Water UK response to the UKRN's cost of capital consultation

Water UK

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www.water.org.uk

This document is Water UK's response to the UK Regulators' Network's cost of capital guidance consultation. It represents the views of water companies in England and Wales.

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Executive Summary

Water UK welcomes the UK Regulators' Network's (UKRN's) timely review of its Cost of Capital Guidance. The review comes as regulated sectors face increasing competition for capital and unprecedented investment needs. With over £550 billion of privately-financed investment required over the next decade just for infrastructure in water, energy and aviation, it is crucial that we get this right.[1]

The country's need for record levels of capital investment coincides with a once-in-a-generation level of instability across economic regulation. This uncertainty results from:

- a new regulator and regulatory framework for the water sector in England and Wales;[2]
- changes to Ofgem's duties and functions, affecting Great Britain's gas and electricity markets;[3]
- a proposed overhaul of the regulatory appeals framework for almost all of the UK's regulated sectors by the Department for Business, Innovation, Science and Trade;[4] and
- UK Government commitments to update its approach to economic regulation across sectors.[5,6]

Such instability increases uncertainty and transaction costs for investors, just as they are being asked to finance the government's increased ambition for infrastructure. During this period of change, the result is likely to be increased investor hesitancy, increasing the cost of capital for UK regulated infrastructure and placing a pressure on customer bills.

In this context, it is essential that the cost of capital is set to attract and retain the capital needed to deliver future investment. In that spirit, this response proposes:

- Reforms to strengthen governance arrangements and promote greater consistency in approaches to setting cost of capital across regulated sectors.
- Reviewing the treatment of investability, the Capital Asset Pricing Model (CAPM), cross-checks and beta estimation in the guidance to better reflect real investor requirements.
- Further consultation on the treatment of Total Market Return (TMR) and Equity Risk Premium (ERP) evidence to improve investability and address important methodological issues.

We provide a response to all of the UKRN's recommendations in Appendix 1.

Governance, consistency and institutional reform

Water UK, alongside investors and government, supports greater consistency across regulated sectors in how the cost of capital is set. It would improve predictability for investors, the accountability for regulators for the decisions they make, and reduce unnecessary duplication. However, consistency should not imply

[1] 'UK Infrastructure: A 10 Year Strategy', *HM Treasury*, (June 2025); plus estimates of upcoming determinations for Heathrow, NATS and Northern Ireland Energy Networks.
[2] 'A new vision for water: white paper', *Defra*, (January 2026).
[3] 'Ofgem Review: final report', *Department for Energy Security and Net Zero*, (April 2026).
[4] 'Swifter and simpler competition redress, regulatory appeals and competition enforcement', *Department for Business, Innovation, Science and Trade,* (July 2026)
[5] 'New approach to ensure regulators and regulation support growth', *GOV.UK*, (July 2026).
[6] 'UK Infrastructure: A 10 Year Strategy', *HM Treasury*, (June 2025), page 38.

identical regulatory outcomes across sectors as sector-specific risks need to be reflected in allowed returns. It is also critical that methodologies that are applied consistently support investability.

Important inconsistencies have persisted, despite the introduction of the UKRN's guidance. Recent regulatory decisions continue to reach different conclusions on TMR, ERP, equity beta estimation, the role of cross-checks, and to some extent the risk-free rate, despite drawing on similar evidence. We can see no reason, for example, why two different UK-based regulators, when choosing the risk-free rate at the same time and regulating investments with comparable investment horizons, should arrive at different estimates. Those inconsistencies have continued.[7] This situation reduces predictability, increases complexity and means regulators, companies and investors repeatedly revisit common methodological issues.

We recommend that the UKRN establishes a standing committee with independent expert oversight. The committee should support structured stakeholder engagement, improve transparency over how methodological decisions are reached and provide a clear process for reviewing and updating the guidance as evidence and market conditions evolve.

More broadly, the UK Government should consider a more centralised approach to setting the cost of capital methodology. Options could include revising Strategic Policy Statements to sector regulators or assigning responsibility for common cost of capital methodologies to a central body, as proposed by the Independent Water Commission. However greater centralisation is established, it must be supported by effective consultation, challenge and appeal mechanisms. Independent scrutiny is essential to prevent flawed approaches becoming embedded and to maintain investor confidence in the framework.

Investability, use of cross-checks and beta

Investability should be a core principle of the cost of capital framework. Investability requires regulators to assess whether allowed returns, together with the overall balance of risk, are sufficient to attract and retain the debt and equity capital needed to deliver future investment.[8] This is particularly important given the substantial capital needs across regulated sectors over the coming decades.

The current framework places too much reliance on the use of a notional company assumption and the Capital Asset Pricing Model (CAPM). Unrealistic assumptions of a regulated company's gearing and performance levels will lead to allowed returns that are not investable. An overreliance on benchmarks and notional company assumptions have been challenged, including by the Independent Water Commission,[9] the National Audit Office,[10] and even the High Court.[11] Sector regulators should be required to consider the company specific circumstances of *actual* firms when assessing whether allowed returns are sufficient. Furthermore, the CAPM has well-recognised theoretical and practical limitations, relies heavily on regulatory judgment when selecting inputs and may not adequately reflect forward-looking risks or investor requirements, particularly in sectors undergoing significant change. Water UK does not believe the CAPM

[7] For example, while Ofwat and Ofgem both used 20-year index-linked gilts in their recent PR24 and RIIO-3 determinations, they took different approaches to how they treated inflation and the period for measuring and averaging gilt yields.
[8] 'Investability at PR24: Final Report for Water UK', *Oxera*, (August 2024).
[9] 'Independent Water Commission Final Report', *Independent Water Commission*, (July 2025), page 193.
[10] 'The economic regulation of the water sector' *National Audit Office*, (2015), page 9.
[11] R (Wales & West Utilities Limited) vs Competition and Markets Authority [2026] EWHC (Admin), paragraphs 168 to 169.

should be treated as a complete answer or automatically receive greater weight than other relevant sources of evidence.

Wider market evidence and cross-checks should be considered with equal weight when assessing allowed returns. Market evidence, transaction evidence, debt-to-equity analysis, investor evidence and wider capital allocation evidence can provide important insights that are not captured within the CAPM framework. Such evidence, if used instead of or as a cross-check to the CAPM, would help reduce the risk that estimation errors or judgment within the CAPM lead to non-investable outcomes.

The proposed UKRN framework for assessing cross-checks sets too high a bar and risks excluding useful evidence. While Water UK supports a structured framework for assessing evidence, the proposed criteria place too much emphasis on track record, theoretical support and the elimination of uncertainty. The framework should be used to determine the weight attached to all evidence, including CAPM-derived estimates and alternative sources of evidence. The criteria should not be applied as pass/fail tests.

Equity beta estimates should be grounded in sector-specific evidence. Listed companies operating within the relevant sector should form the starting point for estimating beta. Regulators should also be required to consider whether adjustments are needed if historical betas are unrepresentative of the wider sector risks or forward-looking risks are unlikely to be reflected in historic market data.

Total Market Return and Equity Risk Premium

The consultation does not provide a sufficiently developed proposal on how ERP evidence would be incorporated into the guidance. Stakeholders are being asked to comment on the existence of a methodological issue rather than a clear methodology for addressing it. Once the UKRN has developed a clear proposal, any substantive changes should be subject to further consultation before being incorporated into the guidance.

Greater weight should be given to directly estimated ERP evidence when estimating allowed returns. Water UK agrees with the Competition and Markets Authority that reliance on a purely stable-TMR approach has demonstrated important limitations during periods of changing market conditions and significant investment requirements. Where interest rates have risen materially, a stable-TMR approach can result in a compressed premium of equity over debt that is unlikely to reflect the returns that are required by investors. Reflecting directly estimated ERP evidence in the cost of equity can help to ensure that allowed returns remain aligned with prevailing market conditions and investor requirements.

However, important methodological issues with direct ERP estimation need to be addressed. Relatively small methodological choices can result in materially different directly estimated ERP estimates and allowed returns. If some of the directly-estimated ERP estimates presented by the UKRN were used in setting the cost of equity for the water sector under the Competition and Markets Authority's approach at PR24, they could result in an unlevered cost of equity that is below the cost of new debt which would not enable investment. This highlights the importance of resolving methodological questions relating to the estimation of ERP, before determining the weight that should be attached to them.

A separate question is how directly-estimated ERP evidence should be incorporated into the regulatory framework. No single approach has yet emerged as the best single solution. Hybrid approaches may offer a useful balance between stability and responsiveness to changing market conditions, but alternative approaches, including risk-free-rate adjustment methods, also warrant further consideration. The UKRN should work with industry, investors, regulators and other stakeholders to explore this further.

1. Introduction

Water UK welcomes the opportunity to respond to the UK Regulators' Network (UKRN)'s consultation on its Cost of Capital Guidance.

This review comes at a critical time for the UK's regulated infrastructure sectors and the water sector in particular. These sectors face unprecedented investment requirements to improve environmental performance, enhance resilience, and adapt to climate change. Across the water, energy and aviation sectors, it is expected that more than £550 billion of new private capital will need to be raised over the next decade.[12] Delivering these programmes will require continued access to both debt and equity capital, including new equity capital.

