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ADVISORS  
A HART ENERGY COMPANY



# Quarterly Oil Price Outlook: 2016-2018

Stratas Webinar

March 3, 2016

UPSTREAM | MIDSTREAM | DOWNSTREAM | FUEL & TRANSPORT

# Webinar Agenda

- Overview of Short Term Outlook Service
- How Did We Get Here?
- Market Fundamentals Outlook
- Price Outlook
- Methodology



# Short Term Service Overview

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# Short Term Outlook – Product Overview

- Global, integrated view, covering oil, oil products, petrochemicals, natural gas and NGLs
- Robust, analytical methodology
- Fully interactive data visualization and data downloads
- Quarterly forecast release with daily and weekly market commentary

December 15, 2015

## Petroleum Product Demand Outlook - 4Q2015

Stratas Advisors

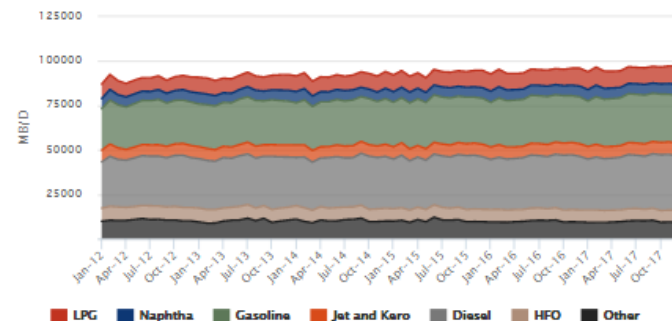
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### Overview

Total global oil demand is forecast to grow by approximately 1.2 million barrels per day in 2015 and by approximately 1.1 million barrels per day in 2016. The bulk of the growth will stem from the non-OECD countries, while demand for OECD countries will be essentially flat.

Countries:  OECD vs. Non-OECD:

Global Refined Products Demand – by Product



Launch chart in new window

From a regional perspective, the strongest growth will stem from North America, the Middle East and Asia. In contrast oil demand for the Russia/CIS region is expected to decline in 2015, as is the oil demand for Africa.

Looking forward, there are uncertainties associated with demand from an OECD perspective and a non-OECD perspective. There have been a number of recent trends that have been driving oil demand; some are structural, while others are temporal.

# Short Term Outlook – Product Coverage

- Global coverage
    - U.S.
    - Europe
    - Middle East
    - Asia
  - Forecasts for 8 quarters
    - Monthly prices
    - Updated quarterly
  - Price set covers the entire spectrum
    - Crude oils
    - NGLs and feedstock
    - Refined products
    - Base petrochemicals
    - Biofuels
  - Forecasted margins
    - Refinery
  - Weekly analysis and commentary
- Crude oils
    - Marker crudes
    - Regional crudes
    - API and sulfur ranges
  - NGLs & Feedstock
    - Ethane
    - Propane
    - Butane
    - Naphtha
  - Refined Products
    - LPG
    - Gasoline
    - Jet fuel
    - Diesel
    - HFO
  - Base Petrochemicals
    - Olefins (Ethylene, Propylene)
    - Aromatics (Benzene, Xylenes, Toluene)



How did we get here?

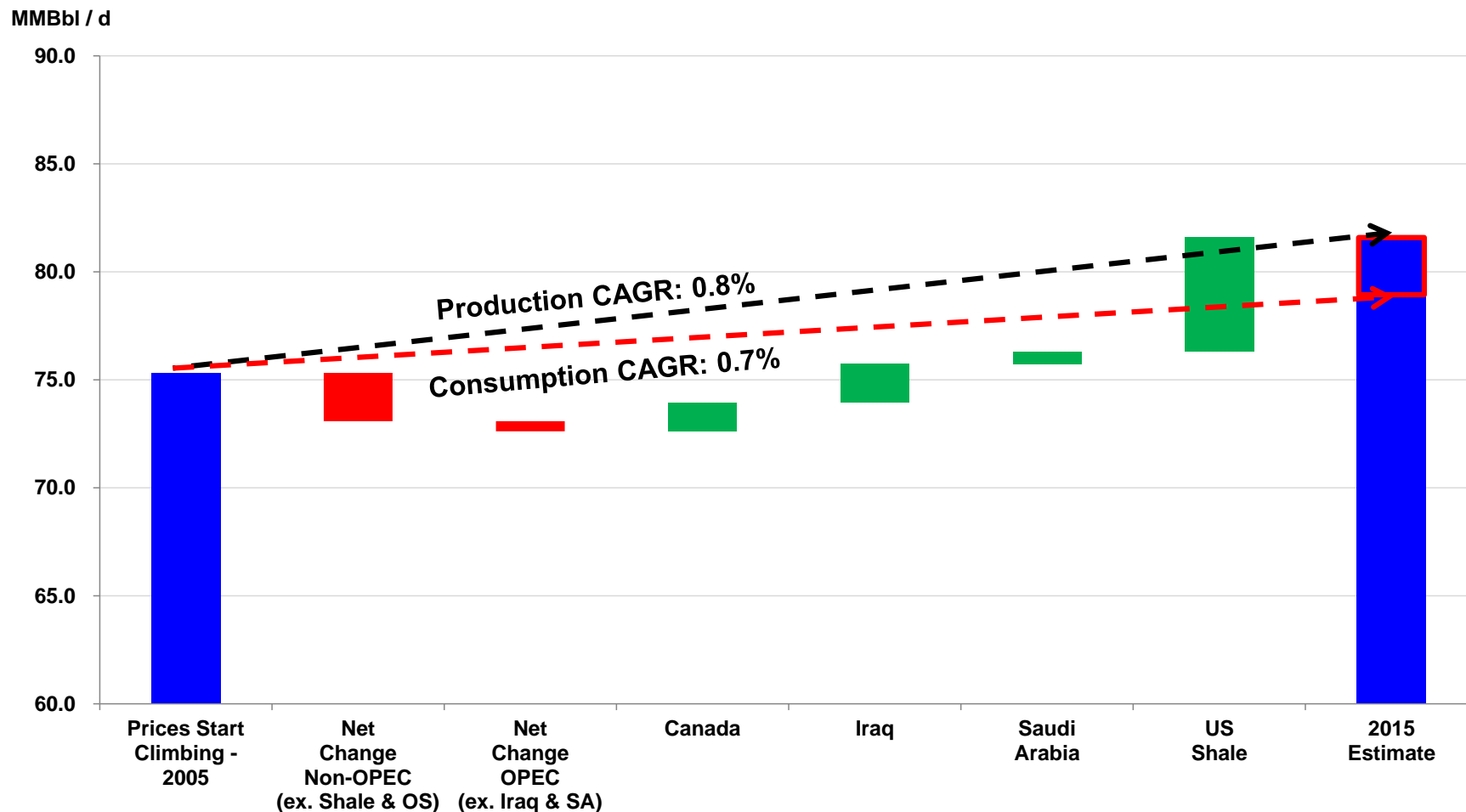
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# Global Oversupply

