

## SSMC Finance Annex – SPT Response DRAFT

### Finance Annex – Executive Summary

The financial package for a price control has never been more important than it is for RIIO-T3, the scale and pace of change required to the transmission grid is unprecedented as we drive towards GB's Net Zero objectives.

In Ofgem's approach to a fair RIIO-T3 financial package it is in the interests of consumers that full consideration is given to promoting these outcomes:

- investor trust and confidence in the regulatory regime;
- investment in UK energy networks critical national infrastructure; and
- sustainable economic growth, consistent with Ofgem's Growth Duty, whilst delivering Net Zero transformation and energy security.

We see a wholesale change in the balance of risk and reward for all stakeholders – the legally mandated Net Zero targets set a clear goal where the benefits of delivering these set of objectives impact every sector of society. Consequently, the risk of not achieving these targets cannot be overstated. Further, this critical investment would unleash meaningful and far reaching direct and indirect economic benefits to individuals, communities, and the country, in tandem with Net Zero – whilst also helping to alleviate the forecast of up to £2.5bn/year<sup>1</sup> in constraint costs to customers by facilitating the transport of ever-increasing renewable generation to people's homes and businesses.

Ofgem must ensure the RIIO-T3 financial package is fair to customers and investors, where risks are balanced to ensure customers don't overpay for critical infrastructure, whilst ensuring investors are fairly remunerated for the scale of required investments and the changing and uncertain risk landscape.

It is in the interests of consumers that TOs can attract the necessary finance efficiently. The interests of future consumers are of particular relevance: setting a relatively low cost of capital on the basis that this is evened out through the cycle of price controls via Ofgem's current approach may be viewed (erroneously) as in the interests of present consumers. However, unless Ofgem fully assesses the changing risk landscape, the consequences to Net Zero targets, Economic Growth, and reflects these considerations in their approach, investor confidence in the regulatory regime will be damaged and a higher cost of capital in the future will be required to attract desired investment in critical national infrastructure like UK energy networks.

**In support of our positions, we refer to the following reports, submitted via the ENA:**

- NERA, Additional Cost of Borrowing for the RIIO-3 Price Control
- Frontier Economics, Initial consideration of break-even inflation for price control purposes
- Oxera, RIIO-3 cost of equity
- Frontier Economics, Equity Investability in RIIO-3
- Frontier Economics, The low beta puzzle

Ofgem has been clear its overall approach is to be aligned with the UKRN methodology for setting the cost of capital, and in line with the RIIO-2 approach where possible. While this may be understandable under a 'normal' price control review where business operations scale and risks remain stable, the RIIO-3 review represents a significant step change from the historic risk environment – both in terms of our CAPEX and operations, but also in the macroeconomic environment, all through the lens of Ofgem's expanded duties. The capital markets and macroeconomic context in which RIIO-3 is being undertaken is markedly different

---

<sup>1</sup> NOA 2020/21 - Modelled Constraint Costs, available at <https://www.nationalgrideso.com/document/194436/download>

to when the RIIO-2 price controls were being determined. Yields on UK government bonds have increased by 332bps since the publication of the RIIO-2 final determinations for gas distribution and electricity and gas transmission networks (GD&T). Quantitative easing by central banks has stopped. Concurrently, the demand for capital to finance investment across a wide range of infrastructure sectors has increased, both in the UK and internationally. Companies need to be able to offer investors returns that are attractive if they are to have reliable access to sufficient capital.

**To achieve the scale and pace required to deliver the grid our customers need, Ofgem cannot assume the current approach to setting the financial package remains appropriate.**

It is therefore timely to review the approach for estimating the cost of capital of energy networks. We are pleased Ofgem is introducing a new concept of 'investability' as well as being open to evidence on how this concept should be developed and enacted. However, we strongly believe Ofgem should continue to be open to evidence in this and other matters post SSMC and take steps to gather evidence themselves to satisfy their duty of fairness to customers and ensuring regulated companies are financeable and investable.

**We can summarise the fundamental problem statement for RIIO-T3:**

1. The nature of our business and operations is going through significant change where the total level of risks and type of risks are no longer stable across price controls. The macroeconomic conditions have changed dramatically and are now aligned closer to the conditions prior to the great financial crisis – and are forecasted to remain so.
2. The current approach to setting the equity return is unable to account for these future risks given the estimation is focussed on backwards looking historical data and may be knowingly set too low using Ofgem's current approach to 'through-the-cycle' returns.
3. There is a severely asymmetrical risk to current and future consumers if the RIIO-T3 financial package does not promote the outcomes referenced above.

Market evidence shows that rolling forward Ofgem's RIIO-2 approach will determine a range and point estimate that is too low – such that this price control would not be investable. Ofgem will need to make adjustments to its CAPM approach and estimates to reflect the latest market conditions and new evidence. In particular, evidence from the bond market such as hybrid bond yield, shows that this range is simply too low, and will produce a point estimate that is insufficient.

Oxera RIIO-3 Cost of Equity analysis (shared via the ENA) suggests the transmission networks would require an allowed return on equity up to 6.5% based on updated CAPM parameters alone and not intended to reflect forward-looking risk. However, we posit there is still work to fully account for an appropriate Risk-Free Rate and convenience premium, as well as taking account of electricity transmission specific forward-looking risk. To improve investability in RIIO-T3, direct adjustments should be made to allowed return on equity, however Ofgem should also seek to review other allowances and mechanisms to better account for the risks we face. Including, but not limited to, ensuring equity issuance allowances are maintained and added to for indirect as well as direct costs, incentives are balanced tailored to allow strong achievable rewards, additional regulatory mechanisms are considered to reduce risk, Real Price Effects and Indirect allowances are reviewed and the notional company benchmark for efficient costs is realistic and achievable.

**SPT are developing our RIIO-T3 plans which will enable the drive towards Net Zero and will represent a substantial economic growth opportunity for Scotland and the UK.**

The scale, type, and exposure of risks in RIIO-T3 is increasing in a number of areas – the number and scale of projects and programmes, the associated series of delivery challenges, compressed outages, planning and consenting challenges, and reputational challenges – to name a few. We are in a position to deliver our ambitious plans despite these increased risks, however this is contingent on Ofgem setting the right

financial package and balancing the increasing risks through the lens of their expanded duties to ensure the sector is investable. The investability assessment must feature heavily in Ofgem's design of the RIIO-3 financial framework.

**Below we have set out the summary of our position, and how this compares to Ofgem's approach/UKRN guidance.** Following this summary we detail our position, rationale, and evidence for the RIIO-3 financial arrangements, where we firmly believe our proposals are compliant with the UKRN guidance, and we have provided good reasons where this may not be the case. We have then responded to the SSMC finance questions more directly, however, many of these will refer to the position set out below:

Topic	Subtopic	SPT Position	UKRN/Ofgem Position Compatibility
Allowed CoD	Indexation	<p>We agree a RAV weighted CoD approach would improve the mechanism and allowance, to better reflect the interest rates at times in line with debt issuances.</p> <p>Ofgem should carefully consider the calibration of this approach to ensure the principle that our efficiently incurred cost of debt is fully funded with sufficient headroom.</p>	Aligned with Ofgem's position and fully compatible with UKRN recommendation 8.
Allowed CoD	Inflation	<p>Our preferred solution is to maintain the status quo. It has not been shown that the current arrangements are a detriment to customers over the long term.</p> <p>Inflation options 1, 2 and 3 propose material change in the core tenet of GB regulation. Making a change at this time will inevitably affect our capability to raise the requisite finance to deliver outcomes consistent with policy objectives and the outcomes desired by our customers.</p> <p>For Option 3, we do not believe it's in customers' best interests for Ofgem to introduce a structurally negative expected return over the long run for licensees by increasing the long-run assumption as an instinctive reaction to an extreme inflation event.</p>	<p>We disagree with Ofgem's objective to remove the leverage effect.</p> <p>Ofgem noted in the SSMC that regardless they would seek to review the long run inflation assumption. Based on historical data the only applicable long run assumption is 2%. If Ofgem were to move away from the 2% assumption they need to set out why a 2% long run assumption is no longer appropriate, with reasoning that does not rely on short term peaks or volatility.</p> <p>We firmly believe companies are in the best position to manage their appetite for inflation risk, who's investors made investments knowing the inflation exposure they were subject to.</p>
Allowed CoD	Additional Borrowing Costs	<p>The ENA asked NERA to refresh its assessment of additional borrowing costs required for RIIO-3. NERA's analysis and evidence sources are set out in the report shared via the ENA.</p> <p>Additional borrowing cost allowances will need to increase in RIIO-3 to reflect changes in market rates, improved estimation approaches and efficient costs</p>	Ofgem have noted they will review the additional borrowing costs. The NERA Additional Borrowing Costs analysis should form the primary evidence for that review.

		<p>incurred by networks that are not compensated in Ofgem's RIIO-2 approach.</p> <p>NERA estimates additional cost of borrowing of 57 bps p.a. for RIIO-3, with a range of 54 to 59 bps, compared to Ofgem's RIIO-2 allowance of 25 bps. Additionally, NERA estimates an infrequent issuer premium of 14 bps p.a.</p>	
Allowed CoD	ILD assumption	<p>As a matter of principle, the ILD notional assumption should continue to reflect the sector average ILD, and not be used as a policy measure to eliminate the leverage effect. Further, removing ILD from the 'financing toolkit' constrains companies' choices for interest rate and inflation management.</p>	<p>We disagree with changing the ILD assumption to 0% as a means to remove the leverage effect.</p>
Allowed CoE	Risk Free Rate (RFR)	<p>The RFR estimate must be adjusted to account for the gilt convenience premium.</p> <p>Overall, ILG yields alone do not provide a viable estimate for the RFR, given structural excess demand and the existence of convenience premium which depresses yields below the true RFR.</p> <p>Academic research has confirmed the existence of a convenience yield in government bonds, including those issued by the UK government. Adjusting the RFR for the convenience premium is consistent with approaches that have been taken by regulators/authorities in the UK, including the Competition and Markets Authority (CMA) and the UK Civil Aviation Authority (CAA).</p> <p>Ofgem should consider the use of highly rated corporate debt indices, however nominal gilt instruments may provide a more appropriate solution, as they overcome multiple risks inherent in corporate debt yields (e.g., default risk premium, illiquidity premium and term premium).</p> <p>In addition, there is strong evidence of material volatility in the CPI-CPIH wedge. The CPI-CPIH volatility must be factored into Ofgem's calculations of both cost of debt and cost of equity for RIIO-3.</p>	<p>Two key concerns we have with Ofgem's approach for the risk-free rate are:</p> <ul style="list-style-type: none"> <li>- Ofgem's is incorrect to rely on ILG yields because of a structural excess demand which depresses yields; and</li> <li>- Ofgem's proposed approach does not recognise the convenience premium associated with sovereign debt yields.</li> </ul> <p>Ofgem acknowledges the idea of the convenience premium (or "convenience yield") in the SSMC.</p> <p>While we believe an adjustment to ILG's to account for the convenience premium is consistent with UKRN guidance (recommendation 3) we also believe this is new evidence on the mispricing of ILG, which constitutes a "good reason" for Ofgem to reconsider the UKRN guidance.</p> <p>The UKRN Guidance does not comment on the CPI-CPIH wedge.</p>
Allowed CoE	Total Market Return (TMR)	<p>The simple one-year arithmetic mean (AM) is the appropriate unbiased</p>	<p>Ofgem's SSMC guidance, and interpretation of UKRN guidance</p>

		<p>estimator for the purpose of estimating TMR in the regulatory context.</p> <p>Historical ex ante approaches to estimating TMR are subjective and prone to hindsight bias – considerably more weight must be placed on historical ex post than the historical ex ante estimates of TMR.</p> <p>Some increase in the TMR range is a logical consequence of the large increase in gilt yields and would be consistent with historical regulatory approaches.</p>	<p>(recommendation 4) is not prescriptive and allowed for a wide range of calculation methodologies.</p> <p>Ofgem's approach to TMR averaging and deflation should be reviewed – it is not clear from Ofgem's RIIO-2 decision how much weight was placed on each of the TMR methodologies it considered. However, it is clear that Ofgem deployed its judgement to determine a TMR range that was towards the lower end of ranges that available evidence supported.</p> <p>In recent price controls Ofgem/ UK regulators have adopted flawed methodologies that have allowed them to determine a lower TMR over time (with a declining RFR allowing for such an approach).</p>
Allowed CoE	Equity Beta	<p>The selection of a beta range for RIIO-3 will require particularly careful consideration due to beta data volatility. There is no reason to expect that the risk of energy networks will have decreased in RIIO-3, either in absolute terms or relative to the wider economy. Indeed, one would expect that increasing risks should be reflected in increasing beta values.</p> <p>The significant volatility in betas during the COVID-19 pandemic period and following the Ukraine crisis requires careful consideration.</p> <p>Recent low betas may be caused by high market volatility – little weight should be placed on them.</p> <p>The increasing energy network risks for RIIO-3 may merit increases to the regulatory allowed beta relative to RIIO-2.</p> <p>Ofgem should not focus on water sector comparators given the different regulatory framework, business activities, and prospective roles in relation to Net Zero (including required future investment). We also have concerns with reliance on NG beta due to potential decoupling with the UK equity market given the extensive corporate M&amp;A activity.</p>	<p>Ofgem indicates that it will follow UKRN guidance (recommendation 5) in its approach to estimating beta. However, the UKRN recommendation is not particularly prescriptive.</p> <p>However, Ofgem's approach is broadly to utilise similar comparator firms to those considered during RIIO-2, including listed UK energy and water networks.</p> <p>We have provided evidence for changing the comparator set, however we note Ofgem has indicated they will consider attributing different weights to the RIIO-2 comparator firms and/or including a broader set of comparator firms if there is sufficient evidence that these, could calculate a more accurate estimate of the beta that is appropriate for energy networks.</p>

		<p>Instead, we set out evidence for comparator European T&amp;D businesses and identify a set of five potential comparators based on proportion of regulated activity, as well as data quality issues, and a relative risk assessment of regulatory regimes.</p>	
Allowed CoE	CAPM Point Estimate	<p>Ofgem should select a higher point estimate on the range due to:</p> <ul style="list-style-type: none"> <li>- The fact that equity beta calculations are inherently backwards looking;</li> <li>- Beta estimations are low driven by UK market volatility, and not offset by an increased ERP;</li> <li>- A stable TMR approach means that the rate of return could be knowingly set too low; and</li> <li>- The specific context of RIIO-T3 and the risks of not getting it right. A combination of a step change in investment, macroeconomic conditions, balance of risk in line with NetZero, economic growth, and enabling lower constraint costs and lower cost generation means Ofgem cannot risk getting it wrong.</li> </ul>	<p>Ofgem intend to follow UKRN guidance (recommendation 6) which suggests that the RFR, TMR and (re-levered) equity beta assumptions should be combined using the CAPM to produce a cost of equity range. The mid-point of the range should be used as the central estimate for the CAPM cost of equity.</p> <p>We disagree with an approach to use the midpoint of the range – we have set out, and will continue to set out and evidence, the severely asymmetrical risks of achieving the right allowed return on equity to ensure our ambitious plans to deliver the network our customers require is realised.</p>
Allowed CoE	Cross Checks / Investability	<p>Equity investability cross-check data shows that rolling forward Ofgem's RIIO-2 approach will determine a range and point estimate that is too low, and that only values towards the top of the Oxera CAPM range would leave energy companies investable.</p> <p>This is further evidence that Ofgem must make adjustments to its CAPM parameter estimates to reflect latest market conditions and new evidence and select a point estimate towards the top of that range.</p>	<p>Ofgem intends to follow UKRN guidance (recommendation 7) in only deviating from the mid-point of the CAPM range using cross checks if there are strong reasons to do so.</p> <p>We believe there are strong reasons to move higher in the CAPM range. The market evidence that determining a point estimate that is too low to secure investability is strong evidence that Ofgem not only may select a point estimate above the mid-point, but they must do so.</p> <p>We conclude that Ofgem's cross checks (used in RIIO-2) are not robust and cannot be used to support Ofgem's implied SSMC cost of equity allowance.</p>
Financeability	Financeability	<p>Key considerations in Ofgem's approach to financeability should be:</p> <ul style="list-style-type: none"> <li>- The financeability assessment should cover both debt and equity.</li> <li>- When being benchmarked against the notional company, Ofgem need to ensure the notional company is a</li> </ul>	<p>In the SSMC Ofgem is considering incremental improvements to the financeability assessment, including those in our approach. We propose a rethink of the fundamental purpose of the financeability duty, which takes into account Ofgem's new growth</p>



