

Re-birth of Funding E&P

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28th February 2018

Energy Transition

New York sues big oil companies over climate change

City will also look at divesting its pension funds of fossil fuel companies

Oil investors face dilemma as demand is likely to fall

Fossil fuel assets have potential to be 'unburnable' as climate change awareness grows

Exxon plans for carbon-constrained future

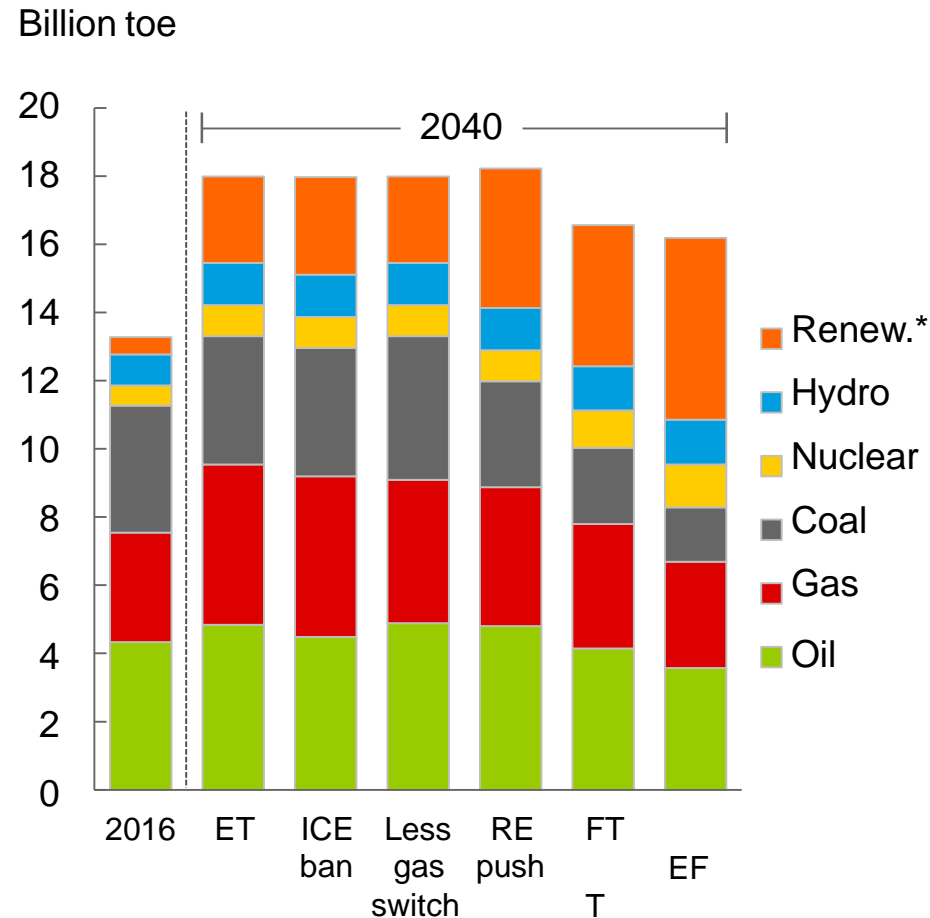
Biggest US energy group believes it will be able to exploit all of its reserves

ExxonMobil bows to shareholder pressure on climate reporting

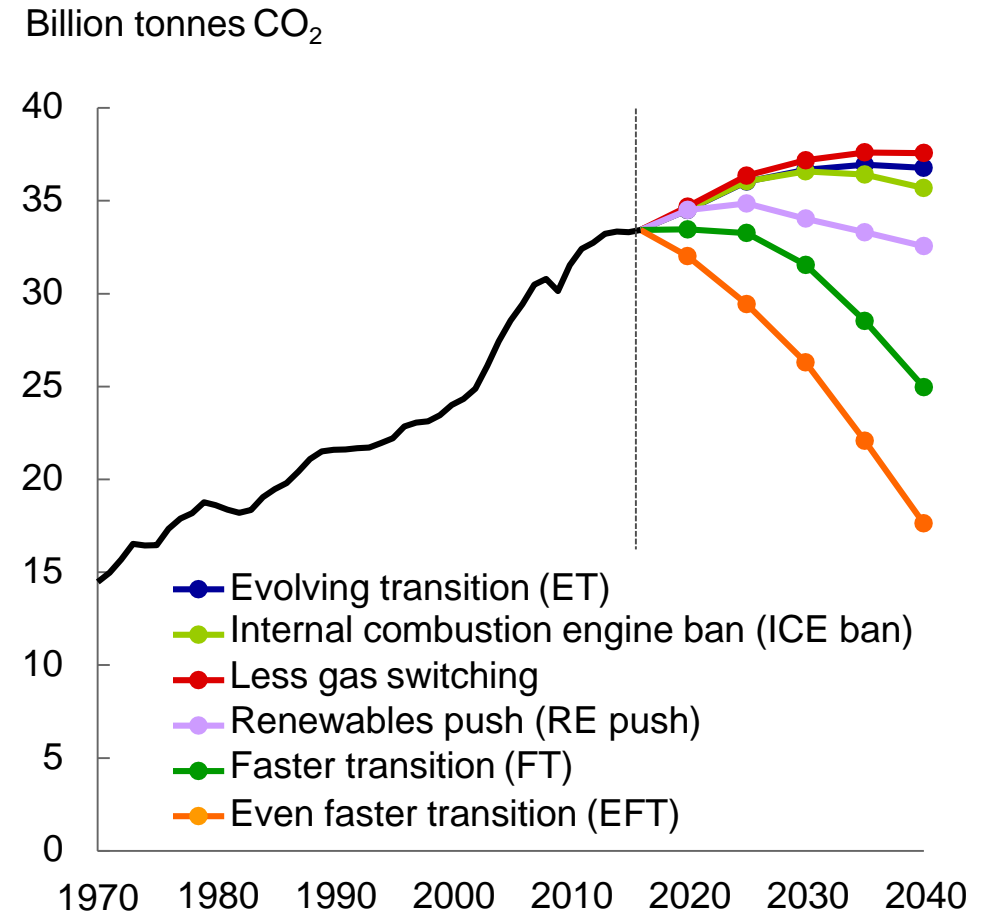
Oil group to improve disclosure of impact assessment from policies to tackle warming

The Energy Outlook considers a range of scenarios...

Primary energy consumption by fuel



Carbon emissions



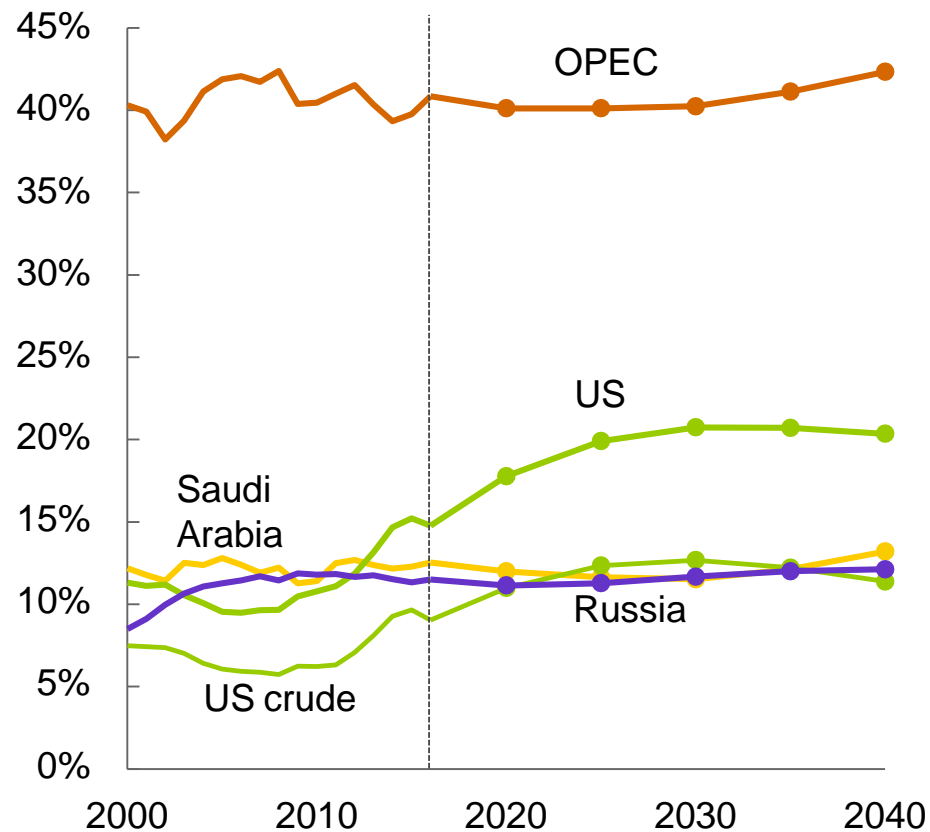
*Renewables includes wind, solar, geothermal, biomass, and biofuels
For full list of data definitions see p122

Source: BP 2018 BP Energy Outlook

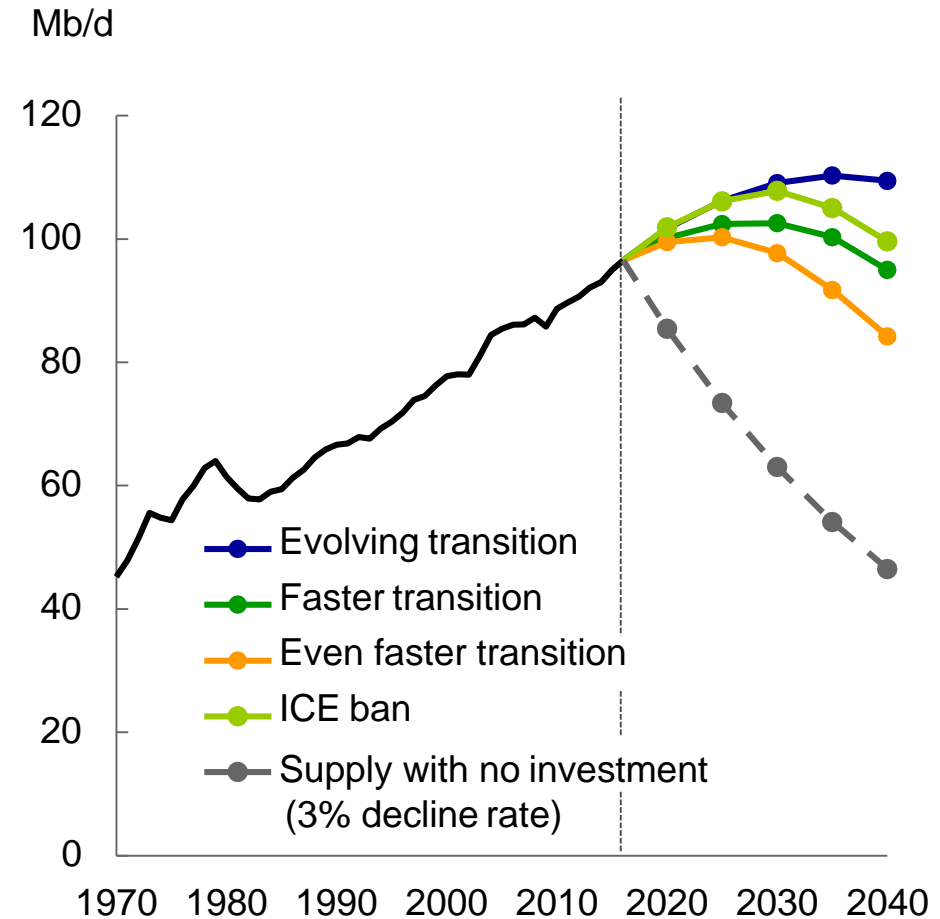
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Global liquids supply growth is led by low-cost producers...