Last 10 Years – Shale Changed the Game

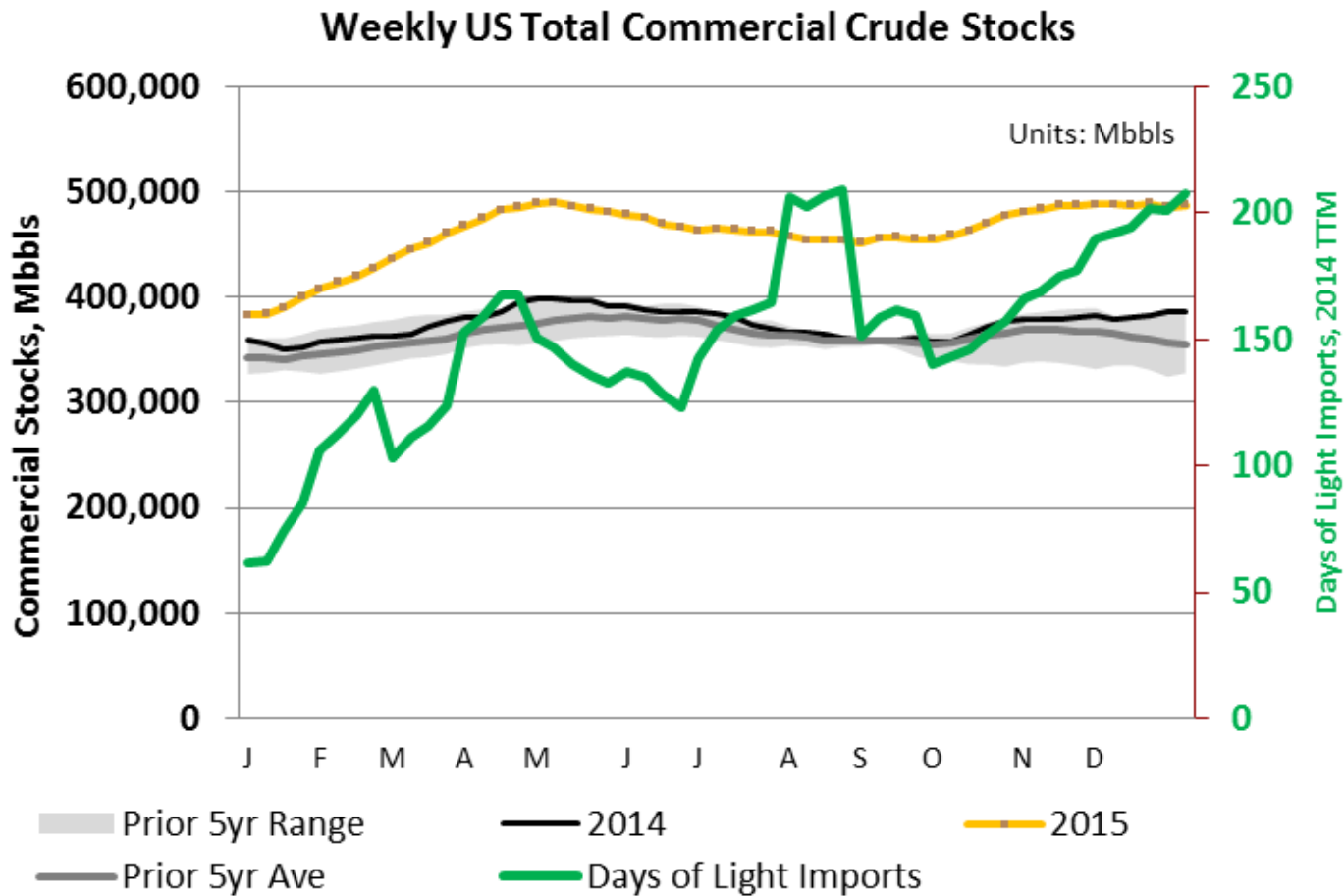
CAGR

- US Shale = 29.6%
- Other = 0.1%



# Elevated Crude Stocks

U.S. crude stock overhang exceeding 100 million barrels

