



Oil & Gas Price – Futures and Impacts

Challenging Times Ahead

2016 Gas/Electric Partnership Conference

Andrew Slaughter

Executive Director
Deloitte Center for Energy Solutions
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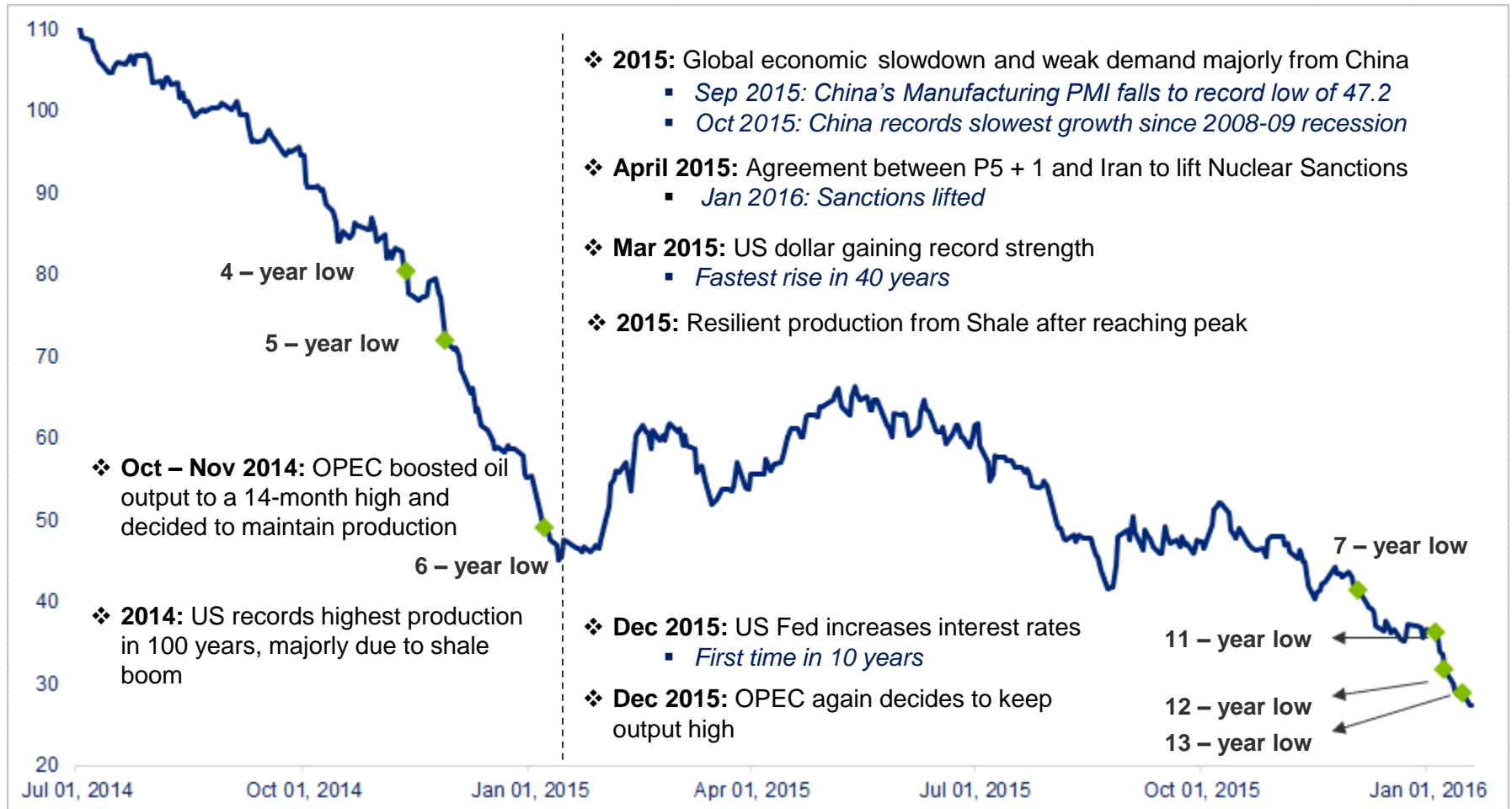
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Agenda

- ❖ **Crash in Oil Prices**
- ❖ **Brent – WTI Price Differential**
- ❖ **Global Demand & Supply Overview**
- ❖ **Production Overview**
- ❖ **Impact of Low Prices on Industry**
- ❖ **Future Outlook of Prices**
- ❖ **Key Reason for Weak Outlook**
- ❖ **Natural Gas Price Overview**
- ❖ **LNG Capacity Overview**
- ❖ **Future Considerations**