Share of world liquids supply

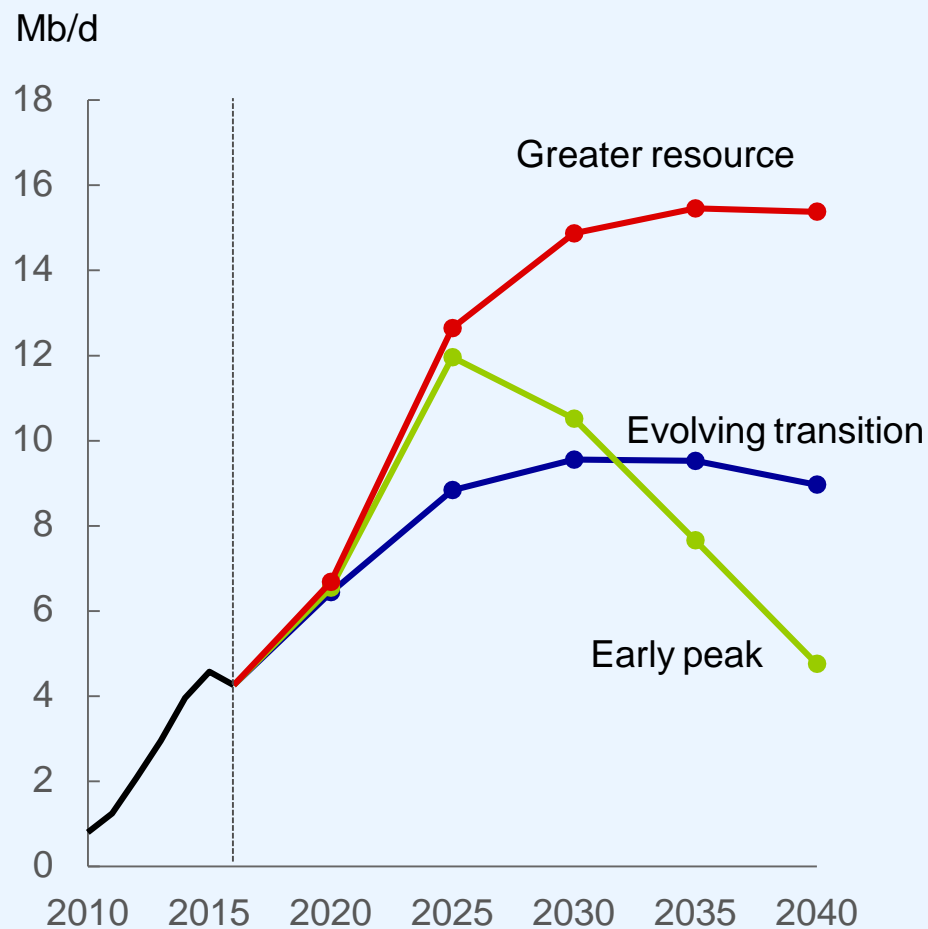


Demand and supply of liquid fuels

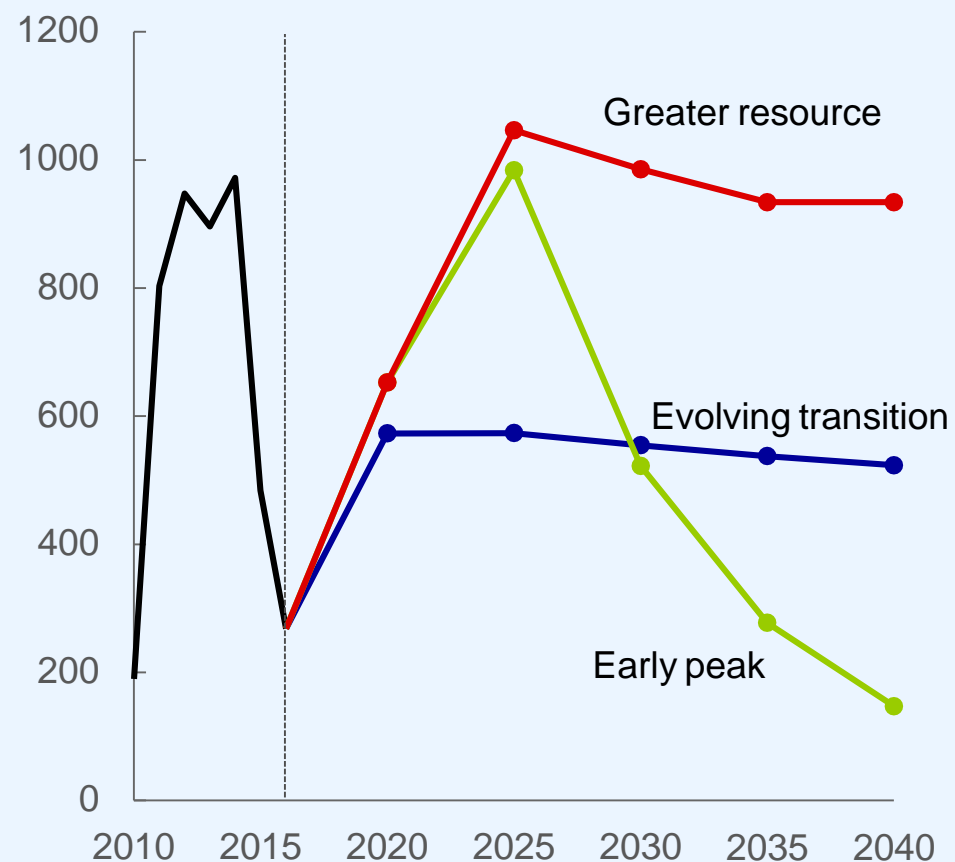


Alternative scenario: US tight oil could grow more rapidly...

US tight oil

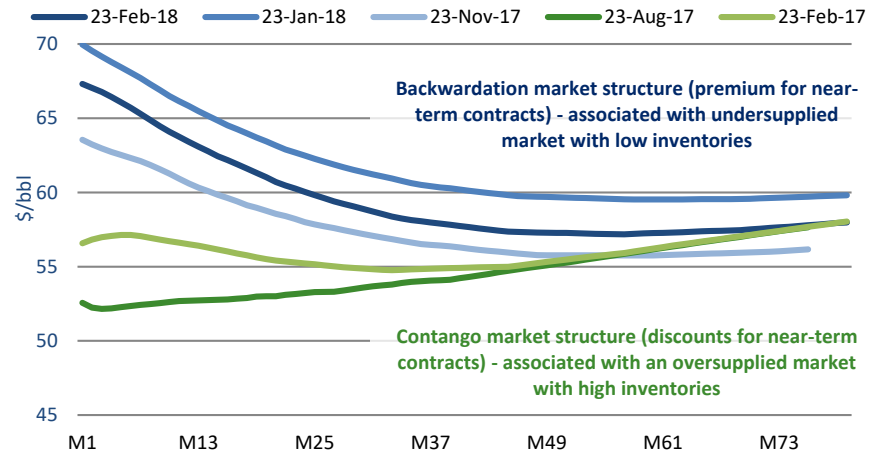


Number of US oil rigs*

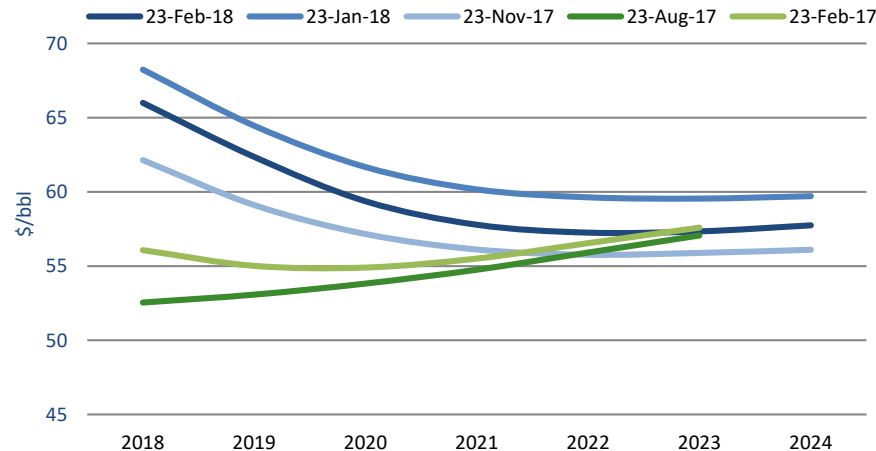


*In the four main producing regions:
Permian, Eagle Ford, Bakken and
Niobrara

Brent Crude Futures Curve: Current, 1M, 3M, 6M and 1Yr Ago

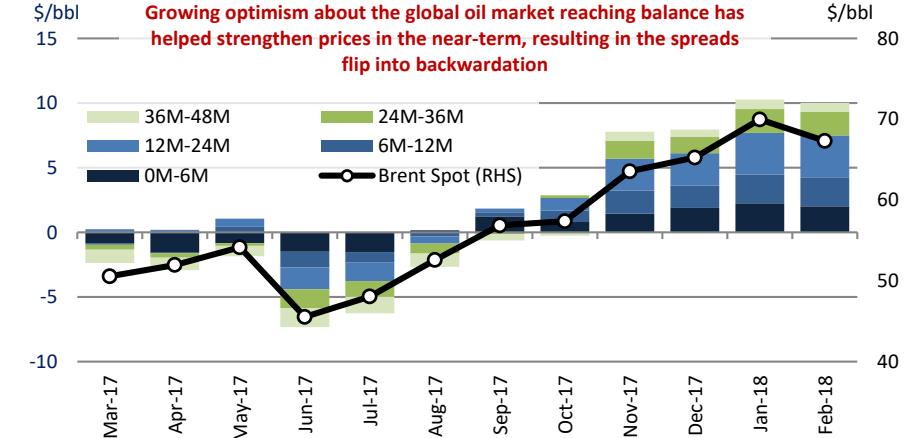


Brent Curve: Annual Averages - Current, 1M, 3M, 6M and 1Yr Ago



The 'spot price' of an asset is the price of buying or selling the asset today. The 'futures price' of an asset is the price of entering into a contract today to buy or sell the asset on some agreed future date. The set of prices for all future dates is then called the 'futures curve'. **The futures curve is not a forecast of future spot prices by the market.** A commodity futures contract is a binding agreement that gives one the right to purchase that commodity at a predefined price on a predefined date in the future. Under a futures contract, both the buyer and the seller are obligated to fulfil their side of the transaction on the specified date. The futures curve shows the price at which it is possible to buy/sell futures contracts for a forward date at a price agreed today (or on a particular date in the past).

