



# Norwegian petroleum: Prosper or perish?

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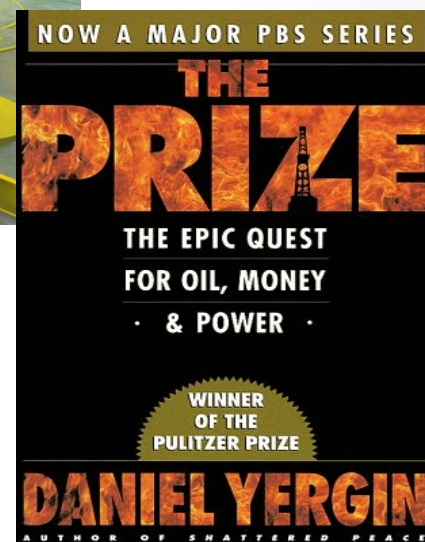
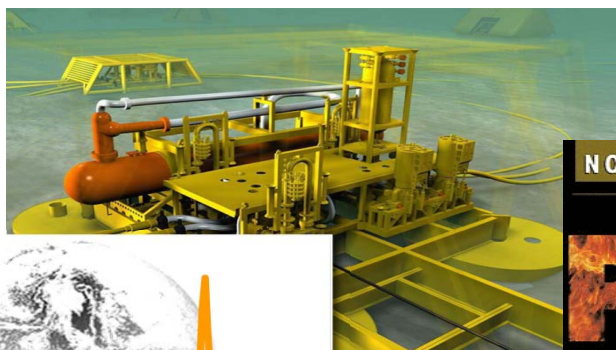
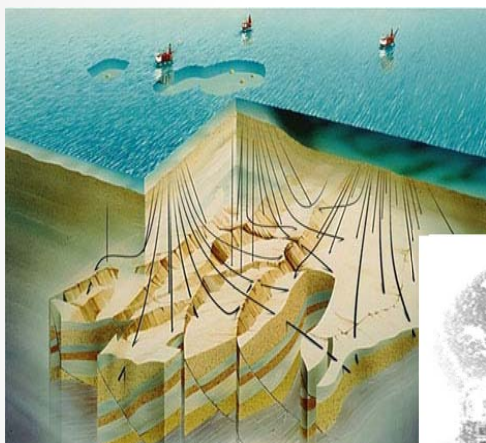
Twitter: @Mohnitor



Guest lecture at the Norwegian University of Life Sciences  
Ås, 27 March 2014

# An intriguing industry

Geology, technology, economics, and politics



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# An industry that makes a difference

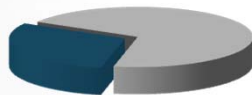
A significant role in the Norwegian economy

## Macroeconomic key figures 2012

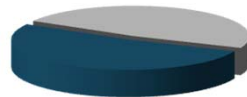
Oil and gas share in...