		<p>realistic benchmark for an efficient company.</p> <ul style="list-style-type: none"> <li>- A financeability assessment needs to consider the longer term in which companies commit their investments – the investments we make, accumulated via the RAV represent a commitment across price controls for which Ofgem need to ensure the assessment covers the length of our investment commitment.</li> <li>- Short term financeability fixes including shortening of asset lives and using a higher than natural rate for our fast pot revenues are reversed out by credit rating agencies when assessing our financial strength, therefore Ofgem should refrain from using these levers to solve short term financeability issues.</li> </ul>	<p>duty in ensuring markets are investable. We believe Ofgem's thinking is in line with this, however we would urge Ofgem to develop and place weight on a comprehensive account of financeability.</p>
Financeability	Investability	<p>A test for investability should include both qualitative and quantitative metrics that represent the ability of the notional company to address funding challenges which are not captured in the current cost of capital estimates and financeability assessments. This test should include:</p> <ul style="list-style-type: none"> <li>- Sufficient allowance for equity issuance costs, both direct and indirect</li> <li>- An attractive dividend yield</li> <li>- Strong and stable credit ratings and consistent cash and valuation metrics, including EV / EBITDA and Net Debt / EBITDA</li> <li>- A strong balance sheet with substantial financial flexibility to absorb shocks and manage capital requirements</li> <li>- A level of accounting earnings growth that substantially reflects asset growth</li> <li>- Clear predictable regulation</li> <li>- Ease of capital deployment, low practical barriers to invest</li> </ul> <p>Ofgem should also consider CoE cross checks as a test for investability, both whether the CoE is a sufficient level give the return on debt, but also if the CoE is sufficient versus the return on offer from competing investment opportunities.</p>	<p>Ofgem considers the current financial and financeability framework to be appropriate for RIIO-3.</p> <p>We disagree with that assessment. We are seeing many analysts and market commentators suggesting the UK energy market is not investable compared to international markets, citing perceptions of an unattractive regulatory regime<sup>2</sup>. This, when considered in the specific context of RIIO-3 – a step change in investment, macroeconomic conditions, balance of risk in line with NetZero, economic growth, and enabling lower constraint costs and lower cost generation – presents a real investability problem for UK electricity transmission sector that needs to be addressed.</p> <p>Ofgem are open for evidence on investability. The evidence for investability will continue to develop. Ofgem should continue to develop the investability tests post SSMC and undertake evidence gathering themselves to satisfy their duty to financeability, net zero and economic growth. We request that Ofgem consult further on the detail of their proposed investability test as the thinking and evidence develops.</p>

<sup>2</sup> Latest pulse survey says governments must take action to capitalise on interests of investors | GIIA

		Ofgem must do a full and comprehensive investability test for the RIIO-T3 price control.	
Gearing	Gearing	Ofgem should fully assess the level of appropriate gearing, however, this should not be reduced from 55% given the scale of required equity injections.	We agree with Ofgem's approach to both UKRN recommendations 1 & 9. We agree with Ofgem, in principle, that notional gearing levels should be maintained for each year of the price control.
Financial Resilience	Financial Resilience	<p>Ofgem already has in place a very comprehensive set of obligations and mechanisms to manage financing, financial resilience and dividend distribution.</p> <p>The current arrangements include financial resilience reporting requirements that impose additional requirements on any companies that fail to meet certain resilience criteria.</p> <p>Ofgem's requirements for reporting of dividend policy and dividends distributed are extensive.</p>	We do not believe additional financial resilience measures are necessary, however we are happy to work with Ofgem to ensure desired outcomes are achieved and financial resilience reporting is consistent across the sector.
Corporation Tax	Corporation Tax	We agree with maintaining the RIIO-2 approach for RIIO-3.	We agree with maintaining the RIIO-2 approach for RIIO-3.
Depreciation & Asset Lives	Depreciation & Asset Lives	The regulatory economic asset life should broadly reflect the statutory calculated economic asset life and could therefore be set on a company specific basis. We believe it's in customers interests for depreciation profiles to match calculated asset lives.	Ofgem's approach is to maintain the current approach. We will seek to provide evidence as part of our business plan submission on our projected economic asset lives for our RIIO-T3 assets.
RAM's	RAM's	<p>We do not support the principle of a Revenue Adjustment Mechanism (RAM): the price control should instead be calibrated appropriately, and outperformance should be encouraged.</p> <p>Proper calibration should ensure companies and customers are protected from unfair losses or gains. However, this is conditional on the overall financial package which will require consideration as the RIIO-T3 process continues.</p>	
Capitalisation Rate	Capitalisation Rate	<p>In principle, we support the alignment of companies' statutory and regulatory capitalisation rates. However, capitalisation rates should not be used as a lever to address financeability.</p> <p>We agree in principle, to simplify the reporting of actual totex and apply a</p>	In principle we agree with Ofgem's approach for setting capitalisation rates, subject to full analysis and consideration of the approach in practise.



		single capitalisation rate for the purpose of calculating the TIM. We also agree on retaining the ex-ante capitalisation rates for totex allowance.	
DRS	DRS	<p>DRS 1: Connection Services - we propose that TOs and Ofgem should take the opportunity to review the methodology for the capture and reporting of Connection Services activity, in relation to the presentation of connection asset funding to better demonstrate transparency of totex performance and calculation of RoRE.</p> <p>In addition, we do not propose more directly remunerated services categories are necessary.</p>	Overall, we agree with Ofgem's proposal to consider a continuation of the existing DRS policy and methodology for RIIO-3.
RIIO-3 Reporting	RIIO-3 Reporting	<p>Ofgem already has in place a very comprehensive set of obligations and mechanisms to manage financing, financial resilience, and dividend distribution.</p> <p>We would be happy to work with Ofgem to explore further clarification of the requirements for reporting on dividends and delivery of investment that support the obligations that already exist.</p>	
AIP & PCFM	AIP & PCFM	<p>We would propose further adoption of the FAST principles with less complex formulae supported by shorter multiple calculations. This may enable the end user to navigate to the source data more quickly or better understand the calculation, through iterative steps. It may also allow for a more transparent audit trail of the various calculations that are employed throughout the PCFM.</p> <p>We also support the self-publication of the PCFM. However, Ofgem should ensure that sufficient guidance is given for updating the PCFM. Ofgem should also allow companies to publish and set in tariffs their most up to date version of allowed revenues.</p>	Ofgem are keen to develop the PCFM to make it more versatile to different regulatory mechanisms. We are supportive of Ofgem's proposals in this area, however we are keen to ensure new developments aren't at the expense of usability and auditability, where the most compact and shortest expressed solution isn't always the simplest or best for the PCFM, given its use by a wide range of stakeholders.

## Allowed return on debt

The ability to fund our efficiently incurred cost of debt is vital to our financing of critical national infrastructure. We see Ofgem's role in calibrating the CoD allowance mechanism to fully fund our expected CoD as foundational to us delivering for customers and other stakeholders. We are encouraged to see Ofgem seeking to develop their approach to take into account the macroeconomic and energy sector developments since RIIO-2 in the RIIO-3 SSMC, where we expect Ofgem, via the SSMD, will set out its approach and confirm that efficiently incurred CoD will be fully funded in RIIO-3.

SPT's cost of debt has increased substantially, however proposed arrangements, if properly updated and calibrated, should be resilient to this.

## Indexation & Calibration

The clear step change in interest rates and debt issuance combination has been highlighted by Ofgem as the key driver in the need for RAV weighting approach.

We agree a RAV weighted approach is most optimal given the environment we operate in currently. We support the principle behind this approach to ensure the scale and cost of new debt issuance is properly reflected in the CoD allowances. However, Ofgem should carefully consider the calibration of this approach to ensure the principle that our efficiently incurred cost of debt is fully funded with sufficient headroom.

We note that Ofgem has also introduced a refinancing mechanism into the RAV weighting calculation, we agree with the principle behind the introduction of this, however, recognise that this mechanism will unlikely have any impact in RIIO-3 – dependant on the combination of the refinancing period assumption and the legacy RAV year chosen.

In calibrating the mechanism, Ofgem should consider the below:

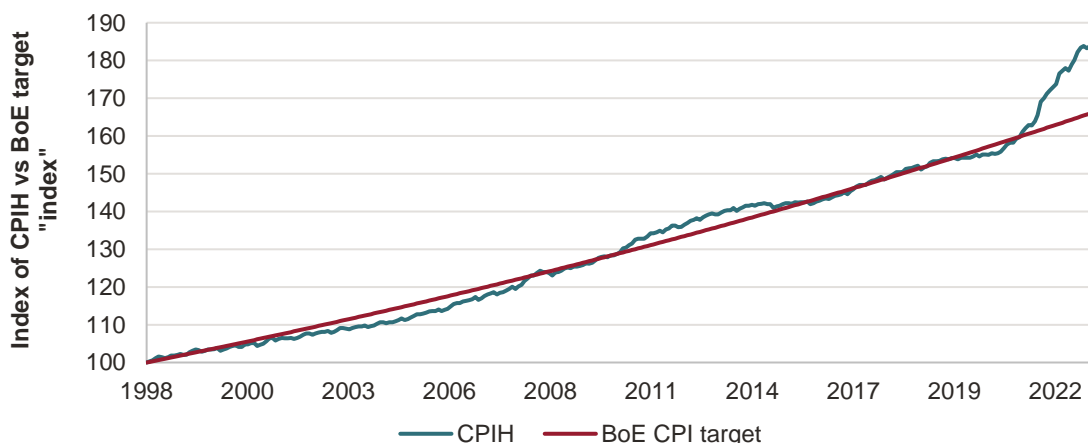
- Beginning the RAV weighting before the start of RIIO-3 (choice of legacy RAV year).
  - Beginning the weighing from the start of RIIO-3 means the RAV weighting will have little effect in the early part of the price control (and no effect in the first year), where TO's will already have large debt issuances required at potentially significantly higher rates than a longer-term trailing average would give.
  - Beginning the RAV weighting prior to RIIO-3 means the mechanism can properly react to the step change in the levels of debt issuance required that began prior to RIIO-3.
  - We posit that it would be logically consistent for the RAV weighting to begin in line with the combination of increased interest rates and debt issuance that Ofgem highlighted as the key driver for this change in approach, alternatively the RAV weighting should begin in line with the beginning of the RIIO- price controls, aligned with SSENT.
- Tailoring the trailing average length.
  - Overall, we believe there should be an appropriate balance between short- and long-term considerations, to ensure the index is more reflective of, and reactive to market changes while ensuring the trailing average reflects an appropriate tenor of debt.
  - Ofgem could consider whether there should be two trailing averages, one covering the average tenor of embedded debt (applied to legacy RAV, and one assumed for the refinancing element of the RAV weighted approach to better reflect the tenor of new debt.
  - Ultimately the trailing average should be tailored so that companies can expect to fully fund their expected CoD.
- Calibrating separately for specific sectors (GD and T separately).
  - Diverging capital requirements between the two sectors means that calibration may not be optimal or even possible across the two sectors, Ofgem should therefore consider the calibration for each sector separately.

- However, in this situation we would strongly urge Ofgem to adopt a company specific cross check to ensure the transmission sector is not unduly influenced by NGET's weighting.
- Ofgem should fully assess the implications of splitting the sectors (or not) and consider each element, including the beginning of the RAV weighting, and the length(s) of the trailing average.

## Inflation

Ofgem has detailed a set of policy options in the SSMC for dealing with the inflation leverage effect via companies CoD allowance. Our position remains that the status quo is not a detriment to customers in the long run. Ofgem notes that it is important that the 'cost of debt methodology does not have an inherently positive expected return over the long run for licensees (and so negative for consumers) by underestimating inflation expectations priced into debt'<sup>3</sup>. We do not believe this is the case for the following reasons:

- When removing the recent outliers in inflation, historical averages of CPIH inflation shows all, averaging periods suggest the 2% inflation long run average is accurate. For as long as the Bank of England has been targeting 2% (1997) inflation has averaged to be 2%, except for the recent peaks in 2022 and 2023.
- The recent high inflation has been an extreme event, however historical data suggests periods of high inflation are followed by periods of low inflation. Today (6<sup>th</sup> March 24) the OBR March 2024 publication, says inflation will go below Bank of England target of 2% in a few months' time<sup>4</sup>. Changing the approach only after a peak in inflation may only serve to protect companies from any negative leverage effect (positive for customers) in line with lower inflation. There is nothing to suggest that inflation won't continue to average out to 2% in the long run, given that the BoE specifically target that, and that policy has been shown to work in the past.



Ofgem noted in the SSMC that regardless they would seek to review the long run inflation assumption. Based on historical data the only applicable long run assumption is 2%. If Ofgem were to move away from the 2% assumption they need to set out why a 2% long run assumption is no longer appropriate, with reasoning that does not rely on short term peaks or volatility. We do not believe it's in customers best interests for Ofgem to introduce a structurally negative expected return over the long run for licensees as an instinctive reaction to an extreme inflation event.

Further, we firmly believe companies are in the best position to manage their appetite for inflation risk, who's investors made investments knowing the inflation exposure they were subject to. The current approach has not been shown to be a detriment to customers in the long run. Ofgem should continue to allow companies control over how they manage their finances and risk in order to better attract the required investment in RIIO-3.

<sup>3</sup> Ofgem (13 December 2023), Sector Specific Methodology Consultation – Finance Annex, para 2.26.

<sup>4</sup> Office for Budget Responsibility, Economic and fiscal outlook – March 2024, charts and tables: Chapter 2, Table C2.B

We have set out our thoughts on each of the inflation options Ofgem has presented:

### Option 1

While Option 1 has a clear financeability benefit for companies, we don't think it's appropriate for Ofgem to move away from the inflation indexation in the RAV and for customers to pay higher bills.

This option represents a material change in the allowance both in philosophy and design, where a fundamental principle of the price controls is to smoothen out volatile bill levels for customers and ensure long term stability and commitment. We believe this option is a step away from that principle and could lead to customers having higher short term bill levels, and more volatile bill levels. This option removes a cornerstone of the existing arrangement, i.e., that the regime provides a real allowance alongside a fully inflation protected RAV. It should be noted that the real returns regime has so far brought forward a material quantum of investment at low cost, to the material benefit of customers.

Implementation of this Option would result in a blended real and nominal WACC, with CoD being specified in nominal terms, while CoE would still be defined in real terms. This composite allowed WACC would be novel and untested. There is a real risk it would not be well understood and welcomed by the investor community. Such a material change in the core tenet of GB regulation at such a time will inevitably affect our capability to raise the requisite finance to deliver outcomes consistent with policy objectives and the outcomes desired by our customers.

Putting additional pressure on bills may be unwelcome, given the wide range of other energy transition costs customers are being asked to bear, and given the underlying economic climate, i.e., the cost-of-living crisis. We consider that a broader assessment will be required, other than just considering whether the leverage effect is eliminated via any particular option. This Option would also change the balance of costs borne by current and future generations, which requires careful consideration and further analysis ahead of implementation.

### Option 2

Compared to Option 1, Option 2 is perhaps a more reasonable move away from the established approach where the potential for positive and negative impacts of inflation to companies and customers is removed. The implementation is less complex than Option 1, and it retains the essential features of the existing treatment of inflation, which are well understood by investors.

However, this Option remains a material departure from the status quo – a partial/incomplete RAV indexation is a markedly different and less attractive proposition when compared to the status quo. The implementation of this Option would result in a return which is indexed to the long-term inflation assumption rather than actual inflation. As such, investors still bear inflation risk: this approach does not result in a real, inflation protected return, which has been a central element of the GB regulatory construct. In contrast, the status quo has worked well in terms of encouraging the requisite investment and therefore improvements in service quality which customers have benefited from over the years.

Ofgem has committed to keeping regulation simple where possible, and we strongly believe this is an area where Ofgem should continue to allow companies to manage their own inflation risk, a freedom which has not proved to be detrimental to customers in the long term.

### Option 3

For Option 3, we understand this is more closely aligned with the current status quo. This option does not remove the leverage effect; however, we do not believe it should be Ofgem's primary goal to do so. We don't see any strong reasons to move away from the current 2% assumption.

Ofgem's use of break-even (BE) inflation as a potential replacement for the 2% assumption is of significant concern. We would strongly urge Ofgem against using the BE inflation as the evidence indicates there are

credible reasons to believe that there are distortions in the gilt market which limits the usefulness of the BE inflation as a forecast for CPI and/or CPIH inflation. Please refer below to the section headed '*ILG yields suppressed by structural excess demand*' within the 'Risk-Free Rate' section, in addition to the Frontier Economics report 'Initial consideration of break-even inflation for price control purposes'<sup>5</sup> for a detailed assessment of the issues with BE inflation.

Herein lies the primary concern from an investor point of view – if Ofgem seeks to adopt an inappropriately high long-term inflation forecast, as a means to reduce the leverage effect, but in doing so does not create a fair bet for companies. BE inflation would materially overstate inflation given mispricing of UK real gilts and inflation swaps – recent Bank of England research concludes that there is persistent mispricing of inflation swaps<sup>6</sup>. Further, market commentators explain that pension fund demand for RPI ILD far outstrips supply driving up prices and reducing yields, and in turn resulting in the mispricing of BE inflation<sup>7</sup>.

It is not apparent that there are alternatives to the existing long-term inflation forecast approach which are superior to the status quo. Alternative expert forecasts, such as HM Treasury, are not materially different from the OBR, and in fact strongly supports that OBR forecasts are reasonable. Following Option 3 and reviewing the long-run assumption, we see no reason it should be systematically different than 2%.

### **Additional Borrowing costs**

The ENA asked NERA to refresh its assessment of additional borrowing costs required for RIIO-3. NERA's analysis and evidence sources are set out in the report shared via the ENA.<sup>8</sup>

NERA estimates additional cost of borrowing of 57 bps p.a. for RIIO-3, with a range of 54 to 59 bps, compared to Ofgem's RIIO-2 allowance of 25 bps. Additionally, NERA estimates an infrequent issuer premia of 14 bps p.a. A breakdown of NERA's conclusions is set out in the following table:

<b>bps per year</b>	<b>NERA's estimate<sup>9</sup></b>
Transaction Costs	6
Liquidity/ Revolving Credit Facilities (RCF) Costs	13
Cost of Carry	12
CPIH Premium	18-23 (midpoint 21)
New Issue Premium (NIP)	5
Additional Cost of Borrowing	54-59 (midpoint 57)
Small Company/Infrequent Issuer Premia*	10-18 (midpoint 14)
Total	64-77 (midpoint 71)

<sup>5</sup> Frontier Economics, Initial consideration of break-even inflation for price control purposes, 5 March 2024

<sup>6</sup> Bank of England (August 2023), Mispricing in inflation markets, pp.1-3.