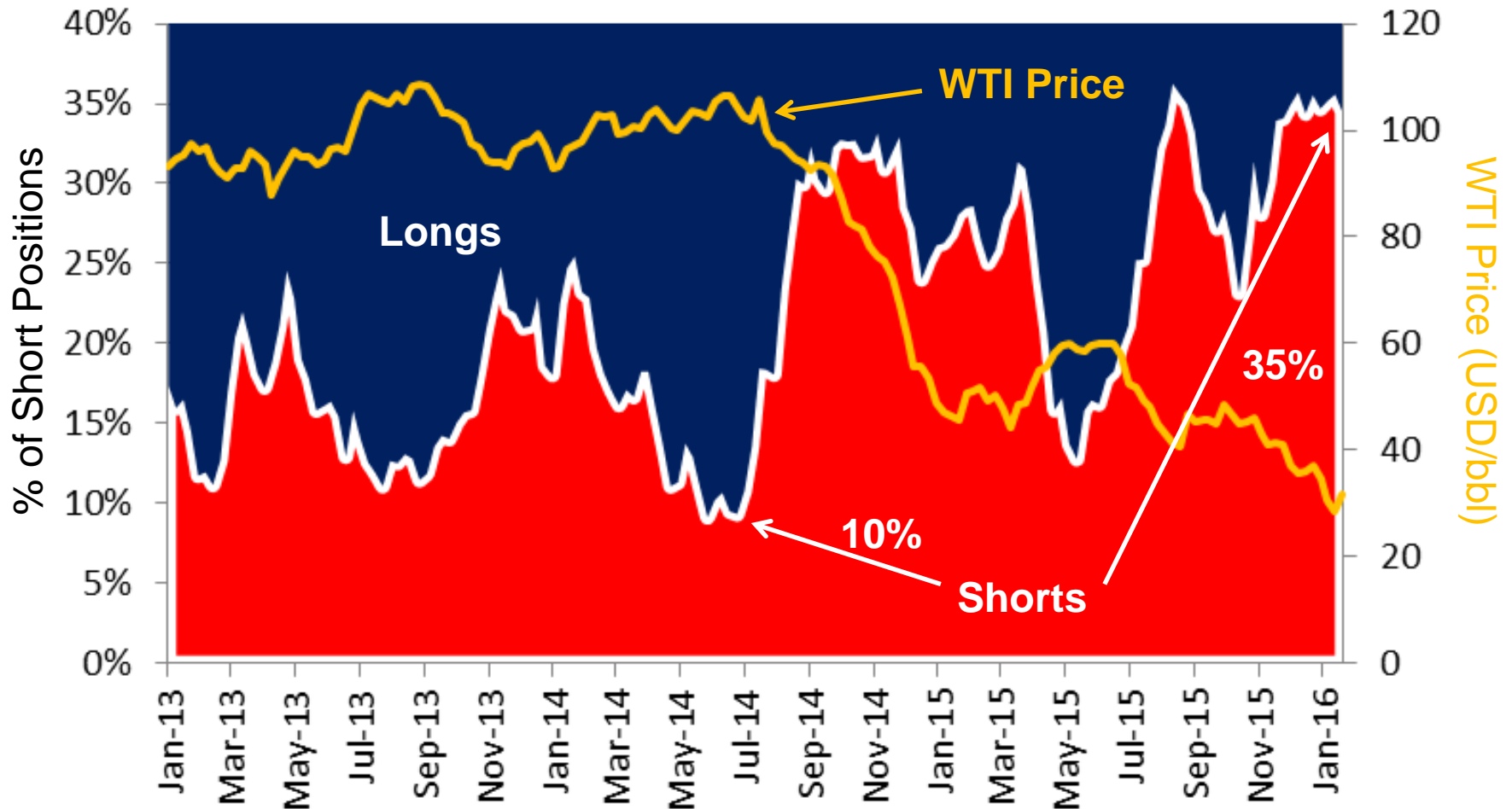


Source: Stratas Advisors, Bloomberg, EIA



# Market Sentiment

NYMEX (WTI) and Brent (ICE) combined



Source: Reuters, CFTC, NYMEX, ICE

