Estimating the required return on equity

Initial network sector views

AER Stakeholder Forum, 16 September 2020

Pathway to 2022 Rate of Return Instrument

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Outline of presentation

1. A clear common objective – we're all trying to estimate the efficient financing costs of a benchmark regulated energy network.

2. The current market conditions are really challenging the current approach.

3. Some key learnings from Brattle:
   - Have regard to a broad set of relevant evidence – particularly forward-looking evidence.
   - Ensure the approach is robust to changes in market conditions.

4. A role for cross checks.

5. A possible way forward.

The central objective is to ensure that the allowed return is commensurate with efficient financing costs

Set the allowed return to be commensurate with the efficient financing costs of a benchmark regulated energy network.

Consumers pay the benchmark efficient cost of the service that is provided to them.

Creates the right incentives for efficient investment, which is in the long-term interests of consumers.

This objective underpinned the AER's 2018 Instrument.

Critical that the clear focus is on getting the best possible estimate of the forward-looking efficient financing costs.

We need to estimate the return required by real world investors

Use evidence from return on equity models and approaches to get the best possible estimate of the return required by real world investors.

Efficient financing costs are those required by real world investors.

Any models used should be implemented in the way that provides the best estimate of the returns required by real world investors.

Theory provides little guidance on how to implement the CAPM. A practical approach is needed.

When estimating beta, there is no guidance from theory about the frequency or length of the data period or how to best select a set of comparators.

When estimating MRP, there is no guidance from theory, other than that we need an estimate of the expected return on the market portfolio over the forthcoming period.

How do real world investors go about determining the rate of return they require?

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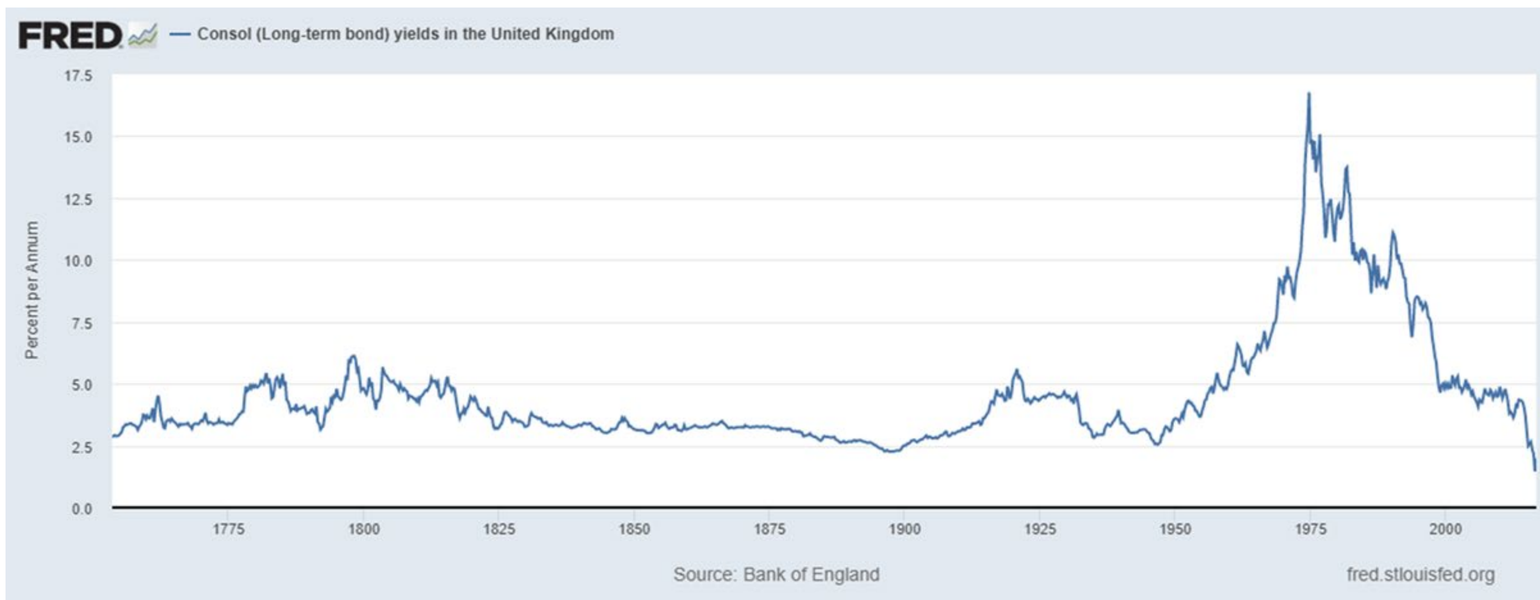
The current financial market conditions are unprecedented, and this may continue for some time…