Brent Futures Curve Spread (12M Ago to Current)

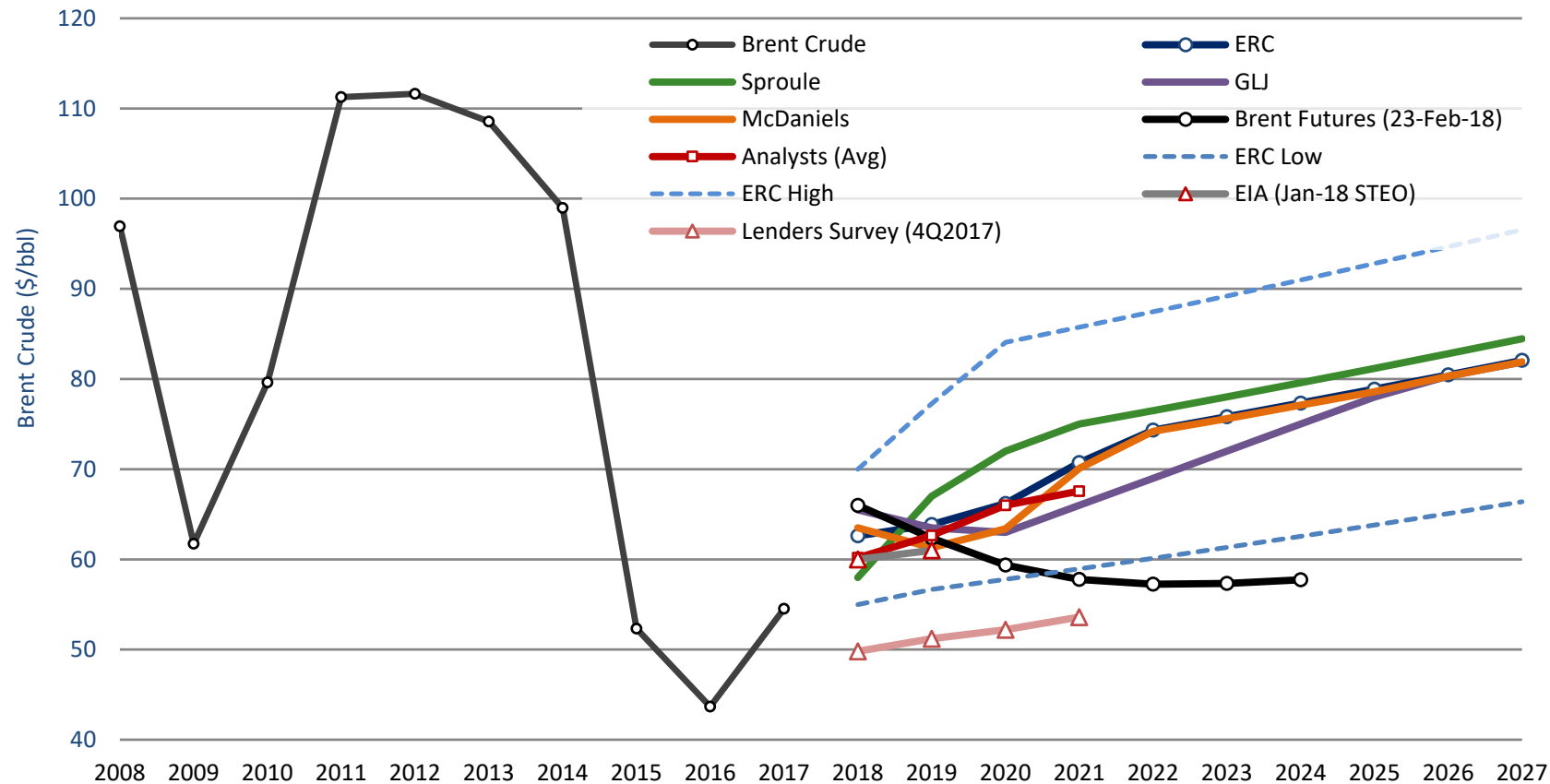


Annual Averages of Brent Futures Contracts (Current Vs 1M, 3M, 6M and 1Yr Ago)

\$/bbl	2018*	2019	2020	2021	2022	2023	2024
23-Feb-18	66	62	59	58	57	57	58
23-Jan-18	68	64	62	60	60	60	60
23-Nov-17	62	59	57	56	56	56	56
23-Aug-17	53	53	54	55	56	57	-
23-Feb-17	56	55	55	56	57	58	-

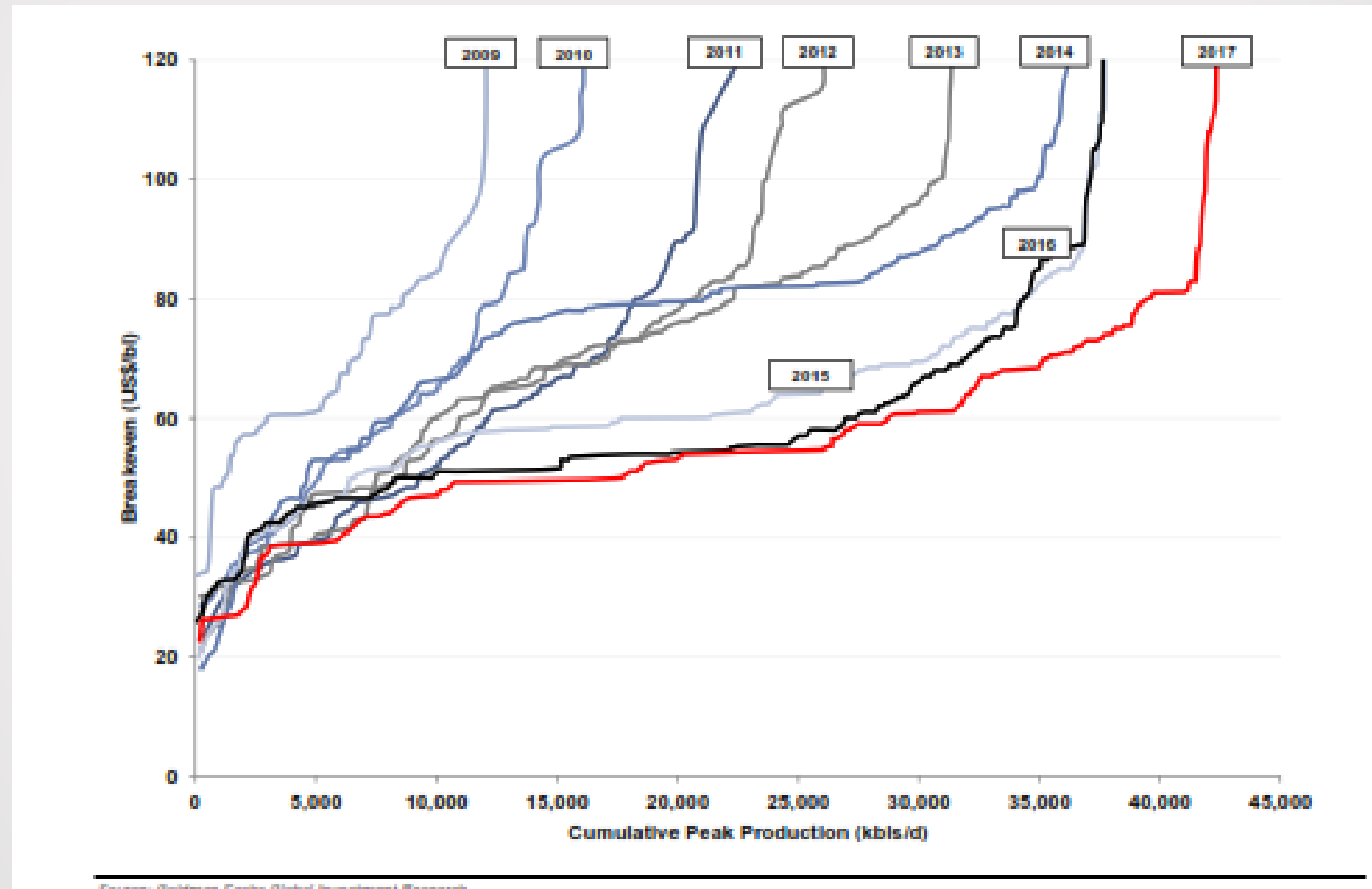
(The latest Brent Futures 2018 figure is the arithmetic average of the futures prices for the remaining year's balance)

Nominal Brent Crude Forecast by Consultants, Analysts Vs. Brent Historical and Futures Curve



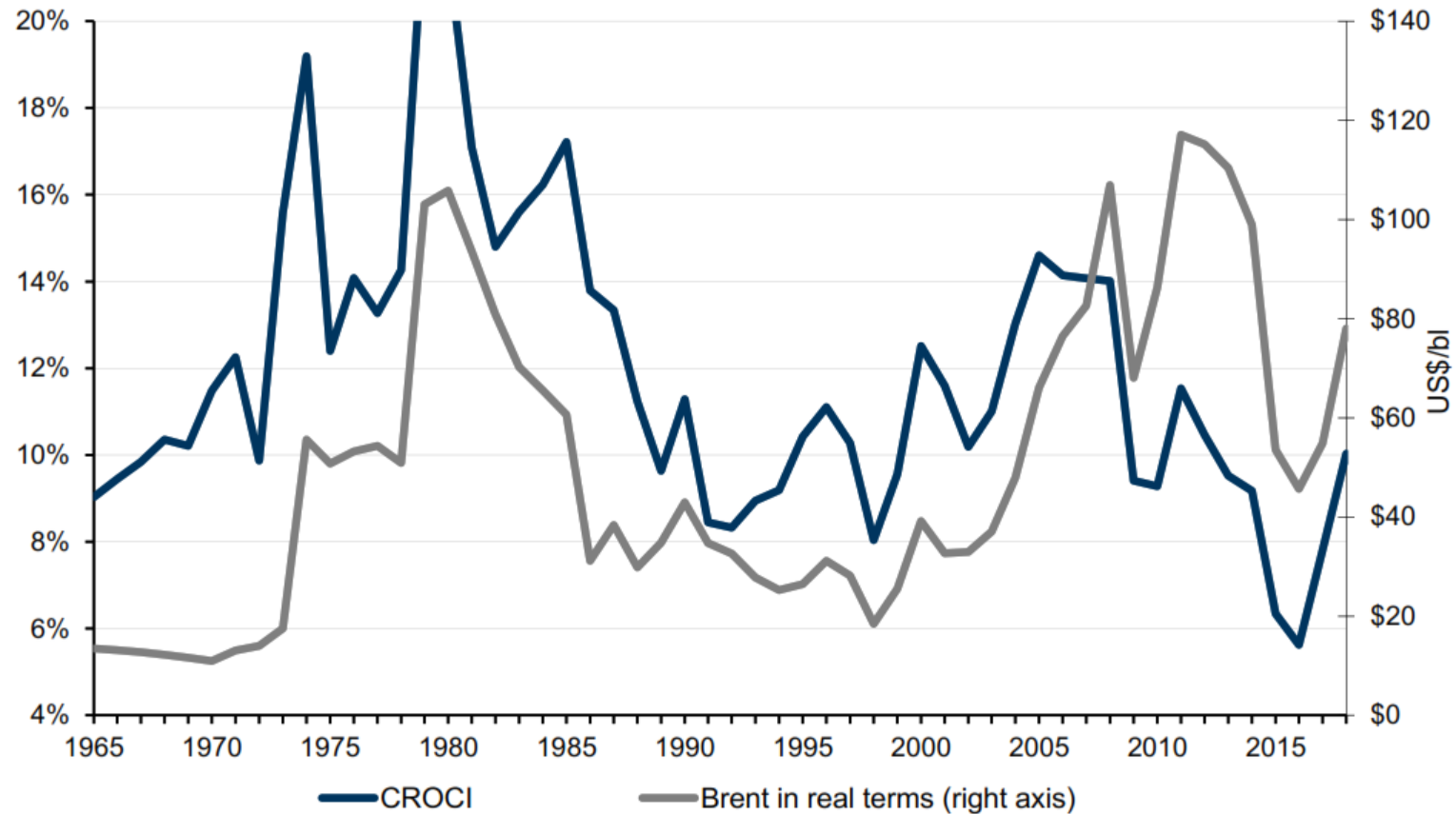
	2018	2019	2020	2021	2022
Petroleum Consultants (Avg)	62	64	66	70	74
Financial Analysts (Avg)	60	63	66	68	-
Brent Futures (23-Feb-18)	66	62	59	58	57
EIA (Jan-18 STEO)	60	61	-	-	-
Lenders Survey (4Q2017)	50	51	52	54	-

