

Investec Asset Management

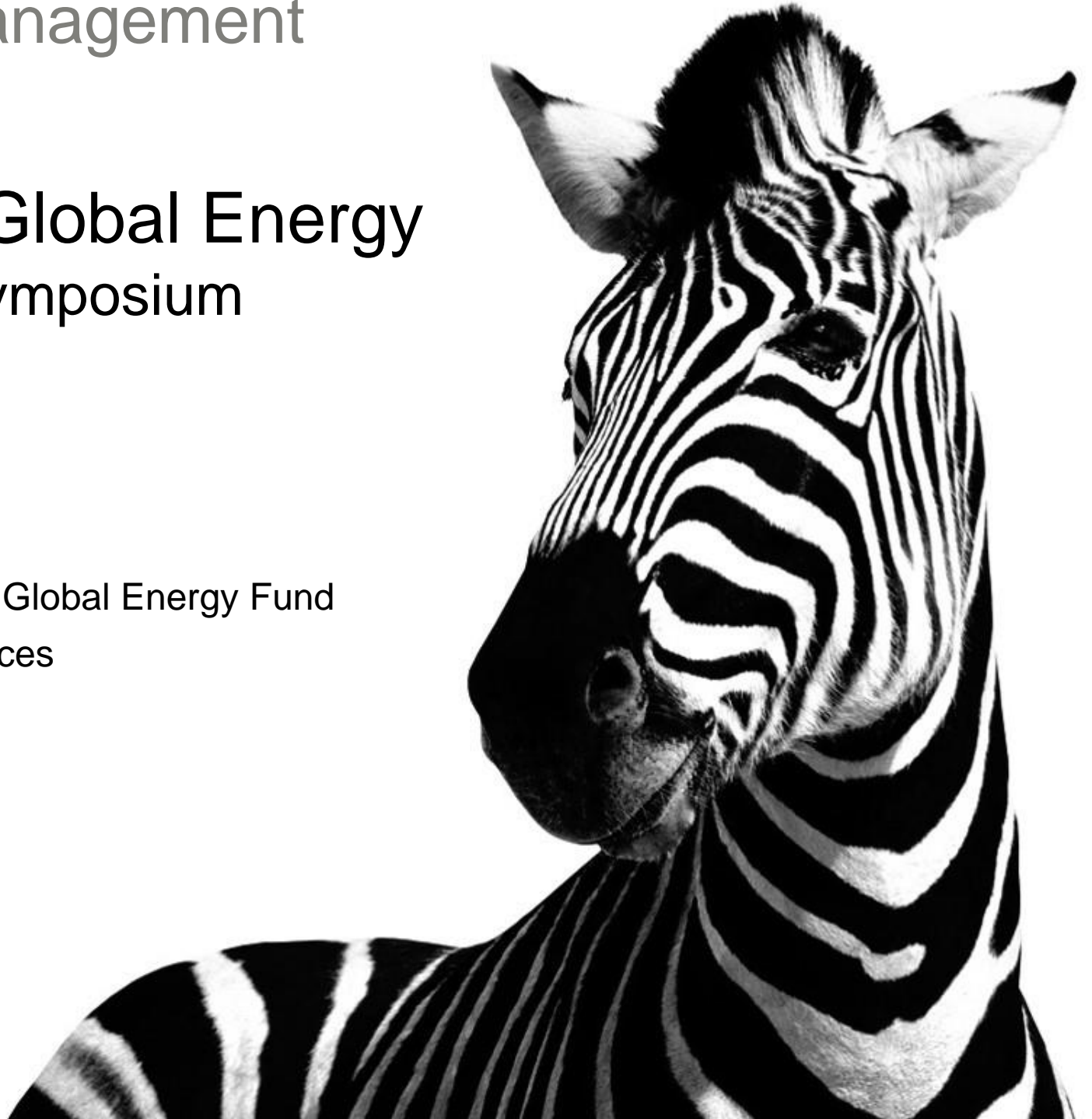
# The Outlook for Global Energy

## Aberdeen Energy Symposium

Tom Nelson, Portfolio Manager, Global Energy Fund  
Head of Commodities & Resources

February 2017

 **Investec**  
Asset Management



# Investec Commodities & Resources

Investment team



Diverse mix of industrial and financial experience; Average of 15 years' experience

Source: Investec Asset Management, February 2017.

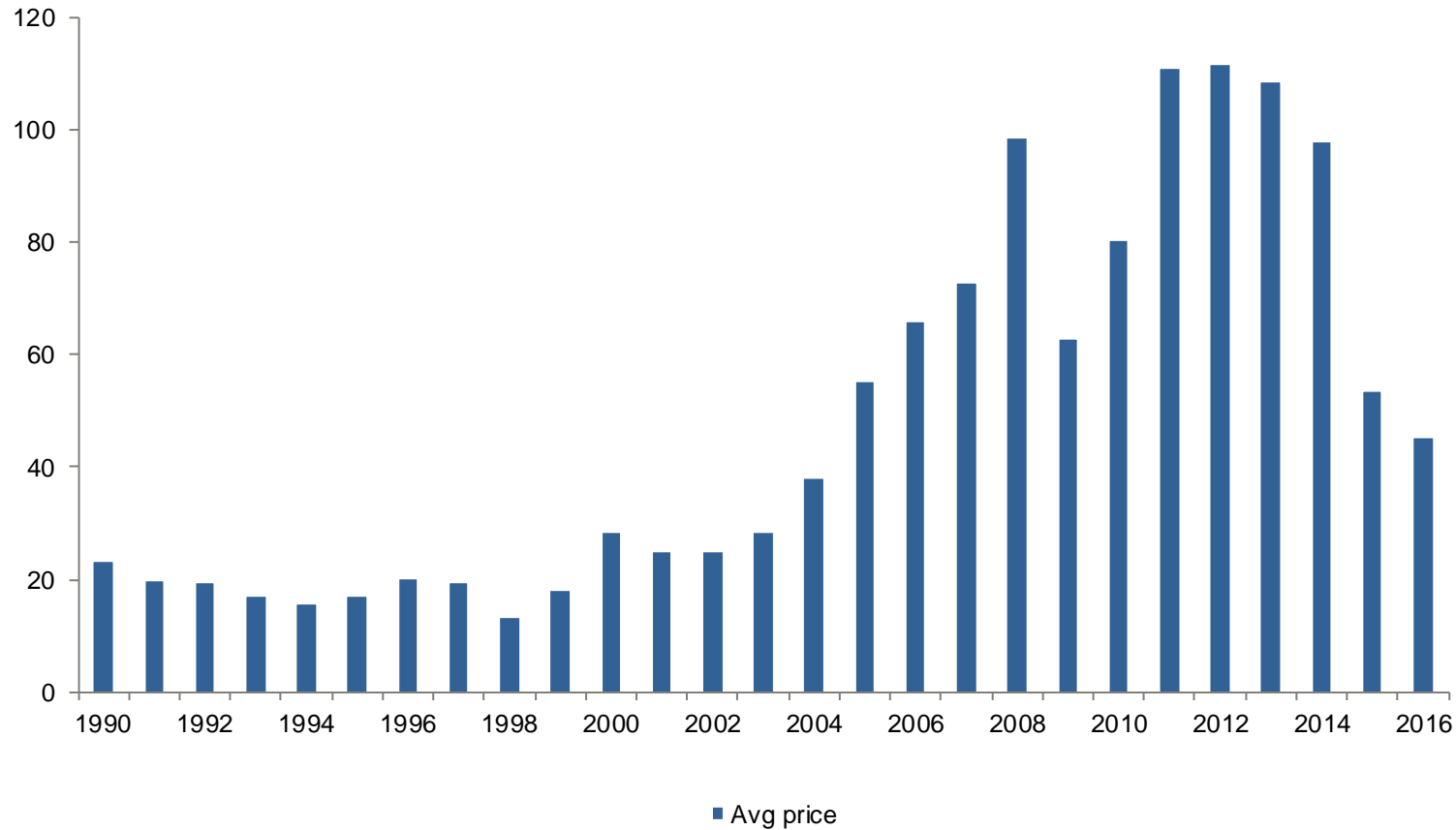
# Oil market fundamentals

How did we get here?



# Average global oil price

## Average Brent Price



Source: Bloomberg 31<sup>st</sup> January 2017.

