

# Global Energy: Q2 2018 webcast

July, 2018

**Tim Guinness (Co-manager)**

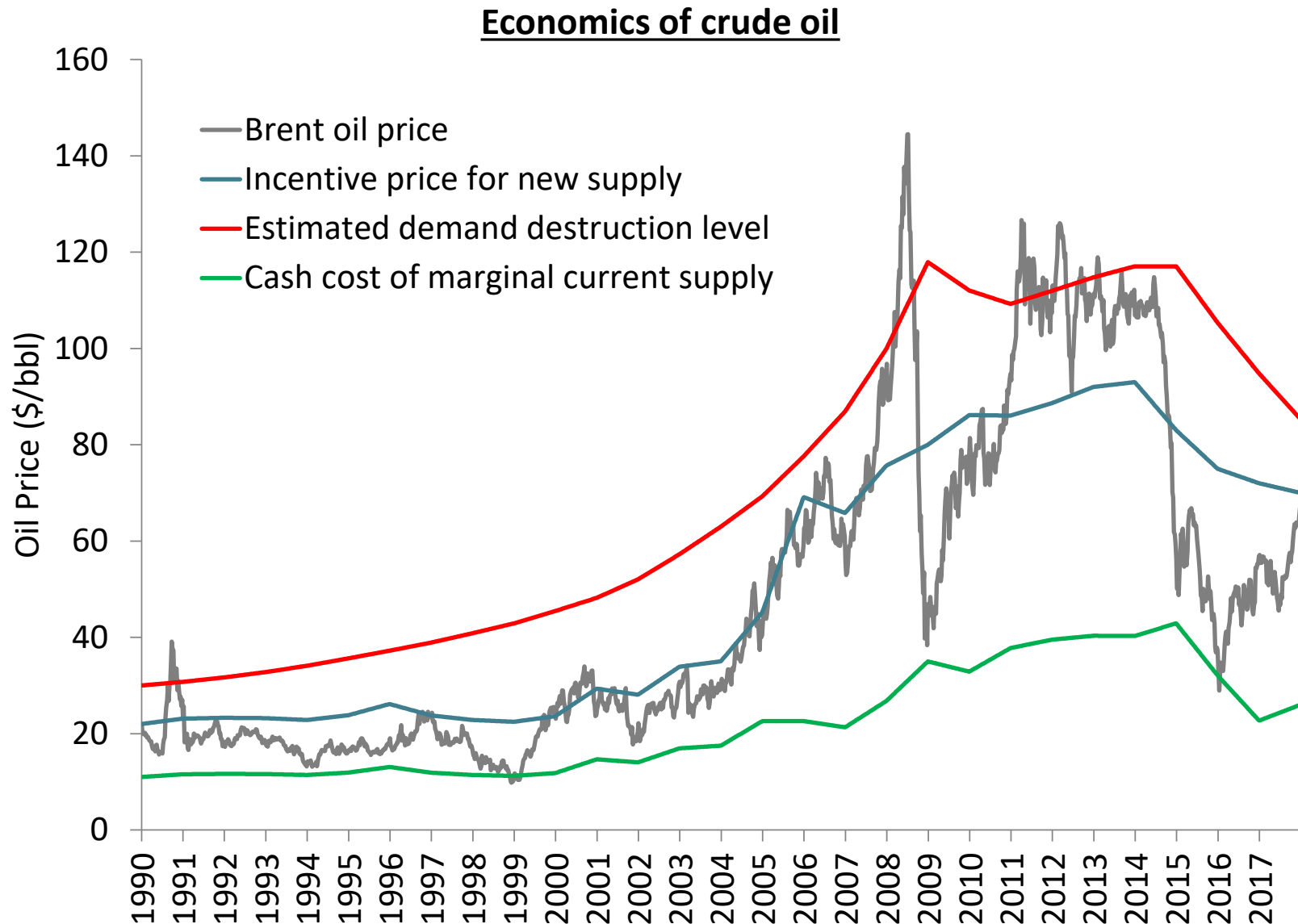
**Will Riley, CA (Co-manager)**

**Jonathan Waghorn (Co-manager)**



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- 1) Oil prices:** what have been the key drivers of oil price moves over the last twelve months? Where do oil prices now sit in the context of previous cycles?
- 2) Oil demand:** The global GDP juggernaut versus the rise of EVs – who wins?
- 3) Non-OPEC supply:** how is US shale responding to rising oil prices? How relevant are constraints in the Permian basin? What are the prospects for rest of non-OPEC supply?
- 4) OPEC strategy:** how does OPEC navigate the Iran nuclear deal, Venezuela and the Saudi Aramco IPO?
- 5) Investment opportunities:** with capital discipline and improving free cashflow in the energy sector now being rewarded by the market over growth, where are the best opportunities?



## Brent oil: spot price vs 5 year forward



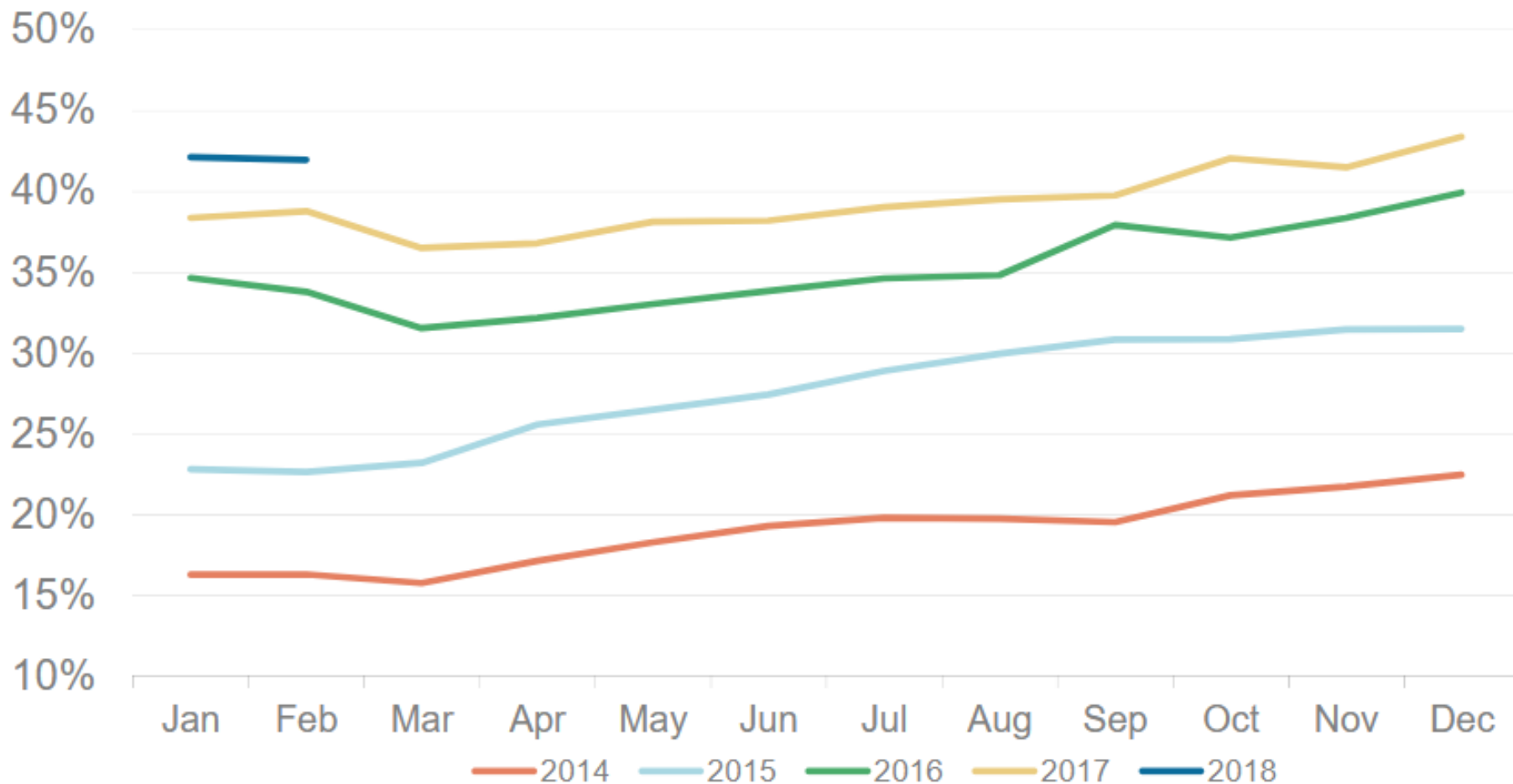
# Near term oil demand: world oil demand up 1.5m b/day in 2018

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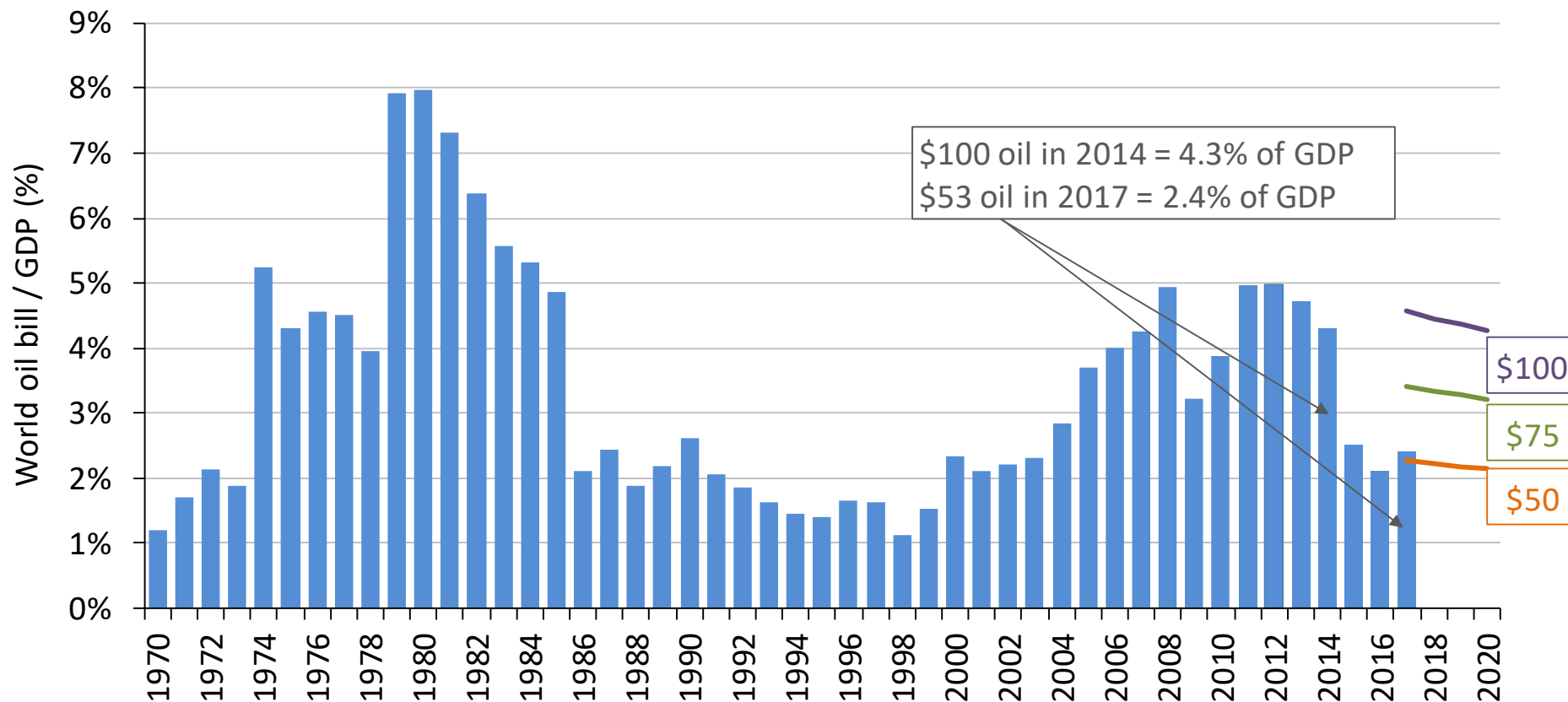
## Global oil demand (m b/day)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>OECD demand</b>															IEA
North America	25.7	25.8	24.5	25.8	24.5	23.7	24.1	24.0	23.6	24.2	24.2	24.6	24.7	24.9	25.0
Europe	15.6	15.7	15.7	15.6	15.5	14.7	14.7	14.3	13.8	13.6	13.5	13.8	14.0	14.3	14.5
Pacific	8.8	8.9	8.7	8.7	8.3	8.0	8.2	8.2	8.5	8.3	8.1	8.1	8.1	8.2	8.1
<b>Total OECD</b>	<b>50.1</b>	<b>50.4</b>	<b>48.9</b>	<b>50.1</b>	<b>48.3</b>	<b>46.4</b>	<b>47.0</b>	<b>46.5</b>	<b>45.9</b>	<b>46.1</b>	<b>45.8</b>	<b>46.4</b>	<b>46.9</b>	<b>47.4</b>	<b>47.7</b>
<i>Change in OECD demand</i>		0.3	-1.5	1.2	-1.8	-1.9	0.6	-0.5	-0.6	0.2	-0.3	0.6	0.5	0.5	0.3
<b>NON-OECD demand</b>															
FSU	3.8	3.9	4.0	4.0	4.2	4.0	4.1	4.4	4.6	4.5	4.6	4.5	4.7	4.7	4.8
Europe	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8
China	6.4	6.7	7.2	7.6	7.7	7.9	8.9	9.3	9.9	10.4	10.8	11.6	11.8	12.4	12.8
India	2.6	2.6	2.7	2.9	3.1	3.2	3.3	3.5	3.7	3.7	3.8	4.2	4.6	4.7	5.0
Other Asia	6.4	6.4	6.6	6.9	6.8	7.1	7.5	7.6	7.6	7.9	8.0	8.2	8.4	8.6	8.8
Latin America	4.9	5.0	5.2	5.3	5.6	5.7	6.1	6.2	6.5	6.6	6.8	6.7	6.6	6.6	6.6
Middle East	5.5	5.9	6.1	6.4	6.7	7.1	7.3	7.5	7.9	8.0	8.4	8.4	8.3	8.3	8.4
Africa	2.8	2.9	2.9	3.3	3.3	3.4	3.5	3.5	3.8	3.8	3.9	4.3	4.3	4.3	4.4
<b>Total Non-OECD</b>	<b>33.1</b>	<b>34.1</b>	<b>35.4</b>	<b>37.1</b>	<b>38.1</b>	<b>39.1</b>	<b>41.4</b>	<b>42.7</b>	<b>44.8</b>	<b>45.6</b>	<b>47.4</b>	<b>48.6</b>	<b>49.2</b>	<b>50.4</b>	<b>51.5</b>
<i>Change in non-OECD demand</i>		1.0	1.3	1.7	1.0	1.0	2.3	1.3	2.1	0.8	1.8	1.2	0.6	1.2	1.1
<b>Total Demand</b>	<b>82.5</b>	<b>83.8</b>	<b>85.1</b>	<b>87.2</b>	<b>86.4</b>	<b>85.5</b>	<b>88.4</b>	<b>89.2</b>	<b>90.7</b>	<b>91.7</b>	<b>93.1</b>	<b>95.0</b>	<b>96.2</b>	<b>97.7</b>	<b>99.2</b>
<i>Change in demand</i>		1.3	1.3	2.1	-0.8	-0.9	2.9	0.8	1.5	1.0	1.4	1.9	1.2	1.5	1.5