Supply Costs Have Fallen



Disappointing Returns

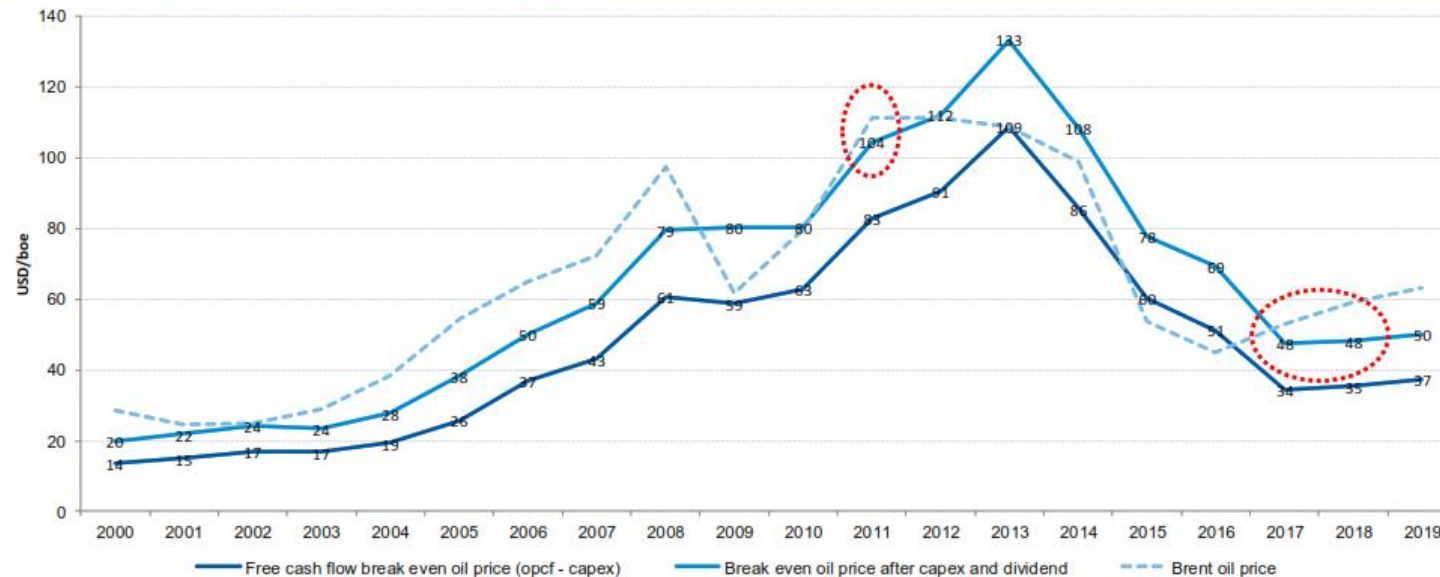
CROCI (cash return on cash invested for XOM, BP and RDS), LHS vs. Brent in real terms



Disappointing Returns

2018e: Second year with oil price above break even oil price since 2011

Break even oil price for oil majors*



How we estimate break even oil prices (simplified):

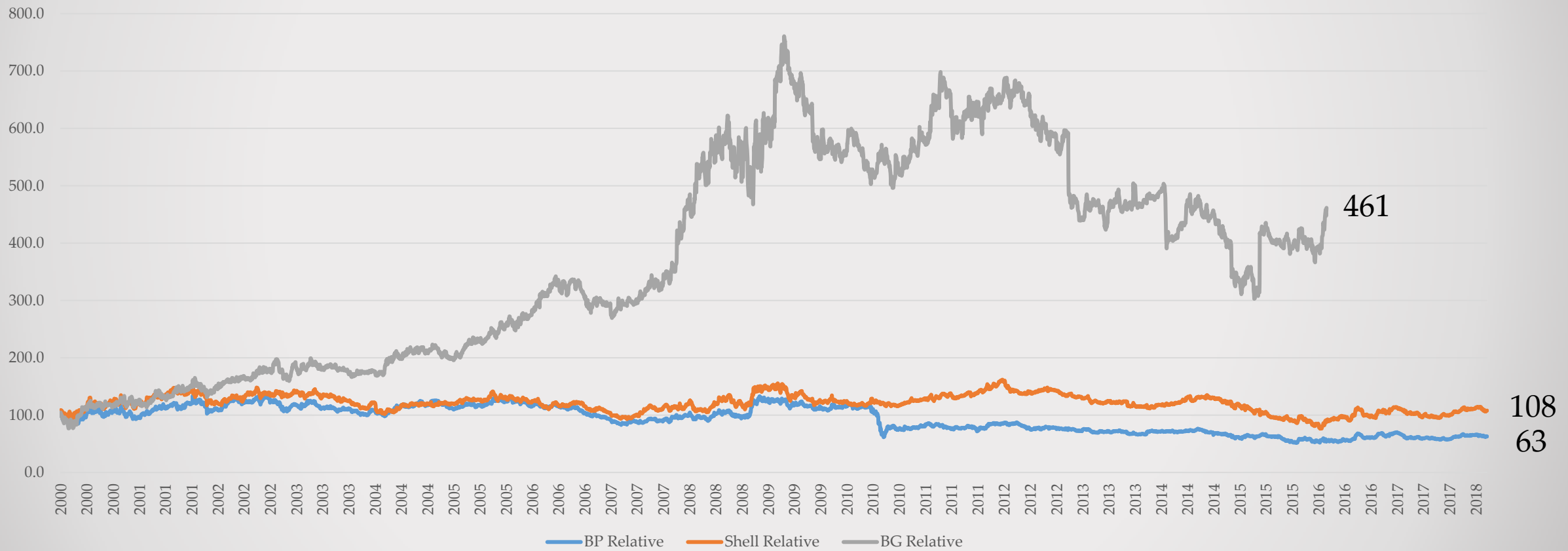
- Collect annual data for operational cash flow, capex, dividend and production (i.e., four key numbers per year per company included in sample)
- Calculate average opcf per boe and opcf per boe as a percentage of annual oil price
- Calculate required oil price change to force free cash flow (opcf – capex) to zero. Compare the required oil price for zero FCF to the actual oil price

* Statoil, Eni, BP, Total, Shell, Repsol, Chevron, Exxon, ConocoPhillips. Source: Factset

BP, Shell BG Relative to UK Market

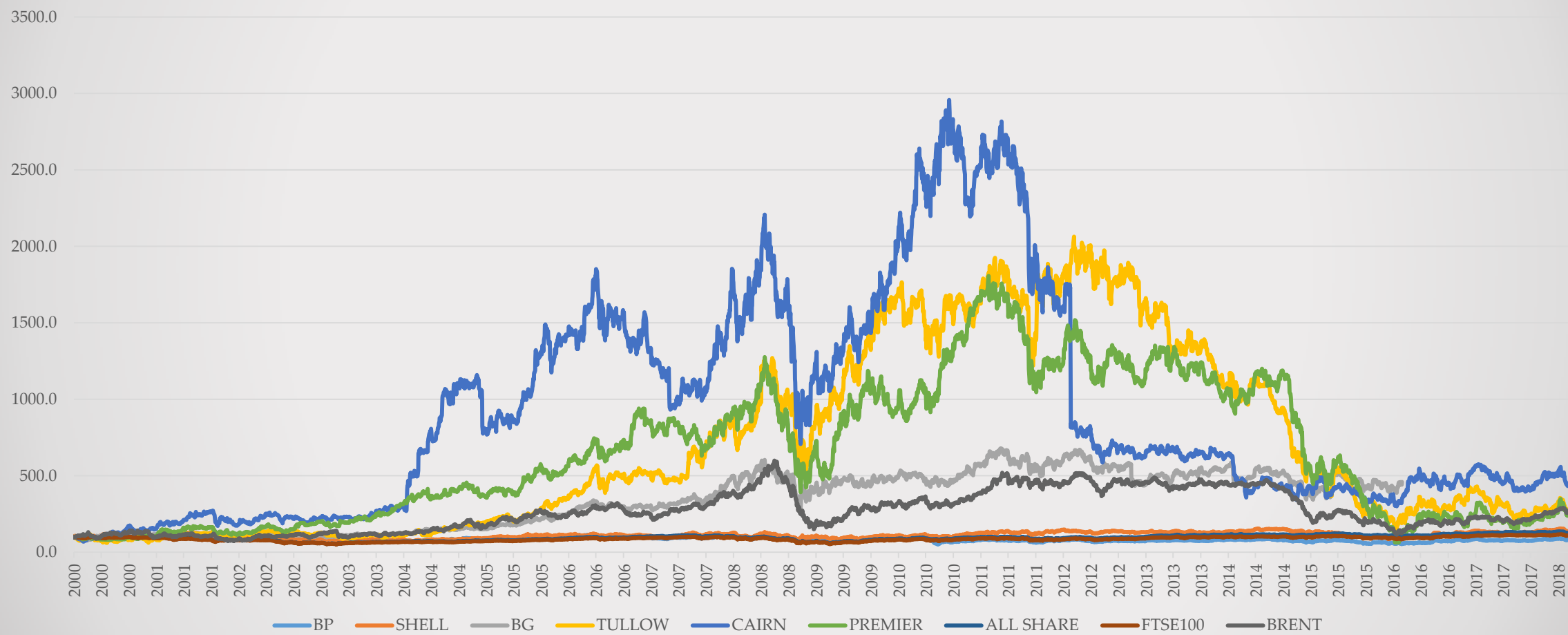
2000-2018

BP, Shell BG Relative to FTA All Share (start indexed to 100)



