



Climate targets, management incentives and corporate strategy in the energy industry

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Research paper

This talk is mostly based on a draft research paper:

Ritz, Robert A. “*Climate targets, management incentives and corporate strategy in the energy industry*”, August 2019

Updated versions of the paper will be available at:

<http://www.econ.cam.ac.uk/faculty/ritz>

Motivation: Climate change & investors

① Since 2015 Paris Agreement:

- Climate change moves up policy agenda
- Climate change + wider ESG move up corporate agenda

② Pressure from institutional investors

- Portfolio value at risk due to climate change
- Investor coalitions e.g. Climate Action 100+
 - Corporate disclosure of climate risks
 - “Paris-consistent” corporate strategy

③ Emerging corporate response to climate transition

- Repositioning: sell high-C assets, buy green entrants
- Electricity sector more advanced than oil & gas

⇒ *Unlike climate policy, investor-driven corporate action is global*

Management incentives & climate targets

Leading investors back Shell's climate targets

Dec 3, 2018

Royal Dutch Shell plc (Shell) today announces plans to set short-term targets as part of a long-term ambition to reduce the Net Carbon Footprint of its energy products. The company plans to link these targets to executive remuneration, subject to shareholder approval.

2018: Shell announces executive pay based on climate targets including Scope 3 “life cycle” product emissions

Opinion **Commodities**

Why Shell and BP are on different tracks on carbon

Investors likely to play a big role in deciding the ultimate paths the pair take

2019: BP, Chevron and others announce management incentives based on Scope 1 emissions from own production

Practice increasingly ahead of theory

Economics of climate policy

- Models influential: case for climate action
 - Firm is “black box” that delivers emissions cuts
 - Abatement cost function captures forgone profit
- Very little on incentives & organization inside firm

Economics of management incentives

- Models influential: executive compensation & corporate governance
- Very little on interplay between agency problems and climate externality

⇒ *This talk: Initial attempt to link climate & agency economics*

Plan for this talk

- ① Benchmark: Efficient markets & efficient policy
- ② Climate policy gap & corporate climate action
- ③ “Climate incentives”
- ④ Conclusions