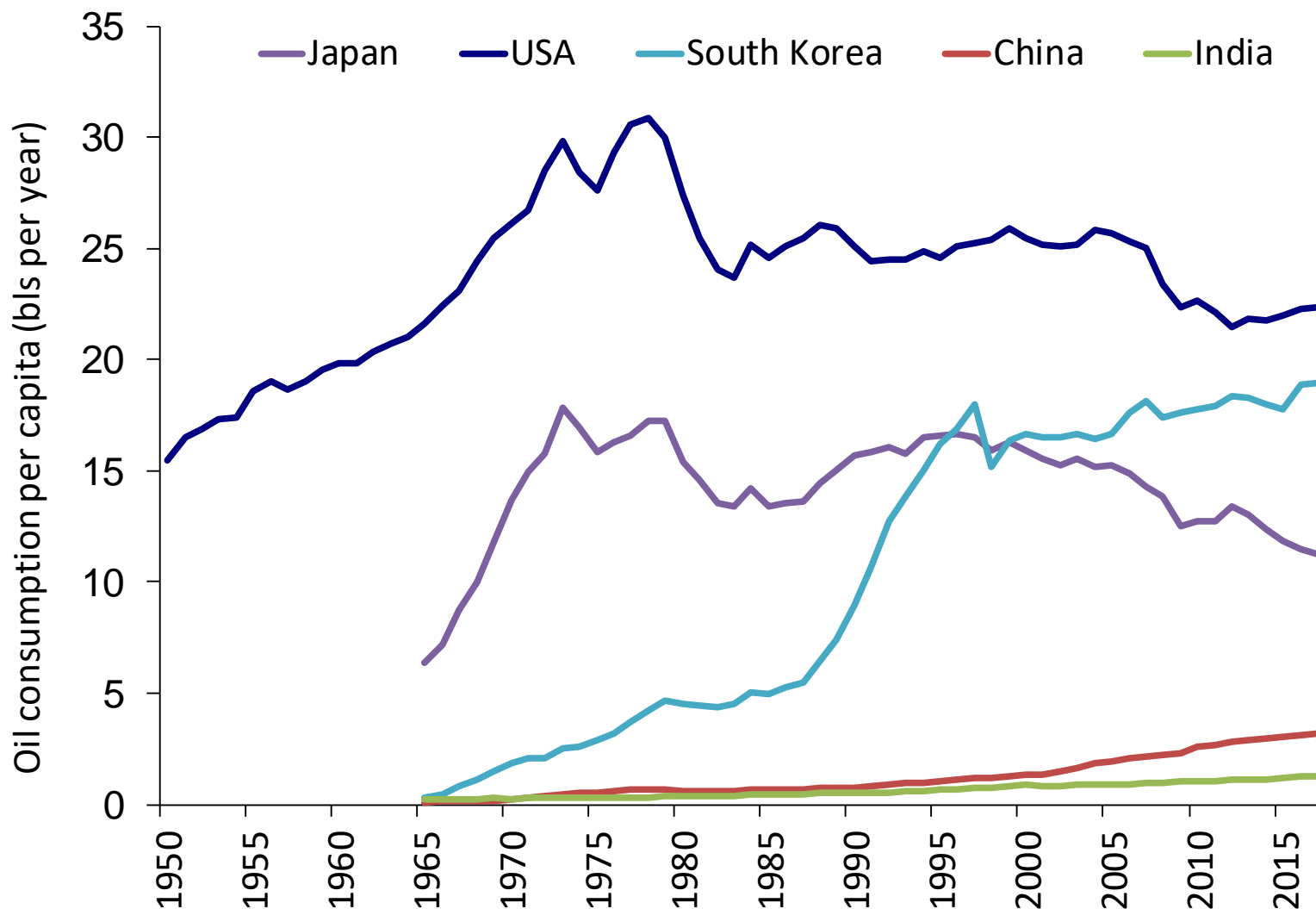
## China SUV sales as % of total vehicle sales