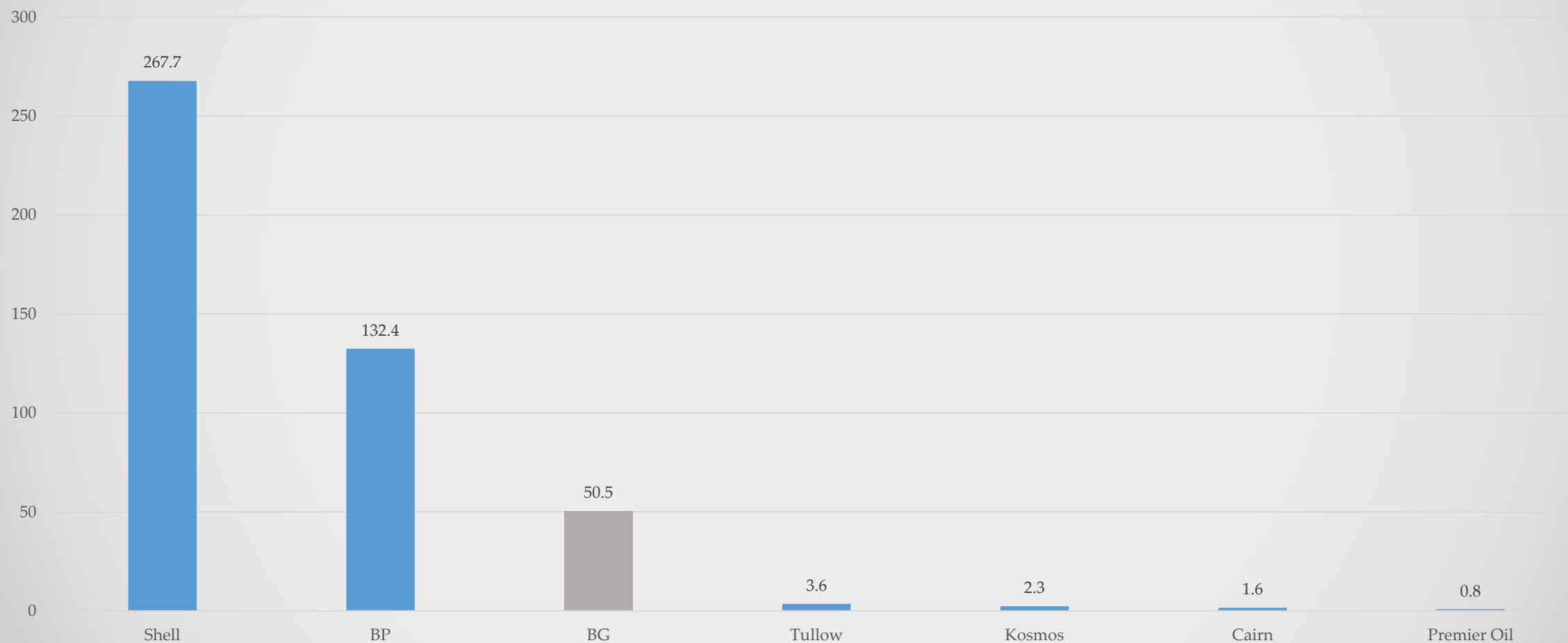
Majors, E&P Oil Price & Market

2000-2018



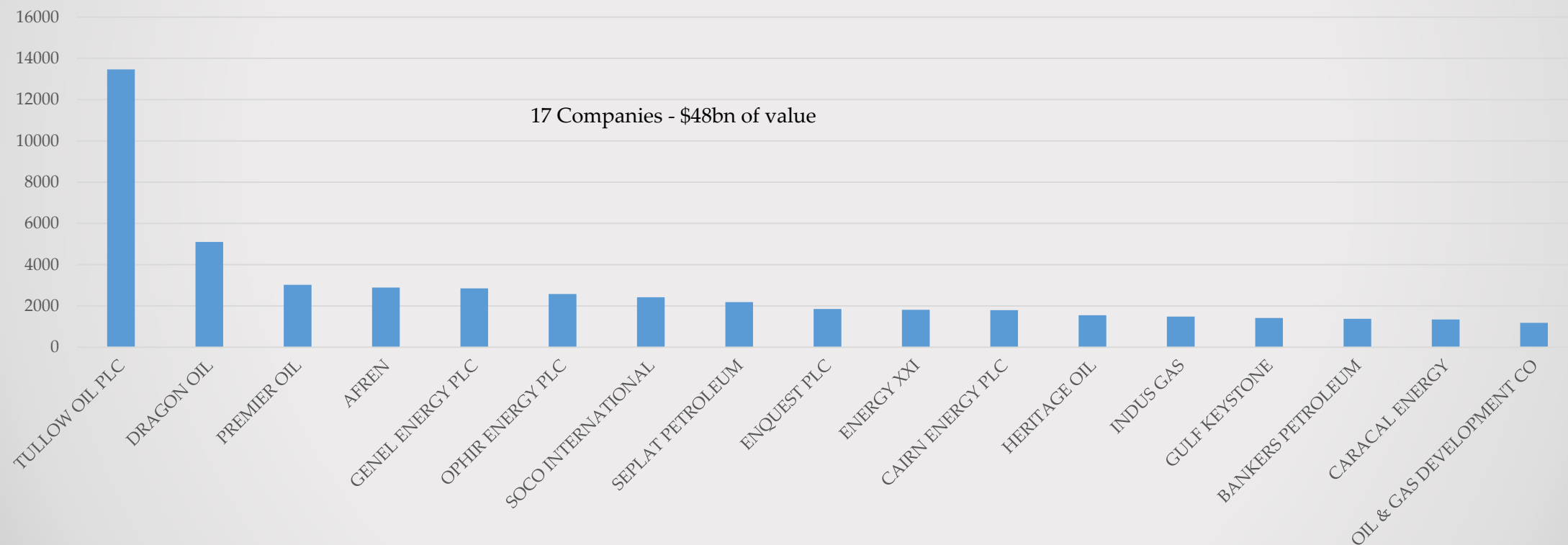
Oil Sector Market Capitalisation

Selected companies \$bn



E&P Companies > \$1bn

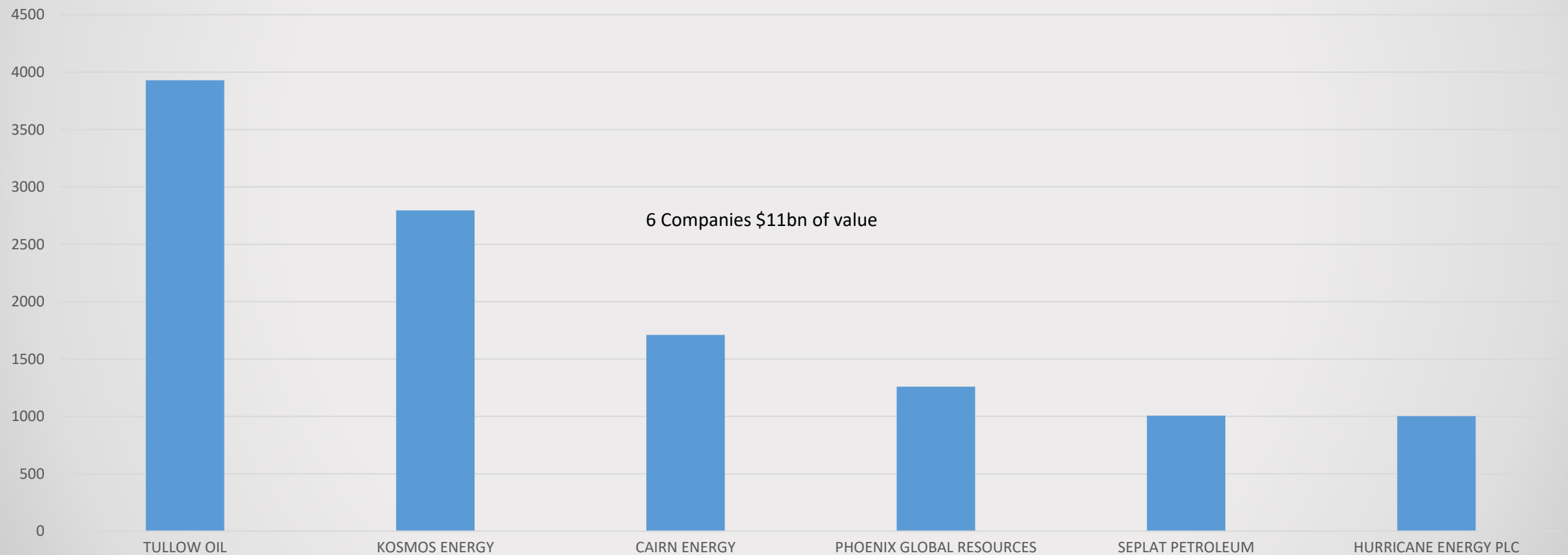
April 2014



E&P Companies > \$1bn

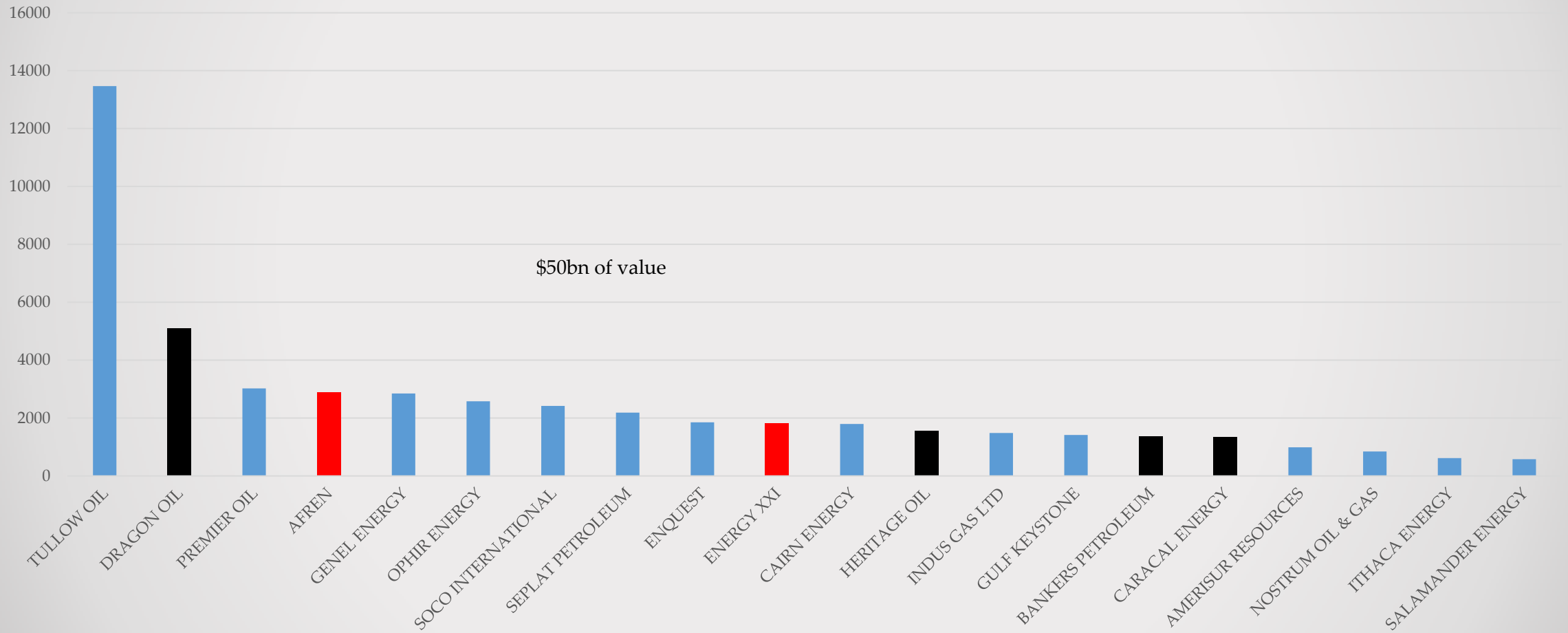