OPEC's inaction, shale's resilience, demand slowdown, strong dollar, and lifting of Iran actions took oil to 13-year low

Brent Oil Price (\$/bbl) July 2014 – January 2016

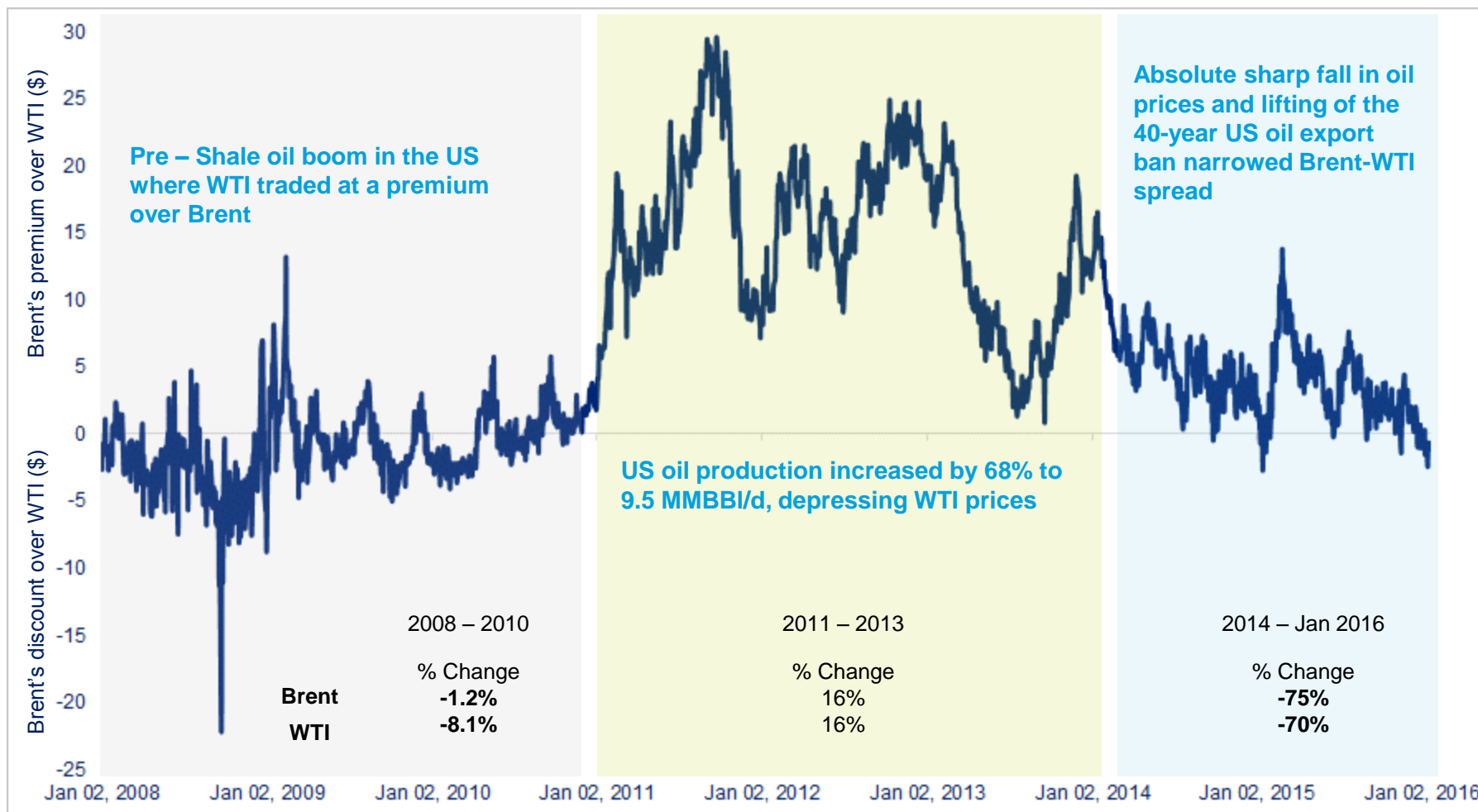


Source: EIA

Note: Year low indicates the lowest Brent price in last X years

Lifting of US crude oil export ban has narrowed the Brent-WTI spread and thus reduced the pressure on domestic oil prices

