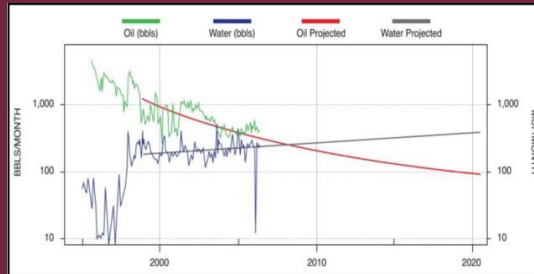




Capital and Sponsorship for the Natural Resources Industry Since 1988



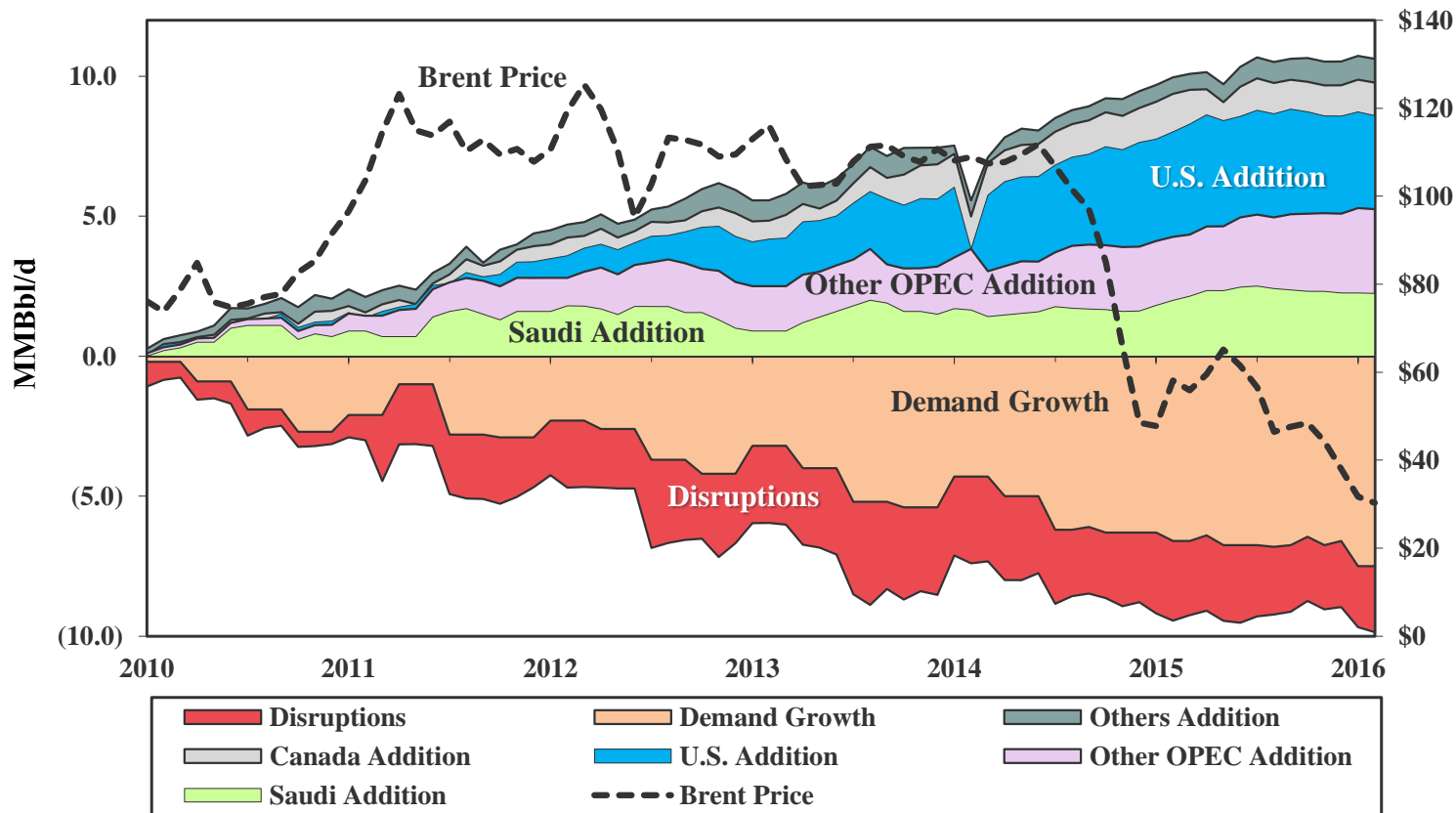
A MACRO VIEW OF GLOBAL ENERGY ISSUES

ANAS ALHAJJI
CHIEF ECONOMIST

2016 TYLER AREA ENERGY SUMMIT
MARCH 31, 2016

The Oil Market is Oversupplied

Disruptions & Demand Growth vs. Additions

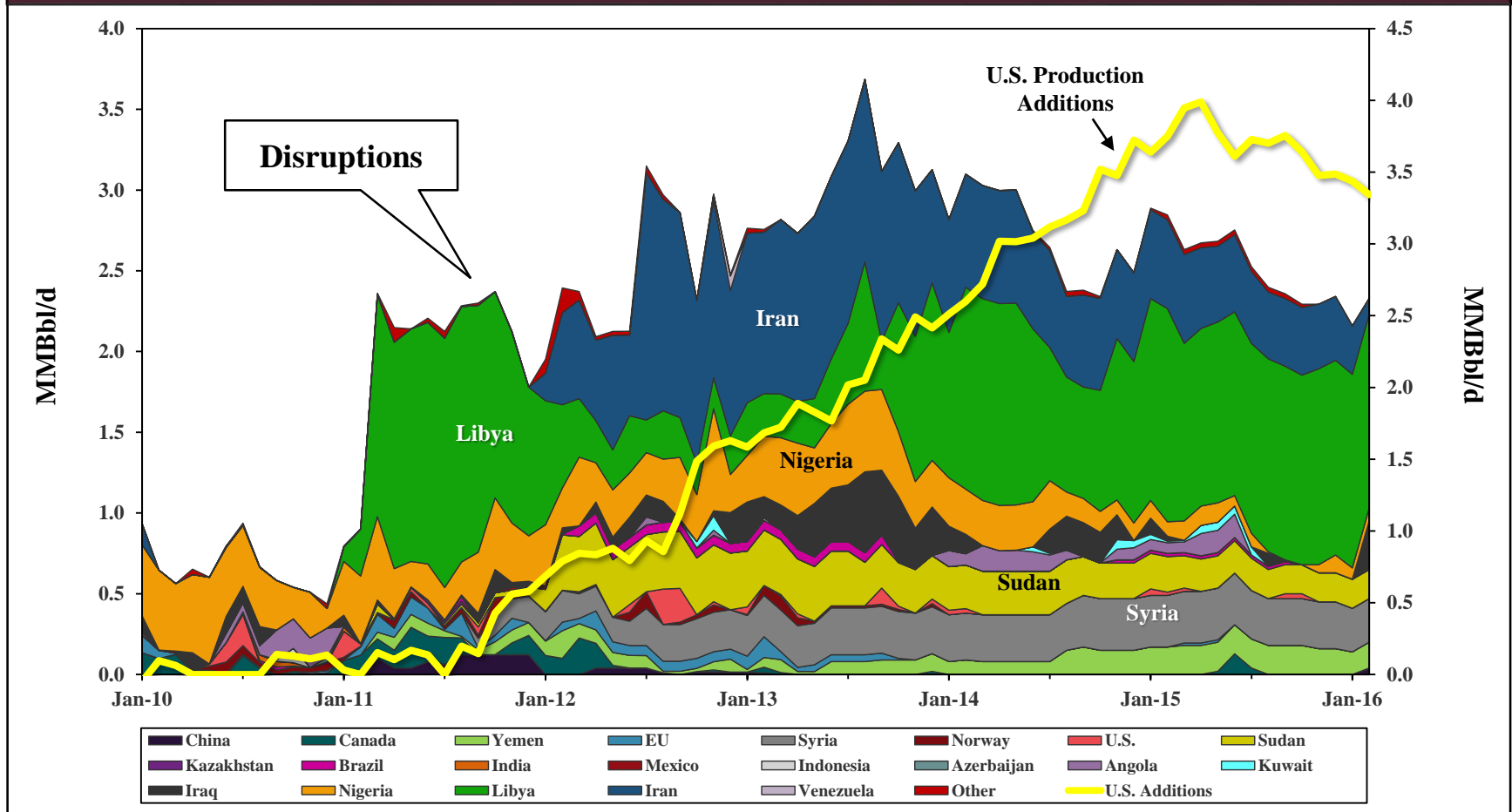