## The world oil 'bill' as a percentage of world GDP

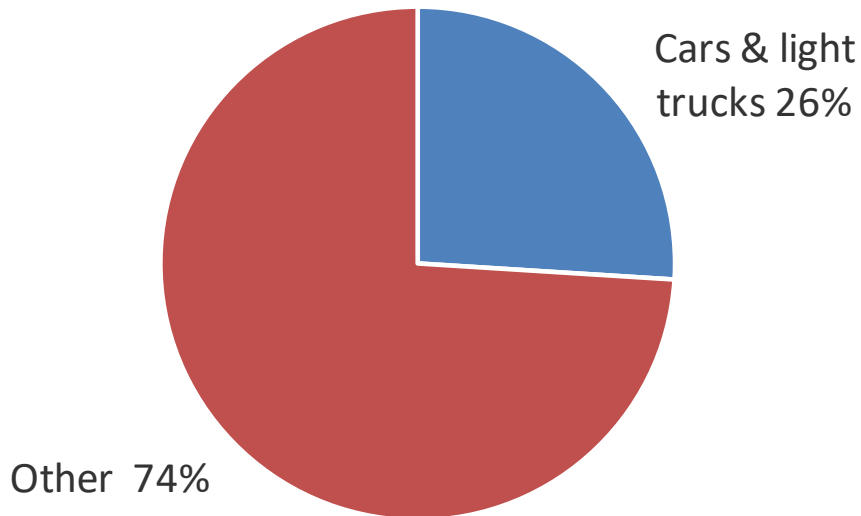


## Per capita oil consumption (barrels per head pa)



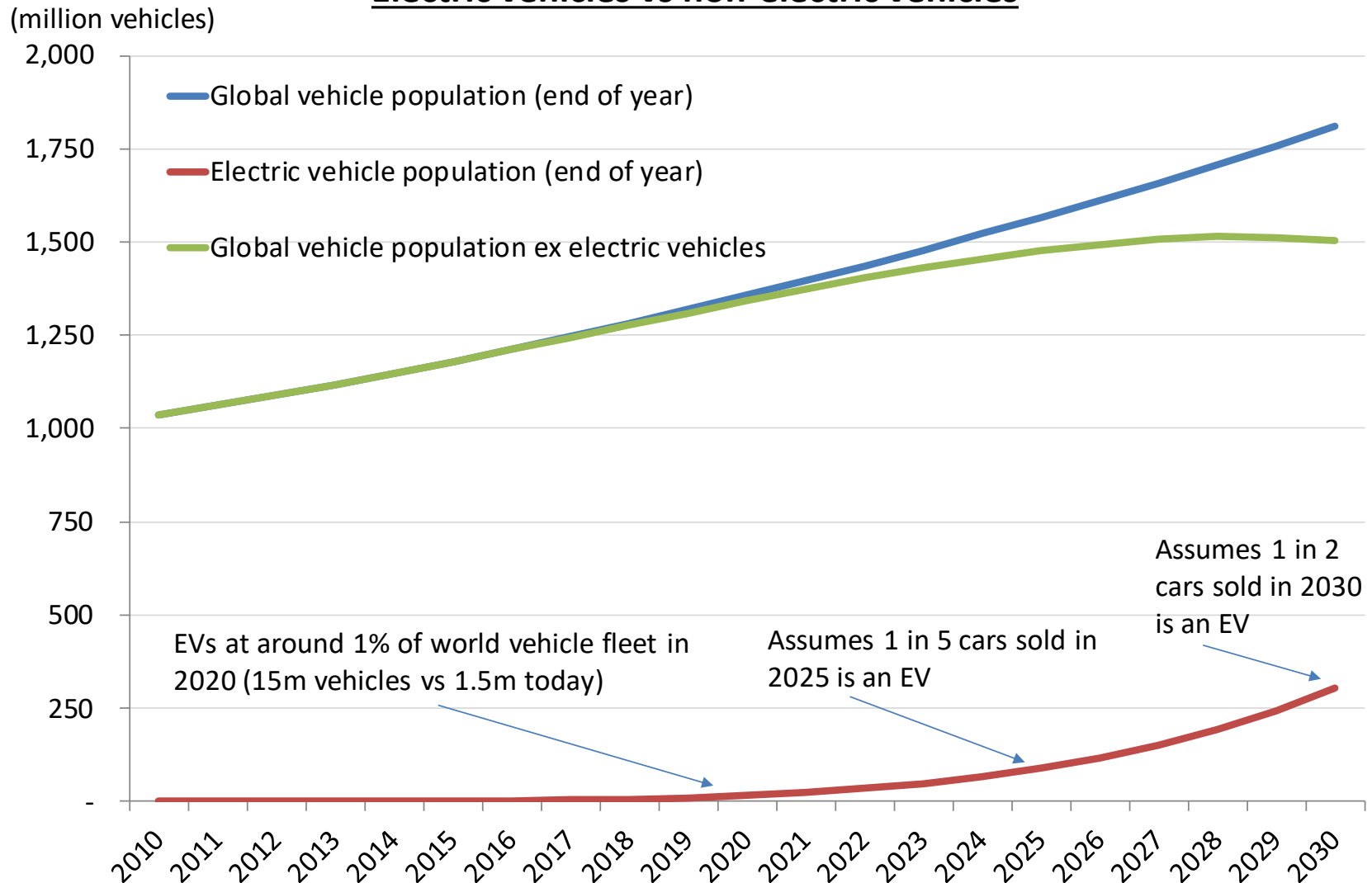


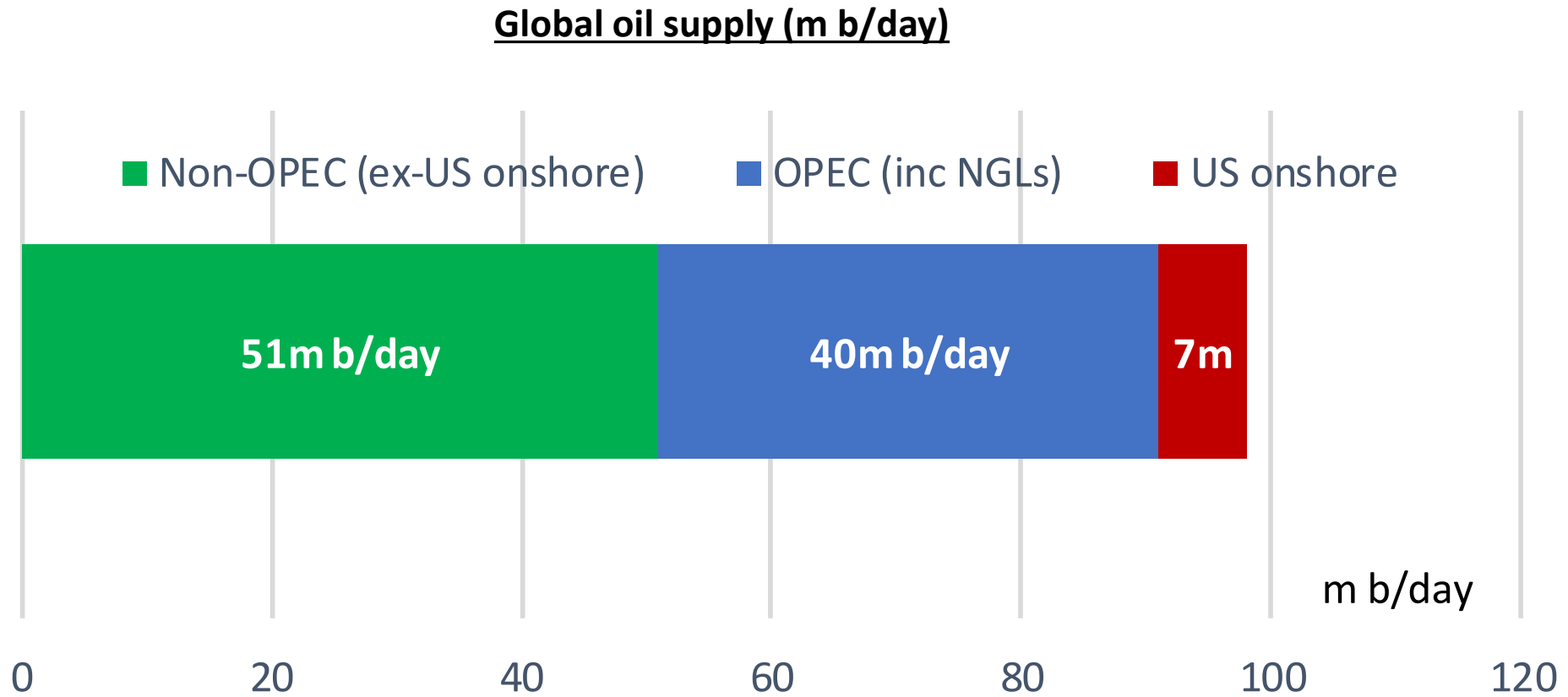
## Structure of global oil demand



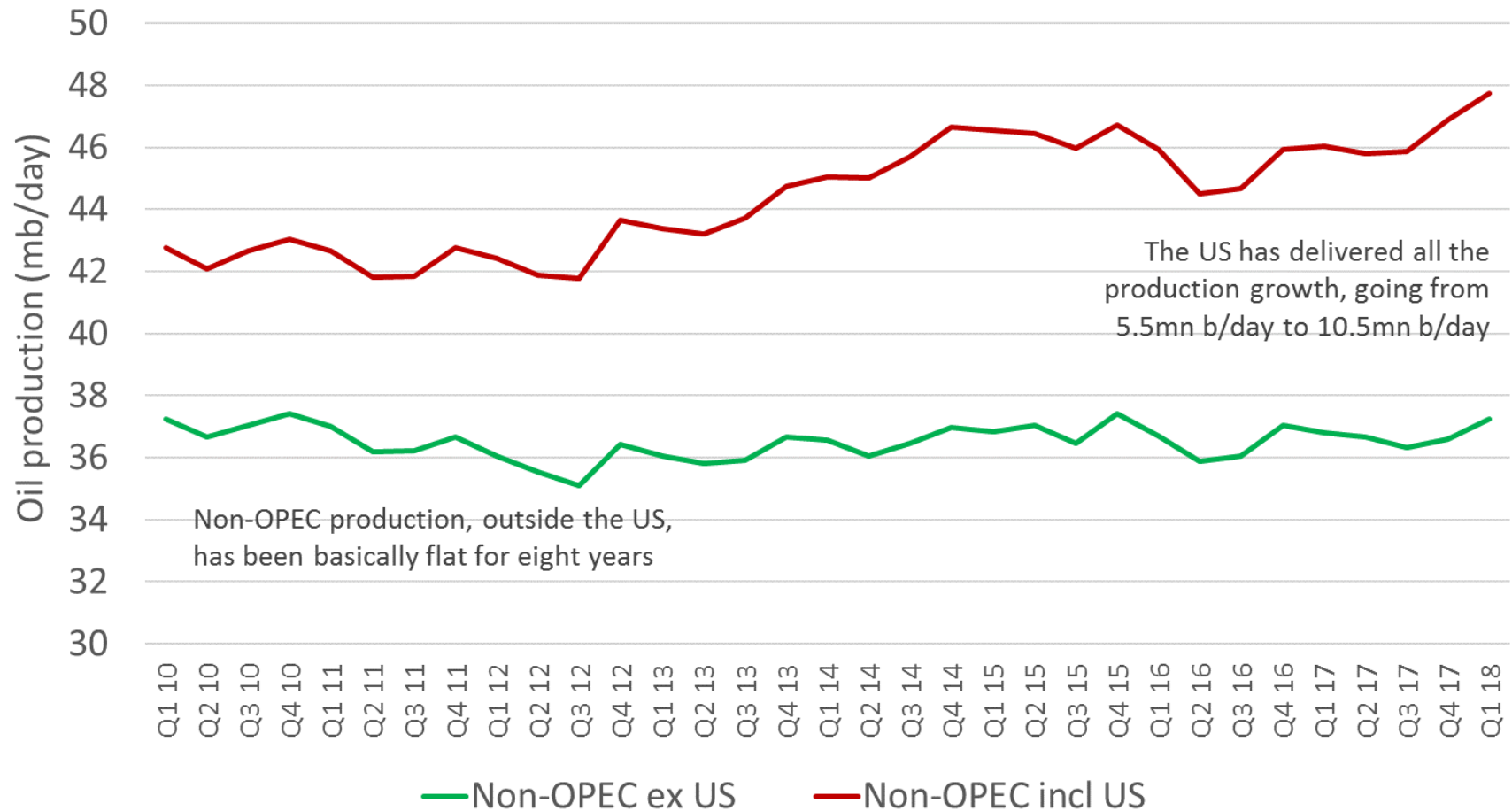
Source of demand	%
Power	6%
Petrochemicals	13%
Other industry	11%
Cars & light trucks	26%
Heavy vehicles	18%
Air travel	6%
Shipping	6%
Rail	1%
Other	13%
<b>Total</b>	<b>100%</b>

## Electric vehicles vs non-electric vehicles





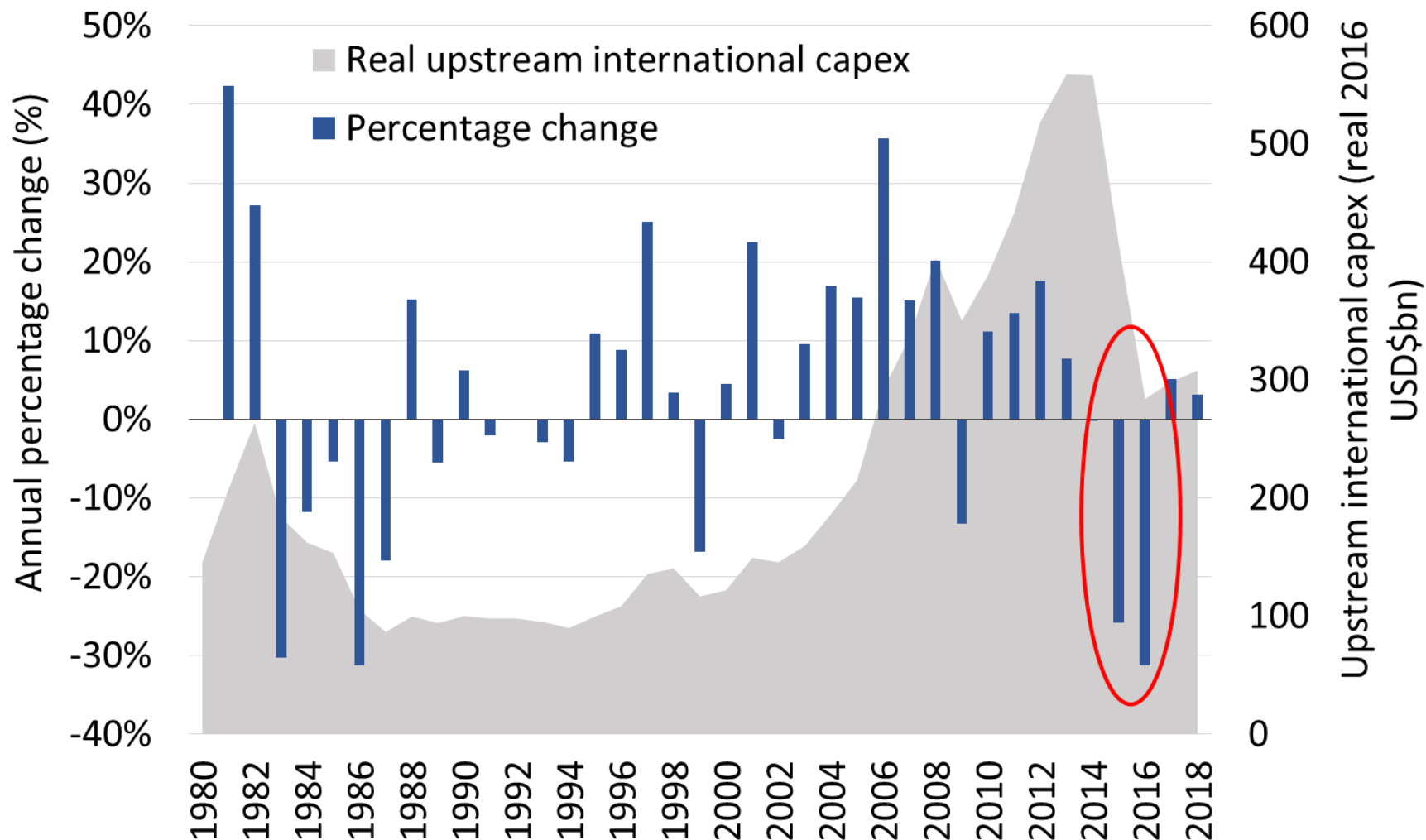
## Non-OPEC oil production split between US and other