January 2018

E&P Companies > \$1bn Mkt Cap
January 2018



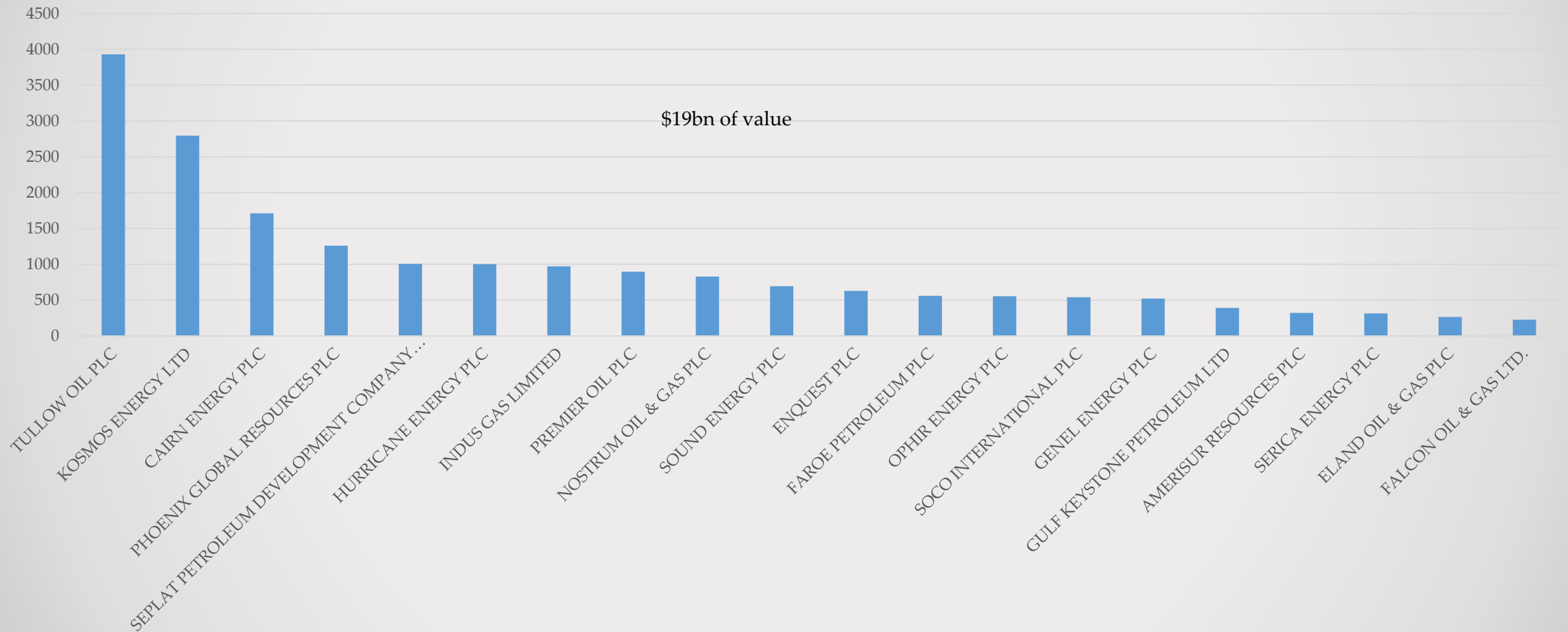
20 Largest E&P Companies

April 2014



20 Largest E&P Companies

January 2018

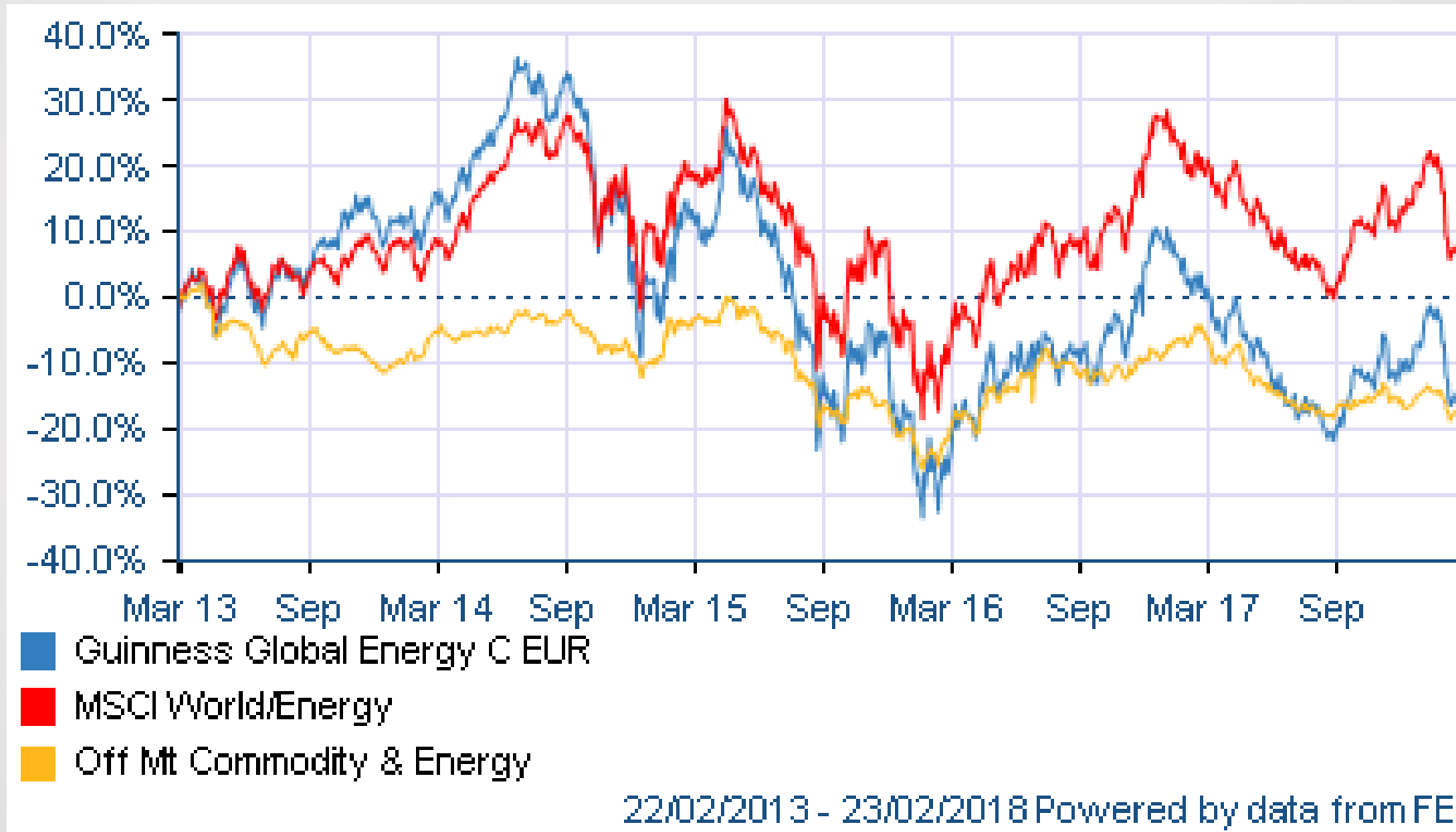


Largest E&P Companies

April 2014 cf Jan 2018

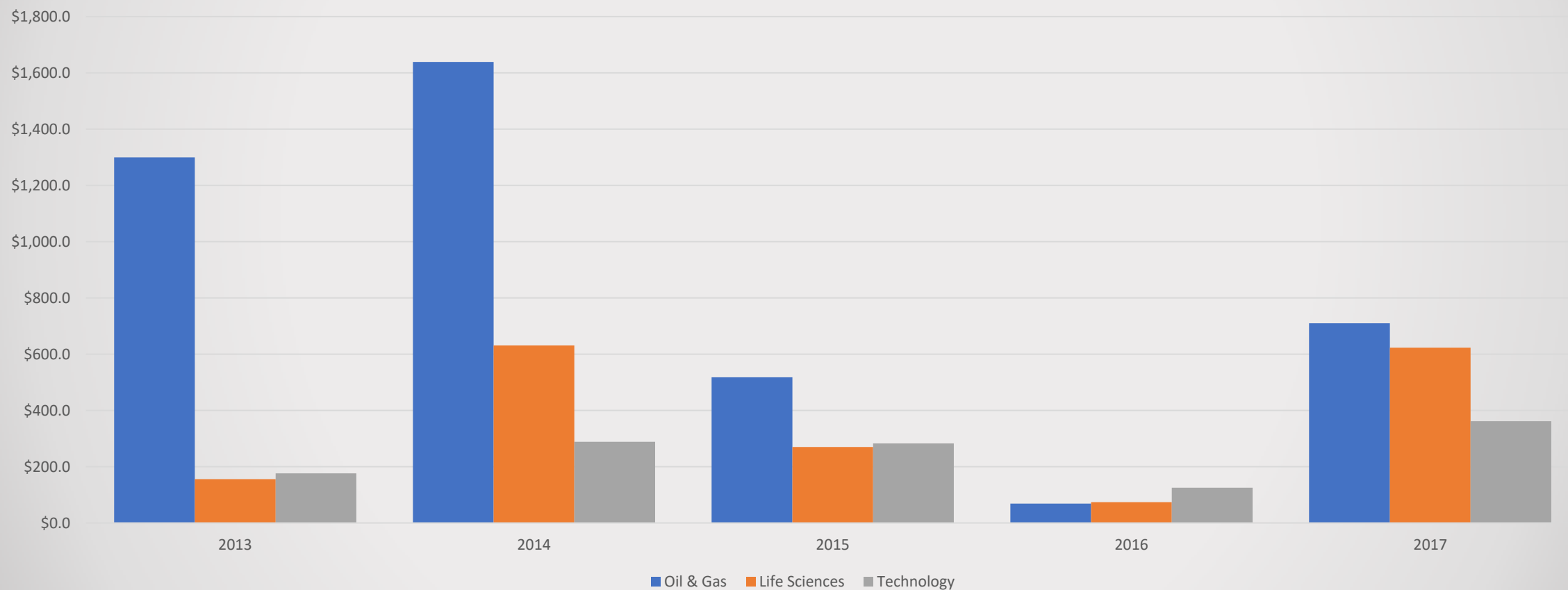