In this context, it is vital that regulated utilities are able to attract the level of equity capital that they need to meet their investment programmes. This concept of 'investability' needs to be embedded in the purpose of the cost of capital framework, so that it is not simply a guide to sector regulators on how to estimate a set of financial parameters. We strongly believe that the guidance needs to be developed and applied in this context.

This response is structured around the themes that we consider most important to the future development of the guidance, with responses to the consultation questions set out separately in Annex A. Many of the issues raised in the consultation are closely interrelated and are therefore addressed across multiple sections of this response.

The response is structured as follows:

- **Section 2** explains why further consultation is required in some areas before changes are incorporated into the guidance.
- **Section 3** considers governance, consistency and institutional arrangements relating to the development and application of the guidance.
- **Section 4** sets out the role of investability, forward-looking risks, CAPM, cross-checks and equity beta when assessing whether allowed returns are sufficient to attract investment.
- **Section 5** considers the treatment of Total Market Return (TMR) and Equity Risk Premium (ERP) evidence.
- **Appendix 1** contains responses to the consultation questions and comments on each of the recommendations in the draft guidance.
- **Appendix 2** sets out our assessment of ERP estimation approaches.

[12] 'UK Infrastructure: A 10 Year Strategy', *HM Treasury*, (June 2025); plus estimates of upcoming determinations for Heathrow, NATS and Northern Ireland Energy Networks.

2. The consultation is insufficient to support changes to the guidance

2.1 Not enough opportunity to engage with the UKRN's developing thinking

The changes being considered are highly complex and contested

We welcome the UKRN's decision to review its Cost of Capital Guidance in light of recent regulatory developments, including the Competition and Markets Authority's (CMA's) redetermination of the 2024 price review (PR24) for water companies in England and Wales. We recognise the importance of ensuring that the guidance continues to evolve as evidence, regulatory practice and market conditions develop. In particular, we welcome the UKRN's willingness to revisit the role of total market return (TMR) and equity risk premium (ERP) evidence in the estimation of allowed returns and to consider whether changes to the guidance may be warranted. That follows a recommendation from the Competition and Markets Authority as it concluded the PR24 redeterminations: "Against the backdrop of needing to attract significant investment into UK infrastructure, in our view, a targeted review of the existing TMR methodology may ultimately benefit customers, without undermining the ambition for greater consistency in cost of capital methodologies."[13]

These are important issues. As discussed in Section 5 of this response, further consideration of directly estimated ERP evidence when estimating allowed returns is needed. TMR and ERP have been among the most heavily debated areas of cost of capital estimation among UK regulators for more than a decade. Regulators, investors, academics, and appeal bodies have all taken differing views on questions such as the estimation of ERP; the role of historical evidence; the relationship between TMR, the risk-free rate and ERP; and the appropriate balance between regulatory stability and responsiveness to changing market conditions.

There remains no settled consensus on these issues. However, just because these issues exist does not preclude greater consideration of ERP-derived evidence. We support resolving these issues through further consultation and engagement.

The consultation does not provide sufficiently developed proposals

With respect to TMR and ERP, the consultation identifies issues, challenges and possible options without setting out a sufficiently developed proposal for stakeholders to evaluate. As a result, stakeholders are being asked to comment on the existence of a methodological issue rather than on a proposal for addressing the issue. While we recognise that the UKRN is still developing its thinking, stakeholders would be better placed to comment on a more developed set of options and their practical implications. In the absence of a clear proposal, stakeholders cannot provide informed comments on the approach that may ultimately emerge from the process, nor properly assess the benefits, drawbacks, implementation challenges or potential unintended consequences of different approaches.

This is a significant issue with the consultation process. Government guidance states that consultees should be provided with sufficient information to understand proposals, assess their implications and provide

[13] 'Determinations volume 4: allowed return - chapter 7', *Competition and Markets Authority,* (March 2026), page 94.

informed responses.[14] That is difficult to achieve where stakeholders are being asked to comment on methodological issues in the abstract rather than on a sufficiently developed proposal.

Water UK is not advocating retention of the status quo. There is a strong case for reviewing several aspects of the guidance, particularly the treatment of TMR and ERP evidence. However, before substantive changes are incorporated into the guidance, stakeholders should have an opportunity to engage with a sufficiently developed proposal and assess its practical implications.

Subsequent engagement does not substitute for formal consultation

We welcome the UKRN's efforts to engage with stakeholders through a workshop held on 21 July 2026 and we found the discussion helpful. The workshop provided additional insight into the UKRN's developing thinking that was not evident from the consultation document alone.

However, the materials remained high level and exploratory in nature and did not set out a sufficiently detailed methodology or clear proposal on which stakeholders could provide informed feedback. While helpful, a single workshop with just a select group of stakeholders could not substitute for formal consultation on a developed proposal.

We also note that the workshop took place almost four weeks after publication of the consultation and only four weeks before responses were due. Stakeholders therefore had limited time to understand, analyse and respond to the UKRN's emerging thinking before the consultation deadline. Government guidance recognises that consulting too quickly can reduce the quality of responses and the effectiveness of the consultation process.

2.2 Further consultation is required before the UKRN's proposals are confirmed

There is a risk that significant methodological decisions become embedded within the guidance before they have been subject to sufficient scrutiny and challenge. This would be inconsistent with the Government's consultation principles and could result in methodological approaches being adopted before their implications have been fully understood.

Once the UKRN has considered the evidence submitted through this consultation and developed a sufficiently detailed proposal, any substantive changes should be subject to further consultation. This would allow stakeholders to evaluate the proposed approach and its implications before changes are incorporated into the guidance, helping to ensure that any resulting changes are robust, transparent and capable of supporting investment.

[14] 'Consultation principles: Guidance', *UK Cabinet Office*, (2018).

3. Reforming the cost of capital process and framework

3.1 Greater consistency has long been an objective of investors and government

Greater consistency in the treatment of common cost of capital issues has long been an objective of investors and the UK Government, with a renewed focus in recent years:

- International investors assess opportunities across multiple regulated sectors and typically expect common cost of capital issues to be treated consistently within a regulatory jurisdiction particularly when addressed at a similar point in time. Unnecessary divergence in methodologies or assumptions, particularly in relation to common parameters, can make regulatory outcomes more difficult to understand and predict, reducing confidence in the framework.[15] This is particularly important at a time when it is expected that more than £550 billion of new private capital will need to be raised across the water, energy and aviation sectors over the next ten years.[16]
- In January 2022, the Business Secretary wrote an open letter to economic regulators, stating that the government expects them to work together to achieve alignment when setting the cost of capital where clear benefits can be identified. It also welcomed the role of the UK Regulators' Network in facilitating co-operation and increasing consistency. In particular, the government said that consistency could be expected in three cases:[17]
  - "common components of WACC methodologies are not influenced by sector-specific variables, there is a strong case for alignment on methodologies, input data and, ultimately the output used in the WACC calculation itself".
  - "*sectoral* circumstances, *for example sector-specific financial data, often lead to justified variation in outputs but where there may be greater scope for consistency in methodologies between sectors*".
  - "*different sector regulators include components in their WACC methodologies that are not used in other sectors,* regulators *could examine the case for greater alignment*".
- In June 2025, the Government's 10-Year Infrastructure Strategy recognised that investors value greater coordination across sectors, while HM Treasury has highlighted the importance of regulatory consistency in fostering the certainty required to support investment.[18]
- In July 2025, the Independent Water Commission, led by Sir Jon Cunliffe, highlighted the importance of providing investors with a clear, stable and predictable regulatory framework at a time when the sector faces substantial investment requirements.[5] It also noted concerns regarding the complexity and fragmentation of existing institutional arrangements and the need to strengthen investor confidence in regulatory decision-making. The Commission recommended that the "*UK Government should consider providing the CMA with responsibility to set a common WACC methodology for all UK*

[15] As Sir Jon Cunliffe noted from his engagement with investors: "a common methodology for estimating WACC across sectors would reduce inconsistencies and provide greater certainty for investors in UK infrastructure", 'Independent Water Commission: Final Report', *Independent Water Commission*, (July 2025), page 189.
[16] 'UK Infrastructure: A 10 Year Strategy', *HM Treasury*, (June 2025); plus estimates of upcoming determinations for Heathrow, NATS and Northern Ireland Energy Networks.
[17] 'Strategic priorities and cross-sectoral opportunities for the utilities sectors: open letter to regulators' (January 2022).
[18] 'UK Infrastructure: A 10 Year Strategy', *HM Treasury*, (June 2025).

regulated sectors."[19] The Commission therefore recognised the potential benefits of greater consistency in the development of elements of the cost of capital framework across sectors.