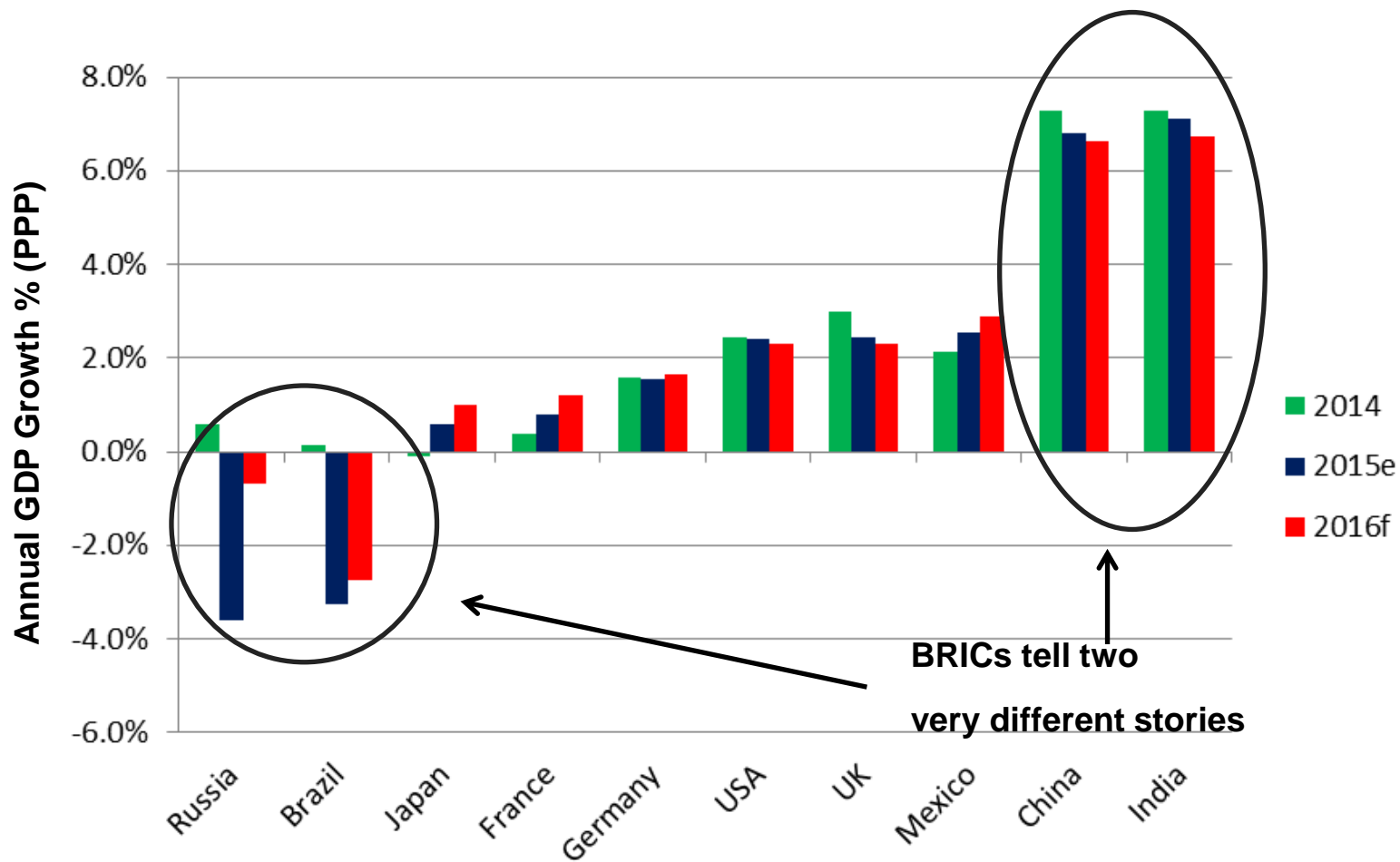


# Fundamentals Outlook

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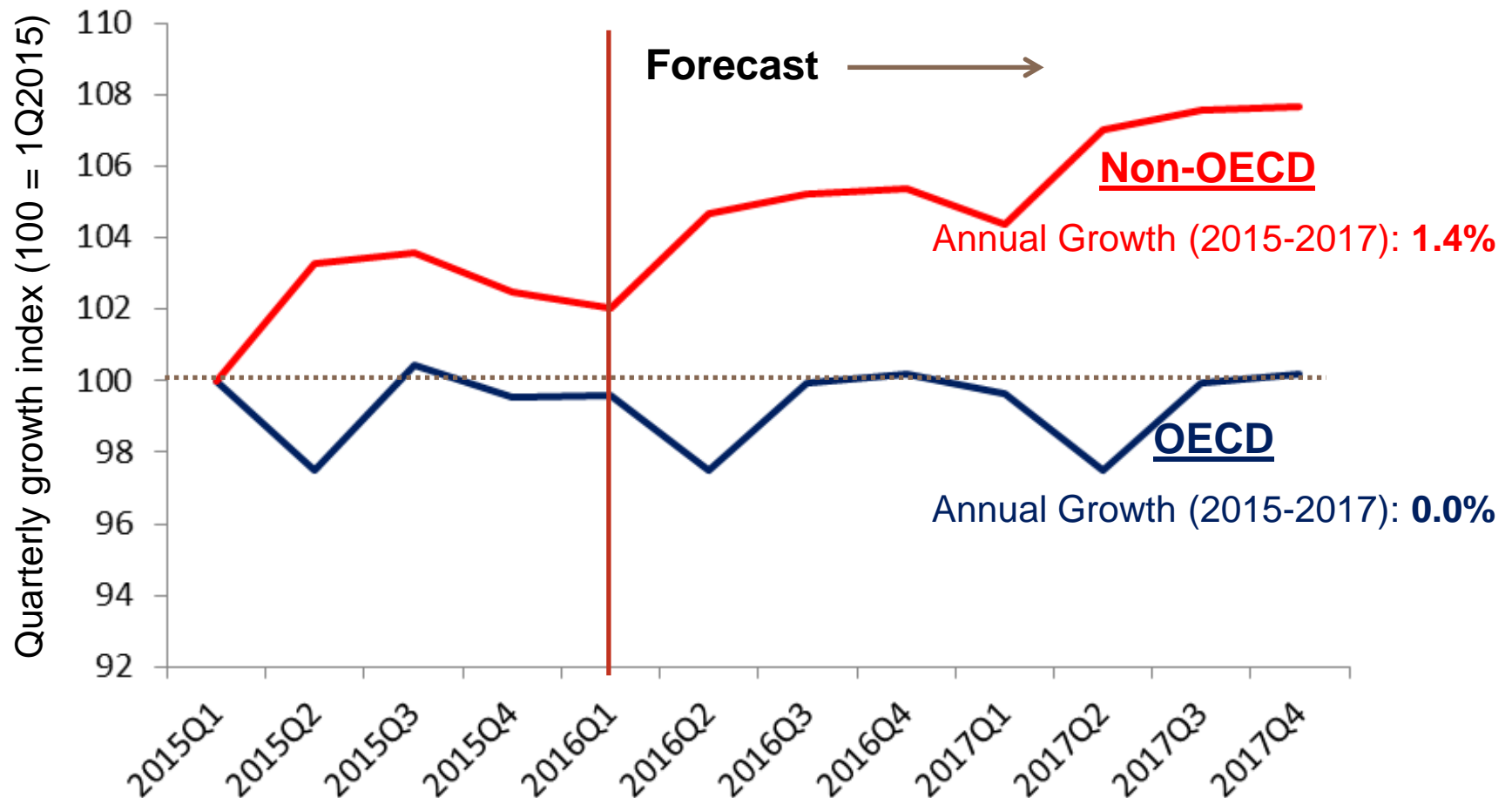
# Economic Outlook

