The Financial Crisis and the Regulation of Energy Markets

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Two major questions

- Does the financial crisis reduce the need for new investment in the energy sector?
- If not, how should regulators promote efficient investment?

Is now the time to invest?

- Initial instinct:

Demand ↓ → **Spare capacity** → **Postpone, cancel projects**

Alternative scenarios:

1. WACC ↑ but regulated return constant.
2. Project cost includes regulatory “tax”, project could proceed if tax eliminated.

Is now the time to invest?

- No change in need for smartgrid investments.
- The financial crisis can even increase the value of new investment:
  - Demand for gas falls disproportionately in southern Europe.
  - Emerging surplus in Spain, Italy.
  - Need to redirect flows.
  - Increases value of new pipelines, regas capacity.
- Changing local/regional merit order can increase value of transmission capacity

Promoting efficient investment

- The financial crisis has complicated the ability to estimate a reasonable return on investment.
- Most regulators use the Capital Asset Pricing Model:

$$R_e = R_f + \beta \times MRP$$

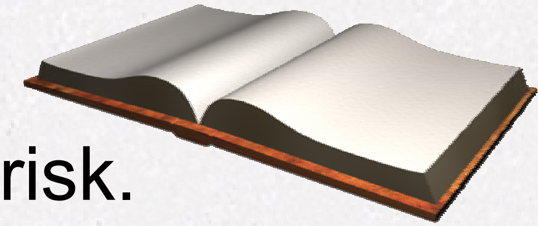
- There is now great concerning all three parameters: R_f , β and *MRP*.
- Risk of *understating* necessary returns.

Estimating the cost of capital

- *Betas* for regulated infrastructure have plummeted as investors “fly to safety”.
- Risk of overstating safety:
  - Looking back from today, a 5-year window now has 4 “normal” years and a 1-in-60-year event.
  - Will the next 5 years be the same? Should the 1 crisis year account for 1/5th of the beta?
  - Betas after the 1987 crash were not stable: they fell and then they came back up after 1992.

Possible solutions

- Estimate beta differently.
  - Examine different data windows.
  - Assign less weight to last year.
- Revisit the market risk premium.
  - Historical data.
  - Consider evidence of increased risk.



Alternative approach

- Subject fewer projects to traditional rate regulation:
  - Use tender processes for new infrastructure. The tender can set a long-term tariff.
  - Precedent: Ofgem and transmission networks connecting offshore windfarms.

- Revisit policy for exempting new infrastructure from regulated TPA.

Exemptions to regulated TPA

- A key advantage to an exemption is that the regulator does not have to estimate:
  a) demand for the project
  b) the cost of capital
- Most regulators have wide discretion on granting exemptions.
  – Stipulate conditions that can “tax” a project.
  – At times projects can pay the tax. In a financial crisis it may not be possible.

Conclusions

- Time to review how regulation can help/hinder necessary investment.
- The financial crisis requires a serious rethink concerning the cost of capital.
- Also consider two alternatives:
  - Innovative tenders
  - Exemptions from 3rd party access.