Energy Specialist Funds Suffer



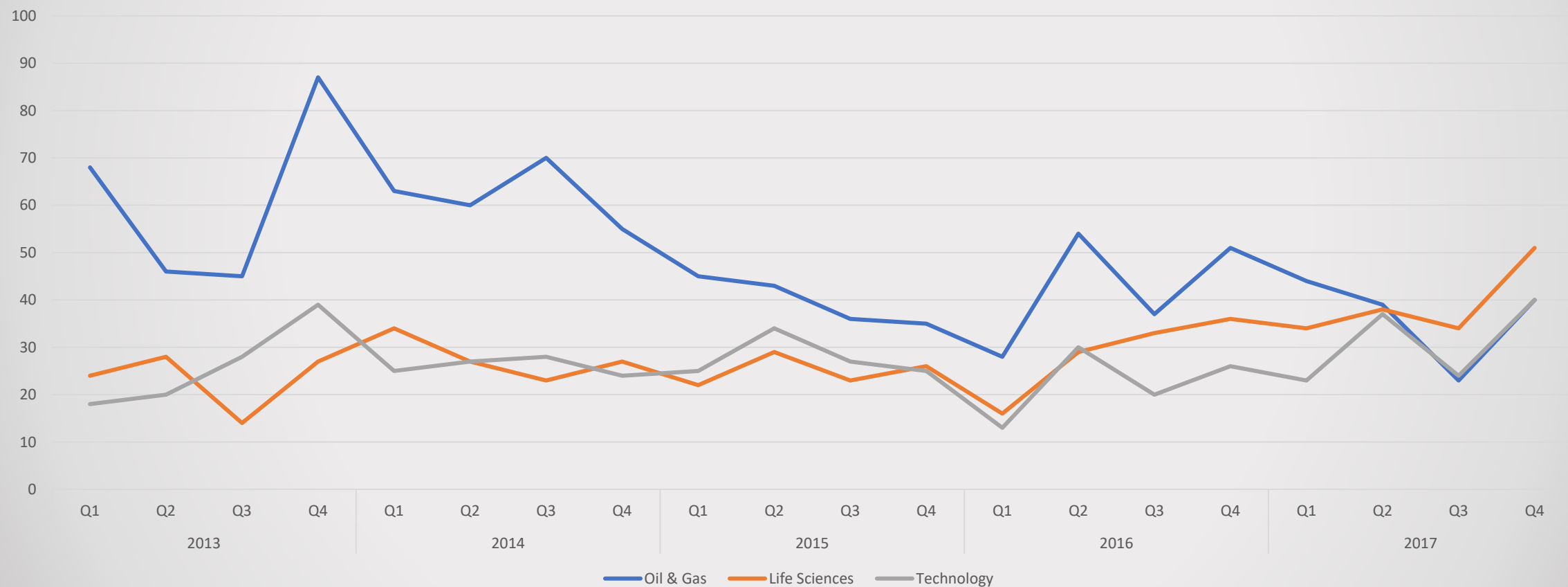
Toronto Risk Capital moves to other sectors

Equity Capital Raised - TSX-V

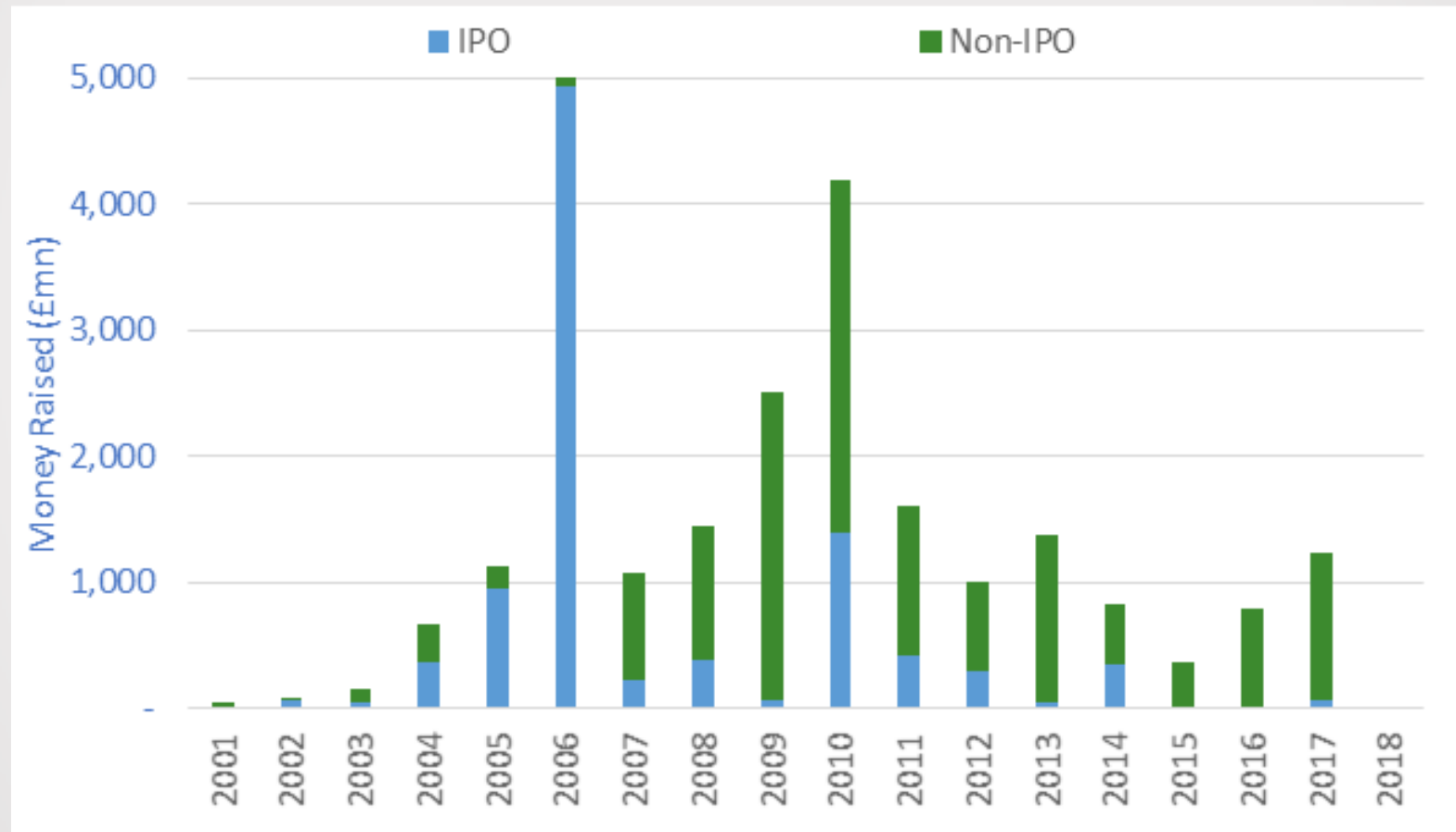


Toronto Risk Capital moves to other sectors

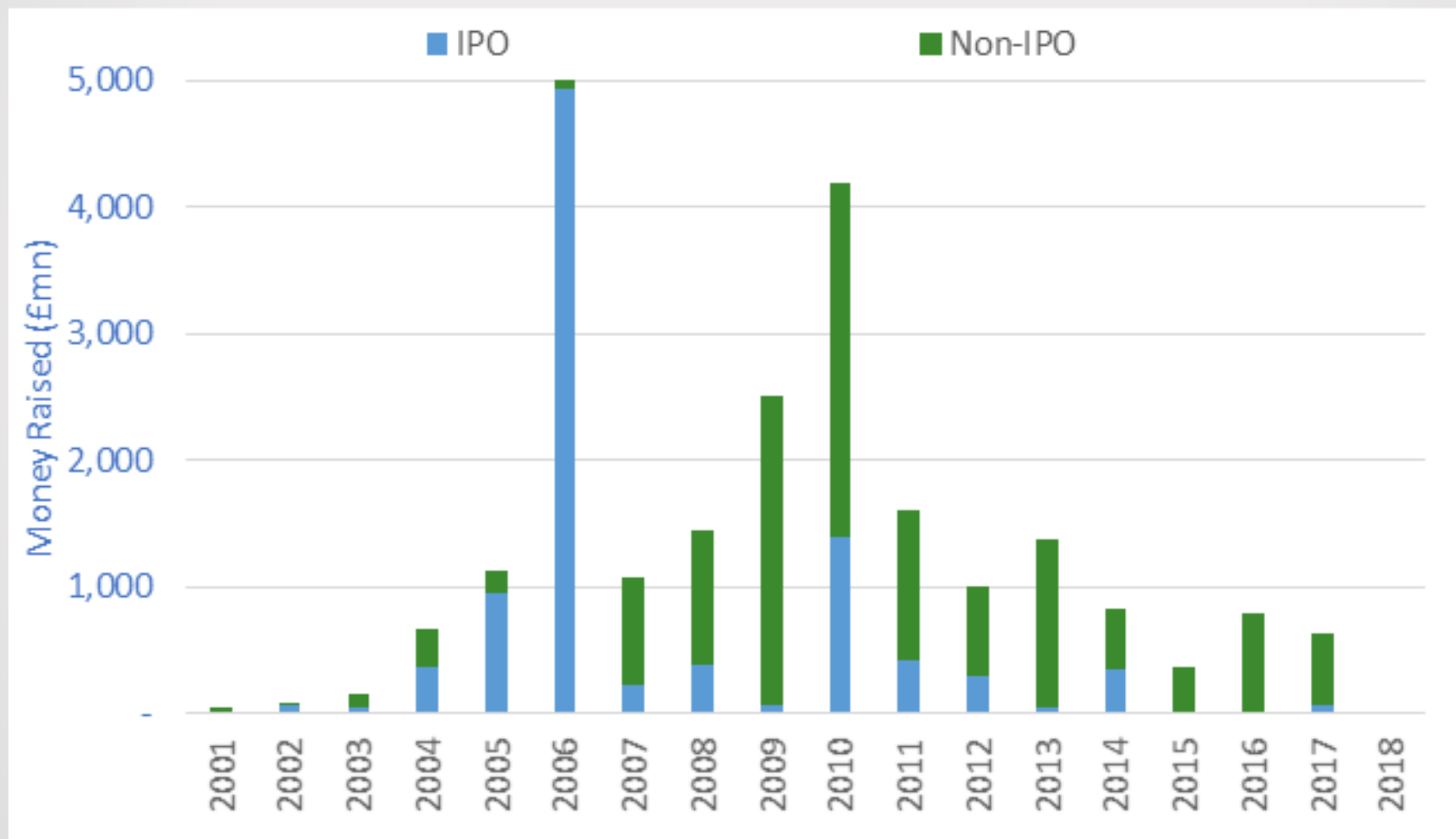
Number of Equity Financings - TSX-V and TSX