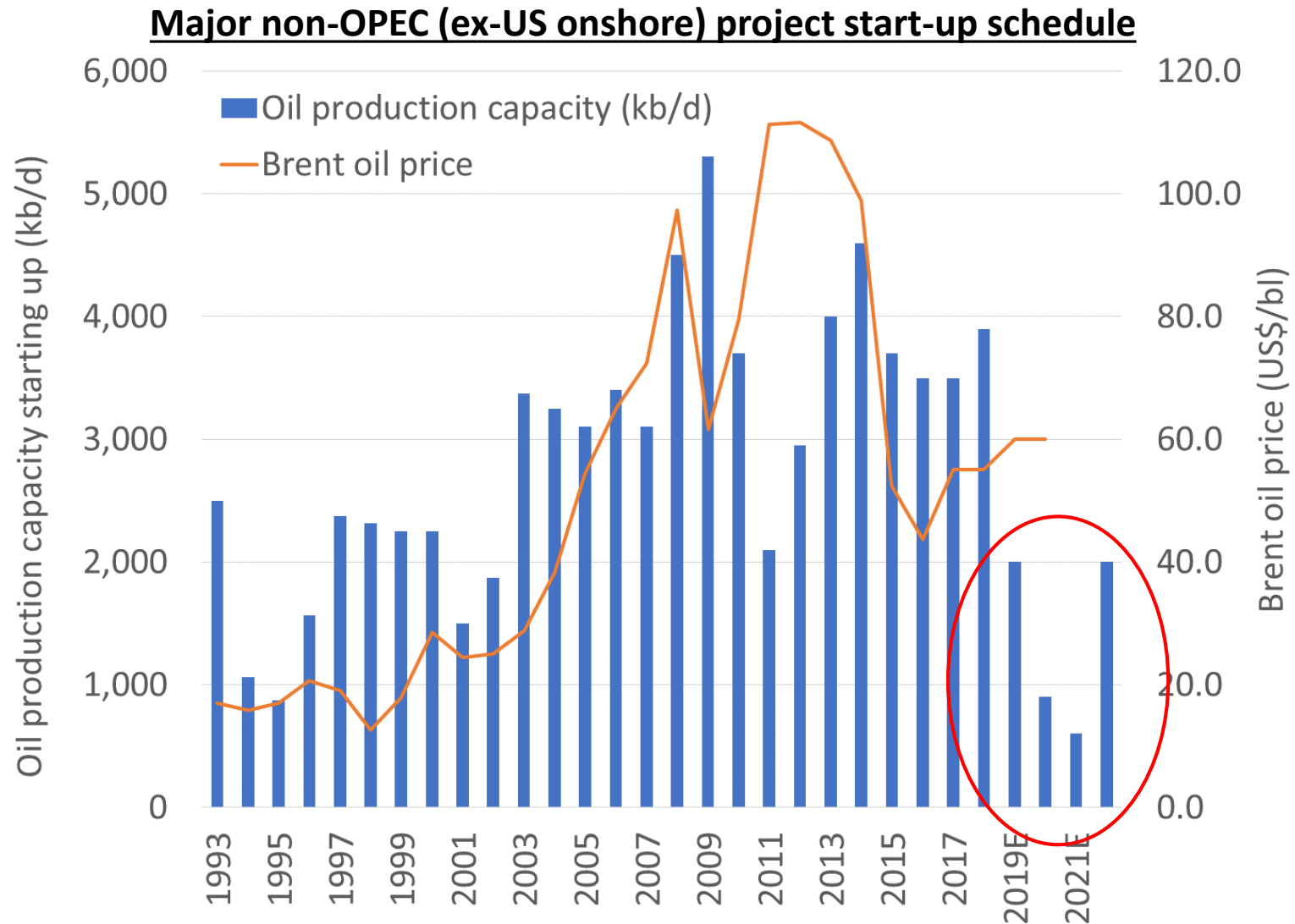


***“At no other time in the past 50 years has our industry experienced cuts of this magnitude and this duration.”***

**Paal Kibsgaard, CEO, Schlumberger**

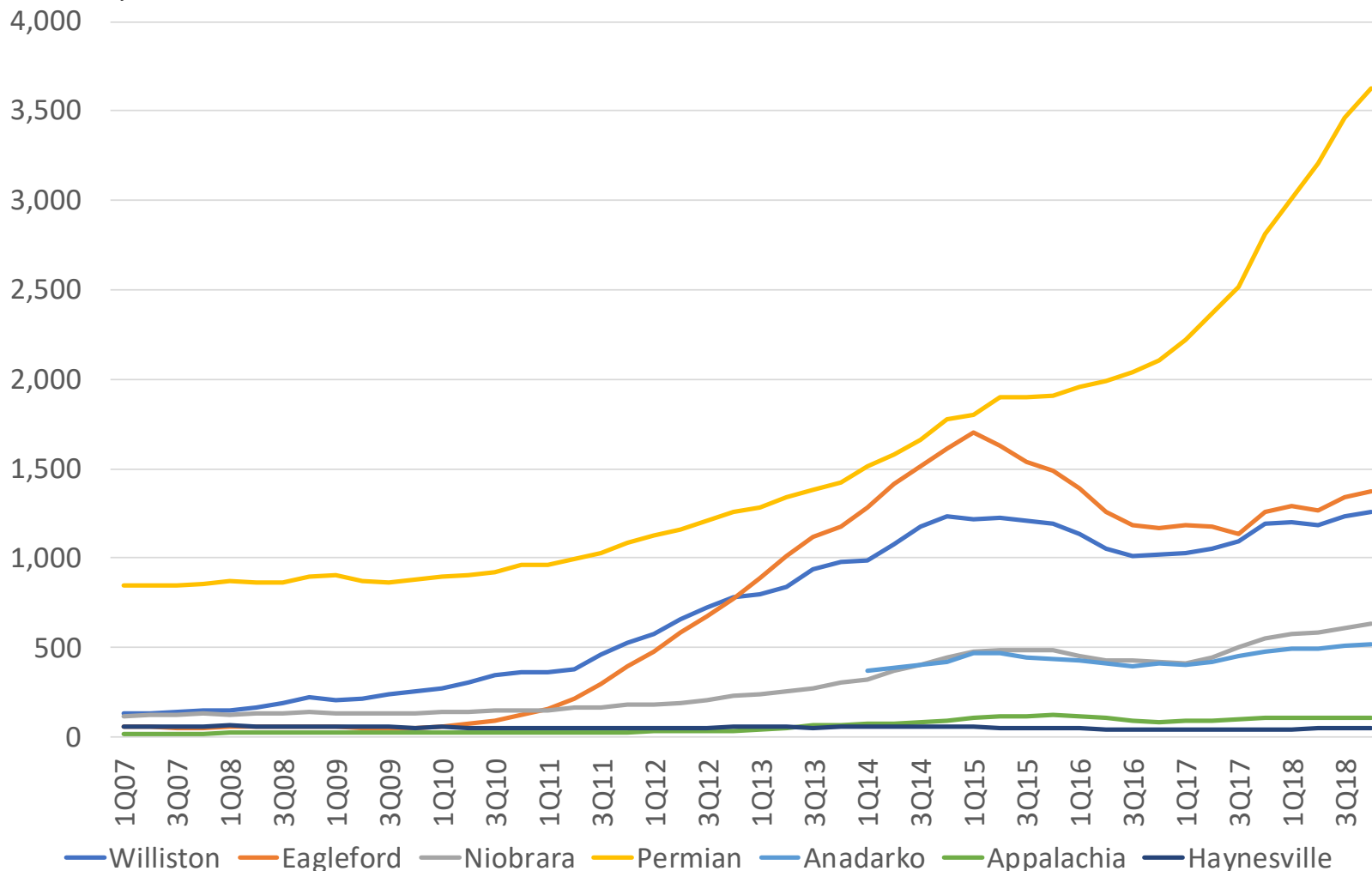
## Year over year change in global upstream capex





## US onshore oil production by basin

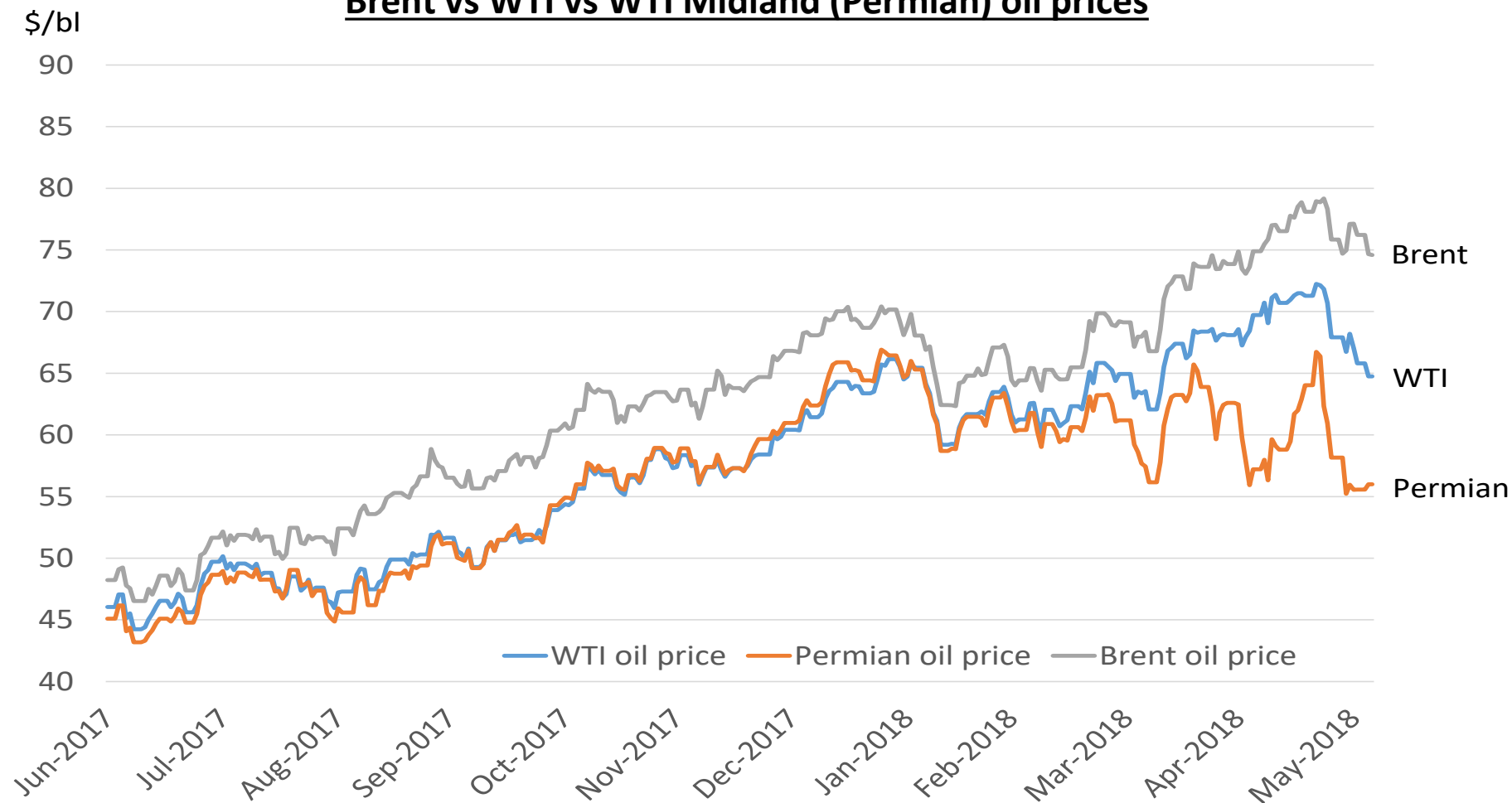
000s b/day





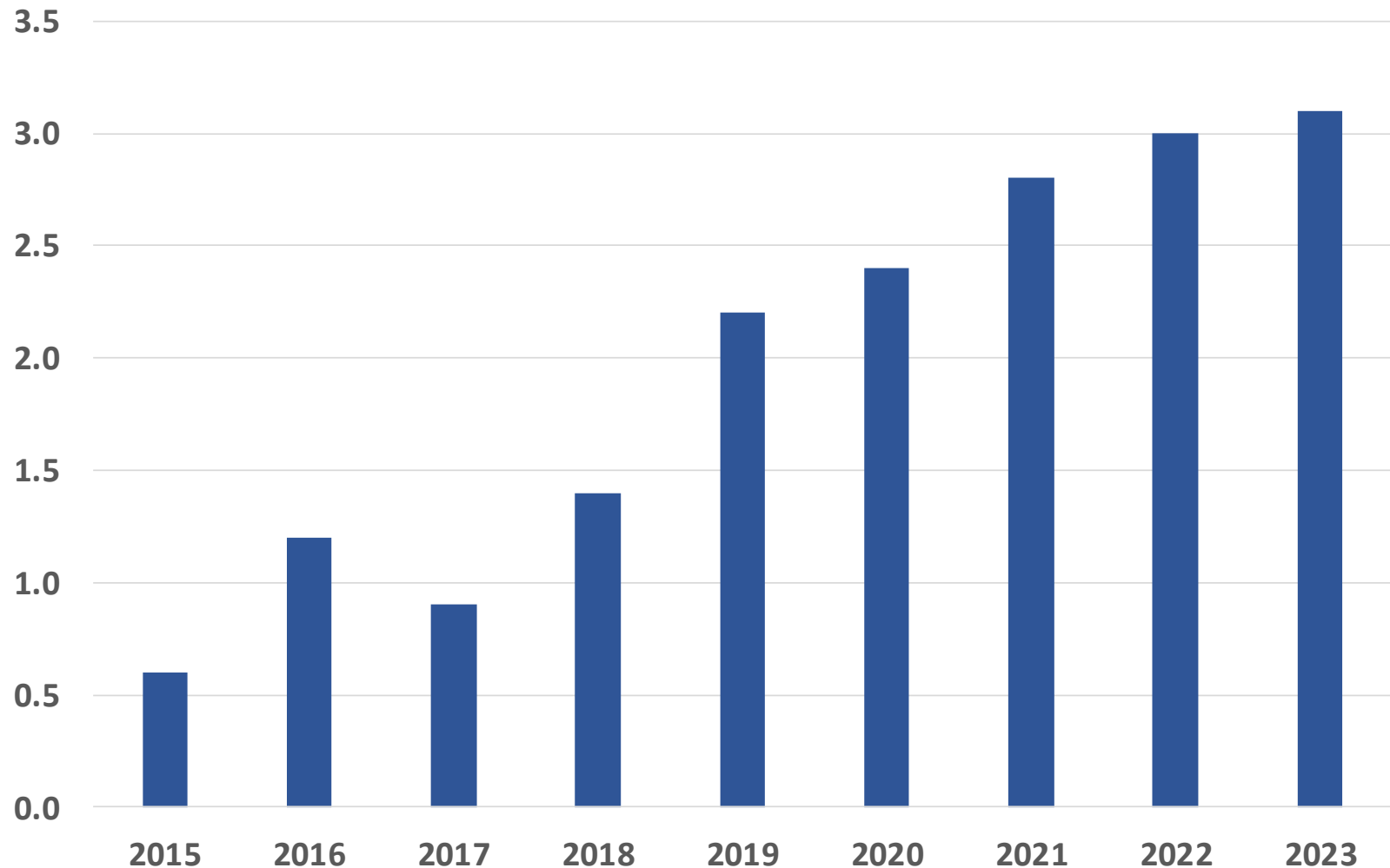
# Non-OPEC supply: Permian differentials have widened significantly<sup>16</sup>

## Brent vs WTI vs WTI Midland (Permian) oil prices



## Estimated new production needed to keep overall US shale supply flat (m b/day)

m b/day



## Potential trajectories for US onshore oil production

Oil price	Production change
\$30-40/bl	Declining 0.3-0.5m b/day
\$40-50/bl	Broadly flat
\$50-60/bl	Increasing around 0.6-1.2m b/day
\$60-70/bl	Increasing around 1.2-1.6m b/day

## OPEC oil production (ex Nigeria/Libya)



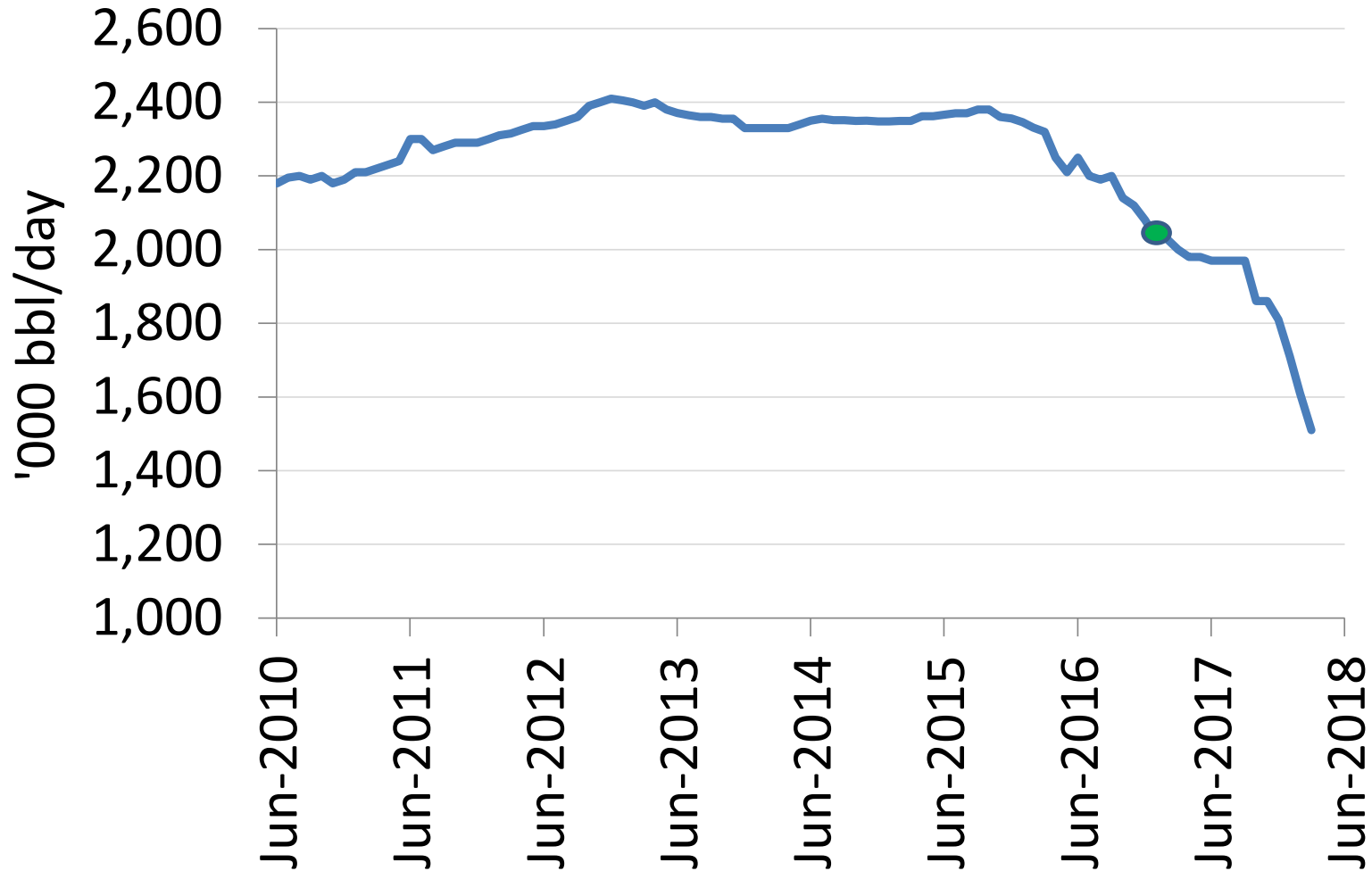
# OPEC oil supply: summary of current positions