No recession predicted, but substantial risks to the downside



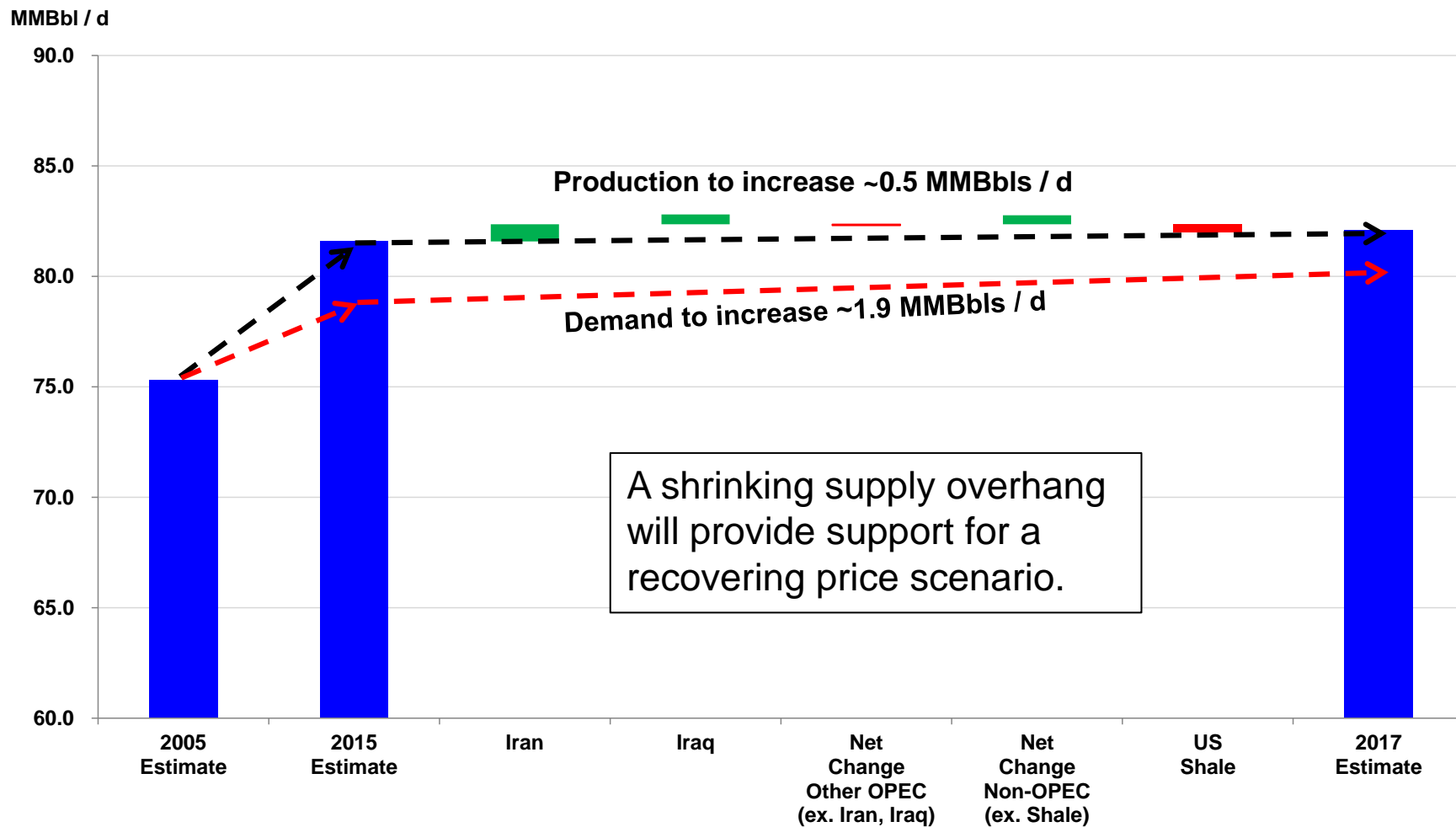
# Demand Outlook

Markets experience slowdown in demand growth



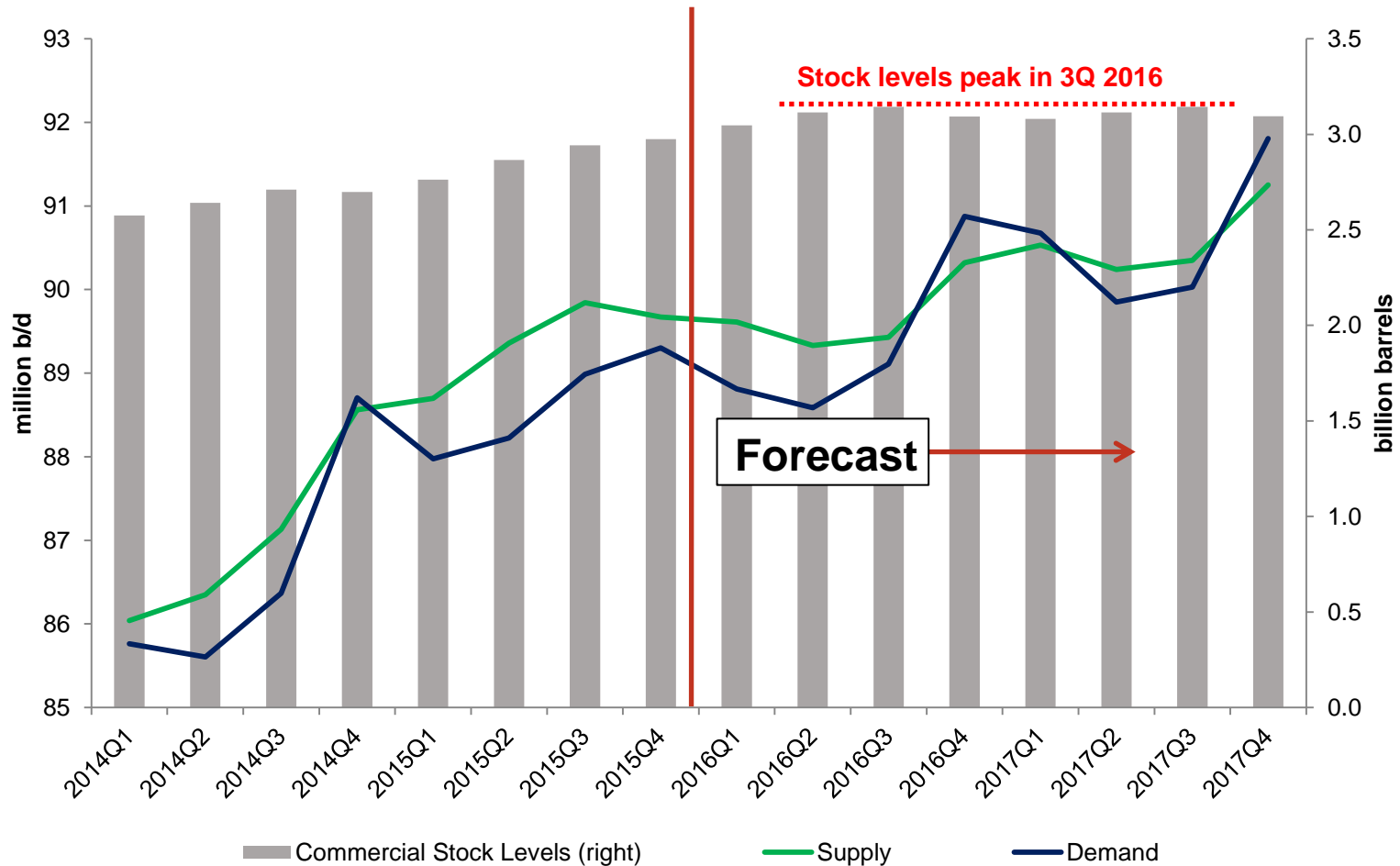
# Global Oversupply

Next 2 Years – Closing the Gap



