Global Energy:
Q1 2018 webcast

April, 2018

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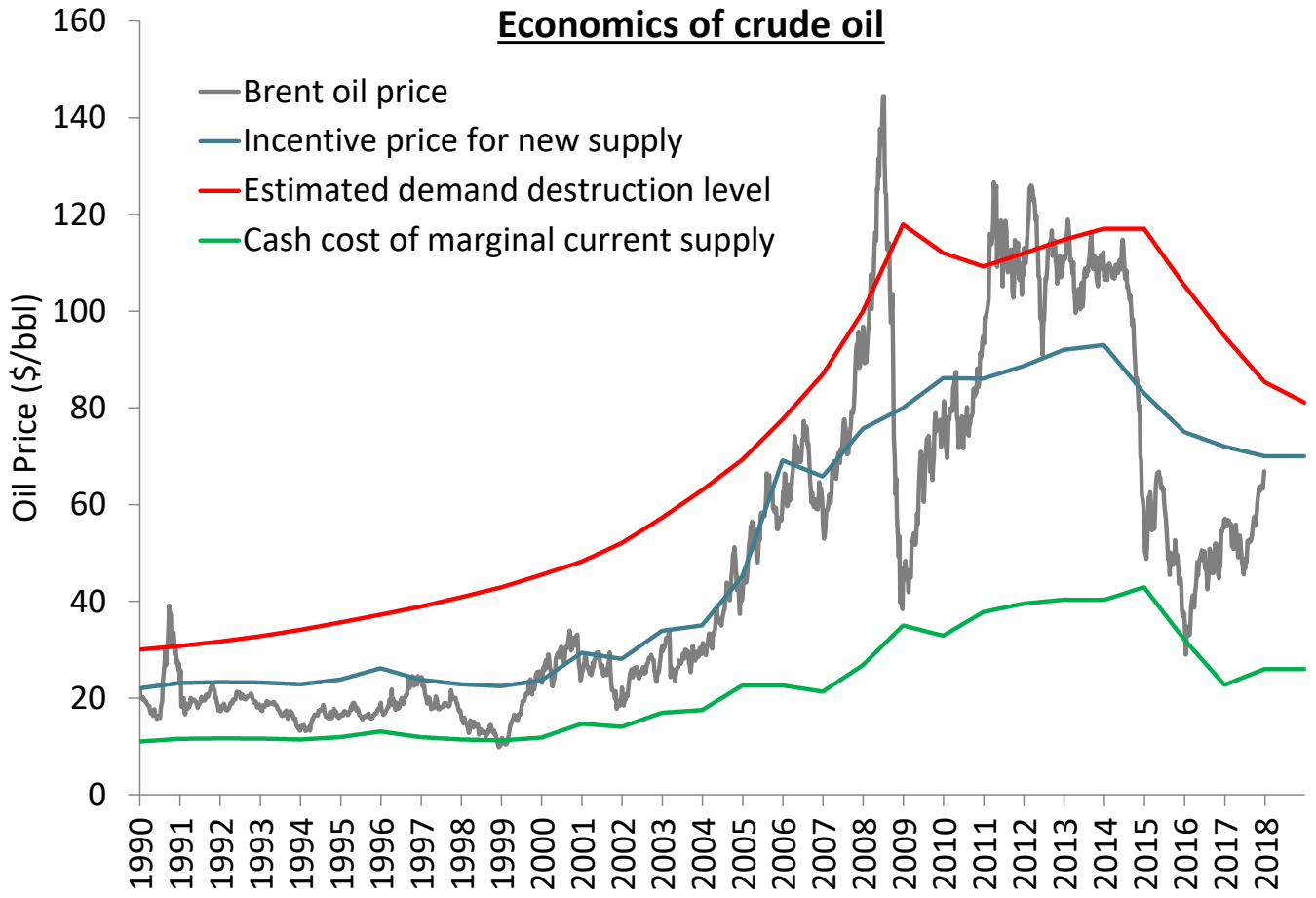
Energy sector: recent trends for commodities and equities

- **Oil inventories** continue to tighten, keeping spot oil price elevated above $60/bl
- **Global oil demand growth** for 2018 seen positive revisions
- **US shale supply** growing well as expected, though Permian infrastructure issues emerging
- **OPEC** remaining disciplined in their supply cuts, compounded by Venezuelan declines
- **Free cashflow** generation improving for energy equities, with capital discipline generally being rewarded by the market over growth, in our view
- **Energy equities** in line with broad market YTD (having rallied in April) – we believe FCF/ROCE improvements imply material upside in the sector, as do oil price sensitivities

Economics: marginal cost of supply has historically defined prices

- The oil price trades between the cash cost of supply and the price at which demand falls
- Marginal cost tends to determine the oil price in the longer term

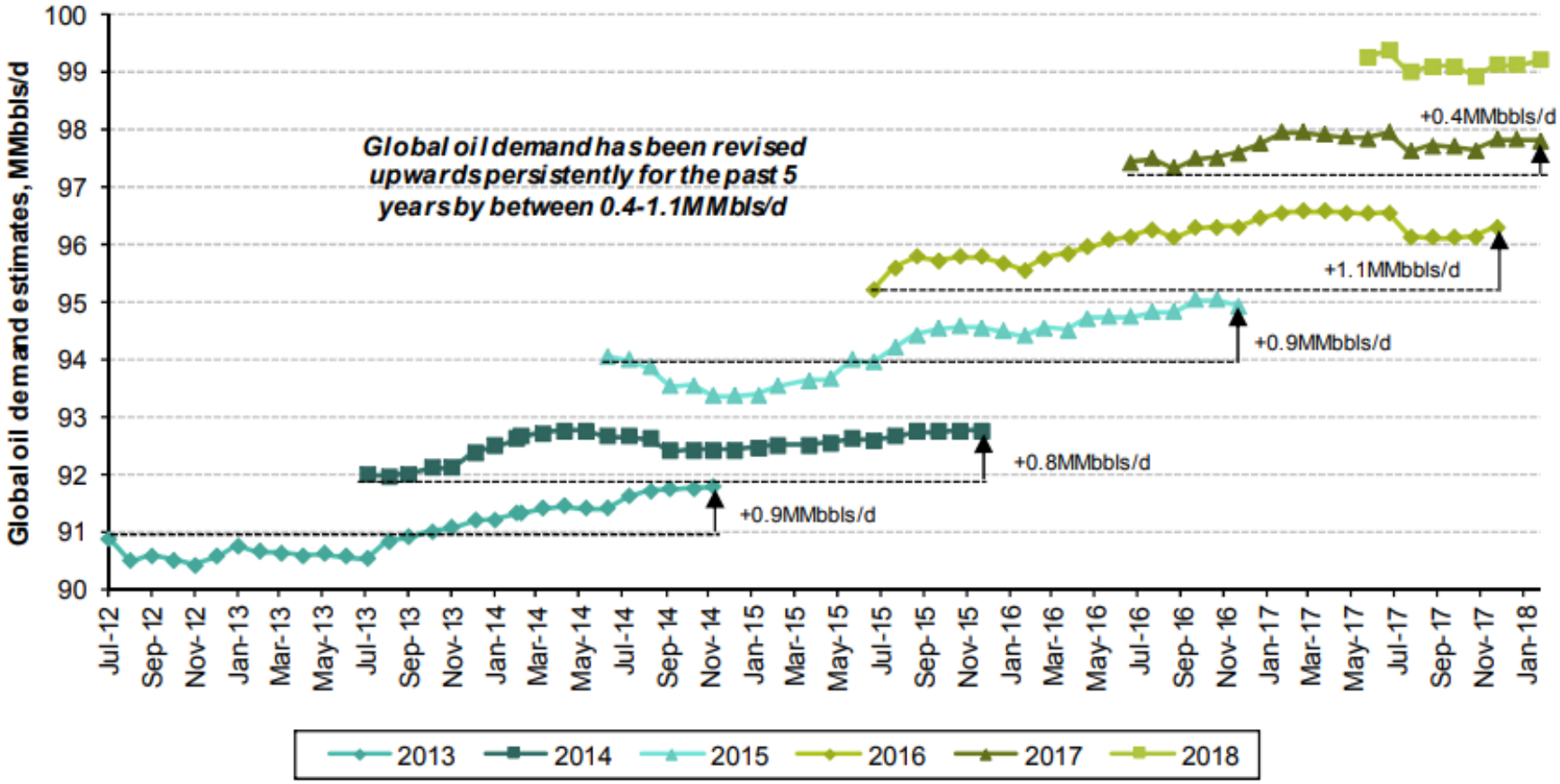


Source: Bernstein, Guinness Atkinson, April 2018

Oil demand: consistent upward revisions since 2013

- IEA global oil demand forecasts have been upgraded every year since 2013
- The positive effect of lower oil prices on consumption has been consistently underestimated

IEA global oil demand forecasts 2013-2018 (m b/day)



Source: Bernstein; April 2018

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

- 2017 world oil demand up around 10.6m b/day on pre-recession peak (2007)
- Non-OECD demand has grown unchecked for over a decade, not unseated by financial crisis
- Estimates for 2018 indicate healthy demand growth of 1.5m b/day – mostly from non-OECD

Global oil demand (m b/day)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
OECD demand															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	14.4	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
Total OECD	**50.1**	**50.4**	**48.9**	**50.1**	**48.3**	**46.4**	**47.0**	**46.5**	**45.9**	**46.1**	**45.8**	**46.4**	**46.9**	**47.4**	**47.7**
Change in OECD demand		*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*
NON-OECD demand															
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	12.5	12.9
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
Total Non-OECD	**33.1**	**34.1**	**35.4**	**37.1**	**38.1**	**39.1**	**41.4**	**42.7**	**44.8**	**45.6**	**47.3**	**48.6**	**49.3**	**50.4**	**51.6**
Change in non-OECD demand		*1.0*	*1.3*	*1.7*	*1.0*	*1.0*	*2.3*	*1.3*	*2.1*	*0.8*	*1.7*	*1.3*	*0.7*	*1.1*	*1.2*
Total Demand	**82.5**	**83.8**	**85.1**	**87.2**	**86.4**	**85.5**	**88.4**	**89.2**	**90.7**	**91.7**	**93.1**	**95.0**	**96.2**	**97.8**	**99.3**
Change in demand		*1.3*	*1.3*	*2.1*	*-0.8*	*-0.9*	*2.9*	*0.8*	*1.5*	*1.0*	*1.4*	*1.9*	*1.2*	*1.6*	*1.5*

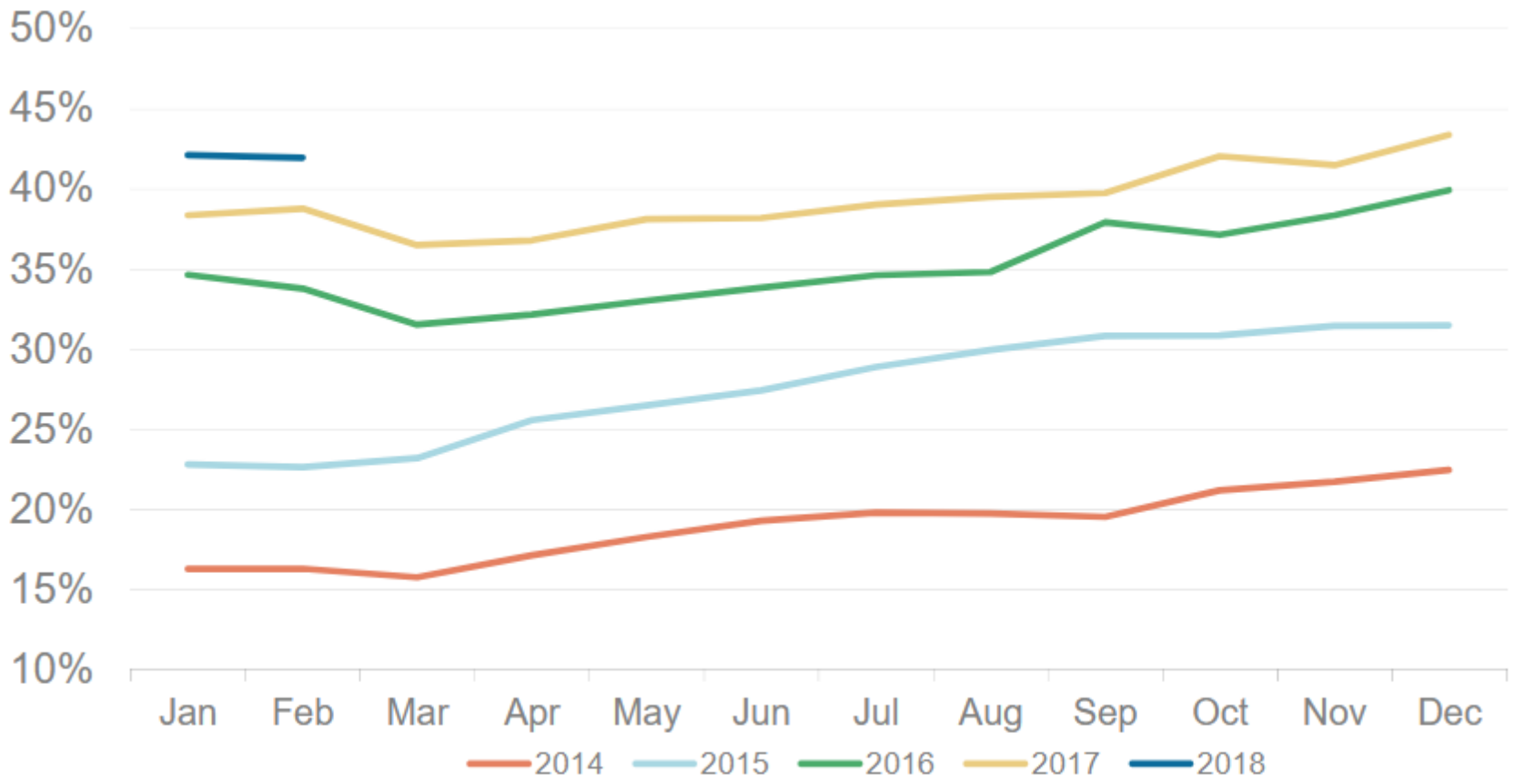
Source: IEA Oil Market Report March 2018; Guinness Atkinson

Forecasts are inherently limited and cannot be relied upon.