- Financial markets look very different from when the 2018 instrument was set.
- The current low interest rate / low inflation environment is unprecedented → current models under stress.
- Sustained negative risk-free rates and deflation are now credible potential scenarios.
- This is not just a COVID development – rates were already at historical lows before COVID.
- It is unclear what 'new normal' will emerge → solutions need to be robust to multiple paths.



Interest rates have not been this low since…ever

Swaps and forward markets imply low interest rates and low inflation for the next several years, as do most economic forecasters.

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…so it’s important to check whether the current approach is producing sensible outcomes

- The current approach adds the long-run average historical MRP to the prevailing government bond yield.

- There is evidence that this approach is being challenged by the current market conditions:
  - Regulatory returns on equity are at lowest ever level.
  - Past reductions in WACC parameters have been compounded by historic falls in risk-free rate.
  - Recent decisions provide for negative NPAT in every regulatory year. Sapere has indicated that this indicates an ‘underlying inconsistency’ in inputs.
  - Network capital expenditure is close to decade lows.
  - Some important new investment may not proceed under current regulatory allowances.

- Brattle report shows us what evidence other regulators consider and use.
- Other regulatory approaches appear to be more robust to the current unusual market conditions.

Key learning #1: Avoid flying blind – have regard to all relevant evidence

» The key risk is that the AER's current approach breaks down outside 'normal' market conditions:
  - » Current approach considers far more information that it eventually uses:
    - » Adopts a single method (and a single historical period within that method) for estimating MRP.
    - » Gives no weight to the possibility that MRP changes over time with market conditions.
    - » Uses a tiny and diminishing sample of firms to estimate beta, potentially increasing volatility
  - » Parameter estimates and CAPM outputs may have been reasonable at a point in time, but market conditions change over time and the approach is now producing strange outcomes.
  - » No full implementation of cross checks. So no fail-safe warning if something is not quite right.

» Brattle Report points to some important ways other regulators use evidence:
  - » shows that it is common ground amongst international regulators to give weight to a broader set of relevant information – particularly forward-looking information and international comparators.
  - » there is an important role here for cross checks – which impact the final estimates.

Key learning #2: Avoid fragility – ensure approach is robust to changing market conditions

- Improving robustness to a wider variety of market conditions is the key:
  - Brattle shows that other regulators have different ways of seeking to ensure that their approaches provide reasonable outcomes across a variety of market conditions:
    - Other regulators have different ways of ensuring the robustness of their decisions.
    - But a common theme is that the allowed return does not vary 1:1 with changes in government bond yields.
    - Real world investors tell us the same thing.

- There is an important role here for cross checks:
  - Bands for 'sense-checking' other data or key thresholds – not alternative ways of producing a point estimate.
  - Must be robust, transparent, and replicable and give clear answers.
  - Must be prepared to give them real weight.
  - Should be specified in advance, before we get to detailed issues about individual parameters.

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The way forward

» **All stakeholders have a common objective – to estimate the efficient financing costs of a benchmark regulated energy network. What is the return that real world investors would require in the prevailing market conditions?**

» There appears to be acceptance that the current approach is under significant strain in the current market conditions.

» Need to develop approaches that are robust to a range of plausible scenarios → to avoid risk of the framework or model ‘breaking’.

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Guidance from the Brattle report and AER working papers

- AER Working Papers and the Brattle Report rightly identify the key questions – directed to producing the best possible estimate of the benchmark efficient financing costs:
    - Should we give weight to a broader set of relevant information?
    - Should we give weight to forward-looking information?
    - Should we have regard to the approaches of other regulators – that seem to be more robust to the current market conditions? (i.e., should we reconsider the assumption that the required return on equity varies 1:1 with changes in government bond yields?)
    - What cross checks are relevant and how should they be used?