Source: NGP, 2016 and EIA, 2016.

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U.S. Oil Brought in Stability

Global Unplanned Oil Production Disruptions⁽¹⁾



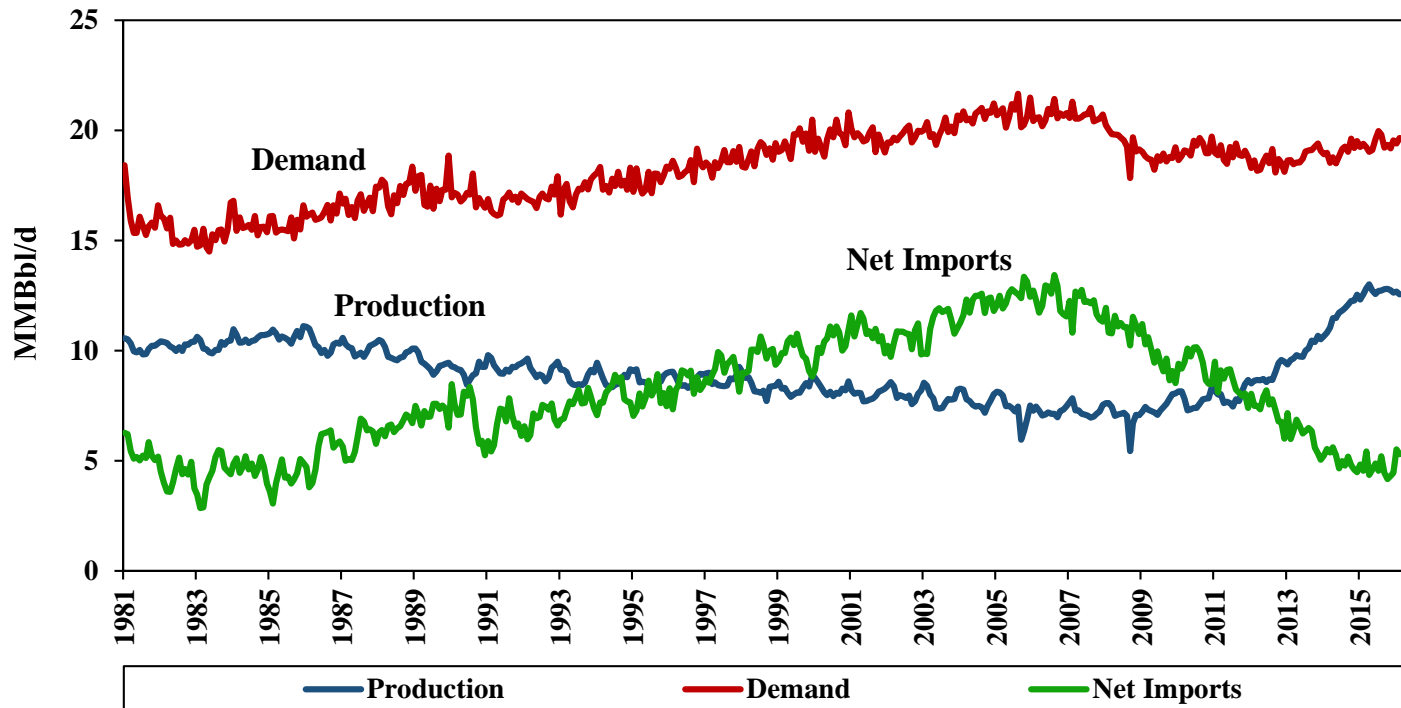
- Most of the unplanned disruptions were caused by geopolitical events
- The increase in U.S. oil production compensated for the disruptions

(1) DNB, 2013, PIRA, 2013 and NGP, 2016.