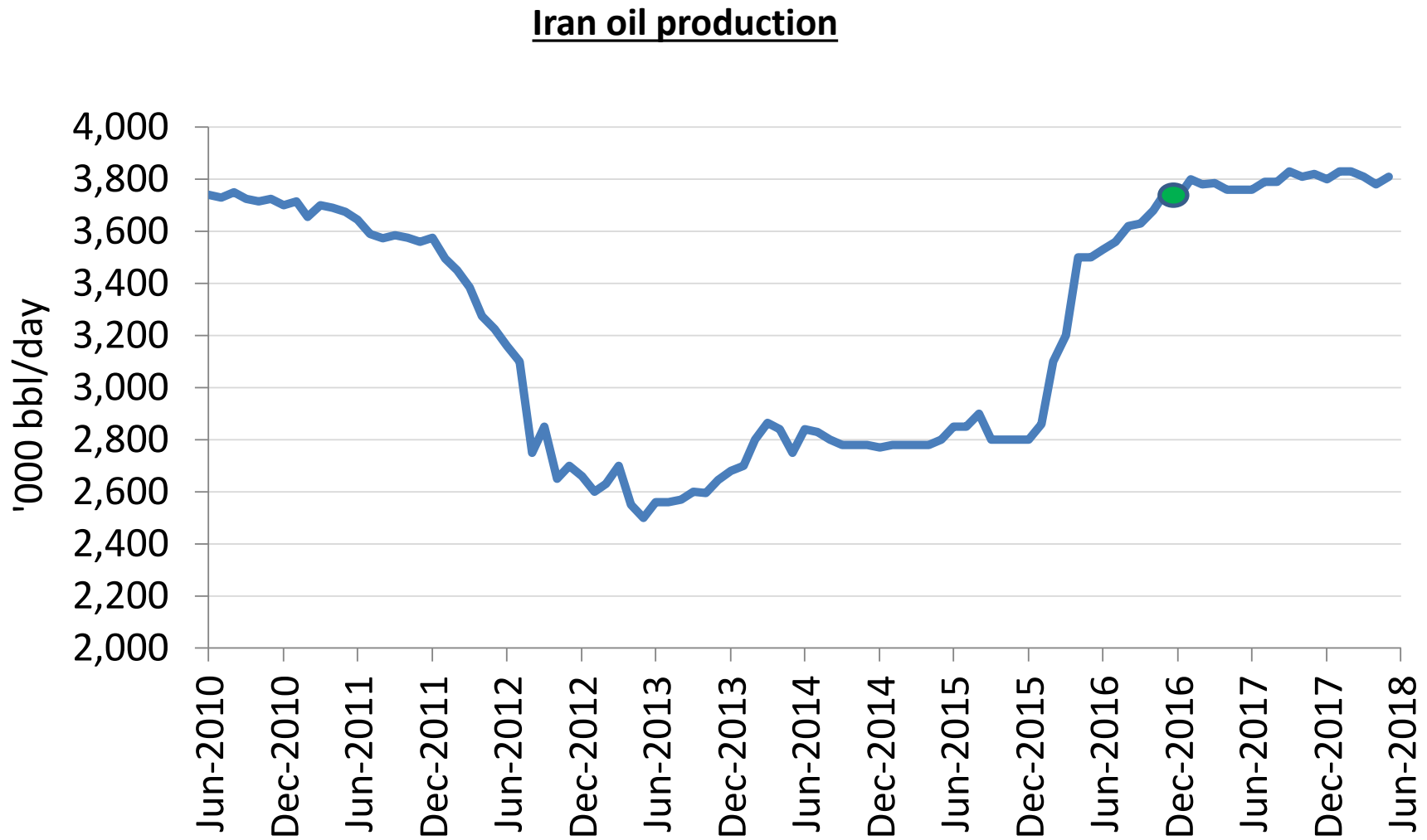
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	Oct 2016	Jan 2017 quota	May 2018			GAM Estimated 2H 2018		Extra oil
(m b/day)	mn b/d	mn b/d	mn b/d	vs quota	Compliance	mn b/d	Change	mn b/d
Saudi	10.54	10.05	10.01	-0.04	108%	10.33	0.28	0.28
Iran	3.70	3.79	3.81	0.02	122%	3.74	-0.05	0.00
Iraq	4.56	4.35	4.48	0.13	38%	4.47	0.12	0.10
UAE	3.01	2.87	2.87	0.00	100%	2.95	0.08	0.08
Kuwait	2.84	2.71	2.71	0.00	100%	2.78	0.07	0.07
Venezuela	2.07	1.97	1.44	-0.53	630%	2.03	0.06	0.00
Angola	1.75	1.66	1.53	-0.13	244%	1.71	0.05	0.00
Algeria	1.09	1.04	1.02	-0.02	140%	1.07	0.03	0.00
Qatar	0.65	0.62	0.60	-0.02	167%	0.64	0.02	0.04
Gabon	0.20	0.19	0.20	0.01	0%	0.20	0.01	0.00
Ecuador	0.55	0.52	0.52	0.00	100%	0.54	0.02	0.02
<b>OPEC-12</b>	<b>31.0</b>	<b>29.8</b>	<b>29.2</b>	<b>-0.58</b>	<b>149%</b>	<b>30.4</b>	<b>0.68</b>	<b>0.59</b>
Nigeria	1.60		1.62	n/a				0.00
Libya	0.42		0.99	n/a				0.00
<b>OPEC-14</b>	<b>33.0</b>	<b>29.8</b>	<b>29.2</b>	<b>n/a</b>		<b>30.4</b>	<b>0.68</b>	<b>0.59</b>
Russia	11.23	10.93	10.97	0.04	87%	11.10	0.17	0.20
Mexico	2.14	2.04	1.90	-0.14	235%	2.09	0.06	0.00
Azerbaijan	0.76	0.72	0.69	-0.04	200%	0.74	0.02	0.00
Khazakhstan	1.65	1.63	1.84	0.21	-940%	1.64	0.01	0.00
Oman	1.01	0.97	1.01	0.03	18%	0.99	0.02	0.00
Others *	1.00	0.95	0.98	0.03	45%	0.98	0.03	0.00
<b>Non-OPEC</b>	<b>17.8</b>	<b>17.2</b>	<b>17.4</b>	<b>0.14</b>	<b>75%</b>	<b>17.6</b>	<b>0.31</b>	<b>0.20</b>
<b>Total OPEC, non-OPEC</b>	<b>50.8</b>						<b>0.99</b>	<b>0.79</b>

\*Bahrain, Brunei, Malaysia, Sudan and South Sudan

## Venezuela oil production





- OPEC have signalled the return of around 0.6m b/day of oil supply in 2H 2018
- Non-OPEC (essentially Russia) looking to add an additional 0.2m b/day of supply

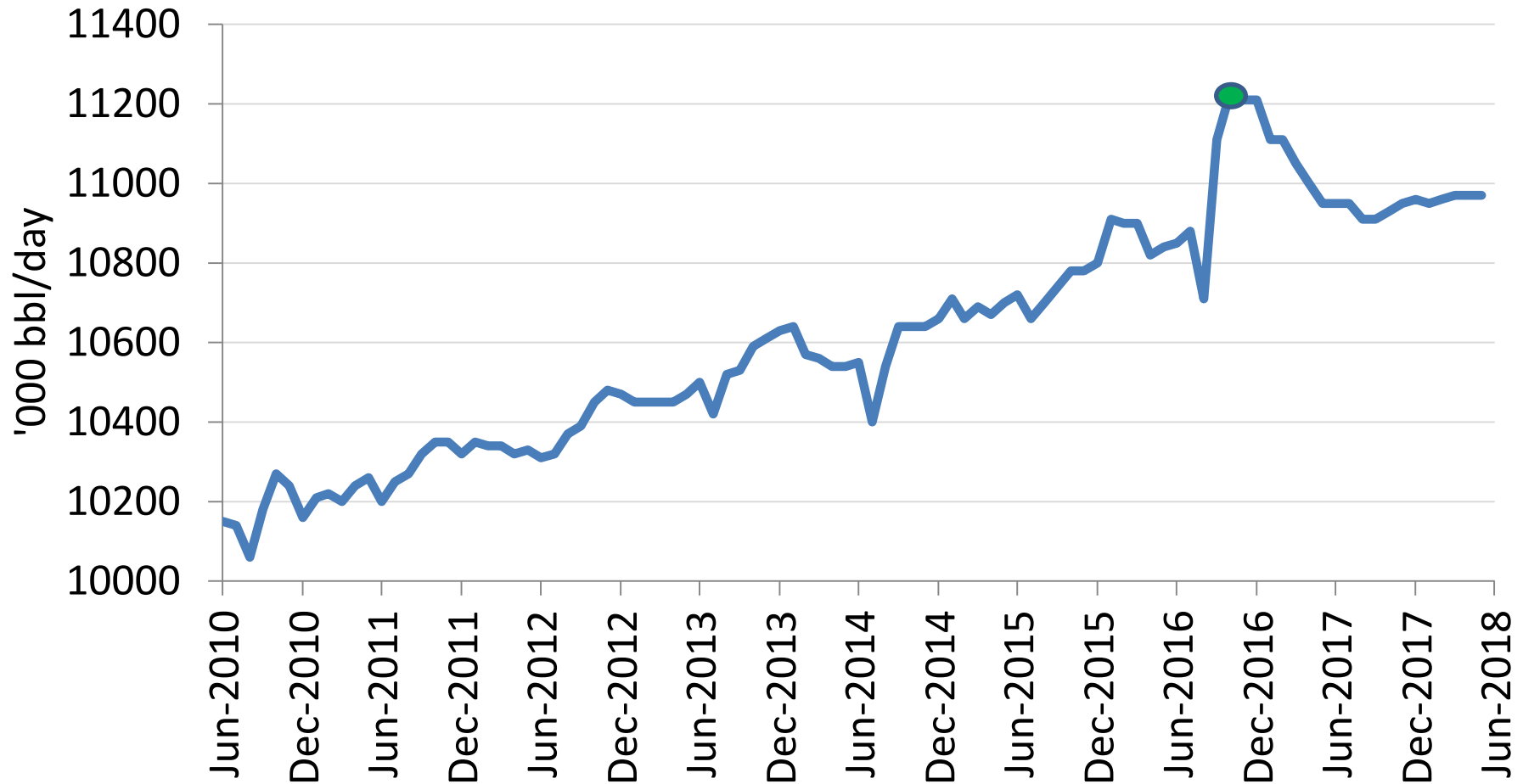
*“We need to continue to tread carefully; none of us want to see the return of the kind of volatility that allows pessimism to return to the markets”*

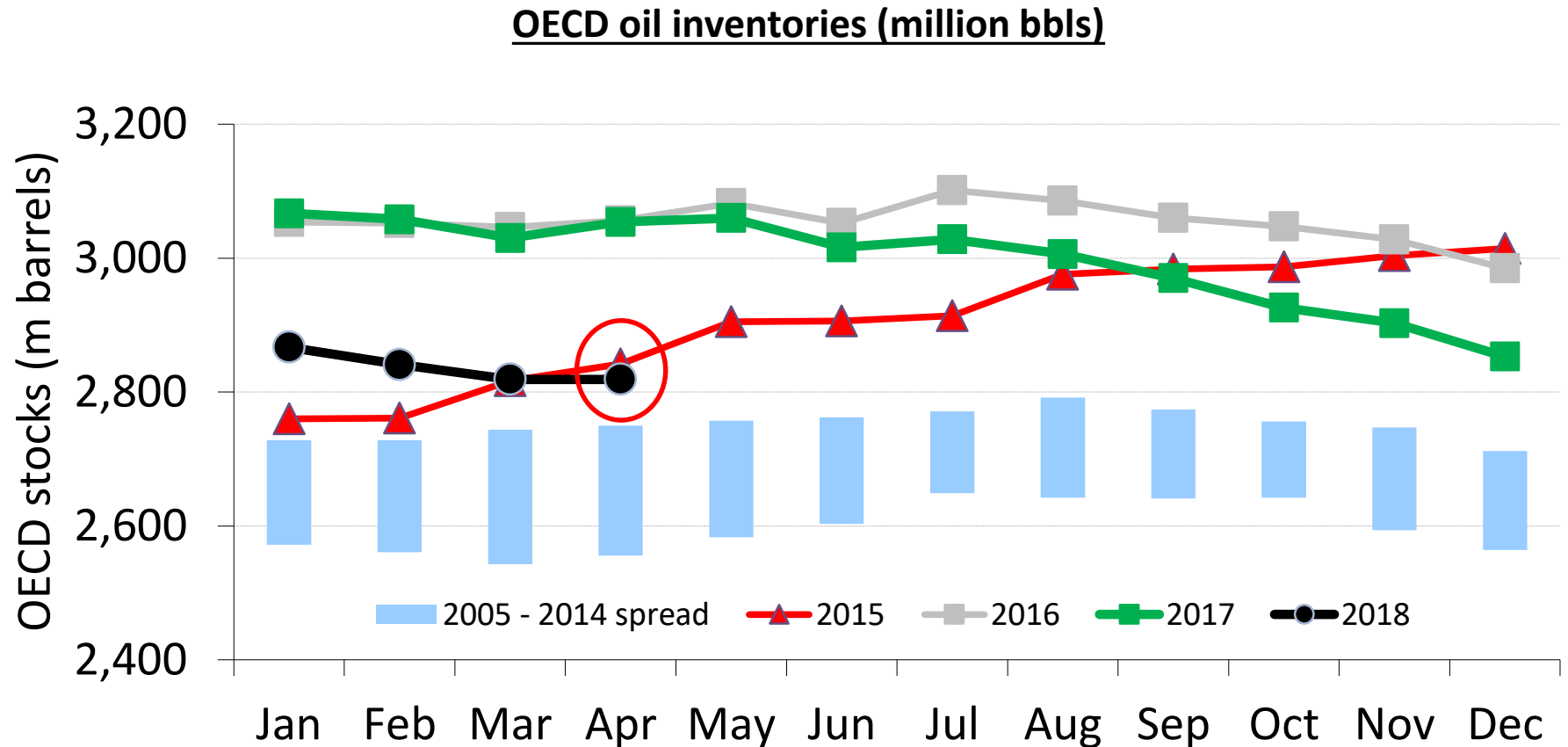
*“So far in 2018, the pace of investment has gradually picked up, but we are still not seeing enough robust investment in long-cycle projects.... Every effort should be made to avoid a potential supply gap that could present a future serious challenge.”*