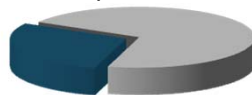
Government revenue  
30 per cent



Total export  
52 per cent



Total fixed capex  
29 per cent



## Seven winter olympic games...

... every year



**OSLO2022**  
Applicant City

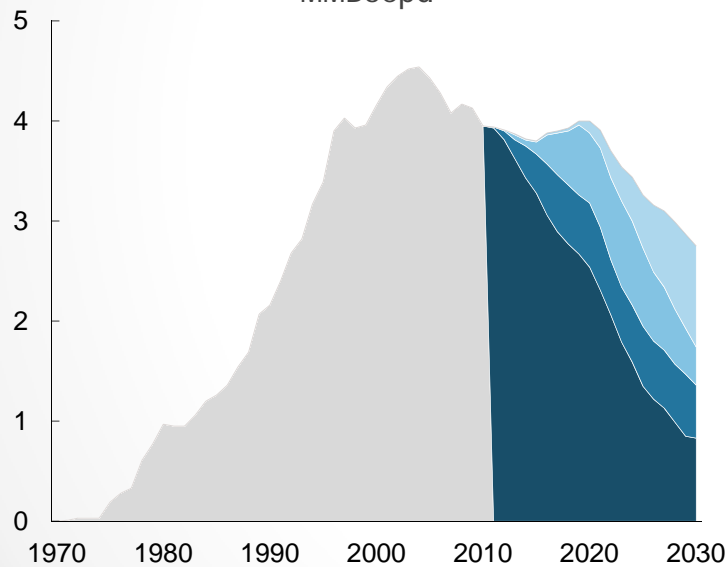


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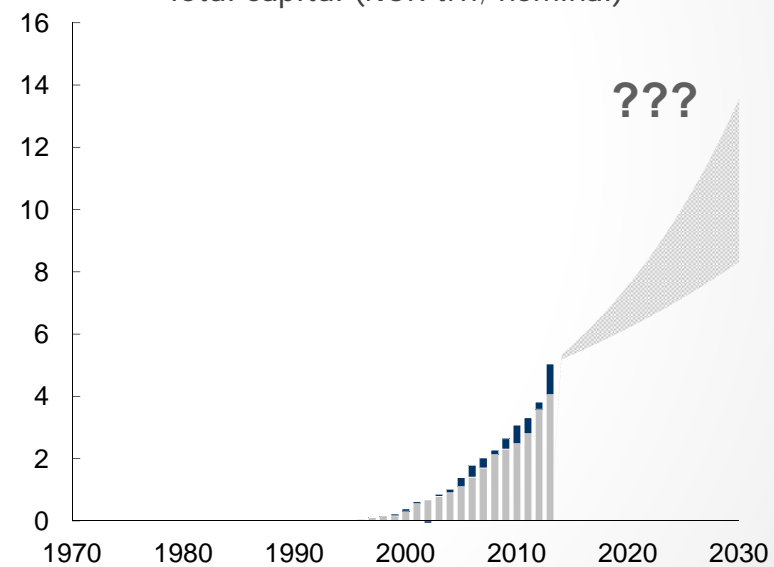
# 40 years of prosperous progress

Substantial revenues for industry, households - and politicians

NCS oil and gas production  
MMBoepd

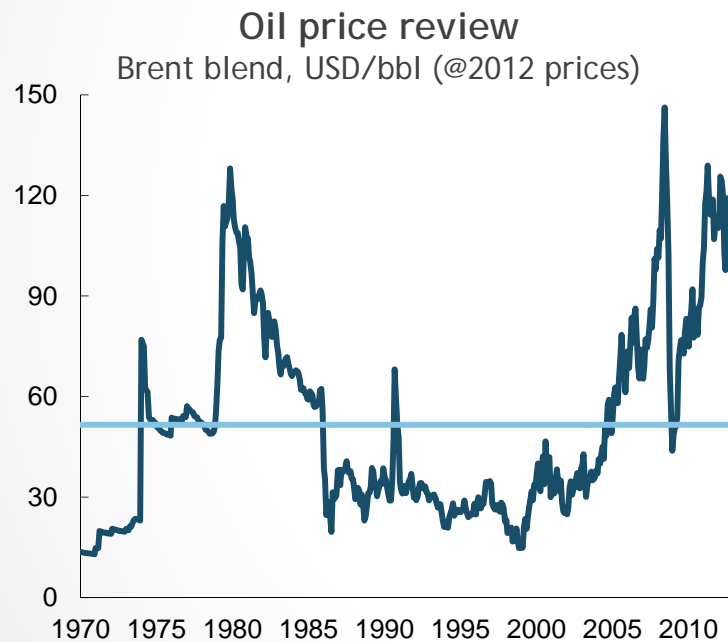


Government Pension Fund - Global  
Total capital (NOK trn; nominal)