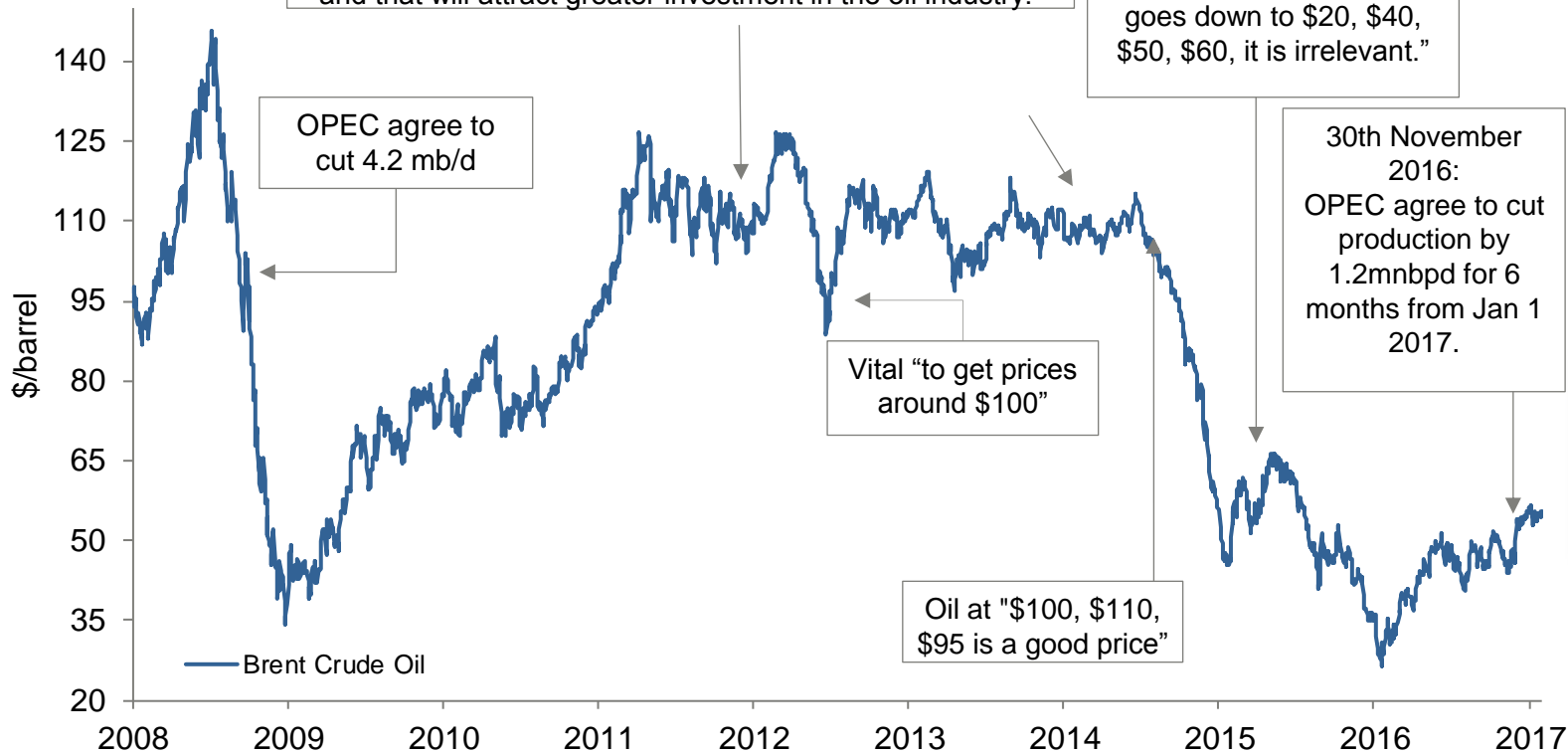
# Recent history of the oil price

Double change in OPEC policy blindsides the market



“Saudi Arabia would like to see a... fair and reasonable price that will generate a good return for producing nations, and that will attract greater investment in the oil industry.”

22 December 2015:  
“It is not in the interest of OPEC producers to cut their production, whatever the price is. Whether it goes down to \$20, \$40, \$50, \$60, it is irrelevant.”



OPEC agree to cut 4.2 mb/d

Vital “to get prices around \$100”

Oil at “\$100, \$110, \$95 is a good price”

30th November 2016:  
OPEC agree to cut production by 1.2mnbpd for 6 months from Jan 1 2017.

10th December 2016:  
Non OPEC also agree to cut 0.6mnbpd. Russia plus others.



Prince Mohammed bin Salman  
April 2016: Vision 2030, and Saudi Arabia’s plan for IPO of Aramco

Source: Bloomberg, Brent Crude Oil Price, from 1 January 2008 to 31 January 2017.

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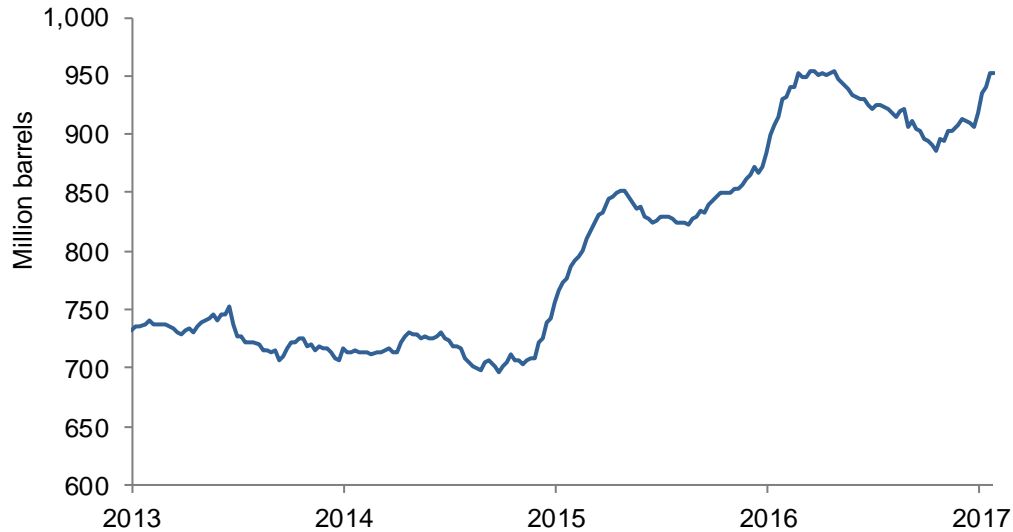
# OPEC – Nov 2016 meeting confirmed strategy reversal

- OPEC's November 2014 decision to protect market share resulted in oil market crash
- Oil market crash had dramatic consequences: industry investment collapsed, US shale production went into reverse, Oil exporters' GDP plummeted
- Consequent pressure from within OPEC, Saudi 'Vision 2030' ambition and continuing Russian crisis led to change of OPEC strategy, and non-OPEC sharing the cuts
- Target cuts from 1 January 2017 are sufficient for global inventories to correct in H1 2017, with moderate compliance. Cuts are 1.2m b/day from OPEC and 0.6m b/day Non-OPEC
- Current cuts are for 6-month period, with intention to extend if necessary

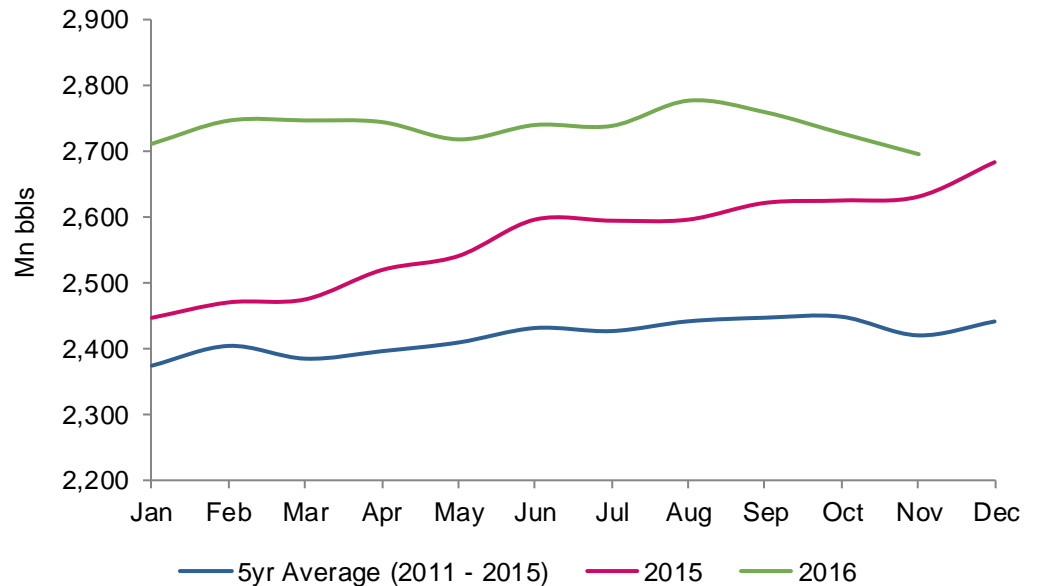
# Inventory levels remain elevated

We believe inventories need to fall for sustained oil price recovery

## Total US crude and product stocks\*



## Total OECD crude and product stocks



- US inventories still a long way above the 5-year average

- OECD oil inventory levels are approximately 300m barrels above 5-year average (12%)

**OPEC: “vital that stock levels are drawn down to normal levels”**

Source: IEA, 31 January 2017. \*excludes chemical feedstocks. Time period selected for contextual and illustrative reasons. For further information on investment process, please see the Important Information section.

