Indepen

Concepts of fairness and regulating for disruptive change

Bridget Rosewell

Indepen

The tyranny of marginal change

Take a production possibility frontier

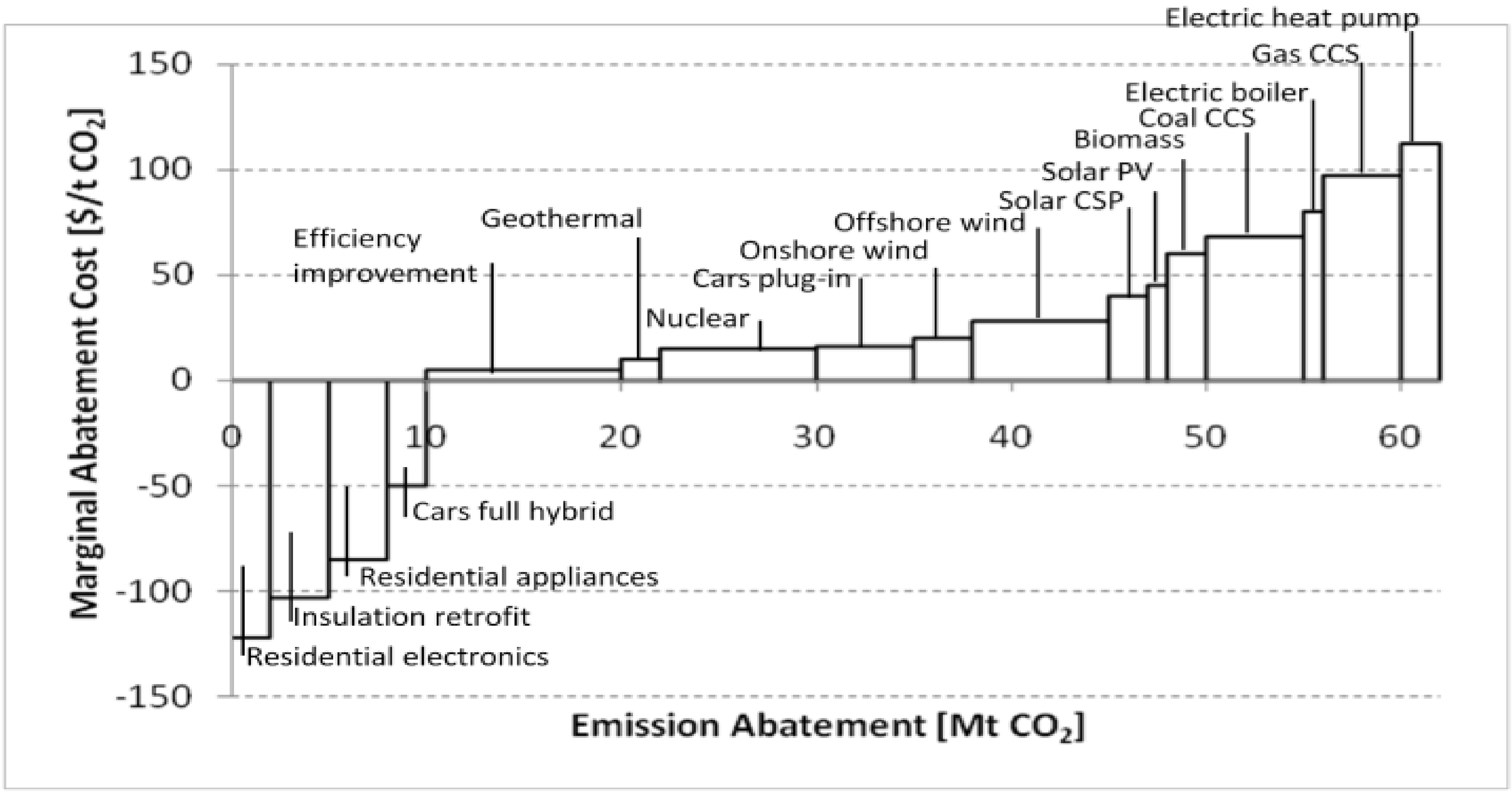
Derive cost curves

Establish marginal costs

Argue with producers.....

Set prices and allowable investment via a guaranteed return on that investment

Abatement curve e.g.



The myth of marginal abatement

Abatement cost schedules exist in a static environment which they are trying to change.

Each abatement will alter the schedule and the cost structures of users, in turn affecting their behaviours

Marginal analysis can only change at the margin in a given context

Works for cyclists playing by strict rules, doesn’t work for step changes such as

- Decarbonisation
- Driverless vehicles
- Battery technology shifts
- Etc, etc

What is missing?