# The oil price matters...

... for demand, supply, and future price dynamics

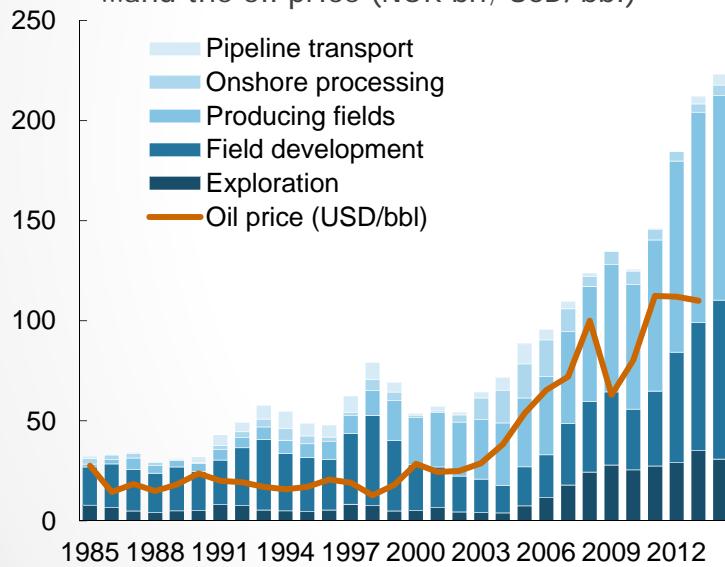


- 4-fold increase since 2000
- Impact on demand
  - Income effect
  - Substitution effect
  - Policy response
- Impact on supply
  - Conventionals
  - Unconventionals
- New technologies

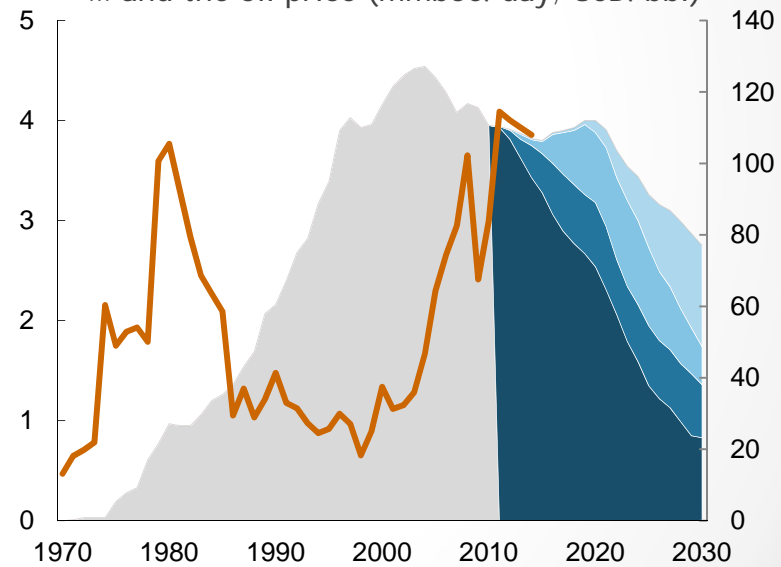
# The oil price matters...

... for NCS activity, production, revenues - and costs

NCS oil and gas investments...  
...and the oil price (NOK bn; USD/bbl)



NCS oil and gas production...  
... and the oil price (mmboe/day; USD/bbl)