# Supply, Demand and Stock Levels

Stock levels will peak in the third quarter of this year



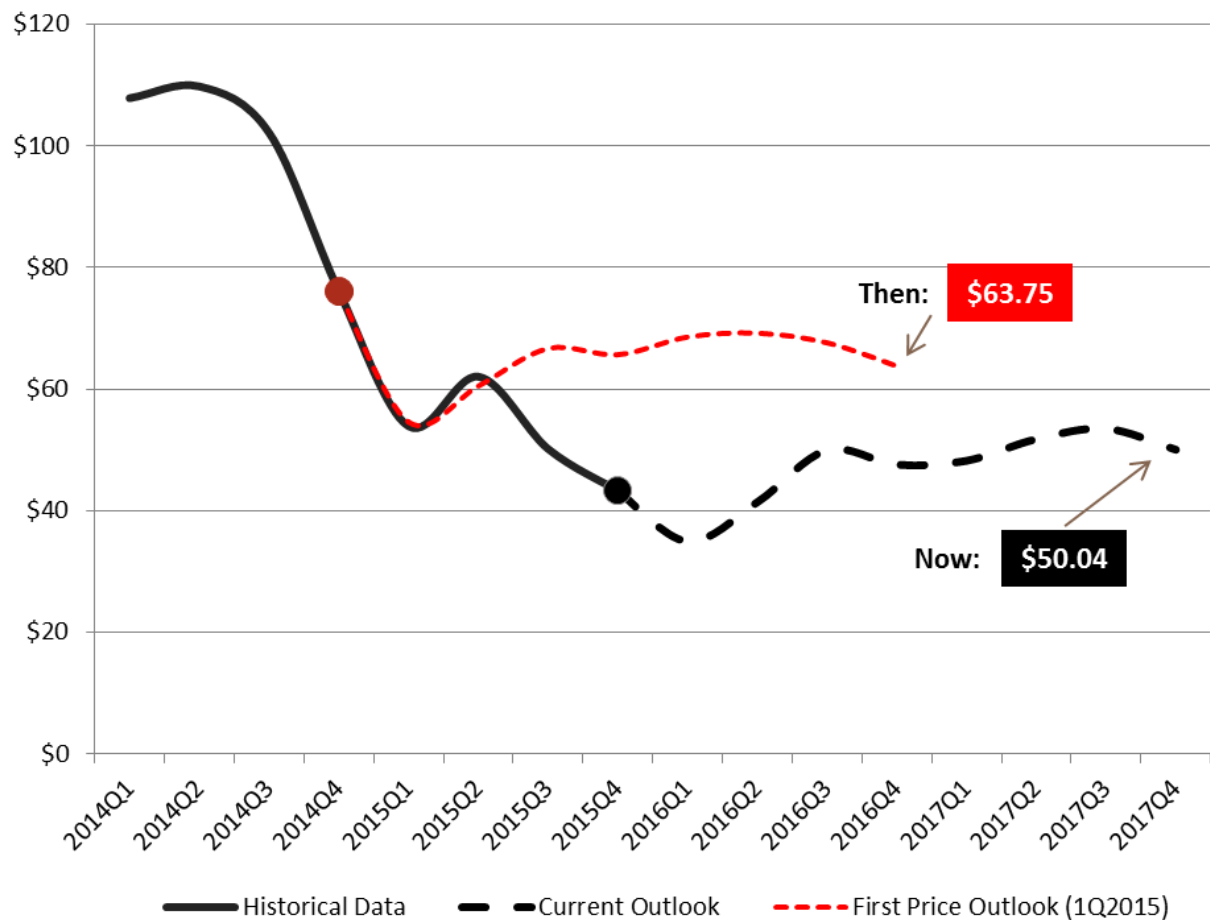


# Pricing Outlook

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# Brent Price Outlook

How have previous Stratas price outlooks held up for the last 12 months?