U.S. Oil Production, Demand, and Net Imports

Exports of Oil Products and NGLs Relieved the Pressure of Increasing Production and Declining Demand. However, Demand Has Recently Increased

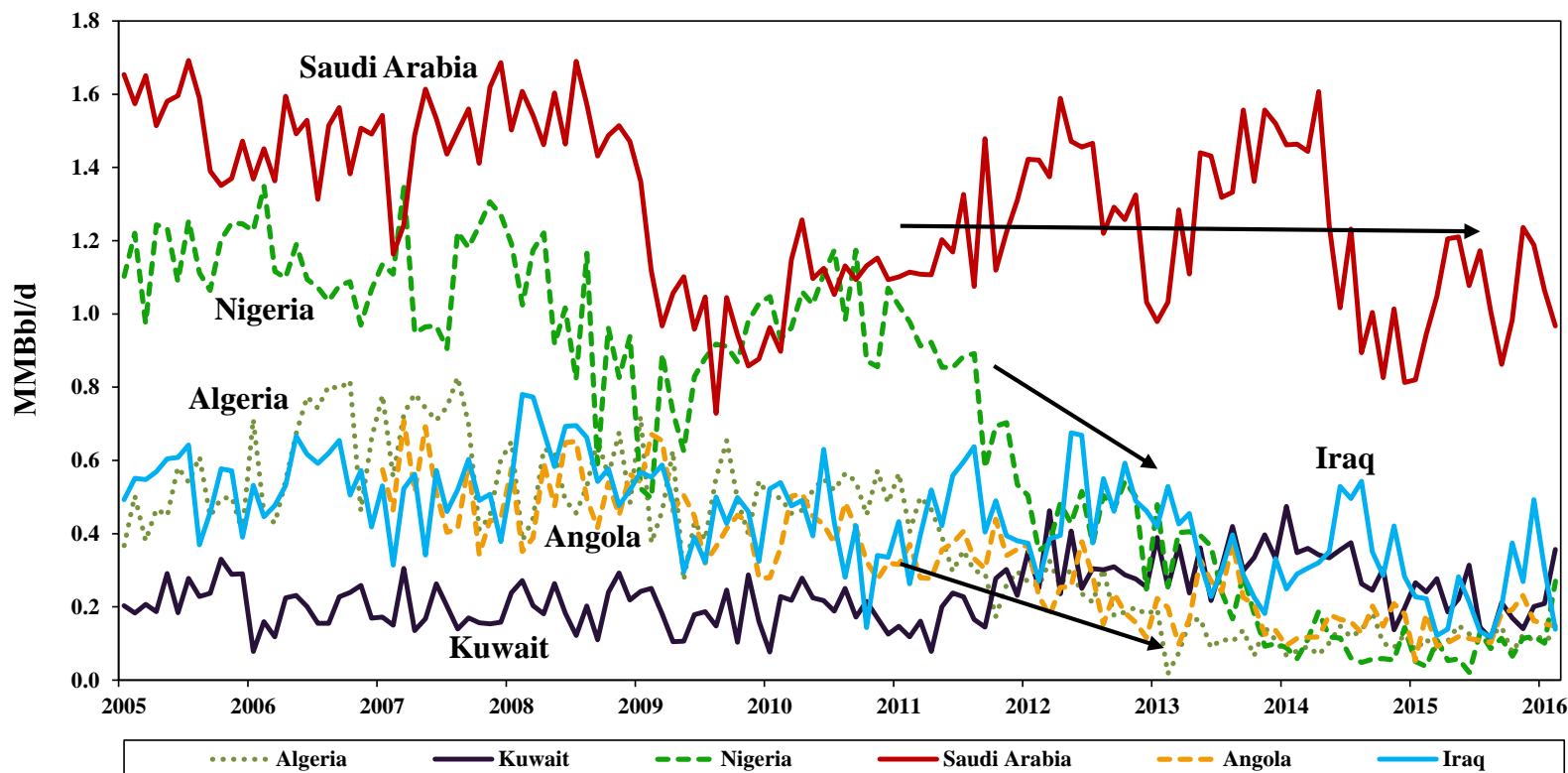
U.S. Oil Production, Demand and Net Imports



The Increase in Production Replaced Light Crude Imports

*The Decline in U.S. Imports of Light Crude Split OPEC into Two Halves:
Those Who Lost Market Share vs. Those Who Have Not*

