Consultation

Making a positive difference for energy consumers

Price Cap - Statutory Consultation on amending the methodology for setting the Earnings Before Interest and Tax (EBIT) allowance

Publication date:	25 May 2023
Response deadline:	28 June 2023
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The default tariff cap ('**the cap**') protects customers by ensuring that customers pay no more than is necessary for an efficient supplier to recover its costs and earn a reasonable level of profit. The level of profit allowance under the cap can affect customers in the short term (via near-term prices) and in the longer term (via investment in the sector or likelihood of supplier failure. We welcome views from all stakeholders with an interest in the domestic retail energy supply market. We particularly welcome responses from energy suppliers, consumer groups and charities. We would also welcome responses from other stakeholders and the public.

We will publish the non-confidential responses we receive alongside a decision on next steps on our website at ofgem.gov.uk/consultations. If you want your response – in whole or in part – to be considered confidential, please tell us in your response and explain why. Please clearly mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

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Executive Summary

The cap, as set out in law and introduced in January 2019, reflects what it costs to supply energy to our homes, by setting a maximum amount suppliers can charge, and sets the profit margin an efficient supplier can make by supplying default tariff customers in the GB energy market. By doing so, it protects customers who do not engage in the market, those placed under the cap in the aftermath of the energy crisis, and vulnerable groups.

This consultation focuses on the profit margin allowed for in the price cap, known as the Earnings Before Interest and Tax (EBIT) allowance. As part of the review, we aim to set an EBIT allowance that is high enough for the notional supplier to finance their activities, but customers pay no more than necessary to ensure this financeability and promote market stability. Setting the allowance in such a way ensures a supply sector that ultimately benefits consumers, as it enhances suppliers' resilience and makes the market attractive, encouraging investment and innovation to improve quality of services.

This consultation includes an impact assessment exploring the costs and benefits to consumers of our EBIT proposal. We note that the EBIT allowance is a single component of the price cap, and our review of other allowances (as set out in our price cap programme of work)[1] and our work strengthening financial resilience are at least as important in enhancing the resilience of the sector and achieving an appropriate balance of risks. We are also mindful that we are required in our decisions to have regard to impacts on public spending. In accordance with that duty, we consider our proposal on the EBIT allowance protects the interests of UK taxpayers, in addition to the interests of energy consumers.

This consultation builds on two policy consultations, the most recent published in November 2022 ('**the November consultation**'). In this statutory consultation, we set out a proposed EBIT allowance level for inclusion in the price cap period 11a (October-December 2023) and on the approach we are minded to apply in future quarterly price cap updates. We have considered stakeholder responses to the November consultation and conducted further analysis, including the development of the working capital model (published alongside this consultation) and assessment of submissions received by Ofgem in response to a request for information ('**RFI**'). We consider the resulting proposed EBIT allowance better reflects the risks participants in the supply sector are

[1] Ofgem (2023), "Price Cap – Programme of Work: Update", https://www.ofgem.gov.uk/publications/price-cap-programme-work-update

facing, whilst introducing a fixed element to the allowance reduces sensitivity of the EBIT level to external factors such as wholesale prices.

The proposed EBIT allowance is calculated based on the multiplication of two components: capital employed and cost of capital. We propose to set capital employed as the sum of fixed assets, working capital (under a 1-in-20 years level of resilience), and collateral. Our proposed cost of capital stands at 12.2%, reflecting an increase to the previously proposed asset beta[2] in recognition that risk facing energy suppliers are higher than those estimated in 2018 when the cap was developed. In combination, this leads to an indicative EBIT allowance of £47 per customer (annualised) for cap period 11a (based on current price cap expectations). This compares with a £37 figure under our current approach.[3]

We are confirming our previous proposal for a

EBIT allowance, with a fixed component, that does not change when the cap is updated, and a variable component that scales with the overall cap level. Stakeholders widely agreed this represents an improvement on the current fully scalable EBIT allowance. We will continue to update price cap elements as needed to ensure the price cap is set at a level that is fair and reflects suppliers efficient costs, a plan for upcoming reviews of those is set out in our Price Cap Programme of Work. We reserve the right to review and further amend the EBIT allowance, for example in the event of significant changes in the market, policy or regulatory conditions.

We welcome stakeholder views by 28 June 2023 on our minded-to position, and on the working capital model published alongside this consultation.

[2] Asset beta measures the systematic risks suppliers are exposed to.

[3] This is based on the forward curves on 28 April and are subject to change as prices move, up until our announcement of the final cap level in August.

1. Consultation process

What are we consulting on?

1.1 As part of this statutory consultation, we are seeking further views and information to inform our methodology for calculating the Earnings Before Interest and Tax ('**EBIT**') allowance in the cap. This follows the previous policy consultation published in November 2022.

1.2 This document is split into 6 chapters:

Chapter 1: Consultation process

Chapter 2: Background

Chapter 3: Case for change and wider policy considerations

Chapter 4: Capital Employed

Chapter 5: Cost of Capital

Chapter 6: Amending the EBIT allowance methodology

1.3 We invite stakeholders to submit comments on any aspect of this policy consultation on, or before, 28 June 2023.

1.4 Other documents supplementing this statutory consultation include:

- Proposed changes to standard licence conditions
- Working capital model documentation and user guide
- Updated default tariff cap level annex

These can all be accessed at: https://www.ofgem.gov.uk/publications/price-cap-statutory-consultation-amending-methodology-setting-earnings-interest-and-tax-ebit-allowance

Related publications

1.5 Key publications with relevance to the EBIT publication include:

- November 2022: Further consultation on amending the methodology for setting the Earnings Before Interest and Tax (EBIT) allowance: https://www.ofgem.gov.uk/publications/further-consultation-amending-methodology-setting-earnings-interest-and-tax-ebit-allowance
- August 2022: Consultation on amending the methodology for setting the Earnings Before Interest and Tax (EBIT) allowance:

https://www.ofgem.gov.uk/publications/consultation-amending-methodology-setting-earnings-interest-and-tax-ebit-allowance

- November 2018: Default Tariff Cap: Decision – Appendix 9 – EBIT: https://www.ofgem.gov.uk/sites/default/files/docs/2018/11/appendix_9_-_ebit.pdf
- June 2016: Competition and Markets Authority (CMA) 2016 Energy Market Investigation: https://assets.publishing.service.gov.uk/media/5773de34e5274a0da3000113/final-report-energy-market-investigation.pdf
- April 2023: Statutory Consultation on Strengthening Financial Resilience - ringfencing customer credit balances and introducing a minimum capital requirement: https://www.ofgem.gov.uk/publications/statutory-consultation-strengthening-financial-resilience-ringfencing-customer-credit-balances-and-introducing-minimum-capital-requirement
- April 2023: Decision on Strengthening Financial Resilience – ringfencing Renewable Obligation and enhancing Financial Responsibility Principle: https://www.ofgem.gov.uk/publications/decision-strengthening-financial-resilience
- April 2023: Price Cap - Programme of Work: Update: https://www.ofgem.gov.uk/publications/price-cap-programme-work-update

Consultation stages

1.6 Once we have reviewed and considered responses to this statutory consultation, we will publish a decision document giving notice of our proposed changes to the EBIT allowance. We expect to publish this decision document in August 2023. Any potential changes will be expected to come into effect from 1 October 2023 (cap period 11a). On that basis, the planned consultation stages are as following:

- This statutory consultation – 25 May 2023
- Statutory consultation responses deadline – 28 June 2023
- Decision – August 2023
- Expected implementation – 1 October 2023

How to respond

1.7 We want to hear from anyone interested in this consultation. Please send your response to the person or team named on this document's front page.

1.8 We have asked for your feedback in questions throughout relevant chapter. Please respond to each one as fully as you can. A full list of questions is provided in an appendix to this document. We will publish non-confidential responses on our website at www.ofgem.gov.uk/consultations.

1.9 You can ask us to keep your response, or parts of your response, confidential. We will respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000, the Environmental Information Regulations 2004, statutory directions, court orders, government regulations or where you give us explicit permission to disclose. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.

1.10 If you wish us to keep part of your response confidential, please clearly mark those parts of your response that you *do* wish to be kept confidential and those that you *do not* wish to be kept confidential. Please put the confidential material in a separate appendix to your response. If necessary, we will get in touch with you to discuss which parts of the information in your response should be kept confidential, and which can be published. We might ask for reasons why.

1.11 If the information you give in your response contains personal data under the General Data Protection Regulation (Regulation (EU) 2016/679) as retained in domestic law following the UK's withdrawal from the European Union ("UK GDPR"), the Gas and Electricity Markets Authority will be the data controller for the purposes of UK GDPR. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on consultations in Appendix 4.

1.12 If you wish to respond confidentially, we'll keep your response itself confidential, but we will publish the number (but not the names) of confidential responses we receive. We will not link responses to respondents if we publish a summary of responses, and we will evaluate each response on its own merits without undermining your right to confidentiality.

General feedback

1.13 We consider that consultation is at the heart of good policy development. We welcome any comments about how we've run this consultation. We'd also like to get your answers to these questions:

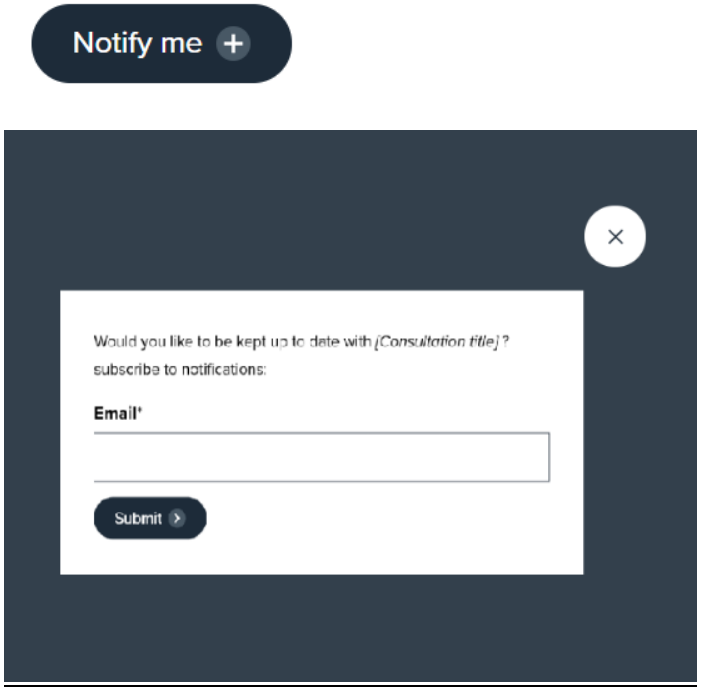
1. Do you have any comments about the overall process of this consultation?

2. Do you have any comments about its tone and content?
3. Was it easy to read and understand? Or could it have been better written?
4. Were its conclusions balanced?
5. Did it make reasoned recommendations for improvement?
6. Any further comments?

Please send any general feedback comments to stakeholders@ofgem.gov.uk

How to track the progress of the consultation

1.14 You can track the progress of a consultation from upcoming to decision status using the 'notify me' function on a consultation page when published on our website. Ofgem.gov.uk/consultations



Once subscribed to the notifications for a particular consultation, you will receive an email to notify you when it has changed status. Our consultation stages are:

Upcoming > **Open** > **Closed** (awaiting decision) > **Closed** (with decision)

2. Background

The chapter considers the general feedback we have received to our previous consultations, including on our consultation, decision and implementation timelines. We have delayed implementation of changes from July 2023 in order to consider responses from stakeholders and further develop analysis, and we anticipate implementing any changes in October 2023. Our engagement so far has included three consultation documents alongside other forms of engagement. We welcome stakeholder views to be submitted by 28 June 2023.

The EBIT allowance

2.1 The EBIT allowance was introduced as part of the price cap to deliver a normal rate of return for an efficient supplier serving standard variable tariff ('**SVT**') customers. It is based on the CMA's 2016 analysis of what a normal rate of return should be in the retail market.

2.2 The Competition and Market Authority ('CMA') estimated a return on capital of 10% using the Weighted Average Cost of Capital ('**WACC**') approach. Alongside it, the CMA estimated a level of capital employed, representing the equity investment in a supply business. The capital employed is then multiplied by the WACC to establish a return on capital employed ('**ROCE**'). ROCE was then divided by a notional supplier's revenue to derive the 1.9% EBIT margin.

2.3 When the cap was introduced in 2018, Ofgem incorporated the CMA's 1.9% of EBIT estimate as a separate allowance within the cap. This percentage is applied to the sum of the cap allowances for wholesale costs, network costs, policy costs, operating costs, payment method uplift, and an adjustment allowance. This broadly means that the allowance scales with overall cap levels (excluding headroom, VAT and the EBIT allowance itself). The EBIT allowance level is updated quarterly when changes to the cap are announced.

Overview of responses – timelines and overall level of the EBIT allowance

2.4 Several suppliers welcomed the additional policy consultation stage undertaken. However, multiple suppliers said that our review of the EBIT allowance was proceeding too fast, and sufficient time and engagement was necessary due to complexity of the topic and risk of detrimental implications. A supplier said no evidence had been provided on the urgency of this review, and two suppliers

suggested that any changes could be delayed until October 2023 with limited impact due to lower consumption in July-September. Another respondent said that change was required due to the excessive costs being incurred by suppliers at present.

2.5 Suppliers said the 4-week further consultation period was insufficient, and highlighted that suppliers were under significant other pressures including implementing government price support schemes, responding to multiple other Ofgem consultations, alongside requests for information and market compliance reviews. A respondent said Ofgem should consider an approach which can minimise necessary supplier input.

2.6 Some suppliers called for further Ofgem engagement, taking in a wider range of stakeholders including wholesale trading partners. Multiple suppliers said that Ofgem needed to disclose the models being used, without which they could not fully engage in the consultation, and that significant time would be needed to consider the model.

2.7 Some respondents considered that the EBIT allowance implemented in the short term needed to reflect current risks, while in the longer term the allowance should signal an enduring approach which allows fair returns. Some respondents expressed concern Ofgem was not committing to future reviews of EBIT and said the EBIT allowance might need further review due to ongoing volatility, changing business models and reforms.

2.8 Suppliers questioned the timing of the review with regard to wider Ofgem activity. Several suppliers said that Ofgem needs to undertake a holistic assessment of the price cap, considering whether its components adequately capture costs and risks. Ofgem's Price Cap Programme of Work[4] was cited as showing there were important price cap components which needed to be considered first, but were on a slower timetable, and also that the Programme of Work demonstrates Ofgem have concerns regarding the overall price cap design. Some suppliers noted the price cap is a time-limited intervention, and attention would be better focussed on resolving the future of the price cap first or considering broader retail reform.

[4] Ofgem (2022), "Price cap - Programme of Work", https://www.ofgem.gov.uk/publications/price-cap-programme-work

Considerations

2.9 We started our consultation process in August 2022, signalling our intention to review the EBIT allowance. We undertook a further consultation in November 2022, providing additional information on our proposals and seeking views from stakeholders.

2.10 In addition, we have held numerous meetings with stakeholders (including suppliers, investors and consumer bodies) and received information and submissions outside the formal consultation process. Those meetings have helped inform our proposals in this statutory consultation and allowed us to better understand stakeholder views. Furthermore, we held workshops on our proposed modelling approach in October 2022 and April 2023.

2.11 We have provided further engagement opportunity through this statutory consultation. Alongside this, we have also published our model for estimating capital employed, together with a user guide. This further enhances transparency and allows stakeholders to review our assumptions and way of deriving the capital employed figure assumed in setting the EBIT allowance.

2.12 This extended consultation process and the publication of the model allows additional opportunities for stakeholders to engage with and contribute to the decision-making process, and for us to ensure that all views are considered and that our analysis is robust. We welcome further views to our proposals as part of this consultation.

2.13 We consider the four-week period we have allowed to respond to the further policy consultation is proportionate and in accordance with our consultation policy, and aligns with other consultation and notice periods in the Domestic Gas and Electricity (Tariff Cap) Act 2018 ('**the Act**').[5] We have appreciated the complexity of this topic, and the further policy consultation was introduced as an additional stage to gather further information and ensure the robustness of the 'minded to' position in this statutory consultation. Furthermore, we have taken additional time to develop our approach and postponed the implementation timelines set out in the November consultation. Looking forward, there is a balance to be struck between extended engagement, and implementing changes in a timely manner where it is in the interests of consumers, and at the same

[5] Ofgem (2022), "Ofgem's consultation policy", https://www.ofgem.gov.uk/publications/ofgems-consultation-policy

time alleviating the potential uncertainty a longer process may entail. Stakeholder views on the need to review the EBIT allowance are discussed further in Chapter 3 as part of the case for change section.

2.14 We consider that the changing context, with regard to high and volatile wholesale markets, evolving business models and policy and regulatory interventions does not justify further delay. There is no indication as to when there may be a period of stability to deliver changes. We acknowledge that there may be reasons why the EBIT allowance may need to be revised, and the conditions for revising the EBIT allowance are set out in chapter 6.

2.15 We have published an update to our Price Cap Programme of Work, reaffirming the fact that we continue to monitor the cap methodology and make changes as appropriate.[6]

Consultation scope

2.16 We are consulting on our minded-to position on the approach for setting the EBIT allowance, and the indicative levels of components of the EBIT allowance:

- Capital employed – including fixed assets, working capital and collateral
- Cost of capital
- The approach for adjusting and reviewing the EBIT allowance over time.

2.17 We are also assessing the impacts of our minded to position of consumers, taxpayers, and suppliers' risk of failure. We also assess the impact on different consumers, particularly vulnerable consumers, using our guidance on assessing the distributional impacts.[7]

2.18 We invite comments on the above components and any other aspect of the broad policy set out here and the specific licence changes described in the notice and on documents to be incorporated into standard licence conditions.[8,9] We will consider all those representations and may decide on licence changes and the content of documents to be incorporated in the form attached, or alternative or similar ways

[6] Ofgem (2023), "Price Cap – Programme of Work: Update", https://www.ofgem.gov.uk/publications/price-cap-programme-work-update
[7] Ofgem (2022), "Impact assessment guidance", https://www.ofgem.gov.uk/publications/impact-assessment-guidance
[8] Ofgem (2023), "Amending Earnings Before Interest and Tax allowance - Proposed Modification Notice", https://www.ofgem.gov.uk/publications/price-cap-statutory-consultation-amending-methodology-setting-earnings-interest-and-tax-ebit-allowance
[9] Ofgem (2023), "Draft Overview model – Default tariff cap level", https://www.ofgem.gov.uk/publications/price-cap-statutory-consultation-amending-methodology-setting-earnings-interest-and-tax-ebit-allowance

of reflecting the policy described in this paper, in light of those consultation responses.

Statutory framework

2.19 We set the cap with reference to the Act. The Act requires us to put in place and maintain the licence conditions which give effect to the cap. We must exercise our functions under the Act with a view to protecting current and future domestic default tariff customers. We must have regard to five matters, set out in section 1(6) of the Act, when setting the cap:[10]

- the need to create incentives for holders of supply licences to improve their efficiency;
- the need to set the cap at a level that enables holders of supply licences to compete effectively for domestic supply contracts;
- the need to maintain incentives for domestic customers to switch to different domestic supply contracts;
- the need to ensure that holders of supply licences who operate efficiently are able to finance activities authorised by the licence; and
- the need to set the cap at a level that takes account of the impact of the cap on public spending.[11]

2.20 The requirement to have regard to the five matters identified in section 1(6) of the Act does not mean that we must achieve all of these. In setting the cap, our primary consideration is the protection of existing and future domestic consumers who pay standard variable and default rates. In reaching decisions on particular aspects of the cap, the weight to be given to each of these considerations is a matter of judgment. Often, a balance must be struck between competing considerations. Throughout this document we explain the various considerations and analysis which we are weighing up.