Benchmark: Efficient markets & efficient policy

STRAWMAN

— **Social cost of carbon**

— Say \$50/tCO₂ today

— SCC rises over time

— **Global carbon price**

— Set at SCC trajectory

— All countries & sectors

— **Efficient markets**

— Labour, product, financial

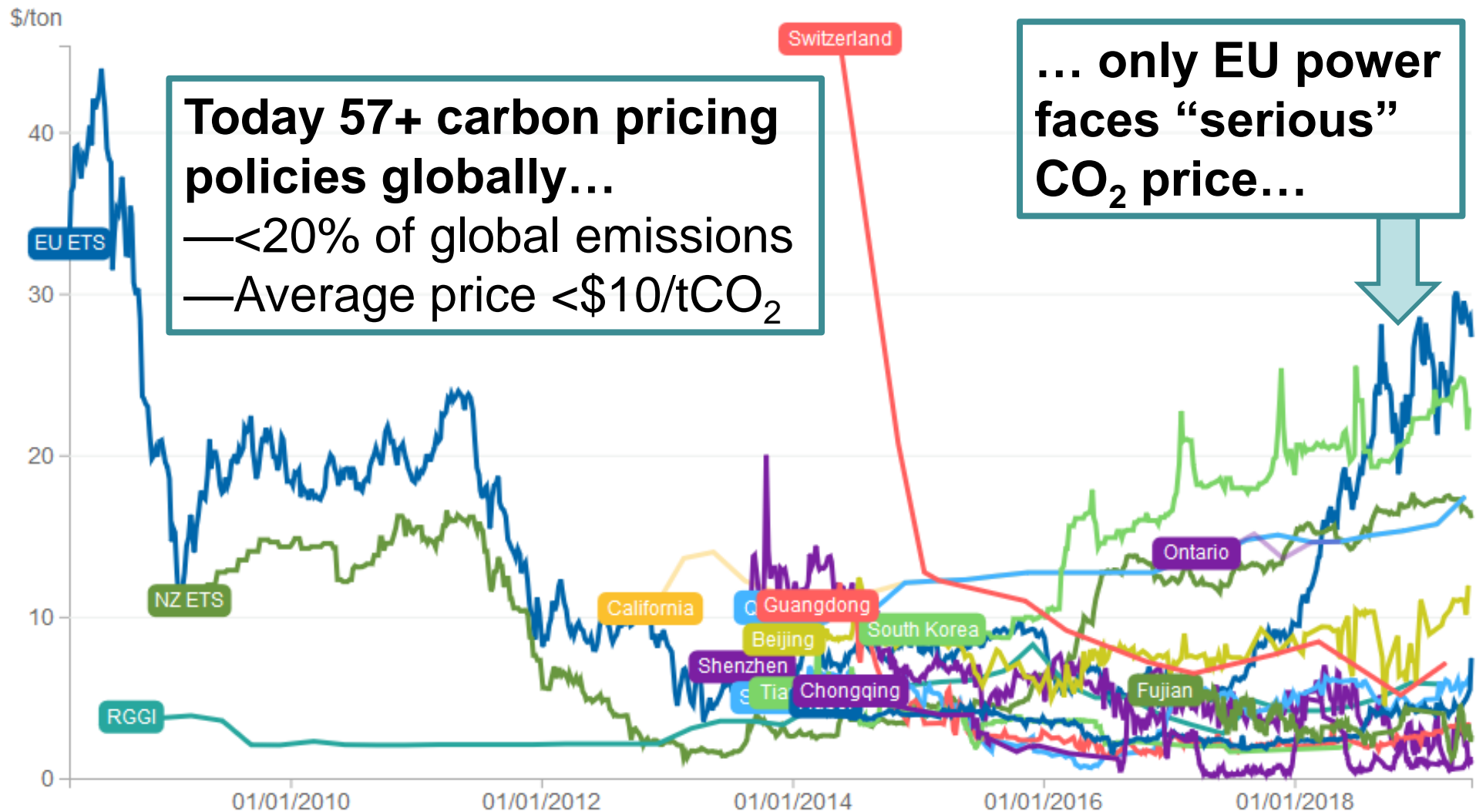
⇒ **Firm value reflects climate damages**

— Global carbon price aligns
private & social interests

IMPLICATIONS

1. No need for incentives based on anything apart from stock price
2. No need for firm- or product-specific emissions limits
3. No need to distinguish between different “scopes” of emissions
— Firm’s customers & suppliers also face SCC