<sup>7</sup> PwC (9 July 2021), Pension funds risk losing £200bn of returns from inflation strategies as index-linked gilts reach record high prices, PwC analysis shows.

<sup>8</sup> NERA, Additional Cost of Borrowing for the RIIO-3 Price Control, 22 February 2024

<sup>9</sup> NERA, Additional Cost of Borrowing for the RIIO-3 Price Control, slide 2, 22 February 2024

### **ILD assumption**

Overall, we disagree with changing the ILD assumption to 0% as a means to remove the leverage effect. First, as a matter of principle the ILD notional assumption should continue to reflect the sector average ILD, and not be used as a policy measure to eliminate the leverage effect. Further, removing ILD from the 'financing toolkit' constrains companies' choices for interest rate and inflation management. Second, from a practical consideration we believe the transitional arrangements would be overly complex.

Over time we expect the sector average ILD to reduce given the limited size of the market and the scale of financing required by the sector.

### **Conclusion**

- Ofgem must commit to fully funding a company's efficient cost of debt with sufficient headroom and consider all calibration options in order to achieve this.
- The status quo should be maintained for the inflation treatment within the allowed return on debt calculation.
  - Inflation options 1 & 2 are a material change in the core tenet of GB regulation. Making a change at this time will inevitably affect our capability to raise the requisite finance to deliver outcomes consistent with policy objectives and the outcomes desired by our customers.
  - While we see merit in assessing the long run inflation assumption in Option 3, we do not believe it's in customers best interests for Ofgem to introduce a structurally negative expected return over the long run for licensees by increasing the long-run assumption as an instinctive reaction to an extreme inflation event.



## Allowed return on equity

For the allowed Cost of Debt indexation Ofgem has recognised the need for a change in approach and methodology in line with the abrupt change macroeconomic conditions and expenditure for transmission networks. Ofgem should extend this rationale to ensuring their approach for the cost of equity can fully account for the macroeconomic conditions and changing risk/expenditure landscape for RIIO-T3.

Increases in observable CoD raises questions about the level of returns that equity investors require for companies to be able to attract the desired blend of financing for their CAPEX programmes. The risk is that if the wedge between allowed CoD and allowed CoE shrinks to the point where it becomes irrational for an investor to be willing to make equity investment in energy networks at this time then networks may find it difficult to raise equity. More generally, this would signal that allowed equity returns are simply insufficient.

Ofgem has recognised this risk in its SSMC and has introduced the concept of investability as a key objective for RIIO-3. Later we provide comment on our proposals for this new investability concept.

We agree with Ofgem that this concept should be considered as a critical test to ensure that the equity returns are sufficient to not only attract new equity, but also to retain the confidence of existing equity investors – the need to attract and retain equity becomes critical for delivering the required decarbonisation and economic outcomes.

Ofgem has been clear that they intend to work within the bounds of the UKRN methodology for setting the cost of capital. While we agree it is important to remain consistent in decisions and arrangements over price controls, the context of RIIO-T3 must be considered. Our CoE proposals set out below remain broadly consistent with UKRN methodology, we expect Ofgem to recognise and use their discretion within the bounds of the UKRN methodology to ensure the appropriate balance of risk and reward is struck for both customers and investors.

Most importantly however the CAPM parameters need to be set in the context of RIIO-3, where the balance of risk has changed on a forward-looking basis and the macro-economic conditions have returned to a pre-Great Financial Crisis level, where forward gilt market rates show no current prospect of a material move down in the risk-free rate over the next 5-10 years.

## Risk-Free Rate

There has increasingly been a debate in the UK and elsewhere in Europe as to whether government bonds provide the best estimate of the RFR. It has been observed that private borrowers, even those with very low credit risk, cannot borrow at the same rate as the government—i.e., the yield on the highest-rated corporate bonds (those rated AAA) is usually above the yield on government bonds of the same maturity. It has also been argued that government bond yields are below the return on a zero-beta asset because the bonds have special properties that give rise to a price premium that usually lowers their yields below the RFR i.e., a convenience premium. It is important that Ofgem account for this convenience premium when estimating the RFR. Allowing for a convenience premium adjustment in the calculation of the RFR (e.g., by including highly rated corporate bonds in the assessment) is an approach that is increasingly used by other UK and European regulators, set out further below.

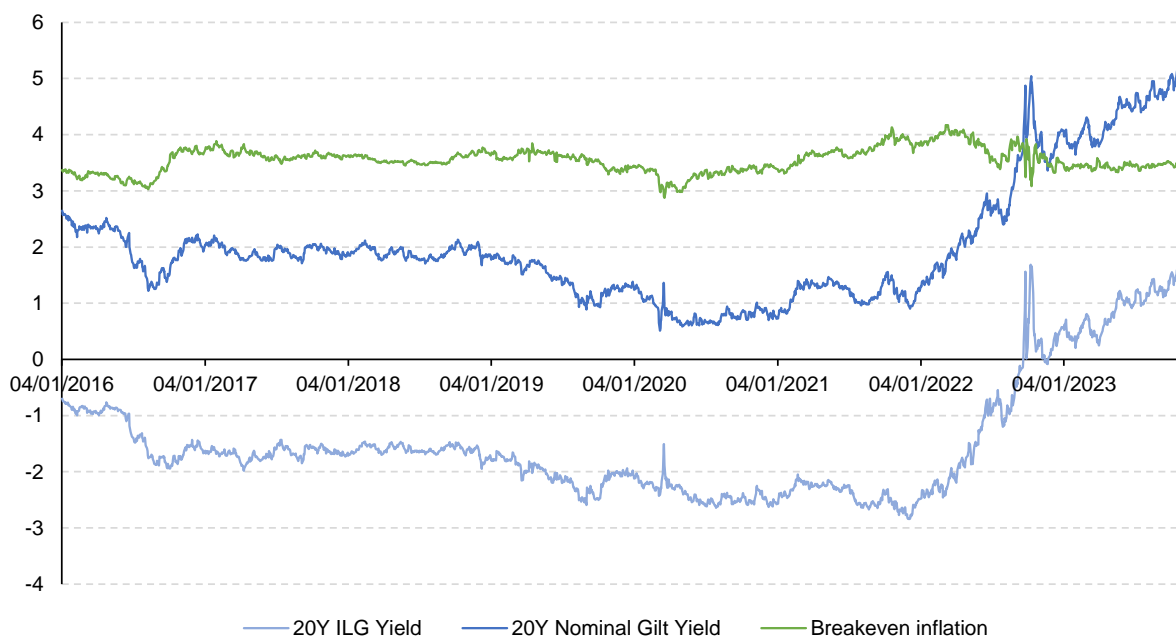
Two key concerns we have with Ofgem's approach for the risk-free rate are as follows:

- Ofgem's is incorrect to rely on ILG yields because of a structural excess demand which depresses yields; and
- Ofgem's proposed approach does not recognise the convenience premium associated with sovereign debt yields.

## ILG yields suppressed by structural excess demand

One reason for the persistently low ILG's relative to nominal bonds may be the very high demand for ILG's from insurance and pension funds, who frequently acquire ILGs "irrespective of their price".<sup>10</sup> This is because defined benefit (DB) pension schemes in particular commonly set out benefits linked in some way to inflation, meaning there is a strong desire from pension fund trustees to cover or hedge that exposure.<sup>11</sup> This strong demand from UK DB pension schemes (which has an asset base of £1,800 billion) has led to a supply-demand imbalance for ILGs, resulting in negative real returns.

As an example of this demand-supply imbalance ILG yields have not moved to reflect the alignment of RPI and CPI by 2030 as expected, as shown below,



and as market observers have commented. For example, a recent report from PwC comments:<sup>12</sup>

*"It's odd that the market has hardly reacted to the news that the RPI formula will be nearly 1% a year lower from 2030. Pension fund investors are still prepared to pay significant premiums for inflation protection via index-linked gilts, despite record price levels".*

A recently published research paper by the Bank of England itself has also acknowledged the mispricing of ILG.<sup>13</sup> The paper concludes that:

- there is persistent inflation mispricing over the 2018–22 period, with nominal gilts on average 135 basis points more expensive than their synthetic counterparts constructed from inflation swaps and inflation-linked bonds;
- inflation markets are largely segmented with liability-driven investors and pension funds (LDI-P) dominating the inflation swap market, and many clients that are active in bond markets are absent in the inflation swap market. LDI-P activity is a key driver of inflation mispricing – the sector's orderflows in inflation-linked bonds and (to lesser extent) nominal bonds and inflation swaps contribute significantly to day-to-day variations in mispricing;
- the generally weak link between market-based measures of inflation expectations and survey-based measures is strengthened once clean market prices are adjusted for the effect of outsized LDI-P trading activity.

<sup>10</sup> Investors Chronicle (8 November 2023), When to buy index-linked bonds.

<sup>11</sup> PwC (9 July 2021), Pension funds risk losing £200bn of returns from inflation strategies as index-linked gilts reach record high prices, PwC analysis shows.

<sup>12</sup> PwC (9 July 2021), Pension funds risk losing £200bn of returns from inflation strategies as index-linked gilts reach record high prices, PwC analysis shows.

<sup>13</sup> Bank of England (August 2023), Mispricing in inflation markets, pp.1–3.

It follows from the Bank's findings, which are consistent with observations of other market participants as set out above, that the impact of outsized demand for ILGs from liability-driven investors is resulting in mispricing in ILG markets, making their yields a flawed basis for estimating the risk-free rate.

This new evidence on the mispricing of ILG was not considered at RIIO-2 (or not to such a degree), and therefore constitutes a "good reason", as Ofgem defines the term, to depart from UKRN Guidance and Ofgem's RIIO-2 approach.<sup>14</sup>

### Government bonds include convenience premium

Notwithstanding our concerns with the mispricing of UK ILG because of structural excess demand, we also have a conceptual concern with the sole reliance on government debt instruments given the existence of a convenience premium.

Ofgem acknowledges the idea of the convenience premium (or "convenience yield") in the SSMC, which it defines as the value that investors ascribe to instruments such as ILGs over and above their proximity to being "risk-free".<sup>15</sup> The "convenience premium" therefore introduces a gap between corporate and sovereign risk-free financing rates, which is a problem in the CAPM framework if government bond yields are used as the basis for the RFR, as the CAPM rests on the assumption that the RFR reflects a rate at which all market participants can borrow and lend.

The convenience premium arises due to the unique characteristics of sovereign bonds: empirical research shows that government bonds have special safety and liquidity characteristics compared to other securities, including greater perceived safety of government debt instruments, high liquidity and their ability to be used as collateral (both of which contribute to "moneyness" of government bonds).<sup>16</sup> As a result, the government bond yields are pushed below the required rate of return for a zero-beta asset, i.e. below the rate of return that the risk-free rate is meant to capture in the CAPM framework.

Ofgem's proposed use of ILG understates the risk-free rate, as ILGs are likely a negatively biased estimate of the risk-free rate (even setting aside the issue of excess demand). In order to achieve an unbiased estimate of the RFR, proxies need to be found that are available to relevant market participants, which include non-government market participants who are unable to borrow at the government bond rate (such as corporate issuers). This can be achieved by:

- Adding an estimate of the convenience premium to the estimate of the RFR based on government bonds.<sup>17</sup>

We note that although UKRN recommendation is to use ILG as the basis for the RFR, in relation to the convenience premium, the UKRN Guidance does not propose a particular stance, but states that regulators should set out their views.<sup>18</sup> An adjustment to ILG is therefore consistent with the Guidance.

Ofgem notes that the UKRN Guidance expresses concern regarding the lack of academic evidence on the size of the convenience premium for ILG at the 10 to 20 year investment horizon, as an obstacle to making such an adjustment.<sup>19</sup> The UKRN report cites only a 2021 paper focussing on short tenor gilts.<sup>20</sup> A more recent academic paper provides further evidence for convenience yield for UK gilts of around 40 bps, consistent with estimates by the authors for other markets and other studies, although this evidence also focusses on short tenors.<sup>21</sup>

---

<sup>14</sup> Ofgem (13 December 2023), Sector Specific Methodology Consultation – Finance Annex, para 3.16.

<sup>15</sup> Ofgem (13 December 2023), Sector Specific Methodology Consultation – Finance Annex, para 3.28.

<sup>16</sup> Jiang, Z. et al (6 October 2022), Bond Convenience Yields in the Eurozone Currency Union, p.3; Bonam, D. (2 March 2022), A convenient truth: The convenience yield and implications for fiscal policy, p.2.

<sup>17</sup> See e.g. Risk-free interest rates, Van Binsbergen et al., NBER, August 2019.

<sup>18</sup> Ofgem (13 December 2023), Sector Specific Methodology Consultation – Finance Annex, para 3.30, p. 28

<sup>19</sup> Ofgem (13 December 2023), Sector Specific Methodology Consultation – Finance Annex, para 3.30.

<sup>20</sup> UKRN (2022) UKRN Guidance for Regulators on the methodology for setting the cost of capital, p. 14. Footnote 30.

<sup>21</sup> Diamond, W. and Van Tassel, P. (February 2023), Risk-Free Rates and Convenience Yields Around the World. Other papers estimating the size of the convenience premium also yield estimates ranging between 40-50bps. Sources: Safety, liquidity, and the

However, in the case of RPI ILG, we have concerns that yields are depressed, and therefore adding a premium of (say) 40 bps is not a viable approach; rather we would need to consider a premium to nominal gilts net of other potential adjustments as we discuss below.

- Inferring the RFR directly from highly rated (i.e., AAA) corporate bond yields.

As per the CMA PRI9 approach and Utility Regulator at GD23, a regulator can allow for a convenience premium by drawing directly on highly rated corporate bond indices (as well as gilts) in setting the RFR.

The use of highly rated corporate debt reflects a rate at which all market participants can lend or borrow whereas for nominal gilts we would need to consider adjusting for a convenience premium. In both cases, we need to consider other potential adjustments, e.g., inflation risk, default, to address CMA and Ofgem's concerns expressed at RIIO-2.

### RFR derived using high grade corporate debt yield

We have reviewed two iBoxx non-gilt AAA indices for potential estimation of a risk-free rate and address the issue of a convenience premium – the iBoxx £ Non-Gilt AAA 10-15Y and the iBoxx £ Non-Gilt AAA 10+Y. These are the same indices used by the CMA at PRI9, and the same indices used by the Utility Regulator in Northern Ireland for its GD23 price control to estimate the risk-free rate.<sup>22</sup> The CMA highlighted at RIIO-2 appeal that there was insufficient evidence to support the use of AAA-rated corporate bonds, and that it had concerns with the use of AAA corporate bond data including:<sup>23</sup>

- Practical problems with AAA corporate bond data, such as limited diversity within AAA indices and the potential inclusion of bonds with very different characteristics;
- Challenges in identifying suitable specific AAA bonds and the complexity of any necessary adjustments;
- It observed that if long dated AAA bonds are removed, the gap between ILG yields and AAA index yields reduces significantly.

Our selected iBoxx indices currently have 4 and 12 constituents respectively which is fewer constituents than when these indices were considered by CMA at PRI9.<sup>24</sup> The iBoxx Non-Gilt AAA 10-15Y excludes long-dated constituents and has an average tenor to maturity of 13 years, while the iBoxx Non-Gilt AAA 10+Y includes more constituents and has an average tenor to maturity of 24 years and therefore consistent with Ofgem's use of RPI ILG of 20 year tenor.

---

natural rate of interest; Del Negro et al., Brookings Papers on Economic Activity, April 2017, Figure 7, page 33. The Aggregate Demand for Treasury Debt, Krishnamurthy and Vissing-Jorgensen, Journal of Political Economy, April 2012, page 4. Risk-free interest rates, Van Binsbergen et al., NBER, August 2019, page 2

<sup>22</sup> See CMA (17 March 2021), Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations, Final Report, para 9.241-9.243; Utility Regulator (October 2022), Gas Distribution Price Control 2023-2028 – Final Determinations, para 10.17. Note, however, that UR only relies on gilt yields in its indexation mechanism for the risk free rate (Rate of return adjustment mechanism), as the regulator places the most weight on gilt yields in its risk-free rate estimate (50 per cent weight on gilt yields, 25 per cent weight on iBoxx yield data for each index). See Utility Regulator (October 2022), Gas Distribution Price Control 2023-2028 – Final Determinations, para 10.45.

<sup>23</sup> The CMA did also set out some support for the feasibility of relying on AAA bond and index data to estimate the risk-free rate, e.g., setting out that AAA bonds should not be disregarded simply because of the difficulty of carrying out necessary adjustments to yield data.

<sup>24</sup> This number of constituents has fallen since CMA relied on these indices at PRI9, at which point they had 8 and 19 constituents respectively.