Near term oil demand: China oil consumption boosted by SUVs

- China oil consumption boosted by change in consumer behaviour in vehicle market

China SUV sales as % of total vehicle sales

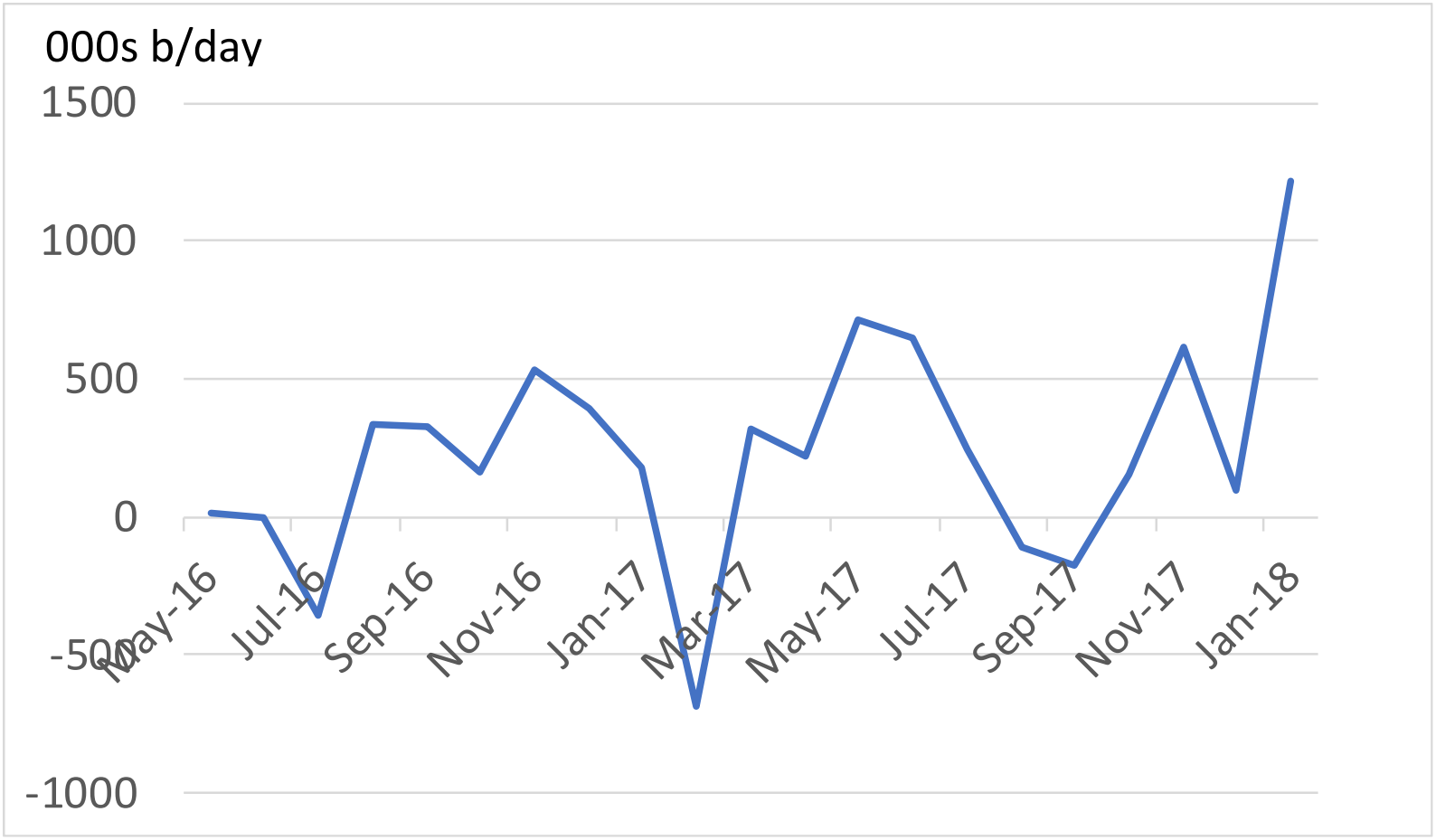


Source: Morgan Stanley April 2018

Near term oil demand: US consumption jumped at start of 2018

- Jan 2018 US oil consumption rose (year/year) by 1.2m b/day, the highest growth rate for 20 years

US oil consumption (year/year)

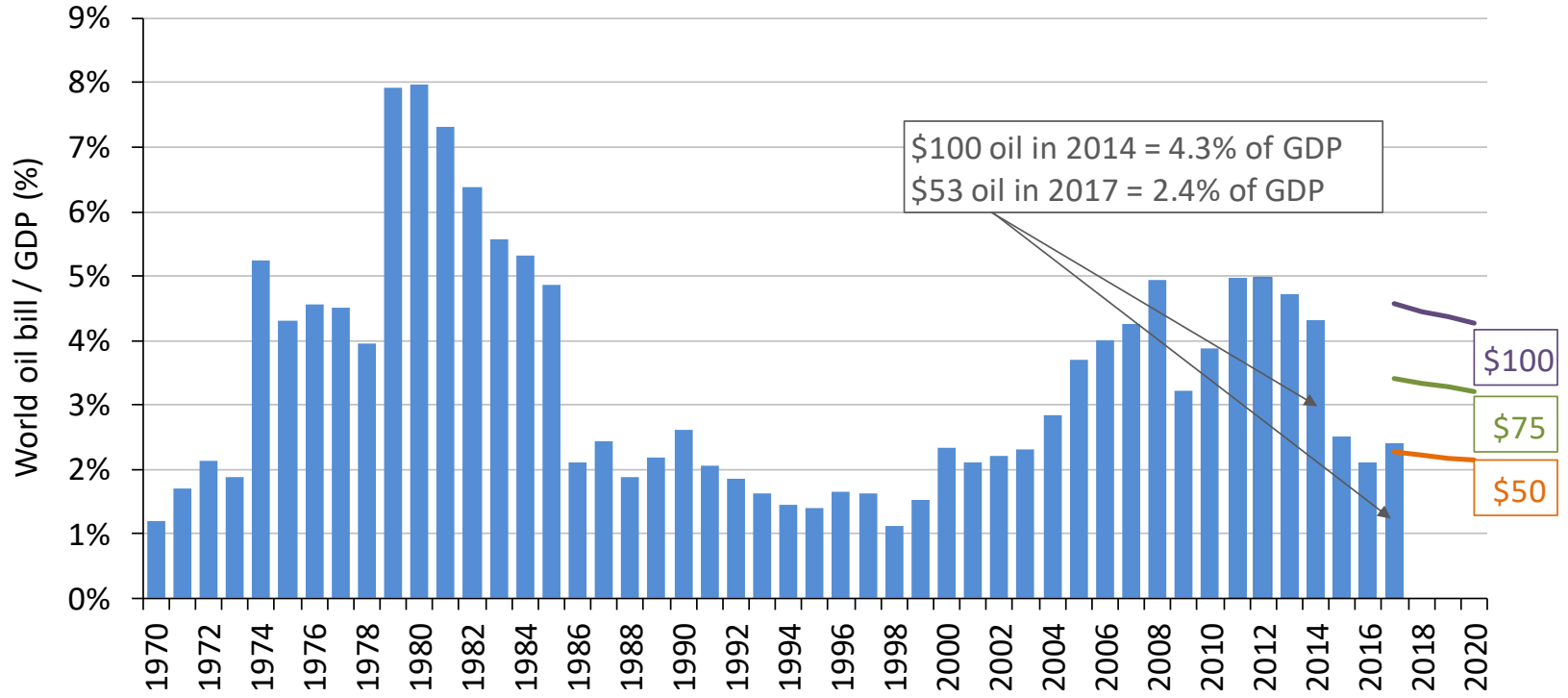


Source: Piper Jaffray; Guinness Atkinson, April 2018

Oil price: $53 oil implies spend of 2.4% of world GDP in 2017

- We believe Saudi is targeting a price that gives a "reasonable" world oil bill
- Ten year average world oil bill is 4.2%, 20yr average is 3.2%, 30yr average is 2.8%
- If oil averages $75 it will mean in 2020 the world oil bill is 3.1% of GDP
- If oil averages $50 it will mean in 2020 the world oil bill is 2.1% of GDP

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



Source Bloomberg LP; Guinness Atkinson, data as of Dec 2017

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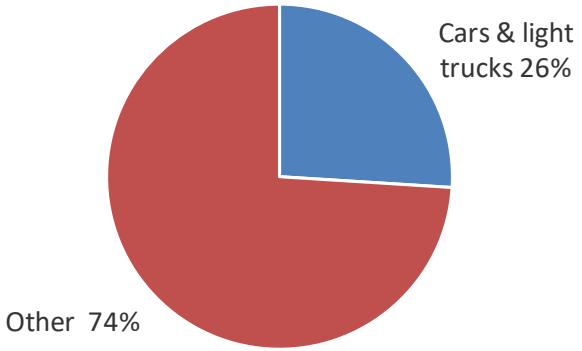
Oil demand: what about the rest?

- Passenger vehicles account for less than 30% of oil demand. Other key sources of demand (heavy transport; petrochemicals) more closely linked to GDP growth

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%
Total	**100%**

- **Global truck fleet** rising from 377m in 2015 to 600m in 2030 **(+c.60%)**
- **Air revenue passenger kms** rising from 9trn in 2015 to 15trn in 2030 **(+c.70%)**
- **Seaborne trade** rising from 54trn ton miles in 2015 to 90trn ton miles in 2030 **(+c.70%)**
- **Ethylene demand** rising from 141m tons to 230m tons in 2030 **(+c.65%)**

Source : US DoE (actual), Guinness Atkinson (estimates) as of March 2018

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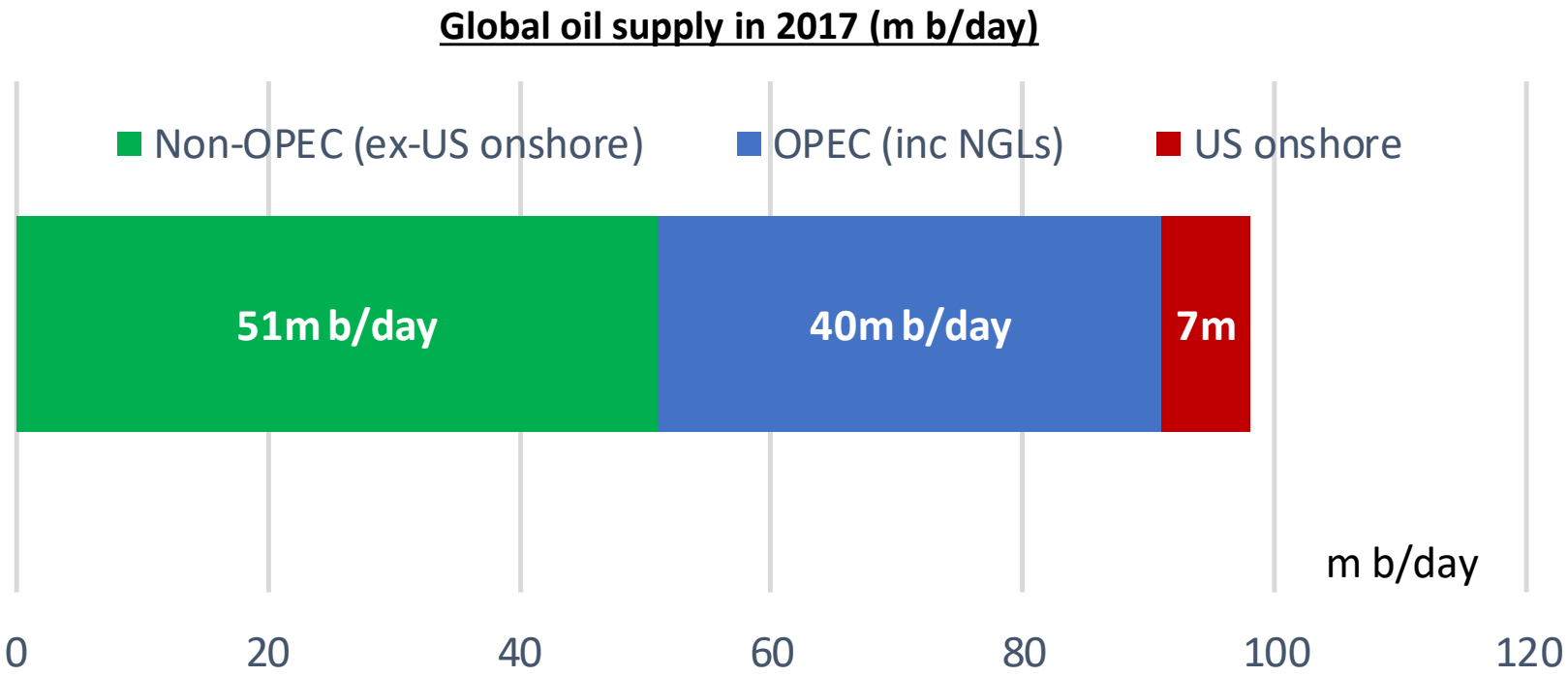
Global oil supply: three main components



1) Non-OPEC (ex-US onshore): holding up thanks to legacy projects, but facing decline

2) OPEC (inc NGLs): low cost production, but in countries struggling to breakeven fiscally