Brent – WTI Price Differential January 2008 – January 2016



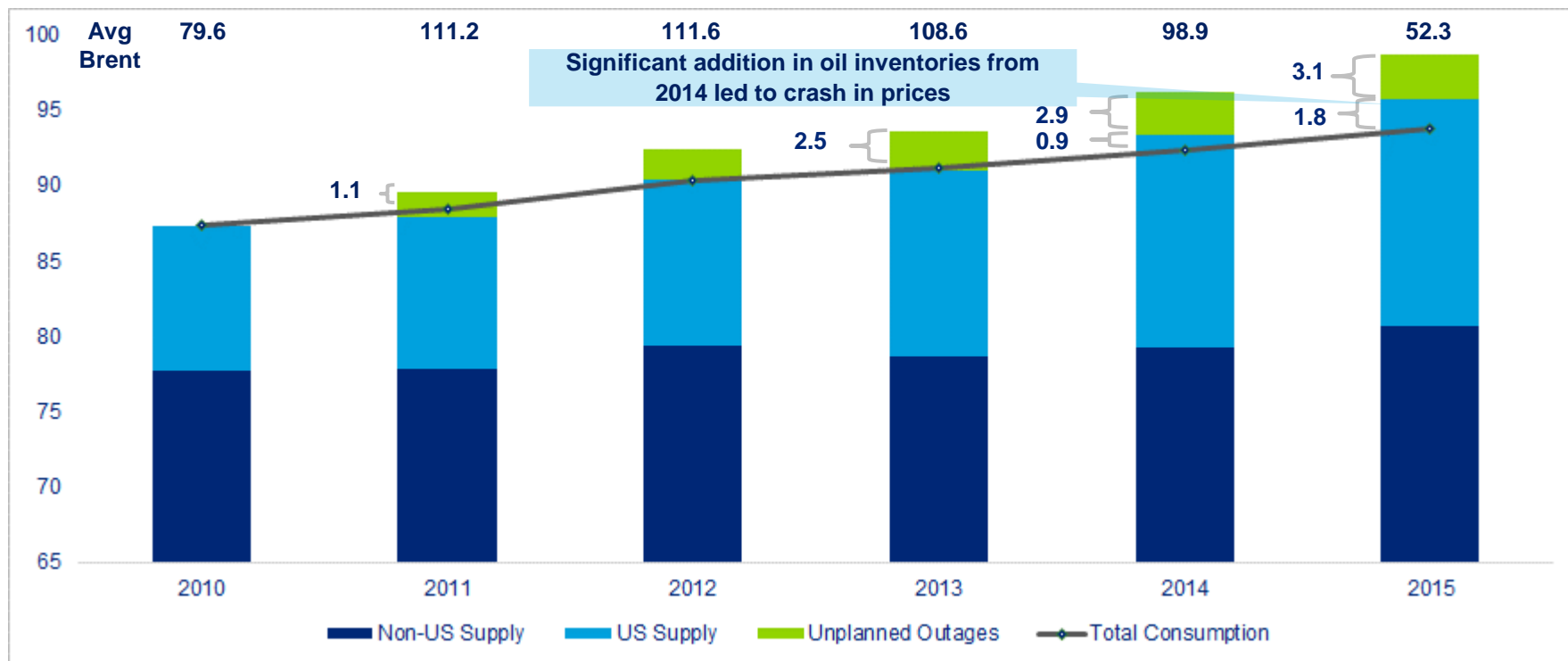
Source: EIA

Note: Price differential represents difference between Brent and WTI prices

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Unplanned outages kept oil prices in check until 2013; surplus production started dampening prices starting 2014

Global Liquids Supply Potential & Consumption (MMbbl/d)