2.21 Following the coming into force of the Energy Prices Act 2022, those specified considerations to be taken into account include "*the need to set the cap at a level that takes account of the impact of the cap on public spending*" That new

[10] Domestic Gas and Electricity (Tariff Cap) Act 2018, section 1(6). https://www.legislation.gov.uk/ukpga/2018/21/section/1

[11] Domestic Gas and Electricity (Tariff Cap) Act 2018, section 1(6)(e) as inserted by Schedule 3 to the Energy Prices Act 2022. In performing the duty under section 1(6)(e) we must have regard to any information provided by the Secretary of State, or any guidance given by the Secretary of State on this matter (section 1(6A)).

consideration reflects the fact that, while the government's Energy Price Guarantee is in force, the cap level affects the levels of payments by the government to energy suppliers. Before we make a final decision on this matter, we shall have regard to the full set of statutory considerations set out in in section 1(6) of the Act. In the meantime, we would invite any views from stakeholders on whether there are any further particular factors or information which we should consider in making our decision.

3. Case for change and wider considerations

We have observed a broad agreement between us and stakeholders that the risks the retail sector is facing have changed since the EBIT allowance was initially introduced. While views on the magnitude and direction of those risks and the effect of mitigations may differ across stakeholders, they all underscore the need to review the EBIT allowance. We also recognise the need and benefit to consumers of restoring investor confidence in the sector – which could be improved by changing the EBIT allowance itself alongside other measures such as strengthening financial resilience and the price cap programme of work. Ultimately, we consider a more cost- and risk-reflective EBIT allowance can contribute to the resilience of the sector, and to better quality of services – which both protects and benefits consumers.

Overview of responses

3.1 Multiple suppliers and consumer advocates agreed that it was appropriate to review the EBIT allowance, but for differing reasons. The material changes in market and regulatory conditions, risks to suppliers and actual levels of profitability were highlighted. Stakeholders agreed it was appropriate to review the EBIT allowance but that did not necessarily constitute agreement with the case for change set out. Some suppliers said they expected that the review of EBIT would conclude that the allowance should increase, but also that any change to the allowance should be clearly evidenced and justified. One respondent said there was no evidence that the proposed approach would create a fairer approach or benefit consumers. A supplier noted that it did not support any increase in the allowance as it would not be in consumer interests or address underlying issues.

3.2 Some suppliers said that an apparent Ofgem motive for the review driven by concerns of excess profits was wrong or unfounded, citing evidence that the majority of the retail sector has been loss-making or only slightly profitable. Suppliers acknowledged the EBIT allowance has risen in line with the price cap, but said that costs and a risks have also increased at the same or higher rate, and returns had not increased. In addition to points raised in the section above on a more holistic reassessment of the price cap being required, some suppliers said the current price cap arrangements do not allow recovery of costs, and that the EBIT review needs to be considered in terms of actual earnings rather than a theoretical allowance, in part given that suppliers have not generally achieved the EBIT margin set in the price cap.

3.3 Some respondents said that the case for change should consider the future energy market also, including potential volatility, the market sought and why a sufficient margin is needed, and evolving business models. Several suppliers said that the EBIT allowance was an important factor in the investability of the retail market, with change needed to deliver an investable market, and that this is in the consumer interest, given investment needed to deliver innovation including in the country's net zero transition, and in providing good customer service, and the costs of supplier failure to consumers.

3.4 Suppliers had significant comments on the risks and mitigations outlined in the further policy consultation. Comments on specific risks and mitigations are further summarised in Chapters 4 and 5.

Risks

3.5 Respondents restated the range of risks, including those arising from past and current economy-wide challenges including COVID-19 and the invasion of Ukraine, saying that these increased both economy-wide risks, but additionally energy supplier-specific risks, with comparisons to other sectors inappropriate.

Counterfactual to current risks under the price cap

3.6 Several respondents said that there had been significant changes to circumstances since the CMA's Energy Market Investigation in 2016, on which the initial EBIT allowance was based, and that risks need to be compared to the pre-price cap period. Suppliers also said that risks had not been reduced compared to the pre-price cap period.

3.7 Respondents said the price cap itself was a significant change, which has altered or increased the risk profile. This introduces risks such as being placed on a standard variable tariff when prices are rising rather than signing a new fixed tariff - limiting ability to manage risks.

Unprecedented market situation

3.8 Suppliers said that there were a range of increased costs and risks, driven by unprecedented high energy prices and levels of volatility. Suppliers said that they are operating in more challenging market conditions, citing higher wholesale prices, issues with energy trading and hedging, with volatility making processes costlier.

Mitigations

3.9 Suppliers acknowledged that policy and regulatory interventions had mitigated some risks and supported retail market viability, but multiple suppliers said that not all risks had been mitigated, or that mitigations such as the Energy Price Guarantee only partially covered risks. Some mitigations were also said to potentially introduce additional risks, and the price cap and regulatory interventions limit ability to independently manage risks. Consumer advocates said that increased risks had been addressed via various mitigations, such that risks had increased less than costs, and not all mitigations had been identified.

3.10 Suppliers said that Ofgem could not attribute risks to be mitigated by other price cap allowances without detailed review, the role of different price cap allowances needed clarifying, and that there was potential for each allowance to impact suppliers differently without assessment of differences in overall impact.

3.11 Some suppliers said that mitigating factors identified in relation to interventions which are not permanent and may be removed do not protect against risks, such as the Market Stabilisation Charge and Energy Price Guarantee.

3.12 Suppliers queried how Ofgem had defined and assessed risks, across what time periods and said that there was no actual assessment of the extent to which mitigations compensated for risks. A respondent said a closer examination of risks was required.

Considerations

3.13 Our view on the case for change has been further developed through the consultation process to date. The case for change is not predicated on a requirement or expectation that the EBIT allowance would change in a specific direction. Rather, we consider it presents the rationale for why a review of the EBIT allowance is a justifiable and important process. The following chapters detail the approach we have taken to identify what we consider to be a more suitable EBIT methodology.

3.14 We acknowledge differing views on whether a change in the EBIT methodology, in either direction, is in consumer interests. The primary policy intent remains unchanged, that the EBIT methodology should deliver a fair return which protects consumers against both the risks of higher-than-normal profits and excessive costs of failure. A fair return ensures the sector is investable, appropriately reflecting risks suppliers are exposed to. Chapter 6 proposes an EBIT scaling method which could better achieve this and our impact assessment appendix also

considers the effect of our proposals against other needs set out in in section 1(6) of the Act.

3.15 Quantifying whether risks and mitigations as set out in Table 1 of the November consultation more than offset existing risks is a challenging exercise, in particular given the full impact of those mitigations may have not taken effect yet. We are also conscious that levels of risks and proposed mitigation evolve over time. Nevertheless, our preliminary estimate for capital employed required by the notional supplier in cap period 11a suggests a higher capital employed requirement than the one implied by the 1.9% EBIT existing methodology. This could be driven by using a different methodology to the one used by the CMA, but also recognises that additional capital employed is needed by the notional supplier to achieve a desirable level of resilience.[12] Furthermore, our minded to position also recognises that in the short-term the cost of capital may have increased since it was estimated by the CMA.

3.16 Our impact assessment in Appendix 1 also acknowledges the importance of a financeable and investable retail sector, ultimately resulting in better quality of service and support for the investment required in the transition to net zero. As such, a higher EBIT allowance than would have otherwise been the case could help restore confidence after a four-year period of low sector profitability. We stress that the investability of the sector is also driven by the parallel financial resilience work and the review of other price cap allowances as set out in our price cap programme of work.[13]

3.17 Setting the EBIT level at this point in time is a challenging task. This is since the market is still in the process of stabilising after unprecedented volatility in wholesale prices driven by geopolitical events. We are confident that our proposed EBIT allowance and the new methodology represents an improvement to the existing allowance. At the same time, we are also cognisant that market conditions may quickly change again and are therefore proposing in chapter 6 a set of conditions which could trigger another review of the EBIT allowance methodology and parameters in the future should it be needed.

3.18 The scope of the EBIT allowance to capture various market and perceived policy and regulatory-induced risks is considered in the capital employed and cost of

[12] The CMA used benchmarking of capital employed, whereas we are using a bottom-up model for working employed, and RFI data for collateral.
[13] Ofgem (2022), "Price cap - Programme of Work", https://www.ofgem.gov.uk/publications/price-cap-programme-work

capital chapters. In general, we model risks to the extent it is credible to so; however, we also rely on reviews of various price cap allowances to mitigate against emerging risks where it is in consumers interest to do so. Although several suppliers wish us to review many cap allowances simultaneously, this may neither be practical nor allow an appropriate consultation process. Our priorities for changes to price cap allowances are set out in our programme of work letter and subsequent update.[14]

3.19 Improvements to the resilience of the retail sector are primarily made through Ofgem's Strengthening Financial Resilience workstream. Statutory consultation on the proposal of setting a minimum capital requirement closed on 6 May 2023.[15] We note this requirement is different from the capital employed level we set for the notional supplier as part of the EBIT allowance. First, we have only consulted on a minimum level, unlike our EBIT capital employed level which calculates the desired level for the notional supplier using an average over stress period – rather than using a minimum which forms the minimum capital requirement. Second, we are still consulting on the scope and definition of the minimum capital requirement in FRC, which may be different to the definition of capital employed for the notional supplier within the EBIT allowance. Nevertheless, we acknowledge the level at which we set EBIT allowance, alongside other cap allowances, has an impact on suppliers' ability to raise the capital needed as part of a prospective minimum capital requirement.

Question

Q1: Do you agree with our assessment for the case for change? Please explain your reasoning.

[14] Ofgem (2023), "Price Cap - Programme of Work: Update", https://www.ofgem.gov.uk/publications/price-cap-programme-work-update

[15] Ofgem (2023), "Statutory Consultation on Strengthening Financial Resilience - ringfencing customer credit balances and introducing a minimum capital requirement", https://www.ofgem.gov.uk/publications/statutory-consultation-strengthening-financial-resilience-ringfencing-customer-credit-balances-and-introducing-minimum-capital-requirement

4. Capital employed

In this chapter, we set out our proposals for estimating capital employed by a notional efficient supplier – to calculate the EBIT allowance alongside cost of capital. We propose to estimate capital employed as the sum of fixed assets, working capital (under a 1-in-20 years scenario), and collateral. For those calculations, we use a combination of price cap estimates, modelling, and supplier information. Our indicative results suggest a level of capital of around £380 per customer for cap period 11a, which will be updated between now and the publication of our decision. This level will scale in future cap periods in accordance with our proposed approach in chapter 6.

Overall capital employed approach

Context

4.1 Capital employed reflects the resources a supplier mobilises to undertake its operations, and for which investors expect to receive a return. In our November consultation, we proposed to a way to set four components of capital employed:

- fixed assets;
- working capital;
- risk capital; and
- collateral capital.

4.2 We described a potential approach for estimating each component in our policy consultation. We considered characterising capital employed at a more granular level in order to review how changing markets conditions could impact capital requirements. However, following responses from stakeholders in the November consultation we have made further changes in the overall capital employed approach, which means we account for risk capital within working capital.

Minded-to decision

4.3 We propose to set capital employed based on the total of four components described above. However, we propose to merge working capital and risk capital into one component as working capital under a 1-in-20 level of resilience scenario. We remain of the view that this approach is transparent and includes the relevant components of capital employed.

4.4 When estimating the capital employed requirement for the notional supplier, we set fixed assets based on information from the operating cost allowance in the cap, working capital based on our working capital model,[16] and collateral based on RFI submissions. Our *indicative* estimates for the capital employed per customer in period 11a are:

- Fixed assets: £90
- Working capital (1-in-20 level of resilience): £127
- Collateral: £165

Overall, this totals £380 per customer, to the nearest £5.

Overview of responses

4.5 In responding to our consultation, suppliers agreed with our proposed overall capital employed approach, but commented on the practicability of separating working capital and risk capital in responding to our RFI. For example, some suppliers do not measure the risk capital at an individual UK licensee level, because they are part of an international group or trading arrangements. Some suppliers have loans from their parent company, the group holding company or trading partner to finance their risk capital requirements. Therefore, this adds another layer of complexity to separating the working capital and risk capital requirement.

4.6 Suppliers also asked us to share our working capital model for estimating the different components of working capital, arguing it would enable them to respond to the consultation more effectively.

Considerations

4.7 We agree with many stakeholders that risk and working capital are inseparable. Ultimately, the level of working capital required from a notional supplier should be based on a desired level of resilience. Furthermore, most suppliers do not report risk capital, which is not an accounting convention.

4.8 We propose to use a bottom-up model (the 'working capital model') for estimating working capital, since it may not possible to infer what the appropriate

[16] Our working capital model is the same model we mentioned in the further policy consultation paper, which was developed with supporting from CEPA. It is published alongside this consultation.

level of working capital for the notional supplier should be based on analysing suppliers responses to the RFI, given their different financing structures.

4.9 We also note the exercise of benchmarking working capital is challenging due to the distinct nature of financial structures, with some suppliers holding generation businesses and some being part of larger groups. Furthermore, stress testing RFI information indicated a wide range of working capital per customer across suppliers, with some suppliers reporting negative working capital and some highly positive. We therefore consider bottom-up modelling of the level of working capital for the national supplier would be a more appropriate way for estimating this.

4.10 We agree with stakeholders that it is beneficial to share the model we are using to estimate working capital, and we are publishing our working capital model and a guidance document alongside this consultation paper. We consider this publication enhances transparency and allows better engagement. We welcome stakeholder views on the model over the consultation period.

Fixed assets

Context

4.11 In our November consultation, we proposed to include fixed assets as a component of capital employed. This is to reflect that the notional supplier is assumed to hold some level of fixed assets under the cap.

4.12 We asked suppliers whether they would agree with our proposals and whether our estimate of fixed assets of £85 for a notional supplier would be representative of current market conditions.

Minded-to decision

4.13 We propose to include fixed assets as a component of capital employed and include it in the capital employed calculation.

4.14 We propose a level of fixed asset of £90 per customer per year. We have updated this figure from £85 per customer, to account for recent CPIH forecasts.

Overview of responses

4.15 All stakeholders agreed with including fixed assets as a component of capital employed in some form or another. One stakeholder agreed with including fixed assets on the condition of a hybrid EBIT approach.

4.16 Many stakeholders asked Ofgem to share more information on how the fixed assets per £85 per customer figure was calculated. There were mixed views on whether the proposed £85 per customer is representative of current market conditions. Two stakeholders required a more detailed explanation on the assumption of a lifetime of six years. One supplier suggested four years lifetime was closer to reality and thought an average time on supply of six years would underestimate the capital employed.

4.17 Another supplier required more clarity on the definition of fixed assets. One supplier suggested to review it at a group level for those suppliers that are vertically integrated or have service companies for a wider group. It also suggested to include investments in buildings, fixtures, and fittings.

4.18 Four stakeholders commented the level of fixed asset could be too high, especially given some suppliers rented their billing systems rather than purchased it as fixed assets. This refers to "software as a service" ('**SaaS**') or "infrastructure as a service" model. They suggested this trend would reduce the value of fixed assets but increase suppliers' operating costs.

4.19 One supplier did not agree with our methodology and said that the depreciation and amortisation allowance should not be used to calculate the fixed assets for the purpose of capital employed. It also said Ofgem should thoroughly review the level of fixed assets and update the CMA's original approach completely.

Considerations

Definition of fixed assets

4.20 In our November consultation, we explained that we are using depreciation and amortisation costs to calculate the capital requirements for the fixed assets.[17] Depreciation and amortisation are largely relating to investment in metering, IT and billing systems, and property.[18] Therefore, the fixed assets relate to these tangible and intangible assets.

4.21 Our estimate of fixed assets focused on domestic costs. This is because we focus on suppliers' costs associated with serving domestic customers, and not wider

[17] Ofgem (2022), "Further consultation on amending the methodology for setting the EBIT allowance", paragraph 4.29 https://www.ofgem.gov.uk/publications/further-consultation-amending-methodology-setting-earnings-interest-and-tax-ebit-allowance
[18] Ofgem (2018), "Default tariff cap: decision – overview", Appendix 6 - Operating costs, Table A6.1. https://www.ofgem.gov.uk/publications/default-tariff-cap-decision-overview

costs which may be associated with serving non-energy supply parts of the business.

4.22 We recognise that renting equipment or software would be likely to reduce the level of required fixed assets and increase suppliers' operating costs. We will review the prominence of this practice across the sector as part of a future review of the operational cost allowance. We consider the allocation of costs between allowances matters less than the total amount provided by the cap. For example, the cap design does not constrain suppliers to operate in a particular way.

Calculating the level of fixed assets

4.23 We consider it appropriate for the calculation of fixed assets to be consistent with the wider cap and are hence proposing to infer it from the depreciation and amortisation components of the current operating costs allowance. Stakeholder responses on fixed assets varied, with some respondents recommended a higher level of fixed assets and some a lower one. This might be due to suppliers operating with different business models and the need to find a single to set a single cap required by the Act. We note the operating cost allowance is being reviewed as a priority, with a call for input being published as part of the wider suite of price cap documents alongside this consultation.[19] However, we consider it is disproportionate to pause the review of the EBIT allowance until the operating costs review concludes.

4.24 Our estimate of the notional supplier's depreciation & amortisation allowance is derived from the operating costs allowance. Initial analysis in 2018 estimated that depreciation and amortisation represented 8% of operating costs for gas and 7% of operating costs for electricity.[20] We take those estimates over a year, and multiply them by six – representing our average assumed lifetime of fixed assets. This translates into £90 per customer when accounting for CPIH.[21]

4.25 Our assumed lifetime of six years is in line with the CMA's approach to amortising customer acquisition costs in the Energy Market Investigation (EMI) model.[22] In

[19] Ofgem (2023), "Price Cap - Programme of Work: Update", https://www.ofgem.gov.uk/publications/price-cap-programme-work-update
[20] Ofgem (2018), "Default tariff cap: policy consultation", Appendix 8- operating costs , Figure A8.1. https://www.ofgem.gov.uk/sites/default/files/docs/2018/05/appendix_8_-_operating_costs.pdf
[21] Outturn CPIH is taken from ONS series L522.
[22] CMA(2016), Appendix 9.10: Analysis of retail supply profitability-ROCE, paragraph 74. https://assets.publishing.service.gov.uk/media/576bcc23ed915d3cfd0000bb/appendix-9-10-analysis-of-retail-supply-profitability-roce-fr.pdf

addition, this is consistent with our recent decision on the SMNCC allowance, in which we have used six years amortisation period for IT costs.[23]

4.26 We have also cross-checked our proposed fixed assets figure against the January 2023 stress-testing RFI data which suggest that the industry average is broadly in line with it (albeit a large variation across suppliers).

Question

Q2: Do you agree with our approach to estimating fixed assets? If not, why not? Please explain your reasoning.

Working capital

Context

4.27 In our November 2022 further consultation, we proposed calculating the working capital requirement for a notional supplier by using our working capital model, which we describe in our modelling appendix published alongside this consultation.[24]

4.28 In our November 2022 further consultation, we also proposed to include wholesale price volatility and unexpected demand shock as drivers of the level of risk capital that suppliers need to employ.[25] These reflect volume risks that may not be fully accounted for under the other allowances within the cap. We also proposed not to include other risk drivers that have already dedicated allowances within the cap, to avoid double counting for cost reflected through other cap allowances.

4.29 As we mentioned in the "overall capital employed approach" section above, we propose to treat working capital and risk capital as one aggregated component in the capital employed requirement.

[23] Ofgem (2020), Technical annex to reviewing smart metering costs in the default tariff cap: August 2020 decision. Paragraph 3.227 https://www.ofgem.gov.uk/sites/default/files/docs/2020/08/technical_annex_to_reviewing_smart_metering_costs_in_the_default_tariff_cap_-_august_2020_decision.pdf

[24] We described this model in the November consultation Appendix one. The model was initially developed by CEPA, but has undergone changes since it was initially constructed.