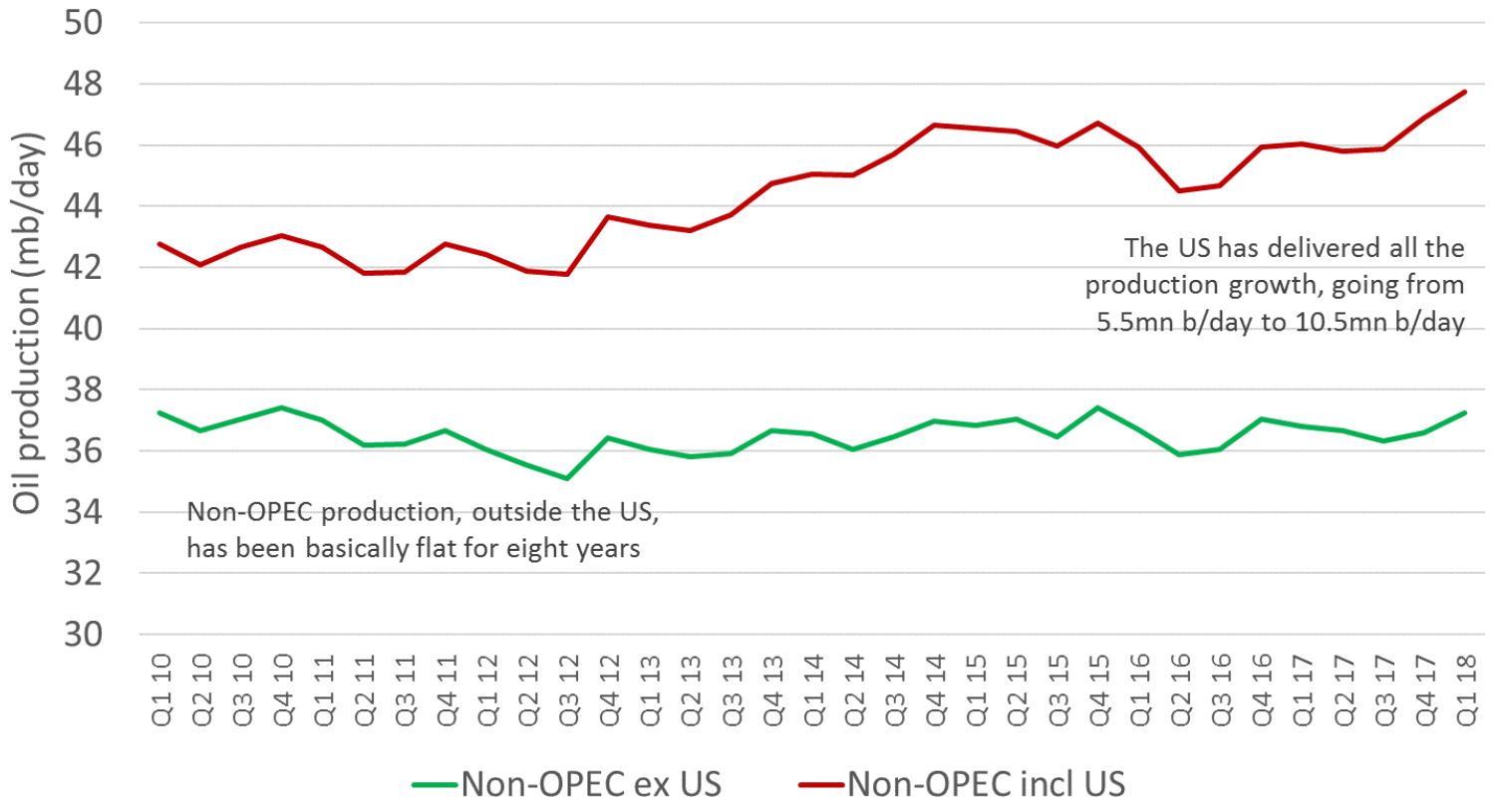
3) US onshore: shorter cycle, able to grow at $50/bl

Source : IEA; Guinness Atkinson (March 2018)

Non-OPEC oil supply: US delivering all the growth recently

- Non-OPEC oil production has grown by 5m b/day from Q1 2010 to Q1 2018
- All growth has come from the US, growing from 5.5m b/day to 10.5m b/day
- Despite high oil prices and high capex levels, other non-OPEC production has been flat

Non-OPEC oil production split between US and other

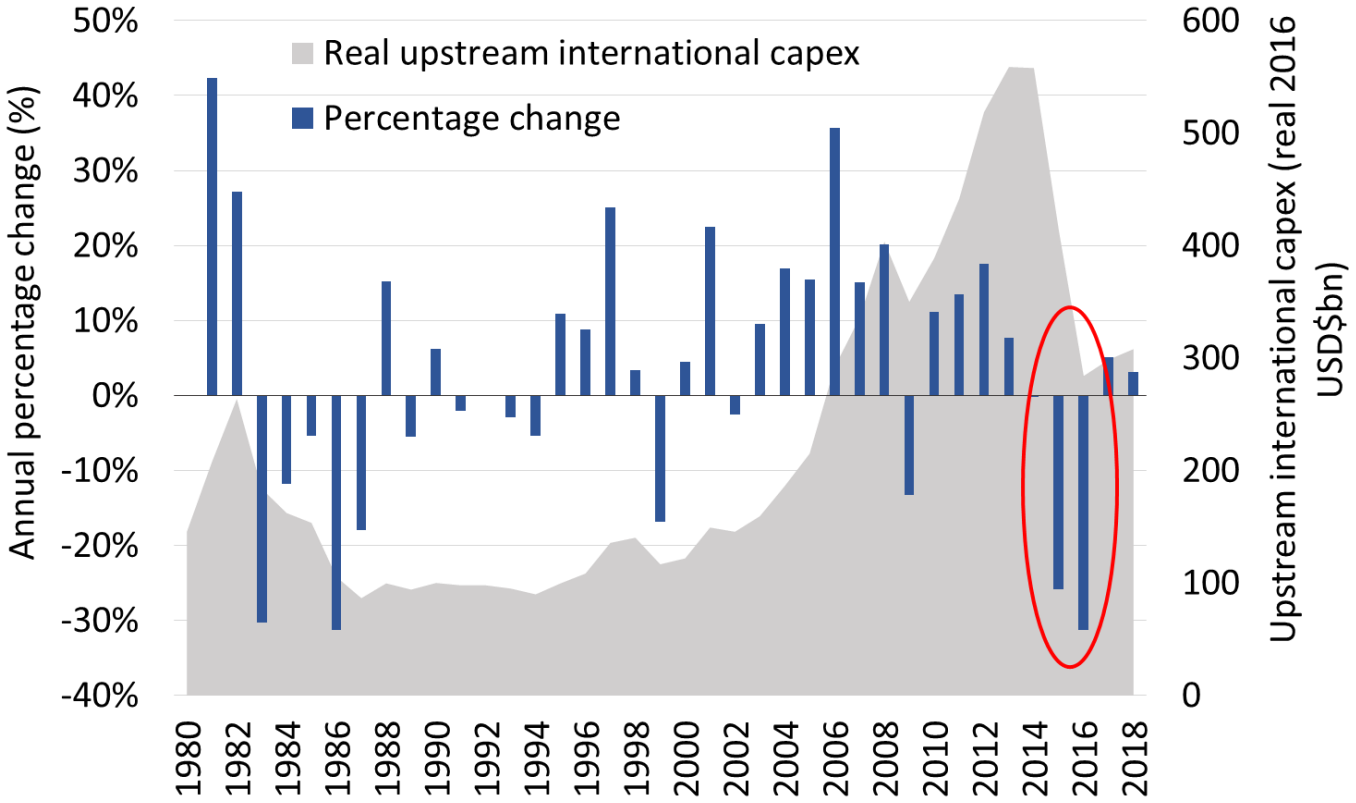


Source: PIW, Guinness Atkinson (April 2018)

Non-OPEC oil supply (ex-US): upstream capex has fallen sharply

- Global upstream capex has fallen by more than 20%pa in both 2015 and 2016

Year over year change in global upstream capex



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

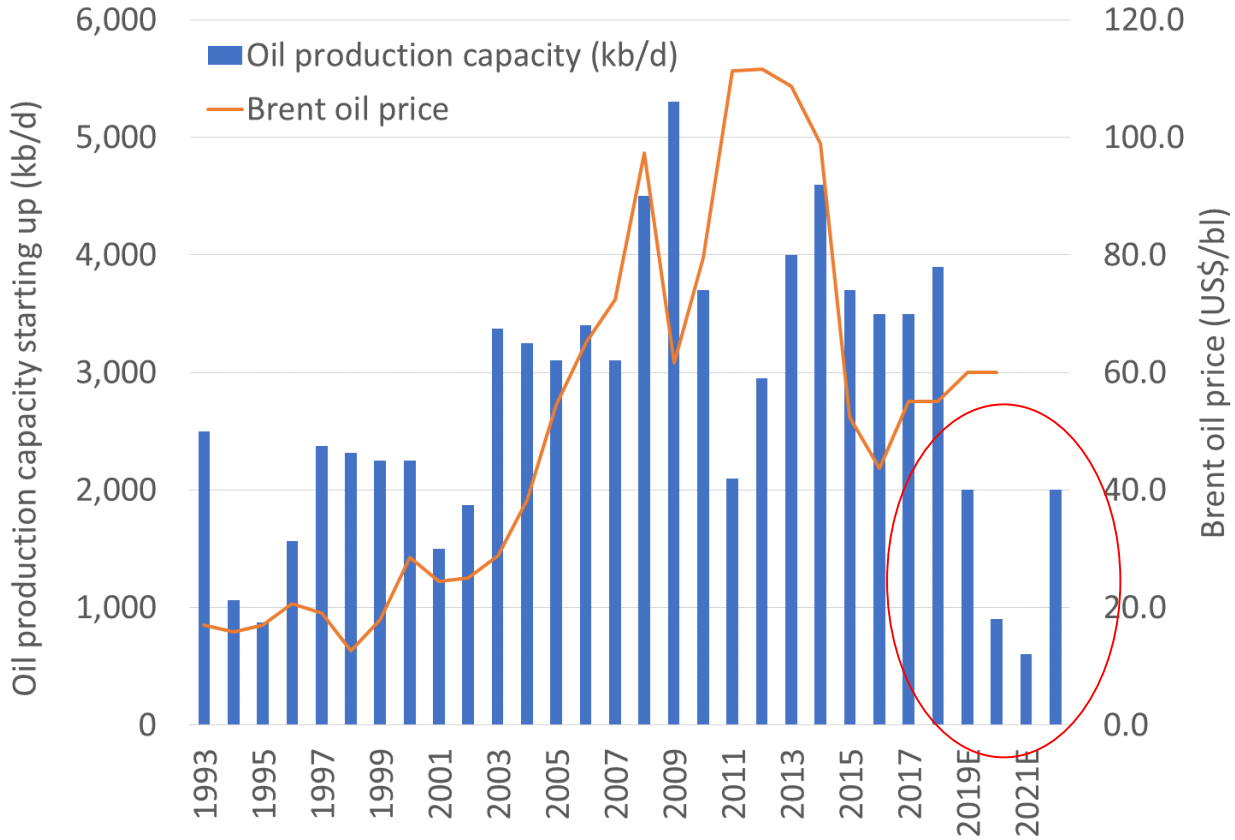
Paal Kibsgaard, CEO, Schlumberger (March 2017)

Source : Simmons International and Rystad, March 2018

Non-OPEC oil supply (ex-US): production flat to declining

- Non-OPEC supply (ex-US) project start-ups still strong in 2017/18 then sharp drop in 2019/20, resulting from the oil price fall in 2014 and 2015
- There is typically a 3-4 year time lag between project sanction and project start up

Major non-OPEC (ex-US onshore) project start-up schedule



Source : Kessler Energy, Guinness Atkinson, March 2018

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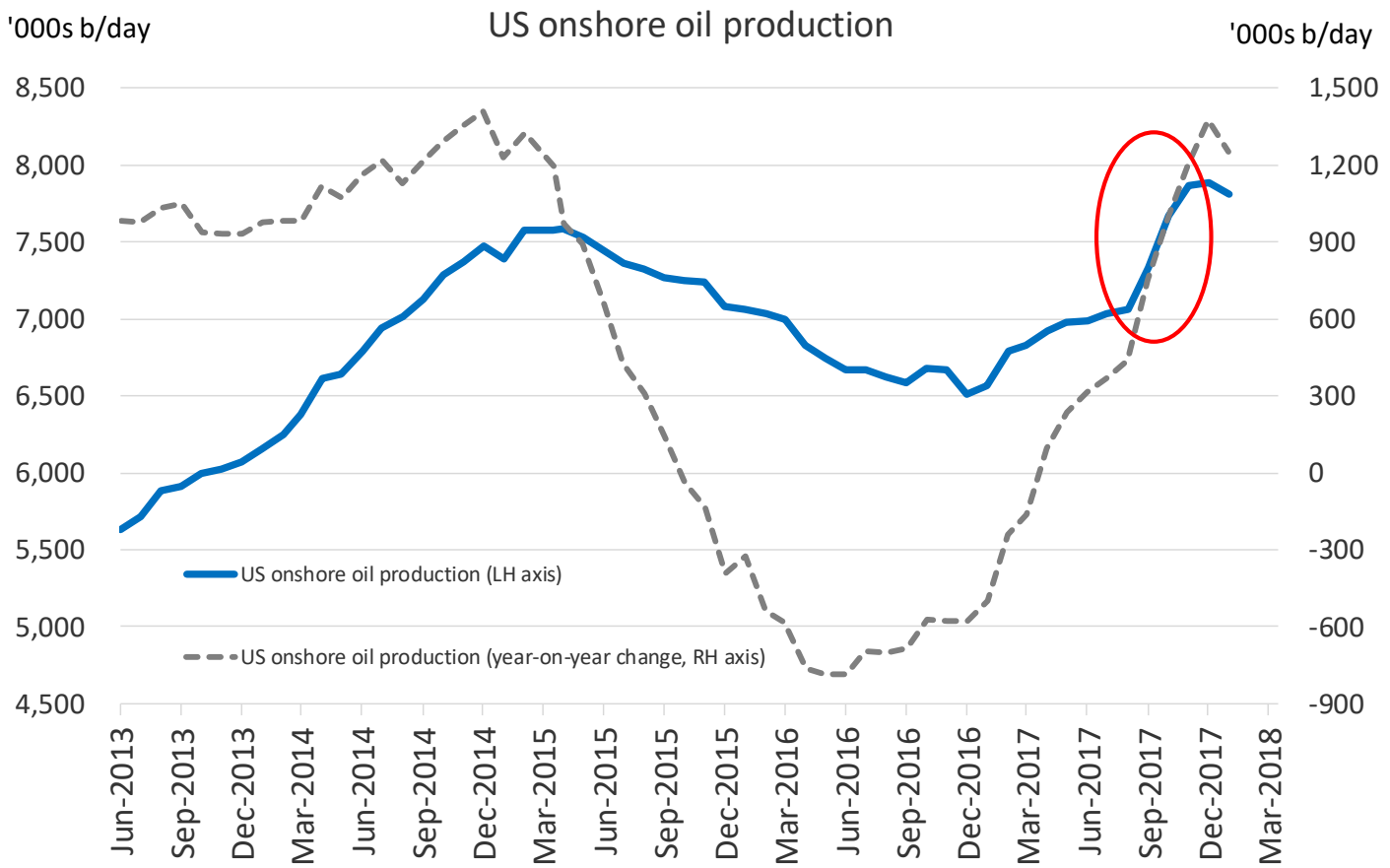
Non-OPEC oil supply: US onshore supply at new high in Q4 2017