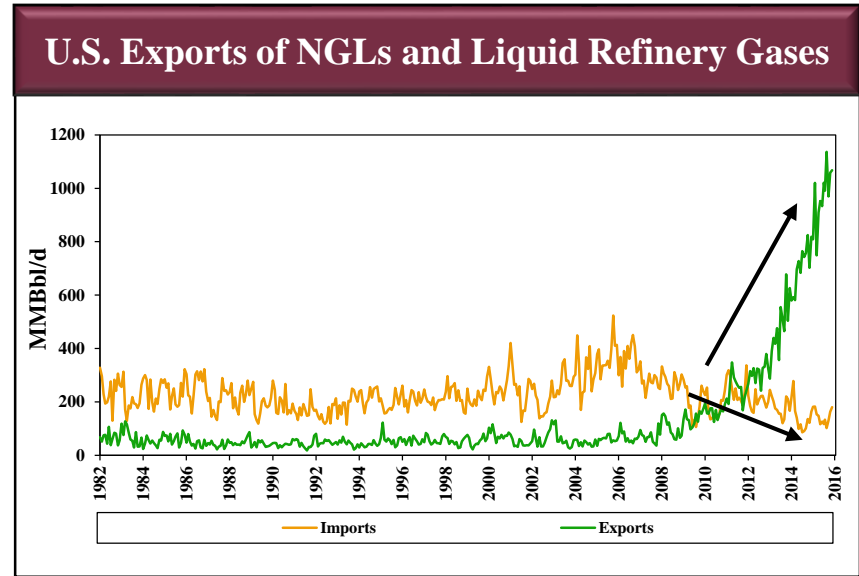
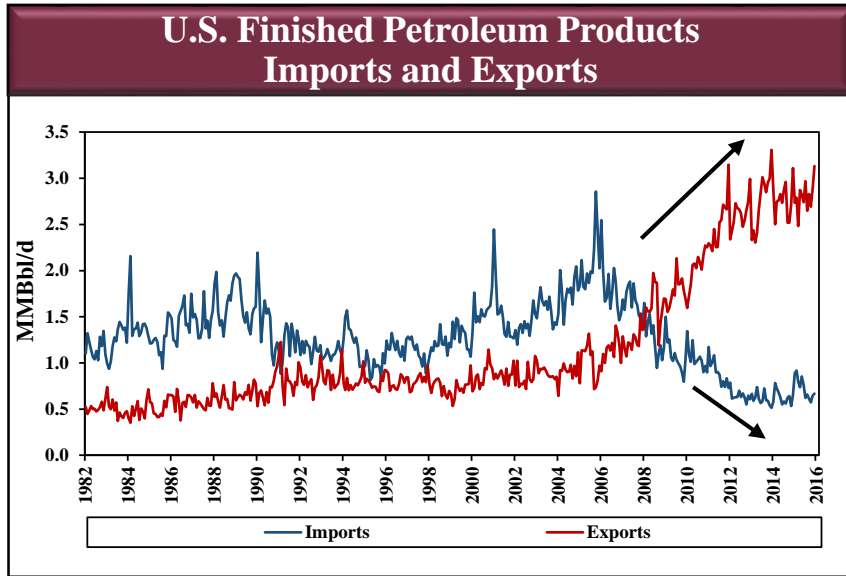
U.S. Oil Imports from Algeria, Angola, Iraq, Kuwait, Nigeria, and Saudi Arabia



Source: EIA, 2016.

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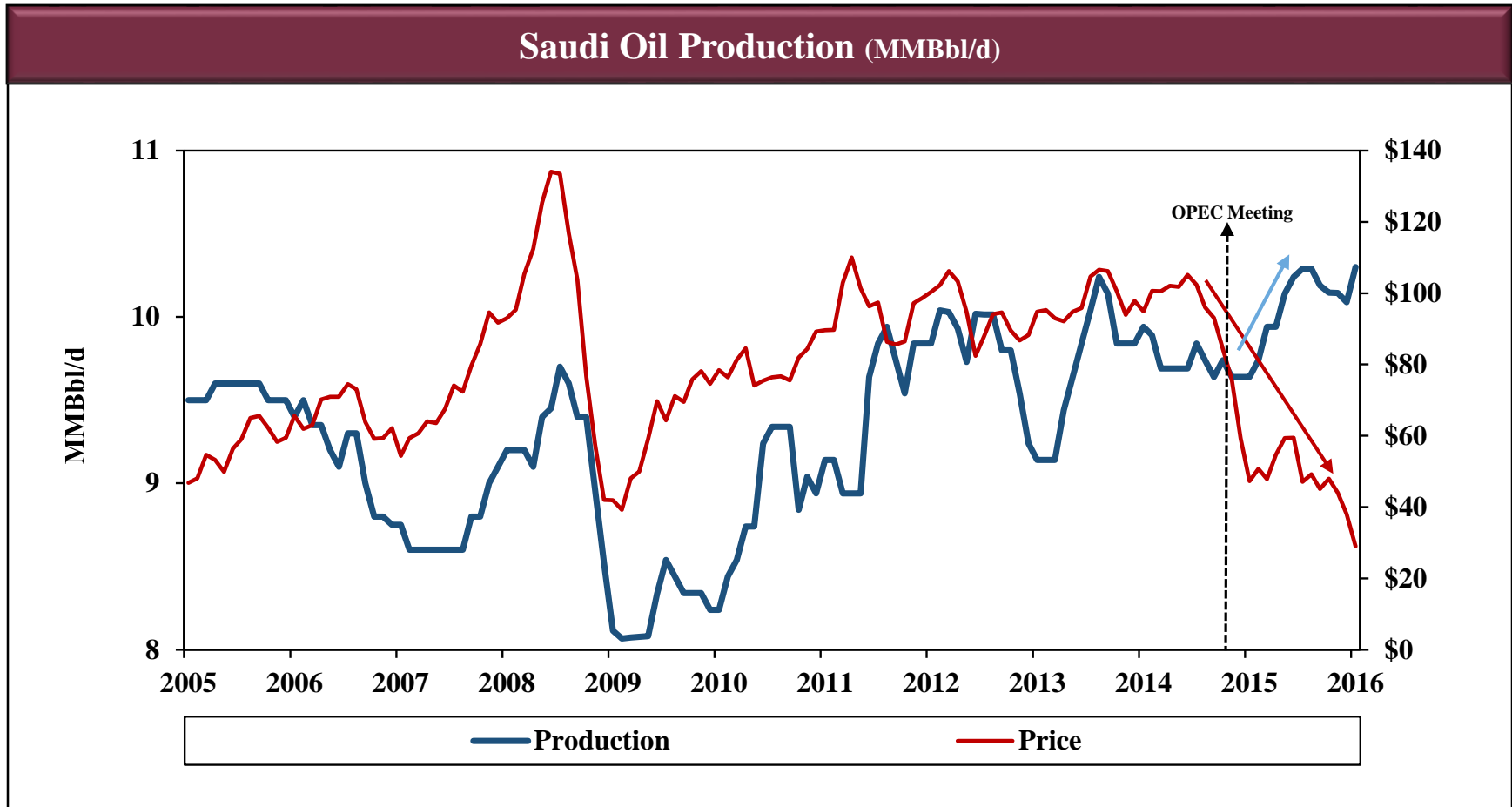
Record Exports of Oil Products and Natural Gas Liquids (NGLs)