- In responding to the Commission in January 2026, the UK Government confirmed that it would "*ensure regulated sectors are treated appropriately and consistently by their regulators – including in how they set the cost of capital*". The UK Government said that doing so would "*provide greater confidence in long-term investment outcomes, reduce unnecessary competition between UK regulated sectors, and attract investment for urgently needed infrastructure upgrades*".[20] In its equivalent response to the Commission, the Welsh Government said it would "*engage constructively in discussions about consistency, transparency, and the implications for devolved regulation*".[21]

3.2 Water UK supports greater consistency in the way the cost of capital is set

Water UK supports greater consistency in the principles, methodologies, and evidence used to estimate the cost of capital across regulated sectors for three principal reasons:

- **Greater consistency would improve predictability for investors**. Investors often assess opportunities across multiple regulated sectors and benefit from being able to understand how common cost of capital issues are treated. Greater consistency in the treatment of common methodologies and evidence would make decisions easier to understand and predict, supporting investor confidence.
- **Greater consistency would improve transparency and the accountability of regulators**. A clearer distinction between the estimation of common cost of capital parameters and the sector-specific judgments made by regulators would make it easier to identify where differences in allowed returns reflect genuine differences in risk and the circumstances of regulated companies, rather than differences in methodological approaches. This would improve transparency and strengthen the accountability for regulators for the decisions that they make.
- **Greater consistency would reduce unnecessary duplication**. Regulators, companies and stakeholders currently devote significant analytical effort to revisiting many of the same methodological questions across sectors. More consistent approaches to common issues would reduce duplication and allow resources to be focused on genuinely sector-specific questions.

However, consistency should not necessarily imply identical cost of capital allowances across sectors. Allowed returns must be able to reflect sector-specific risks and circumstances. But there remains a strong case for consistency in the treatment of common methodologies and evidence across sectors, particularly where decisions are taken *at or around* the same time.

3.3 Existing UKRN guidance has helped, but inconsistency remains in important areas

The introduction of the UKRN Cost of Capital Guidance in 2023 represented an important step to achieving greater consistency. The guidance has improved transparency over the different approaches taken by regulators in setting the cost of capital and contributed to greater alignment in some discrete areas,

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[19] 'Independent Water Commission: Final Report', *Independent Water Commission*, (July 2025), page 221.
[20] 'A new vision for water', *Department for Environment, Food and Rural Affairs*, (January 2026), page 29.
[21] 'Green Paper: Shaping the Future of Water Governance in Wales', *Welsh Government*, (February 2026), page 42.

particularly in relation to aspects of the risk-free rate (e.g. sole reliance on index-linked gilt yields and similar maturity-matching principles).

However, significant inconsistencies remain in the treatment of important methodological issues. While some divergence in outcomes may be justified by sector-specific circumstances, recent decisions have shown that regulators continue to adopt materially different approaches to both common methodological issues and sector-specific questions despite drawing on broadly similar evidence. Examples include:

- **the treatment of TMR and ERP evidence**, where the Competition and Markets Authority's PR24 redeterminations departed from the established pure stable-TMR approach adopted by sector regulators since the 2010s, and sector regulators themselves have derived different estimates of TMR from one another, despite using a broadly common approach and datasets.
- **the selection of equity beta comparators**, where regulators continue to reach different conclusions on which evidence to use. For example, in the same year, Ofwat and Ofgem used materially different approaches to the use of listed water company evidence in PR24 and RIIO-3 respectively.[22] Ofwat included only two of the three listed water companies in England, excluding Pennon from its comparator set. By contrast, Ofgem included all three listed water companies alongside a broader sample of listed energy network companies in Great Britain and continental Europe.[23]
- **the role of cross-checks to ensure investability**, where regulators have attached differing weight to the same market evidence when selecting point estimates.

While the consultation identifies increasing convergence in some areas, particularly of risk-free rate estimation, these examples illustrate that important methodological differences remain despite regulators often drawing on a similar underlying evidence base, despite the existence of the UKRN guidance.

This is not merely a theoretical concern. The current framework requires regulators, companies and investors to repeatedly revisit many of the same methodological issues from first principles. This increases the cost and complexity of regulatory processes, consuming significant specialist resource across regulators, companies and investors that are ultimately paid for by customers.

3.4 Stronger governance is needed: a standing committee with independent oversight

While the current guidance has been beneficial, the examples above demonstrate that there remains scope to improve consistency and transparency in the treatment of common cost of capital issues. While some decisions would be for government, we recommend that the UKRN takes a number of practical steps within the existing framework to strengthen confidence in the guidance and its application.

The need for a standing committee, supported by independent expertise

Water UK recommends that the UKRN establishes a standing committee responsible for maintaining and reviewing the Cost of Capital Guidance on an ongoing basis. The committee should comprise representatives from the UKRN member regulators and include independent expertise through an independent chair, and potentially additional panel members. While the UKRN already provides a forum

[22] 'PR24 final determinations: Aligning risk and return – allowed return appendix', *Ofwat*, (March 2025).
[23] 'RIIO-3 Final Determinations – Finance Annex', *Ofgem*, (December 2025).

for collaboration and uses external peer review there is very limited transparency regarding how consensus is reached, how disagreements are resolved, or how decisions are taken to amend the guidance over time.

A standing committee would help address these issues by providing:

- Greater structure and accountability through a dedicated structure responsible for maintaining and developing the guidance over time.
- Improved consistency on principles, methodologies and evidence by providing a formal forum for regulators to discuss areas of disagreement, consider emerging evidence and seek greater alignment.
- Greater independence and challenge through an independent chair responsible for facilitating discussion between regulators, scrutinising evidence and helping regulators reach consensus. This would help ensure that the process is overseen in a neutral and objective manner, and strengthen the quality of challenge applied to methodological questions.
- Greater confidence in the guidance among investors, firms and other stakeholders through a more transparent and predictable decision-making process under independent leadership and expertise.

The review process should also include structured engagement with investors, regulated companies and other stakeholders. This would help ensure that methodologies remain informed by market developments, investor requirements and emerging evidence, while improving confidence in the resulting guidance.

The guidance should be reviewed when certain criteria are met

The current guidance provides limited clarity regarding when, or under what circumstances, the UKRN intends to review or update the guidance in future. This creates uncertainty for investors, companies and regulators regarding how methodologies may evolve over time.

The experience of recent price controls illustrates the potential consequences. For example, following the finalisation of the previous guidance in 2023, significant debate emerged across regulators, stakeholders and the Competition and Markets Authority regarding the appropriate treatment of rising interest rates and the implications for TMR, ERP and allowed returns. In the absence of an established process for reviewing and updating common methodologies, these issues were considered separately through individual price controls and appeals, contributing to significant divergence in regulatory approaches and prolonged uncertainty regarding the appropriate treatment of common methodological questions.

The standing committee should therefore be required to undertake regular reviews, potentially annually, of whether changes to the guidance are required. Such reviews should operate against clear and transparent criteria so that stakeholders understand when changes to the guidance are likely to be considered and how potential revisions will be evaluated.

Potential triggers for an update to the guidance could include:

- significant changes in market conditions;
- the emergence of new evidence or methodologies;
- important regulatory appeals or court decisions; or
- evidence of persistent divergence in regulatory practice.

A more predictable review process would provide investors, companies and regulators with greater visibility of when methodologies may be revisited and create a structured mechanism for considering emerging evidence before differences become embedded in regulatory decisions.

3.5 Institutional reforms that government should consider

Beyond improvements that should be implemented within the existing the UKRN framework, wider institutional reforms to how the cost of capital is set across regulated sectors should also be considered to improve consistency, transparency and predictability.

The Independent Water Commission recommended that "*UK Government should consider providing the CMA with responsibility to set a common WACC methodology for all UK regulated sectors*".[24] We note this role could instead be given to another public body or a new body.

Sector regulators could be compelled to follow guidance set by a central authority, or by the UKRN. That could be achieved through a new legal duty on each sector regulator, or absent legislation updating the Strategic Policy Statements (or equivalent) for each sector regulator. We noted that the government has committed to provide new Strategic Policy Statements for Ofwat and Ofgem.

Relative to the current arrangements, potential advantages of a more centralised approach could include:

- greater predictability and transparency in the treatment of common methodological issues;
- reduced duplication across regulators, companies and stakeholders;
- increased confidence that similar evidence is being treated consistently across sectors.

For a centralised function to be successful at ensuring that the consistency that is enabled is effective at promoting investment and reducing costs, the following safeguards would need to be in place:

- **Independent oversight**, including meaningful involvement of experts who are independent of both regulators and regulated companies in reviewing evidence, methodologies and proposed changes.
- **A well-resourced body** with access to the necessary expertise to undertake methodological analysis and periodic reviews.
- **Effective consultation and engagement**. There should be robust consultation and engagement with regulated companies, investors and other stakeholders. Stakeholders should have sufficient opportunity to comment on well-developed proposals before they are adopted.
- **Effective mechanisms for challenge and appeal**. Any resulting methodologies should be able to be challenged and appealed. Independent scrutiny is an important safeguard against flawed methodologies becoming embedded and helps to ensure approaches can evolve as evidence and market conditions change.

We encourage the UK Government to consider these matters further as it develops its cross-sector approach to economic regulation.

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[24] 'Independent Water Commission: Final Report', *Independent Water Commission*, (July 2025), page 221.

4. Investability and use of cross-checks

4.1 Investability is vital and should be explicitly recognised in the guidance

Investability should be explicitly recognised in the guidance as central to setting the cost of capital. The consultation is right to recognise that: "*adequate financing may be at risk if investors are not adequately compensated for the risks they bear*". However, we are concerned that investability is not explicitly recognised as a concept or an objective of the framework. Investability means that "*it is highly likely that a company can attract and retain the level of equity capital needed*" to deliver the investment programmes of regulated firms, a concept that has been recognised by sector regulators including Ofgem and Ofwat.[25,26] While investability relates to more than the allowed return – such as the overall balance of risk within the regulatory framework – we believe it is important to embed the principle of investability in the setting of the cost of capital, as many factors are relevant, including whether forward-looking risks and future investment requirements are properly reflected in historical market evidence and regulatory assumptions. We therefore urge the UKRN to join with sector regulators in explicitly recognising the importance of investability in its guidance.