# Oil market fundamentals

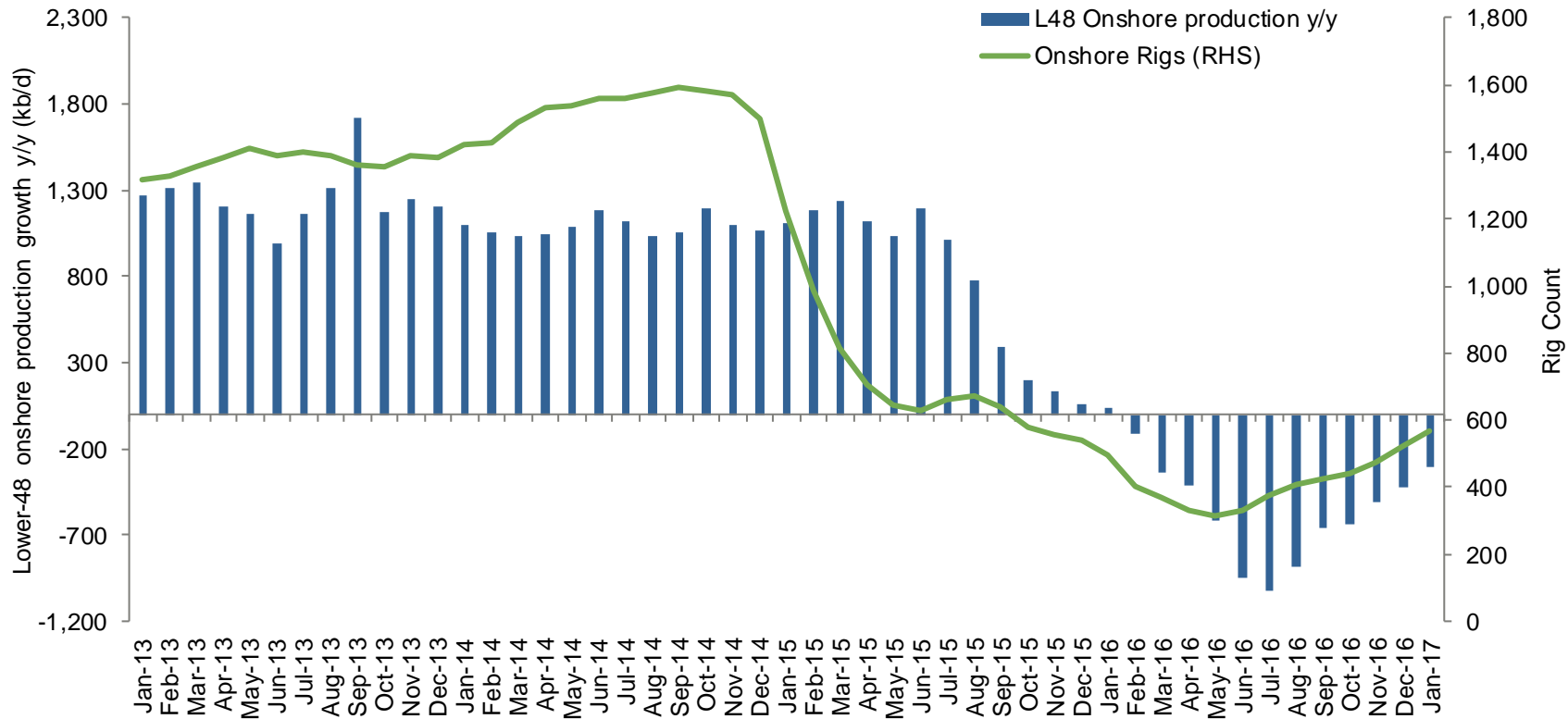
Supply, demand and US shale economics





# US onshore crude production

OPEC strategy worked; but shale is coming back

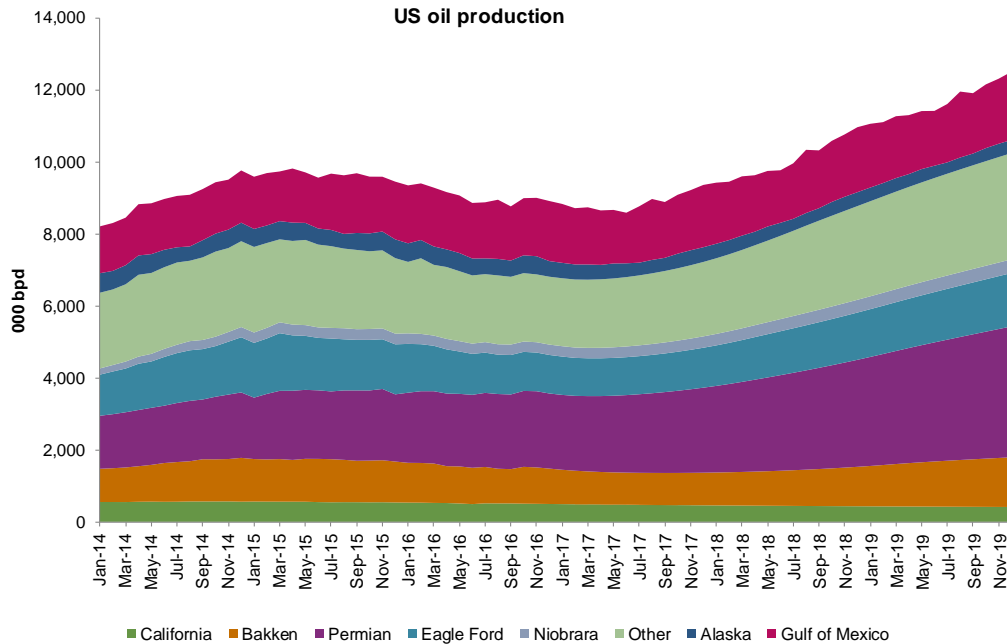


- Production fell 1.4 mb/d from peak
- Increase in rig count needed to reverse declines

Source: Bloomberg, Investec Asset Management, 31 January 2017. Time period selected for contextual and illustrative reasons. For further information on investment process, please see the Important Information section.

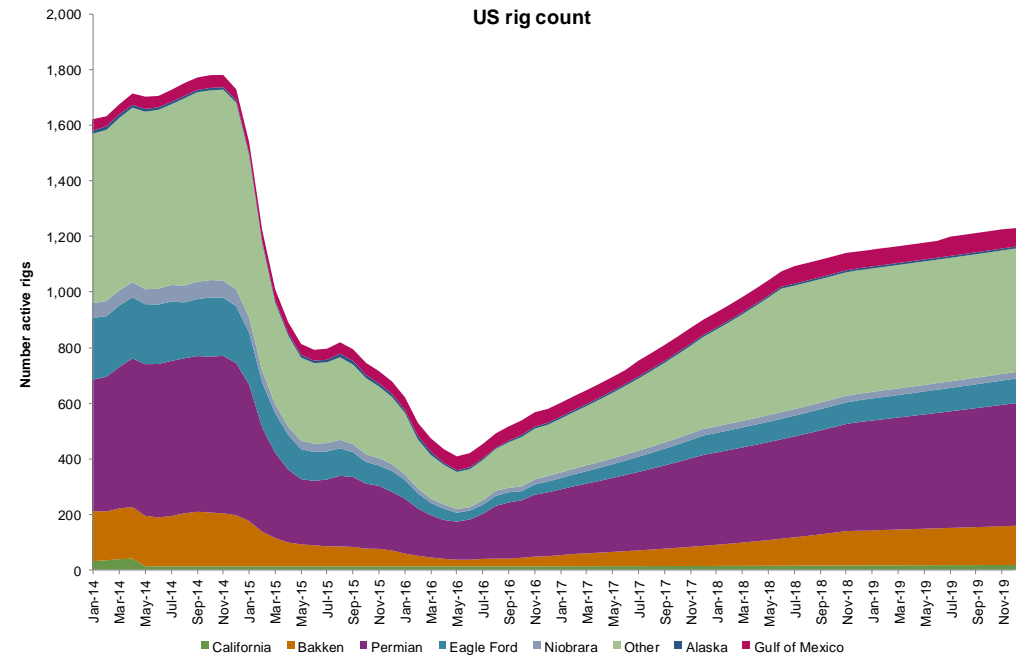
# US onshore basin by basin analysis

Investec Asset Management model (base case)



- Require at least 250 additional rigs from end 2016 to generate +1mbpd growth
- Forecast 493 additional rigs from trough to end 2017

- Peak to trough production decline: -1.1mb/d
- US production average YoY change:
  - 2016: -592 kb/d
  - 2017: -179 kb/d
  - 2018: +1,173 kb/d



Source: Investec Asset Management, January 2017. Forecasts are inherently limited and should not be relied upon as an indicator of future performance.

Time period selected for contextual and illustrative reasons. This slide is updated periodically as our assumptions change. For further information on investment process, please see the Important Information section.