## iBoxx Non-Gilt AAA Indices Constituents and Maturity

Issuer	Index Weight in %	Years to Maturity	Included in iBoxx Non-Gilt AAA 10-15Y?	Included in iBoxx Non-Gilt AAA 10Y+?
Kreditanstalt fuer Wiederaufbau	9.9	12.4	Y	Y
Wellcome Trust Finance Plc	7.2	12.6	Y	Y
Kreditanstalt fuer Wiederaufbau	4.2	13.2	Y	Y
European Investment Bank	14.4	13.4	Y	Y
European Investment Bank	21.1	15.3	N	Y
Temasek Financial I Ltd	6.6	16.6	N	Y
European Investment Bank	9.1	20.2	N	Y
European Investment Bank	9.8	30.8	N	Y
The Wellcome Trust Ltd	4.5	35.4	N	Y
The Wellcome Trust Ltd	3.6	47.5	N	Y
CPPIB Capital Inc	4.5	47.8	N	Y
The Wellcome Trust Ltd	5.0	94.1	N	Y
<b>Weighted Average (iBoxx Non-Gilt AAA 10-15Y)</b>		<b>13.0</b>		
<b>Weighted Average (iBoxx Non-Gilt AAA 10+Y)</b>		<b>24.0</b>		

Source: NERA analysis of IHS iBoxx data.

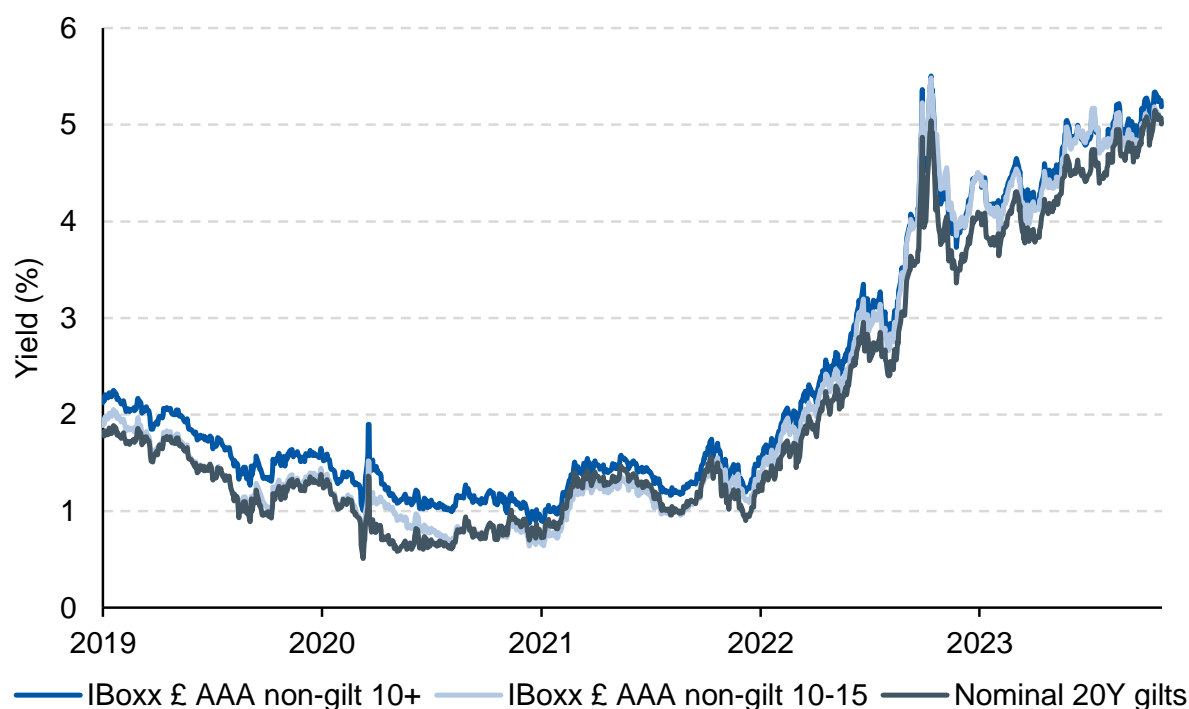
We can therefore estimate the risk-free rate using AAA corporate bonds based on evidence from the iBoxx GBP non-gilts AAA 10-15 year index, and the iBoxx GBP non-gilts AAA 10+ year index. We convert these yields into CPIH-real terms based on the long-term CPIH forecasts from OBR.

### Estimating RFR based on nominal gilt yields

However, the use of nominal gilts may provide a more viable alternative to ILG than corporate bond yields, as we avoid the requirement to adjust for liquidity and default premium albeit we will need to adjust for inflation risk.

As set out in the figure below, nominal gilt yields have on average remained 15-30bps below AAA-rated corporate bond index yields. This gap is most likely explained by the additional risk premia in corporate bond yields – liquidity and default premium.

## iBoxx AAA Non-Gilt Yields and Nominal Gilt Yields, 2019-2024



Source: NERA analysis of FactSet and Bank of England data.

At RIIO-2, Ofgem rejected the use of nominal government debt instruments because of the existence of an inflation risk premium.<sup>25</sup> As noted above, at RIIO-2 Ofgem argued that the inflation risk premium added a further element of discretion in the estimation of the risk-free rate, which would be avoided by instead relying on ILG yields<sup>26</sup>

If we make such a downward adjustment for the inflation risk premium, then it is imperative to make an upward adjustment for the convenience premium, which we estimate at around 40-50 bps, as set out above. We therefore believe that the existence of the convenience premium (more than) offsets the need to adjust the nominal gilt yield downward for an inflation risk premium, thereby making nominal gilt yields a reasonable and indeed conservative estimate of the risk-free rate.

### CPI-CPIH Wedge

Ofgem proposes to use CPI as a proxy for CPIH in a number of its price control calculations. Both Oxera's report on CAPM parameters for cost of equity and NERA's report on additional borrowing costs identify the existence of a CPI-CPIH differential that must be reflected in Ofgem's calculations. The UKRN Guidance does not comment on the CPI-CPIH wedge.

The quantum of the CPI-CPIH "wedge" at any one point in time is volatile. However, over time the difference between the two indices has exposed networks to a difference that is not compensated in allowances for risk free rate or cost of debt allowances.

We disagree with Ofgem's suggestion that the 14-bps average difference between the indices between June 2013 and June 2023 can be taken to suggest that no recognition needs to be made in allowance setting. The difference between CPI and CPIH to which networks have been exposed during RIIO-2 was significant and is contrary to Ofgem's assessment that the impact of the transition to CPIH indexation would be value-neutral to investors.

<sup>25</sup> Ofgem (February 2021), RIIO-2 Final Determinations – Finance Annex (REVISED), para 3.12.

<sup>26</sup> Ofgem (13 December 2023), Sector Specific Methodology Consultation – Finance Annex, para 3.48.



There are a number of ways in which the enduring difference can be estimated for the purposes of adjusting future allowances to reflect both the likely average divergence between CPI and CPIH throughout RIIO-3 and the ongoing volatility of that difference. Oxera estimates an appropriate adjustment of 33 bps, and NERA estimates adjustments in the range of 40 to 50 bps.

Further work is required to explore how Ofgem should best determine the quantum of appropriate upwards allowance adjustments for RIIO-3 and also how the volatility of the difference and therefore the risk that networks will continue to manage relative to those allowance adjustments should be compensated.

We would like to discuss possible approaches with Ofgem prior to its SSMD.

## Conclusion

Overall, ILG yields do not provide a viable estimate for the RFR, given structural excess demand and the existence of convenience premium which depresses yields below the true RFR. While we believe an adjustment to ILG's to account for the convenience premium is consistent with UKRN guidance we also believe this is new evidence on the mispricing of ILG, which constitutes a "good reason" for Ofgem to reconsider the UKRN guidance.

One potential solution that addresses these concerns is the use of highly rated corporate debt indices. However, the CMA at RIIO-2 agreed with Ofgem's concerns around the use of corporate debt data in order to estimate the risk-free rate, including the need to adjust for liquidity, credit and inflation risk premium. At RIIO-2 appeals, the CMA concluded that once we take into account these factors there is little practical impact in including highly rated corporate debt indices in the estimation of the RFR.

The use of nominal gilt instruments provides one possible solution, as it overcomes multiple risks inherent in corporate debt yields (e.g., default risk premium, illiquidity premium and term premium). In theory, nominal gilt yields should be further adjusted for an inflation risk premium and convenience premium; however empirical estimates of the convenience premium of around 40-50 bps are higher than CMA's estimate of the inflation risk premium of 15 bps, suggesting that nominal gilts may provide a conservative estimate of the risk-free rate.

## TMR

There are a wide number of choices in estimating the TMR, but Ofgem's SSMC guidance is not prescriptive. As a reference point, we expect Ofgem to draw on the CMA's approach in the PR19 determination, which adopts the TMR approach, and is based on historical ex post and ex ante analysis (subject to the points noted below). Ofgem also comments that it does not place significant weight on forward-looking estimates.

To illustrate the methodological choices facing Ofgem, we have updated the CMA's analysis which gives a range of 5.3 to 7.0 per cent (real, CPIH). This is lower than the 6.2 to 7.5 per cent TMR range at CMA PR19 due to lower range for ex post and ex ante estimates.

The lower TMR range reflects the combined effect of:

- Historical ex post estimates are lower at 5.9 per cent to 7.0 per cent due mainly to materially lower non-overlapping estimates with 10- and 20-year holding periods. The non-overlapping estimators rely on few data points and are unstable over time.
  - Otherwise, the use of revised CPI/CPIH, which are 10-25 bps lower than the old CPI series used, increase the relevant TMR estimates by 10-25 bps, but there is an equal and offsetting effect from the inclusion of market returns over the period 2020-22 which are very low in real terms.
- Historical ex ante estimates are lower at 5.3 per cent to 6.3 per cent, due to (i) lower geometric mean dividend yield and real dividend growth rates from the latest Barclays Equity Gilt Study and Dimson

Marsh Staunton (DMS), and (ii) mechanically updating the CMA's serial correlation adjustment based on updated historic ex post gives materially higher estimates (8-103 bps downward adjustment) relative to PRI9 (0-40 bps downward adjustment).

However, we have two key concerns with Ofgem's proposed approach/CMA's PRI9 approach:

- First, the CMA's TMR approach relies on the non-overlapping estimator (also included as one potential approach by Ofgem), which is not robust as it is based on a limited number of datapoints and therefore volatile over time. Ofwat has also identified the volatility of non-overlapping estimators in its PR24 Final Methodology.
  - Excluding non-overlapping estimators and using only overlapping estimators, the historic ex post TMR range becomes 6.8 per cent to 7.0 per cent, as shown in.
  - The non-overlapping estimator also affects the historical ex ante estimates since the CMA's serial correlation adjustment is based on the difference in historic ex post estimates of between one-year and 10/20-year holding period, drawing on overlapping and non-overlapping estimators. Using only the more stable overlapping estimator, the serial correlation adjustment declines to 0.8 per cent to 0.17 per cent, and the historical ex ante TMR range increases to 6.2 per cent to 6.3 per cent.
  - Ofwat has also excluded non-overlapping estimators at PR24.
- Second, we have concerns with relying on historical ex ante estimates which involve subjective adjustments.
  - The historical ex ante method decomposes the historical returns into elements that are likely to be repeatable and those that are not, e.g., the expansion of valuation ratios. However, the decomposition of the price return is a subjective exercise that requires one to choose which elements to include in the decomposition, and which to be classified as 'non-repeatable'. The assumptions used for decomposition rely on judgement rather than objective, empirical evidence.
  - In the case of the DMS decomposition approach, DMS assumes that the expected change in the real exchange rate in future will be zero; the historical expansion in the price-to-dividend ratio will not be repeated and should be assumed to be zero; and the historical real growth rate of dividends was partly attributable to good luck.<sup>27</sup> However, these assumption are based on the DMS authors' belief that past good luck has outweighed bad luck, and is inherently subjective. The Fama–French approach is based on a different decomposition, which decomposes total returns into the dividend yield and the capital gain, but it faces similar conceptual issues of subjective adjustments.

Finally, as we explain below, we also believe that Ofgem/CMA should set an allowed return which is consistent with the annual arithmetic return, and not draw on geometric means (or Blume or JKM estimators which are a weighted average of arithmetic and geometric means)

We draw on long run historical realised returns based on UK data from Dimson, Marsh and Staunton (DMS) database, and deflate historical nominal returns into real terms using newly published CPIH backcast series.

The relevant estimator and investment horizon is then a question of what the regulator's objective is in setting the allowed return. We consider that the objective of the regulator is to set a single period allowed rate of return. This means the simple one-year arithmetic mean (AM) is the appropriate unbiased estimator for the purpose of estimating TMR in the regulatory context.

By contrast, the objective of the regulator is not to determine the unbiased estimator the purpose of estimating future values of investment portfolios (which requires Blume or JKM estimators. In other words,

---

<sup>27</sup> Dimson, E., Marsh, P. and Staunton, M. (2022), 'Credit Suisse Global Investment Returns Yearbook 2022', p. 62.

the problem of estimating the expected future value of an investment portfolio is not the problem facing Ofgem. Therefore, the Blume and JKM estimators are not relevant.

Likewise, we do not consider it is the role of Ofgem to determine an unbiased estimator for the purpose of estimating present values of investments (Cooper adjustment). That is, the role of Ofgem is not to determine an estimator that provides an unbiased estimate of the present value of capital investment projects for discounters. Also, it is not the role of the regulator to determine a geometric mean. It is a mathematical fact that the geometric mean will be lower than the arithmetic mean, and where the difference is explained by the variance in stock market returns. However, Ofgem is not determining the return over a period of time, but rather setting an expected annual allowed rate of return which by consequence of companies' own variance in returns will in turn correspond to a lower expected geometric return over a period of more than one year.

Our view, that the role of the regulator is to determine an annual expected return using arithmetic mean, is in line with Professor Schaefer submission to the CMA PR19 appeal. He concluded that

*"[Since the adjustments in the expected return that are required to correct the biases for compounding and discounting are different, it is not possible to provide an expected return that is correct for both but, fortunately, this is not necessary. [...] all the CMA needs to do is to provide an unbiased estimate of (say) the expected annual return. Compounders and discounters will then make their own adjustments to this number to adjust for the bias introduced by the estimate error.]"*<sup>28</sup>

We agree with Oxera's approach to estimating the TMR, which includes two changes to Ofgem's RIIO-2 approach<sup>29</sup>:

- Relying primarily on the historical ex post approach (long-term arithmetic mean of one-year returns, using CPIH backcast inflation for 1950~88), while covering the historical ex ante TMR estimation within its range; and
- Recognising that some increase in the TMR is a logical consequence of the large increase in interest rates. Oxera notes that adjusting the TMR range in response to changes in gilt yields would be consistent with historical regulatory approaches and that its proposed increase to TMR range would be a relatively small change in the context of the observed increase in the UK government gilt yields.

Oxera explains in its report that these differences in approach to estimation of CAPM parameters remain consistent with the UKRN Guidance.<sup>30</sup>

Overall, as Oxera explains, the historical evidence points towards an estimate of 7.0% as based on the one-year arithmetic average, which we consider to be the most robust and reliable technique to estimate the TMR. This estimate is also above Ofgem's RIIO-2 range, which would be consistent with Ofgem's historical practice of varying the TMR with changes in gilt yields. However, we acknowledge that there is uncertainty in deriving the true expected TMR. We therefore consider that it would be appropriate to add  $\pm 50$ bps around the estimate of 7.00%. The resulting range of 6.50–7.50% encompasses almost all presented ex post approaches with the sole exception of the MSE estimator based on a 20-year holding period (6.32%).

### TMR and interest rates

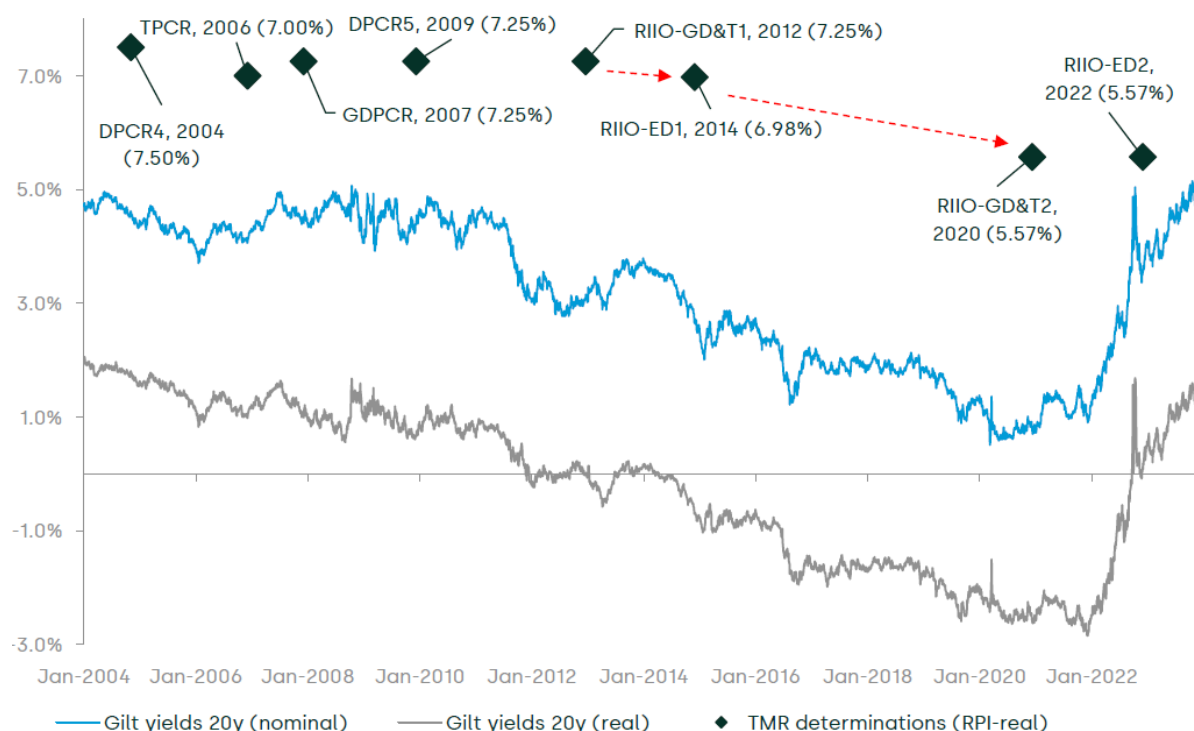
It is apparent from the figure below that Ofgem responded to the decline in gilt yields in the period 2010–21 by reducing the TMR allowance (in RPI-real terms) from 7.25% in 2012 to 6.98% in 2014 and 5.57% in 2020. However, since early 2022, the long-term gilt yields have sharply increased, reaching levels last seen during 2005–11. Given that the TMR was between 7.0% and 7.25% (RPI-real) during that period, a consistent regulatory approach over time implies an increase in the TMR assumption in RIIO-3, to take account of the

<sup>28</sup> Comments on CMA views on Estimating Expected Returns, Schaefer, 15 April 2020, page 5.