[25] By price volatility in this context we mean changes in expected SVT customer numbers that suppliers may face due to wholesale price volatility and also its effect on backwardation. Short term price volatility is addressed in the collateral sub-section.

Minded-to decision

4.30 We propose to set a resilience level of 1-in-20 years for the working capital required by the notional supplier.

4.31 We propose to include within our working capital calculation the effects of high wholesale prices, volume risk, and ex-post recovery of backwardation costs over 6 months. We anticipate that other costs will be covered by the existing cap allowances.

4.32 We propose to include a modelled level of working capital of around £127 per customer in the capital employed figure for the notional supplier when setting the EBIT allowance. This is based on the output of our working capital model shared alongside this consultation. We note this estimate may change upon updating the model's inputs ahead of the decision.

Overview of responses

Overall level of working capital required

4.33 Suppliers commented they needed a higher level of working capital in comparison to the pre-crisis levels in order to handle high and volatile wholesale prices. One supplier mentioned that wholesale prices in particular affect minimum levels of working capital.

4.34 Another said the notional level of working capital and profitability inferred by the existing 1.9% EBIT allowance is not reflective of real-world market conditions, pointing to the historical lack of capitalisation and profitability in the market. One supplier mentioned that it is difficult to distinguish between the overall level of working capital used within a group, and the part used by the supplier within it.

Scope of working capital[26]

4.35 Eight suppliers agreed with our proposal that wholesale cost volatility and demand shock (with consequent impact on volume risk) would be two key drivers for the risk capital requirements. However, some suggested there could be other potential drivers of a "worst case working capital" requirement, such as the link between wholesale market volatility and wholesale price level, a sharp falling market, and customer churn.

[26] This reflects both working and risk capital which have been since merged.

4.36 The majority of respondents did not agree with the exclusion of other costs as drivers for risk capital requirements, such as backwardation costs, shaping and balancing costs, and bad debt costs. They said that the existing cap allowances did not fully account for the costs and risks being borne by suppliers associated with these factors, and that the residual risks should be accounted for via EBIT.[27] However, two stakeholders agreed with our proposal on the components we use to calculate working capital.

4.37 One supplier said that the materiality of costs mentioned above had grown considerably since the energy crisis started, which increases the risk for suppliers should Ofgem's assumption that the costs are covered by the allowances prove incorrect. Four suppliers requested a bottom-up assessment of those allowances to ensure they are fully reflective of supplier costs and are representative of current market conditions. Two suppliers mentioned that the expected value of these costs should be accounted for in the cap, but the uncertainty associated with these costs due to volatility and the delay in recovery should be included in the EBIT allowance. One supplier did not agree that our forward work programme would justify the rationale of excluding shaping and balancing costs from consideration of risk capital.

4.38 One stakeholder said risk capital should be reduced to reflect the low risk of unexpected changes in SVT customer numbers due to the EPG and the low level of customer churn. However, one supplier asked us to consider the broader impact of fundamental changes in market conditions when reviewing the EBIT allowance, because even with EPG in place, current energy bills are at unprecedented levels.

Working capital modelling and supplier resilience

4.39 Three suppliers commented that suppliers with robust financial business models must have access to sufficient "worst case" working capital to withstand high impact and plausible yet low probability events. Many suppliers mentioned worst case scenarios should include varying levels of wholesale prices and volatility, a 'falling' market, and customer churn.

4.40 However, one stakeholder mentioned that the level of working capital assumed for the notional supplier is likely to be higher than either the level held by many suppliers in reality, or the transitionary minimum level proposed in the

[27] For example, the risk of unexpected under-recovery of deferred backwardation and bad debt costs, as a result of customer churn.

strengthening financial resilience consultation, which could lead to the overcompensation of some suppliers.

4.41 Four suppliers commented that scenario-based modelling was a reasonable approach to estimate total capital employed by the notional supplier and asked for more detail on the scenarios set in the capital employed. The majority of suppliers asked us to share the working capital model to enable them to comment on this.

4.42 One supplier pointed out that working capital should be set at a level which considers annual cycles. Similarly, another supplier mentioned that working capital should be calculated in a way that accounts for annual working capital requirements.

Considerations

Overall level of working capital

4.43 Using our model, we derive a working capital estimate of £150 per customer for cap period 11a. We note this level is indicative and could change between the publication of this paper and when cap period 11a starts, due to the updates to wholesale forward curves and other price cap assumptions.[28] While some respondents said that the level of working capital we set should be higher than the one implied by the current EBIT allowance, they did not provide quantifiable evidence on the level it should be set. In estimating this level, we account for various outcomes of wholesale price, volume risk and backwardation costs.[29] The effect of volatility and overall wholesale prices level on collateral is explained in the collateral section.

4.44 In setting the working capital of a notional supplier, we assume a medium sized non-vertically integrated supplier. Our assumptions regarding that supplier are detailed on our modelling documentation.

Scope of working capital

4.45 In our November 2022 further consultation, we discussed our rationale for not including some drivers of risk capital requirements, eg backwardation costs, bad debt costs, and shaping and imbalance costs. This is because there are already dedicated allowances within the cap (including the headroom allowance), and

[28] This is since our 1-in-20 scenarios are estimated based on a rolling time series wholesale price. We describe the how wholesale prices are estimated in the modelling documentation.
[29] Price volatility is reflected in the volume risk and backwardation costs.

remunerating them through the EBIT allowance could lead to double counting of these costs and over-compensation of suppliers.

4.46 We are still of the view that some of the residual components mentioned by suppliers (eg bad debt) are covered by dedicated allowances. We recognise the need to periodically update cap allowances – and plan to undertake reviews as outlined in our price cap forward work plan[30].

4.47 Shaping and imbalance costs are a part of the wholesale cost allowance in the cap methodology and are set as a fixed percentage of the direct fuel costs.[31] This percentage is reflected in the wholesale costs input we use in our working capital model and is applied over a 1-in-20 wholesale price scenario. As such, we consider this sufficiently covers extreme price volatility scenarios which tend to coincide with high price episodes. We note that in exceptional circumstance when we considered there was a rationale to remunerate an additional amount on shaping and imbalance, we did so using an ex-post adjustment, allowing suppliers to recover costs and not be left out of pocket. This was the case in cap period seven in our February 2022 decision.[32]

4.48 We also consider that the headroom allowance in the cap provides room for systematic risk that may arise between cost incurring and allowances being updated. In our model, we include the headroom allowance as supplier's revenue and assume the amount is used by the notional supplier to cover certain costs driven by systematic risks.

4.49 In our working capital model, we have factored in the effect of high wholesale prices, volume risk, delayed recovery of backwardation costs and shaping and imbalance. The forecast wholesale energy price and its twelve-month forward curve, backwardation costs, volume risk costs (incorporating MSC) are fed into the working capital model as model inputs. For example, the forecasted backwardation costs for each quarter will be reflected in the ex-post backwardation allowances and recovered over a 6-month period. Volume risks driven costs are calculated for each quarter and recovered later based on direct debit cycles.

[30] Ofgem (2023) Price Cap - Programme of Work: Update: https://www.ofgem.gov.uk/publications/price-cap-programme-work-update
[31] Ofgem (2018), Appendix 4 Wholesale costs. Table A4.5 https://www.ofgem.gov.uk/sites/default/files/docs/2018/11/appendix_4_-_wholesale_costs.pdf

4.50 We note there is an interplay between the risk captured as part of working capital (eg using a P95 scenario) and the risk captured as part of cost of capital. Our proposal includes a higher cost of capital than in the November consultation, which would provide an additional buffer to represent residual potential systematic risks that we may be unable to capture when using the working capital model.

The level of resilience used for estimating working capital

4.51 Our primary consideration is the choice of what level of 'beyond normal' price shock and volume risk a notional supplier should have the working capital to accommodate. For instance, should the notional supplier capitalise to withstand a 1-in-4, 1-in-20, or 1-in-100 years market conditions. We refer to these as P75, P95, and P99 respectively.

4.52 In terms of consumer bills, a higher level of resilience with higher capital employed increases the EBIT allowance, but it reduces the risk of failure and the expected costs of failure for the notional supplier. We have analysed these costs for the P75, P95, and P99 resilience levels, and found that P95 resilience provides the lowest overall cost. This is because the combination of return on working capital and expected cost of failure is lower at the P95 level for the notional supplier in comparison to P75 or P99.[33]

4.53 We also consider a P95 level of resilience for the notional supplier to be aligned with the approach adopted in our Strengthening Financial Resilience consultation, which set out that suppliers should be capitalised to withstand 'severe but plausible' conditions.[34]

4.54 The combination of our analysis and the alignment with the work on financial resilience leads us to use a P95 estimate for working capital.

4.55 The metric we choose for estimating working capital in the P95 scenario is the average over a period of one year starting in July 2023. We use a single year as we consider it is too uncertain to estimate working capital beyond a one year forward curve horizon. We use the average working capital rather than the peak

[33] The methodology behind this analysis compares the total expected cost to consumers of different working capital levels. The cost of working capital (including fixed assets, excluding collateral) is calculated using the 12.2% cost of capital. The probability of failure for a supplier with capital sufficient for a 1-in-4 price shock is 25%, as this is how often we may expect prices to be more extreme than the supplier has sufficient capital for. The cost of failure is estimated as the proportion of total capital employed that is lost in insolvency.
[34] Ofgem (2022), "Statutory Consultation - Strengthening Financial Resilience". https://www.ofgem.gov.uk/sites/default/files/2022-11/FINAL%20FRC%20Financial%20Resilience%20Stat%20Con%20-%2014.51.pdf

value within that year, which is affected by the initial equity needed to keep the notional supplier financeable. We consider using the average working capital metric avoids overcompensation, as suppliers could manage their finances based on predictable direct debit payment seasonality.[35] Our view of working capital already factors in high levels of resilience by accounting for a P95 scenarios of wholesale prices, volume risk, and backwardation. We note the calculation of a P95 is an uncertain approximation, but a necessary one in the context of setting an EBIT allowance.

Other considerations

4.56 One supplier said the level of capital required could vary depending on the size of the supplier. They suggested accounting for those differences within the EBIT allowance to enable a level playing field.

4.57 As with other cap allowances, the Act requires setting one allowance for all suppliers, so it is therefore not possible for us to tailor the EBIT allowance based on individual suppliers' characteristics.

Question

Q3: Do you agree with our approach to estimating working capital? If not, why not? Please explain your reasoning.

Collateral capital

Context

4.58 Collateral is the money a supplier, or an intermediary on its behalf, may be required to deposit to cover certain activities such as network, balancing and wholesale liabilities. Suppliers procuring energy via an intermediary – as opposed to trading directly – can have some or all their collateral requirements covered by their trading fees.

4.59 In our November consultation, we sought additional information on collateral posted by suppliers, including a breakdown between the different types of

[35] Our assumptions regarding customer credit balances for the notional suppliers is that the average balance over the period is zero, reflecting our anticipation that the notional supplier should not finance its activities through systematically high direct debit charges.

collateral. We also asked about the quantitative link between collateral, wholesale prices and volatility.

4.60 We further explored the different types of assets used by suppliers to finance their collateral costs including cash[36], letter of credits (LOCs) and parent company guarantees (PCGs). This aimed to better understand how collateral is financed in practice and the actual costs for suppliers.

4.61 We considered four options to take collateral into account in the cap:

1. Exclude collateral from the capital employed calculation
2. Include collateral in the capital employed calculation
3. Include collateral fees as an operating cost allowance
4. Hybrid approach (apportioning collateral costs between the EBIT and other cap allowances)

4.62 We also enquired about the difference in collateral requirements for trading on exchanges vs on over-the-counter (OTC) markets. We asked stakeholders whether they see a link between collateral and risk capital.

4.63 In parallel to the November consultation we issued a request for information (RFI) which asked suppliers for collateral posted per consumer per month. The RFI covered the October 2020 to October 2022 period. We asked suppliers trading via an intermediary to provide additional information on their trading arrangements and associated fees.

Minded-to decision

4.64 We are minded to include collateral as part of capital employed (option 2), amounting to £165 of capital employed per SVT customer in cap period 11a. The figure is derived from the RFI data and is based on the highest average amount of collateral posted by a non-vertically integrated supplier calculated over 2021 and 2022 using monthly observations.

[36] In this context, we refer to cash as a type of liquid asset (I-e bank deposit) rather than as a method of payment for goods or services. Unlike expenses, cash used as collateral is recovered by suppliers at the expiry of the contract for which collateral is posted.

Summary of responses

Setting overall collateral levels

4.65 Stakeholders re-iterated that collateral requirements, particularly wholesale collateral, have strongly increased over the past few years. Several suppliers mentioned that initial margin requirements on exchange exceeded 70% through 2022.[37] Another respondent highlighted similar trends for network and balancing collateral.[38] Most started posting variation margins, highlighting this impact may not be fully reflected in the RFI submissions.[39]

4.66 Many suppliers highlighted that it was difficult for them to provide collateral figures for their SVT customers only. This is because collateral positions are aggregated, with figures only available for all domestic customers, or sometimes for all customers including non-domestic. As such some suppliers provided per energy volume or per customer estimates as part of the RFI.

4.67 The majority of suppliers procure wholesale energy via an intermediary. Trading agreements can be collateral free or require collateral on top of trading fees. They usually only cover wholesale volumes, meaning that suppliers pay for regulatory and balancing collateral separately. Arrangements often include other services such as credit support, with the specific cost of trading difficult to isolate from the fee. As a result, three suppliers mentioned that RFI data may not be suitable to inform our calculation for collateral capital.

4.68 Respondents confirmed that there is link between wholesale prices, volatility and collateral requirements. However, they highlighted that the relationship is not linear and that it was not possible to provide an exact quantitative relationship. This is in part because external bodies (ICE, Elexon) take into account other elements such as risk of credit default to set their collateral requirements.

The financing of collateral

4.69 Trading and regulatory bodies accept different types of assets as collateral, such as cash, LOCs and PCGs. Most stakeholders mentioned that collateral is predominantly financed with cash assets. This is partly because some types of collateral (such as variation margins) can only be paid in cash. One vertically

[37] Meaning that 70% of a trade value had to be collateralised
[38] For instance, the credit assessment price used by BSC/Elexon to determine collateral requirements increased from an average of £50/MWh in 2018-2020 to a peak of £450/MWh in 2022
[39] This is the difference between a contract strike price and the contract's current market value

integrated supplier mentioned that it prefers paying in cash as it is more flexible/liquid than LOCs and PCGs.

4.70 A supplier mentioned that some suppliers that do not have a collateral free arrangement when trading with an intermediary and may be required to post wholesale collateral above a certain level. This is because trading partners may require additional liquidity to meet their own growing collateral requirements to trade on behalf of suppliers.

4.71 Several stakeholders commented that PCGs are not available to non-vertically integrated suppliers. They added that only vertically integrated suppliers can leverage credit ratings of their parent company (particularly their generation arm) to secure credit support via PCGs.

4.72 Several respondents disagreed with our proposal that PCGs may not amount to capital directly employed by suppliers. They highlighted that PCGs are provided at a cost to the supplier's parent company, and that the decision on how this cost should be allocated should be a business rather than regulatory decision. They explained that if PCGs were not recognised as a cost, this would further deter investment into the energy retail sector, with diversified groups prioritising capital injection in other segments of their business.

4.73 A few participants mentioned that, while in theory available to all suppliers, LOCs are not in practice used by smaller suppliers. This is because lenders may charge prohibitive interest rates to arrange LOCs for suppliers not backed by a larger, credit rated group. LOCs interest rates for independent suppliers would be at least as high as their cost of capital. One participant added that even large integrated suppliers would not have access to LOCs at a competitive rate if they were operating on a standalone basis.

4.74 One respondent flagged that the Bank of England's Energy Markets Financing Scheme (EMFS) requires participants to have a credit rating above BB-/Ba3. Given independent suppliers have a lower credit rating than BB-/Ba3, the scheme would not be available to them and commercial arrangements would require higher rates than the EMFS.

<u>Collateral treatment for the notional supplier</u>

4.75 Several stakeholders mentioned that the consultation should use a model to calculate collateral requirements for the notional supplier instead of seeking actual market data. One stakeholder mentioned such a model could make

assumptions with regards to future wholesale price volatility to infer future requirements.

4.76 Three suppliers specified that the notional supplier is assumed to be directly undertaking trading activities and that stepping away from this approach would undermine the credibility of the notional supplier model and have consequences for the future of the retail market. Nevertheless, one supplier admitted that temporary incentives (lower costs) may exist for suppliers to trade via an intermediary.

4.77 A few participants mentioned that several legacy third party arrangements may not be extended past their current expiry dates. In particular collateral free trading agreements may no longer be available to new market entrants due to increased wholesale prices and volatility. These arrangements often include covenants, such as allowing the trading partner to acquire a security over the supplier's business or the obligation for the supplier to maintain specific financial ratios. Covenants generate direct or indirect costs which should be factored into our assessment.

4.78 Three suppliers maintained that new trading agreements may include a collateral free allowance, but it would likely be small with optional or compulsory margin calls when trading positions exceed a predefined market exposure. Some further said that assuming that trading agreements could be collateral free would set the cost benchmark at a level not accessible to most market participants, and thus erode the sustainability of standalone supplier business models.

Accounting of collateral within the cap

4.79 Nearly all stakeholders which addressed the question rejected option 1 to exclude collateral from the cap's costs calculations. They maintained collateral represents a major cost for suppliers and excluding them would undermine retail resilience. They added that it was no longer possible for suppliers to secure new collateral free trading arrangements. Only one respondent favoured excluding collateral, arguing that the main players finance them through LOCs/PCGs and that a collateral allowance would overcompensate suppliers for costs not directly incurred by the retail arm of integrated groups.

4.80 Most stakeholders expressed a preference for option 2, collateral to be included with the capital employed estimate of the EBIT allowance. This is because collateral is predominantly financed with cash assets, which is a form of capital. They favoured this approach as it is most consistent with how collateral is

currently being treated by the cap. They also mention that any collateral amount added to capital employed should be remunerated based on 100% equity financed at the cost of capital. One supplier said that collateral should be covered by a specific cost category within capital employed. This is both because collateral capital is tied in and suppliers should have funds readily available in case they are asked to post margins at a short notice.

4.81 One respondent said that including capital employed into the operating cost (OPEX) allowance would require an immediate update to the allowance in parallel to the EBIT consultation to avoid gaps in suppliers being able to recover their costs. One respondent said that the indirect cost component within OPEX allowance may already include collateral costs and therefore could lead to double counting.

4.82 One stakeholder mentioned a preference for the hybrid option (option 4), with collateral costs split between capital employed and the OPEX allowance. This would allow to differentiate between collateral financed in cash (included in capital employed) or with LOCs/PCGs (included in OPEX). Another respondent objected that this may complicate calculations with no guarantee for more accurate results given the lack of data granularity.

Other considerations

4.83 We received mixed answers with regards to the link between collateral and risk capital. Several stakeholders highlighted that collateral capital is a form of risk capital. This is because it provides protection against risks, including credit risks. Employing collateral can therefore reduce the need for risk capital in other parts of the business. Another respondent mentioned that risk capital can be regarded as additional working capital required to operate under a high stress environment. One stakeholder mentioned that collateral is merely a route to market, part of the working capital requirements. On the other hand, one respondent did not see a link between collateral and risk capital. This is because collateral capital represents third party's exposure to an energy supplier, while risk capital relates to risks faced by the supplier itself.

4.84 One supplier mentioned that collateral capital does not appear within the suppliers' balance sheet and as such they do not have full control over it. It was therefore said that growing collateral requirements increased the financial risks faced by suppliers.