Regulated infrastructure sectors face a substantial increase in investment requirements over the coming decades. In water alone, companies are expected to invest more than £100 billion by 2030, which includes the need to raise more than £12 billion of new equity and potentially more than £30 billion of new or refinanced debt over the next five years.[27] Across the water, energy and aviation sectors more than £550 billion of new private capital will need to be raised over the next ten years.[28] Delivering these programmes will require continued access to both debt and equity capital, including capital from investors that are not currently active in these regulated sectors.

One way to embed the principle of investability in the guidance would be to set out that, when setting allowed returns to enable companies to meet their investment requirements, regulators should ensure:

- **Returns are commensurate with the risks allocated to investors**. That would require regulators to make full use of available evidence when assessing and pricing risk. Systematic risks that are supposed to be reflected in beta should be priced through the cost of equity using the most representative comparator evidence available and should reflect the evolution of the sector's risk profile over time.
- **Price controls should represent a fair bet, meaning that an efficiently managed company can expect to earn its required return**. Asymmetric risks arising from the design and calibration of price controls mechanisms may require compensation beyond the base return. If actual returns are too far away from expected returns, particularly due to factors outside of a company's control, then investors will not provide the capital that is needed. Regulators should therefore draw on evidence beyond the CAPM itself, including risk analysis, financeability assessments, market evidence and

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[25] '[Investability at PR24: Final Report for Water UK](#)', *Oxera*, (27 August 2024).
[26] '[RIIO-3 Final Determinations – Finance Annex](#)', *Ofgem*, (4 December 2025).
[27] '[PR24 Final Determinations – Aligning risk and return](#)', *Ofwat*, (December 2024)
[28] '[UK Infrastructure: A 10 Year Strategy](#)', *HM Treasury*, (June 2025); plus estimates of upcoming determinations for Heathrow, NATS and Northern Ireland Energy Networks.

other cross-checks, when assessing whether companies can expect to earn required returns to help ensure that the overall package is investable.

- **Investors are not exposed to excessive risks**. Investors will not commit capital where risks are excessive relative to expected returns or to the level of risk typically associated with core infrastructure assets. Where high risks arise, regulators should consider whether they can be mitigated through the design of the price control or additional compensation, for example, by 'aiming up' when setting allowed returns.

4.2 Notional company assumptions cannot be the sole basis for setting allowed returns

Use of the 'notional company' needs to be clarified

The draft guidance includes four recommendations relating to use of a 'notional company' (emphasis added):

- Recommendation 1: "***Notional company***: Regulators should continue to estimate the allowed rate of return in price controls based on the weighted average cost of capital for a ***notionally-financed firm*** within their sector."
- Recommendation 3: "Gearing: The ***notional gearing assumption*** should reflect the regulator's assessment of the balance of risks facing the regulated company, a wide range of benchmarks on gearing levels and overall regulatory policy objectives, not just that of the actual company (or companies) in question."
- Recommendation 6: "Equity beta: Regulators should estimate equity beta for *the notional company* using comparable listed companies and standard regression techniques (i.e. ordinary least squares (OLS)). Where the listed comparator has different gearing to *the **notional company***, regulators should continue to de-lever and re-lever the raw equity beta."
- Recommendation 9: "Cost of debt: Regulators should estimate an allowance for an ***efficient company*** *under the **notional financial structure***, with actual debt costs suitably benchmarked against other market evidence."

The accompanying explanation of Recommendation 3 goes onto say (emphasis added): "All regulators assume a ***stylised ('notional') financing structure*** for their sector. This means that the gearing assumed for the ***notional company*** whose allowed return is being estimated can be based on a range of evidence – it does not have to faithfully resemble actually-observed financing structures of regulated firms."

The guidance should clarify what it means by using a notional company to set allowed returns. Terminology matters. There are two potential applications of a 'notional company' in economic regulation, and it is unclear to which the UKRN's guidance is referring:

- *Notional gearing*: the relative level of debt and equity that the regulated firm is assumed to hold, which can be used to set the level of allowed returns and revenues, and/or assess whether it is able to finance its functions, or
- *Notional efficiency*: the assumed level of cost and output performance for a regulated firm, typically such that they meet all of their performance targets and expenditure allowances and therefore have no net outperformance or underperformance over time.

Sector regulators should be required to consider actual firms

We strongly believe that regulators should be required to consider the actual circumstances of the firms that they regulate, particularly when assessing the sufficiency of allowed returns. Applying a notional gearing assumption for the purposes of setting allowed returns helps to ensure that investors fully bear the consequences of their financing decisions, protecting customers from any potential risks. We can see merits in assuming a notional level of gearing when initially setting allowed returns, because it allocates risk in that way. However, as the National Audit Office found, Ofwat's approach to assuming the same financing structure for all companies "means that Ofwat's assessment may not reflect a company's true financial resilience".[29] Concerns about the exclusive use of a notional company when considering financing arrangements of regulated firms are also prevalent in the energy sector in Great Britain. A recent High Court judgment in January 2026 concluded that while "the use [by Ofgem] of the 'notional efficient licensee' as a general benchmark" was not prevented by the regulator's financing duty, Ofgem "must include at least some consideration of the individual licence holder".[30]

Similarly, assuming that all regulated firms are notionally efficient – such that they meet all of their targets and therefore will fully earn their allowed returns – has been challenged. The Independent Water Commission found that Ofwat "relied too heavily on a data driven, econometric approach" and that it "led to sub-optimal outcomes for the sector, for customers, for investors and for the environment".[31] This "over reliance on benchmarking" extended to the performance framework which "needs calibration to be a 'fair bet'".[32] The Commission concluded that "a broader, less monolithic and a less desk-based approach to economic regulation" was required.[33] Critiques of the use of a notionally efficient company assumption are not isolated to the water sector in England and Wales – for example, when redetermining the price controls of Northern Ireland Electricity Networks in 2014, the Competition Commission explicitly said that efficiency assessments "need to be interpreted with caution" and that "a hypothetical assumption that our modelling approach allows us to isolate accurately the impact of all differences between companies, aside from efficiency […] is not the case."[34]

For both of these reasons, we therefore think it is important that the guidance sets out that when assessing whether allowed returns are sufficient, sector regulators are required to consider the characteristics of *actual* firms. Sectors regulators should not rely on assumptions about the notional level of gearing when setting allowed returns, or that the regulated firm will operate efficiently based on cost assessment or performance models that are likely to be inherently uncertain or error prone. To ensure that there is clarity, the UKRN should avoid using the term 'notional company' or 'notionally financed company' when it is referring to 'notional gearing'.

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[29] 'The economic regulation of the water sector' *National Audit Office*, (October 2015), page 9.
[30] R (Wales & West Utilities Limited) vs Competition and Markets Authority [2026] EWHC (Admin), paragraphs 168 to 169.
[31] 'Independent Water Commission Final Report', *Independent Water Commission*, (July 2025), page 193.
[32] 'Independent Water Commission Final Report', *Independent Water Commission*, (July 2025), page 213.
[33] 'Independent Water Commission Final Report', *Independent Water Commission*, (July 2025), page 193.
[34] 'Northern Ireland Electricity Limited price determination: A reference under Article 15 of the Electricity (Northern Ireland) Order 1992', *Competition Commission,* (March 2014), paragraph 8.146.

4.3 CAPM should not be relied upon in isolation when setting allowed returns

The UKRN is right to say that, "All UK regulators use the Sharpe-Lintner Capital Asset Pricing Model (CAPM) as their primary approach to estimating the cost of equity for the notional company." The draft guidance proposes that the CAPM is continued to be used as the primary tool used by UK regulators to estimate required returns. However, it should be noted that the CAPM has significant theoretical and practical limitations, if not outright flaws. They are well recognised in both academic finance literature and in decisions made by sector regulators, including that the CAPM:[35]

- **Relies on a number of simplifying assumptions that do not adequately reflect how investors behave in practice**. These include assumptions regarding investor behaviour, market efficiency and the ability of investors to borrow and lend freely at the risk-free rate. In its standard form, the CAPM also assumes the absence of both taxes and transaction costs, as well as that investors can hold fractional interests in all assets. While these assumptions may be useful for developing a simple analytical framework, they do not describe the conditions under which investors make real capital allocation decisions.
- **Assumes that systematic risk is fully captured through market beta, which is unlikely in practice**. In practice, other factors may influence required returns. The CAPM also relies heavily on historical data and therefore on the assumption that historical risk premia and betas remain representative of future investor requirements. This creates a further source of uncertainty when estimating the cost of equity.
- **Estimates parameters that are subject to significant uncertainty and judgment**. The exercise of judgment in selecting key CAPM inputs, including beta, the risk-free rate and the equity risk premium, can have a material impact on the resulting cost of equity estimate and therefore returns available to support investment. Different but reasonable judgments can result in materially different regulatory outcomes.