<sup>29</sup> See Oxera, RIIO-3 cost of equity, section 2.2, 23 February 2024 for Oxera's full assessment of TMR and equity risk premium (ERP)

<sup>30</sup> Oxera, RIIO-3 cost of equity, section 2.1.4 and 2.2.6, 23 February 2024

higher interest rate environment. 7.0% and 7.25% RPI-real estimates would be equivalent to a TMR between 7.94% and 8.19% in CPIH-real terms.



In addition to above, although UK regulators have notionally adopted a TMR approach at recent reviews (i.e., have assumed a constant TMR independent of RFR), in practice Ofgem/UK regulators have adopted flawed methodologies that have allowed them to determine a lower TMR over time (with a declining RFR allowing for such an approach).

However, in a higher RFR environment, the resulting TMR is no longer viable and Ofgem must select methodologies that allow for a reasonable TMR, i.e., focusing on AM and historical ex post data. That is, the RIIO-2 methodology that supported TMR of 6.5 per cent is no longer tenable in a normalised RFR environment.

Regulators have in fact been explicit that they lowered TMR because of their perception of wider market evidence, in particular the change in interest rates – see Frontier Economics report ‘Equity Investability in RIIO-3’, shared via the ENA, for references.

As such, while the basis for the downward shift in TMR allowances has sometimes appeared subjective or opaque, it is evident that regulators have lowered TMR explicitly because of their assessment of wider market evidence, including in particular falls in interest rates and reductions in yields on ILGs.

Given that Ofgem has evidently previously reduced its TMR allowances during times of low interest rates, we recommend increasing it now in accordance with the increased level of interest rates. The current risk-free rate of ~4.6% is broadly in line with the average interest rate seen over the period 2000 to 2007, where forward gilt market rates suggest no prospect at this stage of a material move down in the risk-free rate over the next 5-10 years.

Unwinding of this ‘erring down’ from when interest rates were low is not a step away from UKRN guidance or Ofgem’s stable TMR approach, in fact it is aligned with a through-the-cycle stable TMR approach that is not fixed but flexes for the specific circumstances of the upcoming price control.

## Conclusion

While our approach is compliant with UKRN guidance we deviate from Ofgem's approach in two main areas:

- Little reliance should be placed on historical ex ante estimates, as these involve subjective adjustments, which rely on judgement rather than objective, empirical evidence.
- We focus on single period arithmetic mean. As explained by Professor Schaefer, the regulator simply needs to provide an unbiased estimate of the expected annual return based on the simple arithmetic mean. The compounders and discounters will then make their own adjustments to this number to adjust for the bias introduced by estimation error.

Both Oxera and Frontier Economics describe the clear evidence of how regulators, and Ofgem in particular, have historically adjusted the TMR range downwards in response to changes in gilt yields.<sup>3132</sup> Now that gilt yields have increased considerably, it is logical and consistent that Ofgem increases its TMR range accordingly. We consider that Ofgem increasing TMR in this manner would be consistent with regulatory precedent and would promote regulatory stability and certainty. Indeed, it would be irrational to expect a circa 3.5% increase in gilt yields to have no effect on the appropriate level of TMR.

## Beta

Our update of Ofgem's RIIO-2 beta approach, which is broadly consistent with its SSMC guidance for RIIO-3 on beta, indicates that beta estimates have declined across the wider set of averaging and estimation windows used by Ofgem, although the estimates have increased for 10-year estimation and averaging periods.

These recent low betas may be caused by high market volatility – the ENA asked Frontier Economics to comment on prevailing estimates of beta and, in particular, the low beta values that are observed during the COVID-19 pandemic period and following the Ukraine crisis. Frontier Economics' analysis and conclusion are set out in its report.<sup>33</sup> Frontier Economics observes that utilities betas tend to be negatively correlated with market volatility, implying that utilities beta levels decrease when market volatility increases.

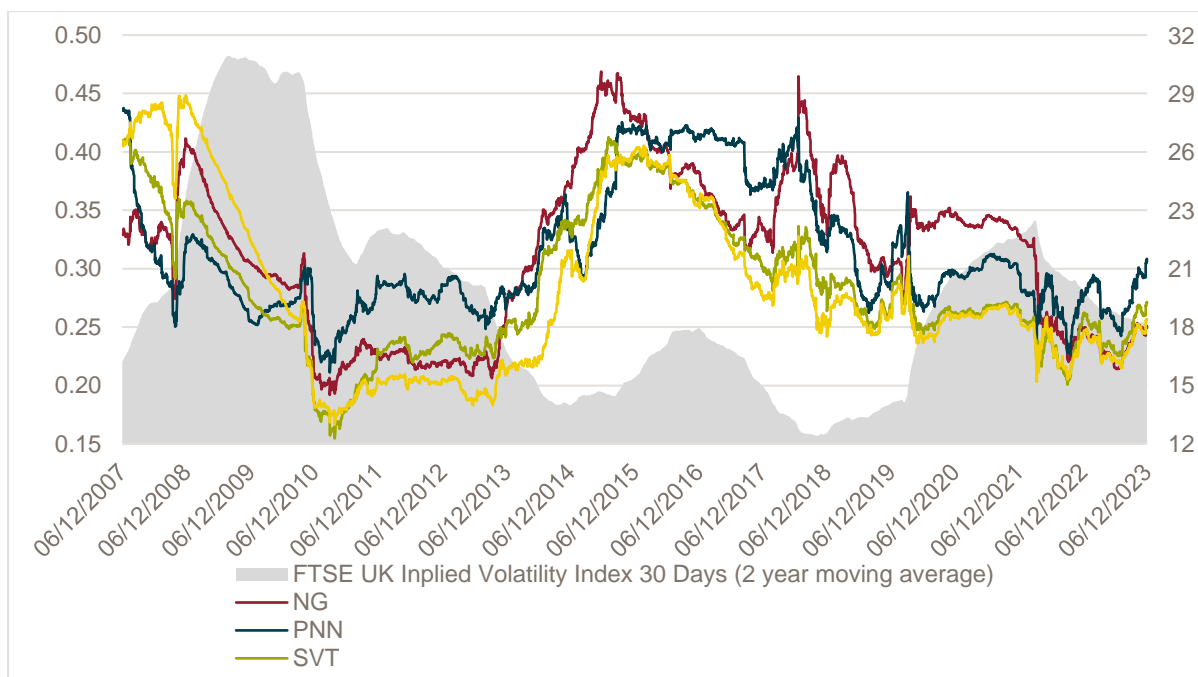
**30d implied volatility and (unlevered) utility betas estimated using a 2-year estimation window**

---

<sup>31</sup> Oxera, RIIO-3 cost of equity, section 2.2.4, 23 February 2024

<sup>32</sup> Frontier Economics, Equity Investability in RIIO-3, section 2.1.1, 5 March 2024

<sup>33</sup> Frontier Economics, The low beta puzzle, 5 March 2024



Source: Frontier Economics based on Bloomberg data<sup>34</sup>

Note: Unlevered betas, 2-year averaging window, daily frequency of the underlying data for beta estimation. Frontier Economics considers a 2-year moving average of the VIX index as the VIX index is inherently forward looking, while betas are inherently backward looking. Using a 2-year moving average attempts to 'match' the appropriate time period of market volatility to the beta estimation windows.

As well as finding a negative relationship between market volatility and the beta of utilities, Frontier Economics also finds a positive relationship between market volatility and the forward-looking market-implied Equity Risk Premium (ERP).

Frontier Economics identifies two potential issues associated with reliance on betas from period of market volatility, (a) when combined with an ERP estimate that is not forward looking so as to reflect high market volatility, the result would under-estimate the cost of equity; and (b) the beta estimate itself may be unreliable owing to high volatility even if paired with an appropriate ERP.

However, the stable TMR approach means the ERP moves in the opposite direction to the RFR, and subsequently because the TMR will not raise 1:1 with the RFR, then the ERP used will inherently fall. When volatility suggests that ERP needs to go up, the regulatory construct used by UK regulators will instead impose an assumption that it has gone down. This represents a real risk that required returns are underestimated.

Therefore, the low betas seen in times of market volatility can only be paired with the high forward-looking market-implied ERP that is also seen in times of market volatility.

Further, beta estimates from periods of market volatility may be inaccurate even if paired with an appropriate ERP where Frontier Economics notes that some researchers and commentators question whether beta estimates made over estimation windows where markets are highly volatile should not be used at all. A well-known finance text summarises this as a potential pitfall of beta estimation for academics and practitioners alike who wish to estimate betas:

<sup>34</sup> Frontier Economics, The low beta puzzle, page 4, 5 March 2024



*“Research has shown that volatility affects the accuracy of beta estimates. at times when the market is highly volatile, beta estimates are less reliable, as are the correlations of individual stock returns with returns on the market...This means that estimating betas during periods of high volatility of market returns **will generally provide less reliable estimates of beta** than during periods of low volatility.”<sup>35</sup> [emphasis added.]*

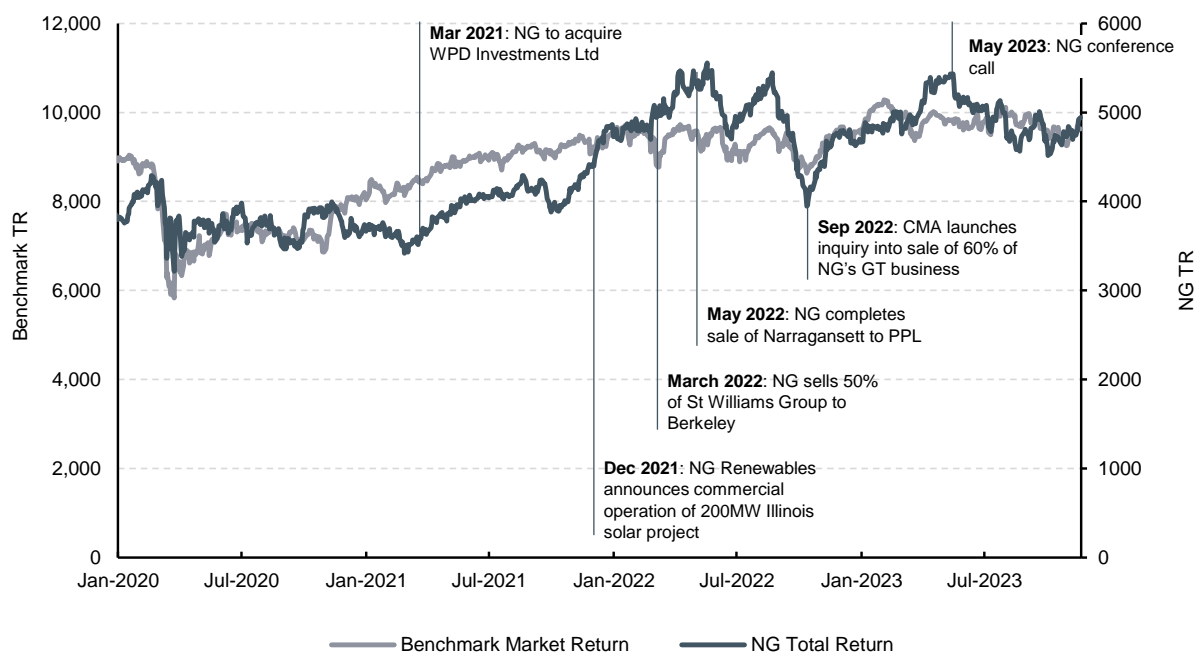
In conclusion, beta volatility represents a real risk that the allowed CoE will be underestimated under Ofgem’s current methodology. Therefore, the selection of a beta range for RIIO-3 will require particularly careful consideration, discussion, and evidence.

## Beta Comparators

Ofgem should not focus on water sector comparators given the different regulatory framework, business activities, and prospective roles in relation to Net Zero (including required future investment). We also have concerns with reliance on NG beta due to potential de-coupling with the UK equity market given the extensive corporate M&A activity.

The below figure sets out key points where NG’s share price movement has been out of sync with the market. As can be seen, there is some overlap with the low-correlation periods and news on M&A activity/other idiosyncratic National Grid news. This suggests that the high impact M&A/idiosyncratic NG news is leading to lower correlation with the market. We note that M&A activity will have contributed to increased relative volatility, but the increase in relative volatility of NG’s share price is less than we observe for other utilities. Thus, the period of M&A activity and share price movement is principally dampening market correlation, with the net result a reduction in the beta.

## National Grid vs Benchmark Market Return, 2020-2023



Source: NERA analysis of FactSet financial market data.

National Grid’s low beta relative to RIIO-2 does not provide a signal of lower systematic risk over the course of RIIO-3. Rather, the lower beta reflects lower correlation as a result of NG’s share price decoupling from the market during the period of M&A activity. Ofgem should not draw upon National Grid’s beta evidence, as it unlikely to provide an indication of market expectation of risk for SPT (and other transmission utilities) over RIIO-3.

<sup>35</sup> Pratt & Grabowski (2014), Cost of Capital – applications and examples, fifth edition, page 277

Instead, we set out evidence for comparator European T&D businesses and identify a set of five potential comparators based on proportion of regulated activity, as well as data quality issues, and a relative risk assessment of regulatory regimes. Such evidence supports a beta in the range of 0.29 to 0.39 (and in our indicative cost of equity for RIIIO-3 set out in section 1 we have assumed a range of 0.35-0.40, zero debt beta).

As a starting point, we rely on CEPA's original set of 12 European comparators from its 2020 report prepared for Ofgem at RIIIO-2. We then construct a "most relevant European comparator set" excluding comparators with:

- more than 50 per cent of revenue or operating profit from activity other than regulated utilities (to exclude companies with different exposure to sector-specific risks than GB energy networks); and
- low liquidity, to exclude comparators without robust pricing data. Academic evidence generally considers that market liquidity depends on criteria on five characteristics: (i) tightness; (ii) immediacy; (iii) depth; (iv) breadth; and (v) resilience.<sup>36</sup> We therefore base our assessment of each company's stock liquidity based on (i) the bid-ask spread, as a measure of tightness of the market, and (ii) trading volume, as a measure of depth and breadth.<sup>37</sup>

Comparator	>50% Revenue and Operating Profit from Regulated Activity?	Bid-Ask Spread <1%?	Trade Volume, thousands (5Y average)	Include in NERA Comparator Set?
Red Electrica Corp	Yes	Yes	1,673.7	Yes
Terna	Yes	Yes	4,968.3	Yes
Elia	Yes	Yes	59.1	No
REN	Yes	Yes	733.2	No
Snam	Yes	Yes	8,052.3	Yes
Enagas	Yes	Yes	1,139.2	Yes
A2A	No	Yes	10,334.6	No
Hera	Yes	Yes	3,070.2	Yes
Transelectrica	No	Yes	16.1	No
Fluxys	Yes	No	2.3	No
Enel	No	Yes	26,872.2	No
Endesa	No	Yes	1,493.0	No

Source: NERA analysis

This screening allows us to arrive at a set of 5 European comparators: Red Electrica (Spanish electricity transmission network), Snam (Italian gas transmission, storage and regasification network), Terna (Italian electricity transmission network), Enagas (Spanish gas transmission, storage and regasification network) and Hera (Italian electricity and gas distribution network). Based on a relative risk assessment of regimes in Italy, Spain and the UK, we consider that the Italian and Spanish networks face broadly similar risks to SPT, supporting an asset beta estimate for SPT based on these five comparators.

In Italy, networks are regulated under a hybrid of a price cap (on opex) and a rate of return regime (on capex). Due to a periodic true-up, only a very small share of opex is subject to volume risk (around 5 per

<sup>36</sup> Measuring Liquidity in Financial Markets. IMF Working Paper, WP/02/232, Sarr, A and Lybek, T, December 2002. Posted versus effective spreads. Good prices or bad quotes?, Petersen and Fialkowski, June 1994.