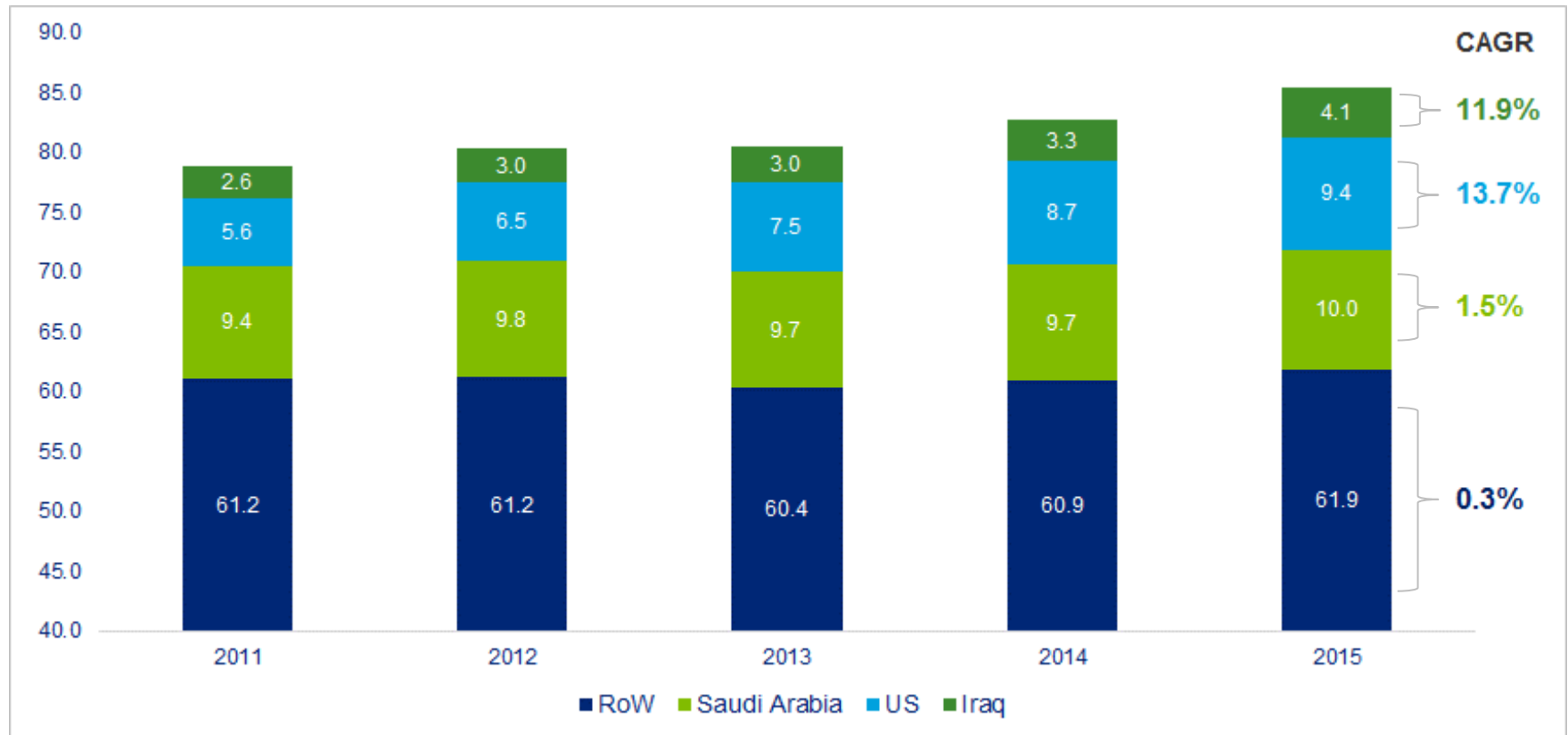


❖ In 2010, global liquids supply and demand were nearly balanced. However, starting 2011, if unplanned production outages worldwide are also considered, supplies started to exceed consumption.

❖ In 2015, global liquids supply potential exceeded total consumption by about 5 million barrels per day—about 4 in terms of unplanned outages and rest in terms of excess inventories.