# Dramatic change in break even costs

NB This is the Big 4 plays (Delaware, Midland, Bakken, Eagle Ford)

## Change in breakeven by year

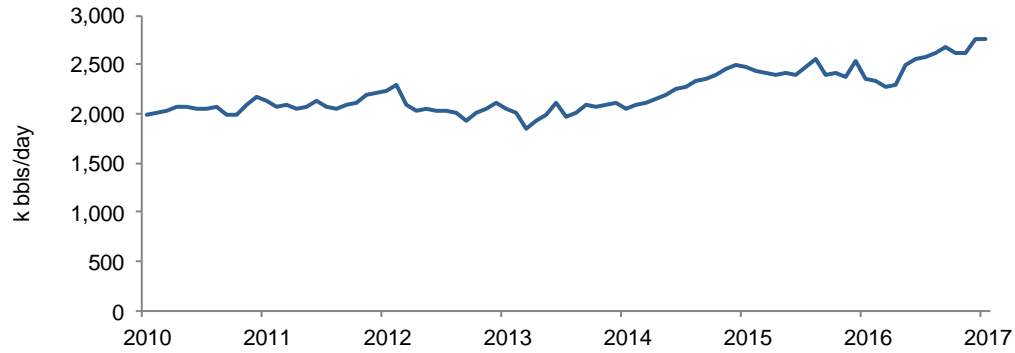


**We believe US onshore service costs will rise significantly in 2017**

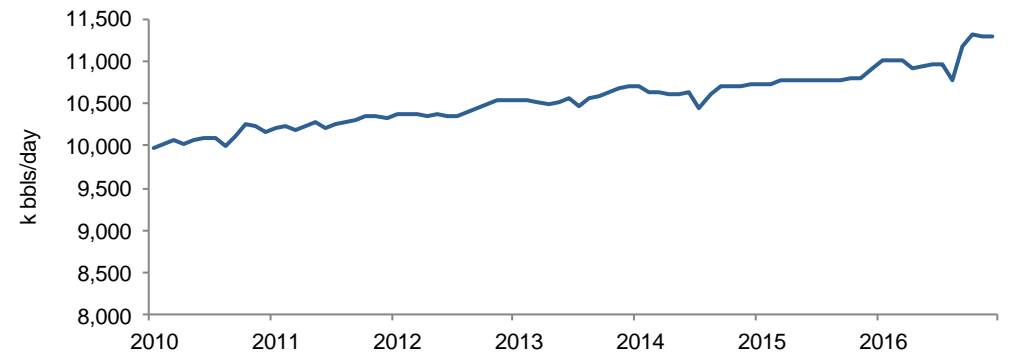
Source: RSEG, December 2016.

# Non OPEC ex-US production

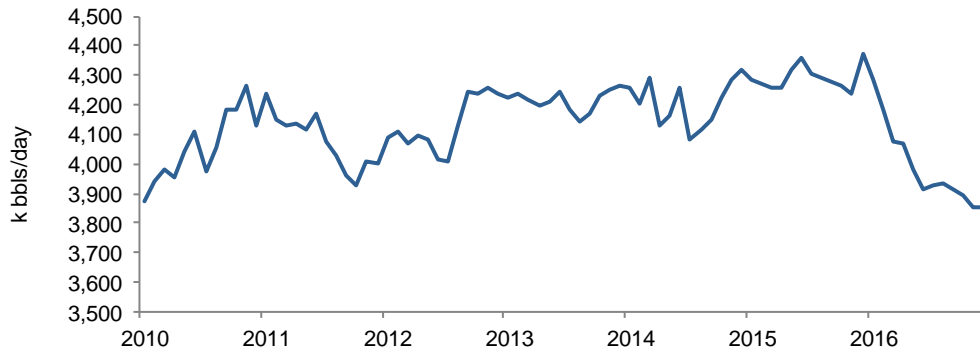
## Brazil



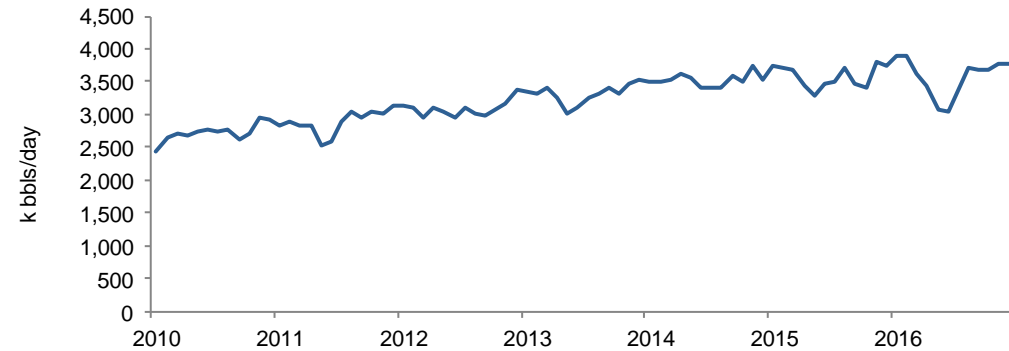
## Russia production



## China production



## Canada production



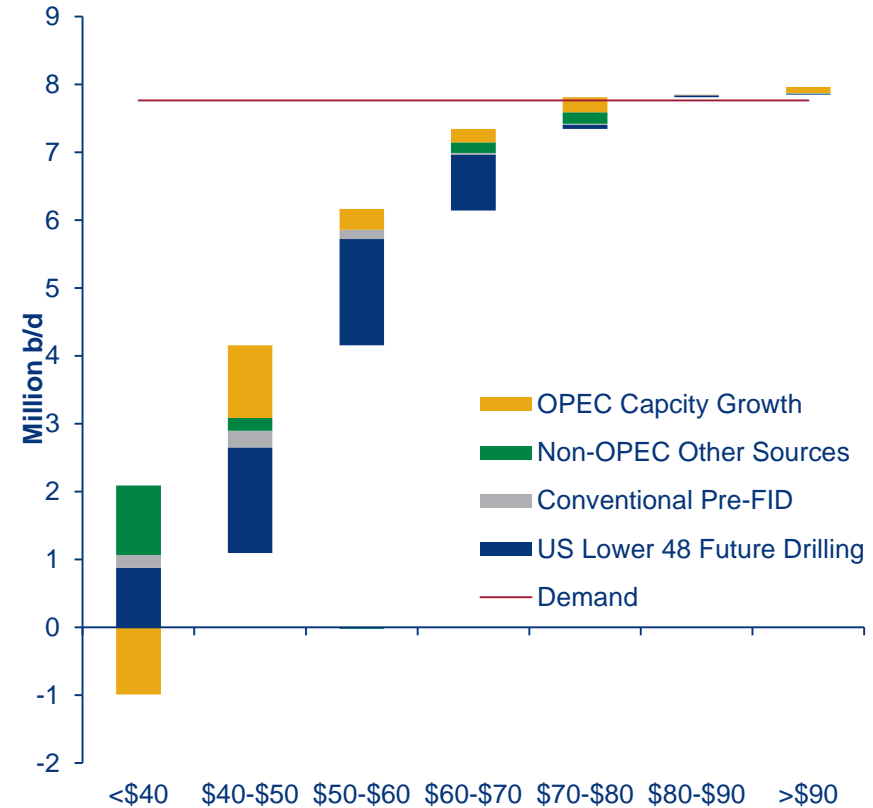
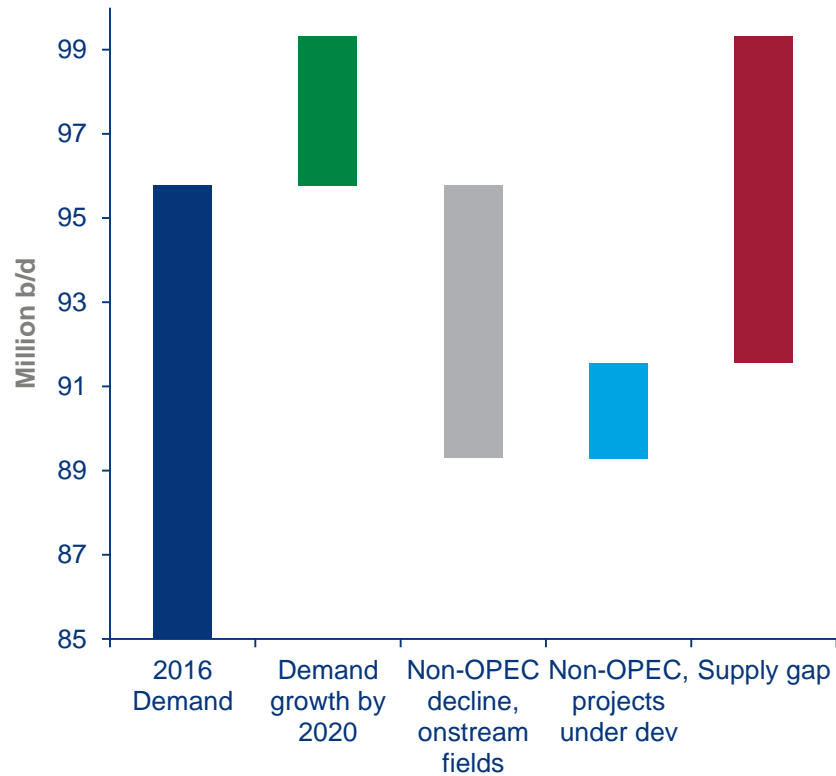
Production resilient so far, but China falling fast

Source: Bloomberg, 31 January 2017.