- Since exports of U.S. produced crude were prohibited, oil product exports have soared
- The U.S. is now a net exporter of NGLs. Exports have increased by more than fifteen-fold since 2005
- The increase in U.S. exports of petroleum products and NGLs was at the expense of Saudi Arabia's market share

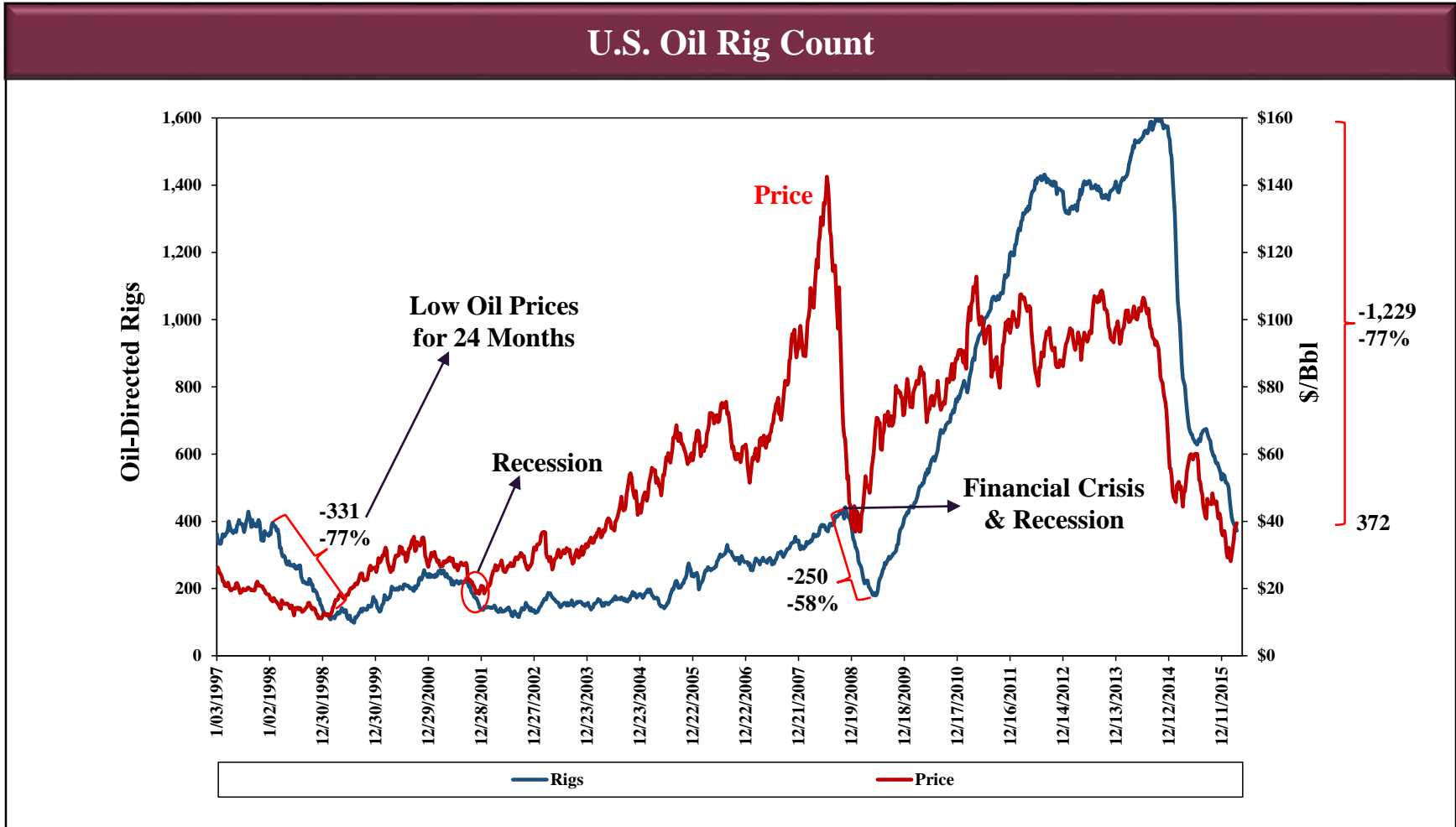
The Saudi Response: Increase Oil Production

To Recover Market Share, Saudis Refused to Cut Production at First, Then Increased It

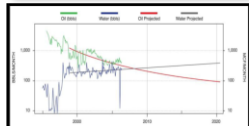
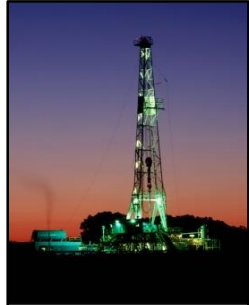