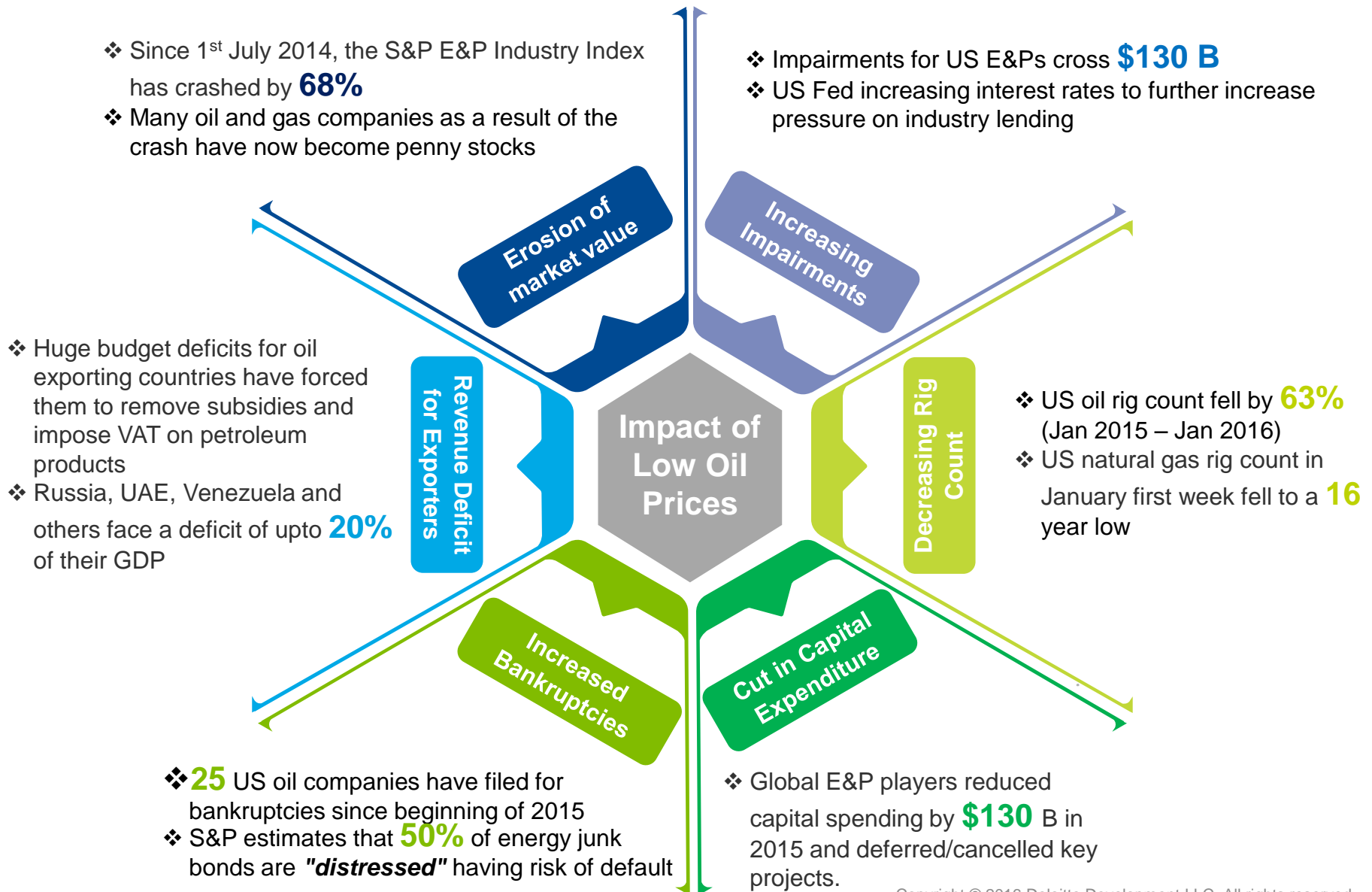
US, Iraq, and Saudi Arabia drove supplies in last few years; production has largely remained resilient with slight corrections in last few quarters

Major Contributors of Increased Oil Supply (MMbbl/d)



Note: Values include lease condensate at well level; RoW refers to rest of world
Source: EIA, "Short Term Energy Outlook," January 2016 Release

Low prices have led to equity erosion, impairments & bankruptcies for companies, and budget deficits and product taxes for exporting nations



Most agencies forecast the prices testing the \$20 mark in near term and industry readjusting to a new normal around \$50 in longer term

Crude Oil Price Forecasts by Agencies & Analysts

Agency/ Analysts	Short-term Price Outlook (2016)	Long-term Price Outlook (2017 & Beyond)
EIA	2016 Average WTI - \$38/bbl <i>"Prices are expected to be volatile throughout 2016, predicting WTI range to be \$25 - \$56 in April and \$22 - \$82 in December"</i>	2017 Average WTI - \$47/bbl <i>"Inventories are forecast to continue rising in 2016, before the global oil market becomes more balanced in 2017."</i>
Morgan Stanley	Predicts price hitting a low of \$20 – 25/bbl and 2016 Average WTI - \$47.5/bbl <i>"Given the continued US dollar appreciation, \$20-25 oil price scenarios are possible simply due to the currency"</i>	Expects a recovery by 2017, with average price around \$75/bbl
JPMorgan	Forecasts average WTI price in 2016 at \$31.25/bbl <i>"The modal view is that oil markets are set to remain heavily oversupplied in 1H2016, but a muted recovery should develop in 2H2016"</i>	Forecasts average WTI price in 2017 at \$43.25/bbl
Barclays Bank	<i>"We now expect Brent and WTI to both average \$37/barrel in 2016, down from our previous forecasts of \$60 and \$56, respectively"</i>	
Goldman Sachs	Predicts the low of \$10 – 25/bbl in the near term and WTI price to be \$40-45 in 6 – 12 months <i>"While not our base case, the potential for oil prices to fall to such levels, which we estimate near \$20 a barrel, is becoming greater as storage continues to fill"</i>	Forecasts average WTI price in 2017 at \$60/bbl
Standard Chartered	Predicts price going as low as \$10/bbl in short term <i>"We think prices could fall as low as \$10/bbl before most of the money managers in the market conceded that matters had gone too far"</i>	