These limitations cannot be dismissed, as the UKRN suggests should be the case, by the fact that the use of the CAPM is supported by corporate finance textbooks or a majority of surveyed US Chief Financial Officers. The CAPM's popularity and familiarity do not overcome its inherent limitations.

These limitations are particularly relevant in sectors undergoing significant change. For example, in the water sector the sector's risk profile has evolved materially in recent years and companies face substantial investment requirements alongside significant regulatory reform. In these circumstances, CAPM-derived cost of equity estimates based primarily on historical evidence, cannot plausibly fully reflect forward-looking risk and hence investor requirements.

It is hard to see how the CAPM itself could satisfy the UKRN's own proposed criteria for assessing the suitability of cost of capital evidence. As set out in section 4.6 below, the UKRN's cross-check framework places considerable emphasis on theoretical support, empirical robustness, track record and the extent to which limitations and anomalies are understood and explained. Yet there remains substantial academic

[35] For example, Fama and French (1993, 1996, 2015), Hou et al (2015), Harvey, C. R., Liu, Y., & Zhu, H. (2016), Green, J., Hand, J. R., & Zhang, X. F. (2017). The limitations of the CAPM are also well recognised by regulators. For example, Ofgem has noted in 'Further consultation on amending the methodology for setting the Earnings Before Interest and Tax (EBIT) allowance' (November 2022): "as with all models, CAPM makes a number of simplifying assumptions, not all of which accord with reality in all contexts", page 50. The widespread use of cross-checks by regulators reflects this recognition.

debate regarding the theoretical and logical strength of CAPM, its empirical performance, the anomalies it fails to explain and the extent to which it accurately captures observed return patterns.

There is an internal inconsistency within the proposed framework. Applying a more demanding evidential standard to alternative sources of evidence than to the primary model used to estimate allowed returns is unjustifiable, particularly where those alternative sources are intended to address recognised limitations in the CAPM.

Given the limitations of the CAPM, wider evidence should be considered with equal weight

Given the limitations of the CAPM, regulators should not rely on it in isolation when assessing investor requirements. The widespread use of CAPM should not mean that it is automatically given greater weight than other relevant sources of evidence. The objective of the regulatory framework should be to determine returns that support investable outcomes.

Alternative sources of evidence can provide important insights that are not captured within the CAPM framework. Market valuation evidence, transaction evidence, debt-to-equity analysis, investor evidence and evidence from competing infrastructure investments can all improve understanding of investor requirements and whether allowed returns remain capable of attracting capital. In many cases, these sources of evidence are valuable precisely because they help address limitations, uncertainties or subjective judgment within the CAPM. Using this evidence would help to mitigate the risk that estimation errors or judgment within the CAPM framework result in allowed returns that do not support investment.

4.4 The proposed framework for assessing cross-check evidence sets too high a bar

We support the UKRN's objective of introducing a more structured framework for assessing evidence relevant to the estimation of allowed returns. Given the significant judgment involved in setting the cost of equity, regulators should have a clear basis for assessing the strengths, limitations and relevance of different sources of evidence. Such a framework would help to improve transparency, consistency and the quality of regulatory decision-making.

However, in our view, the framework should be used to determine the appropriate weight attached to all cost of capital estimates, including the CAPM, rather than whether other evidence should be included or excluded as a cross-check. The same principles should apply to all evidence used in the estimation process, including CAPM-derived estimates and so-called 'cross-checks'. No methodology should automatically receive greater weight simply because it has historically occupied a central position within regulatory decision-making.

In its previous guidance, the UKRN established the overarching concepts of 'defensibility' and 'implementability'.[36] In its draft guidance, the UKRN proposes to extend these concepts further, setting out five new criteria:

- independence from the CAPM;

[36] These two concepts were based on a study from 2018 commissioned by the UKRN. Defensibility was defined as "an approach has to be robust to reasonable criticism." and implementability was defined as "an approach that does not entail excessive cost or complexity to carry out." See 'Estimating the cost of capital for implementation of price controls by UK Regulators', Wright et al., (2018).

- track record and theoretical support;
- transparency and objectivity;
- reliability; and
- proportionality.

The UKRN also proposes additional sub-criteria under each of these criteria, see table 1 below. As drafted, it is unclear whether a cross check needs to meet all, or some, of these sub-criteria to be considered.

Notwithstanding our fundamental concerns regarding the CAPM, we have three inter-related concerns with the proposed framework for assessing cost of equity cross-checks. In general, the proposed framework risks adding significant complexity to what should be guidance to enable straightforward checks. In particular, the proposed framework:

- **Sets an evidential standard that is too demanding in practice and risks excluding useful evidence**. The framework places considerable emphasis on matters such as track record, theoretical support and the extent to which limitations or anomalies are understood and explained. While these may be relevant considerations, they are not sufficient on their own to determine whether a particular source of evidence is useful when assessing investor requirements and investability. As discussed in Section 4.3, the CAPM itself would be unlikely to satisfy all elements of the proposed framework if those criteria were applied to it.
- **Places insufficient weight on the value of information that alternative evidence can provide**. No source of evidence used to estimate the cost of equity is perfect or free from limitations, including the CAPM itself. The relevant question is not whether evidence is flawless, but whether it provides useful information on investor requirements, investability or the reasonableness of the resulting allowed return, and therefore how much weight should be attached to it.
- **Risks making it difficult to place weight on newer sources of market evidence that may be increasingly relevant to investment decisions**. For example, evidence from major infrastructure projects competing for capital, such as Sizewell C, the Haweswater Aqueduct Resilience Programme (HARP) and other large-scale infrastructure opportunities, together with evidence from infrastructure funds, can provide useful insight into the returns investors require from core infrastructure assets. Such evidence may have limited regulatory precedent but can nevertheless provide relevant information on investor requirements and investability.

A more proportionate framework should be used to assess all evidence used when estimating allowed returns. It should be made clearer that the purpose of the framework should be to help regulators determine the appropriate weight to attach to different sources of evidence rather than whether particular sources of evidence are admissible. The same principles should, therefore, be applied consistently to all evidence used in the estimation process, including both CAPM-derived estimates and alternative sources of evidence.

Importantly, the criteria should not be applied as pass/fail tests. The criteria should be considered collectively when assessing the strengths, limitations and relevance of different sources of evidence and the weight that should be attached to them. We therefore propose targeted amendments to the framework in Table 1 below to place greater emphasis on the relevance, robustness and informational value of evidence, while reducing the risk that potentially useful evidence is excluded from consideration altogether.

Table 1: Water UK's proposed amendments to the UKRN cross-check framework

UKRN criterion	Proposed amendments (amendments in bold)	Rationale
Independent of the CAPM • Cross-checks should be based on a genuinely fresh perspective in order to assess the CAPM-determined allowed return	**Brings additional information to the estimation process** • **Cross-checks should bring additional information about investor requirements**	• The relevant question is whether the evidence provides additional insight or address limitations not captured by the primary methodology.
Track record and theoretical support • Supported by economic or financial theory • Track record of use by financial practitioners in academia or industry • Well-tested and any limitations or anomalies are understood and explained	**Evidence of use** • **Used in academic research or by investors and finance practitioners in real-world investment and capital allocation decisions**	• New market evidence would be relevant, even if it is not obviously explained by existing economic or financial theory. • The framework should not exclude evidence on the grounds that there is no track record of it being used over an extended period of time, as this risks overlooking new valuable information that is being used by financial practitioners to make the latest actual capital allocation decisions. • Requiring all limitations or anomalies to be understood and explained sets an impractically high threshold and could exclude otherwise useful evidence from consideration. Financial markets frequently exhibit patterns that are not fully understood, and disagreement often remains regarding their causes and significance.
Transparent and objective • Approach, data, assumptions & calculations should be clear, observable, verifiable and free of bias or predetermined outcomes • Results should be explainable to stakeholders	Transparent and objective • Approach, data, assumptions & calculations should be clear, observable, verifiable and free of bias or predetermined outcomes	• New evidence may still add value even if is complex to communicate to all possible stakeholders.
Reliable • Inputs to derive results are easily obtainable by regulators • Results should be replicable	Reliable • **Inputs are available, or are able to be made, reasonably obtainable to regulators**	• The ease with which inputs or derived results are obtainable should, within reason, be irrelevant. They just need to be reasonably obtainable. • Reliability does not depend on whether a piece of evidence is relevant to different markets and points in time. Results should be able to support

UKRN criterion	Proposed amendments (amendments in bold)	Rationale
• Capable of providing credible estimates across a range of financial environments	• Results should be replicable	investment at the point it is raised, rather than by relevant for all financial markets at different times.
Proportionate • Cost of deriving estimates from cross-checks should be reasonable and proportionate to the costs of deriving CAPM estimates	Proportionate • **Cost of engaging with the evidence should be reasonable and proportionate**	• In practice, regulators do not generally incur the costs of developing cross-check evidence, as much of this work is undertaken by companies and other stakeholders. The relevant consideration is whether the cost of reviewing, understanding and assessing the evidence to the regulator is proportionate to the value of the information it provides. The usefulness of evidence should not be assessed relative to the cost of deriving CAPM estimates, as different approaches may provide different insights and address different limitations of the CAPM.