**OPEC, June 22 2018**



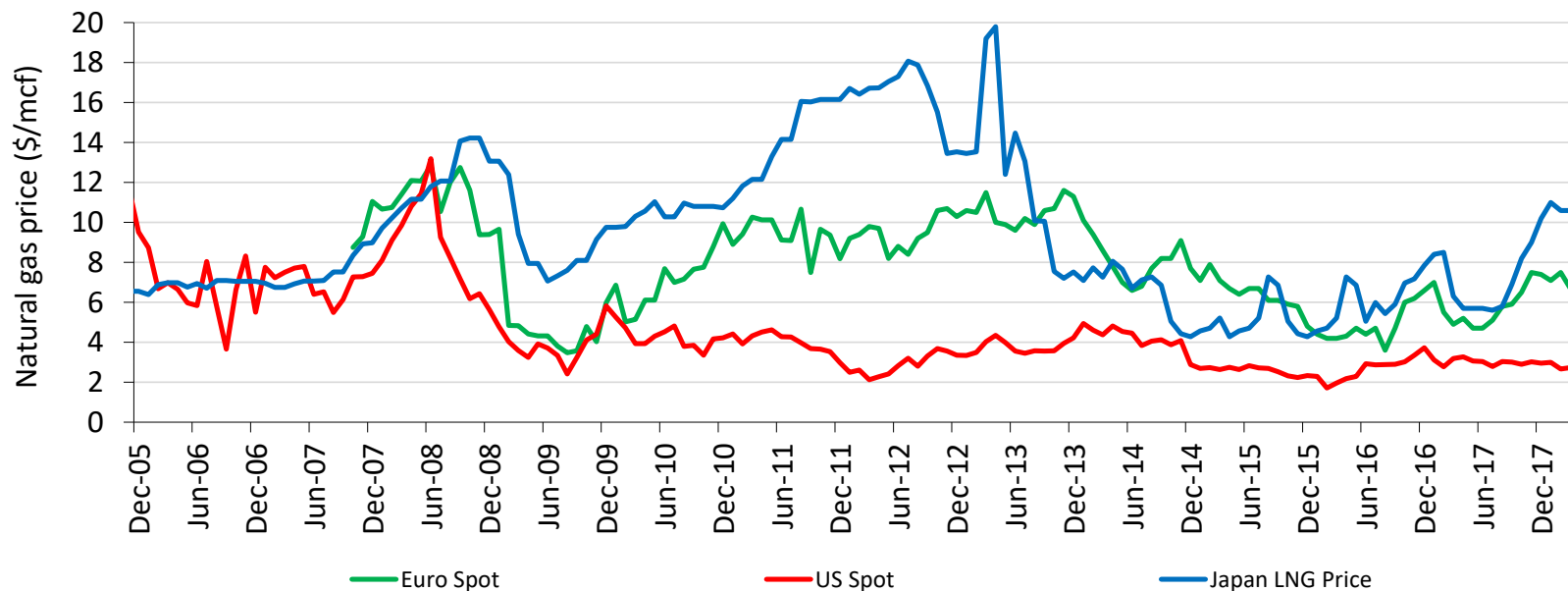
## Russia oil production



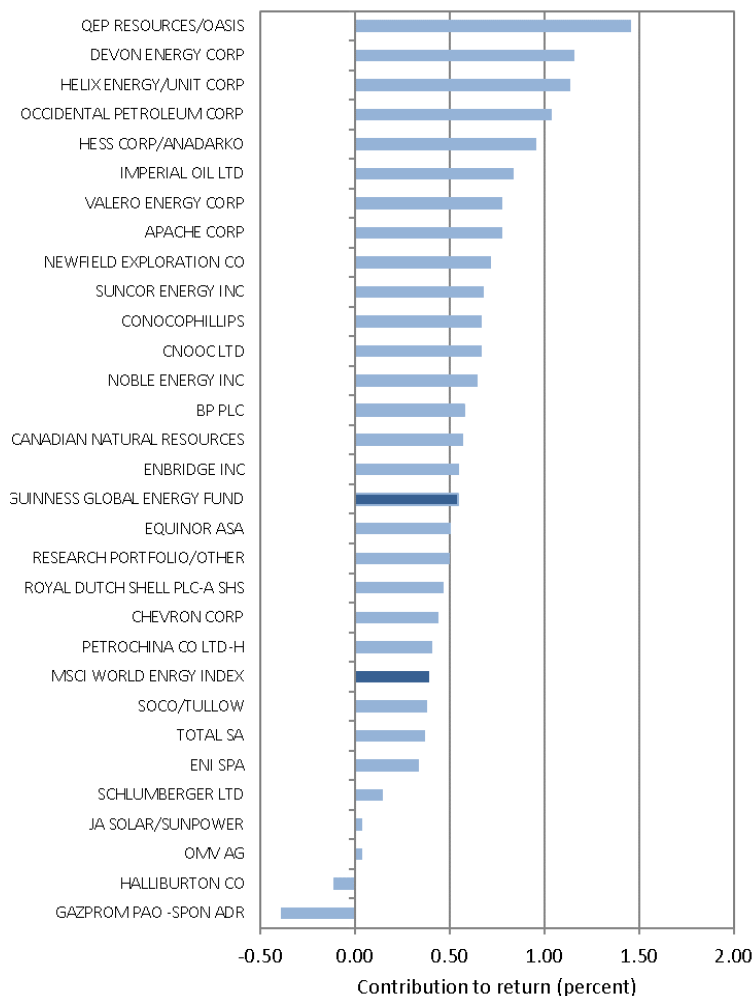


- The gap between US and international gas prices widened in 2017
- US continues to see high levels of new supply, economic at \$3/mcf, from the Marcellus
- New US LNG export facilities starting up over next three years, with major wave in 2019

## Global natural gas prices (US\$/mcf)



## Q2 2018 indicative contribution



- Q2 2018 Fund performance (USD) +15.92%  
vs MSCI World Energy Index (USD) +12.96%

### • Stronger performers in Q2 2018:

- US E&Ps
- US refining
- Canadian integrateds

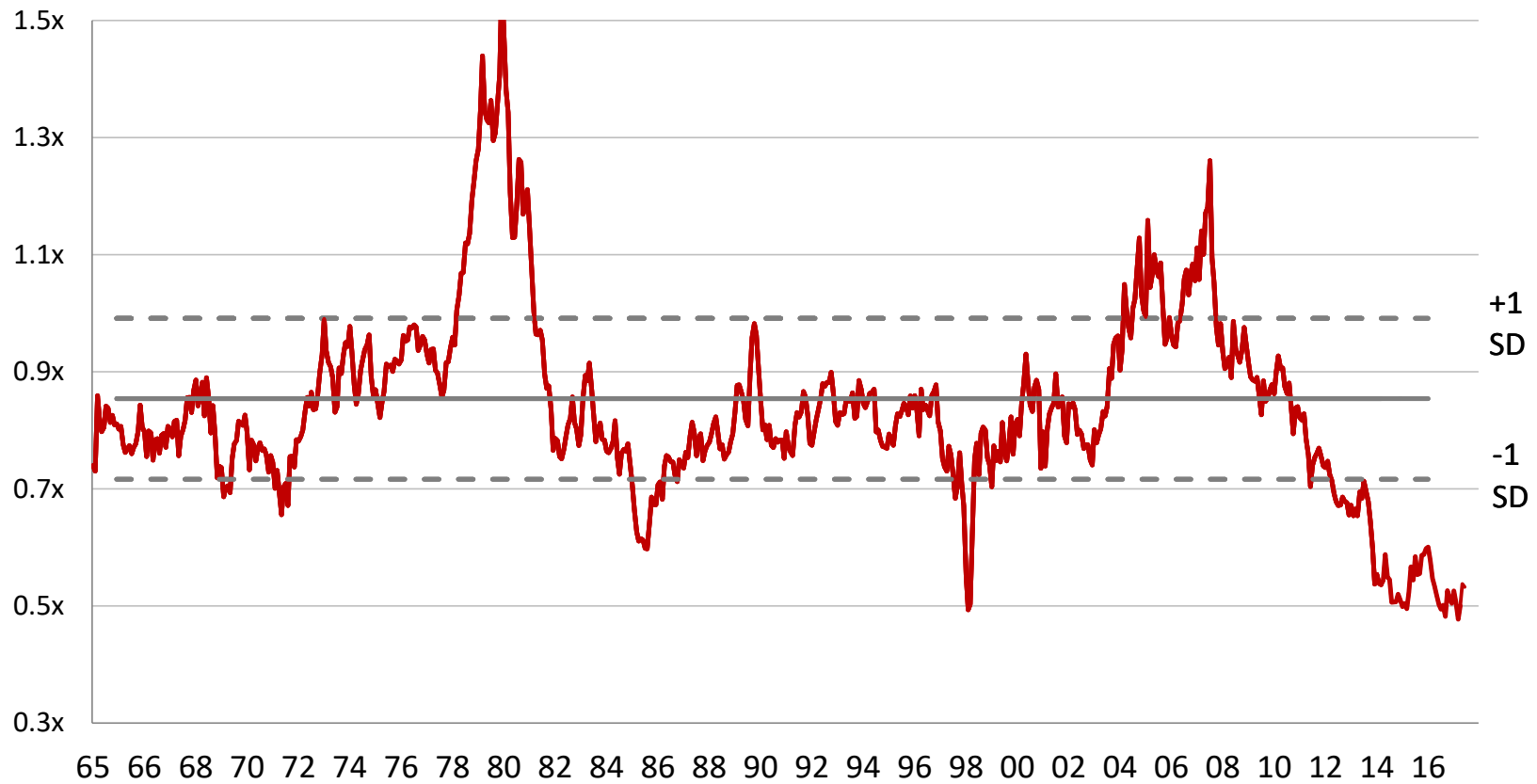
### • Weaker performers in Q2 2018:

- Russian exposed companies
- Large diversified service companies

## Energy companies: historic price to book valuation relative to S&P 500

P/B ratio  
(energy  
relative to  
S&P 500)

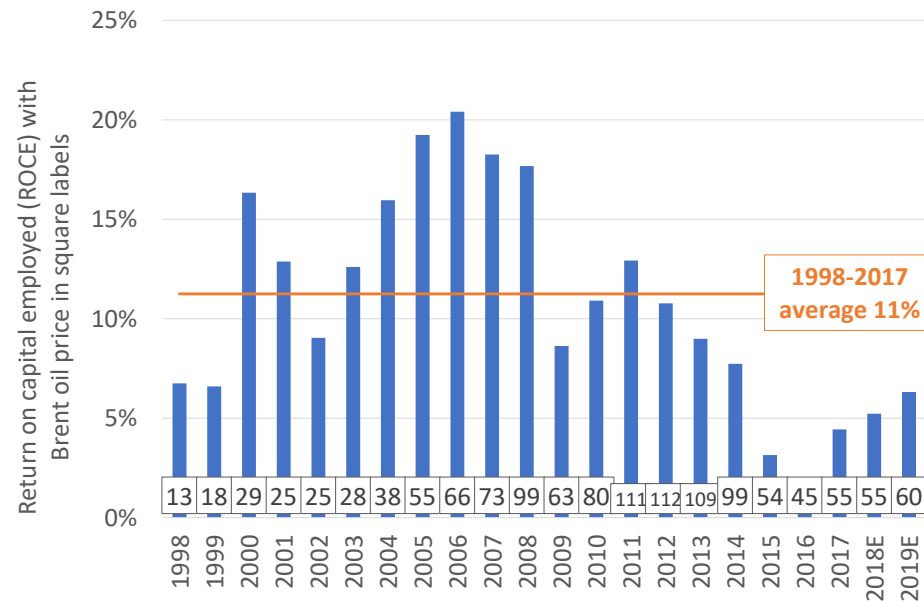
Energy Companies:  
Historical Price-to-Book Valuation Relative to S&P 500