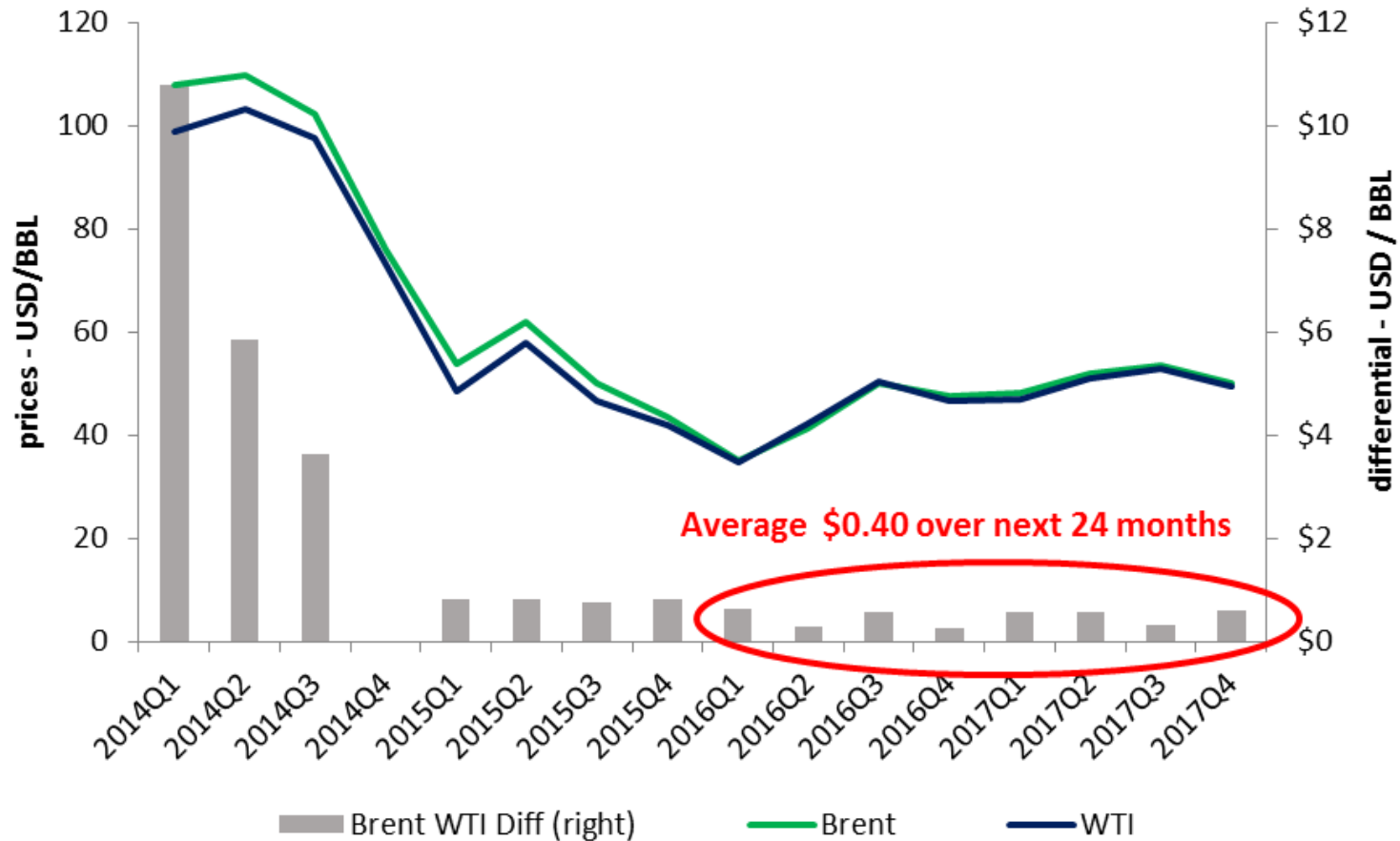


Source: Bloomberg, Stratas Advisors



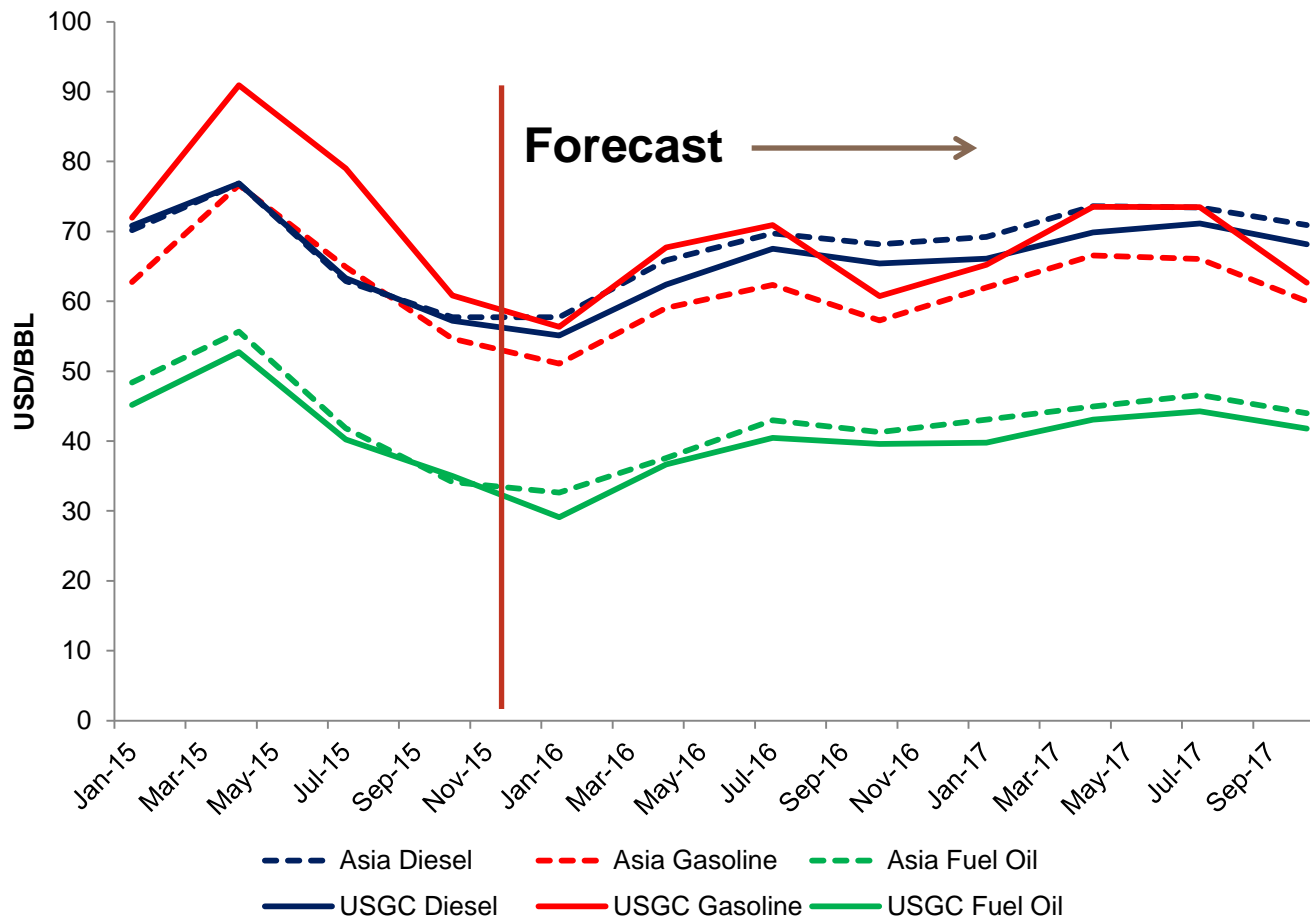
# Brent / WTI Differential Will Remain Narrow

Arbitrage windows will exist, but not for long



# Global Product Price Outlook

Gasoline prices to remain strong with increased global demand





# Wildcards and Risk Factors

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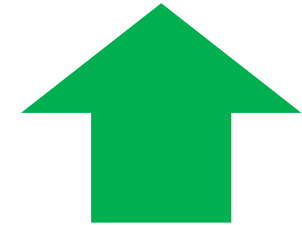
# Wildcards

What are the key markers for disruption?

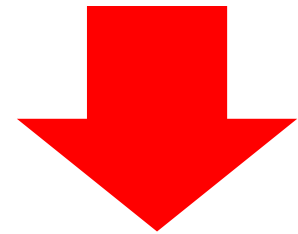
**Price Impact**



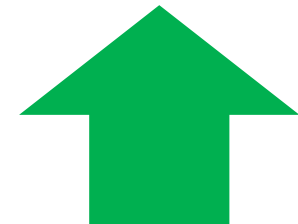
Middle East supply disruption; Iran doesn't come online, Saudi/Iran conflict; Libya peace process fails, etc