4.5 Equity beta estimation should prioritise evidence within the relevant sector

The UKRN guidance proposes that regulators should estimate equity beta for the notional company using comparable listed companies and standard regression techniques, with de-levering and re-levering adjustments used where comparator companies have different gearing to the notional company.

As we have set out in section 3, in recent price controls regulators have taken a wide range of approaches to selecting which listed companies should be included in their estimates of beta – at PR24, Ofwat excluded Pennon while for RIIO-3, Ofgem included Pennon and a wide array of energy networks across mainland Europe in an attempt to support investability in its estimation of the allowed return.

To provide a level of consistency and robustness in the estimation of betas, we recommend that the guidance is updated to state that sector regulators should:

- **Use at least all listed companies operating in the sector for which the price control is being determined when estimating beta**. They are likely to provide the most relevant evidence on systematic risk. While evidence from companies outside the sector could be used, we think they are better used only where there is insufficient sector-specific evidence available or where there are clear reasons to conclude that cross-sector comparators provide relevant additional insight.
- **Consider the use of adjustments where the beta derived from the set of listed comparators is unlikely to reflect the performance of a typical company, or future sector risks**. For example, where listed comparator companies are expected by investors to outperform the wider sector, the resulting betas may not be representative of the risks faced by investors in a typical regulated company. This is particularly relevant in the water sector. Investors may expect some listed companies to deliver financing or operational outperformance relative to the wider sector, and those expectations will be reflected in share prices and therefore in observed betas. However, those outcomes cannot be achieved by all companies simultaneously. As a result, betas derived solely from listed comparator companies may understate the risks faced by most regulated companies and lead to an understated

cost of equity allowance. Similarly, a listed company that is expected to perform materially below the wider sector may lead to an overstated beta when applied to other regulated companies.

We encourage the UKRN to consult further on a framework for making such adjustments.

5. Total Market Return (TMR) and Equity Risk Premium (ERP)

In its consultation, the UKRN asked the following:

- When determining the range for TMR, to what extent should the UKRN members place weight on estimates of TMR derived additively from estimates of the ERP combined with the RFR?
- If supportive of placing weight on TMR estimates relying on ERP, which approaches to estimating ERP should the UKRN members consider adopting?

In this section we cover in turn:

- Use of directly estimated ERP-based evidence in setting the cost of equity.
- Issues with estimating ERP directly that need to be overcome.
- Options for applying directly estimated ERP estimates.

What is the equity risk premium?

When estimating the cost of equity, regulators use the Capital Asset Pricing Model (CAPM). That model assumes the cost of equity is equal to the 'risk-free rate' plus compensation for the risks faced by equity investors in a regulated sector. That compensation is calculated as the regulated company's systematic risk relative to the market (the 'equity beta', a sector-specific parameter) multiplied by the additional return investors require for holding equities rather than a risk-free asset (the 'equity risk premium', a parameter that should be common across sectors).

Regulators have either estimated the equity risk premium directly or inferred it by estimating the total market return, which is the expected return investors require from the equity market as a whole, minus the risk-free rate.

UK regulators have used the latter approach, the so called 'stable-TMR approach', since the early 2010s, estimating the total market return using historical data stretching back more than 100 years to the year 1900. The approach can involve using a mix of unadjusted historical data ('ex post evidence') with some approaches that adjust that data to remove elements of past returns that are not expected to happen again ('ex ante evidence').

5.1 Greater use of directly estimated ERP can support investability

During its redeterminations of PR24, the Competition and Markets Authority was the first UK regulatory body for more than a decade to place weight on directly estimated ERP evidence when estimating the cost of equity for a price control.[37]

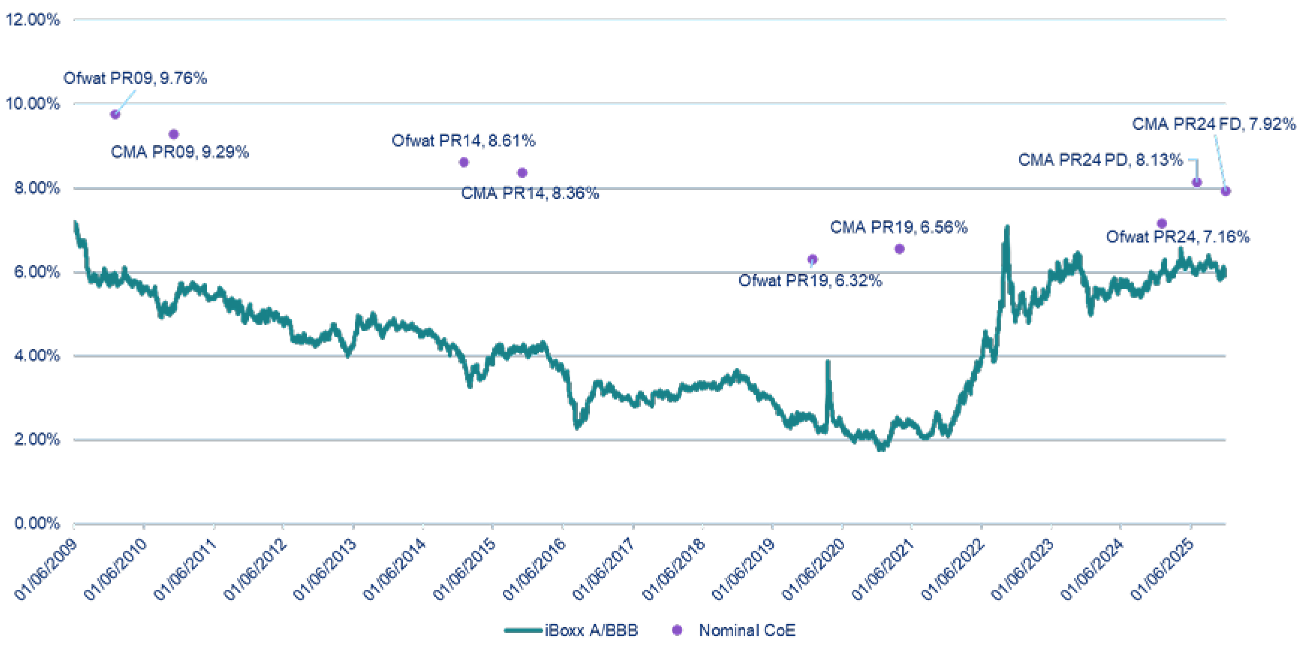
The Competition and Markets Authority concluded that it would "place some weight on historical ex post ERP estimates […] as a way to recognise that a stable TMR does not necessarily imply the values used by regulators should be fixed through time, especially when interest rates move significantly between

[37] The Competition and Markets Authority set the upper bound of the TMR range based on directly estimated ERP and the lower bound based on the Frama-French Dividend Growth Model approach, effectively placed 50% of the weight on directly estimated ERP and 50% on the weight on a stable-TMR estimate.

regulatory periods."[38] The body observed that maintaining a stable TMR approach would: "leave relatively little flexibility to reflect changes in macroeconomic conditions in the allowed return on equity."[39] In reaching its decision, the Competition and Markets Authority said that it considered "the context of rising interest rates, and when investment requirements in water (as well as other infrastructure), have increased dramatically", the "need to consider the perspective of new investors coming into the sector" and "the wider macroeconomic context".[40]

We agree with the reasons set out by the Competition and Markets Authority. While the stable-TMR approach has been the primary approach to estimating the cost of equity across UK economic regulators since the early 2010s, that approach is unresponsive to periods where market interest rates are changing significantly. This issue affects companies across different regulated sectors such as water, energy and aviation but has been explored in greatest detail in water as part of the PR24 redeterminations. This reflects the fact that the compression between the allowed cost of equity and the cost of debt was particularly acute in the water sector around the time of PR24. As Figure 1 shows, taking the water sector as an example, as interest rates increased over recent years, the stable-TMR approach resulted in a materially narrower spread between the cost of equity and the cost of debt.

Figure 1 Nominal iBoxx A/BBB and Cost of Equity decisions in water[41]



Source: CMA analysis of iBoxx data and previous Ofwat decisions. Note: CMA PR24 PD shows the mid-point of our CAPM range.

[38] 'Determinations volume 4: allowed return - chapter 7', *Competition and Markets Authority*, (March 2026), page 88, paragraph 7.433.
[39] 'Determinations volume 4: allowed return - chapter 7', *Competition and Markets Authority*, (March 2026), page 88, paragraph 7.398.
[40] 'Determinations volume 4: allowed return - chapter 7', *Competition and Markets Authority*, (March 2026), page 93, paragraphs 7.424 and 7.425.
[41] 'Determinations volume 4: allowed return - chapter 7', *Competition and Markets Authority*, (March 2026), Figure 7.13.