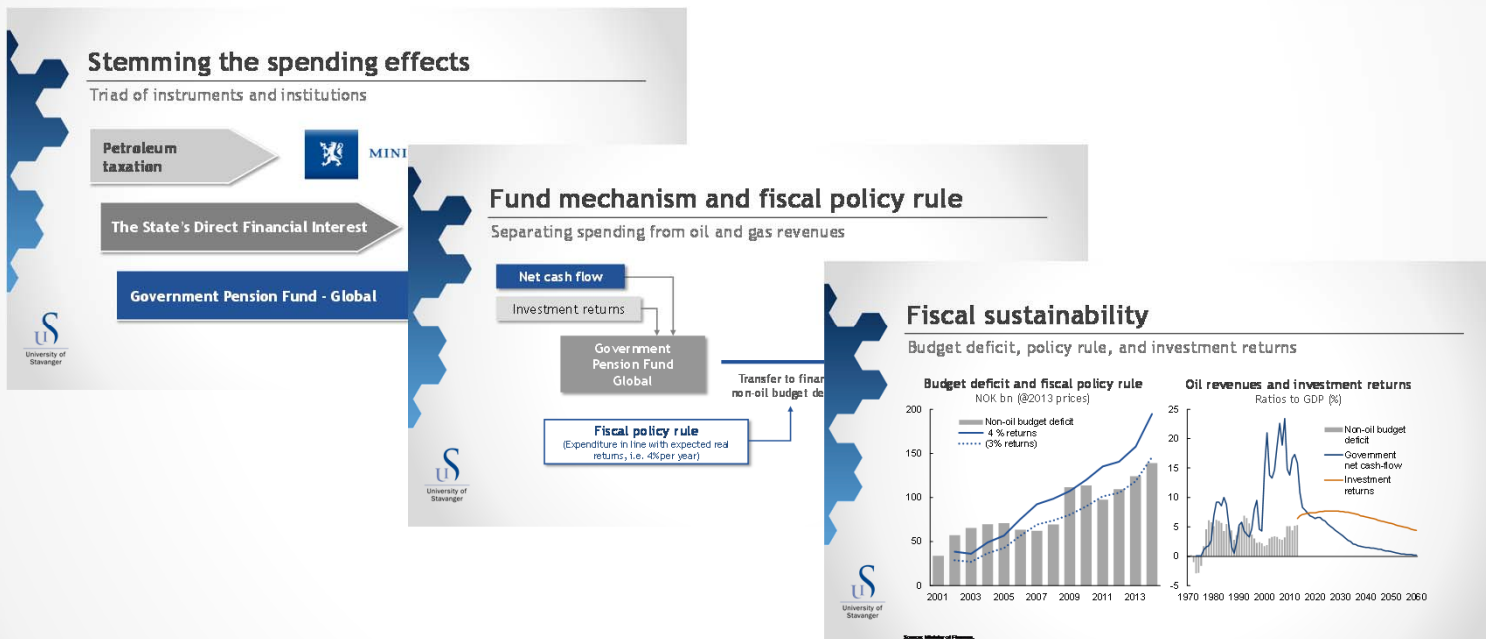


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Source: Statistics Norway, Norwegian Petroleum Directorate, Reuters EcoWin.

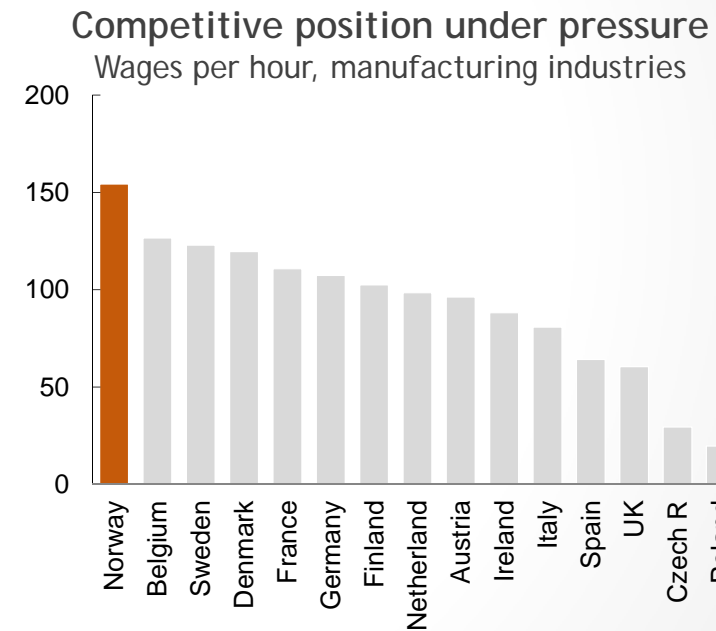
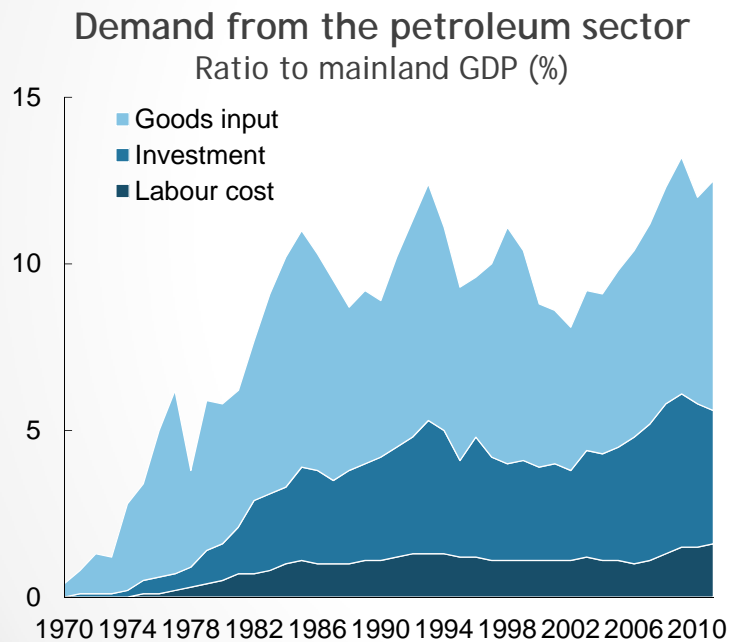
# High attention on spending effects