4.85 The majority of suppliers trade both on exchanges and over-the-counter (OTC) to procure wholesale energy. OTC trading is done on a bilateral basis, rather than through a centralised authority. Requirements differ given OTC contracts are more bespoke than on exchange. However, one respondent said wholesale price and volatility have brought trading conditions on exchanges and OTC closer together. Three stakeholders mentioned that trading on OTC is mostly done on a collateral free basis. Suppliers often trade with counterparties with a comparable credit rating, sometimes backed by PCGs. Variation margins are not always required. Suppliers can mitigate credit risks by setting a maximum trade exposure with a specific counterparty. When the limit is exceeded, suppliers can turn to exchanges to source additional volumes.

4.86 One stakeholder suggested the creation of a levelisation fund which would spread out the cost of collateralisation evenly across all suppliers.

4.87 Three suppliers mentioned that collateral has to be paid for other government obligations such as payments to the low carbon contract company (LCCC).

Considerations

Setting overall collateral levels and its treatment for the notional supplier

4.88 We used RFI data to inform our estimates for collateral posted by the notional supplier. The RFI responses contain information on wholesale, balancing and network collateral as well as fees paid by suppliers trading via an intermediary. We have aggregated these figures and expressed them as capital employed per customer. In our approach, trading fees are capitalised. This means that annual fees are treated as a cost of capital equivalent to infer a capital employed figure, which allowed for cost comparisons with suppliers trading directly.[40] In the section below, unless specified otherwise, when we refer to collateral values we are summing over wholesale (calculated as capitalised trading fees where relevant), network and balancing collateral.

4.89 RFI data showed a wide range of collateral costs between suppliers, with monthly variations exceeding £1,000 of capital employed per customer for vertically integrated suppliers. As mentioned before, several suppliers explained they could not break down collateral specifically for SVT customers, hence provided data for

[40] Where trading fees are applied on a per MWh basis, these are transformed into a per customer values using typical consumption values and quarterly demand shares. Fee values per customer are then capitalised using a cost of capital of 12.2%, as estimated in the next chapter.

their domestic customers instead. Some suppliers shared data for all their customers, which could inflate results particularly for those with a large non-domestic customer base. We also anticipate that vertically integrated suppliers have some ability to net off collateral at the group level, hence we consider their estimates are likely to represent theoretical costs for their domestic customers rather than actual costs faced by them.

4.90 Using market average which includes vertically integrated supplier may thus artificially inflate collateral numbers, which led us to narrow down our analysis to data provided by non-vertically integrated suppliers. This allows us to focus on the notional costs of supply, in line with much of the wider cap methodology. However, none of the independent suppliers which responded to the RFI trade on their own account. Our benchmark therefore reflects the costs of a supplier trading with an intermediary. This is different to the previous cap assumption, where the notional supplier was assumed to trade directly. However, we have regards to the need to set the cap at a level which enables holders of supply licences to compete effectively for domestic supply contracts, rather than trying to replicate costs of a specific business model. Given the previous assumption no longer reflects current market conditions, we have adapted our approach to reflect observed behaviour in the market in which non-vertically integrated supplier choose to post wholesale collateral through a trading intermediary and pay a fee instead of posting wholesale collateral directly.

4.91 Trading fees tend to be fixed either per customer or on a volumetric basis, meaning that costs of suppliers trading with an intermediary are more stable – they were higher than market average in 2021 when collateral requirements were lower, and lower than market average in 2022 when collateral requirements increased. This in turn lowers exposure of suppliers trading with an intermediary to price volatility impacting collateral requirements. We consider using more stable, mainly fee based costs is more appropriate for setting a forward-looking EBIT allowance.

4.92 We appreciate feedback that some collateral free trade arrangement may no longer be available to new entrants, but have seen no direct evidence that this may be the case. In addition, suppliers with collateral free trading have a sizeable market share – around 25% of total SVT customers in the sample we received – suggesting that this would amount to an efficient but achievable cost benchmark.

4.93 We acknowledge that fee-paying suppliers have also been impacted by increasing collateral costs over the past twelve months. This is because some trading

arrangements are not collateral free, and even suppliers with collateral-free wholesale trading need to post collateral for their network and balancing activities. This is why we suggest using a conservative benchmark in the form of the highest monthly average collateral figure reported by a non-vertically integrated suppliers over the two-year period, amounting to around £165 of capital employed per customer.[41] This provides buffer should trading fee arrangements be re-negotiated in the future.

4.94 We appreciate that trading fees may include different services such as short-term credit facilities. On one hand, this implies that collateral costs from suppliers trading with an intermediary could be lower than trading fees. On the other hand, trading agreements include covenants such as rights for the intermediary over a supplier's business which come at a cost to suppliers. These costs could be deducted from trading fees, suggesting that collateral costs could be underestimated by the fee. In light of lack of supporting evidence, we assume that the overall impact is neutral and have used trading fees as a proxy to suppliers' wholesale collateral costs.

4.95 We are aware that many suppliers are confronted with growing variation margins payments in a declining wholesale price environment. However, declining prices also contribute to downward pressure on initial margins. Any updated EBIT allowance is now most likely to be reflected in the price cap from October 2023. If future prices continue to decline, variation margins will be based on lower contract prices, hence mitigating impact. If future prices increase, factoring in an uplift for variation margins will overcompensate suppliers, who will no longer post them on legacy contracts. In this regard, using an average of collateral over a two-year period (based on monthly observations) is more likely to soften the impact of market fluctuations and better reflect future requirements.

4.96 In addition as we propose to set the assumed level of collateral capital with reference to non-vertically integrated suppliers, whose wholesale collateral is typically covered through trading fees, and because wholesale collateral represents the majority of total collateral we do not expect our assessment of collateral to change significantly over time.

[41] Rounded up to the nearest £5.

4.97 We would encourage suppliers, particularly those trading via an intermediary, to let us know via their consultation response if there have been material changes to their collateral requirements since October 2022.

4.98 We considered suggestions to develop a model to determine collateral requirements for SVT customers. However, we are not convinced it would improve upon the use of market data to define collateral employed. For instance, a model would rely on uncertain assumptions such as future price volatility to infer margins. Furthermore, such model assumes wholesale collateral being posted fully in cash, which is not the case of the non-vertically integrated suppliers who responded to the RFI. Using such a model overlooks the ability of trading intermediaries or vertically integrated suppliers to net-off supply positions against a generation portfolio, and estimates suppliers' collateral on a gross basis which is likely to overestimate collateral costs faced by existing market participants.

Accounting of collateral within the cap

4.99 We are minded to include collateral costs within the capital employed component of the EBIT allowance (option 2). This reflects the fact that a proportion of collateral is paid in cash even when using a trading intermediary. Although we could account for trading intermediary fees as part of the OPEX or wholesale allowances, this may add unnecessary complexity. Therefore, we suggest including trading fees with collateral in capital employed.

4.100 We agree with stakeholders that LOCs/PCGs represent a cost for companies, even if an indirect one. In the context of this EBIT review, we therefore consider that option 1 would not be appropriate as it would not include any allowance for collateral in the cap. The indirect costs covered by the operating cost allowance do not include collateral, which reduces the risk of double counting.

4.101 While we did not consult on LOCs/PCGs interest rates, we understand that suppliers which are part of a larger group are able to leverage their parent company's credit rating to secure guarantees at a rate below our assumed cost of capital (12.2%). However, some independent suppliers would likely be asked for rates above our assumed cost of capital given their lower credit score. We consider that using the CoC as a benchmark for LOCs/PCGs costs would be appropriate. In the context of this work on EBIT, we consider that using our assumed cost of capital is a reasonable and prudent assumption for the cost of financing collateral.

4.102 We do not favour option 3 to include collateral in the operating cost allowance. This would also require a parallel review of the operating cost allowance, which is currently not expected to progress before winter 2024/25.[42] Including collateral in the OPEX allowance may create a temporary gap in suppliers' ability to recover their costs. An interim compensation may be an alternative, but this would create additional administrative burden and be less efficient. Similar issues would arise if collateral was included in other allowance such as the wholesale allowance.

4.103 The hybrid approach (option 4) may more accurately reflect that collateral is in practice paid with different types of assets. However, consultation responses did not allow us to precisely split how collateral was financed over the two-year period, with significant differences reported by suppliers. A split may have no impact on the overall cap level, as the same amount of collateral would be divided between different allowances. The added challenge of updating several allowances is unlikely to yield a tangible benefit.

Other considerations

4.104 We have noted stakeholders' comments that trading over-the-counter does not often involve collateralisation, as participants agree on a maximum trade exposure with counterparties to reduce credit risk. The RFI asked about wholesale collateral posted by suppliers and was agnostic on whether they were posted on exchange or OTC. Hence, we assume data includes collateral for both exchanges and OTC markets and we do not model an uplift for OTC collateral.

4.105 We asked about the relationship between collateral capital and risk capital to rule out the possibility of double counting. Indeed, collateral capital protects suppliers against some risks, for instance credit risk, meaning that it is a form of risk capital and can lower risk capital requirements in other areas of business. Likewise, collateral capital can be seen as a distinct form of working capital needed for businesses to operate. We therefore consider that similarly to the CMA, having both collateral and working capital within capital employed is unlikely to lead to double counting.

4.106 We appreciate that collateral capital may need to be available at short notice, particularly for some suppliers which have to post wholesale margin calls. We consider collateral as a separate source of capital employed, acknowledging that capital should be earmarked for collateral and cannot be deployed in other illiquid

[42] Ofgem (2022), "Price Cap - Programme of Work: Update", https://www.ofgem.gov.uk/publications/price-cap-programme-work-update

parts of a supplier business. We consider that our conservative choice of using a two-year average of the collateral paid by the highest cost non-vertically integrated supplier covers this eventuality. The creation of a levelisation fund may allow suppliers more exposed to high collateral requirements to benefit from additional resources. However, considering such a proposal this is outside the scope of this consultation.

4.107 A couple of suppliers mentioned other collateral are posted by suppliers, mainly to finance policy costs such as contracts for difference and capacity markets. We consider that our consultation has captured the main sources of collateral paid by suppliers, although smaller contributions may not have been included in RFI responses. Our assessment reveals that outstanding collateral is very small, representing below £3 of capital employed by customer.

Question

Q4: Do you agree with our approach to estimating collateral? If not, why not? Please explain your reasoning.

Q5: For suppliers trading via an intermediary, how has your wholesale collateral requirements changed since October 2022?

5. Cost of capital

This chapter sets out our approach to estimating the pre-tax nominal Cost of Capital (CoC) of a non-vertically integrated energy supplier. In it we consider our overall approach to modelling the CoC and then also consider our approach to each of the relevant parameters, including the risk-free rate (RFR), Total Market Return (TMR), measure of systematic risk (beta) and tax-rate. Through this we establish a plausible range for the CoC of 11.5% to 12.9%. We conclude by setting out how we propose to select the middle of this range (12.2%), consistent with established regulatory practice.

5.1 The CoC is the minimum rate of return investors expect for providing capital to a company. In the context of setting an EBIT margin the CoC is used to determine the rate of return suppliers should make on their capital employed. By setting the Return on Capital Employed (ROCE) equal to the CoC, suppliers should be able to attract the funding needed to finance their businesses.

5.2 When setting the first cap in 2018, we used the CMA's estimate of the CoC for a notional supplier. The CMA estimated a nominal pre-tax Weighted Average Cost of Capital (WACC) of 10%. In practice, this was a cost of equity figure as the CMA assumed a 100% equity financed supplier.

5.3 In our August 2022 consultation we set out a high-level approach to estimating a CoC. Alongside that consultation, we also published work commissioned from the consultancy CEPA which sought to update and refine the CMA's CoC estimate to reflect newer data.[43] In our November 2022 consultation we set out more detailed CoC proposals and sought stakeholder views on different approaches, but we did not provide a minded-to CoC value.

5.4 In this consultation we set out clear minded-to positions on the use of the Capital Asset Pricing Model (CAPM), each of the CAPM parameters, the resulting CoC range and a final point estimate.

Summary

5.5 Table 1 below provides a summary of our proposed approach to estimating the CoC of a non-vertically integrated, equity financed notional energy supplier.

[43] CEPA (2022), "Default Tariff Cap cost of capital", https://www.ofgem.gov.uk/sites/default/files/2022-08/CEPAReport_DTCCostofCapital_2022.08.24.pdf

5.6 These proposals are a refinement of the positions and options presented in the November 2022 consultation. They key change compared to the proposals in that consultation is the use of a higher asset beta range of 1.0 to 1.2 (compared to 0.7 to 0.8 previously).

Table 1: Summary of Cost of Capital proposals and rationales

Issue	Sub-issue	Proposal/Options	Rationale
Use of CAPM	N/A	Use a standard CAPM framework	CAPM is used in almost all regulatory CoC decisions and is recommended in UK Regulators Network (UKRN) recommendations.
Risk-free rate	Choice of benchmark	UK government gilts	Common practice supported by regulatory precedent and UKRN guidance.
	Inflation risk	Account for inflation risk by using nominal gilt yields	Even with EBIT scaling with the overall DTC level suppliers still face inflation risk, it should therefore be incorporated into EBIT. Doing so via nominal gilt yields is in line with the CMA and CEPA approaches.
	Maturity of gilts	Use 10- year gilt maturities	A reasonably long maturity, reflecting the nature of equity investments. Consistent with UKRN guidance and CMA cost of equity approaches in other sectors.
	Observation period	One-month average of daily spot yields with analysis cut-off date two months prior to relevant cap period	Use of recent gilts is in line with UKRN guidance and other regulatory precedents including RIIO-2.
	Adjustments	Inflation adjustments using OBR forecasts	Use of OBR forecasts for inflation adjustment in line with common practice and UKRN guidance.
	Forecast error	Annual updates via amended EBIT sheet of DTC overview model	With yields subject to volatility and forward rates having low predictive power, annual updates using recent observed yields ensures RFR remains reflective of current circumstances.
Total Market Returns	N/A	TMR value of 6.5%, as used in the RIIO-2 price controls	RIIO-2 TMR has been subject to robust consideration.
Asset beta	N/A	Asset beta range of 1.0 to 1.2, with a point estimate of 1.1.	Reflects that risks suppliers face have increased since 2019. Range based on the evolution of Good Energy's asset beta since 2019, CEPA's independent assessment, narrative stakeholder arguments and regulatory judgement under uncertainty.
Tax-rate	N/A	Corporation tax rate of 25% with annual updates	In line with proposal on RFR, ensures tax rate remains reflective of current circumstances.

5.7 Taking these proposals together results in a CoC between 11.5% and 12.9%, as set out below.

Table 2: CAPM calculation (gilt yields from March 2023)

Ref	Parameter	Low	High
A	Nominal risk-free rate [1]	3.5%	3.5%
B	Real risk-free rate [1,2]	1.4%	1.4%
C	Total Market Returns [3]	6.5%	6.5%
D	Equity Risk Premium (= C – B)	5.1%	5.1%
E	Asset beta	1.0	1.2
F	Gearing (%)	0%	0%
G	Equity beta (= E / (1 – F))	1.0	1.2
H	Nominal post-tax cost of equity (%) (= A + (D x G))	8.6%	9.7%
J	Tax rate (%)	25	25
K	**Nominal pre-tax cost of equity (= H / (1 – J))**	**11.5%**	**12.9%**

1. Average daily spot yields on 10-year gilts in March 2023.
2. RPI-CPI wedge of 1.21% calculated as the difference between OBR RPI and CPI 5-year ahead forecasts from March 2023.[44]
3. Total Market Returns as used in RIIO-2 ED2 final determinations.

5.8 In translating this range into a point estimate we propose to follow UKRN guidance and use the mid-point. This reflects our assessment that the values in this range are symmetrically distributed. **Using average gilt yields from March 2023 this results in a CoC estimate of 12.2%**. This should be viewed as indicative given our intention to use average gilt yields from July 2023 when setting the final EBIT allowance.[45]

[44] OBR (2023), "Historical official forecasts database", "CPI" and "RPI" sheets https://obr.uk/download/historical-official-forecasts-database/
[45] On the assumption that the new allowance comes into effect on 1 October 2023.

Use of CAPM

Context

5.9 The CAPM is the primary approach used by regulators to estimate the cost of equity. Under the CAPM approach, the cost of equity is estimated as a function of the RFR, the expected return of the market above the risk-free rate, ie the equity risk premium (ERP), and the systematic risk of the relevant activity, ie the equity beta (βe). The CMA used a CAPM approach in its 2016 EMI.

5.10 However, just with any model, CAPM is a simplified and stylised representation of reality. Different approaches to estimating the cost of capital do exist, each with their own set of assumptions. For completeness we therefore seek to establish whether there is any substantive reason to deviate from the standard CAPM approach.

Minded-to position

5.11 We propose to use a standard CAPM framework to estimate the nominal pre-tax cost equity of a notional energy retail supplier.[46]

Overview of responses

5.12 No stakeholder explicitly advocated in favour of a named alternative model to CAPM for estimating the cost of capital. However, some stakeholders did raise concerns over the assumptions which sit behind CAPM, notably related to the treatment of idiosyncratic risks. Other stakeholders also expressed reservations about the sole reliance on CAPM to set the cost of capital component of the EBIT calculation.

Reflecting idiosyncratic risk

5.13 One key reservation some stakeholders raised was the assumption under CAPM that only exposure to systematic risks influenced a company's cost of capital.[47]

5.14 Several stakeholders stated that this assumption was not realistic. One stakeholder said that idiosyncratic risks impact investors' expected returns and

[46] The cost of equity in a standard CAPM framework is assumed to described by the following equation: Cost of Equity = Risk-free rate + (Equity risk premium x β_e); where the Equity risk premium = (Total Market Return – Risk-free rate).

[47] Systematic risks are those risks which are shared across the entire market and are not company or sector specific in nature. Risks unrelated to the wider market are often referred to as idiosyncratic risks and are assumed to not impact the return required by investors.

therefore the cost of capital. The stakeholder stated that the risks created by the price cap design are unusual and, in some cases, unique but it would be wrong to exclude these risks when considering the cost of capital on this basis. The stakeholder therefore disagreed with our rejection in the November 2022 consultation of a call to explore extensions to the CAPM approach which explicitly incorporate idiosyncratic risk.

5.15 In contrast one stakeholder accepted that idiosyncratic risk is not captured by CAPM and that Ofgem is therefore right not to attempt to incorporate it into the CAPM parameters, notably beta. However, the stakeholder also questioned the underlying assumption which leads to idiosyncratic risks not being captured by CAPM – that investors hold a diversified portfolio. It stated that for private firms, like many independent suppliers, this assumption may not hold as often the only investor is the owner. The owner may have much of their capital invested only in that one business. As a result, this stakeholder told us that consideration should be given to how idiosyncratic risk is, or is not, compensated for in other elements of the price cap outside of the EBIT allowance.

5.16 On the other hand, an advisor to one supplier stated that it was hard to consider of an idiosyncratic risk affecting the energy supply industry. This came from the observation that energy prices have been a key driver of the wider macroeconomic environment as well as main determinant of energy suppliers returns and therefore all the risks suppliers currently face had at least some systematic component. This implies less of a clear boundary between what might have traditionally been considered an idiosyncratic versus systematic risk and therefore a need to consider whether our approach to estimating the beta CAPM parameter reflected this change.

Reliance on CAPM

5.17 Two stakeholders noted differences between the situations CAPM is often applied to by regulators and the current energy supplier market. The differences highlighted include the level of competition and the relatively asset-light nature of energy suppliers. These stakeholders said that the assumptions behind CAPM deviate further away from reality for energy suppliers than they do when applied to the likes of regulated monopolies.