<sup>37</sup> In particular, we set a 1 per cent threshold for bid-ask spread and a daily trade volume of 1 million trades.

cent).<sup>38</sup> Moreover, opex cost risk is partially mitigated through a 50 per cent sharing factor. Italian networks face very little capex risk given that capex is effectively passed through.

Whereas the Italian networks face relatively low risk based on volume and cost risk considerations, the regulator has announced its intention to introduce a RIIO-like incentive-based framework. This will increase the systematic risk of these networks and is likely to be reflected in the current beta estimates (see Section **Error! Reference source not found.**). Given the expected change to the regime, we consider the Italian networks face a similar risk to SPT.

In Spain, transmission networks are regulated under revenue caps, as is SPT. On the cost side, they are subject to a 50 per cent sharing factor on capex but bear the full cost risk on opex. There is no sharing of opex and capex out or underperformance which indicates that it faces greater cost risk than UK networks, although this is mitigated by annual updates to the allowance in line with volume drivers and unit costs.<sup>39</sup> As with the Italian regime, we consider that investors in SPT face a similar degree of risk as investors in Spanish networks.

---

<sup>38</sup> See for example ARERA (16 July 2021), 308/2021/R/com, Criteri per la determinazione e l'aggiornamento del tasso di remunerazione del capitale investito per le regolazioni infrastrutturali dei settori elettrico e gas nel secondo periodo di regolazione (II PWACC).

<sup>39</sup> Gas: Ley 18/2014, <https://www.boe.es/boe/dias/2014/10/17/pdfs/BOE-A-2014-10517.pdf>; Electricity: Ley 24/2013 (<https://www.boe.es/boe/dias/2013/12/27/pdfs/BOE-A-2013-13645.pdf>), Royal Decree 1047/2013 (<https://www.boe.es/boe/dias/2013/12/30/pdfs/BOE-A-2013-13766.pdf>) and Royal Decree 1048/2013 (<https://www.boe.es/boe/dias/2013/12/30/pdfs/BOE-A-2013-13767.pdf>).

The table below summarises our risk assessment for these markets, relative to SPT. We find that in general, SPT faces similar risks as Italian and Spanish networks.

	GB SPT	Italy Snam (GT), Terna (ET), Hera (ED/GD)	Spain Engas (GT), Red Electrica (ET)
Form / length of revenue period	<ul style="list-style-type: none"> <li>- Revenue-cap</li> <li>- 5 years</li> </ul>	<ul style="list-style-type: none"> <li>- Hybrid of price cap (opex) and cost plus / passthrough (capex), but virtually no volume risk on opex as a result of true up</li> <li>- 6 years</li> </ul>	<ul style="list-style-type: none"> <li>- Revenue-cap</li> <li>- 6 years</li> <li>- Volume drivers for GT revenues based on outturn demand</li> </ul>
Setting cost allowances	<ul style="list-style-type: none"> <li>- Expert review of totex</li> <li>- DB pension deficit recovery over 15yrs with 3yr revaluation (but risk on post-2012 liabilities)</li> <li>- Re-openers for some costs</li> <li>- CoD update based on trailing average iBoxx</li> </ul>	<ul style="list-style-type: none"> <li>- Based on actual opex in base year, updated annually according to CPI-x formula</li> </ul>	<ul style="list-style-type: none"> <li>- Allowances set based on "standard" costs for capex and opex (review of historical data &amp; technical input)</li> <li>- Standard costs revised at the start of every regulatory period and every 3 years for GT</li> </ul>
Outturn cost risk & incentives	<ul style="list-style-type: none"> <li>- TIM</li> <li>- Uncertainty / passthrough of non-controllables</li> <li>- Disapplication of price control</li> </ul>	<ul style="list-style-type: none"> <li>- Opex: 50% sharing factor, limited volume risk</li> <li>- Ex-post recognition of actual capex spent</li> <li>- Additional WACC for some investments (e.g., security of supply)</li> </ul>	<ul style="list-style-type: none"> <li>- Opex: no sharing factor</li> <li>- Capex: 50% sharing factor; profit from underspend capped at 12.5% of costs (ET only)</li> </ul>
Quality of Service / Output Incentives	<ul style="list-style-type: none"> <li>- Performance incentives +0.9% / -1.4% of RoRE</li> </ul>	<ul style="list-style-type: none"> <li>- Quality of service premiums / penalties (mainly technical, e.g., interruptions)</li> </ul>	<ul style="list-style-type: none"> <li>- ET: Availability incentive (of minor importance, capped)</li> </ul>
Other	<ul style="list-style-type: none"> <li>- Uncertainty over future role of system from distributed generation</li> </ul>	<ul style="list-style-type: none"> <li>- Risks from prospective regulatory reforms (longer controls, outputs-based regime)</li> </ul>	

By construction beta estimates are backward-looking and sluggish in detecting structural, fundamental changes in a company's exposure to systematic risk. Finance theory and regulatory precedent suggests that beta risk will increase over ED3 with increased levels of capex/totex under the transition to Net Zero. The adjustments for greater capex risk vary substantively: from around 0.02 to around 0.2. However, overall, the evidence demonstrates that higher capex:RCV increases beta risk and substantively so. The implication is that SPT's asset beta would be at the high-end of the empirical range that we observe, i.e., towards the upper end of European T&D evidence.

## Cross Checks (Investability)

This section sets out proposals, aligned with the ENA, for how Ofgem should approach cross checks, and how these cross checks can inform a market based investability test. The CAPM cost of capital calculation is an estimate of the return required for equity investors for a particular investment and uses historical market data to estimate future required returns. By its nature, the CAPM estimate of the equity return is unobservable and therefore contains a significant risk that it is not set at the right level, regardless of how mechanistic the calculations can be to set the individual elements there remains a risk of not ‘getting it right’. Ofgem need to ensure the risks are balanced symmetrically when assessing if an uplift is required via cross checks or investability. These concepts are required to get a broader sense of where the estimate should be given the wider market context. Ofgem should consider adjustments to the equity return, not as a ‘just in case’ but to balance the forward risks when relying on historical data to calculate a future CoE. This should be done in the context of the current price control - accounting for forward risk is required in any price control, but particularly in RIIO-3.

Purely mechanical calculations of financial parameters will not be sufficient to accurately reflect the uncertain risk landscape, given the nature of the calculation is backwards looking and Ofgem’s approach to through-the-cycle returns. Any mechanical calculation to take account of forward risk will merely be a proxy, which in principle we see as no different to an ‘aiming up’ exercise.

Even RIIO-2 contained an element of aiming up when market evidence was taken as a whole, where Ofgem has stated their position that cross checks may have suggested a lower equity return than the CAPM. Ofgem used its discretion and refrained from revising the equity return downwards in order to balance the future risks.

Overall, we conclude that Ofgem’s cross checks are not robust, and cannot be used to support Ofgem’s implied SSMC cost of equity allowance, updating cross checks for recent market data we find that the evidence does not consistently support Ofgem’s preliminary guidance at SSMC.

The ENA asked Frontier Economics and Oxera to undertake a number of tests of whether equity returns would be sufficient if Ofgem rolled forward its RIIO-2 approach to setting the allowed cost of equity. Their analysis and findings are shared via the ENA.

Frontier Economics’ proposed framework for assessing equity investability considers that two types of investability tests could be developed:

- Tests that consider whether the return on equity is sufficient given the return on debt, and the evident difference in risk between these two classes of investment; and
- Tests that consider whether the return on equity is sufficient versus the equity return on offer from competing investment opportunity, and other wider cost of equity cross-checks, including those used by Ofgem at RIIO-2.<sup>40</sup>

The following sections explore the nature of such tests and the evidence that they currently provide.

### Tests that consider whether the return on equity is sufficient given the return on debt, and the evident difference in risk between these two classes of investment.

Investability can be tested by considering the uplift above debt returns that would be required in order to attract equity investment to the same company. These tests reflect that fact that, because of this marked difference in risk, it would be irrational for investors to opt for equity if returns with sufficiently similar rates could be earned from providing senior debt. For this reason, both Oxera and Frontier Economics recommend placing particular focus on cross-checks to debt returns.

---

<sup>40</sup> Frontier Economics, Equity Investability in RIIO-3, section 3.1, 5 March 2024

Our evidence includes comparisons based on two methods for comparing sufficiency of equity returns relative to returns available on debt.

#### *Oxera's ARP-DRP cross-check*

Oxera's report includes its latest comparison of a measure of the ARP with the DRP.<sup>41</sup> This is a reliable cross-check of whether the allowed cost of equity is appropriately calibrated, because it is derived from market data on observed debt yields rather than built up from a theoretical asset pricing model. Oxera's report also addresses comments on the ARP-DRP framework made in previous regulatory publications and present the improvements that it has introduced since then.

Oxera's ARP-DRP suggests that the allowed cost of equity should be set near the top end of the Oxera estimation range, if market conditions remain the same at the time of the RIIO-3 decision.<sup>42</sup>

#### *Frontier Economics' hybrid debt cross-check*

Frontier Economics' report introduces a new test of equity returns relative to debt yields that focuses on hybrid debt issued by networks to infer required equity returns.<sup>43</sup>

Hybrid bonds are securities that combine debt and equity characteristics. For example, hybrid bonds can be of very long tenor – covering multiple decades, making it more similar to the perpetual nature of equity. These securities can also have debt like qualities, including periodic coupon payments, however, in certain circumstances there can be a higher degree of flexibility over when these are paid. Hybrid bonds also sits between senior debt and ordinary shares in a company structure, being eligible for payments prior to equity-holders, but after senior debtholders.

Since the yield on these hybrid bonds is directly observable, with an appropriate assumption on the proportion of equity like feature of the hybrid bond, an expected return on equity can be implied from a relatively simple formula. This allows estimates of the cost of equity to be compared to the level implied by of the yields of hybrid bonds. If the allowed equity return is set below the level implied by of the yields of hybrid bonds, then the RIIO-3 package violates the principle of equity investability. Rational investors would therefore not invest equity capital.

Frontier Economics finds that evidence from hybrid bonds indicates that the cost of equity should fall in the range 5.8% to 8.5%, with a central estimate of 6.7%.<sup>44</sup> This suggests that a simple roll forward of Ofgem's RIIO-2 CAPM approach would result in a cost of equity that is too low, even if a value is taken from the top of the range. It also suggests that an appropriate allowed cost of equity is likely to be at least in line with the top end of Oxera's estimated RIIO-3 range (i.e., 6.5%) – and if anything, higher than this.<sup>45</sup>

*Tests that consider whether the return on equity is sufficient versus the equity return on offer from competing investment opportunity, and other wider cost of equity cross-checks, including those used by Ofgem at RIIO-2.*

Frontier Economics explores equity cross-checks in its report.<sup>46</sup> Frontier Economics urges caution in interpreting and using the results of equity cross checks due to important imperfections and limitations. In

---

<sup>41</sup> Oxera, RIIO-3 cost of equity, section 3, 23 February 2024

<sup>42</sup> Oxera, RIIO-3 cost of equity, page 72, 23 February 2024

<sup>43</sup> Frontier Economics, Equity Investability in RIIO-3, section 5, 5 March 2024

<sup>44</sup> Frontier Economics, Equity Investability in RIIO-3, section 5.6, 5 March 2024

<sup>45</sup> Frontier Economics, Equity Investability in RIIO-3, para 18, 5 March 2024

<sup>46</sup> Frontier Economics, Equity Investability in RIIO-3, detailed analysis in section 6 – summary results section 4, 5 March 2024

particular, that they cannot provide a reliable estimate of the actual cost of equity of GB regulated energy networks, but they can inform on the overall trends in equity returns.<sup>47</sup>

Nonetheless, it builds on the cross-checks developed by Ofgem at RIIO-2, presents updated evidence on what Ofgem's RIIO-2 cross-checks now show, and considers how equity cross-check data might be used to inform investability assessment. It also presents updated evidence on the long-term profitability benchmark that it proposed during RIIO-2.

It concludes that:

- Three of Ofgem's RIIO-2 cross-checks contained weaknesses and are subject to judgement in their inference of any implied COE (the MAR-implied cost of equity cross-check, the OFTO-implied equity IRR cross-check and the investment manager forecasts of TMR cross-check (and associated CAPM with investment managers' TMR)).
- Two of Ofgem's RIIO-2 cross-checks contain critical errors and should not be relied upon (the Modigliani-Miller cost of equity inference cross-check and the infrastructure fund implied equity IRR cross-check)
- Data is not available to update all of Ofgem's RIIO-2 cross checks

Frontier Economics presents the results of those equity cross-checks that it has been able to provide updated data for<sup>48</sup>:

- Infrastructure fund IRR;
- COE inferred from investment manager forecasts of TMR, supplemented by the Fernandez survey; and
- the long-term profitability benchmark.

The results of the equity cross-checks also support a view that rolling forward Ofgem's RIIO-2 approach will determine a cost of equity range that is too low and that the allowed cost of equity should be set near the top end of the Oxera estimation range, if market conditions remain the same at the time of the RIIO-3 decision.

Equity investability cross-checks consistently conclude that rolling forward Ofgem's RIIO-2 approach will determine a range and point estimate that is too low

Frontier Economics summarises the findings of the range of investability cross-checks in its report.<sup>49</sup> We replicate the summary of the findings below:

---

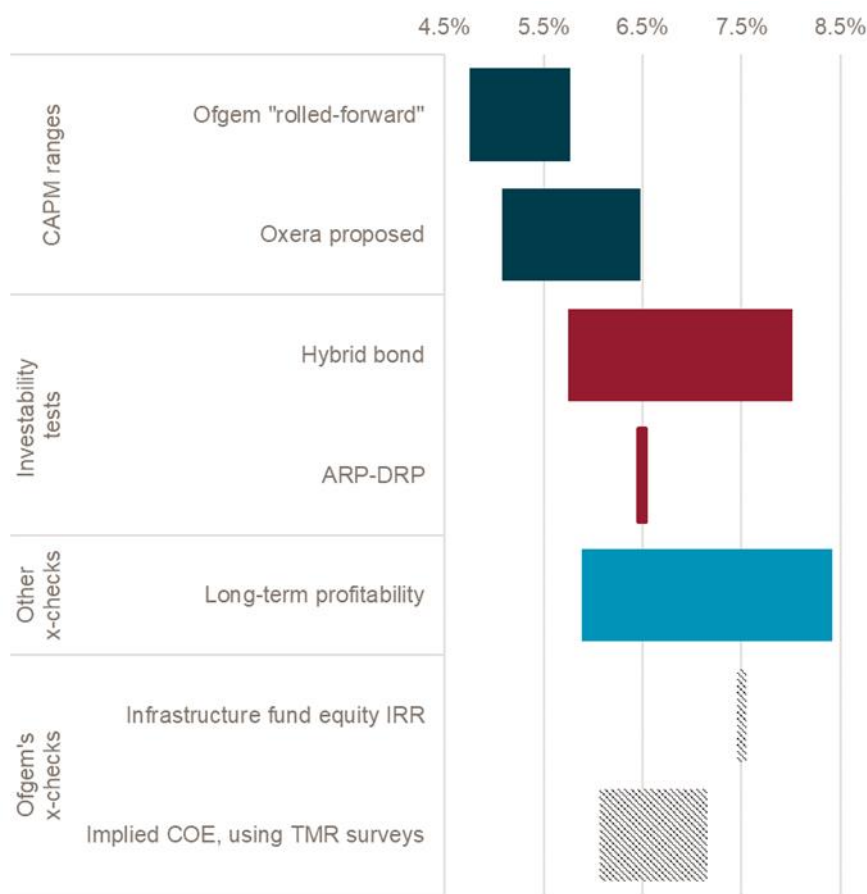
<sup>47</sup> Frontier Economics, Equity Investability in RIIO-3, section 3.1.2, 5 March 2024

<sup>48</sup> Frontier Economics, Equity Investability in RIIO-3, section 6, 5 March 2024

<sup>49</sup> Frontier Economics, Equity Investability in RIIO-3, section 4, 5 March 2024



Frontier Economics’ investability tests of Ofgem’s rolled forward RIIO-2 approach and Oxera’s CAPM range:



Source: Frontier Economics<sup>50</sup>

In summary, market evidence shows that rolling forward Ofgem’s RIIO-2 approach will determine a cost of equity range that is too low – such a price control would not be investable. Even a number from the very top of that range would fail investability tests.

It also shows that only the top of Oxera’s CAPM range would meet the investability tests. This finding seems consistent with Oxera’s view that the approach it has adopted may not yet capture all relevant future risks, and that some further uplift to beta may be necessary.

The consequences of equity investability cross-check results for Ofgem’s determination of RIIO-3 cost of equity: Ofgem must make adjustments to its CAPM parameter estimates to reflect latest market conditions and new evidence and select a point estimate towards the top of that range

Having concluded that a roll forward of Ofgem's RIIO-2 approach to setting the cost of equity will determine a range and point estimate that is too low it is necessary to consider what Ofgem should do in light of this evidence.

Ofgem cannot simply ignore the investability cross-checks and forge ahead with setting a cost of equity on a basis that is broadly similar to RIIO-2. Setting the cost of equity too low would be irrational and would result in significant consumer harm.