- US onshore shale supply surged in Q4 2017, up 0.8m b/day
- US production profile proving lumpy, depending on timing of well completions

US onshore oil production (actual and year-on-year change)



Source: EIA (oil production to March 2018); Bloomberg (oil rig count)

Non-OPEC oil supply: US oil supply response depends on price

- We expect marginal investment (from higher oil prices) to be invested in US shale
  - The resource is available, payback is quick and technical, fiscal and political risks are low
- We believe that a trajectory towards $60/bl will be required, to:
  - Offset the increasing decline rates of new wells in order to sustain the growth trajectory
  - Deliver more growth in 2019/2020 as non-OPEC ex-US sees production declines

Potential trajectories for US onshore oil production

Brent oil price	Production change (annual)
$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

Source: Guinness Atkinson, as of March 2018

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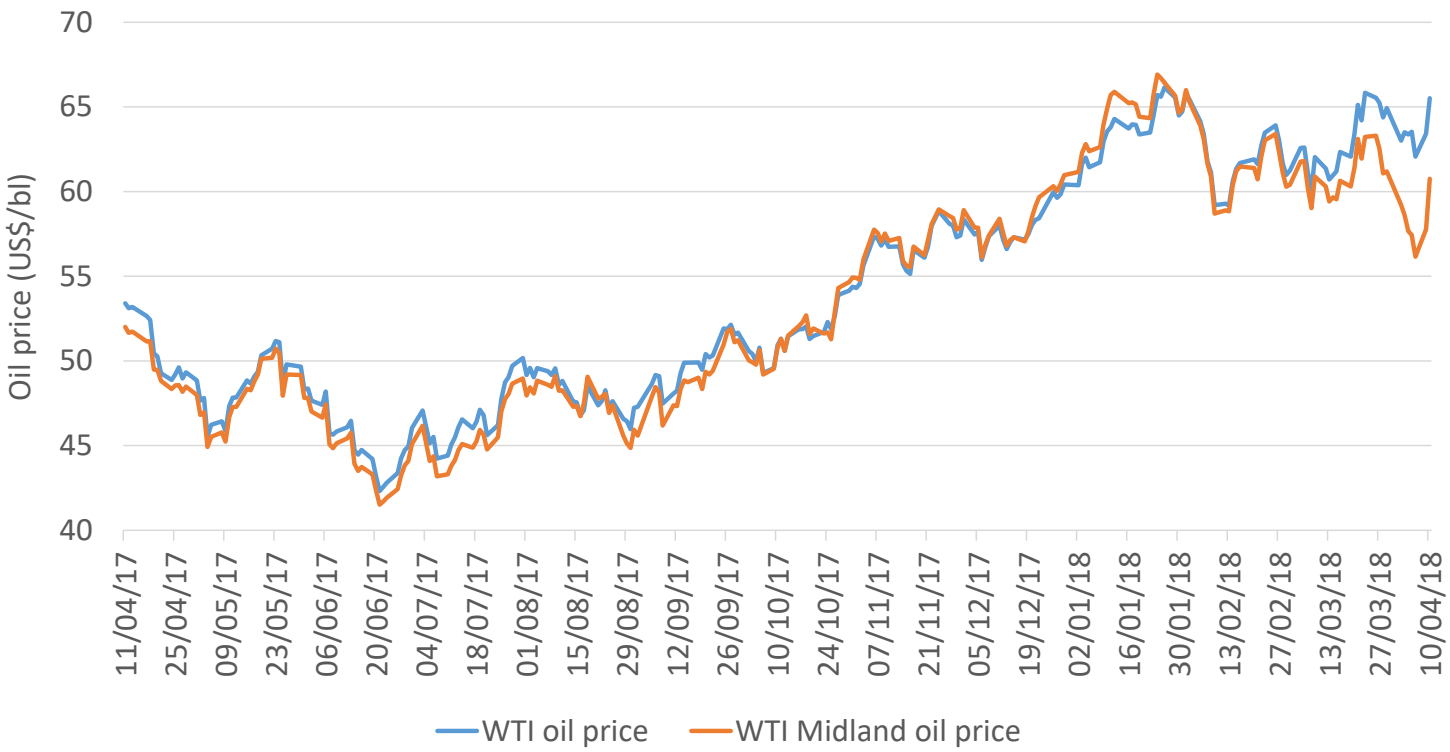
Non-OPEC supply: Permian differentials indicating basin constraints

- Rapid oil production growth in the Permian is causing infrastructure constraints
  - The price of Permian oil (WTI Midland) is starting to fall relative to WTI oil
- New pipelines will be required to export the extra oil and gas from the region
  - Constraints are likely to continue through the remainder of 2018

WTI vs WTI Midland (Permian) oil prices

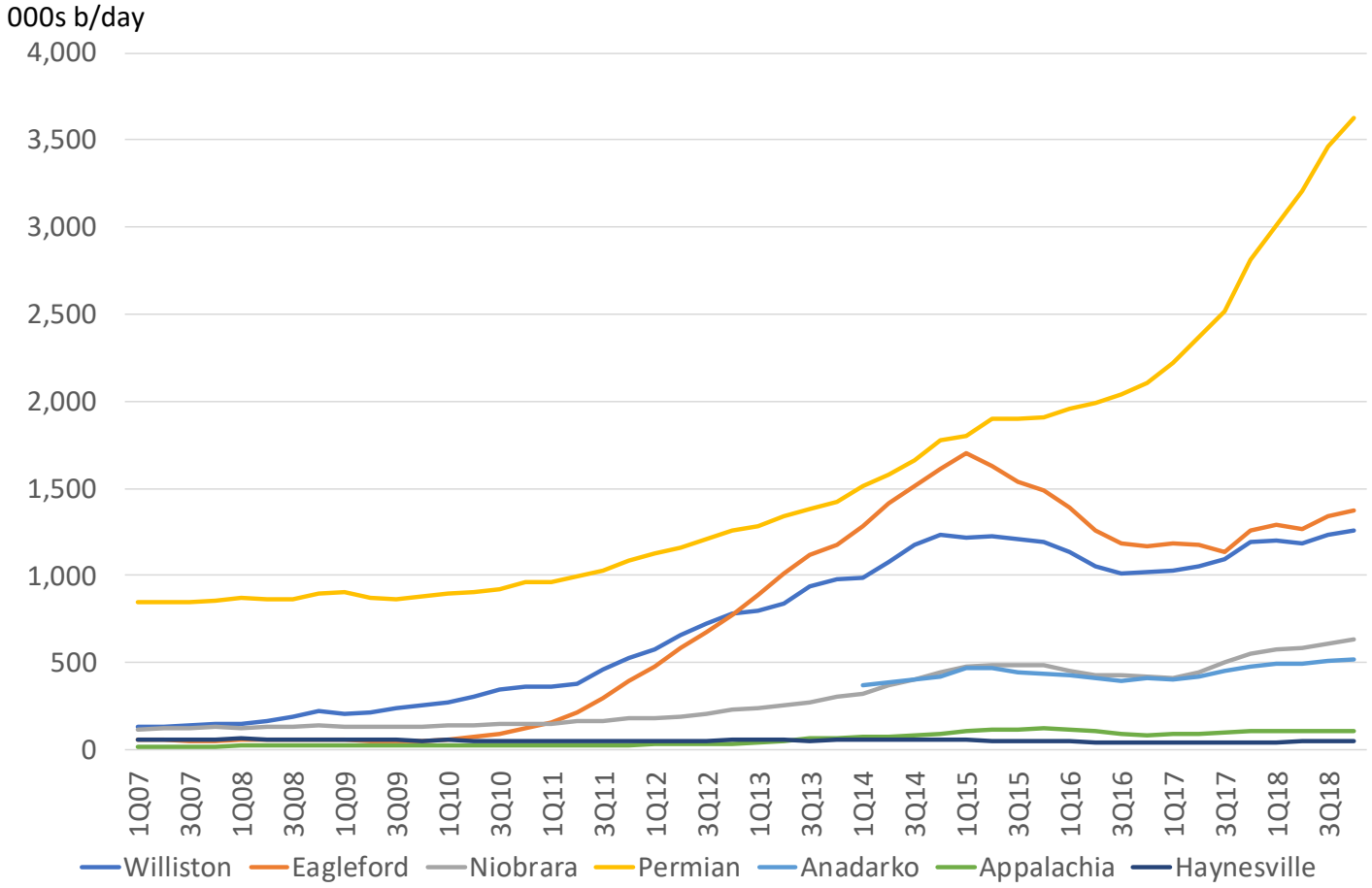


Source: Guinness Atkinson, as of April 10 2018

Non-OPEC oil supply: US onshore production by basin

- US shale growth since 2014 dominated by the Permian basin
- Shale supply grew by 1.2m b/day (Q4 to Q4) in 2017; we expect similar in 2018

US onshore oil production by basin



Year	Annual growth (Q4 to Q4) 000s b/day
2011	588
2012	875
2013	866
2014	1,632
2015	43
2016	-429
2017	1,199
2018 (est)	1,125

Source: Heikkinen; Guinness Atkinson

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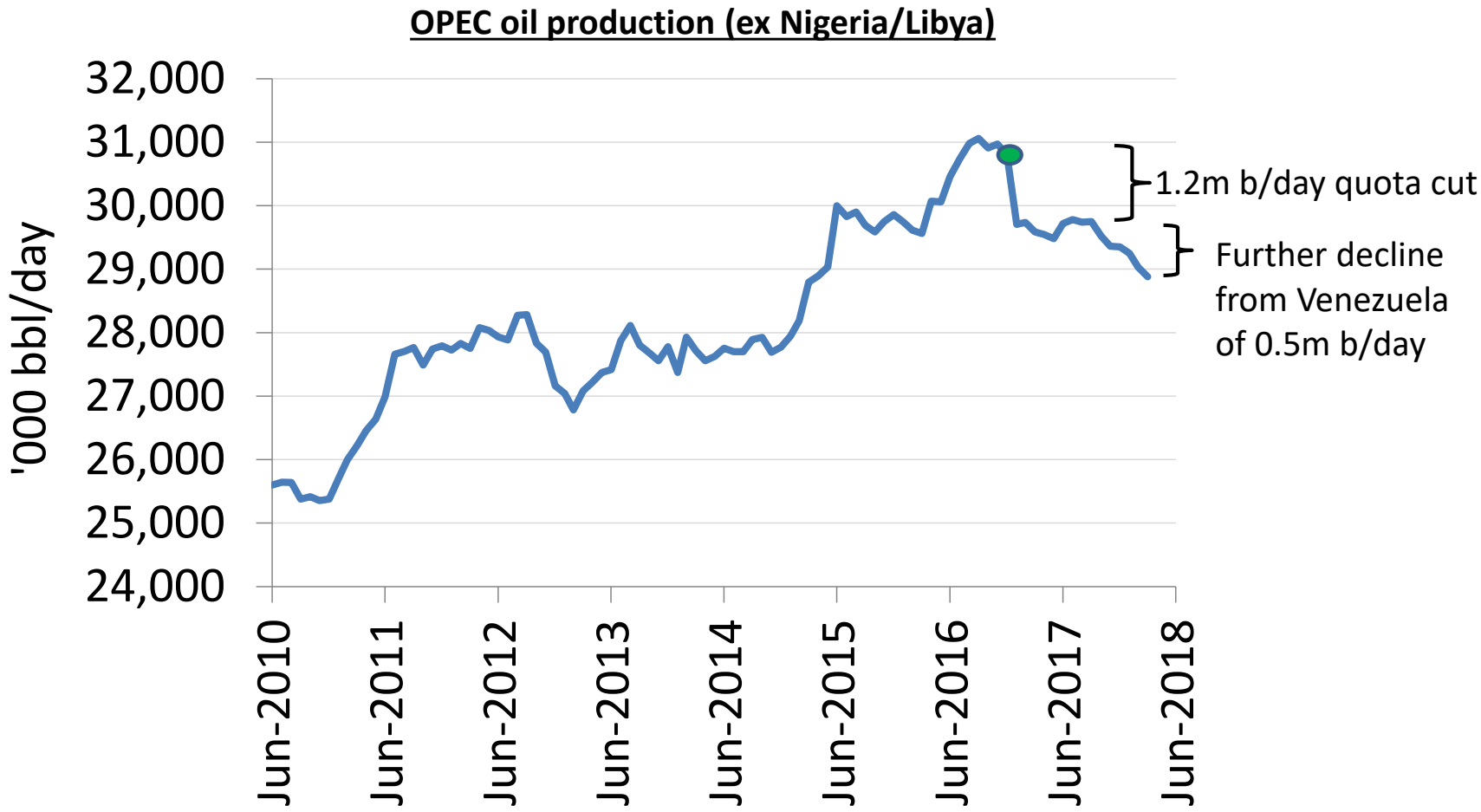
OPEC oil supply: OPEC staying disciplined with cuts