Responsible revenue management and fiscal sustainability



# Less focus on resource movement effects

Significant repercussions to the mainland economy





# IOC returns fall short of expectations

Unimpressive share price developments



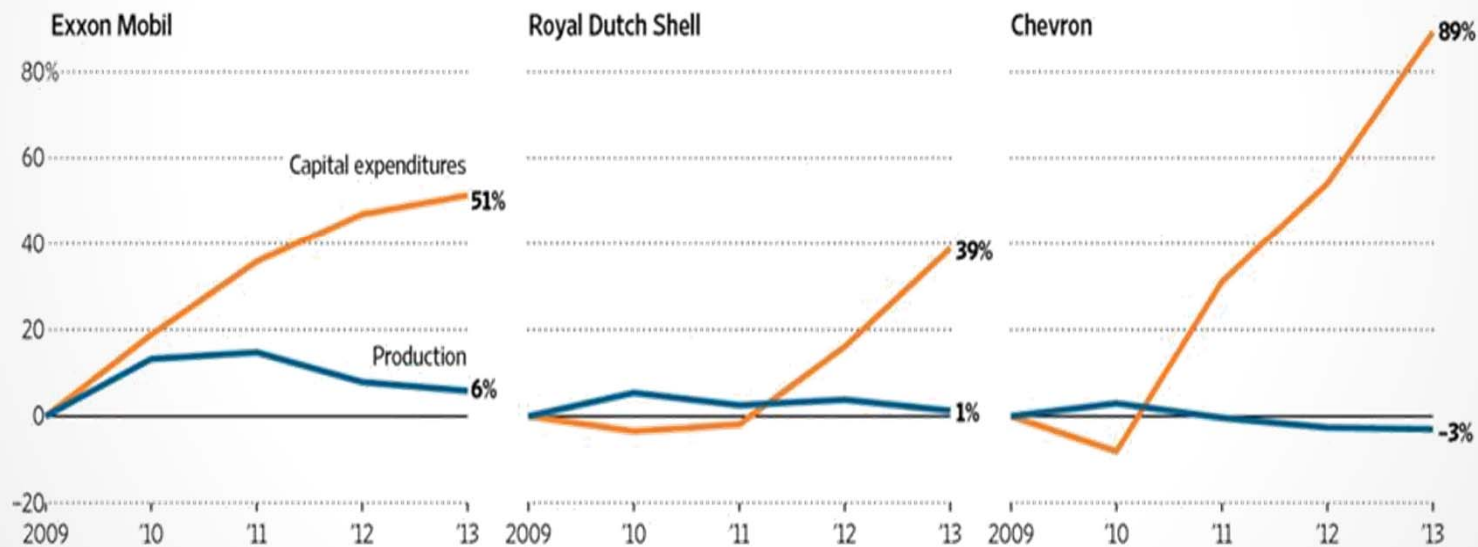
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Source: <http://www.statoil.com/IR>.