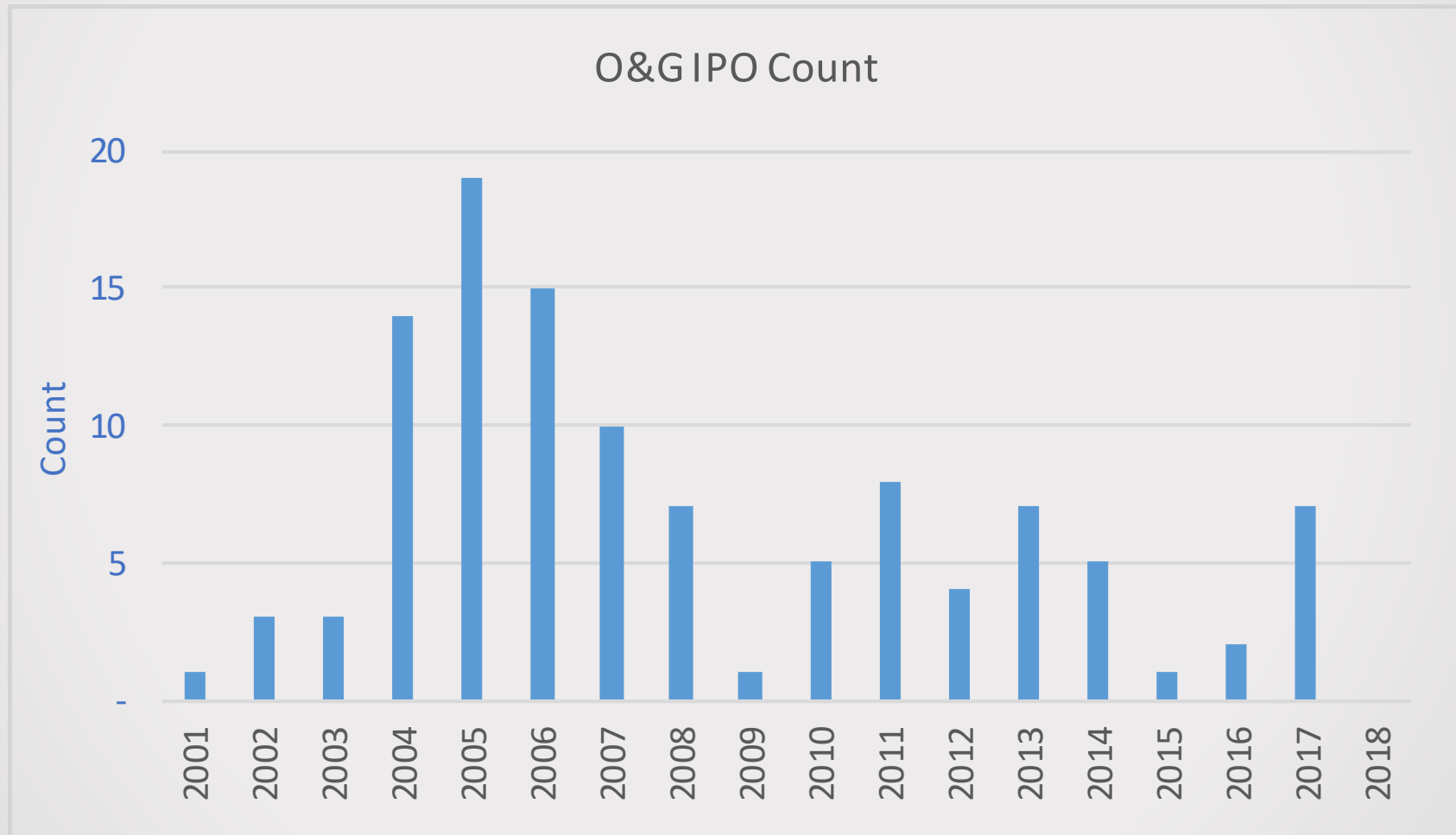
Recovery in London financing



Recovery in London financing (excluding Tullow Rights Issue)

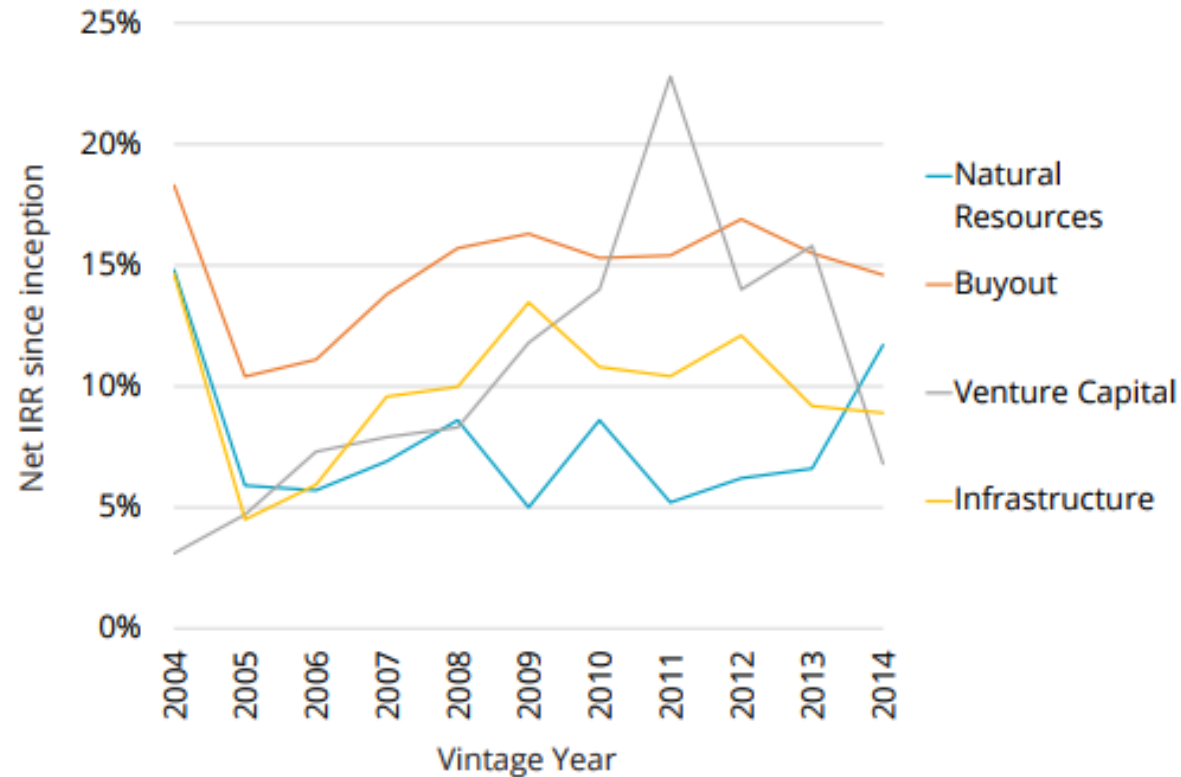


Recovery in London financing



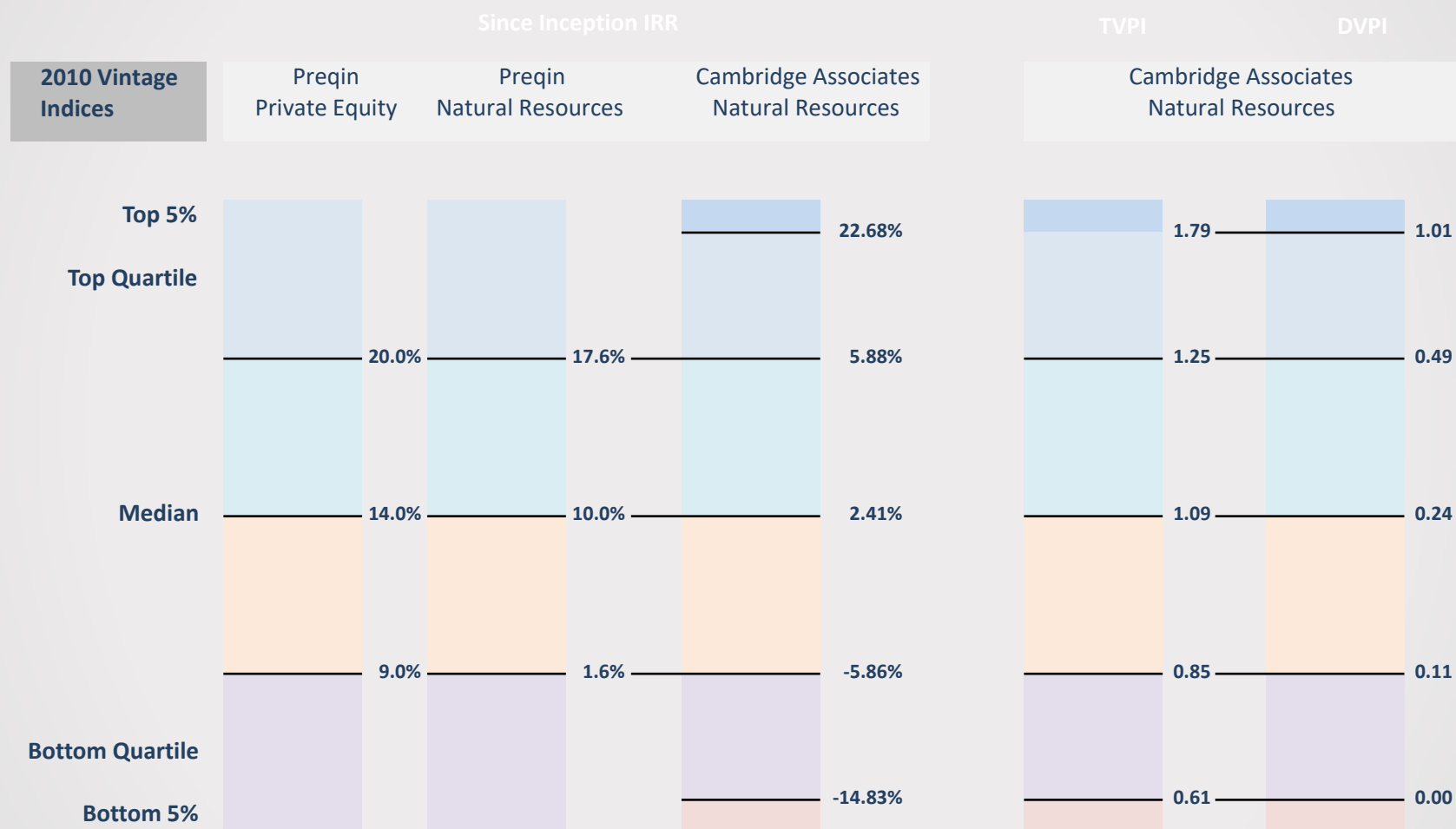
Private Equity – The Great Saviour

Fig. 7.2: Median Net IRRs by Vintage Year: Natural Resources vs. Other Private Capital Strategies (As at June 2017)



Source: Preqin Natural Resources Online

Performance Ranking



What the market wants?

- To make money
(A \$1bn-\$5bn balanced production development exploration company?)
- Good management teams with successful track records
- Realistic valuations when seeking financing.
- Cost control
- Good opportunities

Corporate Structure

- Management.
 - Track record, necessary skills, investment to date, exclusivity to this venture
- Board
 - Track record, independence, add value – complement management team
- Business Plan
 - Strategy, acquisition and exploitation of assets, capital requirements, how much capital has been raised to date and at what prices, technical challenges
- Structure
 - Is asset valuation fair or realistic, preferred shares, options, warrants is management team aligned with investors, is financing sufficient?

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