- Ex Nigeria & Libya, OPEC cut in 2017 by 1.2m b/day – this has been maintained
- Cuts have been compounded over the last six months by additional decline from Venezuela

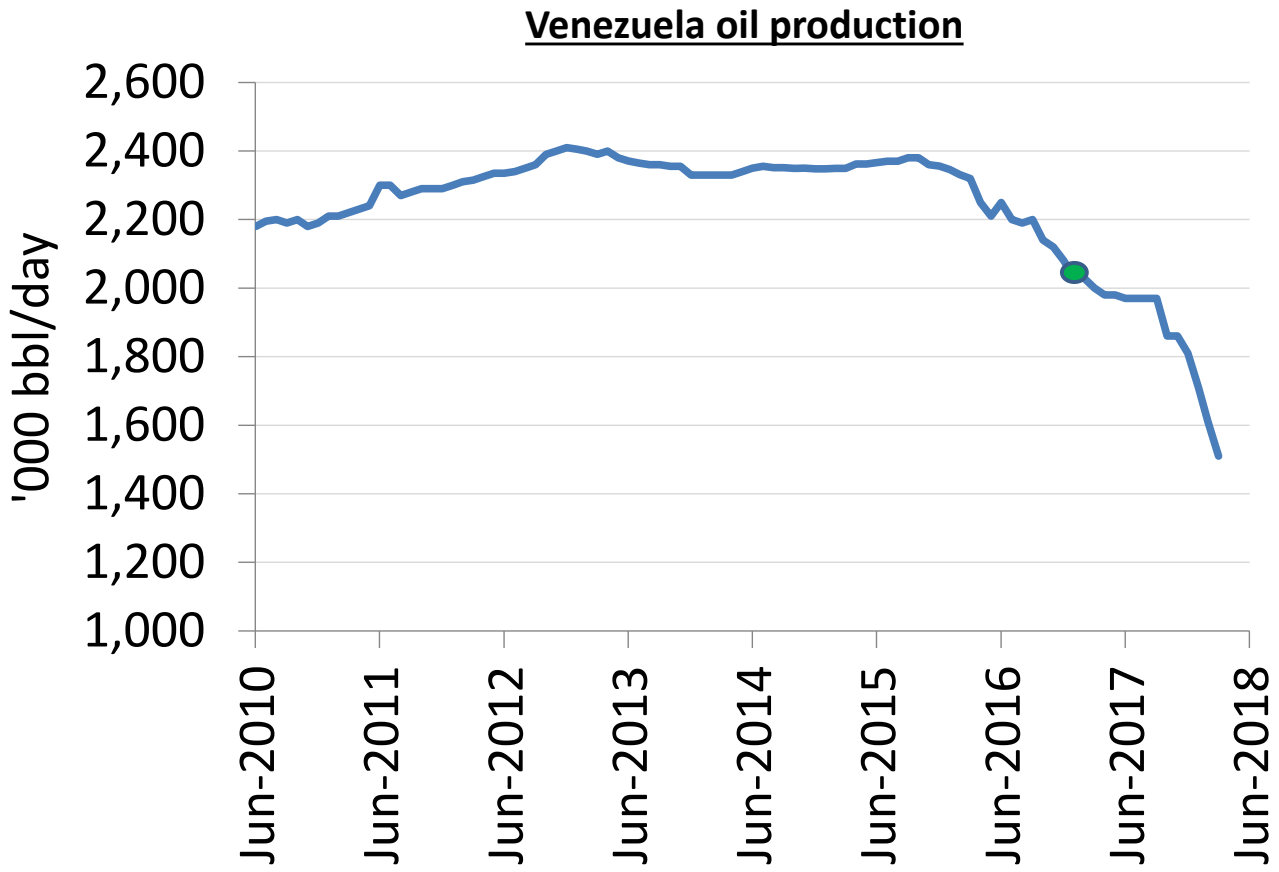


Source: Bloomberg, December 2017, Guinness Atkinson; green dot indicates Jan 2017 quota change

Forecasts are inherently limited and cannot be relied upon.

OPEC oil supply: sharp deterioration from Venezuela

- Venezuela currently producing around 1.5m b/day, well below 1.97m b/day quota
- Deteriorating infrastructure, weak reservoir management and US sanctions contributing to decline
- US refiners increasingly rejecting Venezuelan crude for quality problems



Source: Bloomberg, December 2017; green dot indicates Jan 2017 quota change.

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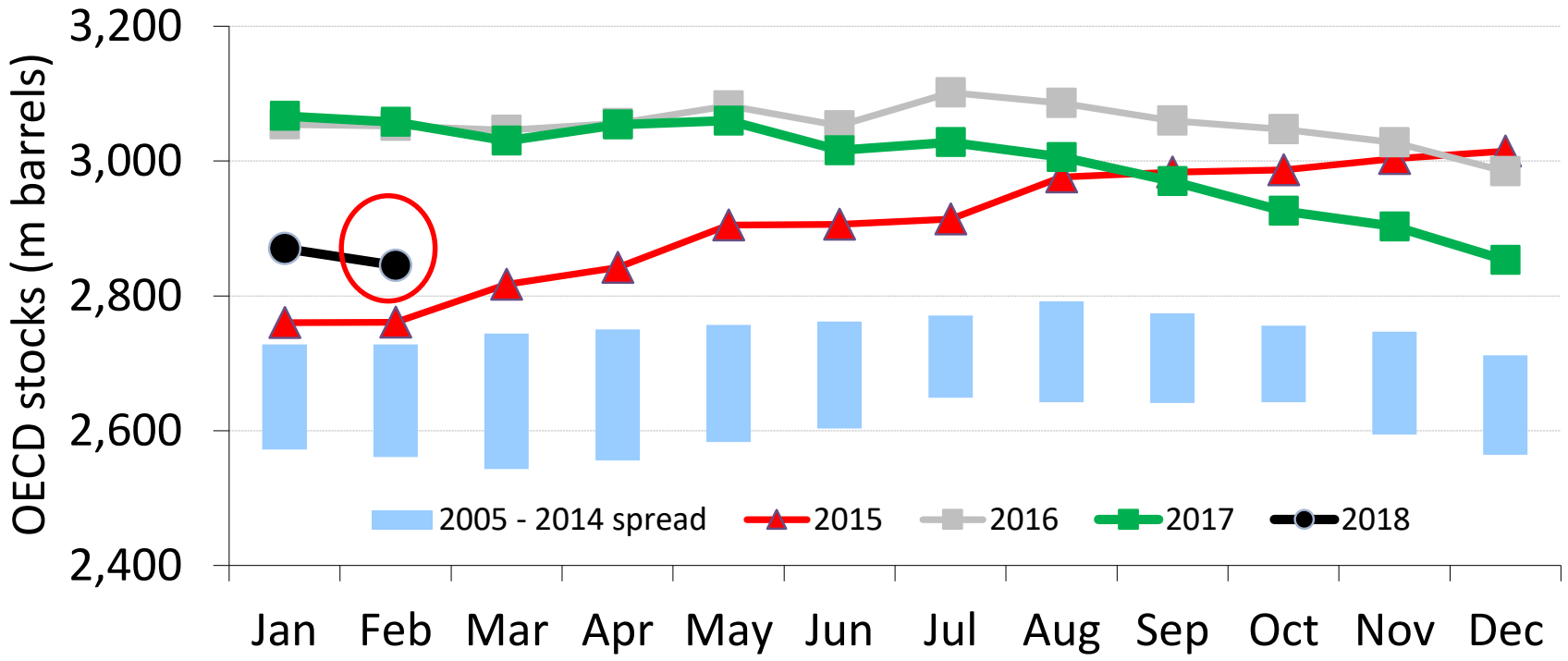
Oil supply/demand: OECD inventories normalizing

- In 2015, OECD inventories moved well above the top of the ten year range…

  ….the move implied average oversupply of c.0.8m b/day
- In 2016, inventories fell slightly, indicating a tightening in the second half of the year
- In 2017, inventory levels tightening thanks to OPEC cuts, accelerating in 2H 2017

OECD oil inventories (million bbls)



Source: IEA Oil Market Report (March 2018); Guinness Atkinson

OPEC: recent Saudi Oil Minister commentary

Some recent quotes from Saudi Arabia's Oil Minister, Khalid al-Falih, on the key issues for the global oil market:

- On ending current quotas *"We shouldn't limit our efforts to 2018 - **we need to be talking about a longer framework of cooperation**… I am talking about extending the framework that we started, which is the declaration of cooperation, beyond 2018"*

- On longer term market control *"What we want is an evergreen framework that brings producers from OPEC and non-OPEC (countries) together in a market monitoring fashion that allows us to take quick decisions"*

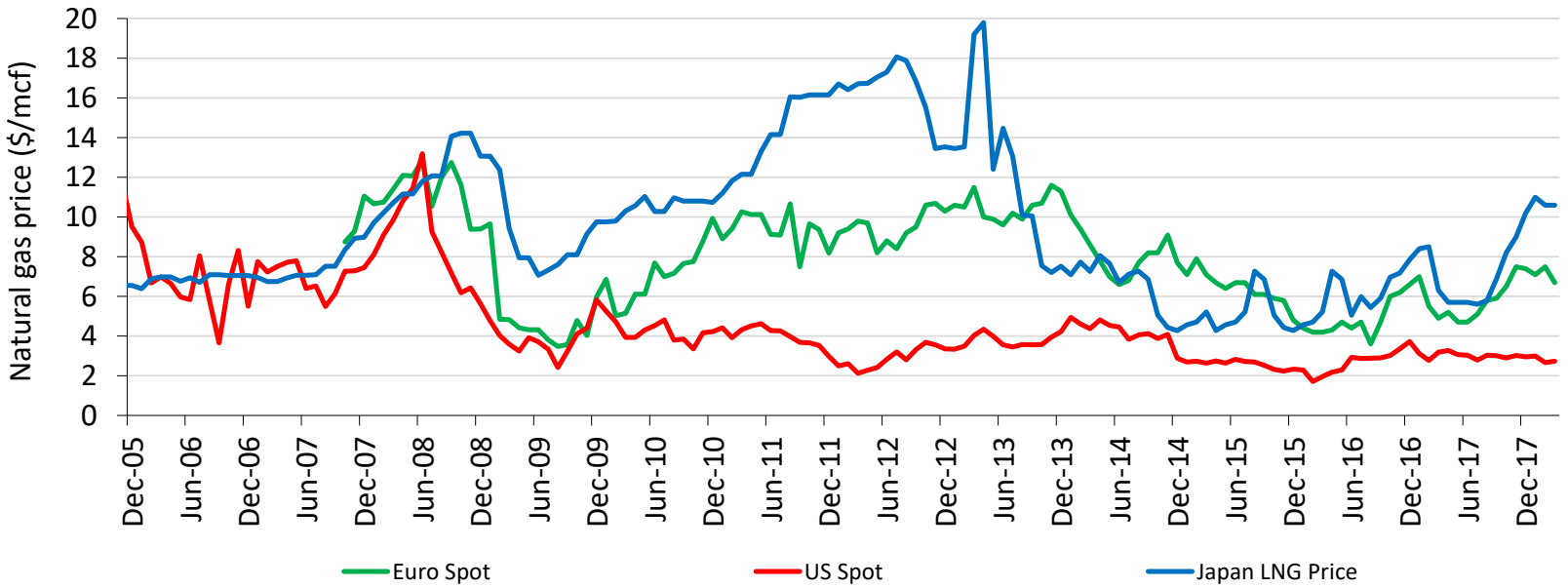
- On likely oil price levels *"There is no such thing as a target price by Saudi Arabia. We're seeing many regions declining. The only way to offset this is for the financial markets to start financing and funding upstream projects... I don't know what is the price that will provide that equilibrium. All we know is in 2018 we're still not seeing that."*