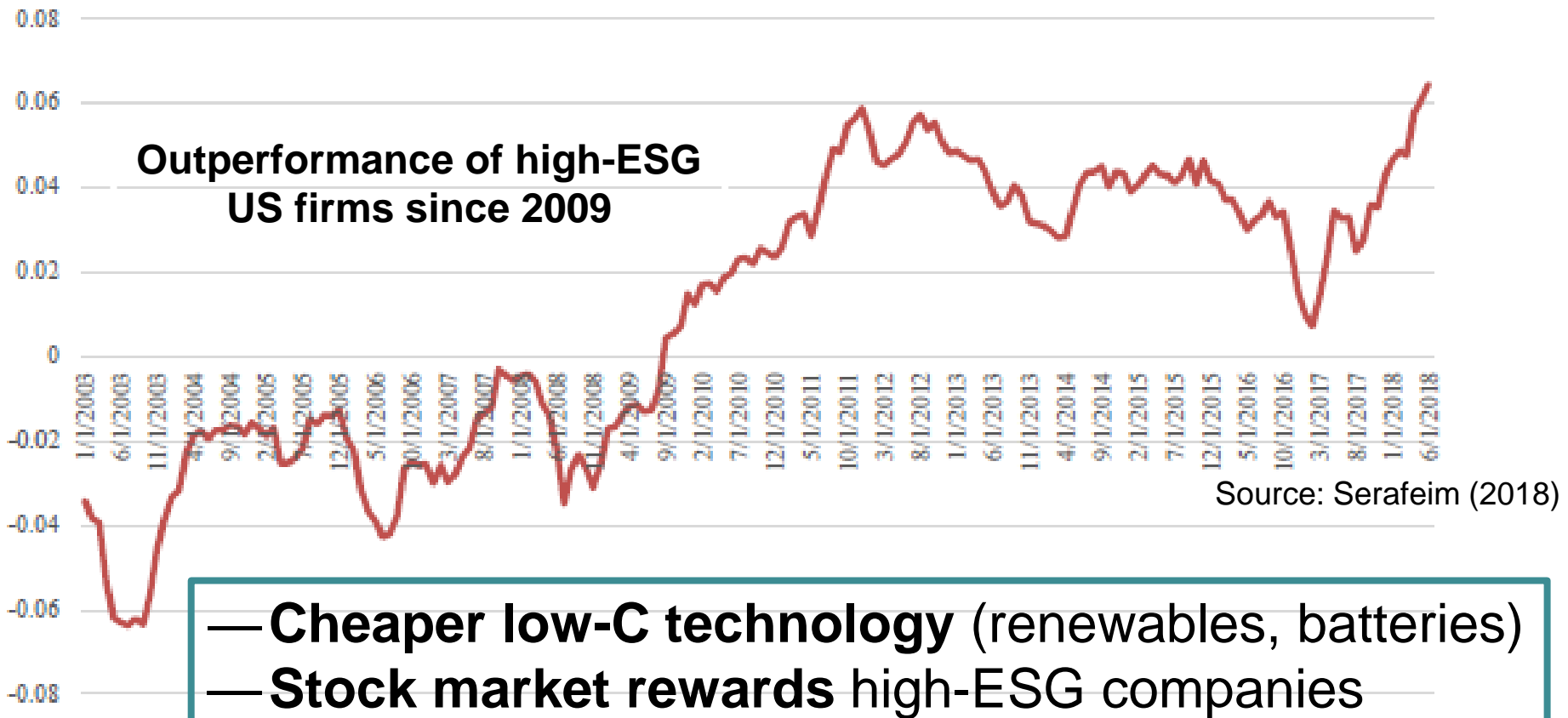
Carbon pricing: Increasing action but large gap



Source: ICAP

Corporate climate action: What? Why?

- **Internal carbon prices** (1,400+ firms, many energy)
- **Paris-consistent climate targets** (200+ firms, few energy)



Agency theory & climate incentives

“Design management incentives to align with firm value while reducing risk and balancing incentives for different tasks”

① **Balanced scorecard** (non-financial metrics)

- Complex strategy & high innovation
- Inefficient & short-termist stock market

② **“Paying for luck”**

- Empirics: Oil & gas CEOs earn more when oil price is high
- Relative performance metric can filter out “noise”...

③ **Conflicts between tasks**

- *Short-term*: Emissions cuts vs production growth etc.
- Weaker incentives may become optimal...
- *Longer-term*: Innovation to cut C-intensity of output

Corporate strategy & climate incentives

① Firm-employee match

- Greener incentives can attract greener people
- Signal commitment to new low-C strategy

② Growth vs performance

- Commodity markets prone to boom-bust
 - *Growth mode*: Production targets, market share...
 - *Performance mode*: ROCE, cash flow
- Climate targets discipline investment for performance?

③ Mergers & acquisitions

- Divestiture of high-C business gives climate quick-win
- What is the global climate benefit of M&A activity?

Management incentives & Scope 3 emissions

Perspective A “Agency theory”

Scope 3 emissions:

- Hard to measure
 - Significantly beyond management control...
 - *Ex post*
 - *Ex ante*
 - Incentive to manipulate?
- ⇒ *Use in pay raises return to better measurement....*

Perspective B “Corporate strategy”

Scope 3 emissions:

- Alignment with climate-ambitious strategy
 - *May 2019*: Shell sells two “carbon-neutral” LNG cargos to Japan
 - Offset by bundling sale with carbon credits (forestry)
- ⇒ *Customers pay for green*

Conclusions for discussion

Corporate climate action & investors

- ① Financial sector as major force in solving climate problem
- ② Energy companies seeking to retain “investability”
- ③ Full-scale (Drax, Orsted) vs incremental change

Management incentives & climate targets

- ① No clear rationale with efficient markets & efficient policy
- ② Justification: climate policy gap + agency theory
+ corporate strategy
- ③ Scope 3 emissions: Difficult road ahead?