U.S. Oil Rig Count

As Prices Declined, the U.S. Oil-Directed Rig Count Declined Sharply



Source: Baker Hughes, 2016 & Bloomberg, 2016.
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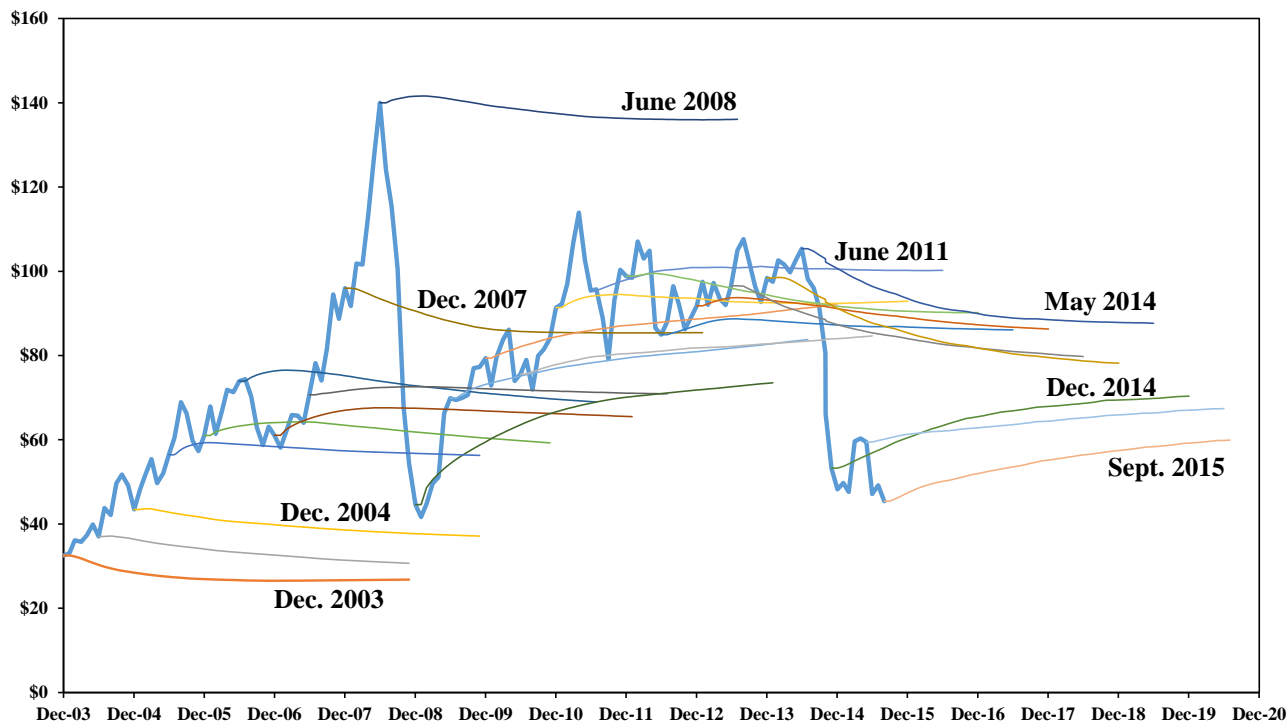


OUTLOOK

Forward Prices vs. Actuals

Forward Curves Are Useful for Investments and Hedging Decisions, But Not for Forecasting

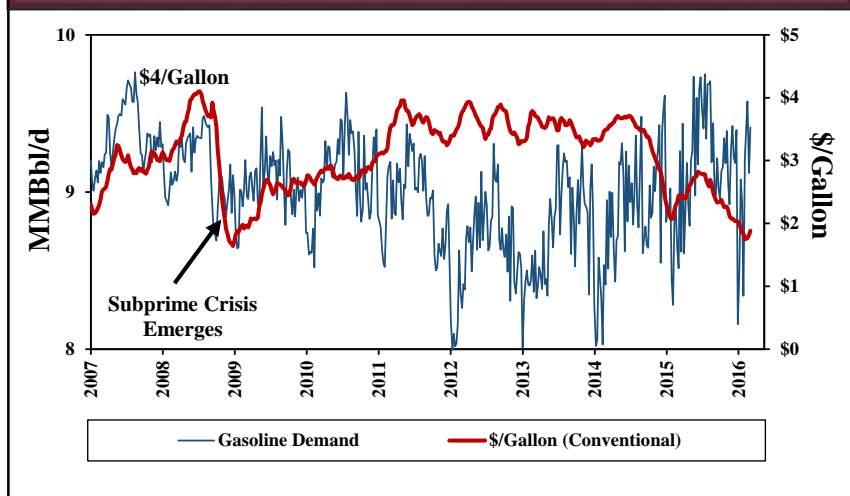
Oil Strip vs. Actuals



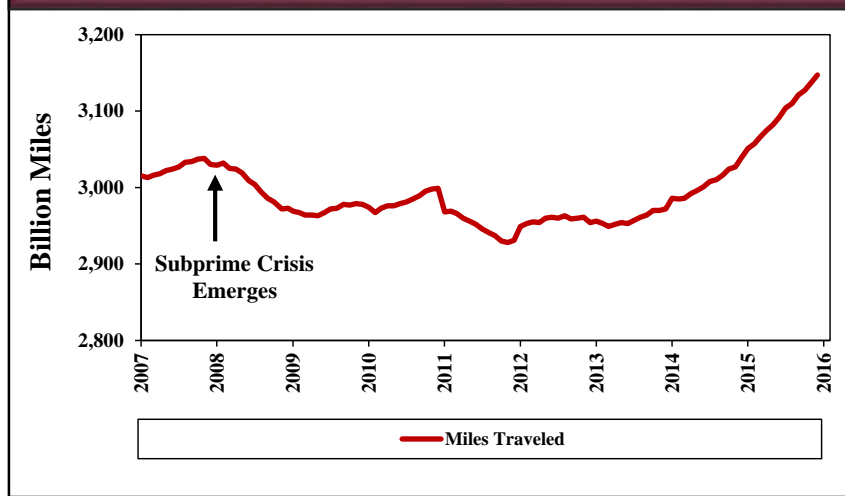
U.S. Gasoline Demand and Gasoline Prices

Lower Gasoline Prices, Higher Employment, and Higher Income Stimulated the Demand for Gasoline

Weekly Gasoline Demand vs. Price⁽¹⁾



Monthly Vehicle – Distance Traveled⁽²⁾

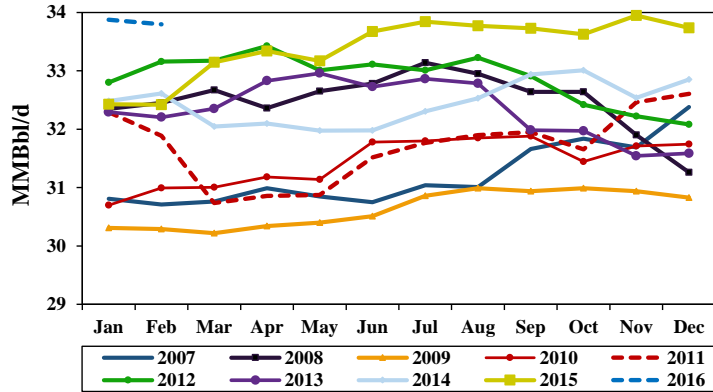


(1) Source: EIA, 2016.