# 8 million b/d of new supply is required by 2020

Wood Mackenzie study shows oil prices need to rise to fill the gap

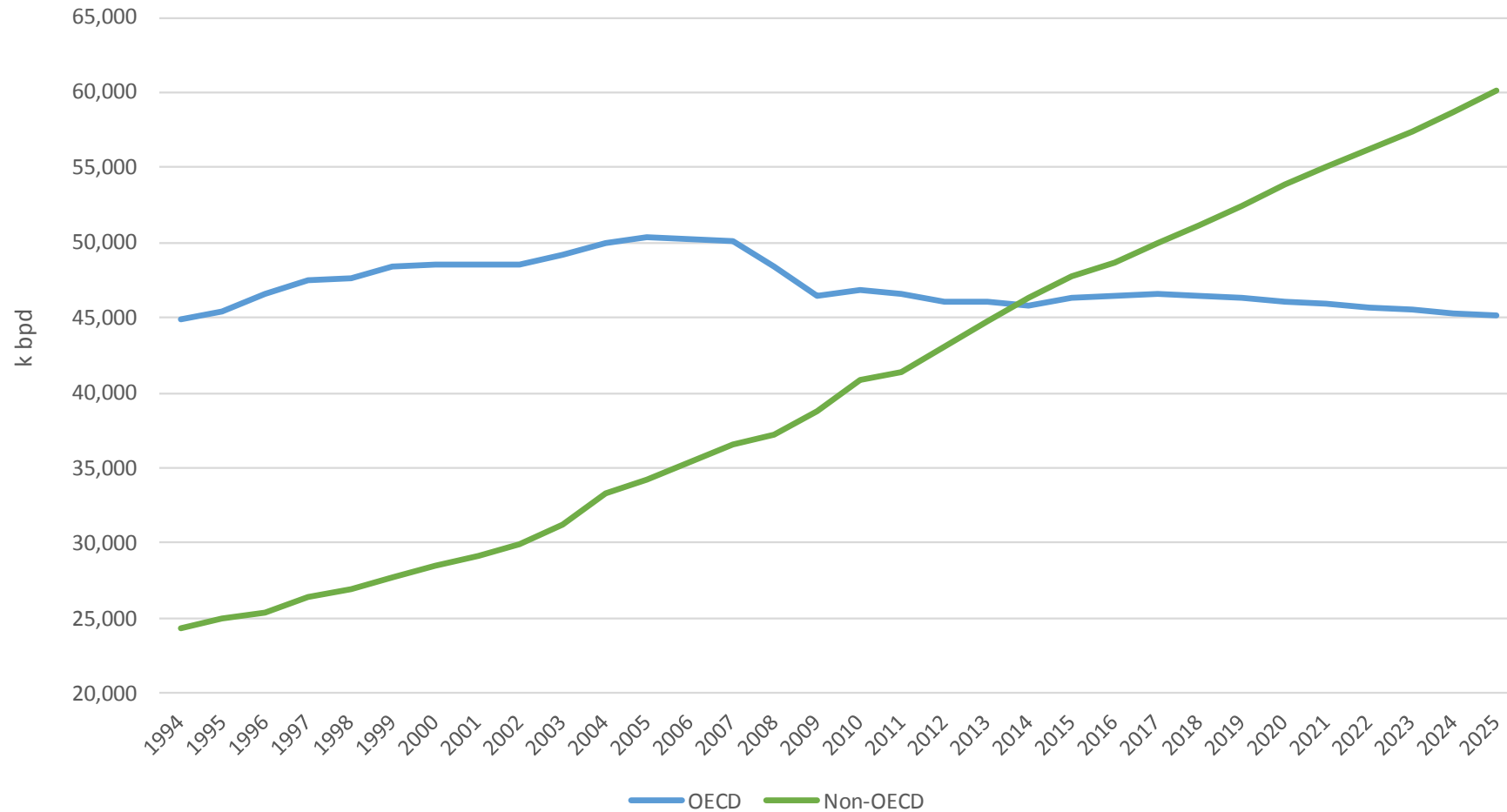
## Supply gap – 2016 to 2020, million bpd



Source: Wood Mackenzie, January 2017. Point forward Breakevens, Onshore at 10% discount rate offshore at 15%. Forecasts are inherently limited and should not be relied upon as an indicator of future performance. For further information on investment process, please see the Important Information section.

# Global oil demand

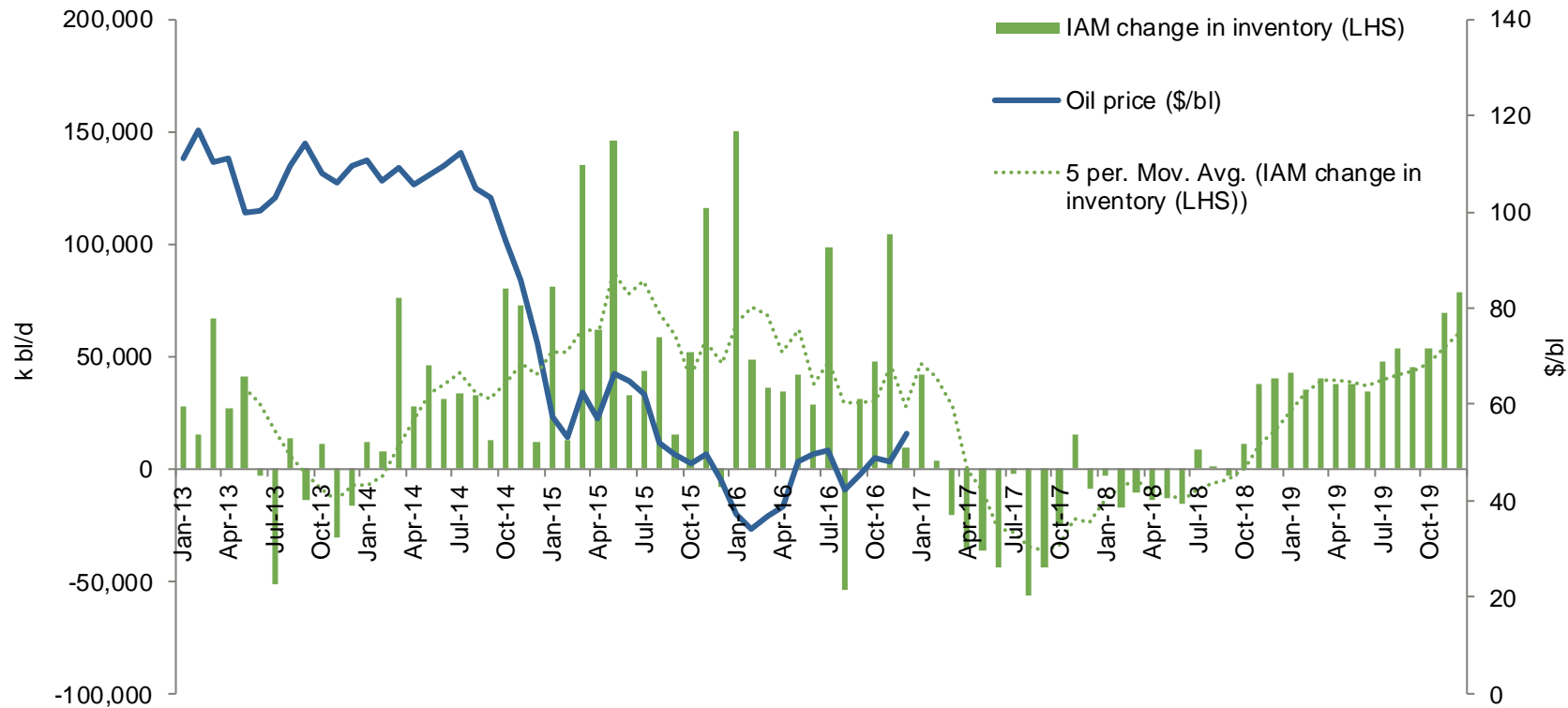
Non-OECD driving global oil demand



**Global oil demand growth since 1994: + 1.3% p.a.**

# Oil price vs global inventories

Strong inverse relationship



**Inventory draws should drive oil prices towards marginal cost in 2017**

Source: Investec Asset Management and Bloomberg, January 2017.

# The outlook for companies





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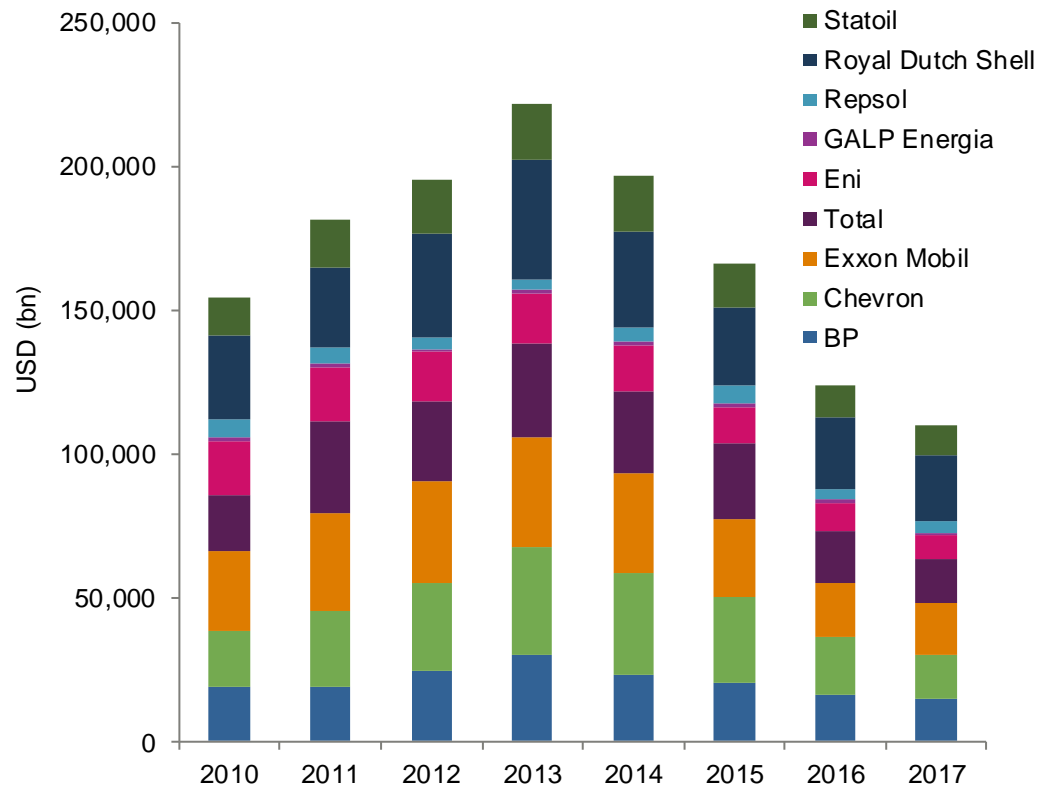
# Corporate strategies: value over volume