# IOC revenues fall short of expenditures

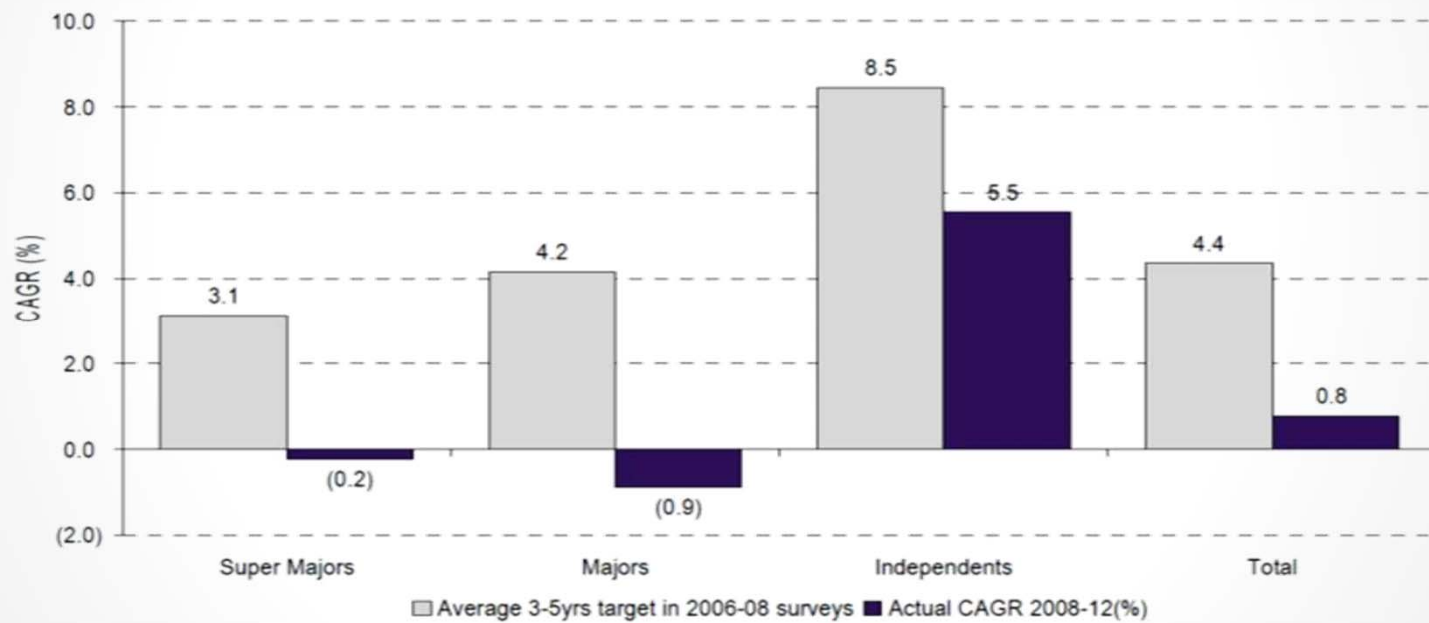
More capital is required for each barrel of production capacity

Exxon, Shell and Chevron have been spending at record levels as they seek to boost their oil and gas output. It has yet to pay off. Below, change in production and capital expenditures since 2009.