<sup>50</sup> Frontier Economics, Equity Investability in RIIO-3, figure 1, 5 March 2024

Neither could Ofgem defend a decision to do so based on a “through-the-cycle” notion that somehow equity investors would be appropriately compensated in the long run.<sup>51</sup> Such an approach would be flawed on three bases: firstly, it would ignore the fact that allowances determined in this manner would be insufficient given current capital market conditions and that networks would therefore be unable to attract and retain equity investors during RIIO-3 – they would be uninvestable. Secondly, it would also ignore the fact that Ofgem lowered its estimate of TMR over time in response to the fall in gilt yields and its assessment of wider market evidence – meaning that returns would not somehow “average out” at an appropriate level either. Thirdly, even if it uplifted its RIIO-2 TMR range to reflect average returns, investors would recognise that Ofgem cannot fetter the discretion of future regulators in making decisions for future price controls and therefore could be certain that returns would average out over time.

Ofgem can also not use non-compliance with UKRN Guidance to justify not changing its approach. Firstly, Ofgem cannot hide behind the UKRN Guidance to justify taking an approach that would fail to meet its statutory duties. Secondly, we believe that it is largely possible to make the changes necessary to secure an appropriate cost of equity range and point estimate within the scope of the UKRN Guidance.

This strong market evidence is clear. To respond to this evidence, Ofgem needs to:

- Make adjustments to its CAPM parameter estimates to reflect latest market conditions and new evidence; and
- Select a point estimate towards the top of that range.

Ofgem cannot simply roll forward its RIIO-2 approach to estimating CAPM parameter ranges. As described in previous sections of this response, it needs to make adjustments to its estimates of RFR and TMR. It will also need to be very careful in its selection of beta range in light of evidence that recent low betas may be caused by high market volatility.

Ofgem must then recognise the evidence that the bottom end of the resulting cost of equity range is too low and select a point estimate towards the top of that adjusted range, in light of market indications of investor requirements.

The UKRN Guidance sets out that:

*“Recommendation 7: Cross checks may be used to sense check the CAPM derived point estimate. However regulators should only deviate from the mid-point of the CAPM cost of equity range if there are strong reasons to do so.”<sup>52</sup> (emphasis added)*

The market evidence that determining a point estimate that is too low to secure investability is strong evidence that Ofgem not only may select a point estimate above the mid-point, but they must do so.

---

<sup>51</sup> As suggested in Ofgem, RIIO-3 Sector Specific Methodology Consultation – Finance Annex, para 3.84, 13 December 2023

<sup>52</sup> UKRN, UKRN guidance for regulators on the methodology for setting the cost of capital, page 30, March 2023

## Financeability & Investability

### Financeability

Moving into RII0-3 with the step change in operations, finances, and the external environment we agree it's time Ofgem rethought their financeability assessment.

Ofgem's financeability duty is arguably more important than any other as it is fundamental to the fulfilment of all Ofgem's duties and ensures we are in a position to deliver fair value for customers. Ofgem's financeability duty reflects the vital contribution of investment, including investment in infrastructure, to economic growth across the whole economy. Investment in productive assets allows the economy to function more efficiently, and this is especially true for infrastructure, which facilitates productive activity across the economy. Conversely, an outdated energy network increases the risks of power cuts and exposure to international price shocks. Achieving financeability aligns with customers' interests, as keeping risk low reduces pressure on the cost of capital and helps to keep customers' bills down.

The current assessment of financeability only tests one particular aspect of financeability – whether an efficient notional firm would have sufficient cash flows, over the course of the price control, to achieve an investment-grade credit rating.

Financeability and financeability assessments should seek to achieve a wider objective of addressing the UK's history of underinvestment and ensuring economic growth and net zero ambitions are delivered. Financeability should be much wider in scope and should go much further than a piece of analysis toward the end of the price control planning process. Three things Ofgem should consider in a wider financeability assessment:

1. The financeability assessment should cover both debt and equity. As Ofgem have recognised for RII0-3 and beyond, there is a step change in the requirement for new equity investment, alongside a greater competition for capital in global regulated infrastructure. This is expanded on further below when considering the concept of investability.
2. When being benchmarked against the notional company, Ofgem need to ensure the notional company is a realistic benchmark for an efficient company. Any errors in the calculation of efficient costs and revenue allowances for the notional company will directly impact the expected level of equity return, and damage confidence in financeability from an equity perspective. While Ofgem will be ensuring the targets are tough, equally they need to ensure the notional company assumptions are not too challenging to be an achievable benchmark. Assessing financeability using inappropriately low-cost estimates will give an unrealistically optimistic view of the notional company's financial position. Taking a rigorous approach to the estimation of efficient costs is therefore vital to ensuring financeability is accurately assessed. Part of this includes considering the balance of risk for RII0-T3 when it comes to Ofgem's duties where true efficient costs are different to Ofgem's best estimate. Further thoughts on the level of risk in RII0-T3 are addressed below.
3. A financeability assessment needs to consider the longer term in which companies commit their investments – the investments we make, accumulated via the RAV represent a commitment across price controls for which Ofgem need to ensure the assessment covers the length of our investment commitment. In using financeability levers to fix short-term cash shortfalls, this can only be an appropriate response when aggregate revenue allowances over time are sufficient, so that shortfalls in one year are offset by surpluses in others. Otherwise, reprofiling revenue by changing assumptions about depreciation or the capitalisation rate will only serve to store up problems for the future. In this situation, financeability assessments will cease to provide a top-down cross-check to revenue allowances, and shortfalls in revenue allowances will be pushed into subsequent price controls, while at the same time the value of companies' asset bases will become detached from the underlying physical infrastructure.

A robust approach to financeability is vital to safeguarding consumer interests, so that regulated companies can make the investments they need to secure future service levels. Financeability duties will therefore play an increasingly important role in ensuring adequate levels of investment over the long term, thereby enabling the utilities sector to play its part in addressing the UK's under-investment problem.

We have concerns that Ofgem will seek to move away from targeting a BBB+/Baa1 credit ratio in its financeability assessment, we would strongly advise against this. Maintaining strong financeability metrics is essential for RIIO-T3 and this is not the time to reduce or water down financial strength. The targeting of BBB+/Baa1 allows us sufficient headroom to protect against external shocks which may impact our ability to raise finance and cover our debts. We see maintaining targets as a key support mechanism – a change to financeability targets at this point could damage investor confidence and inhibit our ability to deliver our ambitious investment plans.

## **Investability**

Equity financeability will be a key part of the RIIO-T3 price control, driven by the fact that a huge amount of new equity is needed as well as retaining equity, at a time where every nation needs to spend vast sums on infrastructure to support their own decarbonisation process creating a wide set of alternative investments. If fresh equity capital cannot be raised, then this will immediately hamper the ability of any company to deliver large investment programmes.

We are pleased Ofgem is introducing a new concept of 'investability' as well as being open to evidence. Ofgem has acknowledged that market evidence around investability is difficult to gather at this stage and is continuing to evolve. A test for investability should include both qualitative and quantitative metrics that represent the ability of the notional company to address funding challenges which are not captured in the current cost of capital estimates and financeability assessments. This test should include:

- Sufficient allowance for equity issuance costs, both direct and indirect
- An attractive dividend yield
- Strong and stable credit ratings and consistent cash and valuation metrics, including EV / EBITDA and Net Debt / EBITDA
- A strong balance sheet with substantial financial flexibility to absorb shocks and manage capital requirements
- A level of accounting earnings growth that substantially reflects asset growth
- Clear predictable regulation
- Ease of capital deployment, low practical barriers to invest

New equity capital can only be attracted if the level of return on offer is competitive versus other competing opportunities in the wider market; and it is rational to prefer risky equity investment over safer debt investment given the wedge between allowed return on debt and allowed return on equity.

Investment in energy sector moving abroad for a number of reasons<sup>53</sup>:

*"However the attraction of the UK as a destination for private investment in infrastructure has tumbled to a new low, reflecting continuing investor concerns over the UK's political and policy stability, and perceptions of an unattractive regulatory regime."*

Ofgem cannot allow underinvestment in the UK to continue and need to do whatever is necessary to incentivise investment to counter investor sentiment of an uninvestable market, due to low confidence over the connections of generation, perceptions of an unfavourable regulatory regime and better returns available elsewhere.

---

<sup>53</sup> Latest pulse survey says governments must take action to capitalise on interests of investors | GIIA

## Risk

As highlighted Oxera's 'RIIO-3 cost of equity' analysis does not take account of sector-specific forward-looking risk. There is therefore a legitimate concern that the level of allowed equity return will be a fundamentally flawed estimation.

SPT faces heightened risks relative to RIIO-2, yet as discussed in the '**Beta**' section above, these risks are not yet showing in beta estimations due to the inherent fact that data is backwards looking, and recent data is misleading due to UK market volatility. However, these risks will be reflected in investors' perception of the risks associated with investing in energy networks and therefore in the financing costs that networks will bear. There may be a need to increase the regulatory allowed beta relative to RIIO-2 to reflect to these increasing risks.

SPT are undertaking a timeseries analysis of residual risk. Initial results show that while percentage risk reduces going into RIIO-3, as a result of increased regulatory risk mitigation via the ASTI regime, the absolute value of risk is significantly higher given the scale of our expenditure. We look forward to sharing this risk work further as it develops, and the scale and type of risks become clearer. We have a suite of risks that are new and growing that are not sufficiently offset by regulatory mechanisms, set out below.

### Risks associated with the scale of investment:

- Supply chain and labour market constraints
- Growing asset base at pace

### Asymmetric business risks:

- Scale of new connections
- Planning and land purchasing
- Growing demand, utilisation and versatility of the network
- More adverse weather conditions

### New technology risks:

- Business IT security and cyber attacks
- New asset types primarily associated with subsea infrastructure, with complex design requirements including marine environment & length of cables (ASTI offshore)

### Other new and/or growing risks:

- Financial: concentration risk, need to raise equity, international competition for capital, profile of cash flows, change in the investor proposition, changes in market conditions
- Regulatory / Political: regulatory settlement risk, legal rights of appeal, regulatory reset risk, stranding risk, government policy / influence, public opinion, reputation risk
- Interface Costs: interface & co-dependency risk – working with third parties and other TOs
- Significant ODI penalty and risk of Licence breach through new licence obligation
- Revenue collection risk: potential move to +15 months tariff setting timelines for TNUoS revenues, growing outsized revenue collection risk where onshore TO's face the collection risk for a growing OFTO revenue base and potentially CATO revenue base.

## Conclusion

The risk work undertaken by TOs in conjunction with the market cross check evidence set out above demonstrate it would be wrong and irrational for Ofgem to simply adopt its RIIO-2 method to determine allowed equity returns, updating it only for the latest information on gilt yields. A price control so calibrated would not be investable. It would fail to reflect profound changes in capital markets since RIIO-2, and heightened risk.

Ofgem must select a point estimate towards the upper end of an appropriately adjusted CAPM range. In addition, Ofgem should also seek to improve investability via other methods:

- Equity issuance costs should be reviewed and maintained, to ensure accurate allowance for both direct and indirect costs. While the available evidence demonstrates the existence of costs associated with equity issuance for UK regulated businesses, it might not fully reflect the potential increase due to recent trends. Further research and data analysis are crucial to understand the current cost landscape in this evolving environment. Ofgem should continue to gather evidence to ensure allowances are fully comprehensive and fair.
- Incentives that are balanced and tailored to allow achievable rewards, where incentive calibration must reflect the highly challenging delivery environment in RII0-T3, ensuring electricity transmission remains an attractive investment opportunity despite the significant risks and volume of RII0-T3 investment.
- Consideration of additional regulatory mechanisms and regulatory certainty to reduce risk and secure the supply chain.
- Real Price Effects and Indirect allowances are reviewed to reflect the uncertain cost environment given there is a very significant risk of material overspend in RII0-T3, given that many electricity transmission assets and business costs have seen inflation that outstrips commonly used indices.
- As per the above, developing a robust notional company benchmark for efficient costs to be realistic and achievable.
- Appropriate calibration of the allowed cost of debt to allow for reasonable outperformance (see '[Allowed return on debt](#)' section above).
- Refresh of additional borrowing cost, per NERA's report on 'Additional Cost of Borrowing for the RII0-3 Price Control', shared via the ENA and summarised above (see '[Allowed return on debt](#)' section above, '[Additional borrowing costs](#)' sub section above)

The concept of investability should continue to be developed and refined in order to build a comprehensive account of the real-world implications of retaining and attracting new investment, which can adequately inform adjustments to the allowed equity return, inform Ofgem policy, and assess new and current additional allowances, assumptions, and mechanisms, using both market and non-market-based evidence.

Despite the growing and uncertain risk environment SPT are in the best position to deliver on our ambitious plans, a Net Zero energy grid and economic benefits for our communities. However, this is contingent on Ofgem appropriately reflecting the context and circumstances of RII0-T3 when setting the overall financial package.

We now respond to the SSMC finance questions more directly, where answers will refer to the above positions where appropriate.

## SSMC Questions and responses:

### FQ.1: Do stakeholders consider there to be good reasons to deviate from the overall approach set out under UKRN Recommendation 8?

Overall, we agree with UKRN recommendation 8. While we appreciate the importance of setting the allowance for a notional capital structure, as noted above, Ofgem should use SPT's specific debt profile as a cross check on the calibration of the indexation/approach. Ofgem need to ensure that our efficiently incurred debts are fully covered with sufficient headroom by the adopted CoD methodology.

### FQ.2: Do stakeholders have evidence in support of or opposition to one or more of the updated indexation or inflation remuneration methodologies under consideration.

Please refer to the '**Allowed return on debt**' section above, '*Indexation & Calibration*' and '*Inflation*' sub sections.

### FQ.3: Do stakeholders have views on the potential approaches to implementation of the proposed methodology changes, including assumptions relating to ILD weights?

Please refer to the '**Allowed return on debt**' section above, '*ILD assumption*' sub section.

### FQ.4: Do stakeholders wish to propose any other alternatives that have not been proposed?

No further proposals/suggestions than those set out above. We are keen to continue working with Ofgem in relation to any other proposals put forward.

### FQ.5: Do stakeholders have any additional evidence for us to consider in our review of the additional borrowing allowances or infrequent issuer premium?

Please refer to the '**Allowed return on debt**' section above, '*Additional borrowing costs*' sub section.

### FQ.6: Do stakeholders agree with our interpretation and proposed application of UKRN Recommendations 2-7?

Please refer to the '**Allowed return on equity**' section above.

### FQ.7: Do stakeholders consider there to be good reasons to deviate from the respective approaches set out under UKRN Recommendations 2-7?

Please refer to the '**Allowed return on equity**' section above.

### FQ.8: Do stakeholders agree with our proposed methodologies where not specifically covered by the UKRN Guidance recommendations or our approach in previous price controls, such as the proposed approach to converting the RPI-real yields to CPIH-real inputs in the RFR calculation?

Please refer to the '**Allowed return on equity**' section above.



**FQ.9: What comparators and/or timeframes are likely to provide the most accurate estimate of beta for the energy network sectors on a forward-looking basis?**

Please refer to the '**Allowed return on equity**' section above, '**Beta**' sub section.

**FQ.10: Do stakeholders consider there to be good reasons to deviate from the respective approaches set out under UKRN Recommendations 1 and 9?**

We agree with Ofgem's approach to both UKRN recommendations 1 & 9. However, Ofgem should fully assess the level of appropriate gearing, this should not be reduced from 55% given the scale of required equity injections.

**FQ.11: Do stakeholders consider there to be good reasons to deviate from the notional gearing assumptions (with respect to the level of gearing and the mix of debt types) applied to GD, GT and ET companies in the RII0-2 price controls?**

We don't have evidence to suggest a move away from the 55% notional gearing assumption is required, however Ofgem should undertake analysis to assess the appropriateness of this level going into RII0-T3.

**FQ.12: Do stakeholders agree with the proposal that notional gearing levels should be maintained for each year of the price control? Do stakeholders have a preference for how this assumption is managed within the price control process?**

We agree with Ofgem, in principle, that notional gearing levels should be maintained for each year of the price control; this will ensure that, at any point in the price control period notional gearing levels remain consistent with other calculations within the PCFM such as dividend payments and return on RAV. This could be managed by adjusting the timing of the modelled equity issuance, however we look forward to engaging with Ofgem and discussing matters further in the forthcoming RII0-3 PCFM WGs.

**FQ.13: What, if any, improvements should Ofgem make to the assessment of financeability in the next price control?**

Please refer to the '**Financeability & Investability**' section above.

**FQ.14: What evidence, if any, should Ofgem consider in relation to expanding its assessment of financeability to account for 'investability'?**

Please refer to the '**Financeability & Investability**' and '**Cross Checks (Investability)**' sections above.

**FQ.15: What is your view on the proposed financial resilience measures? Are these appropriate and/or are there any other measures that you would propose?**

Overall, we believe additional financial resilience measures are not required. We understand and fully support the requirement to ensure public interest entities of critical national importance to have financial resilience standards. However, electricity transmission companies have not had issues with financial resilience since privatisation. We therefore see additional resilience measures as unnecessary and simply creating additional regulatory burden without any associated benefit. We believe this is an inappropriate mirroring of rules introduced in other sectors (e.g., water and energy retail) which have had demonstrable, significant financial resilience issues in recent times, on the contrary, energy networks companies have remained financially resilient despite the volatile external conditions. Further energy networks operate a very different business model than energy retail, given our more stable model of owning energy infrastructure. Below we have set out our thoughts on each of the additional financial resilience measures under consideration:

1. Proposed measure 1 (requiring maintenance of more than one investment grade rating) - The removal of the 'reasonable endeavours' qualifier to the obligation suggests we will have to maintain investment grade in any scenario, no matter what the cost or wider implications or face a licence breach. This represents a step up in strength of the obligation. Ofgem need to consider this change in obligation very carefully and ensure our financeability targets and funding arrangements cover us for this increased obligation, should they deem a heightened obligation appropriate. Further, the obligation to maintain two investment grade credit ratings can prove particularly difficult under the scenario where one credit rating agency takes a significantly different view of a sector or company from another agency. This requirement could lead to suboptimal decisions to maintain two investment grade ratings, i.e., equity calls to appease one agency with the toughest ratings criteria/credit assessment. The inefficient consequences of this additional risk could ultimately lead to either additional returns being required from equity holders or companies urgently requiring to find another credit rating agency with different views on the prospects of the company/sector.