- In the last cycle oil companies chased production growth, leading to:
  - Escalating costs, poor project delivery, and weak exploration performance
  - Deteriorating returns, even with significantly higher oil prices
- The industry needed to reset priorities and behaviours, irrespective of the cycle. The deepest down-cycle for 30 years has provided the opportunity.
- A focus on 'returns at the expense of growth' should improve Return on Capital Employed, dividend payouts and total shareholder return over the next cycle

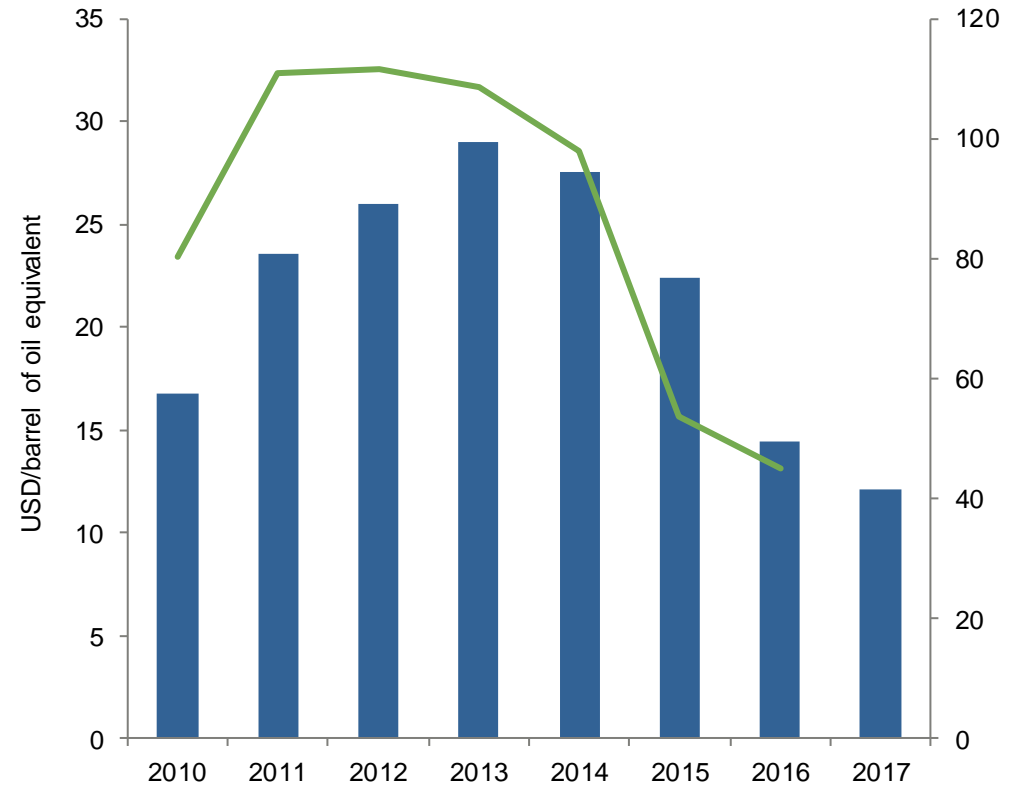
**We expect improved corporate and equity performance through this cycle**

# Capex down >50% since 2013

## 'Big Oil' Capex by company 2010 - 2017

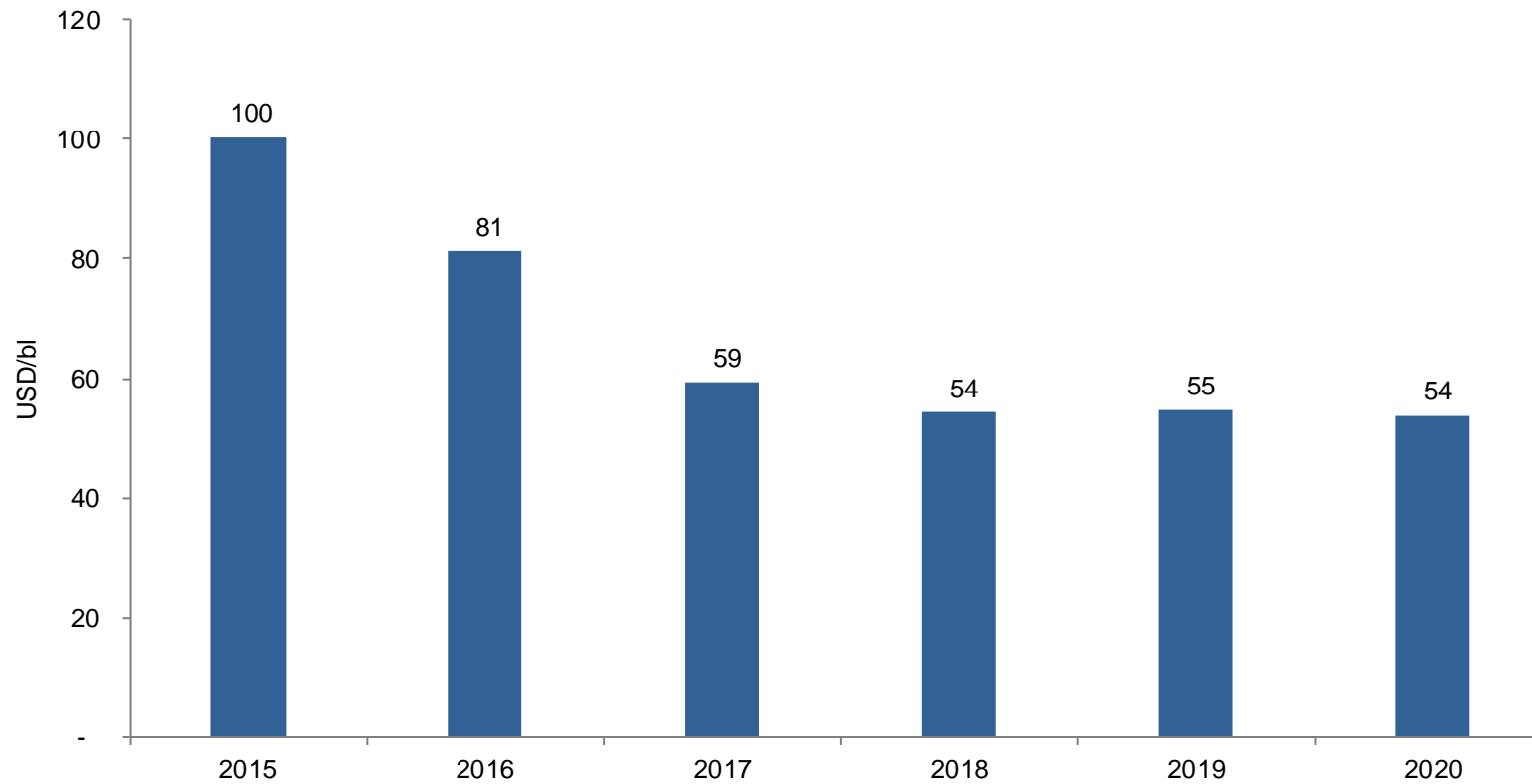


## 'Big Oil' upstream capital intensity vs. Brent



Source: Exane, January 2017. 'Big Oil' includes BP, Chevron, Eni, Exxon Mobil, GALP Energia, Repsol, Royal Dutch Shell, Statoil, Total. Forecasts are inherently limited and are not a reliable indicator of future performance.