Source: Reuters, Bloomberg and Financial Times

Natural gas: summary views

- 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

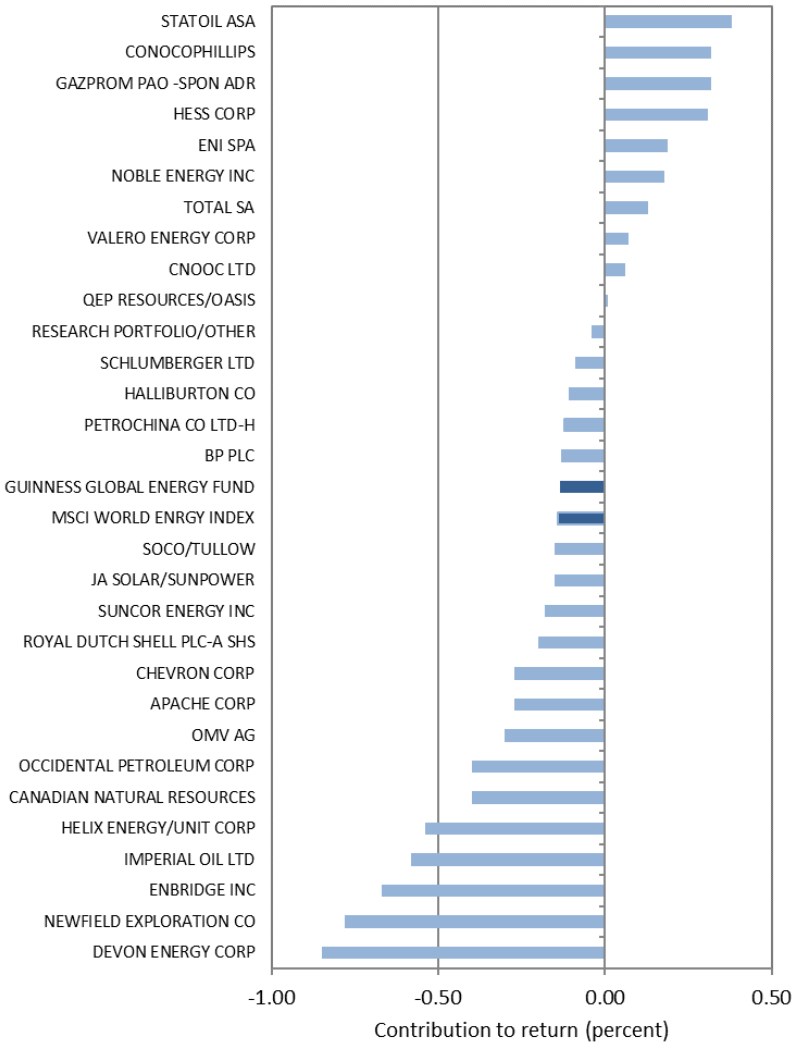
Global natural gas prices (US$/mcf)



Source: Bloomberg, Guinness Atkinson (data as of March 2018)

Indicative fund contribution, per position, Q1 2018

Q1 2018 indicative contribution



- Q1 2018 Fund performance (USD) -4.01%

  vs MSCI World Energy Index (USD) -5.23%

- **Stronger performers in Q1 2018:**
  - European integrateds
  - Emerging market producers
  - Refining

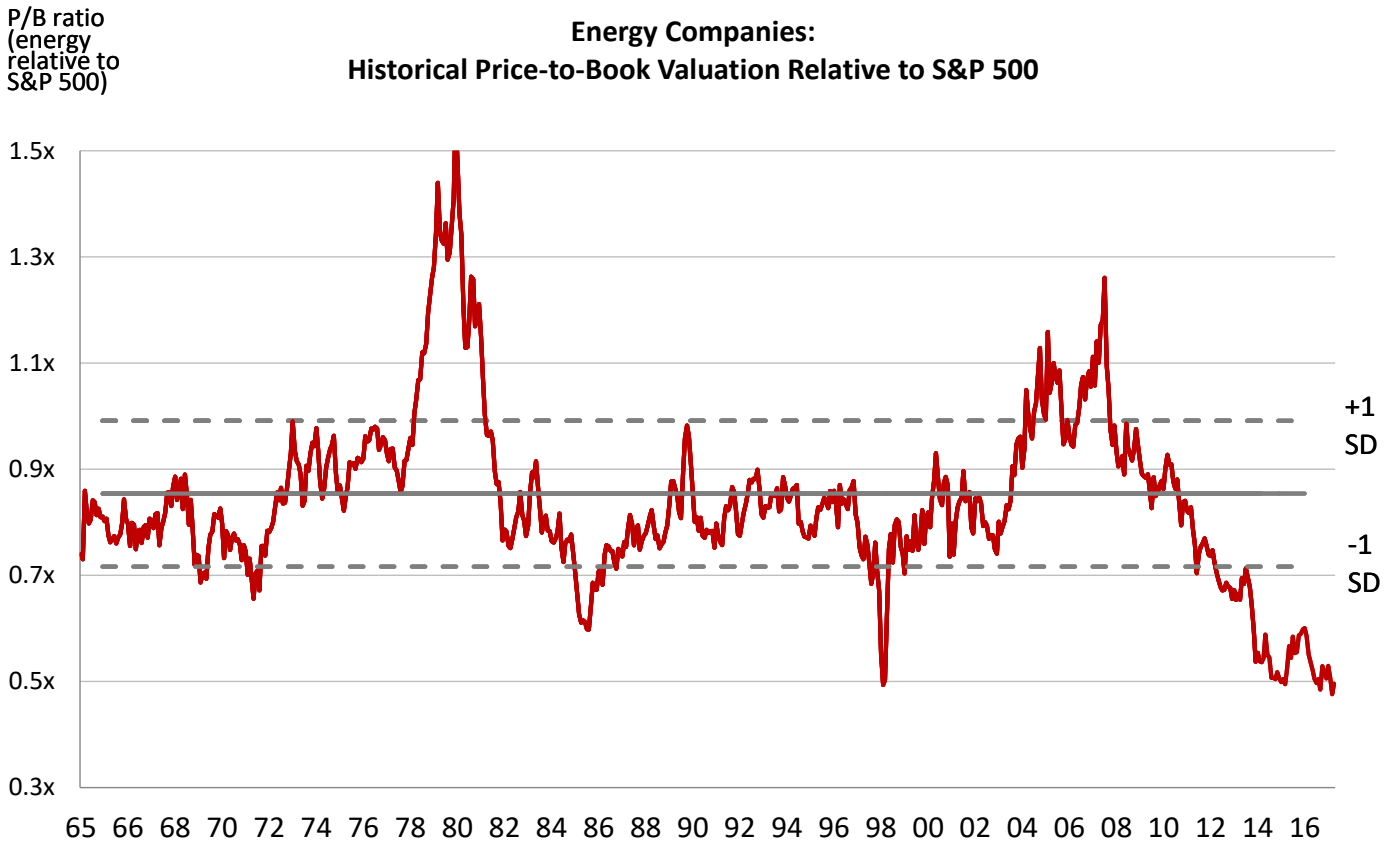
- **Weaker performers in Q1 2018:**
  - Canadian large caps
  - Gassier E&P companies

Source: Guinness Atkinson, Bloomberg, data as of end March 2018; Class E fund data

2. Energy equities: relative price to book at extreme

- The energy sector (at 0.5x the S&P500) is trading about 2 standard deviations below its long run average; similar conditions in 1986 and 1998 were good buying opportunities

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

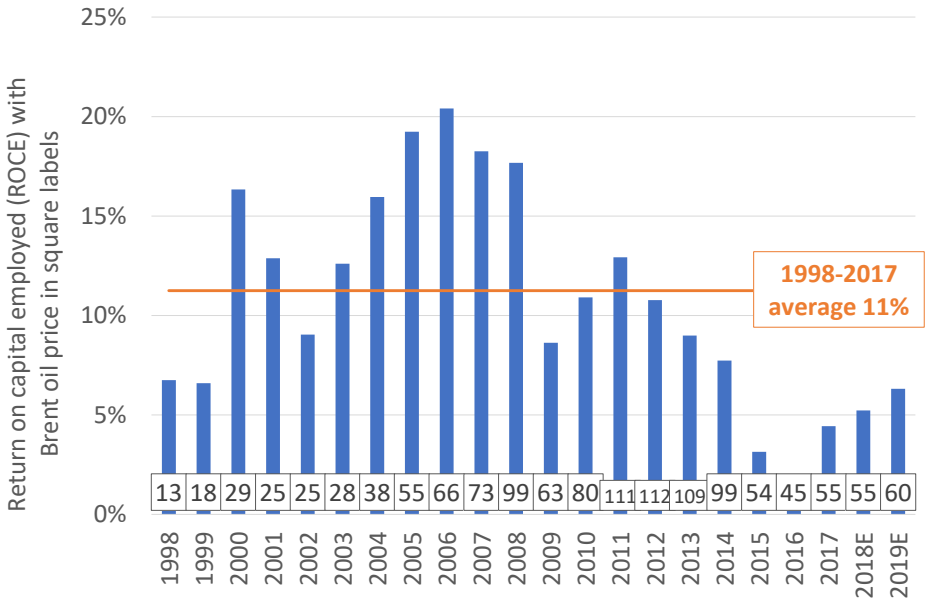


Source: Bernstein; Guinness Atkinson (April 2018)

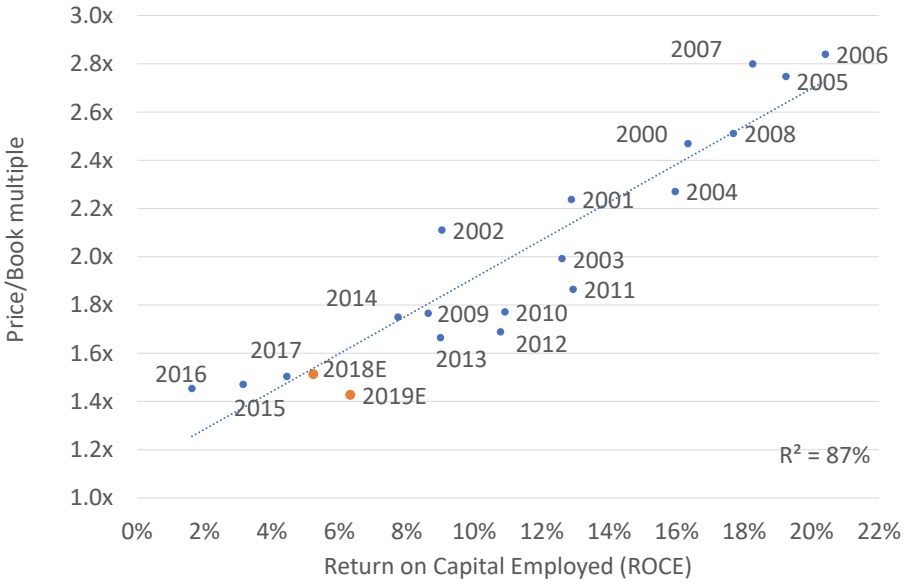
Guinness Atkinson Energy Fund: ROCE expected to rise from trough level

- The combination of lower oil prices and legacy higher cost structures leave ROCE depressed
- We expect reported ROCE to improve as a result of
  - External factors: improvements in oil and natural gas prices
  - Internal factors: Cost deflation, efficiency improvements and M&A activity
- A return to 12% normalized ROCE would imply P/B ratio for portfolio rising from 1.5x to 2.1x (+40%)

ROCE of current Guinness Atkinson portfolio



ROCE vs P/B multiple for 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 1998-2016 data is available) in the Guinness Atkinson Global Energy fund as of March 31 2018

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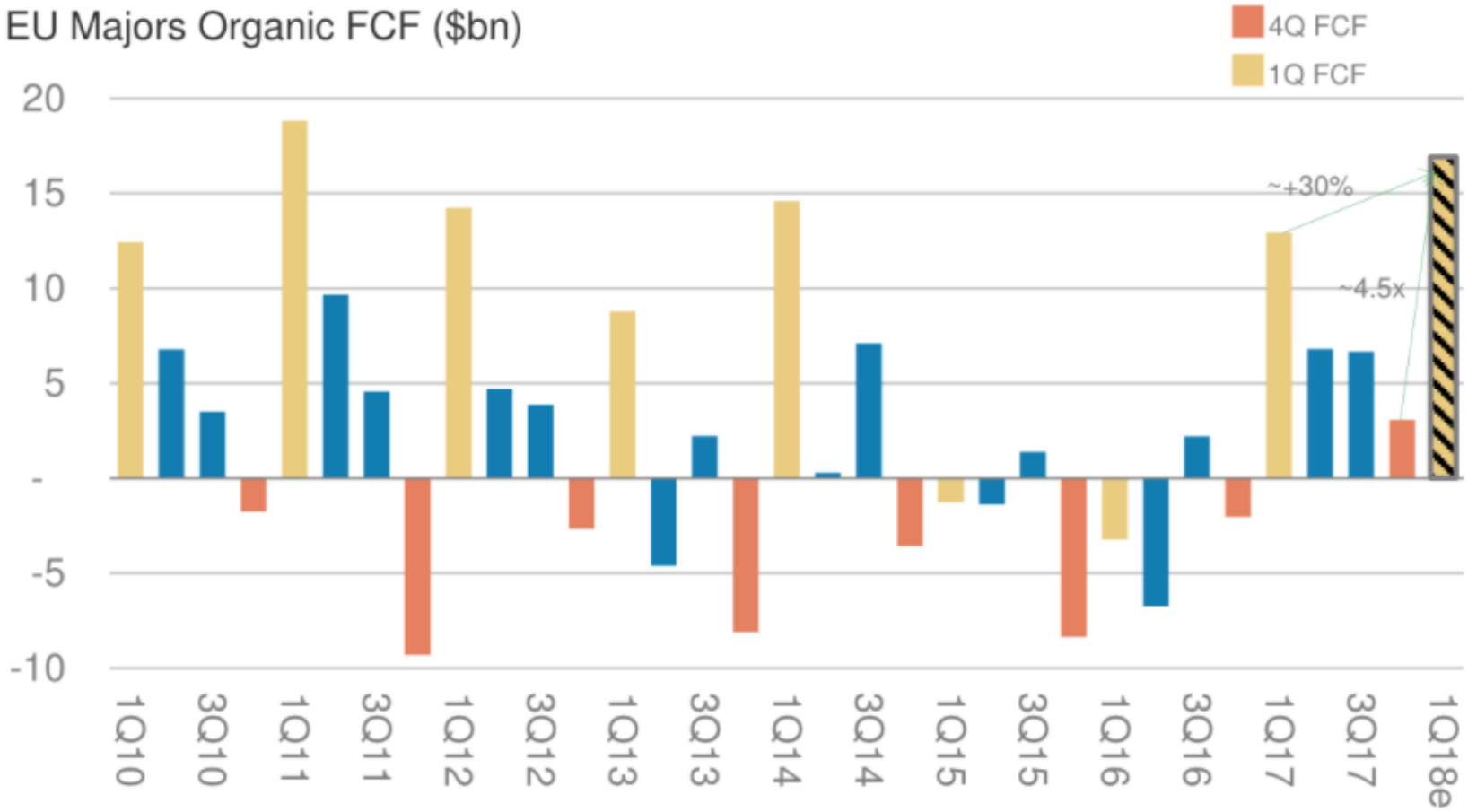
Energy equities: strongest FCF from European oils since 2011