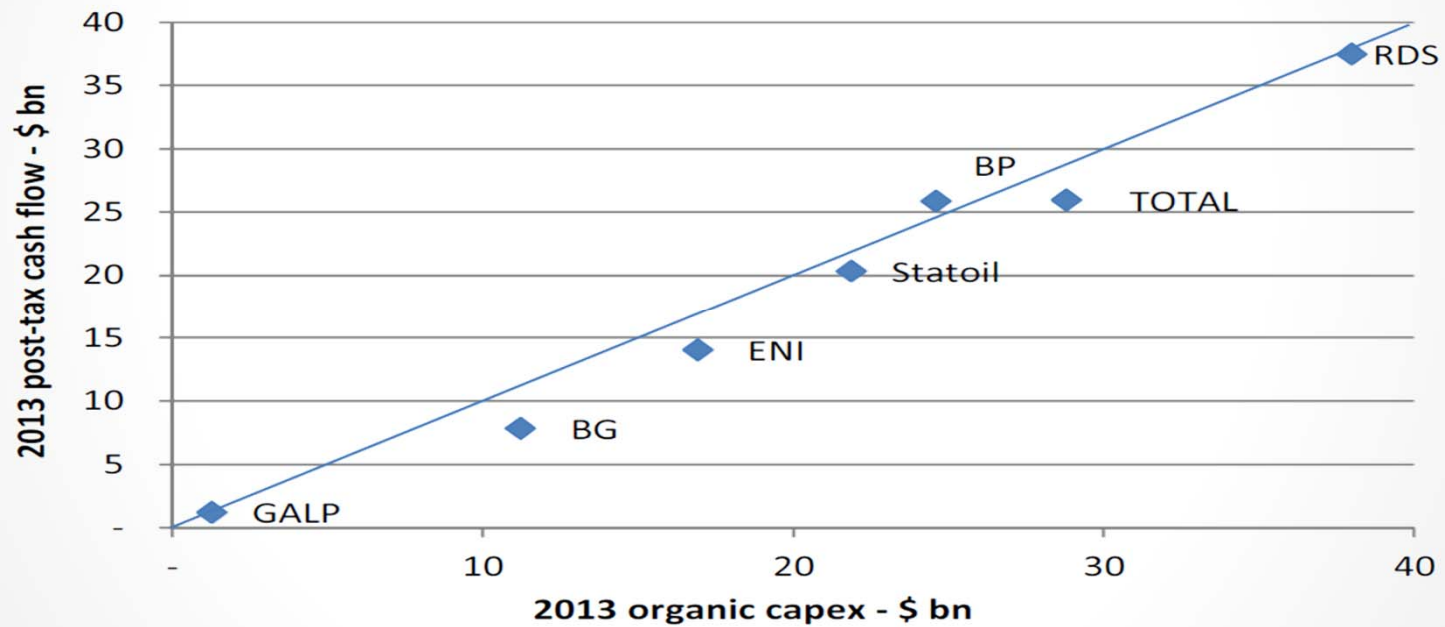
# IOC production falls short of promises

Production growth versus targeted growth last four years



# IOC cash-flows fall short of investments

Only BP funded its capex with cash-flow in 2013

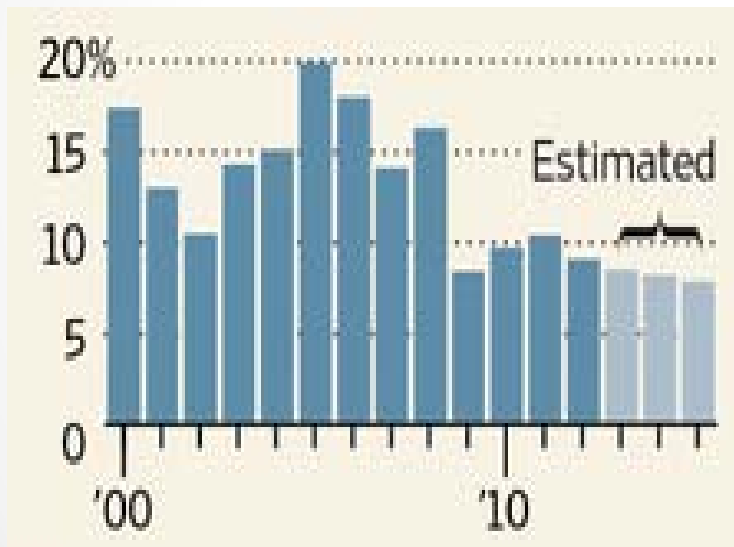


# Investment choked by financial markets

Increasing focus on cash-flow management and capital discipline

## “Leaking profits”

Return on capital employed for major oil companies



- Shareholder skepticism
  - Production short of targets
  - Sky-rocketing costs
  - Erosion of returns
- Worries over oil price outlook
  - Weak economic growth
  - New floods of supplies
  - Policy uncertainty looms
- Business model under pressure
  - Scarcity and access dilemmas
  - «Carbon bubble» challenge
- “Cash is King!”