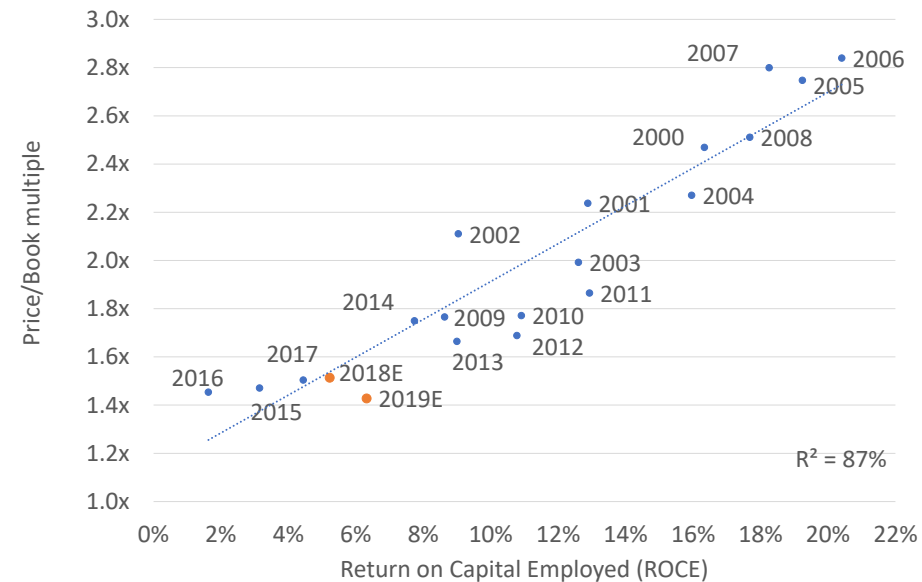
# Guinness Atkinson Energy Fund: ROCE expected to rise from trough level

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## ROCE of current Guinness Atkinson Energy portfolio



## ROCE vs P/B multiple for Guinness Atkinson Energy portfolio

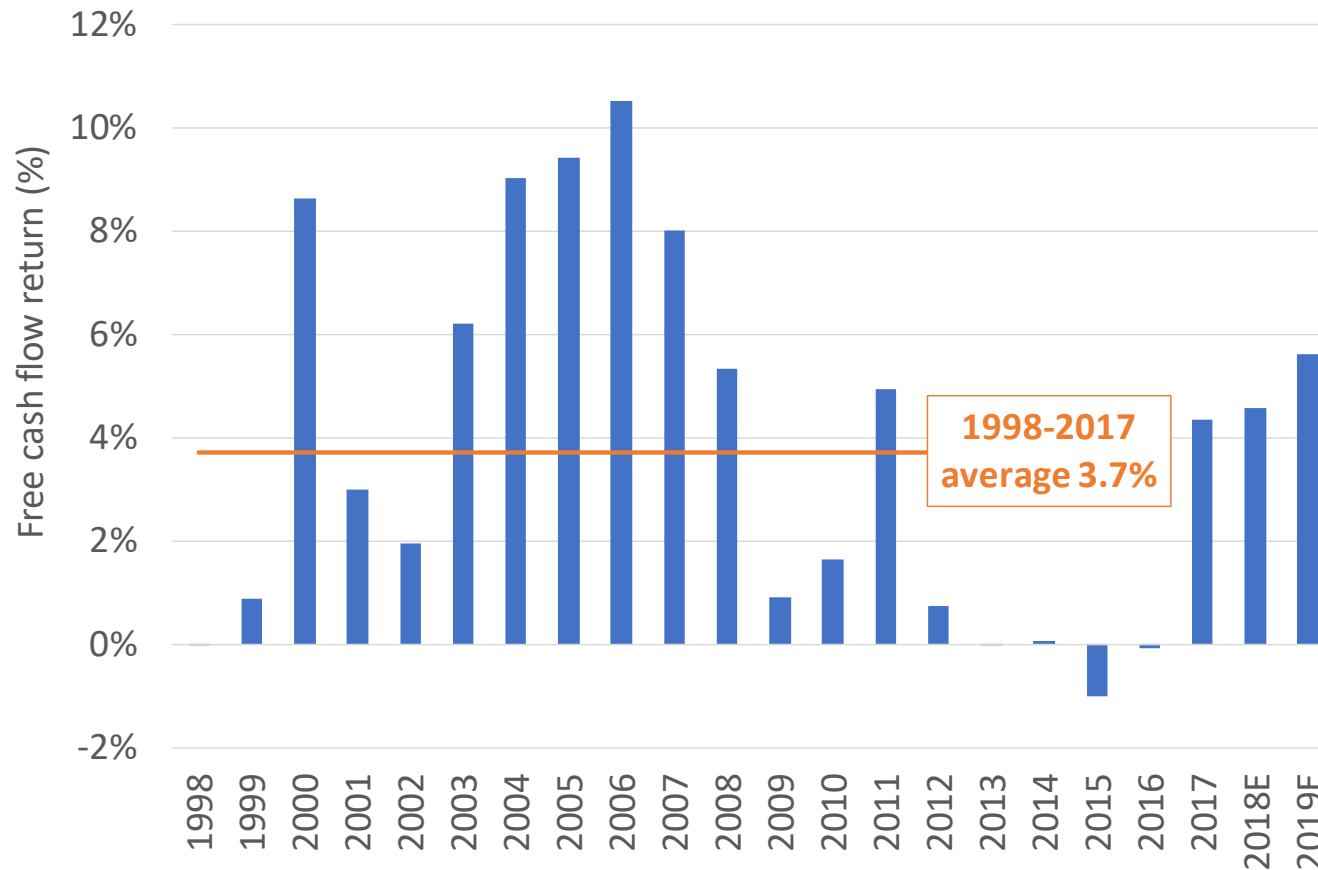


Forecasts are inherently limited and cannot be relied upon

# Guinness Atkinson Energy Fund: FCF improvement not fully valued

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## FCF return of current Guinness Atkinson Energy portfolio



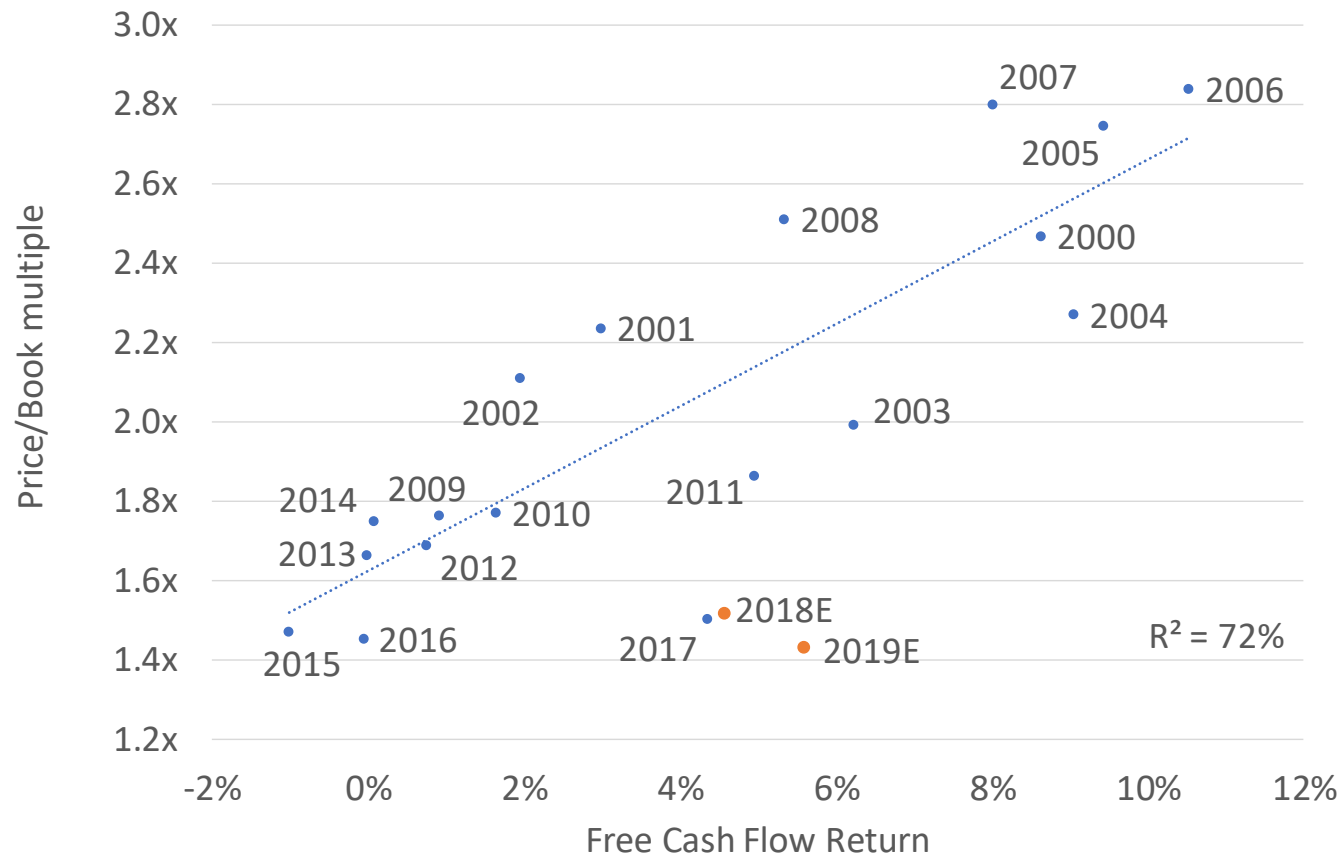
Forecasts are inherently limited and cannot be relied upon

Source: Bloomberg, Company Data and includes analysis of all 'full position' holdings (for which 1998-2017 data is available) in the Guinness Atkinson Energy fund as of March 2018. Data as of June 2018

# Guinness Atkinson Energy Fund: FCF improvement not fully valued

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## FCF return of current Guinness Atkinson Energy portfolio

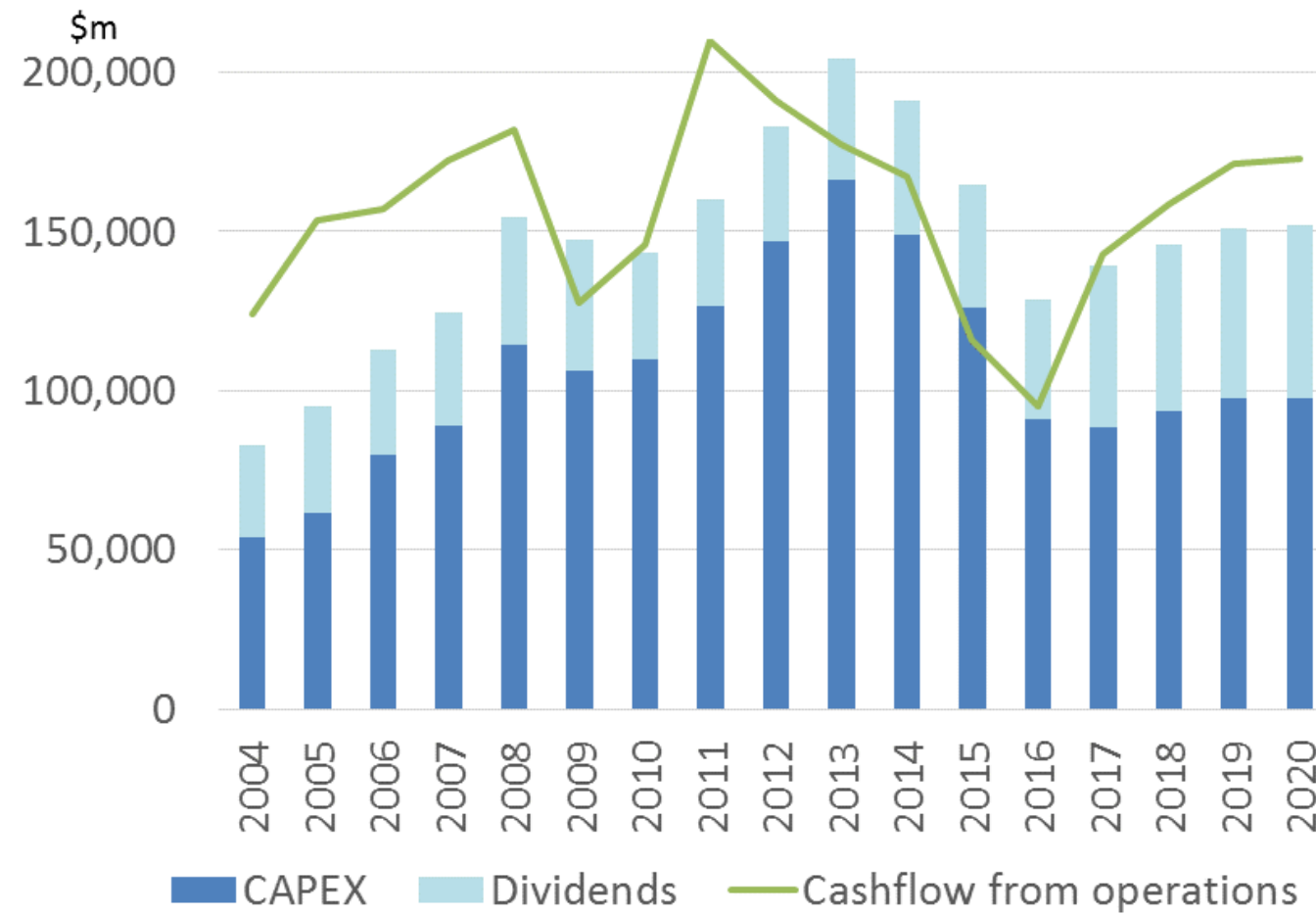


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Source: Bloomberg, Company Data and includes analysis of all 'full position' holdings (for which 1998-2017 data is available) in the Guinness Atkinson Energy fund as of March 2018. Data as of June 2018