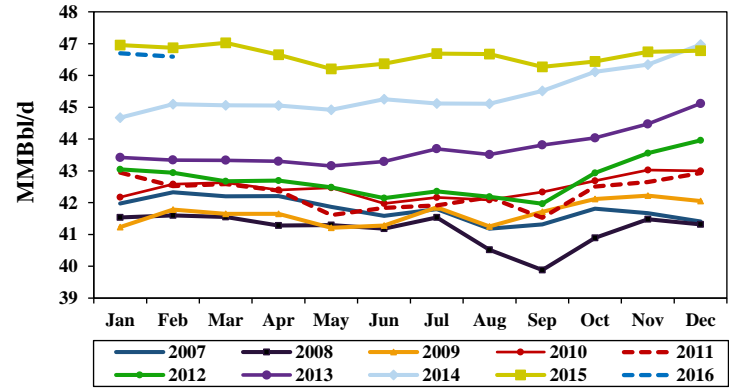
(2) Source: Federal Highway Administration, 2016.

Supply: OPEC and Non-OPEC Production Increased

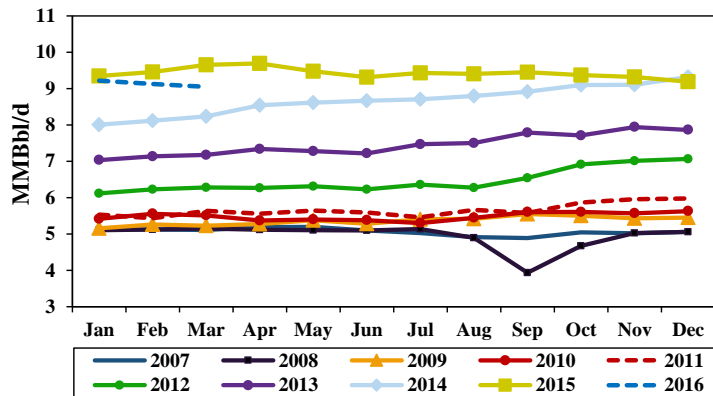
OPEC Crude Oil Production



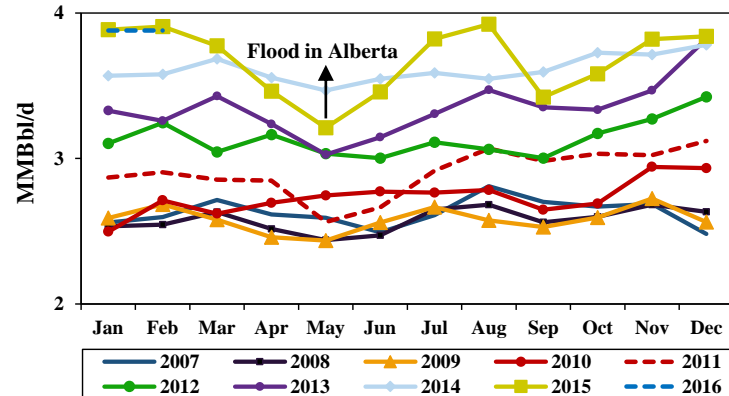
Non-OPEC Crude Oil Production



U.S. Crude Oil Production



Canada Crude Oil Production

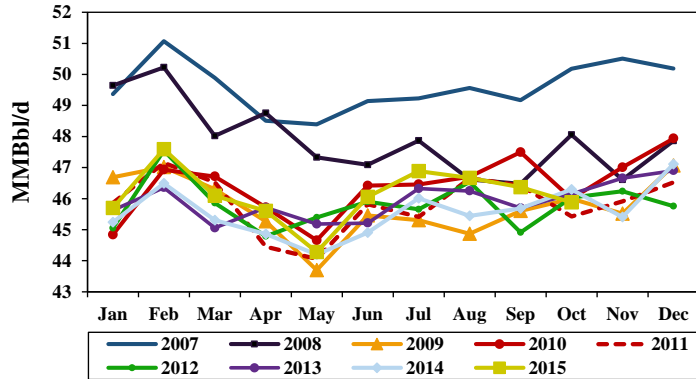


Source: EIA, 2016; OPEC, 2016; IEA, 2016.

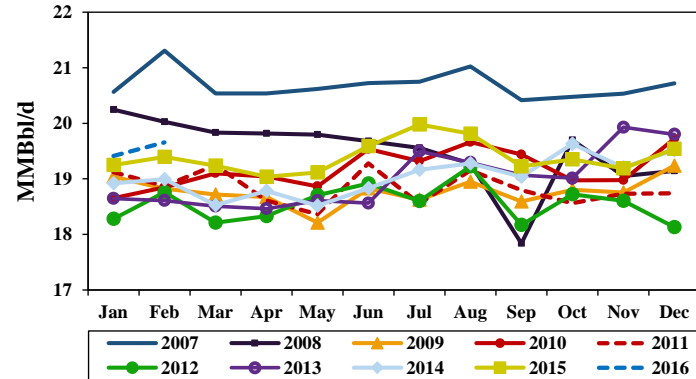
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Demand: Lower Oil Prices Have Stimulated Demand