As is well recognised in finance theory, equity investors take on more risk than debt investors and therefore require a premium above the cost of debt.[42,43] This reflects the fact that, in practice, shareholders bear greater downside risk than debt holders, including in insolvency where debt holders rank ahead of shareholders in the distribution of a company's assets. Without that, equity investment would not be able to be attracted into regulated sectors. This concern is not just theoretical – during Ofwat's PR24 determinations:

- Barclays said the "cost of equity allowed by Ofwat looks low vs. debt" with the resulting spread appearing "too thin";[44] and
- Moody's said that the proposed cost of equity allowance implied a "rather low equity premium to attract new funding in a higher interest rate environment".[45,46]

In principle, we support the use of directly estimated ERP evidence as part of the estimation of allowed returns. Such approaches would introduce a stronger link between the allowed cost of equity and prevailing market conditions, helping to reduce the risk that the equity premium applied by regulatory allowances becomes disconnected from the returns required by investors in practice. This is particularly important where sectors need to attract significant new investment, as investors will assess regulated opportunities against returns available elsewhere. Incorporating directly estimated ERP evidence can, therefore, help ensure that allowed returns remain competitive and capable of attracting capital. As recognised in the UKRN's roundtable materials, there is also regulatory precedent for the use of directly estimated ERP evidence, which further supports its consideration here.

5.2 Estimation issues with ERP that need to be addressed

In order to reliably use directly estimated ERP in the setting of allowed returns, further work is required to resolve a number of important methodological questions relating to its how it is estimated. While the UKRN's roundtable materials have provided a useful starting point for such a review, some methodological questions remain unresolved. In particular, the UKRN appears to be considering a wide range of estimation approaches, some of which are new and without precedent, require important methodological judgments that have yet to be fully explored, or rely on data that is not consistently available to stakeholders. These issues are not insurmountable but need to be resolved.

The UKRN's roundtable materials demonstrated the importance of resolving concerns with estimation. The UKRN presented different ways of directly estimating ERP with the lowest estimate 2.3% and the highest estimate above 5%. The breadth of the estimates is wider than the entire range for the TMR and indeed the cost of equity in the PR24 redeterminations. Were the cost of equity for the water sector set according

[42] This principle is consistent with established corporate finance theory. In structural models of corporate liabilities, such as Merton (1974), equity is a residual claim on firm assets whereas debt enjoys priority claims. As a result, equity bears greater risk and is therefore expected to command a higher required return than debt.
[43] This has been recognised by multiple regulators as well as the UKRN consultation itself which notes that "The allowed return on equity should be higher than the allowed return on new debt by a reasonable margin, reflecting that equity carries higher risk (as it is first in line to bear losses)."
[44] 'Breaking the water cycle – no longer so positive', *Barclays* (2024), page 61.
[45] 'Ofwat's draft determination increases sector risk', *Moody's* (2024), page 7.
[46] 'Increased business risk weakens credit quality, despite improved settlement', *Moody's* (2025), page 3.

to the CMA's PR24 approach but with the lower end of the directly estimated ERP estimates presented by the UKRN, the resulting unlevered cost of equity would be below the cost of new debt - leaving the sector entirely uninvestable. This suggests that methodologies producing estimates at the lower end of the range may not provide a reasonable basis for setting allowed returns, and illustrates the importance of making the right methodological choices.

We set out some of the issues with directly estimating ERP that would need to be resolved in Appendix 2. For historical-based estimates, issues include the appropriate treatment of the historical risk-free rate, the role and use of different datasets, the appropriate estimation horizon and the choice of averaging methodology. For newer modelling-based approaches, the issues that need to be resolved include the relevance of different datasets, investment horizons, market indices, modelling assumptions and the extent to which estimates are representative of investors' choices.

5.3 Options for incorporating directly estimated ERP evidence

Once the above estimation issues are addressed, the UKRN will need to consider how directly estimated ERP estimates might be applied. While the UKRN's consultation was high level, a subsequent roundtable on 21 July 2026 set out three options for changing the approach to estimating TMR, as well as potential sources for estimating the ERP and how ERP evidence may be applied.

We consider and expand the options put forward by the UKRN and provide some discussion before concluding that further consideration is required.

1. **Stable-TMR with cross checks:** the stable-TMR approach would be retained, with a reliance on cross-checks that could include evidence based on ERP estimates to ensure the final cost of equity is investable (the UKRN calls this option 'do minimum')
2. **Stable-ERP:** the directly estimated ERP is applied directly within the CAPM calculation, without using the stable-TMR approach.
3. **'Hybrid':** combine the stable-TMR approach with directly estimated ERP approach, such as:
    a. Using the stable-TMR approach for one end of the range, and the directly estimated ERP for the other end of the range (the CMA's approach at PR24)
    b. Weightings of TMR estimates based on stable-TMR and directly estimated ERP (either set in advance, or determined by sector regulators at each price control decision)
4. **'Risk-free rate adjustment factor'**: Instead of using ERP estimates, this approach would calculate a relationship between the risk-free rate and the TMR, applying that adjustment to the TMR (this has been considered recently by Frontier Economics and First Economics).[47,48]

Analysis of options

Stable-TMR

Given the concerns identified above regarding investability, as well as the potentially counterintuitive outcomes that a stable-TMR approach can produce when equity beta exceeds one, for this option to be

[47] 'Additional Considerations for the PR24 Allowed Return on Equity', *Frontier Economics*, (April 2024).
[48] 'The allowed return on equity', *John Earwaker*, (9 July 2026).

viable, a robust set of cross-checks using ERP evidence would need to be introduced as a minimum.[49] However, reliance on cross-checks, which would presumably be applied by sector regulators, may undermine the objective of greater consistency across regulated sectors. That would largely reflect the current approach, which has not been able to prevent the gap between allowed equity returns and debt costs narrowing in the water sector and perpetuated inconsistent approach across sectors.

Stable-ERP

Under the stable-ERP option, the equity risk premium would be held constant and added to the prevailing risk-free rate. This would make the allowed cost of equity responsive to market conditions, increasing when interest rates rise and decreasing when they fall. This was the approach of UK regulators prior to the 2010s and is commonly used by regulators in Europe, Australia and New Zealand. However, this option has drawbacks:

- **Potential overstatement or understatement of required returns**. The approach assumes a one-to-one relationship between the ERP and risk-free rates, but that is unlikely to be the case due to an unclear relationship between the two values.
- **Volatility and timing sensitivity**. Estimates could be sensitive to the level of interest rates at the point when the price control is determined, particularly if it relies on a relatively short averaging period.

These concerns could be mitigated through the use of trailing averages for the risk-free rate or an adjustment that limits the extent to which changes in the risk-free rate pass through to the allowed cost of equity. The latter would, however, move the approach away from a genuinely stable ERP and introduce an additional parameter requiring judgment and estimation.

This approach would also be most open to estimation issues outlined above.

Hybrid approach

As discussed above, directly estimated ERP evidence can provide useful information on prevailing market conditions and investor required returns that may not be fully captured under a stable-TMR framework. Hybrid approaches offer a means of incorporating that information while retaining some of the stability associated with the existing stable-TMR approach.

The principal advantage of hybrid approaches is that they can help to balance:

- the lack of responsiveness of stable-TMR approaches to interest rates;
- the estimation issues with directly estimated ERP approaches; and
- the volatility of directly estimated ERP approaches.

However, they do not eliminate the underlying estimation and implementation challenges associated with either framework. The hybrid approach is also sensitive to how it is applied, in particular the weight placed on directly estimated ERP evidence and the degree of discretion afforded to sector regulators. This is important given:

- **The uncertainty around the relationship between the risk-free rate, TMR and ERP**. As the UKRN's analysis showed, Dividend Growth Models (DDM) based evidence suggests that a 1 percentage point

[49] Where equity beta exceeds one, a stable-TMR approach can produce counterintuitive results because increases in the risk-free rate reduce the implied ERP, potentially compressing the premium of equity over debt.

increase in the risk-free rate could result in an increase in TMR of between around 35 and 51 basis points. By contrast, the historical evidence presented by the UKRN indicates materially different relationships, with the extending full-sample correlation ranging from around 0.4 to 0.75 and rolling 20-year estimates varying between approximately -0.4 and 0.75. Even within these limited range of approaches, the estimated relationship appears sensitive to methodology and assumptions used.[50]

- **The likelihood that appropriate weights vary across different sectors and market conditions**. Expected returns may vary between periods of high and low interest rates, and between sectors with different risk characteristics and equity betas. A single weighting would therefore be unlikely to be appropriate over time.

To promote a level of consistency, the UKRN could include in its guidance either analysis that it carries out, or guidance to sector regulators, on the relationships between the risk-free rate, TMR and ERP. The UKRN guidance could then require sector regulators to test different weighting approaches based on an assessment of financeability and/or investability at that point in time.

Risk-free adjustment factor

The benefit of this approach would be avoiding the need to estimate ERP directly, overcoming estimation issues – particularly where there is a lack of historic data on risk-free rates. However, it requires a judgment over what the adjustment factor should be and would also require estimation of 'equilibrium' risk free rates which is not directly observable and lacks consensus on how it should be estimated. Nonetheless this approach merits further consideration as it may ultimately be a proportionate approach for price control periods of five years.

Conclusion and next steps

Overall, we support incorporating evidence that can better reflect prevailing market conditions in the estimation of cost of equity to help ensure that allowed returns support investability. We have set out the different options for achieving this objective, and would encourage the UKRN to engage further with industry, investors, regulators and other stakeholders on this matter further through a structured process.