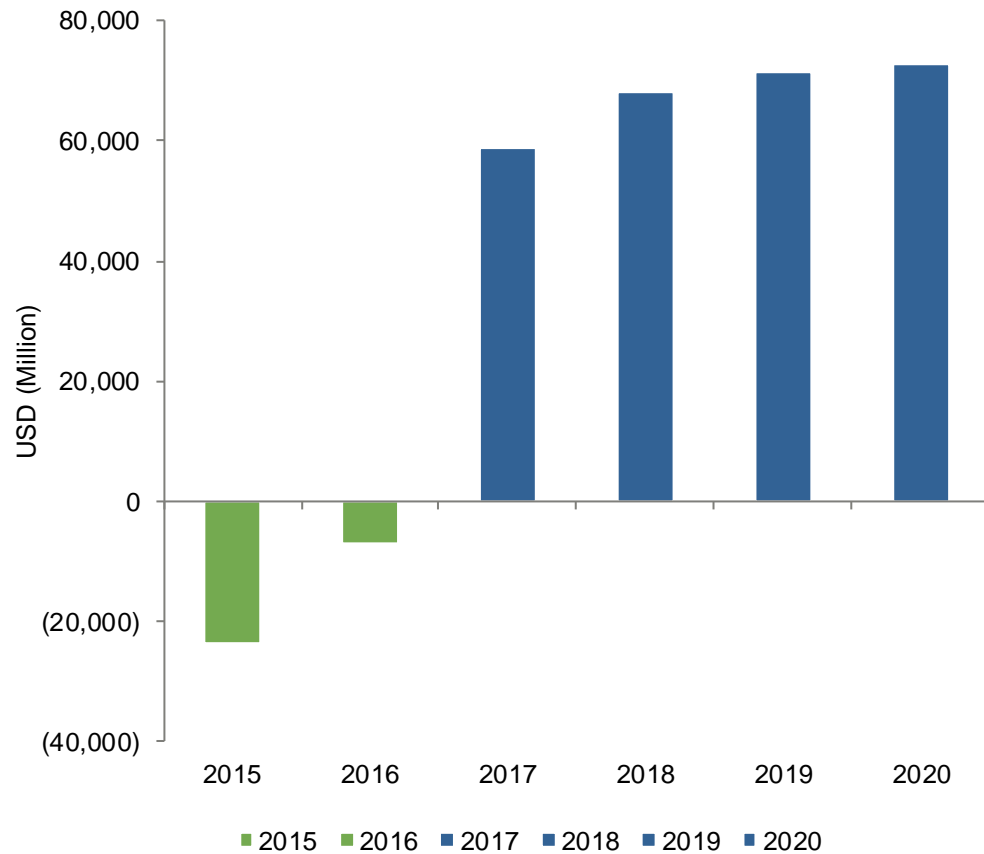
# Cash breakeven price for Oil Majors



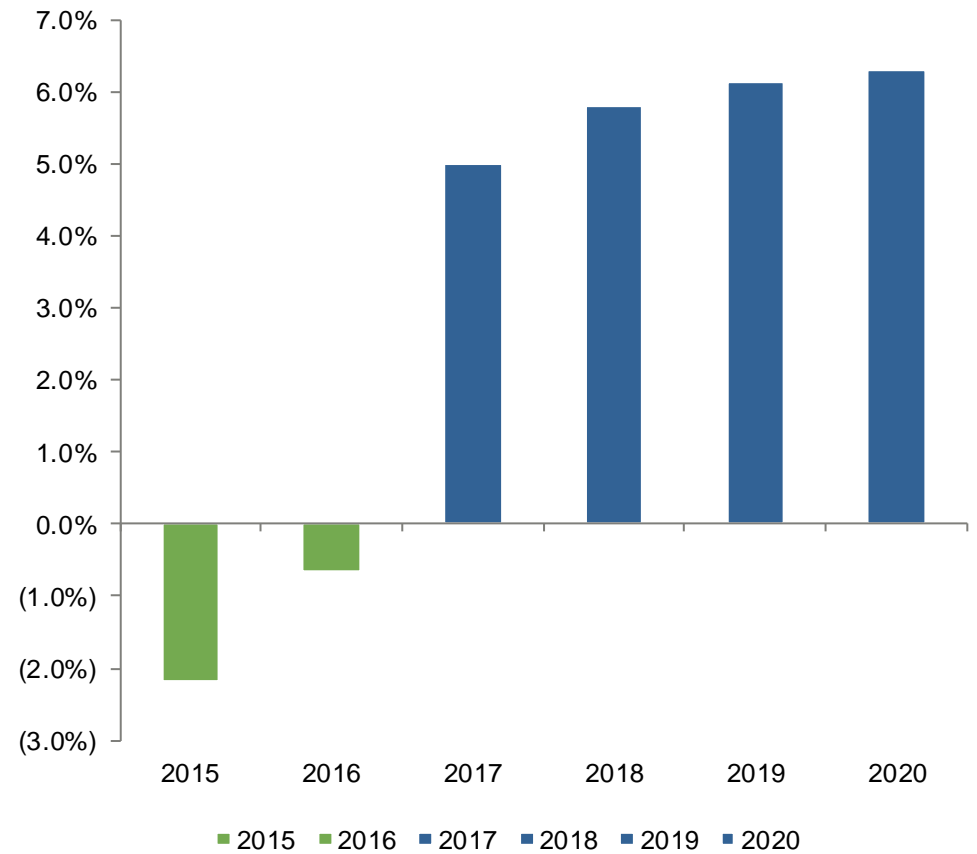
Source: Exane, January 2017. 'Big Oil' includes BP, Chevron, Eni, Exxon Mobil, GALP Energia, Repsol, Royal Dutch Shell, Statoil, Total. Forecasts are inherently limited and are not a reliable indicator of future performance.

# Cash-flow inflection point in 2017

## 'Big Oil' – Organic FCF



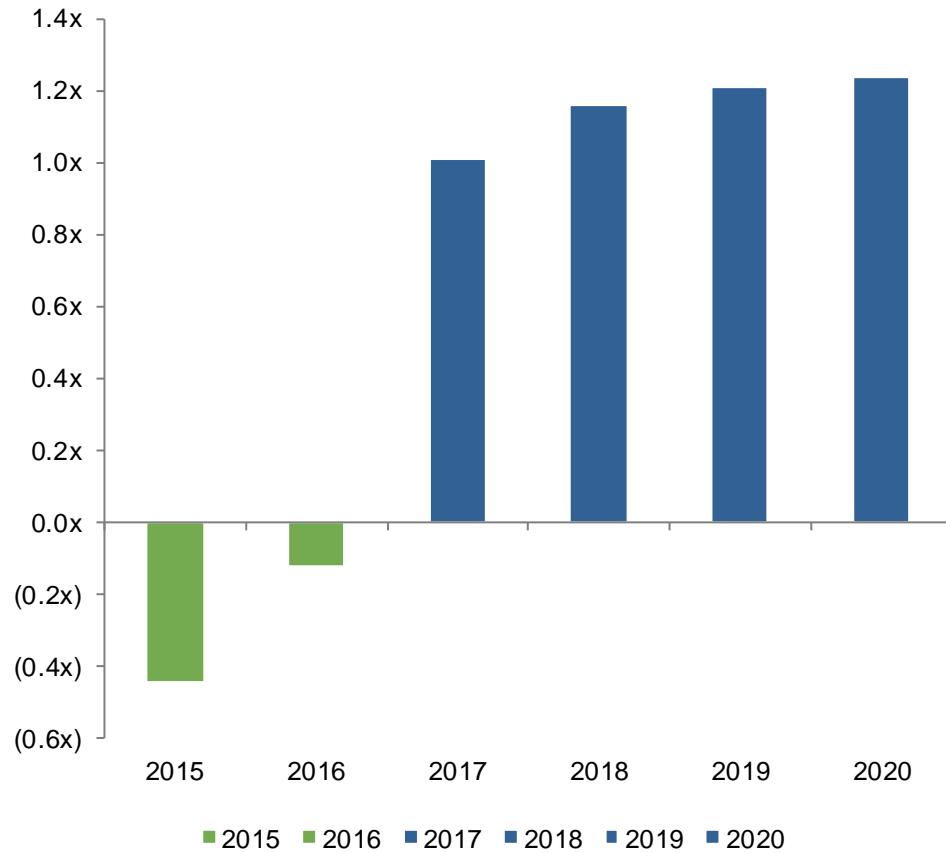
## 'Big Oil' – Organic FCF yield



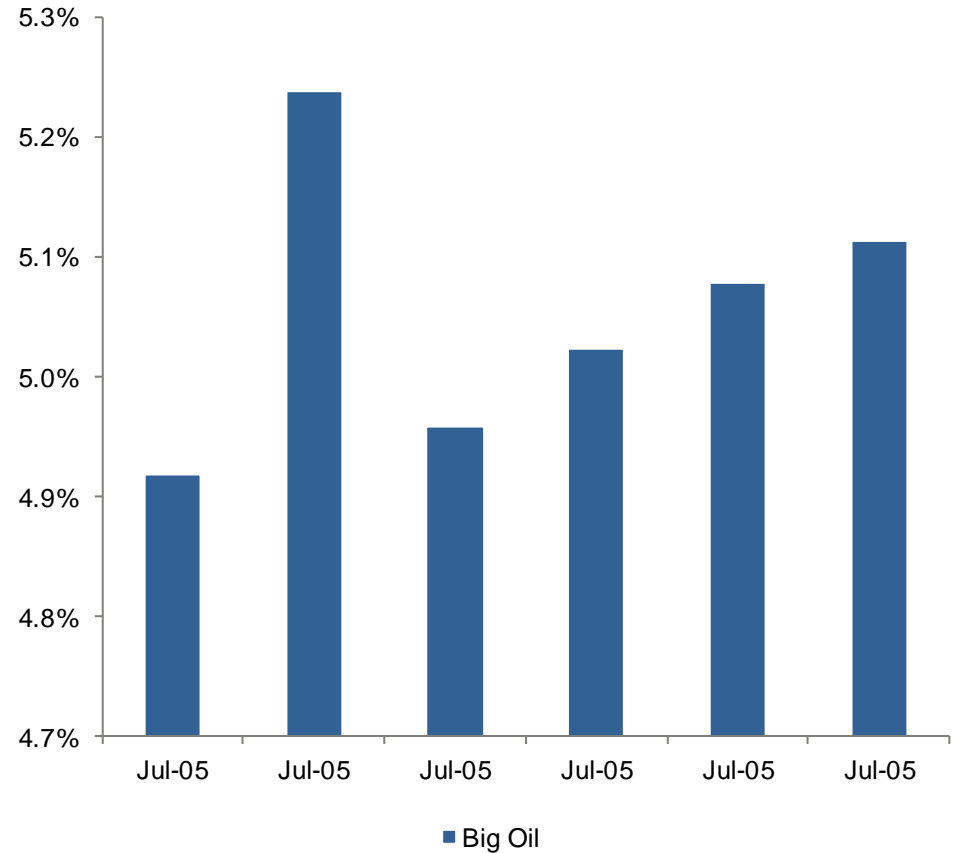
Source: Exane, January 2017. 'Big Oil' includes BP, Chevron, Eni, Exxon Mobil, GALP Energia, Repsol, Royal Dutch Shell, Statoil, Total. Forecasts are inherently limited and are not a reliable indicator of future performance.