Oversupply factors continue to keep pressure on oil price along with weak global economic outlook led by major emerging countries

Demand Factors

Impact
on Price

❖ **Economic outlook for developing countries like Russia, Brazil, China and others continue to be weak**

- *China's GDP growth in 2016 to be the lowest in 25 years; Russia & Brazil face recession fears*



❖ **OPEC members significantly increasing taxes on refined products to offset decreasing revenue from oil**

- *Have started imposing VAT, removing subsidies on petroleum products, significantly cut social spending*



❖ **Low gasoline price has led to record savings, expected to increase consumer spending and fuel sales**

- *US average retail gasoline price are now below \$2/gallon, lowest in 6 years*



❖ **Higher investments in renewables, strict pollution norms, climate concerns, push towards public transport**

- *The recent Paris Climate Summit reinforced all nations to reduce carbon emissions*



Supply Factors

❖ **Focus on costs, efficiency and variable production profile of shales makes US supplies highly responsive**

- *US shale production is only around 10% below its peak despite more than 60% fall in rig count*



❖ **OPEC's decision to continue production hoping to impact high cost producers resulting in over supply**

- *IEA forecast that OPEC's market share to grow from 41% to 44% by 2025 led by Saudi Arabia, Iran & Iraq*



❖ **Sanctions on Iran getting lifted will lead to further supply in the market**

- *Iran is expected to add 0.5 mbpd of oil by 2016 and further 0.5 mbpd by 2017 in order to regain market*