5.18 As a result, these stakeholders told us that we should not overly rely on the conclusions of CAPM and should, for example, also seek to benchmark against other asset light industries or against the cost of capital of independent suppliers

as reported directly or via conversations with financing institutions. This wider set of information would serve as a sense check on the outputs of a CAPM approach.

Considerations

Reflecting idiosyncratic risk

5.19 To the extent that stakeholders are correct, and the increase in risks which suppliers now face are systematic in nature, then this should be reflected in evidence we use to help estimate the CAPM parameter which measures systematic risk (the equity beta). The relationship between energy prices and the wider macroeconomic situation does not therefore point towards deviating from CAPM, as this dynamic will be reflected in the beta parameter.

5.20 There may be reasons to consider idiosyncratic risks could influence suppliers cost of capital, for example because investments in suppliers may not be part of a wider diversified portfolio. However, for the reasons set out below, we do not consider adjustments to EBIT to be the appropriate means of reflecting this potential reality.

5.21 We set out in our November 2022 consultation that we did not see a strong case for attempting to incorporate measures of idiosyncratic risk within the CAPM. This is because there is no well established method for doing so, and no analytically robust way of making ad hoc adjustments to beta parameter to reflect these risks. This remains our position. We discuss in more detail our proposed approach to estimating the beta parameter later in this document.

5.22 Several energy supplier specific (ie idiosyncratic) risks are already captured by the wider design of the price cap and other supplementary policies. Just as one example, the risk that backwardation exceeds contango is covered by an ex-ante allowance for backwardation costs. This consultation focuses on the appropriate design and calculation of the EBIT allowance. The need, or otherwise, for new cap allowances to be introduced to reflect specific risks or the detailed consideration of existing cap allowances is beyond the scope of this review. In this document we therefore do not consider how specific idiosyncratic risks are, or could be, differently captured outside of the EBIT allowance. Stakeholders can see our

near-term, medium-term and long-term workstream priorities for the price cap in our published Programme of Work letter.[48]

Reliance on CAPM

5.23 We accept that the application of CAPM to the energy supplier market has its own difficulties, including a lack of data and the deviation of underlying assumptions from real-world processes. We described the limitations of CAPM in detail in our November consultation. However, in the absence of any clearly superior alternative model we maintain that continuing to use CAPM in line with the CMA's original approach remains appropriate.

5.24 Supplementing the output of a CAPM approach with wider contextual information, from benchmarking exercises or external qualitative judgements, may have merit. A key difficulty however is that we are attempting to estimate the cost of capital of a notional supplier with specific characteristics, such as independence from other revenue sources and 100% equity funding. Also, in establishing a level of capital employed we assume our notional suppliers holds sufficient capital employed to remain cash positive under high price scenarios.

5.25 Even if it were possible to directly obtain reliable cost of capital estimates from current suppliers or financing institutions, it is not clear that these would be reflective of our notional supplier or that these are not unduly subjective. Despite this, we would encourage stakeholders to provide any wider information they consider may be useful in helping sense check the output of our CAPM approach.

5.26 Overall, we consider CAPM to remain the most suitable and well established framework to estimate the cost of capital in the context of setting an EBIT allowance, with no better alternative being suggested as part of responses to this consultation.

CAPM components: Risk-free rate

Context

5.27 The RFR provides the foundation of the cost of equity under the CAPM framework. It aims to estimate the required return on a riskless asset and is generally used twice in the CAPM equation. First as the base level of return investors require and

[48] Ofgem (2023), "Price cap – Programme of Work: Update https://www.ofgem.gov.uk/publications/price-cap-programme-work-update

secondly to identify the portion of equity returns which are affected by a company's expose to systematic risk – the ERP.

5.28 The RFR is an economy-wide figure and does not vary depending on the sector being considered. A truly riskless asset does not exist, so proxies must be found. The most common proxies used are government bonds, but other debt instruments are also sometimes considered.

5.29 Once a suitable proxy asset is found, invariably some form of debt, there are a series of decisions which follow. These include the maturity of the asset, the period over which the rate of return of the asset is observed, whether any inflation or other adjustments are made to the rate of return and if/how uncertainty about future movements in the rate of return will be factored in when setting the RFR.

5.30 Below we set out our minded-to position on each of these questions. Under these positions, and using average gilts yields over March 2023 for illustration, they imply a nominal RFR of 3.5% and a CPI real RFR of 1.4%. As set out below, if an updated EBIT allowance was introduced for cap period 11a (October-December 2023), we are minded to use average gilt yields over July 2023 to set RFR. As such these values should only be considered indicative.

Minded-to positions

Choice of benchmark

5.31 We propose to use UK government gilts as the basis of our estimate of the RFR.

5.32 We do not propose to incorporate evidence from other assets, such as AAA-rated corporate bonds.

Inflation risk

5.33 We propose to maintain the existing CMA approach, replicated in the CEPA analysis, and incorporate compensation for inflation risk by using nominal gilts to estimate the standalone RFR parameter in the CAPM equation.

Maturity

5.34 We propose to use government bonds with 10-years to maturity.

Observation period

5.35 We propose to use a 1-month average of the daily spot yields observed prior to the analysis cut-off date. Where the analysis cut-off date will be 2-months prior to the beginning of the relevant quarterly cap.

5.36 For example, if an updated EBIT allowance is introduced for the October to December 2023 cap period, the analysis cut-off date would be the 1st of August 2023, meaning an observation period of July 2023.

Adjustments

5.37 We propose to adjust the RPI based yields on index-linked gilts so that they are expressed in CPI terms. We will calculate this adjustment using the difference between the five-year ahead forecasts of CPI and RPI as published by the Office for Budget Responsibility (OBR).

5.38 Using OBRs March 2023 forecast this results in an estimated RPI-CPI wedge of 1.21ppts. In line with the analysis cut-off date for the RFR observation period, for the final RPI-CPI wedge value we propose to use the most recent OBR forecast available 2-months prior to the beginning of the relevant quarterly cap period.

5.39 We do not propose making any other adjustments to remove potential other drivers of the returns on government bonds, such as the "convenience" premium. This is in line with our proposal to not consider evidence from AAA-rate corporate bonds when setting the RFR.

Forecast error

5.40 We propose to update the RFR estimate annually by using the latest observed yields. We will do this via updating values in an amended EBIT sheet ('3k EBIT') in the Default Tariff Cap model published alongside each quarterly price cap announcement.

5.41 A draft of the amended Default Tariff Cap model and associated EBIT sheet has been published alongside this consultation.[49]

Overview of responses

Choice of benchmark

5.42 We received limited additional response from stakeholders on the choice of RFR benchmark asset. A report commissioned by an industry association used yields on government bonds when estimating their RFR, in line with the benchmark asset we are proposing.

[49] Ofgem (2023), "Draft Overview model – Default tariff cap level", https://www.ofgem.gov.uk/publications/price-cap-statutory-consultation-amending-methodology-setting-earnings-interest-and-tax-ebit-allowance

5.43 Several suppliers in response to our August 2022 EBIT consultation told us that we should not rely on government bonds alone and should also incorporate evidence from AAA-rated corporate bonds as well.

Inflation risk

5.44 Several stakeholders told us that suppliers are exposed to inflation risk and that therefore some compensation for this exposure should be factored into the EBIT calculation.

5.45 Some suppliers did not offer a firm view on how inflation risk should be incorporated. Those suppliers that did tended to agree with the approach and logic set out in the CEPA report published alongside our August 2022 EBIT consultation. One supplier told us that inflation risk should be captured by using nominal gilts to estimate the risk-free rate.

5.46 One stakeholder disagreed with the proposition that suppliers face inflation risk. They told us that as the EBIT allowance is applied as a percentage of other price cap allowances, it scales with changes in the prices suppliers face. They also noted that some cost elements in the price cap are explicitly indexed to inflation.

Maturity

5.47 One report, commissioned by a stakeholder, used 10- and 20-year government gilts when estimating RFR values. Another stakeholder stated that it did not disagree with the use of 10-year gilts, but also considered that it was not necessary to lock in a specific choice on maturity at this stage. It suggested that 5-year gilts could also be considered to reflect short retail asset lives.

5.48 Beyond this most stakeholders did not offer a firm view on the maturity, or range of maturities, of our benchmark assets should be used when estimating the RFR.

Observation period

5.49 One stakeholder commissioned report used average yields over the course of a month when estimating RFR values. In addition, one supplier said that the RFR should be set a small number of months in advance of implementation, implying an observation window near to implementation. Outside of this, stakeholders did not tend to express firm views on this topic.

Adjustments

5.50 Stakeholders did not provide any comments on the appropriate method for adjusting index-linked gilt yields from RPI- to CPI-based. One stakeholder

repeated its objection to our proposal to not include an adjustment to reflect the convenience premium in government bonds.

Forecast error

5.51 Two suppliers expressed a preference for an indexation approach to deal with the movement in the RFR over time. One told us that they favoured a combination of the use of forward rates and indexation. Under this approach, it said that indexation is only used to reflect the inaccuracies in the predictive power of the forward rate adjustment rather than the difference between estimates based on market data in different periods.

5.52 In contrast, two other suppliers suggested that we should use forward rates when setting the RFR. One told us that the CoC should endure for a period of time before requiring revision and that the use of forward rates would enable that. Another said that the criticism of the use of forward rates has usually taken place during period of relative stability of the RFR. They told us that the rate of change in the RFR is greater now than at any time before the financial crisis and as a result historical RFRs will be a less good indication of future rates.

Considerations

Choice of benchmark

5.53 We responded in detail to the suggestion of incorporating evidence from alternative instruments, such as AAA-rate corporate bonds, in our November 2022 EBIT consultation. In summary we concluded that strong regulatory precedent and known issues associated with incorporating evidence from alternative instruments meant that relying only on government bonds when estimating the RFR was reasonable.

5.54 In the absence of further response on this question we consider that the use of UK government gilts, as set out in the November 2022 consultation, remains appropriate.

Inflation risk

5.55 In the November 2022 consultation we described why it might be viewed that suppliers face inflation risk as well as why they might not, we did not express a firm view either way. Reviewing stakeholder responses and after further internal consideration, we now conclude that supplier returns are not automatically protected from inflation.

5.56 The scaling of the EBIT allowance in line with the overall price cap is not equivalent to inflation protecting the returns of suppliers, as said by one stakeholder. This scaling is also not analogous to the inflation indexation of the regulatory asset value (RAV) used in other price protection contexts, as we suggested might be said in our November 2022 consultation.

5.57 Retail energy bills are only one component of inflation, and the price cap just one determinant of those bills. While some allowances are indexed to a measure of inflation, changes in the price cap have primarily been driven by movements in the wholesale prices. Scaling the EBIT allowance with the price cap does not therefore guarantee an inflation protected return.

5.58 A more accurate analogy with the network's context is that scaling EBIT mechanically adjusts the capital employed to reflect the level of capital needed to remain cash positive under our assumed price scenarios given changes in costs. In the networks context the net additions to and depreciation of RAV is pre-specified for each period, generating a profile over time. The EBIT scaling mechanism serves a similar purpose but allows for a profile to be created without this being pre-specified. In the networks context, in addition to having a profile over time, the RAV values are also subject to inflation indexation; which is not the case for EBIT. Given this we conclude that suppliers do face inflation risk despite the scaling of EBIT.

5.59 In our November 2022 consultation we set out how nominal gilt yields inherently include an inflation risk premium. Using nominal gilts to set the RFR will therefore incorporate that premium into the CoC, providing compensation to suppliers for inflation risk.

5.60 However, we also agree with CEPA's judgement that there is no logical basis for the renumeration of inflation risk to scale with the beta parameter. As such, in line with both the CMA and CEPA approaches, we do not propose to incorporate inflation risk in the calculation of the ERP. We propose to use real gilt yields as the basis for estimating the RFR parameter in the ERP calculation.

5.61 Also remaining consistent with the CMA and CEPA methodologies, we propose to estimate the RFR value used in the calculation the ERP parameter using the yields on index-linked (ie real) government bonds. This ensures the ERP value does not incorporate any inflation risk premium and is therefore not scaled by the beta parameter.

5.62 While ILG yields could be adjusted for inflation, resulting in a nominal RFR without any inflation risk premium, this is ultimately unnecessary given the TMR value we propose to use is a real value and so would also have to be adjusted by the same amount – resulting in an unchanged ERP value.

Maturity

5.63 UKRN guidance on CoC states that regulators should use long dated gilts to match the assumed investment horizon in *their* sector and suggest that maturities of ten to twenty years are likely to be suitable for most sectors.[50]

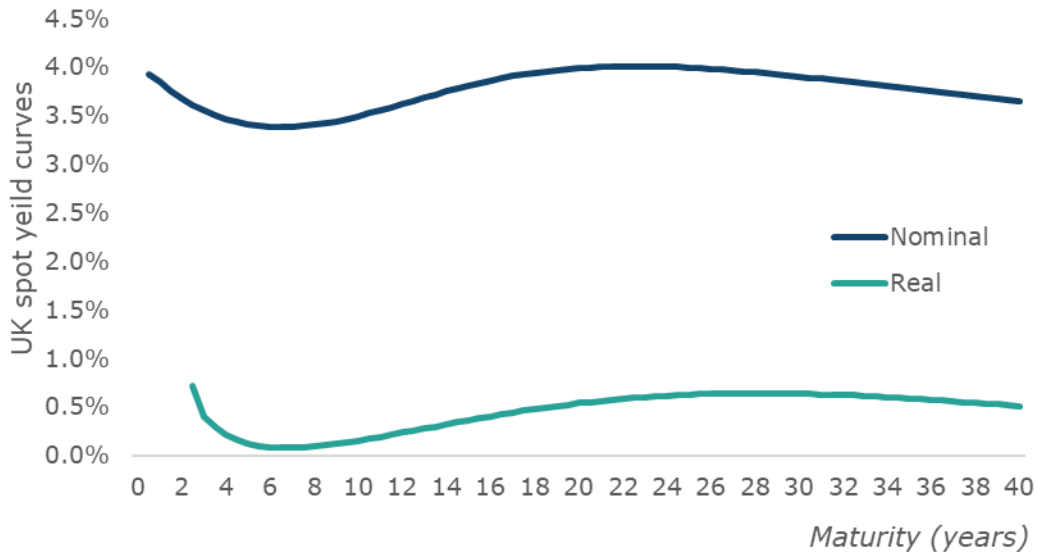
5.64 We set out in the November 2022 consultation the difference in view between CEPA and a number of suppliers on what the investment horizon of the energy supplier sector is. CEPA, in their report, used 5- and 10-year maturities, reflecting their view that the investment horizon in the energy retail sector is likely to be shorter that other sectors, like energy networks, due to the existence of competitive pressures and shorter-lived assets.

5.65 In contrast several suppliers in their response to the November 2022 consultation, expressed the view that the more relevant consideration was the time horizon for investors into energy suppliers. They told us that equity investments effectively have an indefinite maturity. This was the same rationale that led the CMA to use 15- and 25-year bonds when estimating the RFR in their 2016 EMI.

5.66 We can see the logic of both positions. Currently the difference between shorter and longer dated gilts is relatively narrow. The figure below shows that the real and nominal yield curves were relatively flat in March of this year. The choice of maturity of government bonds is therefore less impactful on the overall CoC calculation currently, although this may not always be the case.

[50] UKRN (2022), UKRN guidance for regulators on the methodology for setting the cost of capital, p14 https://ukrn.org.uk/publications/ukrn-guidance-on-the-methodology-for-setting-the-cost-of-capital/

Figure 1: Yield curves on UK gilts, average yields over March 2023



Source: Bank of England, nominal spot curve and implied real spot curve

5.67 In this context, we consider that 10-years still represent an appropriate maturity of asset on which to estimate the RFR. It is a reasonably long maturity, sits within the range suggested by UKRN and has been used by the CMA previously when considering the cost of equity.[51]

Observation period

5.68 In the light of very limited additional stakeholder feedback on this issue we refer to the considerations we laid out in our November 2022 consultation. In that document we said that the use of recent yields has precedent when setting a forwarding looking CoC. We therefore proposed the use of average daily yields over a one-month period.

5.69 Under the expectation that an updated EBIT allowance would take effect from 01 October 2023 we also proposed 01 August 2023 as a reasonable analysis cut-off date. These two proposals imply that the RFR will be estimated using the average daily yields in the month of July 2023. We consider that these proposals remain appropriate.

[51] CMA (2020), Funerals Market Study, Appendix R: Weighted average cost of capital paragraph 47. https://assets.publishing.service.gov.uk/media/5fdb2450d3bf7f40d1221889/Appendix_R_-_WACC_18.12.20.pdf

Adjustments

5.70 Following a lack of new stakeholder comments on this topic we refer to the considerations we laid out in the November 2022 consultation. In that document we considered different approaches to estimating the RPI-CPI wedge. We concluded that the use of OBR forecasts, in line with UKRN guidance and RIIO-2 practice, represented a reasonable approach. We maintain that position now.

5.71 Also in line with those considerations, we maintain the view that no other adjustments to our RFR estimates are needed.

Forecast error

5.72 In our November 2022 consultation we considered the relative merits of setting the RFR with reference to recent yields only, incorporating forward rate data or indexing the RFR so that it is updated on a periodic basis. We did not express a preferred approach.

5.73 After considering stakeholder responses we are minded to use a simple indexation approach where we update the RFR using recent market data once a year. In practice this would involve updating an amended EBIT sheet in the DTC overview model. We would insert into this sheet average gilt yields calculated over the same observation window used to estimate the initial RFR, but one year later. This would generate an updated CoC and therefore EBIT allowance which would be applied to the next four quarterly cap periods.

5.74 Some stakeholders' responses expressed a preference for stability in the CoC and so pointed towards the use of forward rate data. We accept that our proposed approach would generate more variability in the EBIT allowance compared to setting a fixed RFR. However, we are minded against the use of forward rates in light of CMA precedent and UKRN guidance which, as we highlighted in the November 2022 consultation, suggests that forward rates offer no better assessment of future spot rates than current spot rates do.

5.75 We also contend that one stakeholder's advocacy for a combined use of forward rates and indexation would be inappropriate.

5.76 As we understand the stakeholder's proposal, this approach would see the use of forward rates to set an RFR that takes account of the potential movements in yields over the course of a given period and then would use contemporaneous yields at the end of that period to 'true up' the initially set RFR. This would result in an ex-post RFR, meaning the final CoC value could not be known until after the relevant period had ended.

5.77 In the context of the EBIT allowance this would therefore require an ex-post adjustment to future EBIT allowances to reflect whether the initial RFR had under or overestimated the average rate over the previous period, likely one year. This would be a significant departure from the current approach and would add additional complexity to the calculation. Furthermore, it would generate uncertainty for investors with retrospective changes to the allowed return.

5.78 Published alongside this consultation is a draft amended DTC overview model with an updated EBIT sheet ("3k EBIT"). Through inspection of this file stakeholders can see in greater practical detail how we are minded to operate our proposed approach to updating the RFR.

CAPM components: Total Market Return

Context

5.79 The TMR parameter, sometimes called the Expected Market Return, measures the return expected by the marginal investor from holding a diversified portfolio of all investible securities. The difference between the TMR and RFR is the Equity Risk Premium (ERP), which represents the additional compensation investors require for being invested in the market compared to the RFR. Under the CAPM framework, the ERP is multiplied by the beta parameter to give the risk premium specific to a given company.

5.80 The TMR is not specific to any sector and tends to be thought of as a relatively stable component of the cost of equity. As a result, the TMR is often estimated by looking at historical equity returns over a long period of time.

5.81 The CMA used a TMR range of 5% to 6.5% in their EMI report, reflecting a judgment made in a previous determination. CEPA use a range of 6.25% to 6.75%, reflecting the CPIH real range used in the RIIO-2 price controls (T2, GD2 and ED2). In our November 2022 consultation we proposed to use the midpoint of the RIIO-2 range (ie 6.5%), in line with CEPA.