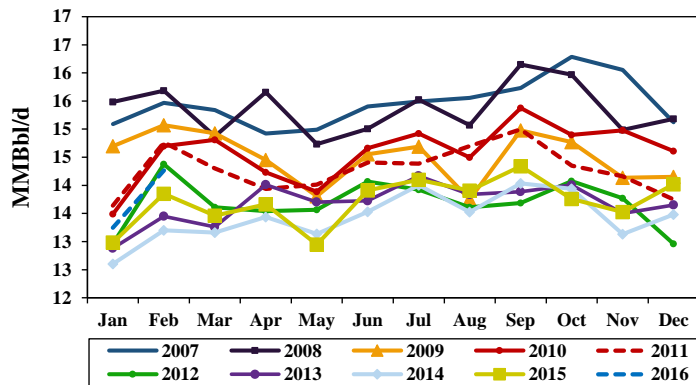
OECD Petroleum Consumption



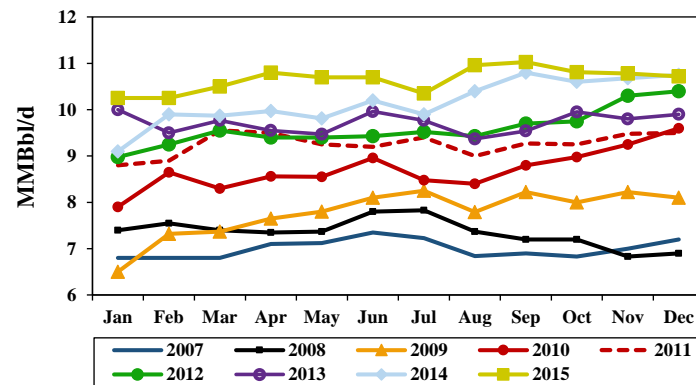
U.S. Petroleum Consumption



OECD Europe Petroleum Consumption



China Implied Oil Demand⁽¹⁾

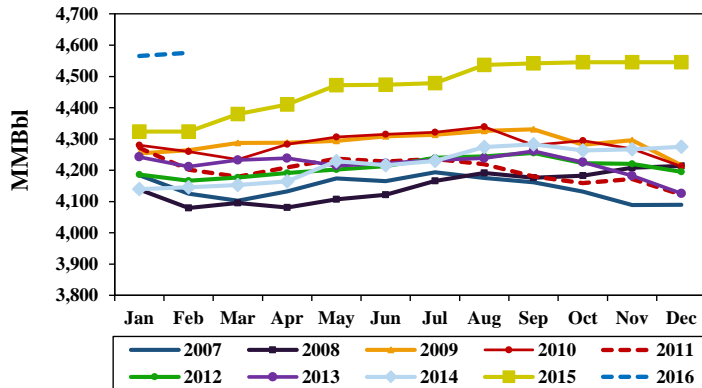


(1) Implied demand is calculated as refinery runs plus net products imports.

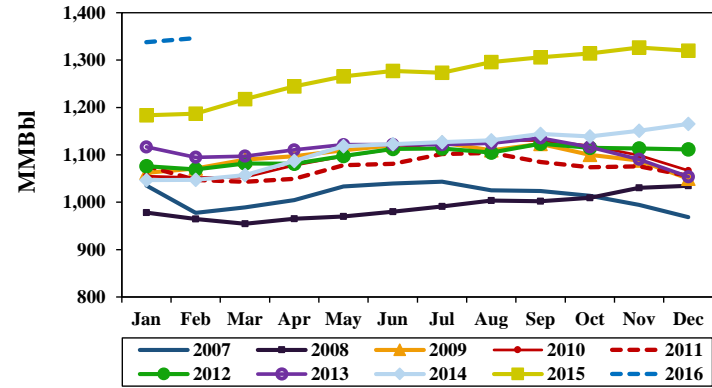
Source: EIA, 2016; DnBNor, 2016.

Oil Stocks: Inventories Are at a Record High

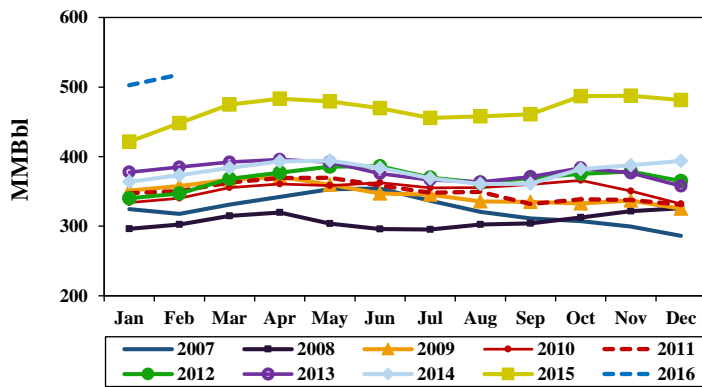
Petroleum Stocks in OECD



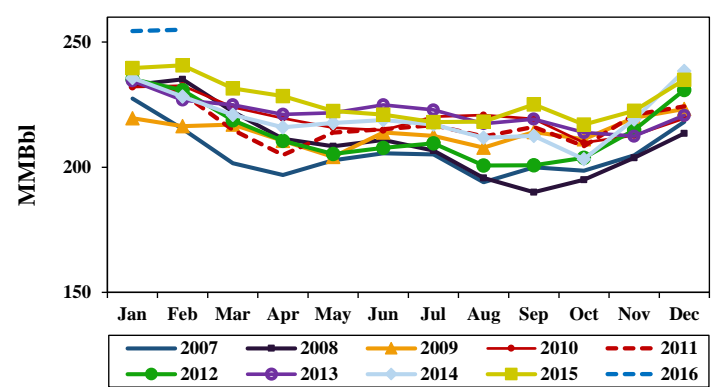
U.S. Crude Oil & Petroleum Products Stocks⁽¹⁾



U.S. Crude Oil Stocks⁽¹⁾



U.S. Gasoline Stocks



(1) Excluding Strategic Petroleum Reserves (SPR).

Source: EIA, 2016.

Conclusion

- **The market is oversupplied in the short run, regardless of OPEC action**
- **The domestic and global oil markets are going through the adjustment process:**
 - **Supply is contracting, demand is increasing**
- **Most of the losses in the U.S. should be from stripper wells**
- **Drilling response to increasing prices should be slow with a longer lag as companies use the additional revenues to pay debt and improve their balance sheets**
- **The market is expected to tighten significantly in the long run. Project delays and cancellations accompanied by low rig count in the U.S. should reduce supply significantly while low prices keep stimulating demand**



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