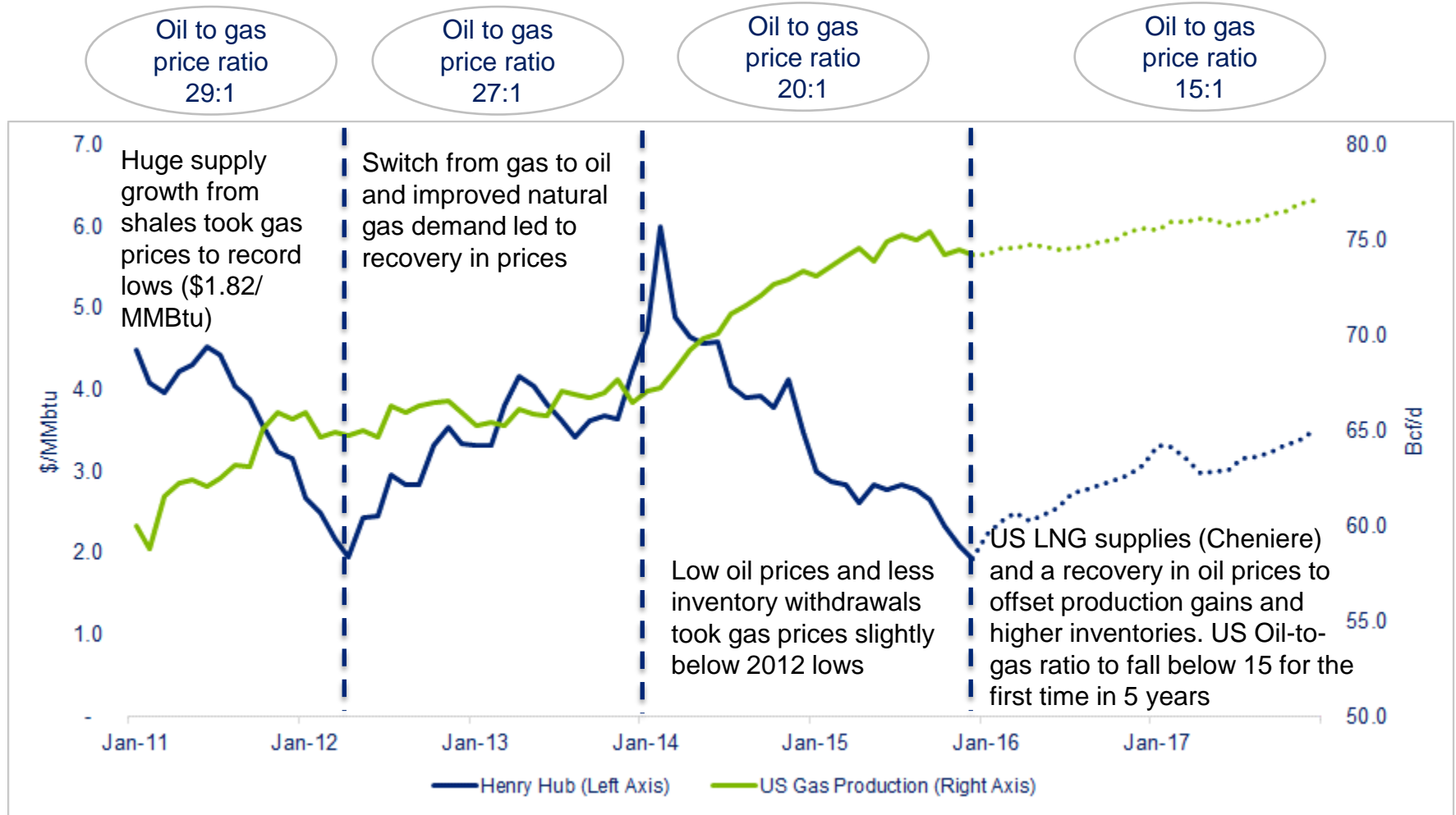


❖ **High inventory levels will keep the pressure on price. Global inventories rose by a notional 1 billion barrels in 2014-15 with the fundamentals suggesting a further build of 285 mb over the course of 2016**



US gas prices briefly breached 2012 lows in late 2015; start of LNG exports and recovery in oil prices to ease pressure on domestic gas prices