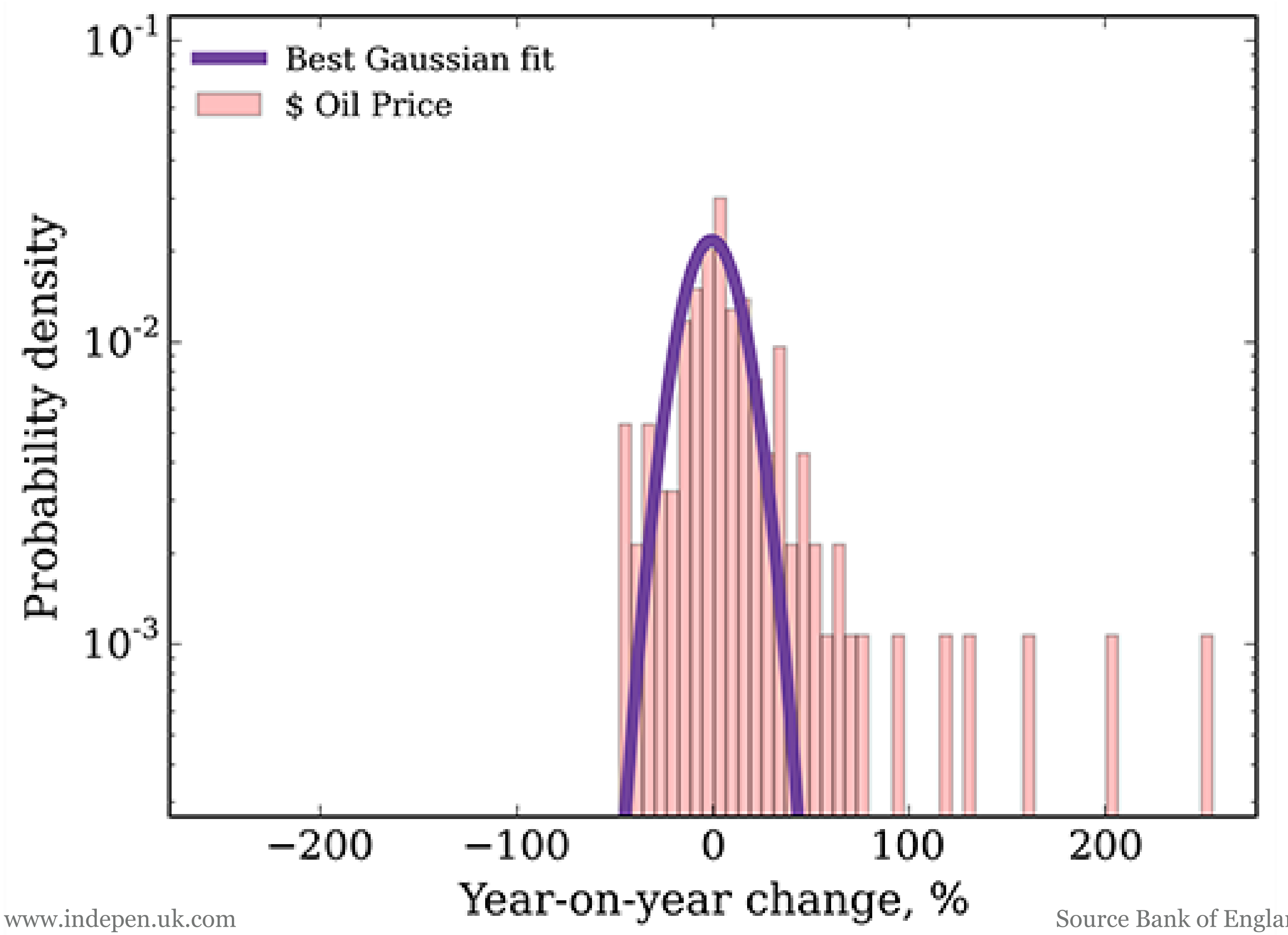
Feedbacks between system elements

Knowledge of future technology and costs

Variations in behaviour

External elements, which aren’t really external

Oil Prices



Source Bank of England

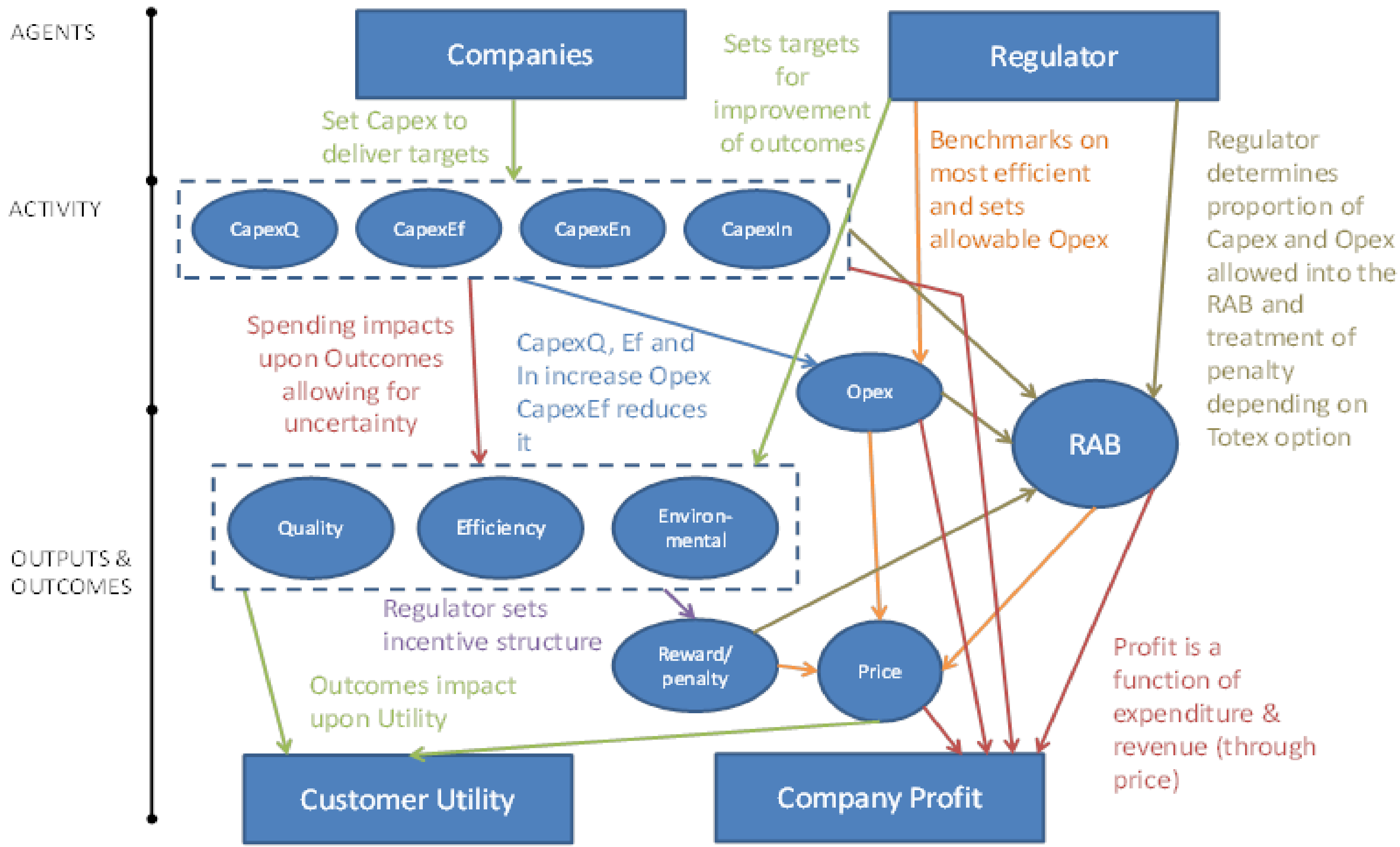
A different approach

Rules of behaviour for

- Firms
- Consumers
- Regulators
- Policy makers

All of whom may take various approaches, and cannot optimise

Example for the water industry



Source: Indepen and Volterra

Competition and collaboration

Optimisation is not necessarily either the result of competition or the regulator's substitute for it

If there are multiple equilibria possible then no system may find the preferred one

Collaboration may be as strong – and in any case defines rules of acceptable behaviour

Carrots work differently from sticks

Copying is prevalent, by consumers and others

Consequences are unintended

Conclusion

The standard model is broken

- Step changes
- Non-normal distributions
- Feedbacks – copying, herd behaviour, cost cascades

We need a new model which is less prescriptive and is better able to allow risk and price it more effectively

Our current system has enabled investment by guaranteeing returns but has cut back investment which could make step change

Is this fair?

Fair risk transfer – only goes with the balance sheet

Consumers believe in the fair price – and don't like easy profit

What is reputational risk?