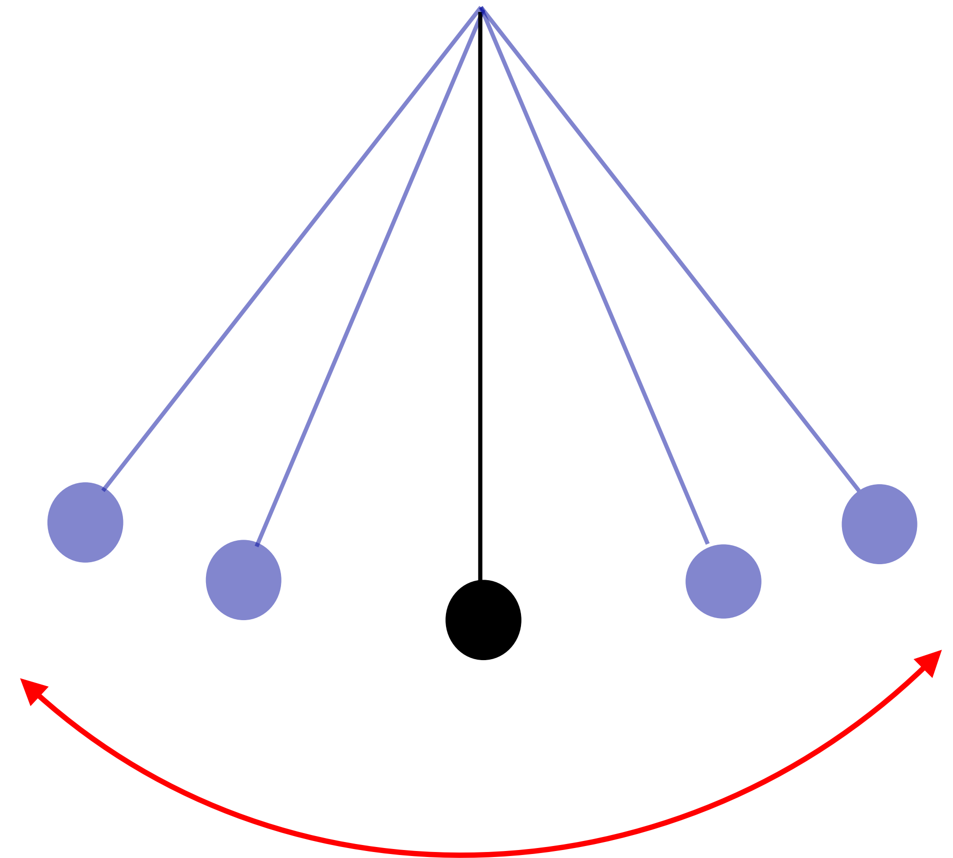
Initial ENA perspectives on the way forward for the cost of equity estimate

1. Use current Sharpe-Linter CAPM as the primary model: Not pursuing ‘multiple models.’
2. Recognise the Brattle findings that other models and approaches can provide important evidence and information. For example:
   - » DGM evidence of the forward-looking required return on equity.
   - » Evidence that real world required returns do not vary 1:1 with government bond yields, and Brattle’s observations on how to give effect to that evidence.
   - » Problems that arise when there are insufficient comparators to estimate beta, and Brattle’s observations about looking back in time vs. across comparable markets.
3. Equity cross-checks need to play a substantive role with clear consequences (i.e. adjustments) when those checks fail.
4. A robust financeability assessment needs to be applied to the whole rate of return decision, again with clear consequences if it fails.

ENA’s approach to the 2022 Instrument

- Reductions in allowances for beta and MRP (which are largely yet to flow through) have been compounded by the unprecedented fall in government bond yields:
    - Allowed returns are at an all time low.
    - Allowed profits are negative.
    - Distributions are being cut.
    - Discretionary investments are at risk of being put on hold.
- It’s time to end the pendulum of cycles of over- and under-recovery.

- **Our collective goal should be an approach that produces reasonable estimates of efficient financing costs over a range of market conditions.**



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