China slowdown materializes; has knock on effects throughout developing world

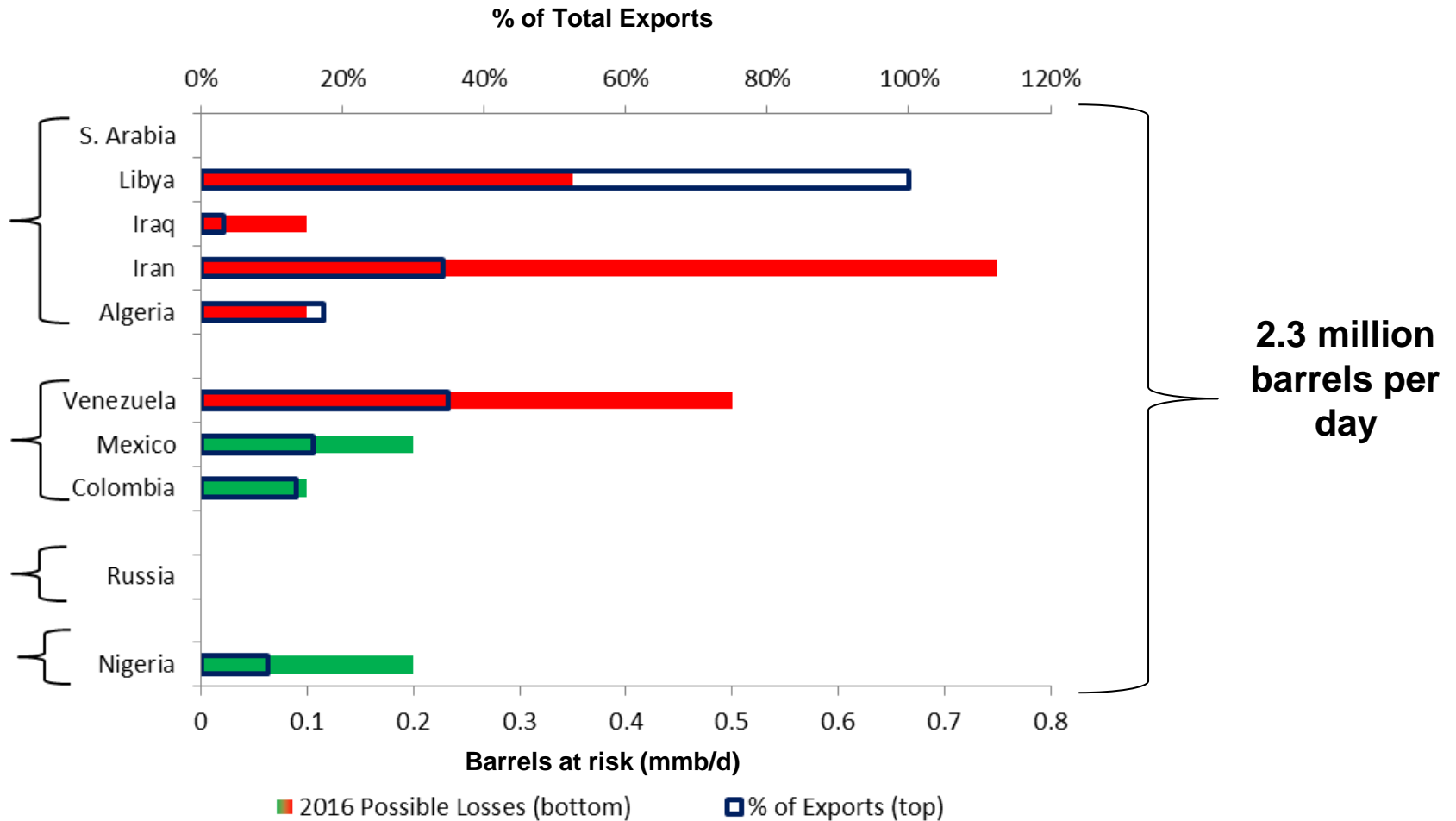


US shale producers face liquidity crisis as financial players choose to reduce oil patch exposure and not invest or extend credit lines to large producers



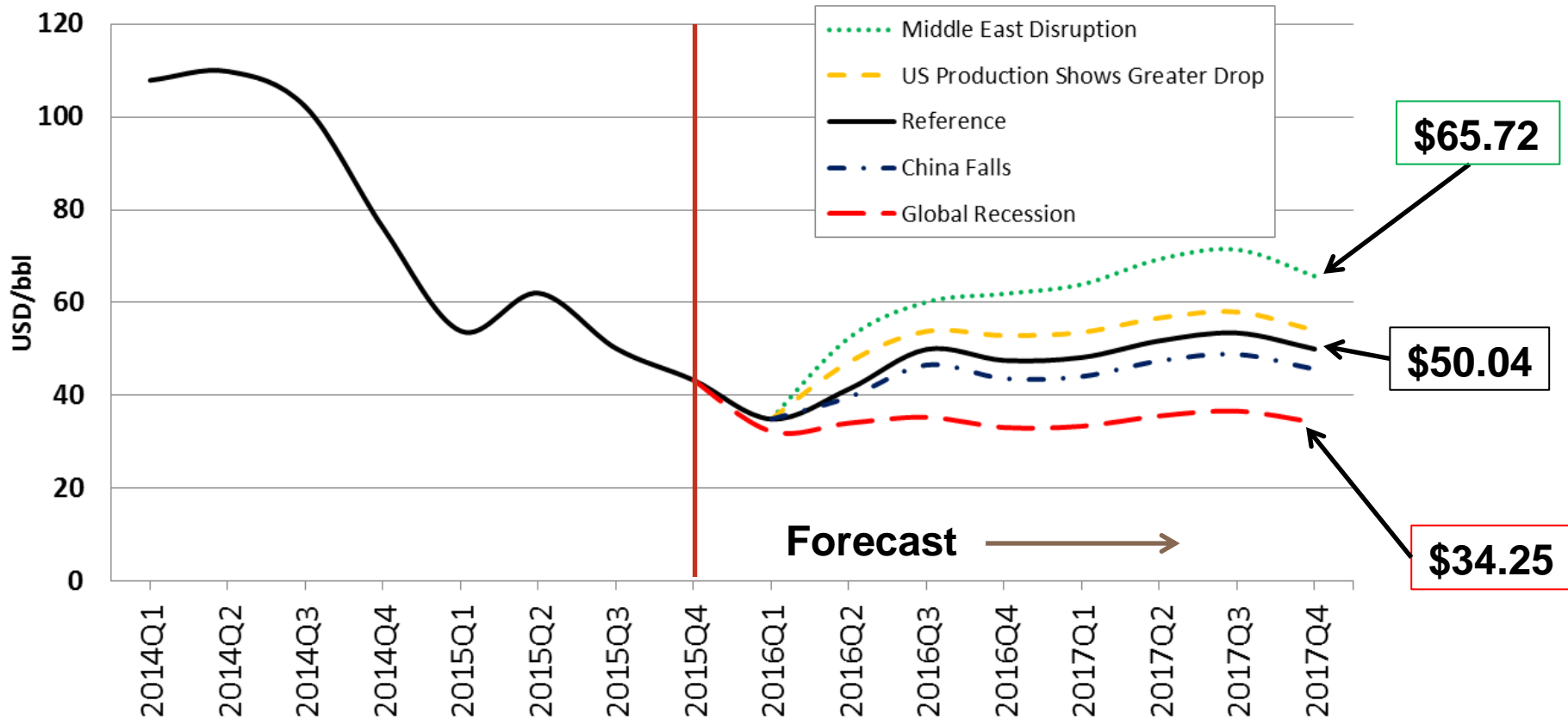
# Barrels at Risk

Areas of potential supply disruption



# 2016-2017 Brent Price Sensitivities

Uncertainties are driving a wide range of potential price outcomes



# Key Price Drivers

What is the most likely outcome for key uncertainties?

- China slows down, but not substantially
- Global demand growth remains below 1 mmb/d for 2016, but no global recession
- Iranian production comes online as expected with roughly 750 mb/d of new barrels by the end of 2016
- No conflict inside of OPEC, involving Saudis or otherwise
- US shale producers see M&A and production cuts through 2017, but large bankruptcies do not materialize as banks keep major shale-exposed producers afloat
- Global supply excess is slowly eroded as market returns to equilibrium



# Modeling Methodology

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# Methodology

## Framework of the Short-term Price Forecast Modeling