In addition to decisions on the use of stable-TMR and directly estimated ERP approaches, we also recommend that the UKRN includes in its guidance a consideration of how much weight should be put on 'ex ante' and 'ex post' estimates of the TMR. We note that there is greater uncertainty associated with 'ex ante' estimates due to their reliance on forward-looking judgments and assumptions which introduces more uncertainty and risk of forecasting error. We encourage a balanced and holistic review of the relative merits of this approach.

[50] Different approaches raise different methodological questions. Historical approaches require judgments regarding sample periods, averaging methodologies and the choice of risk-free rate benchmark. DDM-based approaches require assumptions regarding market coverage, growth rates, inflation treatment, estimation periods and other modelling choices. In addition, movements in the risk-free rate may reflect factors such as quantitative easing and other market distortions, making it difficult to distinguish temporary effects from the underlying long-run relationship.

Appendix 1: Response to consultation questions

Q1: Do you agree with the proposed recommendations in this document?

Water UK welcomes the UKRN's review of its Cost of Capital Guidance. The recommendations raise important issues for how allowed returns are estimated. We set out our view, or signpost to our view in the relevant section of our response, on each of the recommendations below.

UKRN recommendation	Water UK response
Recommendation 1 – Notional company: Regulators should continue to estimate the allowed rate of return in price controls based on the weighted average cost of capital for a notionally-financed firm within their sector**.**	Water UK recommends that the use of 'notional company' is clarified and that sector regulators are required to consider the circumstances of actual firms when assessing whether allowed returns are sufficient to support investment. Please refer to Section 4.2 of our response.
Recommendation 2 - CAPM: Since the cost of equity is not directly observable, it must be estimated using a widely accepted method. Regulators should continue to use the capital asset pricing model (CAPM) as their primary approach for estimating the cost of equity	Water UK does not support exclusive reliance on CAPM. CAPM has significant theoretical and practical limitations and should be treated as one source of evidence rather than a complete answer in its own right. Wider evidence on investor requirements, including cross checks, should be considered with equal weight to CAPM by regulators. Please refer to Section 4.3 of our response.
Recommendation 3 – Gearing: The notional gearing assumption should reflect the regulator's assessment of the balance of risks facing the regulated company, a wide range of benchmarks on gearing levels and overall regulatory policy objectives, not just that of the actual company (or companies) in question	Please refer to our response to Recommendation 1.
Recommendation 4 – Risk-free rate: To estimate the real risk-free rate (RFR) within the CAPM, regulators should use recent yields on the index-linked gilts, with a maturity which matches the assumed investment horizon for their sector	Water UK supports greater consistency in the treatment of common parameters such as the risk-free rate. Where regulators are estimating the risk-free rate at the same point in time, with comparable investment horizons, they should arrive at the same estimate.
Recommendation 5 – Equity risk premium: [This recommendation is under review pending the outcome of this consultation]	Please refer to Section 5 of our response.
Recommendation 6 – Equity beta: Regulators should estimate equity beta for the notional company using comparable listed companies and standard regression techniques (i.e. ordinary least squares (OLS)). Where the listed comparator has different gearing to the notional company,	Please refer to Section 4.5 of our response.

regulators should continue to de-lever and re-lever the raw equity beta.	
Recommendation 7 – CAPM point estimate: 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	Water UK does not support treating the CAPM midpoint as the default central estimate to which other evidence is secondary. Given the recognised limitations of CAPM and the significant judgment involved in selecting CAPM inputs (as set out in Section 4.3 of our response), regulators should consider all relevant sources of evidence, including wider market evidence, with equal weight when determining an appropriate cost of equity. The final estimate should support investable outcomes and not be determined solely by reference to the CAPM midpoint.
Recommendation 8 – Cross-checks: 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.	Please refer to Section 4 of our response.
Recommendation 9 – Cost of debt: Regulators should estimate an allowance for an efficient company under the notional financial structure, with actual debt costs suitably benchmarked against other market evidence.	On the use of a notional financial structure, please refer to our response to Recommendation 1. We support the use market evidence when benchmarking actual debt costs.

Q2: When determining the range for TMR, to what extent should UKRN members place weight on estimates of TMR derived additively from estimates of the ERP combined with the RFR?

Please refer to Section 5 of our response.

Q3: If supportive of placing weight on TMR estimates relying on ERP, which approaches to estimating ERP should UKRN members consider adopting?

Please refer to Section 5 of our response.

Q4: Do you have views on potential issues that UKRN members may want to consider for further investigation?

Yes. Water UK considers that the UKRN members should give further consideration to these areas:

- Governance and institutional arrangements: Please refer to Section 3 of our response.
- Further consultation on TMR and ERP: Please refer to Sections 2 and 5 of our response.
- Cross-check framework amendments: Please refer to Section 4 of our response.
- Equity beta estimation: Please refer to Section 4.4 of our response.

Appendix 2: Detailed assessment of ERP estimation approaches

We support the use of ERP-derived evidence when setting allowed returns. However, some methodological questions remain unresolved. We recommend further engagement on these issues.

Unresolved questions within historical ERP estimation

Historical ERP estimates provide the strongest starting point for ERP estimation because they are grounded in observed market outcomes over long periods and are less dependent on forward-looking modelling assumptions than alternative approaches.

However, a number of important questions remain unresolved.

The first relates to the treatment of the historical risk-free rate. DMS (UBS Global Investment Returns Yearbook), which is the leading source used in TMR estimation by regulators, reports bond returns rather than historical risk-free rates and therefore does not enable the ERP to be estimated relative to a historical risk-free benchmark.

In principle, the historical ERP should be estimated relative to a historical risk-free rate, expressed in real CPIH terms and calculated over a horizon aligned with the stable-TMR methodology. In practice, the data required to do this are not readily available for the UK, requiring the use of imperfect proxies and alternative data sources, as recognised by the UKRN itself.

Alternative sources of evidence may help address this limitation. For example, in response to the Competition and Markets Authority's Provisional Determinations for PR24, KPMG estimated the ERP using DMS equity returns and promised yields from the Bank of England Millennium Dataset. Using data to December 2024, this approach produced an ERP estimate of 5.1%.[51] The UKRN's roundtable materials referred to Macrohistory data but did not explain how the associated estimates have been derived or what the limitations of the data or assumptions underpinning the calculation are. This makes it difficult to assess the robustness of the estimates or evaluate their suitability for regulatory purposes.

A second unresolved issue concerns the appropriate measurement period. The roundtable materials demonstrate that ERP estimates can be sensitive to the period over which they are calculated.

There is also a question regarding the appropriate averaging methodology. The roundtable materials include an estimate of 3.9% ERP based on the RIIO-ED3 SSMD which appears closest to the geometric average ERP reported in Table 12 of the 2025 DMS Yearbook. Its relevance is unclear given that the wider TMR framework uses arithmetic averages, either directly (ex post) or through adjustments (ex-ante).

Unresolved questions regarding newer ERP estimation approaches

The UKRN's roundtable materials also considered a number of newer approaches to ERP estimation. These include fundamentals-based approaches such as Dividend Growth Models (DDMs) and Cyclically Adjusted Price to Earnings ratio (CAPE) and market-implied approaches using options pricing.

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[51] KPMG estimated the ERP using DMS equity returns and a historical yield series constructed from Bank of England data. Millennium Dataset yields were combined with more recent Bank of England yield data to create a long-run series broadly aligned with the maturity of the regulatory risk-free rate. The resulting series was converted into real CPIH terms and used to estimate the historical ERP.

DDM-based approaches

DDM-based estimates may provide useful supplementary information. However, they are inherently more dependent on modelling assumptions than historical evidence and can be highly sensitive to assumptions and inputs.

Important implementation choices include the choice of market index, assumptions regarding future growth, inflation treatment and estimation periods. Where DDM evidence is considered, approaches based on broad measures of the UK equity market are likely to be more representative of investors' opportunity set. In this respect, Frontier Economics' TMR Glider is likely to provide a more relevant reference point than other approaches such as the Fed Model or generic DDM estimates based on the MSCI UK Index, because they are focused on the large- and mid-cap segments of the market.[52] Frontier's analysis has been developed specifically to examine the relationship between TMR and risk-free rates in a regulatory context and draws on FTSE All-Share data, which provides substantially broader coverage of the UK equity market than several of the alternative approaches discussed in the roundtable materials. The methodology has been presented transparently and submitted to regulators for scrutiny, enabling stakeholders to assess its assumptions and sensitivities.

CAPE-based approaches

The guidance itself recognises that further work is required to establish whether CAPE-based approaches are appropriate to a regulatory context.

More fundamentally, the relevance of CAPE as a direct estimator of the ERP is unclear. CAPE is generally used to form expectations regarding long-run market returns rather than estimate the ERP directly. The resulting estimates are also highly sensitive to key assumptions, particularly assumptions regarding long-run growth.

Option-implied ERP estimates

As with CAPE-based approaches, the UKRN recognises that further work is required to establish whether this evidence is appropriate for a regulatory context. However, its relevance to setting an allowed cost of equity is unclear. The estimates are derived over a 1-year horizon, whereas regulatory cost of equity estimates are intended to reflect investors' required returns over much longer periods. The Bank of England also notes that the estimates are based on a lower-bound methodology and FTSE 100 data, raising further questions regarding their interpretation and representativeness.

[52] MSCI United Kingdom Index