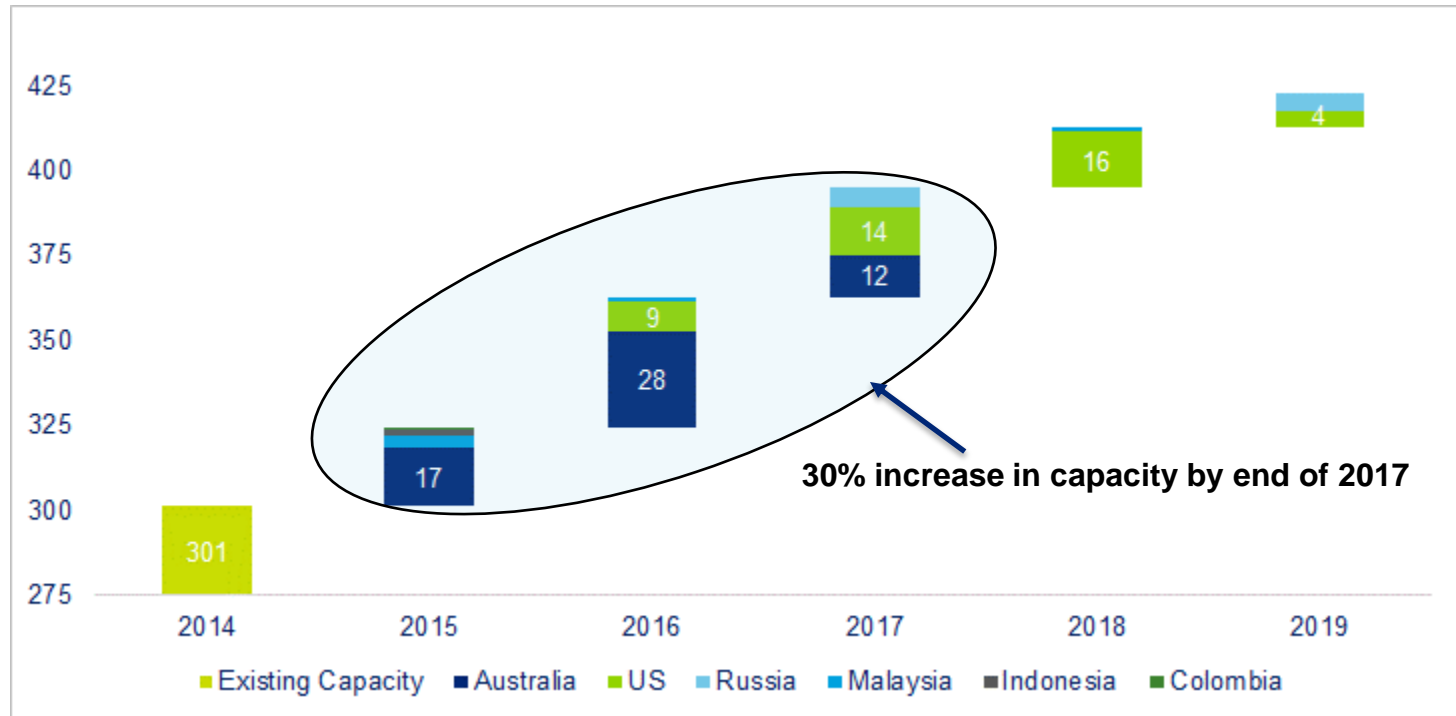
Natural Gas Price & Production



Source: EIA, "Short Term Energy Outlook", Jan 2016 Release

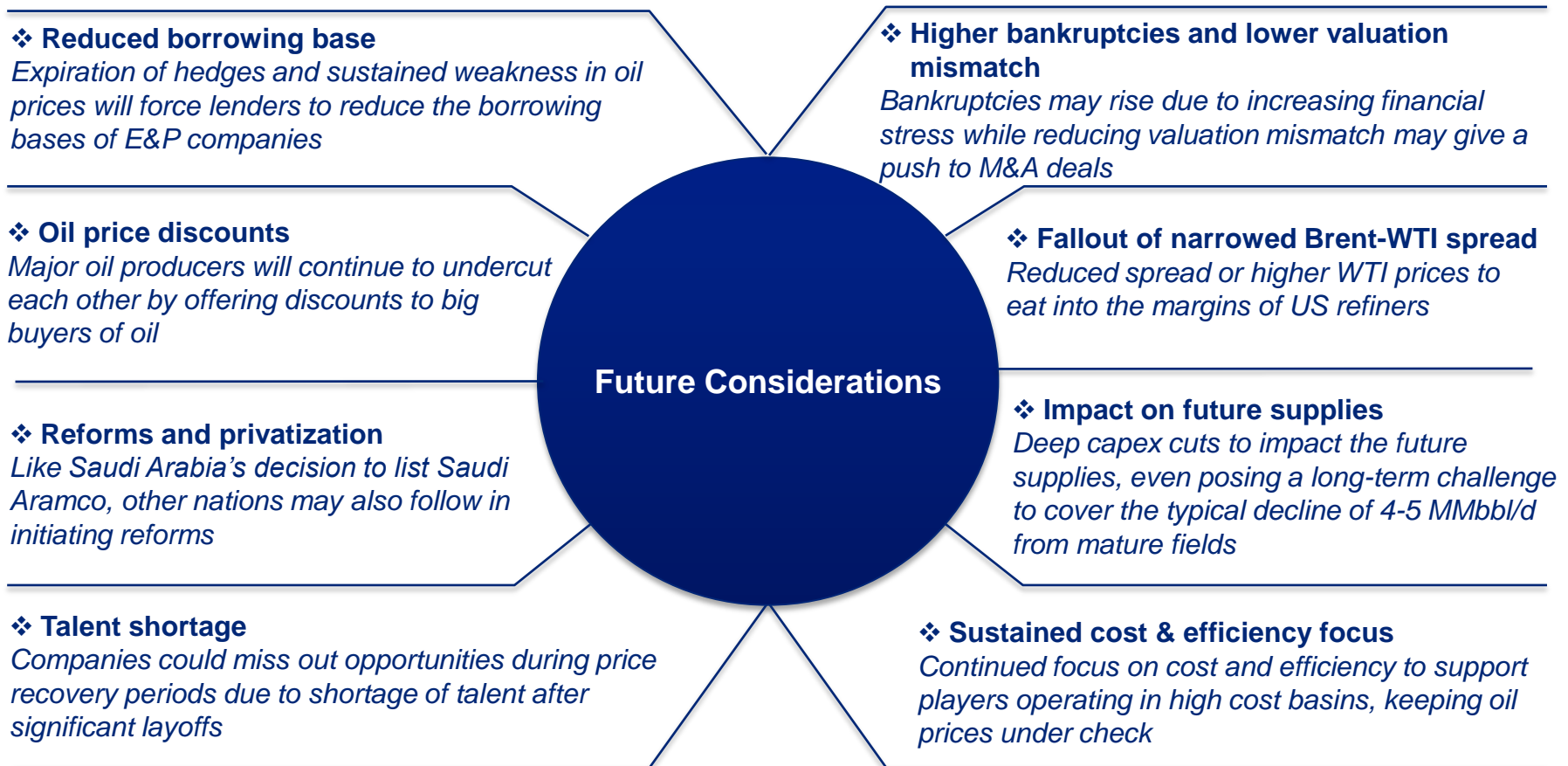
30% increase in LNG export capacity by 2017 to keep a pressure on oil-indexed gas prices internationally

Upcoming LNG Capacity (MTPA)



- ❖ Asian LNG market could possibly experience a downward shift in oil indexation of natural gas prices after supplies from Australia and the US enter the market.
- ❖ According to DOE/Oxford Economics study on LNG, the reduced spread between Henry Hub and oil-indexed Asian gas market to impact investments in US LNG but still the market remains attractive for US exporters, supporting domestic gas prices.

Access to capital remains a key consideration in near-term, while policy reforms and cost saving measures to determine future industry dynamics



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