Further, the expanded requirement to maintain two credit ratings introduces additional cost to the business. This has the potential to duplicate management time, explaining the company strategy, prospects as well as input into the agencies sector publications, but also in development and maintenance of a strong relationship between the company and additional the rating agencies. Over and above the management time are the ongoing fees/expenses involved in maintain two/dual credit ratings.

The dual ratings requirement also brings into question what would happen in the event of split ratings (i.e., agencies seeing the credit risks differently which leads to a different credit rating from each) which can occur when one rating agency views the company and sector in a different light to another. Split ratings can also have negative impacts on access to capital markets and/or pricing when accessing those markets, in the event of the two rating agencies forming a different view on the applicable rating, investors and those providing debt financing could take the view the lower of two ratings is more appropriate in which case this may have an adverse impact on the lenders appetite to fund or they may require a higher rate of interest to reflect the additional risk. Another potential question/issue with respect to split ratings would be, is it the lower of or higher of rating that would trigger regulatory events/involvement, Ofgem should clearly set out what the process would be in such a scenario. The best way to maintain the relationship with the credit rating agencies is consistency of delivery of results that were forecasted/expected. That key requirement means a stable and supportive regulatory regime. There are only a handful of rating agencies that are universally recognised by the wider financial investment community. If these agencies understand that companies will be forced to use two of them then this could lead to a lower competition and higher prices for those ratings.

2. Proposed measure 2 (amending the dividend lock-up trigger) – For this measure it's important to clarify that Ofgem must ensure that the notional companies financeability targets, used in the calibration of the overall financial package, are not reduced or diluted to ensure we can maintain sufficient headroom to avoid BBB- with negative outlook. The importance of maintaining current financeability targets is set out below.

Targeting a lower ratio would impact funding availability and cost. Although a lower ratio may still be investment grade, a lower ratio implies greater risk and therefore may reduce the appetite of debt investors (reducing the funding pool) or require an increased return on the debt which in turn would increase the ultimate cost to the customer. The current target ratio also provides a buffer, to absorb any market shocks that potentially result in a downgrade that would more quickly trigger reaching BBB- lockup scenario.

Ofgem should set out more clearly how this measure may be applied and work in practise. The concept of amending the dividend lock-up trigger to be the earlier of reaching BBB- with a negative watch/outlook and 80% regulatory gearing adds more complexity. The rating agencies closely monitor financial ratios, specifically gearing ratios in forming their credit opinion and view on rating and outlook. Using a credit metric brings into question the frequency of assessment and timing given a measure at one point in time can be impacted by short term market shocks that wouldn't be factored into the rating agency's longer-term view. The rating agencies are quick to respond and adjust ratings where appropriate but also avoid knee-jerk reactions that create volatility in ratings.

3. Proposed measure 3 (amending the Availability of Resources requirement for board certification to cover entire price control period or at least three years ahead) – We don't believe this proposed measure is necessary and believe the current availability of resources requirements have not been shown to be insufficient. This measure places significantly greater responsibility on licensee directors than is the case under the requirements of the Companies Act 2006 and the going concern considerations of the statutory auditors.

The requirement for Board Certification to confirm sufficient financial resource to cover a minimum term of 3 to 5 years is asking Directors to go above and beyond the existing requirements, under company law, of assessing the company's ability to continue as a going concern. Further, this represents a significantly greater responsibility from a financial, audit and accounting perspective, in the amount of financial support, audit scrutiny and accounting treatment that would be required to support a position that the companies would be financially resourced for 3-5 years.

Providing this level of comfort would require substantial long term committed facilities, which bear additional cost, and depending on the applicable assumptions could have a detrimental impact on the ability to implement a flexible treasury funding policy, take advantage of favourable market pricing and manage financial resource across the wider group. This could in turn lead to an inefficient increase in costs for consumers.

If Ofgem were to decide to amend the Availability of Resources requirements in the manner described, they need to set out realistic assumptions for how the 5 years is funded and ensure these are consistent and agreed. Ofgem should be clear whether Ofgem assumptions should be used, or companies own assumptions which Ofgem will agree and scrutinise if needed.

#### **FQ.16: Are there better ways to protect against excessive leverage and financial risks, in particular leverage via acquisition finance, by utilising existing powers rather than imposing new requirements in the licence?**

The rating agencies look beyond the immediate entity for the overall strength of the group, and serve the purpose of providing investors with a view of risk which takes account of leverage. The rating agencies will, as part of their ongoing credit assessment process, review the impacts of any structural finance on the credit metrics for the company/group involved.

**FQ.17: For the SSMC we have not proposed dividend controls or dividend policy requirements. How should we think about protections to ensure that leverage at MidCo and/or HoldCo does not become disproportionately influential in decision making at the licensee with the potential for negative outcomes for consumers?**

Directors already have statutory obligations under the Companies Act 2006 regarding payments of dividends. Further, the declarations required under the standard licence condition B7 in respect of dividend payments already ensures clarity when making those decisions.

In setting a company's dividend policy, directors are balancing provision of a return to equity sufficient to attract investment versus retention of funds for future capital expenditure to deliver continued growth of the business that provides the revenue streams to support future equity returns in the form of dividends and/or capital.

We agree with Ofgem's position to not impose dividend policy restrictions, which could potentially reduce financeability and investability. Dividend policy is a key investment criterion for equity investors when comparing potential returns across companies, sectors and geographies. In order to continue to attract the level of investment that will be required to support capital expenditure, it is key to strike a balance between minimising risk and attracting investment.

**FQ.18: Is there merit in amending the RFPR RIGs to include requirements for Licensees to undertake stress-testing, and to provide the results to Ofgem, as in the Retail sector and as the Prudential Regulatory Authority/Bank of England does for banks, to test for financial resilience?**

We don't believe this should be required for companies that have a strong track record of responsible corporate behaviour and show no signs of financial weakness, doing so would represent an undue regulatory burden. Further the Availability of Resources already shows we can sufficiently fund our operations. We believe stress testing should be done at the start of the price control as part of the financeability assessment, where a fully comprehensive financeability assessment as part of the price control planning process would satisfy any stress testing requirements. Regular stress testing in this case would be unnecessary, however, it may be an option to introduce this measure as a trigger event for companies that begin to show indicators of financial weakness as opposed to a business-as-usual process – a proportionate measure rather than on size fits all.

**FQ.19: Do you agree with our proposal to align the RIIO-3 tax approach with RIIO-2 and ED2 including; to maintain Option A - notional allowance with added protections; the approach to capital allowances, and "glide path"?**

We agree with maintaining the RIIO-2 approach for RIIO-3, namely option A with added protections, a move to variable values for capital allowances and "glide path" which tapers the gearing threshold trigger where allowed notional gearing reduces into next price control period.

We look forward to working with Ofgem with respect to the tax approach, in the forthcoming 2024 RIIO-2 RFPR Working Group and Consultation.

**FQ.20: Do you agree with the proposed revision to tax clawback methodology?**

We agree with Ofgem, in principle, that the definition of net debt should be amended such that components of gearing, for the purpose of the 'Gearing Level Test' be compared on a like for like basis, to ensure that two identical companies are compared on a consistent basis.

**FQ.25: ET: do stakeholders consider there to be a need for amending the existing RIIO-ET2 asset life and/or profile assumptions, on either a company specific or sector basis? If so, please set out your evidence base and potential consumer benefits and costs of changing the existing methodology.**

The regulatory economic asset life should broadly reflect the statutory calculated economic asset life, thus preserving the equitable inter-generational amortisation of the RAV. The Regulatory asset life could therefore be set on a company specific basis and rates, including justification, could be proposed by the companies as part of their business plan submission.

**FQ.26: If a 'semi-nominal' cost of debt and WACC approach were to be adopted which results in an acceleration of cashflows, would this impact your responses to any of the questions above?**

Regardless of the adoption of a 'semi-nominal' cost of debt, we believe the best asset life assumption for RIIO-T3 is one which best reflects the actual asset lives of the infrastructure we are adding to the network, selecting alternatives could mean the value of companies' asset bases will become detached from the underlying physical infrastructure.

**FQ.27: Do stakeholders have views or evidence as to why RAMs should or should not continue?**

As outlined within our RIIO-ED2 SSMC response, we do not support the principle of a Revenue Adjustment Mechanism (RAM): the price control should instead be calibrated appropriately, and outperformance should be encouraged. Outperformance demonstrates that companies are beating their targets and improving performance, delivering better outcomes for consumers as outperformance accrues to customers during the price control via the Totex sharing mechanism and is then allocated to consumers when the price control is re-set. Therefore, any RAMs mechanism must allow for and retain a strong incentive for reasonable and genuine outperformance opportunities from efficiencies.

**FQ.28: Do stakeholders have views or evidence as to whether the RAMs methodology should be amended, such as recalibrating the threshold or rates or including financial performance?**

As noted in our response to question FQ.27 above, we do not support the principle of RAMs and would not propose any amendments at this stage of the RIIO-3 process, in absence of a more complete picture of the overall price control package. We look forward to engaging with Ofgem when they will consult on proposals for these parameters as part of their Draft Determinations.

**FQ.29: Do stakeholders have views or evidence as to whether there should be separate RAMs for 'BAU' parts of the business and specific programmes, such as ASTI?**

In line with the responses to the previous two questions we do not, in principle, believe RAMs should be required. Instead, the financial parameters for the overall package should be calibrated to ensure companies and customers are protected from unfair losses or gains. However, this is conditional on the overall financial package which will require consideration as the RIIO-T3 process continues.

**FQ.30: Is there a case for altering the capitalisation rate modelling approach between sectors (eg removing the multiple bucket approach for GD)?**

In principle, we support the alignment of companies' statutory and regulatory capitalisation rates, and it may therefore be appropriate to set such modelling ensuring a best approach for the relevant sector.

However, capitalisation rates should not be used as a lever to address financeability. The regulatory framework should be calibrated to avoid intergenerational inequity which a notional rate could bring because of over or under capitalisation.

**FQ.31: What are your views on retaining an ex-ante capitalisation rate for allowed totex, but reporting an outturn capitalisation rate for the purpose of calculating the totex incentive mechanism?**

We agree in principle, to simplify the reporting of actual totex and apply a single capitalisation rate for the purpose of calculating the TIM. We also agree on retaining the ex-ante capitalisation rates for totex allowance.

**FQ.32: Are there any reasons why the RIIO-3 approach to directly remunerated services should differ from RIIO-2?**

Overall, we agree with Ofgem's proposal to consider a continuation of the existing DRS policy and methodology for RIIO-3.

RIIO-T2 investment has been dominated by a significant increase in generation connections activity. We believe that this activity will continue to dominate load investment in RIIO-T3 and beyond. To this end - for DRS 1: Connection Services - we propose that TOs and Ofgem should take the opportunity to review the methodology for the capture and reporting of Connection Services activity, in relation to the presentation of connection asset funding to better demonstrate transparency of totex performance and calculation of RoRE. We are happy to work with Ofgem on this area in the forthcoming Cost Assessment WGs.

**FQ.33: Do stakeholders have any reasons or evidence to suggest more directly remunerated service categories are necessary?**

No, currently we do not propose more directly remunerated services categories are necessary. We note that the list of categories does not include the recently added DRS16: Distribution Network Voltage Control, however this is not applicable to the Transmission Sector.

**FQ.34: Do stakeholders have views or evidence in support of or objection to treating all asset disposals as fast money? Would the existing or alternative approaches have greater merit?**

We do not agree, in principle, with treating all types of asset disposals as fast money. We support the continuation of the RIIO-2 approach with deduction of net proceeds from Totex, providing an appropriate level of incentivisation for network companies to achieve the best sales proceeds benefitting both current and future consumers.



**FQ.36: "Do you consider that the existing reporting requirements on executive pay/remuneration, dividends and corporate governance previously introduced for RIIO-2 price controls remain appropriate in helping demonstrate the legitimacy and transparency of company performance?"**

Networks take their regulatory and fiduciary duties very seriously, including dividend decisions and Ofgem can investigate and, if appropriate, take action if it believes those obligations are not being met.

Ofgem already has in place a very comprehensive set of obligations and mechanisms to manage financing, financial resilience and dividend distribution. These include board level obligations and key roles for companies' auditors. The current arrangements include financial resilience reporting requirements that impose additional requirements on any companies that fail to meet certain resilience criteria. (Further details of the comprehensive obligations that are currently in place are provided in Appendix 1 of the ENA, (September 2023), "Response to Ofgem Call For Input - Impact of high inflation on the network price control operation)

We do, however, acknowledge that there may be a lack of public clarity on the extent of requirements we are subject to as well as the challenges for stakeholders and customers to fully comprehend the rationale behind our, and other networks', decisions around the timing and level of dividend distributions given the intricacies and complexities inherent in the regulatory framework e.g. dividends may be linked to long-term financing needs, and there is often a disparity between the timing of cash-flows and the actual performance linked to those cash-flows.

Customers, stakeholders and investors must be confident that distributions to shareholders are appropriate. This includes being confident that dividends will not be distributed in inappropriate circumstances, for example that dividends will not be made if it would reasonably be expected to cause the licensee material financeability issues in the future.

**FQ.37: Do you have any other suggestions for clarifying or strengthening the reporting requirements with regard to executive pay/remuneration, dividends or corporate governance?**

We recognise that companies may have historically interpreted those various requirements, and in particular reporting requirements, in slightly different ways and have sometimes presented information in differing formats. We would be happy to work with Ofgem to explore further clarification of the requirements for reporting on dividends and delivery of investment that support the obligations that already exist.

**FQ.38: Do you have any suggestions on how to improve and future-proof the price control financial model, or use cases it could better support?**

We agree with Ofgem in the overall approach to future-proof the PCFM and are supportive of taking steps to improve its functionality and useability. We would propose further adoption of the FAST principles with less complex formulae supported by shorter multiple calculations. This may enable the end user to more quickly navigate to the source data or better understand the calculation, through iterative steps. It may also allow for a more transparent audit trail of the various calculations that are employed throughout the PCFM.

Given the K-term is now an all-encompassing true-up term we would like to see, for greater transparency and traceability, a breakdown of the true-up term into its constituent elements built in to the PCFM – a split between allowed revenue and recovered revenue, and further into WACC, totex, tax, incentives, passthrough etc.



**FQ.39: What are your views on allowing licensees to self-publish the PCFM with their charging statements, rather than relying on an Ofgem publication or direction to determine allowed revenue?**

We agree with the principle of allowing licensees to self-publish the PCFM. However, Ofgem should ensure that sufficient guidance is given for updating the PCFM. Ofgem should also allow companies to publish and set in tariffs their most up to date version of allowed revenues. A key check for this self-publish principle to work and benefit customer in practise will be if charges are best reflective of the most up-to-date information known at the time of tariff setting – Ofgem should not restrict the accurate updating of PCFM allowed revenues and only provide strong guidance for how they should be updated.

We note this approach has been adopted for Electricity Distribution companies, which has broadly allowed to publish and set more reflective charges, relative to tariff setting timelines. We see benefit here for consistency across Electricity Distribution and Transmission.

**FQ.40: What are your views on applying a single time value of money in the financial model to all prior year adjustments, based on nominal WACC**

SPEN see no reason to change the established framework where separate time-value of money (TVM) mechanisms are used depending on the type of true-up, which is equitable and consistent with investor expectations.

- Under- and over-recoveries against the revenue cap should roll forward at a benchmark interest rate as they do in RIIO-ED1 and have done in previous price controls. We see no reason to change the established practice.
- Prior year adjustments relating to expenditure items should generally roll forward at the allowed cost of capital

The base rate plus a margin is a suitable interest/discount rate when a company can reasonably be expected to accommodate the movement of cashflows across years via a short-term bank facility (or equivalent). But the cost of capital ought to be used when timing adjustments entail a more substantial investor commitment and/or take effect over a longer duration.

At RIIO-GD/T2, we previously commissioned First Economics to produce a report on the subject. The report details out the arguments around why the Ofgem proposal is incorrect.

In principle, under- and over-recoveries against the revenue cap should roll forward at a base rate plus margin interest rate as they do in RIIO-T2 and have done in previous price controls. This reflects the short-term nature and scale of these types of adjustments due to the nature of the true up required.

However, prior year adjustments relating to expenditure items should roll forward at the allowed cost of capital. This is because, when a company is not permitted to recover revenues in relations to these costs, be that due to a timing difference, or a reopener, investors must step in to finance the mismatch between costs and revenues. This is also true for the opposite scenario where financing requirements may not be required and scaled back due to lower investment requirements in which case any over-recoveries should rightly be returned to the consumer.

Therefore, we believe the existing approach is equitable and regulated companies' capital requirements should be treated in a homogeneous way, with adjustments for an advance / delayed return in line with the underlying applicable cost of capital for the regulated business.