.5	60.2	25.5	41.0
2017	49.3	67.6	26.2	55.0
2018	59.6	81.6	27.3	62.0
2019	59.6	83.5	22.0	65.0
2020	59.6	89.1	21.3	n.a.

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