Minded-to position

5.82 We propose to use a CPIH real TMR value of 6.5%, as used in the RIIO-2 price controls.

Overview of responses

5.83 Most stakeholders did not offer a view on this topic. One that did repeated a comment made in response to the November 2022 EBIT consultation, that a more recent inflation back-cast time series should be used to calculate the TMR.

5.84 One other stakeholder, in a report they commission, claimed that the equivalent CPIH-real TMR used in the original 2016 CMA analysis was between 7.5% and 9%, significantly higher than the RIIO-2 range we proposed to use.

Considerations

5.85 Shortly after the publication of the November 2022 EBIT consultation the final RIIO-ED2 determinations were published.[52] These discussed in detail the case for increasing the TMR estimate to reflect the newly publish inflation back-cast time series.[53] They concluded against making this change on the basis that the 6.5% mid-point TMR estimate isn't solely reliant on any one piece of data.

5.86 For example, there are other historical measures of inflation (including CPI and RPI) which lead to lower estimates. Other sources also point to a lower TMR, such as professional forecasts and outturn data for other regions. In addition, the ONS described the series as "purely indicative" and subject to a "large degree of uncertainty". We consider that the rationale for remaining with a mid-point TMR estimate of 6.5%, as set out in the RIIO-ED2 determinations, applies to the EBIT context as well and so remain minded-to assuming a TMR value of 6.5%.

5.87 We do not recognise the claim that the TMR value used by the CMA in 2016 was significantly higher than the 6.5% value we are proposing. The stakeholder report states that the CMA calculation assumed a ERP of 4-5.5% and a nominal RFR of 4%, by implication the report says this results in a nominal TMR of 8-9.5%. The report then tells us that, adjusting for inflation at the time would have resulted in a CPIH-real TMR of 7.5-9%, higher than our proposed 6.5% value.

5.88 This description misunderstands the CMA approach and the nature of ERP estimates. It is true that the CMA assumed a ERP of 4-5.5%, however this reflected a real TMR range of 5-6.5% and a real RFR of 1%.[54] Using a real TMR

[52] Ofgem (2022), "RIIO-ED2 Final Determinations" https://www.ofgem.gov.uk/publications/riio-ed2-final-determinations
[53] Ofgem (2022), "RIIO-ED2 Final Determinations", Finance Annex, paragraph 3.41-3.45. https://www.ofgem.gov.uk/publications/riio-ed2-final-determinations
[54] CMA (2016), "Energy Market Investigation Final Report", Appendix 9.12, paragraph 43. https://assets.publishing.service.gov.uk/media/576bcc3c40f0b66bda0000b4/appendix-9-12-the-cost-of-capital-fr.pdf

and real RFR in the calculation of the ERP remains consistent with estimating a nominal CoC.

5.89 TMR estimates typically reflect the average return of equities over a very long time, often over 100 years. Calculating this in nominal terms would result in an estimate which reflected inflation rates under very different circumstances, which are unlikely to influence investors' expectations of the returns they could receive looking forward – which is what the TMR value represents. For this reason, TMR estimates are invariably real values.

5.90 While it is possible to then inflate the real historic TMR using current or expected inflation, the same would have to be done to the estimate of the RFR, resulting in no change to the differential between the two.

5.91 Following consideration of the limited stakeholder feedback on the estimation of the TMR parameter we currently see no reason to deviate for the RIIO-2 approach and therefore remain minded-to use a value of 6.5%.

CAPM components: Systematic risk (Asset beta)

Context

5.92 The equity beta in the CAPM framework represents a company's exposure to systematic risk and is measured as the covariance between the returns of the company and returns in the wider market (eg how a listed company's share price tends to rise and fall in relation to the wider market).

5.93 By definition, the market-wide (or average) equity beta is equal to one. As we are concerned with estimating the beta of a notional supplier – which we assume to be 100% equity-financed – we need to remove the impact of leverage on the beta. An unleveraged measure of beta is often called the asset beta. Assuming an average leverage of 30% implies that UK equities have, on average, an asset beta of around 0.7. We calculate asset betas assuming a debt beta of zero.

5.94 The current CoC figure used in EBIT, taken from the CMA 2016 EMI report, assumes an asset beta of 0.7 to 0.8, suggesting approximately average exposure to systematic risk.[55] This was based on evidence from two main sources: UK grocery retailers (which had asset betas between 0.55 and 0.65) and the

[55] As we assume our notional supplier is 100% equity financed the equity beta is the same as the asset beta (or unlevered beta).

Canadian energy retailer Just Energy (which had an asset beta of between 0.9 and 1.2 at the time).[56]

5.95 CEPA, in their report published alongside our August 2022 EBIT consultation, sought to update the CMA's assessment of beta using newer data. They concluded that 0.7 to 0.8 remained a plausible long-term estimate of beta. However, they also considered that a beta as high as 1.0 to 1.2 could be justified in the short-term; given the elevated risks suppliers face under current market conditions and where those risks are not accounted for elsewhere within the price cap.

5.96 In our November 2022 consultation we proposed to maintain an asset beta of 0.7 to 0.8, reflecting our judgement based on the comparative beta analysis we had available at the time.

Minded-to position

5.97 We propose to increase the asset beta range from 0.7 to 0.8 to 1.0 to 1.2.

5.98 Our position has evolved after considering stakeholder responses, which included additional empirical evidence and qualitative arguments – notably about the challenges involved with exclusively relying on our suggested comparators for the setting of the asset beta.

Overview of responses

5.99 A majority of responses to our November 2022 consultation disagreed with our proposal to maintain an asset beta range of 0.7 to 0.8. This reflected a general view that risks faced by suppliers had increased and that this should be reflected in a higher asset beta. A range of quantitative and qualitative observations were provided to justify this view.

5.100 A report commissioned by one supplier highlighted the following as evidence of increased risks and higher asset betas within the market for energy suppliers:

- A 150% increase in the number of exits in the UK energy retail sector between 2016-19 and 2020-22, compared to a decrease in the average number of overall business insolvencies in England and Wales over the same period. No new pure play energy suppliers entering the market since 2022.

[56] CMA beta estimate ranges reflects monthly and quarterly data between January 2007 and March 2014.

- None of the comparators originally used by the CMA to establish the 0.7 to 0.8 beta range having exited their markets, compared to the increase in energy supplier exits described above.
- Reported EBIT margins from a range of non-legacy suppliers demonstrating limited or negative profitability, including prior to the current crisis. The report says this suggests the CMA may have underestimated the level of risk in 2016.
- When using monthly frequency data to reduce the impact of being infrequently traded, the report found that Good Energy's asset beta had increased by 46% since 2019 and by 227% since 2016.
- The report highlighted academic studies which found that the equity betas of financial stocks increased substantially around the time of the financial crisis, with the increase taking several years to subside. One study for example found that the asset betas of European banks increased from 0.1 to 0.4 between 2008 and 2009. By analogy the report suggests the current energy crisis is likely to have a lasting impact on investors' perceptions of the riskiness of the sector.

5.101 Other stakeholders made similar or complementary observations which they told us were evidence of suppliers experiencing higher levels of risk now than when the CMA conducted their CoC analysis in 2016.

5.102 A report, commissioned by a trading association gave qualitative descriptions of the risks they considered suppliers faced in the second half of 2021, at the end of 2022 and are likely to face by the end of 2023. This exercise concluded that, while interventions had mitigated some of the increased risks that have arisen during the energy crisis, looking forward risks remain elevated.

5.103 This assessment reflects that while interventions like the Market Stabilisation Charge (MSC), more frequent cap updates, the introduction of backwardation allowances, the Energy Price Guarantee and the Energy Market Financing Scheme (EMFS) do help reduce suppliers' exposure to risks, they do not fully mitigate them. Moreover, some of these interventions may be temporary.

5.104 This report, and other stakeholder responses, also questioned the validity of the independent energy supplier comparators referenced in our November 2022 consultation. Several stakeholders told us that Just Energy was an inappropriate comparator due to not operating in the UK since 2019 and because it had filed for

bankruptcy protection. Telecom Plus was also considered inappropriate by some respondents due to having diversified revenue streams outside of energy.

5.105 Overall energy suppliers directly, or through commissioned reports, told us that a beta higher than the proposed 0.7-0.8 range was needed to reflect the current level of risk. Some made specific proposals for beta values.

5.106 One supplier told us that a beta in the range of 0.8 to 1.0 would be needed to appropriately capture the longer-term risks that the sector is likely to face. Another stakeholder, in a report they commissioned, expressed a judgement that looking forward to the end of 2023 energy suppliers would be around 1.5 times as risky as the average firm in the economy, which translates into a beta of 1.05.

5.107 Beyond these two examples, most stakeholders advocating for a higher beta directly or indirectly referenced CEPAs judgement that a beta in the range of 1.0 to 1.2 was justified. This range was described by CEPA as being broadly in line with that of airlines.

5.108 Several suppliers told us that airlines were a reasonable comparator and that in fact there were reasons to consider the asset betas in the energy supply market may well be higher than in the airline market. One supplier told us how airlines have several advantages in managing their risks.

5.109 For example, airlines can manage demand by adjusting supply (ie cancelling flights) and by adjusting prices (not subject to a cap), in a way that is not possible for energy retailers. Demand is also subject to an overall cap (ie when the seats are sold out) whereas energy suppliers must continue to offer supply even in extreme demand scenarios. Furthermore, the supplier noted that airlines do not face an equivalent of SVT churn risk.

Considerations

Direction of change

5.110 The proposal set out in our November 2022 consultation to maintain a 0.7-0.8 beta range relied heavily on the available beta comparators. The fact that not even the two independent suppliers for whom we had beta estimates exceeded the existing 0.7-0.8 range was a key observation that led us to that proposal.

5.111 Following consideration of stakeholder responses, we now accept that the November 2022 proposal may have been overly reliant on a small amount of imperfect data.

5.112 Stakeholder responses were convincing in setting out robust qualitative arguments that risks faced by suppliers are higher now than they were in 2019 when the allowance was first set. Moreover, it appears likely that some of these increased risks are systematic in nature and therefore point to a higher asset beta than would have been appropriate in 2019.

5.113 Evidence for increased exposure to systematic risk can be seen in the observation that energy prices are been a key determinate of economy wide inflation but also in the observed increasing trend in the betas of comparators Centrica and Good Energy. Overall, we therefore accept the case that the beta of an independent energy supplier would be higher now than it was when the cap was introduced.

Beta range

5.114 Having reviewed the case for an increased beta, we seek to triangulate a reasonable higher range using different sources of admittedly imperfect information.

5.115 None of the energy supplier beta comparators covered in the CEPA analysis are perfect. Just Energy no longer operates in the UK and has been subject to bankruptcy related proceedings and Telecom plus is not an entirely pure-play energy supplier. Beyond this, listed suppliers are vertically integrated and therefore offer limited insight on the likely beta of a non-vertically integrated supplier.

5.116 Table 3 shows that among these comparators, even using shorter estimation windows, there is limited evidence of betas above the existing range among energy companies.

Table 3: CEPA beta estimates over different estimation windows (April 2012–April 2022)

Industry	Estimation window	Averaging period	Range	Average
Large Energy[1]	10-year	10-year	0.46 – 0.64	0.55
	2-year	2-year	0.34 – 0.91	0.56
Vertically Integrated Energy (Europe)[2]	10-year	10-year	0.41 – 0.68	0.54
	2-year	2-year	0.47 – 0.81	0.63
Vertically Integrated Energy (Non-Europe)[3]	10-year	10-year	0.33 – 0.73	0.51
	2-year	2-year	0.37 – 0.93	0.66
Energy Retail[4]	10-year	10-year	0.43 – 0.50	0.46
	2-year	2-year	0.34 – 0.56	0.45
Airlines[5]	10-year	10-year	1.01 – 1.06	1.04
	2-year	2-year	0.88 – 1.49	1.18

1. Centrica; SSE; EDF; E.ON; Iberdrola; RWE
2. Ensel; Gas Natural; Verbund; Fortum; GDF Suez
3. Contract Energy; 67rust Power; NRG; Origin Energy; AGL; AEP
4. Telecom Plus; Just Energy
5. IAG; EasyJet

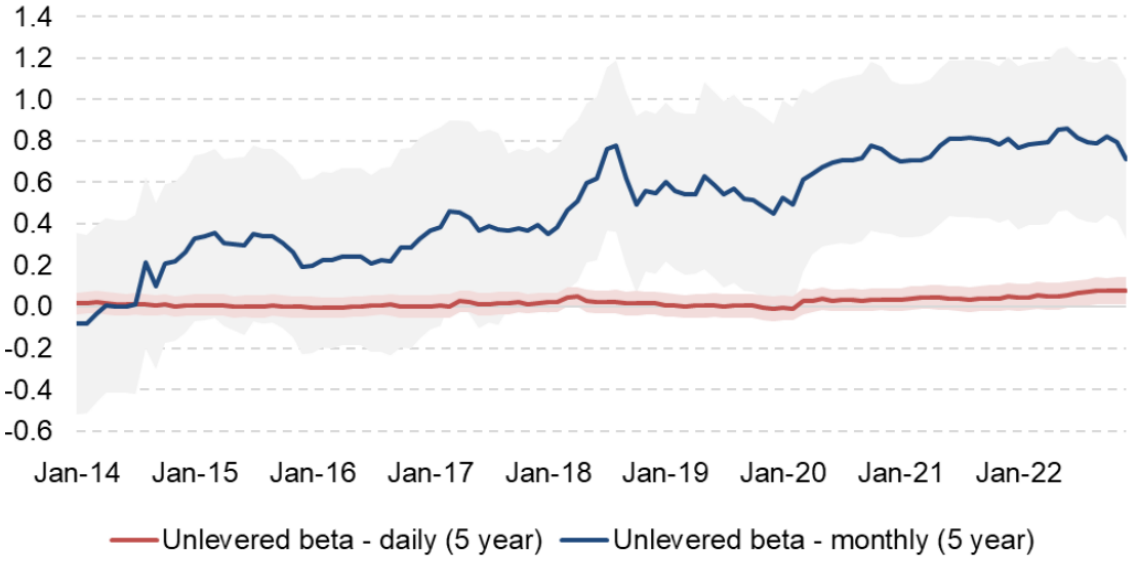
5.117 To ensure robustness we have sought to replicate some of the beta estimates presented in the CEPA report, notably for those companies within the "Large Energy", "Energy Retail" and "Airline" groupings. We found broadly similar results as highlighted in table 3 when estimating over the same time period. In our internal analysis we further explored the impact of estimation and averaging period length and observation frequency on estimates, as well as incorporated data up to March 2023. We did not find anything in this extended analysis that materially deviated from the findings of the CEPA report. It remained the case that there was limited evidence of energy retailers with asset betas above the original CMA 0.7-0.8 assumed range.

5.118 However the addition of estimates for Good Energy's asset beta, as provided by a stakeholder commissioned report, increases our set of independent comparators from two to three. As Figure 2 shows below, the use of monthly rather than daily returns results in a significant higher asset beta estimate.

5.119 This estimation approach can be justified in the case of Good Energy due to its shares being insufficiently liquid (ie traded infrequently). The impact of a stock's liquidity on beta estimates is known as the non-trading problem and academic studies suggest that betas calculated using shorter intervals are likely to show

significant bias when stock are illiquid.[57] The use of longer intervals can reduce this bias.

Figure 2: Good Energy asset beta with daily and monthly periodicity



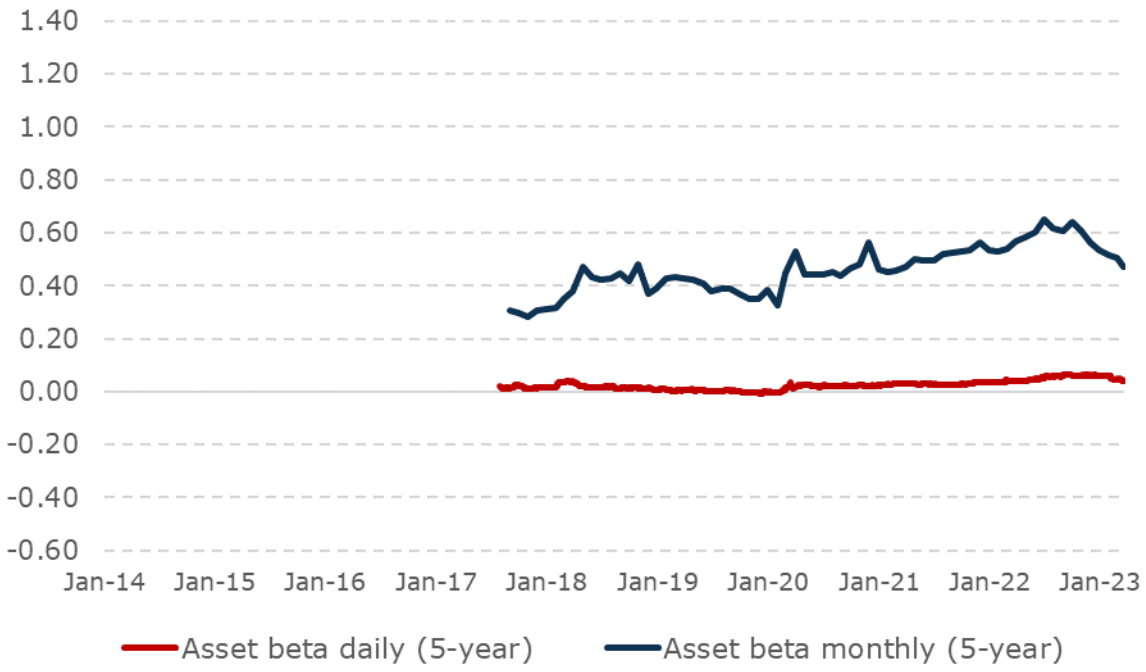
Source: Charles River Associates Report on Ofgem's approach to calculating the EBIT allowance prepared on behalf of So Energy
Notes: Rolling unlevered beta using 5-year estimation period. Local index considered FTSE100

5.120 As mentioned in the summary of responses, the report which produced this analysis states that when using monthly observations, the beta of Good Energy increased by 46% since 2019 and by 227% since 2016.

5.121 To verify this finding, we undertook some internal analysis. We found broadly comparable movements in Good Energy's asset beta over time when using a 5-year estimation period and monthly observations, see figure 3. However, the exact percentage change is dependent on the months being compared which is not specified in the supplier's report. Our internal analysis also suggests that Good Energy's asset beta began to fall from September 2022 onwards, which outside of the period considered in the supplier report.

[57] Aswath Damodaran (1999), "Estimating Risk Parameters", p.10-11/31 https://pages.stern.nyu.edu/~adamodar/pdfiles/papers/beta.pdf

Figure 3: Ofgem estimates of Good Energy's asset beta



Source: Internal Ofgem analysis calculated using Bloomberg data
Notes: Rolling unlevered beta using 5-year estimation period. Local index considered FTSE100. Series starts August 2017 as Good Energy first listed August 2012.

5.122 Overall, our internal analysis suggests that the increases in Good Energy's asset beta presented in the supplier report is somewhat sensitive to the comparison period chosen. Nonetheless, as we can broadly replicate the results of the supplier report and we still consider the upward trend in Good Energy's asset beta to be a useful point of triangulation.

5.123 That said, despite being close to a pure-play energy supplier, even Good Energy has issues as a comparator. Notably Good Energy's SVT is subject to a renewable derogation and therefore is not subject to the price cap. Suppliers told us that several of the risks they cite as having increased are, at least in part, due to the existence and design of the price cap.

5.124 Taking the limited evidence we have on the betas of independent suppliers in the round, we consider that applying the uplift in Good Energy's beta since 2019 (as calculated in the supplier report) to the existing range offers one plausible way of calibrating the extent of increase in beta. Doing this results in a range of 1.0 to 1.2.