# Dividends covered in 2017

**'Big Oil' – Dividend cover by organic FCF**

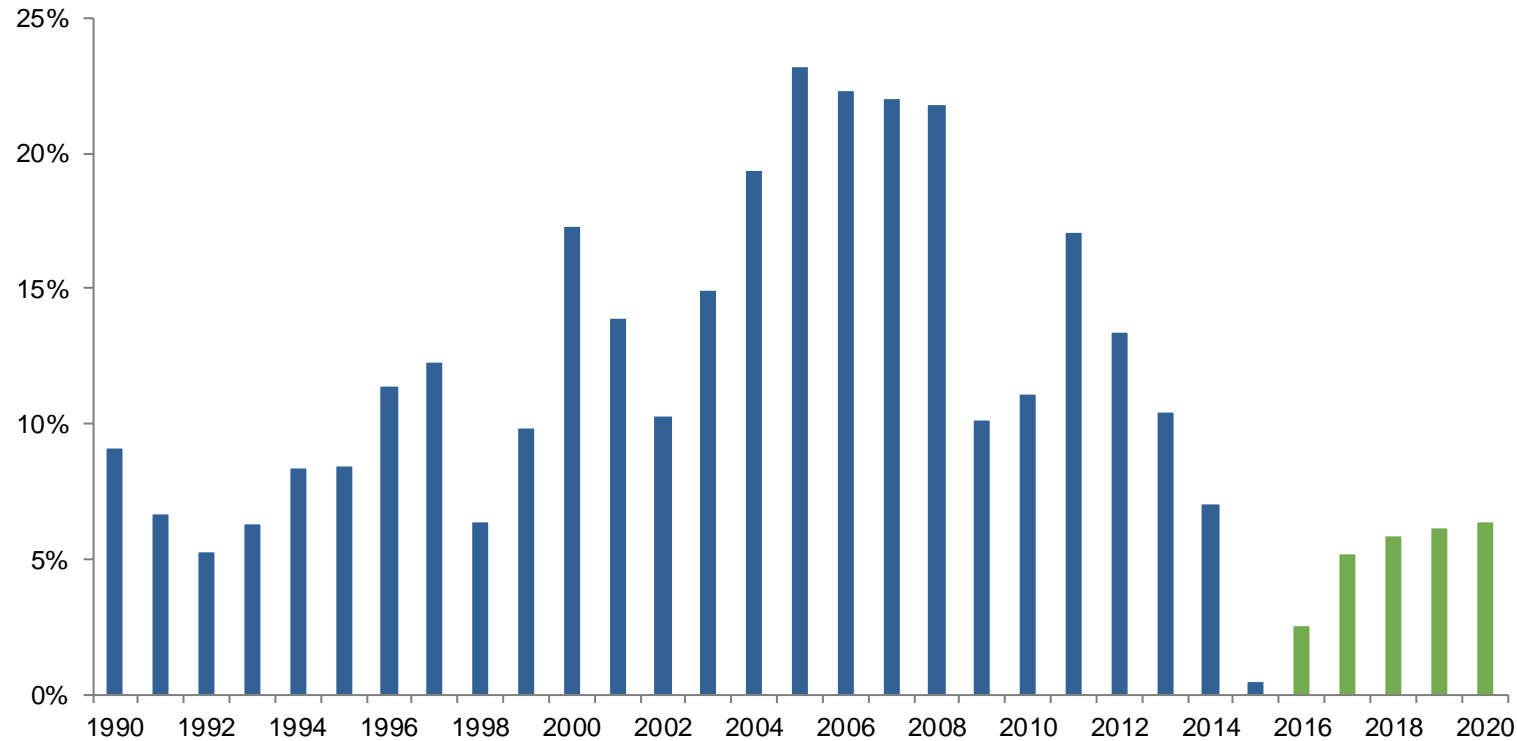


**'Big Oil' – Dividend yield (%)**



Source: Exane, January 2017. 'Big Oil' includes BP, Chevron, Eni, Exxon Mobil, GALP Energia, Repsol, Royal Dutch Shell, Statoil, Total  
 Forecasts are inherently limited and are not a reliable indicator of future performance.

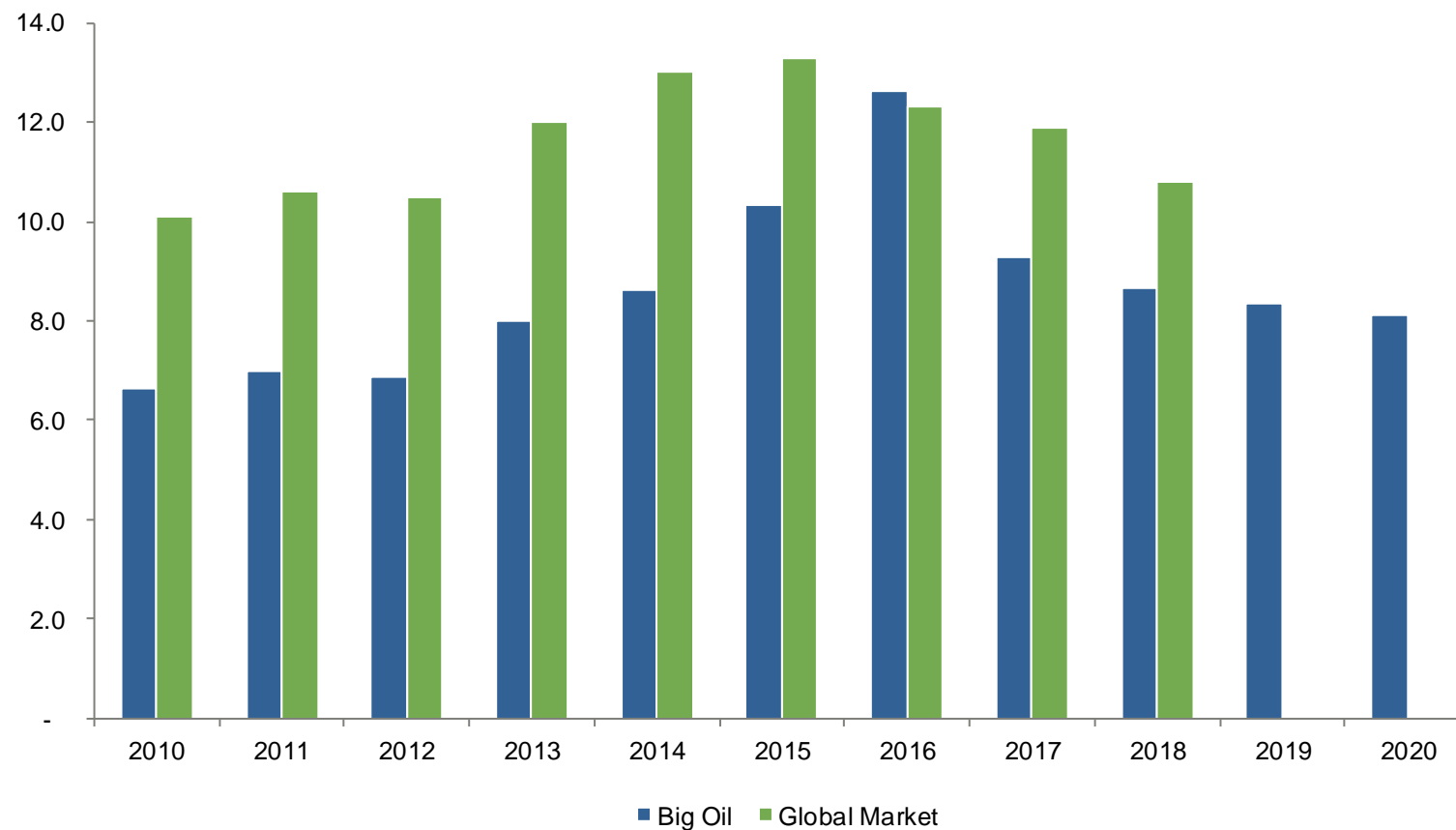
# Significant change in ROCE over time



## Change in ROCE drives outperformance

Source: 1990 – 2015, Bloomberg. 2016 – 2020 Forecasts, Exane, January 2017. 'Big Oil' includes BP, Chevron, Eni, Exxon Mobil, GALP Energia, Repsol, Royal Dutch Shell, Statoil, Total  
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# Valuation – EV/DACF



Source: Exane, January 2017. 'Big Oil' includes BP, Chevron, Eni, Exxon Mobil, GALP Energia, Repsol, Royal Dutch Shell, Statoil, Total  
Forecasts are inherently limited and are not a reliable indicator of future performance.

Thank you

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