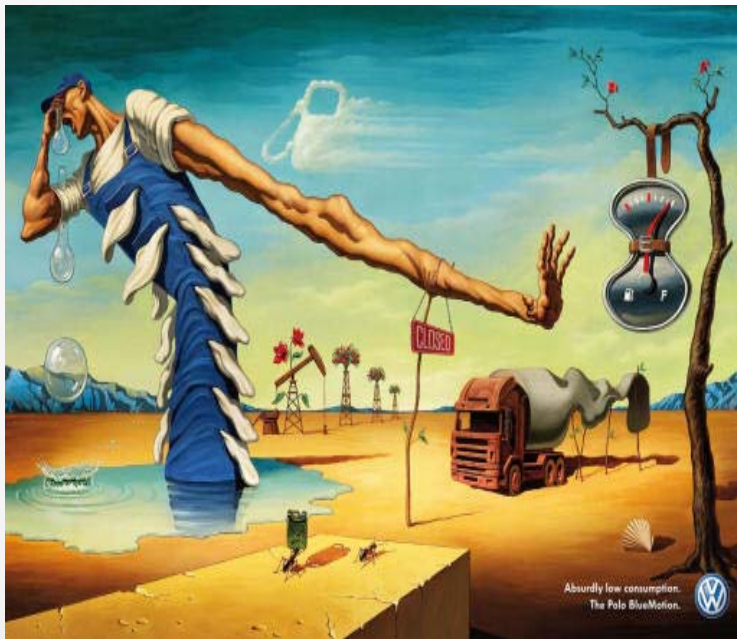


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Source: Citibank (chart).

# Longer-term oil industry challenges

Will the world turn its back on fossil fuels?



- Energy and climate policies
- Role of oil in transport
- Eastward bound energy
- Shale gale globalisation
- Emerging technologies
- Access, returns, and risk
- Changes in OPEC behaviour

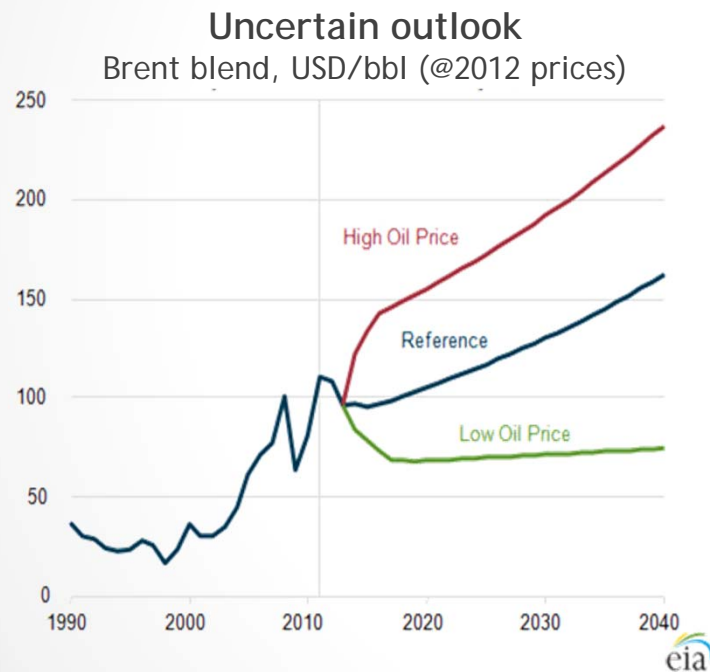


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Source: Mitchell, John, Marcel, Valerie and Beth Mitchell. 2012. «What next for the oil and gas industry?». Chatham House. October 2012.

# Concluding remarks

Build resilience, prepare for change



- Energy is getting more expensive
- Oil price outlook is very uncertain
- The oil price matters for activity
- Boom arrested by market concerns
- New shocks and cycles in the cards
- IOC business model under pressure



# Thank you for your attention!

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