5.125 However given the known issues with Good Energy, discussed above, it would be insufficient to rely on them alone. We therefore also consider CEPA's independent assessment of the plausible short-term beta range for an independent supplier.

5.126 CEPA considered similar narrative arguments as stakeholders and therefore similarly concluded that it is reasonable to expect the beta of a non-vertically integrated supplier to be higher under current market conditions that under the conditions which prevailed when the CMA established a range of 0.7 to 0.8.

5.127 CEPA tested this intuition against market evidence. They primarily focused on Centrica's beta and wider market performance. The choice of Centrica was motivated by the observation that energy "supply and services" made up the largest proportion of its operating income in 2019 and 2020. CEPA argue that, following divestments, Centrica had become a more pure-play energy retail company over time and therefore a more useful comparator.

5.128 They found that Centrica's asset beta was at the top end of the 0.7-0.8 range when estimated over a two-year window and that over shorter windows it was higher still. Estimates of Centrica's asset beta using one-year and six-month windows were approximately 1.0 and 1.1 respectively.

5.129 Centrica's high beta does however appear to be somewhat of an outlier among UK vertically integrated suppliers, as indicated in Table 3. In addition, beta values estimated over very short windows can be subject to short-term fluctuations that may not be indicative of the underlying forward-looking relationship between an equity and the wider market.

5.130 CEPA also considered the evolution of Centrica's market value to earnings multiple over time. They found that it had declined significantly since the start of 2016. On possible reason for this is that investors were discounting future earnings more heavily, indicating an increase in the cost of capital.

5.131 We remain somewhat sceptical of the use of Centrica as a comparator, with stakeholders offering similar reservations in response to the August 2022 consultation. In particular CEPA's observation that "supply and services" had become the largest single source of income for Centrica in 2019 and 2020 ignores that this includes significant revenues from non-energy supply services such as boiler maintenance. More generally, while upstream income was a minority of overall income in 2019 and 2020 since the rise in gas prices this is no longer the case – Centrica remains a vertically integrated supplier.

5.132 Despite this, and in the absence of any obviously better comparators, CEPA's conclusions remain informative. On the basis of these market cross checks CEPA coincidentally also concluded that a beta between 1.0 and 1.2 was plausible for a non-vertically integrated energy supplier under current market conditions.

5.133 The comparative beta analysis conducted by CEPA points to a range of 1.0 to 1.2 being broadly in line with the long run for UK listed airlines.[58] At a fundamental level and in the long run there are good reasons to expect the beta of energy suppliers to be lower than that of airlines. For example, the demand for air travel is significantly more discretionary than for energy. It is therefore more likely to be exposed to trends in the wider economy, implying a higher equity beta. However, taking account of the shorter-term evidence from Good Energy and Centrica, a beta in line with that for airlines seems plausible.

5.134 We consider that values above 1.2 would begin to appear implausible. Very few industries have average asset betas above 1.2. For example, using data on asset betas across Western Europe complied by Professor Aswath Damodaran, only four out of the 96 industry groups had average asset betas above 1.2.[59,60]

5.135 Based on these two independent approaches, we also conclude that a beta between 1.0 and 1.2 can be justified while current market and regulatory conditions continue.

CAPM components: Tax rate

Context

5.136 Our aim is to establish a nominal pre-tax cost of capital. This is because the price cap aims to provide suppliers with sufficient pre-tax cash revenue to meet their efficiently incurred costs.

5.137 The CAPM framework provides us with a post-tax cost of equity estimate; we therefore need to convert this into a pre-tax figure. This is done by scaling the

[58] Range reflects the average asset betas of IAG and EasyJet calculated at different estimation windows and averaging periods, ranging from a 10-year estimation and averaging period (1.04) to a spot estimate using a 2-year estimation window (1.23).
[59] Damodaran Online (2023), "Levered and Unlevered Betas by Industry", Europe https://pages.stern.nyu.edu/~adamodar/pc/datasets/betaEurope.xls
[60] Industry betas calculated as simple average across individual firms. Firm level betas calculated using 2-year and 5-year estimation windows, with 2-year estimates given a weighting of 2/3rd. Beta estimates adjusted for leverage using industry aggregate debt to equity ratios. Unlevered betas recalculated using "practitioners formula" (i.e. Unlevered Beta = Levered Beta / [1 + Debt/Equity]).

post-tax figure by 1 / (1 - t) where t is the tax-rate faced by energy suppliers over the relevant period.

5.138 In the November 2022 EBIT consultation, we set out two potential options for selecting the tax-rate to be applied when calculating the CoC.

- A static value based on the planned headline corporation tax rate at the point of implementation – currently 25%
- A tax rate which is updated annually to reflect the headline corporation tax rate as of 1 April each year.

Minded-to position

5.139 We propose to update the tax rate annually via an amended EBIT worksheet in the DTC Overview model workbook.

Overview of responses

5.140 Several stakeholders explicitly supported the idea of the tax rate being updated in line with changes. A smaller number either did not offer comment on this topic or told us they did not have a strong view.

Considerations

5.141 By updating the tax rate we would ensure that it reflected the actual rate faced by companies in each year. This is in line with our proposed approach to the RFR.

5.142 The disadvantage of this approach is that it could generate more volatility in the CoC estimate and therefore EBIT allowance. Given the EBIT allowance scales with the overall price cap it is already the case that the EBIT allowances changes in absolute terms once a quarter. The addition of an annual update to the tax rate, which may not change between any given two years, is unlikely therefore to material alter this reality.

5.143 Given this, and the largely positive stakeholder reaction this proposal, we are minded-to update the tax rate value within the EBIT worksheet of the DTC Overview model on an annual basis to reflect the prevailing headline rate of corporation tax at the time.

Cost of Capital point estimate

Context

5.144 As we only set a single EBIT value we need to establish a single CoC value. Having estimated a plausible range of CoC values, we therefore need to narrow this down to a single number.

5.145 In practice as the CoC range we have estimated is generated by the range of plausible beta values, with the remaining CAPM values being the same across the low and high scenarios, selecting a CoC point estimate is equivalent to selecting a single beta value within the 1.0 to 1.2 range we have proposed.

Minded-to position

5.146 We propose to use the mid-point of the CoC range as the input into the EBIT allowance calculation, following standard regulatory practice.

Overview of responses

5.147 We did not make an explicit proposal on how we would pick a point estimate within a CoC range in our November 2022 consultation. As a result, stakeholders did not tend to offer views on this question. However, some responses did touch on this topic.

5.148 One supplier, in a report they commissioned, told us that there was a case for "aiming-up" when it comes to the CoC. The intuition provided for this was that a higher CoC would help the health of the industry and support investment, the benefits of which would outweigh any small increases in energy tariffs.

5.149 Other responses highlighted the asymmetric nature of the some of the risks suppliers face. For example, one supplier told us that wholesale price and volume risks are correlated. This means during unexpectedly cold weather, when suppliers need to buy more energy, the wholesale price tends to be high. Equally during unexpected warm weather, when suppliers sell some of their positions, wholesale prices tend to be low. As a result, suppliers face loses in both scenarios with no compensating upside risk.

Considerations

5.150 UKRN guidance recommends that regulators combine their RFR, TMR and beta assumptions using CAPM to produce a CoC range and that the mid-point of that

range should be used as the central CoC estimate. This reflects the view that the distribution of values within that range should be broadly symmetric.[61]

5.151 While we acknowledge there is uncertainty about the "true" CoC for an independent energy supplier, we are not convinced that there are good reasons to deviate from the mid-point for this reason.

5.152 We have drawn on a range of evidence to establish a plausible CoC range. That evidence does not point only in one direction. For example, the lower observed betas of Just Energy, Telcom Plus and even Good Energy point towards a lower beta; while the existence of asymmetric risks may point towards a higher beta.

5.153 Equally we do not see the case for "aiming up" on the basis of asymmetries in the risks to consumers of under versus overcompensation of suppliers. The difference in the EBIT allowance generated by the low and high CoC range is small. A CoC estimate assuming a beta of 1.2 rather than 1.1 would likely increase any final EBIT allowance by less than £3.[62] We do not consider that a difference of that scale would have a material impact on the resilience of suppliers or their ability to invest.

5.154 In the absence of clear evidence to conclude that the distribution of values within the CoC range are skewed upwards or that a marginally higher CoC would protect customers, we see no reason to deviate from normal regulatory practice and UKRN guidance. We therefore propose to use the mid-point of our CoC range (ie a CoC based on a beta of 1.1) as our point estimate, which we will use to calculate the EBIT allowance in conjunction with our CE estimates.

Cost of Capital link to other cap allowances

5.155 Within the payment method uplift allowance, we use the CoC to set separate return on capital allowances for standard credit and direct debit customers. These allowances are relative to the average level of working capital already included within the EBIT allowance, with working capital below the average level for direct debit and above the average level for standard credit.

5.156 Applying a higher cost of capital is unlikely to materially affect the total level of costs included in the cap because the allowances are relative to an average level.

[61] UKRN (2023), "UKRN guidance for regulators on the methodology for setting the cost of capital", Recommendation 6 https://ukrn.org.uk/app/uploads/2023/03/CoC-guidance_22.03.23.pdf
[62] Assuming capital employed of around £380 per customer an increase in the estimated CoC from 12.2% to 12.9% represents and additional £2.66 per customer.

However, it would change the allocation between payment methods, increasing the payment differentials faced by standard credit customers relative to direct debit.

5.157 Given the anticipated limited overall impact on bills, we do not propose immediate changes to the payment uplift method. We plan to consider updating the cost of capital assumption within the payment uplift allowance as part of an upcoming review of the operational cost allowance.

5.158 CoC estimates have been or are being used in other price cap allowances. For example, a 10% CoC estimate was used in the calculation of the true-allowance for COVID-19 costs.[63] As this was a backwards looking allowance there is no reason to expect that the CoC estimate used should align with our updated and forward-looking assessment discussed in this review.

5.159 A CoC value is also used to amortise the cost of buying and installing smart metering equipment as part of the calculation of the non-pass-through (NPT) Smart Metering Net Cost Change (SMNCC) allowances.[64] Following a decision earlier this year, we have indefinitely paused methodological reviews of the NPT SMNCC calculations. We therefore do not anticipate amending the CoC used in the NPT SMNCC calculations.

Question

Q6: Do you agree with our proposals on cost of capital? Please explain your reasoning.

[63] Ofgem (2023), "Price Cap – Decision on the true-up process for COVID-19 costs" https://www.ofgem.gov.uk/publications/price-cap-decision-true-process-covid-19-costs

[64] Ofgem (2022), "Price Cap - August 2022 decision on credit and PPM SMNCC allowances", paragraph 3.65 pp.34. https://www.ofgem.gov.uk/publications/price-cap-august-2022-decision-credit-and-ppm-smncc-allowances

6. Amending the EBIT allowance and methodology

This section discusses our minded to position on implementing the EBIT allowance, which is to have a fixed component based on fixed assets and capital required for Renewables Obligation (RO) ringfencing, and a scalable component based on the overall level of the cap.

It also covers our minded to position on when to review the allowance in future, which is that we will review the allowance when we consider there to have been significant changes in, for example, market or policy and regulatory conditions.

EBIT allowance methodology

Context

6.1 In November 2022 we consulted on the methodology for implementing the EBIT allowance, and when to review the allowance again in future.

6.2 On the implementation of the allowance, we asked for views on:

- Our proposed hybrid approach for scaling the allowance, which uses a combination of a fixed and variable components. We proposed to set the fixed component equivalent to level of RO ringfencing and fixed assets.
- Whether or how should we account for price volatility.
- The conditions for revisiting the methodology and parameters of the EBIT allowance in the future.

Our minded-to position

6.3 Following review of stakeholder responses, our minded to position is to implement the EBIT allowance with a hybrid methodology, based on a fixed element, and a scalable component. The fixed component is based on RO ringfencing and fixed assets multiplied by the cost of capital. The variable component is set as a percentage of the price cap level (pre Headroom, EBIT and VAT) which makes the fixed plus scalable components equal the estimated ROCE.

6.4 Under our proposed approach, we propose to the calibrate the EBIT allowance to the period of its introduction, 11a. The formula for the EBIT allowance is the *indicative* total of a fixed and a variable component:

1. Return on Capital Employed (ROCE) = (Working capital + collateral capital + fixed assets) * Cost of capital = (127 + 165 + 90) * 12.2% = £46.6

2. Fixed component = (Fixed assets + RO ringfencing)* CoC = (£90 + £67) * 12.2% = £ 19.2
3. Variable component scaler = (ROCE – fixed component) / 11a price cap level excluding EBIT, Headroom and VAT = (£46.6- £19.2)/£1940 = 1.41%
4. Indicative variable component for period 11a = 10a price cap level excluding EBIT, Headroom and VAT * Variable component Scaler = 1.41% * £1940 = £27.4
5. Return on capital employed (EBIT allowance in period 11a) = fixed component + variable component = £19.2 + £27.4 = £46.6

6.5 Based on expectations for prices in 11a based on forward curves in April 2023, the EBIT allowance of £47 would lead to a variable component scalar of 1.41%. The above numbers are indicative and are subject to change, as the price cap overall level in 11a may in some cases be very different from what current forward contracts indicate. Our proposal for incorporating the change within the Overview model for the default tariff cap level can be found in a draft update to the Default Tariff Cap Overview model published alongside this.[65]

6.6 Upon quarterly updates to the price cap, the fixed component would be updated by CPIH, while the scalable component would be multiplied by the new price cap level (excluding EBIT, Headroom and VAT). Both components will be subject to change once a year, as a result of routine updates to the CoC estimate as detailed in Chapter 5.

6.7 We are minded to implement the EBIT allowance in the nil consumption cap charge on an equivalent percentage basis, so that the existing ratio between standing charges and unit charges is preserved. The formula for EBIT in the nil consumption cap will be set as:

1. Nil consumption EBIT = typical consumption EBIT for period / typical consumption allowances for period * nil consumption allowances for period

6.8 Indicatively for 11a this would be £1.32 higher than the status quo, increasing the standing charge as a whole by 0.45% compared to under the existing 1.94% allowance. For simplicity, we are minded to set the fixed components for electricity and gas as 50% of the total fixed component, with the scalable

[65] Ofgem (2023), "Draft Overview model – Default tariff cap level" https://www.ofgem.gov.uk/publications/price-cap-statutory-consultation-amending-methodology-setting-earnings-interest-and-tax-ebit-allowance

component the same percentage for each. We are minded to set the multi-rate electricity cap with the same fixed and scalable components as the single rate electricity cap.

6.9 We also refer you to our proposed changes to the standard licence conditions published alongside the consultation[66].

Question

Q7: Do you agree with our approach to setting and scaling the EBIT allowance? Please explain your reasoning.

Stakeholder responses

6.10 Several stakeholders agreed with the proposal to implement EBIT with a fixed component and a component that varies with wholesale prices. Several stakeholders expressed a preference for retaining the pure percentage allowance, due to it being simpler and more transparent.

6.11 Some stakeholders said that the EBIT allowance should have a component that reflects market volatility, with others stating that it would be too complex. Some suggested potential methodologies, with others noting that choosing one metric for 'volatility' would be a complex choice in itself, and that the place to account for market volatility is within the cost of capital, rather than through a volatility-adjustment to the allowance methodology.

6.12 Most stakeholders agreed that fixed assets and RO receipts should make up the fixed element of a hybrid allowance. A few supplier stakeholders disagreed, suggesting that the fixed element of the allowance should be linked to the minimum capital requirement set by the Strengthening Financial Resilience[67] workstream, or that doing so reduces transparency and simplicity compared to the 1.9% allowance.

6.13 Over half of suppliers agreed with the proposal to apply the hybrid method in a way which avoids increasing the ratio of standing charges to unit charges, to

[66] Ofgem (2023), "Amending Earnings Before Interest and Tax allowance - Proposed Modification Notice". https://www.ofgem.gov.uk/publications/price-cap-statutory-consultation-amending-methodology-setting-earnings-interest-and-tax-ebit-allowance

avoid adverse distributional impacts and to maintain incentives for energy efficiency. Three respondents said that cost-reflectivity, and ensuring full cost recovery, was the most important factor. One said that the 2018 decision to follow market practice rather than cost-reflectivity in setting the nil consumption cap allowances was no longer relevant, as since then the price cap has been responsible for setting the ratio between standing and unit charges. Another respondent said that not putting the fixed EBIT element in the nil consumption cap would prevent suppliers from recovering their fixed costs, or would lead to worse service outcomes for those customers.

Considerations

6.14 Most objections to having a fixed element were based on it not making much difference compared to the pure percentage model, at the cost of additional complexity. We do not consider the complexity is considerably higher than a pure percentage model, and we consider it would improve suppliers' ability to finance themselves by making the allowance more reflective of how capital employed changes as prices vary over time.

6.15 On the other hand, we have considered proposals for ways of building a volatility component into the EBIT methodology, and consider that any attempt to do so would increase the complexity of setting the cap considerably. It would require selecting a measure of volatility, and a method of translating that volatility into higher capital employed or cost of capital. One suggested approach is to use options pricing approaches to estimate the benefit to consumers of being able to join or leave the price cap as prices vary, as a risk and cost that suppliers bear. The assumptions required to make this estimate, including the extent to which energy customers who can switch supplier are in an analogous situation to financially sophisticated market participants trading in a liquid options market, mean we are not confident this additional complexity would improve the accuracy of our EBIT allowance. We consider that the risks to suppliers of operating in a volatile market will be compensated by the cost of capital we propose, which is 2.2 percentage points, or almost a quarter higher, than the existing approach.

6.16 Most stakeholders agreed with the proposal to base the fixed element of a hybrid allowance on fixed assets and capital required to ringfence RO receipts. One suggested that it should be linked to the Minimum Capital Requirement (MCR) Ofgem sets through the financial resilience workstream. In our April statutory

consultation on Strengthening Financial Resilience[68], we explained our intent to set a capital target consistent with - but distinct from - this level of capital implied under the price cap. This distinction arises - for example - due to the different tariffs covered by capital requirements (in addition to SVT), the diversity of business models and approaches to de-risking these businesses, and the difference between minimum capital requirements and the average modelled under price cap.

6.17 Increasing standing charges may be harmful to some groups of vulnerable customers, and would give customers less control over their bills and less ability to save through energy efficiency. We agree with the majority of respondents and suppliers that the EBIT allowance methodology should not increase the ratio of standing charges to unit charges.

Future reviews of the EBIT allowance

Context

6.18 On the timing of future reviews of the EBIT allowance methodology, we asked for views on the frequency of reviews to the EBIT allowance methodology and parameters and the conditions that may trigger those. We proposed no periodic reviews, but to revisit the allowance subject to significant changes to the context in which suppliers operate.

Our minded-to position

6.19 Our recommended approach is that we should not schedule periodic reviews of the EBIT allowance in the future. Instead, we will consider carrying out a review of the EBIT allowance if there are significant changes in the conditions in which suppliers operate which in our view are not transient or temporary and justify considering modification of the EBIT allowance or its components. Such changes in operating conditions could in principle be in the following categories or a combination of them:

[68] Ofgem (2023), Statutory Consultation: Strengthening Financial Resilience – ringfencing customer credit balances and introducing a minimum capital requirement. https://www.ofgem.gov.uk/publications/statutory-consultation-strengthening-financial-resilience-ringfencing-customer-credit-balances-and-introducing-minimum-capital-requirement

1. Significant changes in market conditions (eg Wholesale price levels or their volatility)
2. Significant changes in regulatory and policy conditions (eg significant changes to the price cap or related government policy)
3. Significant changes to the structure or number of suppliers operating in the market

Of course, a review would not necessarily result in a change to the EBIT allowance formula or amount.