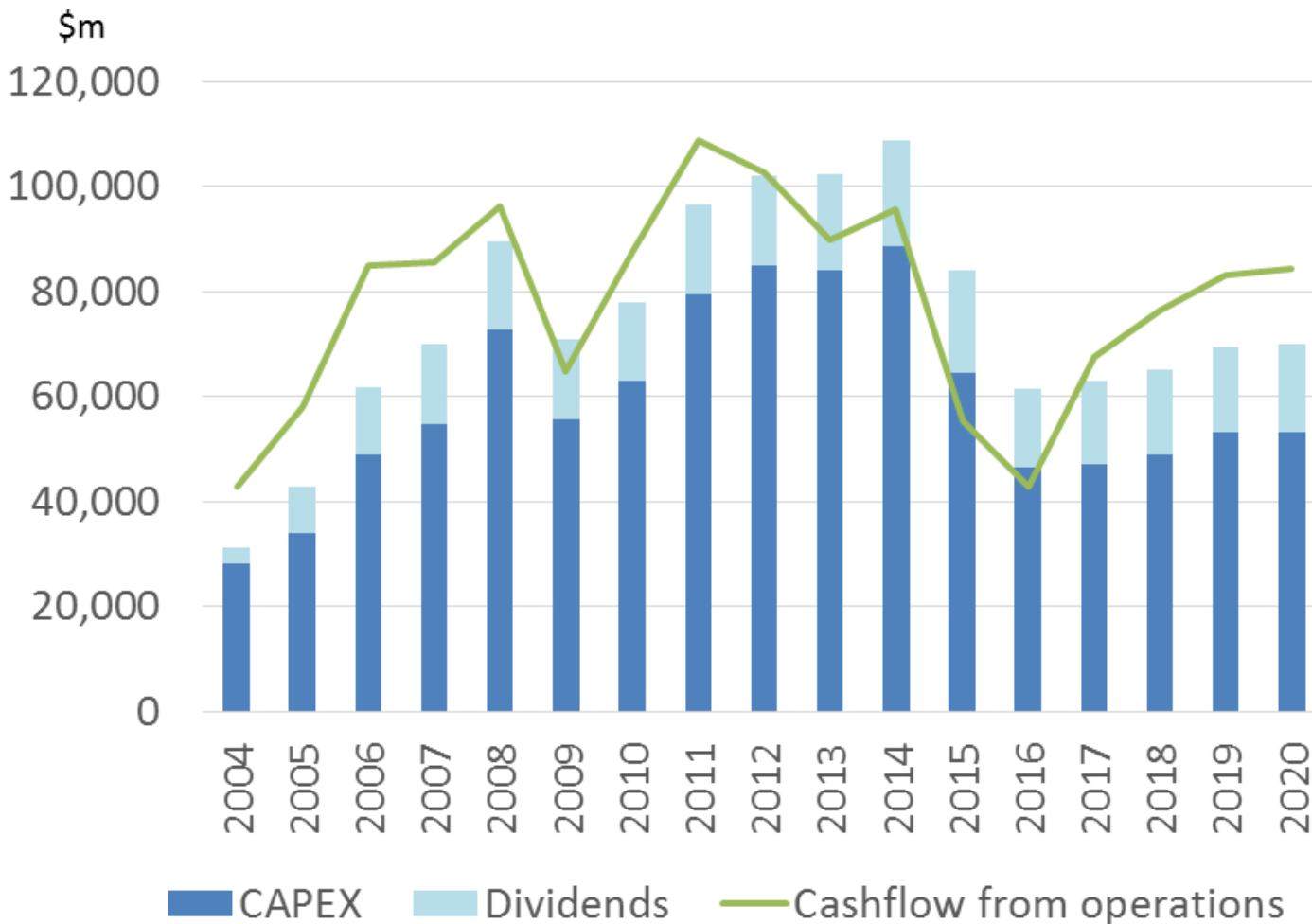
## Super-majors operating cash flow versus capex and dividends



Super-majors have the scope to increase dividend **by about 40%** in 2019/2020 (at \$60 Brent / \$58 WTI)

















- Exxon; Chevron; BP; Royal Dutch Shell; Total

## Other large caps operating cash flow versus capex and dividends



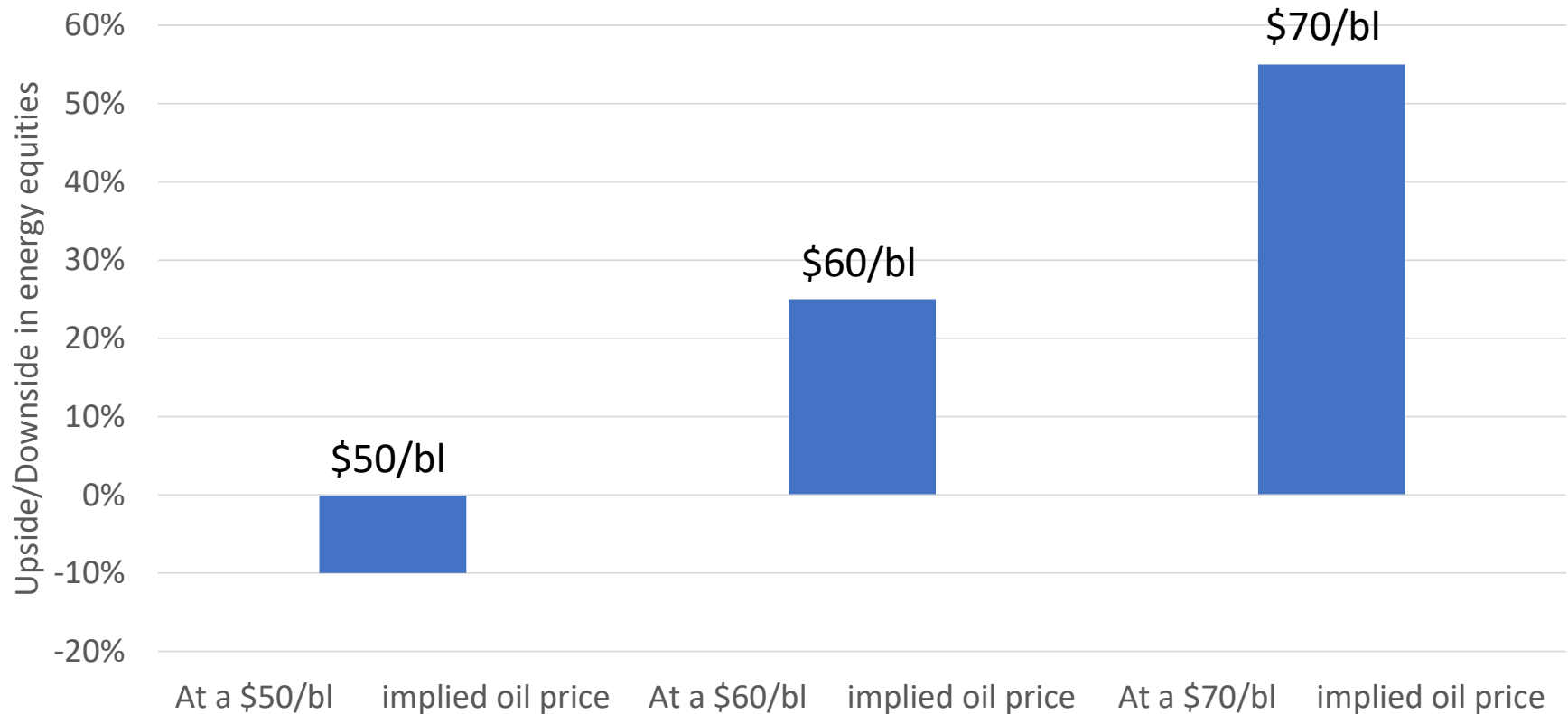
Other large caps have the scope to increase dividend **by about 80%** in 2019/2020 (at \$60 Brent / \$58 WTI)

- Statoil; ENI; OMV; Conocophillips; Occidental; Suncor; CNOOC; Imperial Oil; Canadian Natural Resources

Theme	Example holdings	Weighting (%)
Expanding free cashflow yields from large-cap oil & gas	  	29.8%
North American shale oil & gas growth	  	25.8%
Growing return on capital from oil & gas majors	  	18.2%
Emerging market natural gas demand growth	 	11.2%
Strong refining margins resulting from global GDP growth	 	7.0%
Deleveraging balance sheets	 	2.5%
Growth in global solar market		1.5%
Other (incl cash)		3.9%

**Top 10 holdings as of 06/30/2018:** 1. Enbridge Inc 3.96% 2. Canadian Natural Resources 3.87% 3. Apache Corp 3.77% 4. Devon Energy Corp 3.66% 5. Anadarko Petroleum Corp 3.65% 6. Noble Energy Inc 3.65% 7. Newfield Exploration Co 3.62% 8. ENI SpA 3.62% 9. Royal Dutch Shell PLC 3.59% 10. Suncor Energy Inc 3.58%

## Estimated upside/downside for Guinness Atkinson energy portfolio (2 year view)



# Fund and index performance, as of June 30, 2018

	Q2 2018	1 Year	5 Years*	Since Inception (June 30, 2004)*
Global Energy Fund	15.92%	29.83%	-0.05%	7.39%
MSCI World Energy Index	12.96%	25.03%	2.93%	7.03%
S&P 500	3.43%	14.36%	13.40%	8.63%

Expense ratio: 1.62% (gross); 1.45% (net)

\*Periods over 1 year are annualized returns

*Performance data quoted represents past performance; past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance of the fund may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by calling 800-915-6566 and/or visiting [www.gafunds.com](http://www.gafunds.com)*

<b>Single sector</b>	Companies engaged in the production and distribution of energy (oil, natural gas, coal, alternative energy, nuclear and utilities)
<b>High conviction</b>	Equally weighted, concentrated portfolio (30 positions)
<b>Unconstrained</b>	No reference to index
<b>Global</b>	Diversified globally
<b>Investment type</b>	Listed equities (long-only)
<b>Investment objective</b>	Long-term capital appreciation



## Timothy Guinness

- Executive Chairman and Chief Investment Officer of Guinness Atkinson Asset Management
- Portfolio manager of the Investec Global Energy Fund from November 1998 to February 2008
- Co-founder of Guinness Flight Global Asset Management and, after its acquisition by Investec, chairman of Investec Asset Management until March 2003
- Graduated from Cambridge University in 1968 with a degree in Engineering. After obtaining an MBA at MIT, worked for 10 years as a corporate financier



## Will Riley CA

- Joined Guinness Atkinson Asset Management in 2007
- Company valuation expert for PricewaterhouseCoopers 2000-2007
- Qualified as a Chartered Accountant in 2003
- Graduated from Cambridge University with a Masters degree in Geography in 1999



## Jonathan Waghorn

- Joined Guinness Atkinson Asset Management in 2013
- Co-portfolio manager of the Investec Global Energy Fund from February 2008 to May 2012
- Co-head of energy equity research at Goldman Sachs from 2000-2008
- Drilling engineer in Dutch North Sea for Shell

## Corporate Office (California)

**Aya Aboul Hosn**

**aya.aboulhosn@gafunds.com**

**1-626-628-2753**

**225 Lake Avenue  
Suite 216  
Pasadena  
California 91101**

## Investment management team (London)

**Tim Guinness**

**tim.guinness@gafunds.com**

**+44 (0) 20 7222 7978**

**Will Riley**

**will.riley@gafunds.com**

**+44 (0) 20 7222 3451**

**Jonathan Waghorn**

**jonathan.waghorn@gafunds.com**

**+44 (0) 20 7222 3457**

**14 Queen Anne's Gate  
London  
SW1H 9AA**

*For your protection, calls to these numbers may be recorded*



- **Guinness Atkinson Asset Management:** founded in 2003, along with UK sister firm Guinness Asset Management
- **Four core areas of expertise:** Global Equities, Energy, Asia & Financials
- **Guinness Atkinson Group AUM (at June 30, 2018): \$1.7bn**
- **Group staff of 30, including 14 investment professionals**
- **Company is 100% owned by employees**

Opinions expressed are subject to change, are not guarantee and should not be considered investment advice.

The Fund's holdings, industry sector weightings and geographic weightings may change at any time due to on-going portfolio management. References to specific investments and weightings should not be construed as a recommendation by the Fund or Guinness Atkinson Asset Management, Inc. to buy or sell the securities. Current and future portfolio holdings are subject to risk. References to other mutual funds should not be interpreted as an offer of these securities.

**Mutual fund investing involves risk and loss of principal is possible. The Fund invests in foreign securities which will involve greater volatility, political, economic and currency risks and differences in accounting methods. The Fund is non-diversified meaning it concentrates its assets in fewer individual holdings than a diversified fund. Therefore, the Fund is more exposed to individual stock volatility than a diversified fund. The Fund also invests in smaller companies, which involve additional risks such as limited liquidity and greater volatility. The Fund's focus on the energy sector to the exclusion of other sectors exposes the Fund to greater market risk and potential monetary losses than if the Fund's assets were diversified among various sectors. The decline in the prices of energy (oil, gas, electricity) or alternative energy supplies would likely have a negative effect on the funds holdings.**

While the fund is no-load, management and other expenses still apply. Please refer to the prospectus for further details.

*The Fund's investment objectives, risks, charges and expenses must be considered carefully before investing. The statutory and summary prospectus contains this and other important information about the investment company, and it may be obtained by calling 800-915-6566 or visiting [gafunds.com](http://gafunds.com). Please read it carefully before investing.*

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Fund holdings & sector allocations are subject to change and are not recommendations to buy or sell any security.

**Diversification does not assure a profit nor protect against a loss in a declining market.**

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