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

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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
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

Today 57+ carbon pricing policies globally…
—<20% of global emissions
—Average price <$10/tCO₂

… only EU power faces “serious” CO₂ price…

Source: ICAP
Corporate climate action: What? Why?

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

Outperformance of high-ESG US firms since 2009

— **Cheaper low-C technology** (renewables, batteries)
— **Stock market rewards** high-ESG companies

Source: Serafeim (2018)
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?
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….

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?