6.20 We note that in the first instance, we aim to reflect changes in risk as part of existing cap allowances or ex-post adjustments when needed rather than adjusting the EBIT allowance.

Stakeholder responses

6.21 Several respondents agreed with Ofgem's criteria for a future review, and the majority said there should not be scheduled reviews. Some respondents said they wanted more clarity, including pre-defined criteria or observable market triggers for when a review would be prioritised by Ofgem, or a clear high bar for any change to enable certainty of supplier returns. Others said being flexible to conditions changing was best, and that any change in circumstances large enough to warrant a re-evaluation of the EBIT allowance would be obvious with judgement. Another suggested that in stable circumstances a frequency of five years as in network price controls may be appropriate, but that given policy and regulatory change likely to occur in next few years, more frequent changes may be warranted.

Considerations

6.22 There was broad support for the proposal not to schedule periodic reviews, and for the criteria that would justify a future review. The argument that any changes significant enough to warrant reviewing the EBIT allowance would be 'obvious' qualitatively is persuasive, and we agree that it will be necessary to be flexible to unexpected changes in conditions, which may make the environment suppliers operate in higher or lower risk. There is a risk that any quantitative triggers we set could be based on metrics that turn out to not be relevant to the change that occurs; and we have not identified a clear basis for selecting any particular threshold. We therefore don't consider that pre-specifying observable triggers for a review would be the best approach. We note that future review of the EBIT

allowance parameters or methodology would be progressed through consultation and could be triggered by both an increase or decrease in suppliers' risk profile.

Question

Q8: Do you agree with the conditions which may trigger revisiting the EBIT allowance parameters or its methodology? If not, why not? Please explain your reasoning.

Appendix 1 - Impact assessment

Rationale

A1.1 Ofgem is required by the Act to set the price cap so as to protect existing and future domestic consumers on SVT/default tariffs, while having regard to:

a) the need to create incentives for holders of supply licences to improve their efficiency;

b) the need to set the cap at a level that enables holders of supply licences to compete effectively for domestic supply contracts;

c) the need to maintain incentives for domestic customers to switch to different domestic supply contracts;

d) the need to ensure that holders of supply licences who operate efficiently are able to finance activities authorised by the licence;

e) the need to set the cap at a level that takes account of the impact of the cap on public spending.

A1.2 Ofgem set the EBIT allowance methodology within the price cap in a 2018 decision,[69] based on analysis conducted by the CMA in their 2016 Energy Market Investigation,[70] and has not updated this methodology since then. In the last four years, the retail sector as a whole has achieved low profits or made losses. With wholesale prices rising considerably in the last two years, the EBIT allowance within the price cap has scaled linearly, going from an annualised figure of £20 per customer in 2018 to £78 per customer in January-March 2023, before falling to £60 per customer in April-May 2023.

A1.3 We have therefore reviewed the EBIT allowance in order to assess whether it protects existing and future customers, while having regard to the 5 needs set out above. The driving criteria within this assessment are: 1) the cost to consumers through their energy bills; 2) the impacts on consumers of a more or less resilient supply sector, with different expected costs of failure falling on customers, and 3) the need to ensure that holders of supply licences who operate efficiently are able to finance activities authorised by the licence.

[69] Default tariff cap: decision - overview | Ofgem
[70] Energy market investigation - GOV.UK (www.gov.uk)

Description of options

A1.4 This assessment looks at two options:

Our proposed allowance methodology: using a ROCE framework, we estimate capital employed of £382 and a cost of capital of 12.2% is needed for an efficient notional supplier to finance itself, providing a ROCE of £47. We propose a hybrid methodology, where £157 of the capital employed receives a fixed return, and the rest of the return is based on a percentage of price cap allowances in period 11a that gives the overall EBIT of £47. This considers among others, 1-in-20 wholesale prices based on sampled wholesale prices over the last 14 months.[71].

The status quo: The EBIT allowance remains 1.94% of price cap allowances. Indicatively, April forward curves imply a price cap level of around £2,100 in 11a, which would result in £37 allowance.[72] This counterfactual is uncertain and is likely to be updated ahead of the August decision.

A1.5 The final formula and level will vary as the price cap level for period 11a is settled – and all the numbers in this impact assessment should be considered indicative as a result. Hence, there is a high level of uncertainty over benefits and costs as those are based on forwards curves which are highly volatile. Estimates will be updated at the point of decision, at which point the observation window for 11a will be concluded.

Overall conclusion from the impact assessment

A1.6 This impact assessment finds that our proposed allowance increases consumer bills by £227m in the 12 months following October 2023, which we see as necessary, given the level of capital employed and the cost of capital needed for suppliers to operate and finance their activities. If suppliers are unable to adequately finance themselves, existing and future consumers could be harmed through a less resilient and competitive sector, providing a lower quality of service, and slowing the transition to net zero. Increasing the EBIT allowance reflects the additional return on the capital required to operate a notional supplier. This in turn increases the return a supplier serving SVT customers

[71] The estimate of 1-in-20 will be updated ahead of the decision. However, it is less volatile as it is based on information sampled over 14 months. More info can be found in the Working Capital model documentation.
[72] This is based on the information of 5 days of forwards, in the lead up to 28 April 2023 – with an estimated price cap level at around £2100. Estimates for period 11a are still uncertain and could vary by the time of decision publication.

would be making, potentially leading to a more investible retail sector. It also reduces the risk that suppliers fail, which imposes costs on consumers. We have estimated the reduction in expected failure costs as a £132m benefit to consumers.

Summary of quantitative and qualitative analysis

A1.7 The following table sets out the scope of the analysis conducted as part of this cost-benefit analysis – which assess the areas the Act prescribes we should have regards to. The most significant impacts have been assessed quantitatively, where possible, though there remains significant uncertainty in some assumptions required for the analysis. For criteria where the change is unlikely to have a significant impact, the impact is assessed qualitatively only.

Table A1.1: description of impacts

Criteria	Assessment
Cost to consumers – change in bills	**Quantitative** The change in consumer bills over the 12 months from October 2023 is estimated using supplier stress-testing 'low' price scenario submitted by suppliers in April 2023.[73] Beyond this the difference will depend on wholesale prices, which have never been more uncertain than over the recent two years. The EBIT allowance is illustrated for different overall cap levels in **Figure A1.**.
Cost to consumers – change in expected costs of failure	**Quantitative** Change in supplier risk of failure is assessed by observing changes in credit rating metrics as a result of changes to the EBIT allowance. This uses the Moody's framework[74], replicating the approach used in the FRC impact assessment. Using this approach, we assume the cost of failure would be broadly in line with historical SOLR costs since 2021, for suppliers with fewer than 1m customers, and that the cost of a larger supplier failure through a SAR would be half of this, due to the retained value of hedges in insolvency for a SAR supplier hedging in line with the price cap methodology. The cost of a SAR in particular is highly variable depending on market conditions and the government's choice of hedging policy while the SAR is in place.

[73] This reflects this scenario being the closest to turn out prices at this point in time.
[74] Revised impact assessment of Strengthening Financial Resilience proposal: https://www.ofgem.gov.uk/sites/default/files/2022-11/Revised%20impact%20assessment%20of%20Strengthening%20Financial%20Resilience%20proposals.pdf

	As a result of the uncertainty in the assumptions of this analysis, the results of it are considered broadly indicative within the overall analysis.
Supplier financeability	**Quantitative and Qualitative** In terms of quantitative factors, we assess the impact of changing the allowance on supplier profitability, liquidity and implied credit rating – using supplier forecasts collated through the April 2023 stress testing RFI. Qualitative evidence on the level of risk in the sector is assessed, as part of the cost of capital evidence base, and we consider the role of the allowance as a signal for investors following past years of low sector profitability.
Distributional Analysis and Impact on vulnerable consumers	**Quantitative** The distributional impact on bills for 1-year following the change is assessed for income deciles, as well as for potentially vulnerable groups such as pensioners, people with disabilities, who are unemployed, who live in rural areas, and those without internet access. As seen in **Table A1.3**, the impact across different groups is of a small order of magnitude.
Efficiency incentives	**Qualitative** There may be a small impact on efficiency incentives – reducing the strength of the incentive for inefficient suppliers to cut costs – but this is unlikely to be quantitatively significant.
Competition	**Qualitative** There may be a small positive impact on the ability of suppliers to compete by offering tariffs under the cap level, and provide a positive signal for market entry, but this is unlikely to be quantitatively significant.
Incentives for switching	**Qualitative** There may be a small impact on incentives for customers to switch tariff, but switching incentives are much more dependent on the path of prices, the Market Stabilisation Charge, and supplier pricing behaviour.
Public spending	**Qualitative** The Energy Price Guarantee is expected to expire 6 months into the implementation of the revised EBIT allowance. Furthermore, current forward prices suggest that it is unlikely that price cap level for TDCV will rise above £3,000 during that period.

Direct consumer impact

A1.8 The direct impact on consumers of our proposal is estimated to be £227 million in higher bills over the period Oct 23 to Sep 23, and an £10 increase per SVT customer in the EBIT allowance for period 11a, for an estimated overall cap level at typical consumption of around £2,100. This estimate is highly likely to change as estimates for revenue in period 11a change.

Table A1.2: quantified impacts

		Impacts for the period Oct 2023 to Sep 2024		
Measure	EBIT allowance - £ in period 11a (indicative numbers, subject to change)	Direct consumer bill impact of the revised EBIT allowance - £m	Change in expected failure cost - £m	Sector EBIT margin
Status quo	£37	N/A	N/A	N/A
Proposal	£47	+£227	-£132	0.3pp

A1.9 The impact on bills will depend on how prices evolve, which is highly uncertain given energy markets are yet to stabilise. We therefore consider attempting to assess the impacts beyond the next 12 months may not provide a meaningful outcome at this point of time. We therefore illustrate how the EBIT allowance would vary in cash terms under our central proposals, at different levels of wholesale prices. Due to the hybrid approach, consumer see a reduction in the allowance in comparison to the status quo when the cap level is high, and an increase when the cap is lower. But we consider it more accurately tracks the capital that suppliers need to deploy at different price levels. Furthermore, the increase in the EBIT allowance at lower prices would lead to a better capitalised and more resilient sector, which reduces expected costs of failure which are passed to consumers, and the associated disruption such failures may cause.

Figure A1.1: EBIT allowance at different overall cap levels in pounds per customer. *(Percentages are shown on a comparable basis to the flat 1.9% approach, as a percentage of the overall cap level excluding EBIT itself, Headroom and VAT)*

Supplier financeability and risk of failure

A1.10 Aggregate supplier profitability across their domestic and non-domestic segments in the 12 months following October 2023 is estimated to improve by 0.3 percentage points under our proposal. We consider this is likely to improve suppliers' ability to finance their activities and attract needed investment and help suppliers to recapitalise in the longer term. Analysis conducted on individual suppliers' financial forecasts suggests that our proposal would make an incremental improvement in sector financeability, improving liquidity metrics and proxies for risk such as interest coverage. However, for individual suppliers the additional amount the new EBIT allowance provides is small relative to their overall financial position.

A1.11 Though reforms on financial resilience are the most important measures to reduce risk of supplier failures, the increased revenue of a higher EBIT allowance will reduce the risk that suppliers fail, and the costs of failure paid by consumers. As set out in the table above, we have estimated the reduction in the expected costs of failure as a result of our change to the allowance. The

changes we see in proxies for risk of failure such as implied credit rating, lead us to estimate a £132 million expected benefit for consumers from reduced failure risk over the 12 months from implementation.

Distributional analysis and impact on vulnerable consumers

A1.12 Ofgem considers carefully the impact of its decisions on potentially vulnerable consumers, including the groups we are asked to have regard to in our duties as set out in legislation:[75]: people who are older, disabled, living in rural areas, or with low incomes. Under the Equality Act 2010, we are also required to consider how our policies or decisions affect people who have protected characteristics mentioned in that Act. We have assessed the potential impact on the 4 statutory groups that Ofgem is required to have regard to, as well as people with protected characteristics as part of the consumer archetype framework.

A1.13 Distributional analysis finds that higher income deciles and other higher consuming groups lose more in cash terms from this change. **The size of differences between income deciles and for potentially vulnerable groups compared to the average effect is small, at around £1-4 per year.**

A1.14 Using our consumer archetypes, which has more variety of consumption and cover groups with protected characteristics, illustrate variation in impact between groups.

Table A1.3: bill impact of our proposal by customer groups

Consumer type	Decile groups of all individuals ranked by equivalised household disposable income										Average
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Pensionable age	-£10	-£10	-£10	-£12	-£10	-£13	-£11	-£12	-£13	-£14	-£11
Disabled	-£10	-£12	-£11	-£12	-£11	-£12	-£11	-£12	-£12	-£14	-£12
Rural areas	-£11	-£11	-£12	-£11	-£12	-£13	-£12	-£13	-£14	-£17	-£13
No internet access	-£10	-£10	-£9	na	na	na	na	na	na	na	-£11
Unemployed	-£13	na	na	na	na	na	na	na	na	na	-£12
Lone parents	-£10	-£11	na	na	na	na	na	na	na	na	-£11

[75] Our powers and duties | Ofgem

ALL	-£11	-£11	-£11	-£12	-£11	-£12	-£11	-£12	-£12	-£14	-£12

Impact by consumer archetype		**Average savings per household (£)**
A1	High incomes, owner occupied, working age families, full time employment, low consumption, regular switchers.	-£8.66
A2	High incomes, owner occupied, middle aged adults, full time employment, big houses, very high consumption, solar PV installers, care for the environment.	-£17.07
B3	Average incomes, retired, owner occupied - no mortgage, lapsed switchers, late adopters.	-£12.77
B4	High incomes, owner occupied, part-type employed, high consumers, flexible lifestyles, environmental concerns.	-£13.23
C5	Very low incomes, single female adult pensioners, non-switchers, prepayment meters, disconnected (no internet or smart phones).	-£9.29
D6	Low income, disability, fuel debt, prepayment meter, disengaged, social housing, BME households, single parents.	-£10.91
D7	Middle aged to pensioners, full time work or retired, disability benefits, above average incomes, high consumers.	-£13.25
E8	Low income, younger households, part-time work or unemployed, private or social renters, disengaged non-switchers.	-£10.45
E9	High income, young renters, full time employments, private renters, early adopters, smart phones.	-£9.15
F10	Middle aged to pensioners, full time work or retired, owner occupied, higher incomes, oil heating, rural, RHI installers, late adopters.	-£3.86
G11	Younger couples or single adults, private renters, electric heating, employed, average incomes, early adopters, BME backgrounds, low levels of engagement.	-£3.52
H12	Elderly, single adults, very low income, medium electricity consumers, never-switched, disconnected, fuel debt.	-£2.70
H13	Off gas, low income, high electricity consumption, disability benefits, over 45s, low energy market engagement, late adopters.	-£3.60

Appendix 2 - Model changes

A2.1 Our proposed introduction of annual updates to certain CoC parameters (risk-free-rate and tax rate), as well as our proposal to uprate the fixed EBIT component by inflation, both create the need to make modifications to the Default tariff cap overview model.

A2.2 A draft amended model is published alongside this consultation. The table below briefly describes the changes made.

Table A2.1 – Changes to Default tariff cap overview model

Input	Added new table to '3k EBIT' sheet above existing table with current EBIT values.	Table provides a summary of the fixed and variable EBIT components for all price cap periods up to the end of 2030. Takes values from pre-existing EBIT table (rows 21-27) for all periods prior to October 2023 and from a new section (rows 29-66) for cap periods from October 2023 onwards. Values in this table are referenced within the calculations (green) sheets.
Input	Added a new section to '3k EBIT' sheet below the existing table containing EBIT values.	Section consists of three tables. The first table (rows 36-50) calculates the cost of capital given a set of parameter values. These parameters will be fixed for four quarters, with only the risk-free-rates and tax rate being updated annually. The second table (rows 54-59) contains the capital employed values. These values will remain the same for each cap period unless subjected to a future review and reassessment. The third table (rows 63-66) calculates the fixed and variable EBIT components using the cost of capital and capital employed values. These calculations follow those set out in Chapter 6 of this consultation document.
Calculation	Amended the formulas in the EBIT rows of each "calculations" sheet	The calculations sheets (shaded green) contain the total EBIT allowance value (fixed plus variable) for each fuel/metering arrangement, consumption level, payment type and region combination. For those calculations sheets assuming positive consumption the EBIT allowance is calculated by multiplying the variable EBIT percentage for the relevant period taken from sheet '3k EBIT' by the sum of the allowances excluding EBIT itself and headroom. Half the value of the fixed EBIT component for the relevant period, also taken from '3k EBIT', is then added. This reflects the proposal to split the value of the fixed component equally across electricity and gas. For those sheets assuming 'Nil' consumption the EBIT allowance is calculated using the implied EBIT margin

		(EBIT allowance / All other allowances excluding EBIT and headroom) from the equivalent calculations sheet based on TDCV levels of consumption. This ensures the EBIT margin is the same at TDCV and Nil consumption.

Appendix 3 - Consultation Questions

Question 1: Do you agree with our assessment for the case for change? Please explain your reasoning.

Question 2: Do you agree with our approach to estimating fixed assets? If not, why not? Please explain your reasoning.

Question 3: Do you agree with our approach to estimating working capital? If not, why not? Please explain your reasoning.

Question 4: Do you agree with our approach to estimating collateral? If not, why not? Please explain your reasoning.

Question 5: For suppliers trading via an intermediary, how has your wholesale collateral requirements changed since October 2022?

Question 6: Do you agree with our proposals on cost of capital? Please explain your reasoning.

Question 7: Do you agree with our approach to setting and scaling the EBIT allowance? Please explain your reasoning.

Question 8: Do you agree with the conditions which may trigger revisiting the EBIT allowance parameters or its methodology? If not, why not? Please explain your reasoning.

Appendix 4 - Privacy notice on consultations

Personal data

The following explains your rights and gives you the information you are entitled to under the General Data Protection Regulation (GDPR).

Note that this section only refers to your personal data (your name address and anything that could be used to identify you personally) not the content of your response to the consultation.

1. The identity of the controller and contact details of our Data Protection Officer

The Gas and Electricity Markets Authority is the controller, (for ease of reference, "Ofgem"). The Data Protection Officer can be contacted at dpo@ofgem.gov.uk

2. Why we are collecting your personal data

Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

3. Our legal basis for processing your personal data

As a public authority, the GDPR makes provision for Ofgem to process personal data as necessary for the effective performance of a task carried out in the public interest. ie a consultation.

4. With whom we will be sharing your personal data

We may share consultation responses with DESNZ (including your personal data, if that is necessary under the above legal basis) when requested.

5. For how long we will keep your personal data, or criteria used to determine the retention period.

Your personal data will be held for six months after the project, including subsequent projects or legal proceedings regarding a decision based on this consultation, is close

6. Your rights

The data we are collecting is your personal data, and you have considerable say over what happens to it. You have the right to:

- know how we use your personal data
- access your personal data
- have personal data corrected if it is inaccurate or incomplete

- ask us to delete personal data when we no longer need it
- ask us to restrict how we process your data
- get your data from us and re-use it across other services
- object to certain ways we use your data
- be safeguarded against risks where decisions based on your data are taken entirely automatically
- tell us if we can share your information with 3rd parties
- tell us your preferred frequency, content and format of our communications with you
- to lodge a complaint with the independent Information Commissioner (ICO) if you consider we are not handling your data fairly or in accordance with the law. You can contact the ICO at https://ico.org.uk/, or telephone 0303 123 1113.

7. Your personal data will not be sent overseas

8. Your personal data will not be used for any automated decision making.

9. Your personal data will be stored in a secure government IT system.

10. More information: For more information on how Ofgem processes your data, click on the link to our "ofgem privacy promise".