- The five largest European integrateds expected to report best FCF since start of 2011
- Better FCF than any quarter 2012-14 when the oil price generally averaged over $100/bl

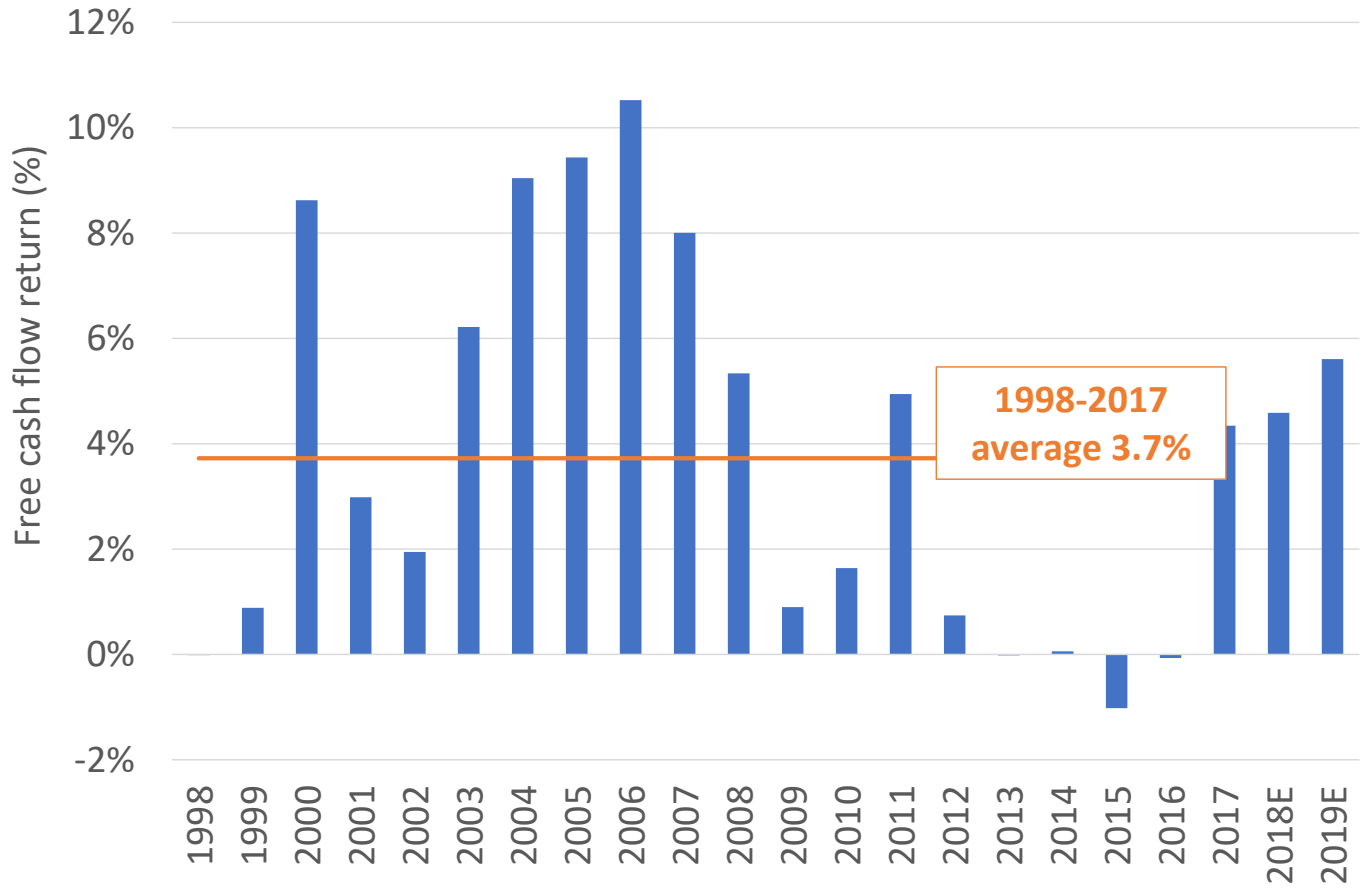


Source: Morgan Stanley, Guinness Atkinson (April 2018)

Guinness Atkinson Energy Fund: FCF returns improving well

- FCF (cashflow from operations less CAPEX) return was essentially zero between 2012 and 2016, but has now returned to the longer-term average, as companies have adjusted

FCF return of current Guinness Atkinson Energy fund portfolio holdings



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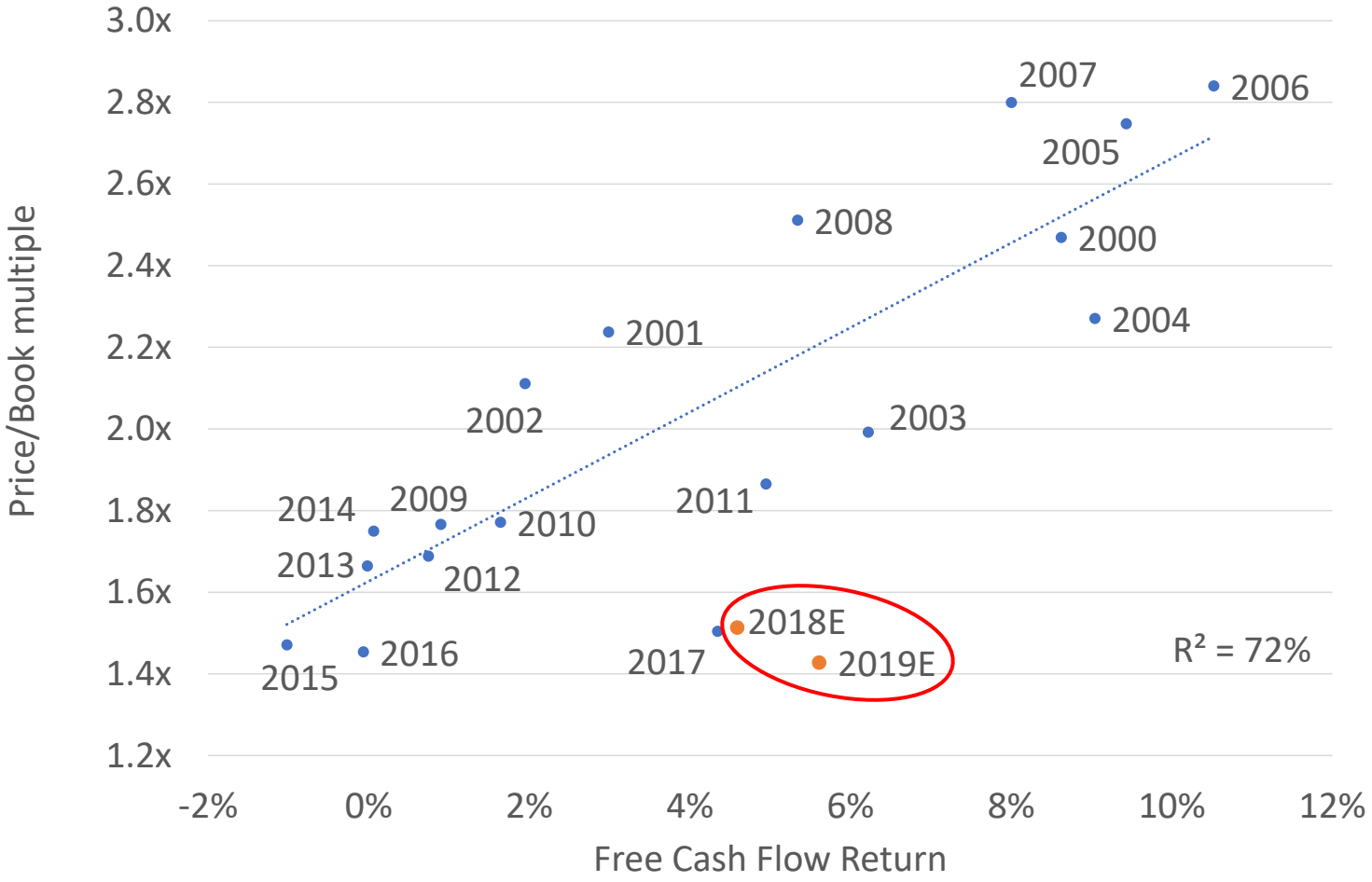
Guinness Atkinson Energy Fund: FCF returns improving well

- The long-term relationship between FCF return and P/B implies 40+% upside

FCF return of current Guinness Atkinson Energy fund portfolio holdings



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Source: Bloomberg, Company Data and includes analysis of all 'full position' holdings (for which 1998-2016 data is available) in the Guinness Atkinson Energy fund as of March 31 2018

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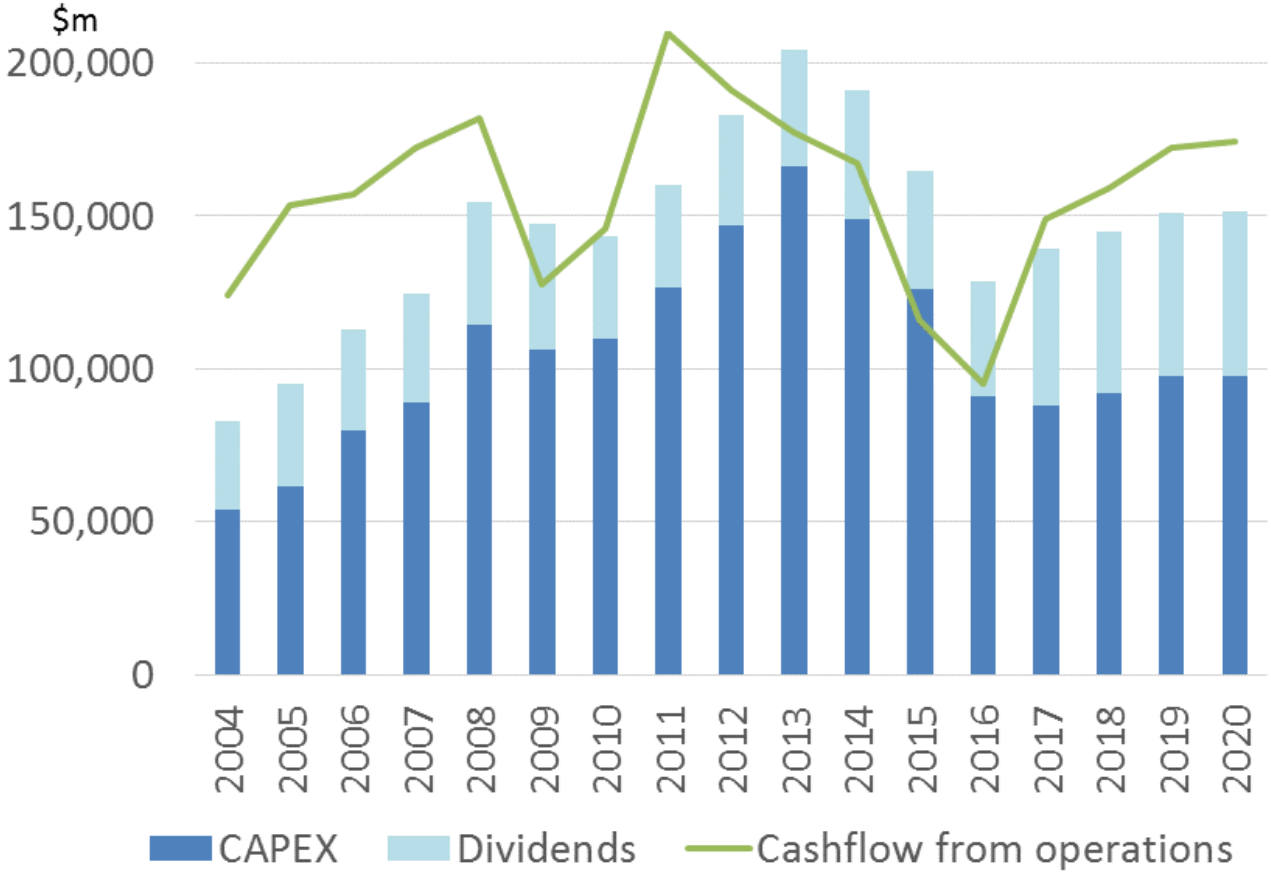
Energy equities: super-major FCF yield improving

- Super-major oil and gas companies are emerging from a period in which dividend was being paid by debt to a period where they will have the ability to raise dividends by up to 40% (at $60 Brent)



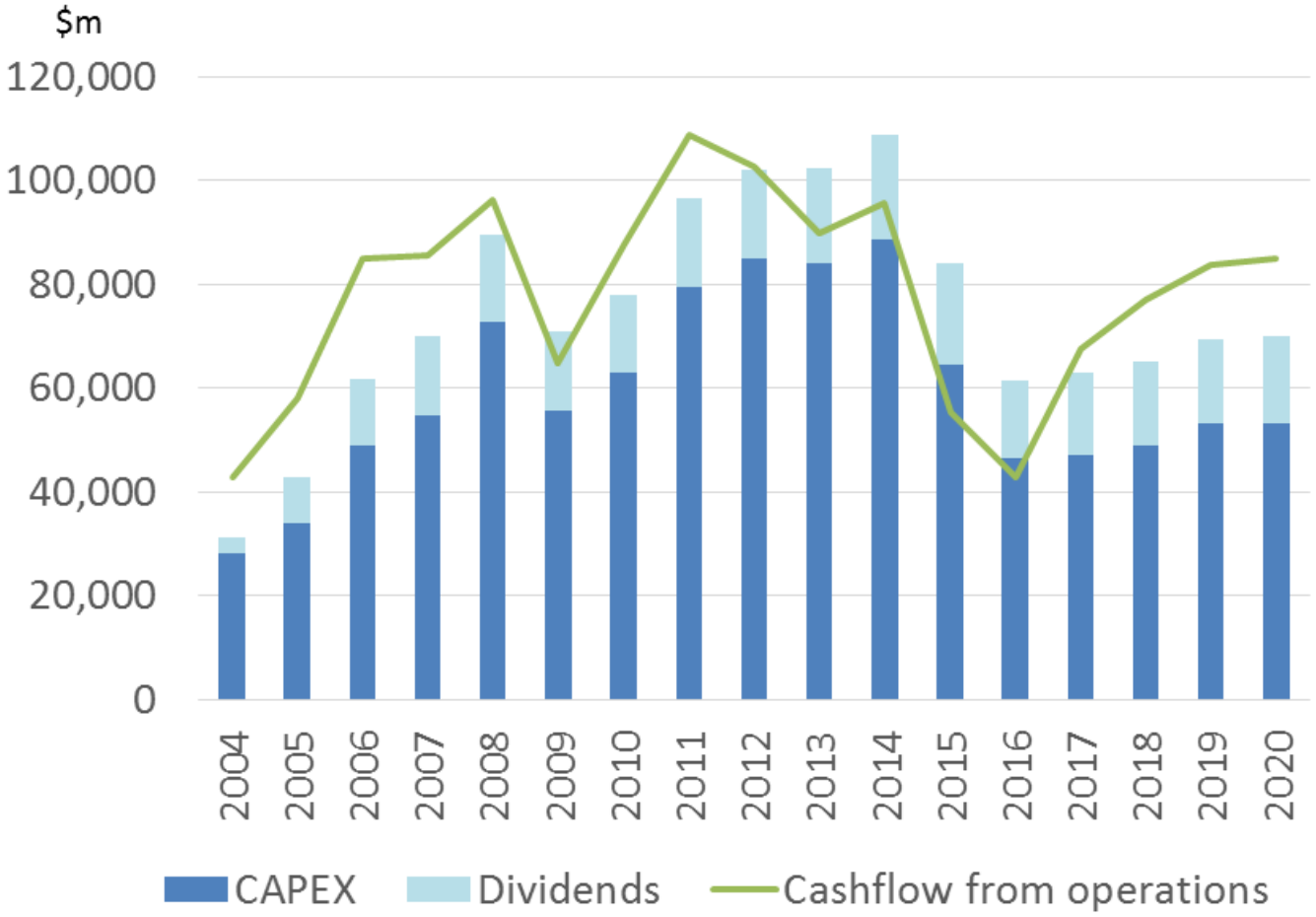
Super-majors have the scope to increase dividend **by about 40%** in 2019/2020 (at $60 Brent / $58 WTI)

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

Source: Guinness Atkinson (March 2018)
Forecasts are inherently limited and cannot be relied upon.

Energy equities: other large-cap FCF yield improving even more

- Other large cap oil and gas companies also emerging from a period in which dividend was being paid by debt to one of expanding FCF – greater scope to expand dividends than majors (at $60 Brent)



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

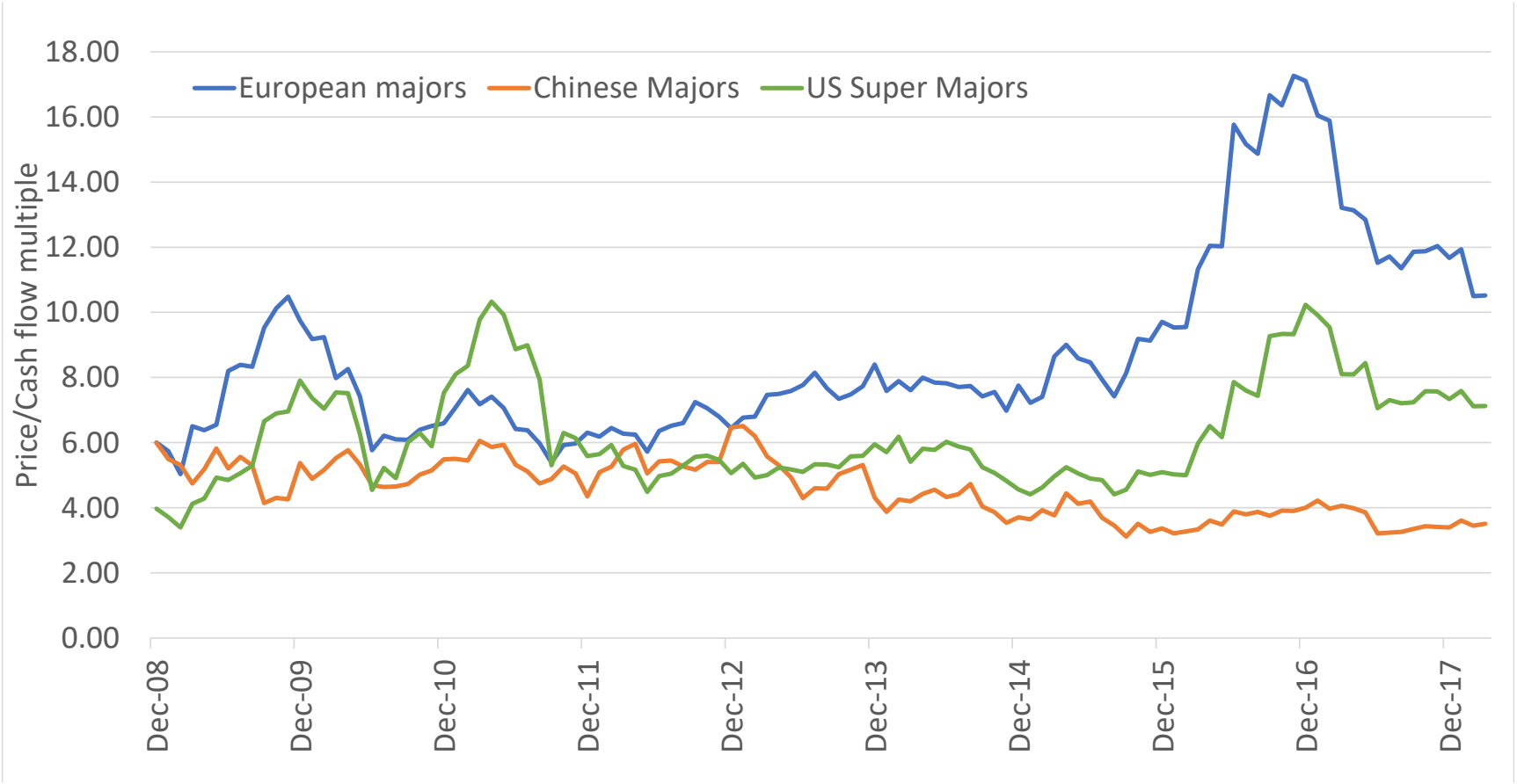
- Statoil; ENI; OMV; Conocophillips; Occidental; Suncor; CNOOC; Imperial Oil; Canadian Natural Resources

Source: Guinness Atkinson Asset Management (March 2018)
Forecasts are inherently limited and cannot be relied upon.

Energy equities: importance of looking beyond the US

- Not all energy super-majors are valued the same: for example, there has been a major divergence since 2008 between the P/CF of US vs Chinese major oil & gas companies
- As a result, we have shifted our portfolio towards Europe and China

US, European & Chinese oil & gas majors: price to cashflow multiple



Source: Bloomberg; Guinness Atkinson (April 2018)

Fund positioning: key themes in the fund for 2018

Theme	Example holdings	Weighting (%)
Expanding free cashflow yields from large-cap oil & gas	CNOOC, Suncor Energy, Canadian Natural	29.8%
North American shale oil & gas growth	Oasis Petroleum, Halliburton, Newfield	25.8%
Growing return on capital from oil & gas majors	Chevron, Total, BP	18.2%
Emerging market natural gas demand growth	PetroChina, Gazprom	11.2%
Strong refining margins resulting from global GDP growth	Valero, OMV	7.0%
Deleveraging balance sheets	Tullow Oil, EnQuest	2.5%
Growth in global solar market	JA Solar	1.5%
Other (incl cash)		3.9%

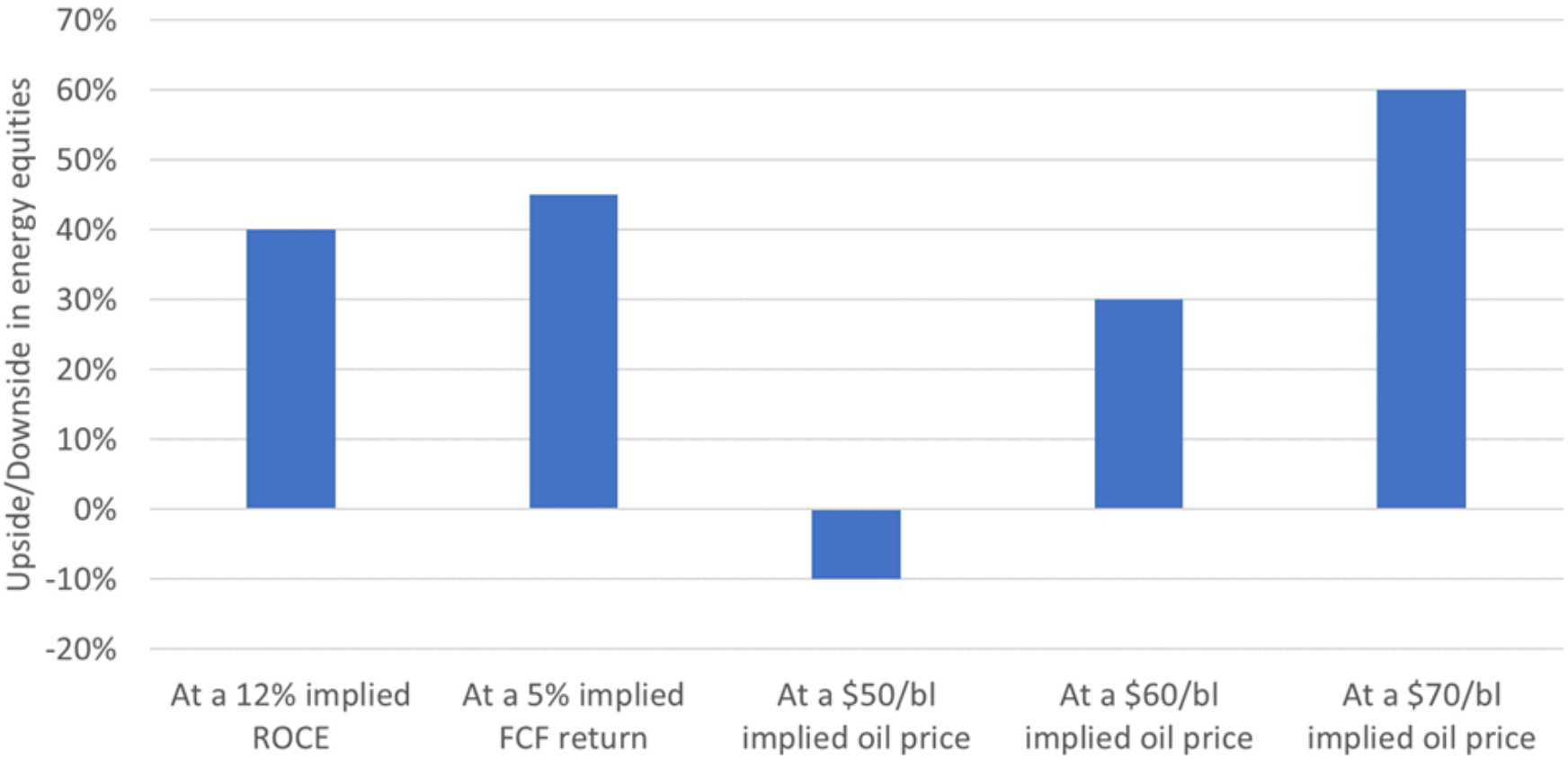
Top 10 holdings as of 03/31/2018: 1. Noble Energy 3.97% 2. Total SA 3.91% 3. Hess Corp 3.88% 4.Gazprom OAO-ADR 3.85% 5.BP PLC 3.80% 6. Conocophillips 3.76% 7. Eni SpA 3.69% 8. Royal Dutch Shell PLC 3.67% 9. Statoil ASA 3.65% 10. Valero Energy Corp 3.65%

The mention of any individual securities should neither constitute nor be construed as a recommendation to purchase or sell such securities, and the information provided regarding such individual securities is not a sufficient basis upon which to make an investment decision.

Source: Guinness Atkinson, at end March 2018

Fund valuation: sensitivities to oil price, ROCE and FCF

Upside/downside for Guinness Atkinson energy portfolio (2 year view)



Source: Guinness Atkinson, at end March 2018

Fund and index performance, as of March 31, 2018

- Underperformance from energy vs S&P500 in 2017 and Q1 2018, leaving the sector, in our analysis, a long way from historical normalized valuation levels

	Q1 2018	1 Year	5 Years*	Since Inception (June 30, 2004)*
Global Energy Fund	-4.01%	2.84%	-3.46%	6.38%
MSCI World Energy Index	-5.21%	5.45%	0.04%	6.22%
S&P 500	-0.76%	13.98%	13.28%	8.74%

Expense ratio: 1.53% (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

Source: Bloomberg

Fund characteristics

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

Fund manager biographies

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

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For your protection, calls to these numbers may be recorded

Guinness Atkinson Asset Management

- **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 Group AUM (at March 31, 2018): $1.5bn**
- **Group staff of 30, including 14 investment professionals**
- **Company is 100% owned by employees**

AUM = assets under management

Disclosure

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. Please read it carefully before investing.

You cannot invest directly in an index.

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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