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Sent by email to: Marzia.Zafar@ofgem.gov.uk; Shai.Hassid@ofgem.gov.uk

Dear Marzia and Shai

Further consultation on amending the methodology for setting the Earnings Before Interest and Tax (EBIT) allowance: NON-CONFIDENTIAL VERSION

Ofgem has recognised that: *“Significant detriment would be likely to arise for consumers if the regulatory framework does not allow the efficient costs of providing energy to be recovered. These detriments could include disorderly or unplanned exits (with potentially significant mutualisation costs), consolidation and lack of competition, low or no investment and poor service, lack of innovation and ultimately failure to properly carry out the activity.”*¹

The corresponding principal objective of the review of the EBIT allowance should be to protect the interests of consumers by restoring a level of confidence that the GB domestic energy retail market is an investable proposition. Ofgem's latest consultation falls a long way short in achieving this objective.

In this cover letter:

- We set out the context to this consultation. In that context, we suggest that Ofgem's EBIT review should be an opportunity to take stock of all the risks that suppliers face and explain what Ofgem intends to do to put the sector on a pathway to genuine stability and investability.
- We show how Ofgem has not made a serious attempt to undertake a meticulous and systematic review of the risks that suppliers face in the market today, and how they compare to when the CMA last observed the market and set the EBIT allowance in 2016.
- We show how Ofgem is wrong in asserting that some regulatory interventions reduce suppliers' risks compared to a market without a price cap.

¹ Ofgem [Decision on changes to the market stabilisation charge](#), Paragraph 2.11

- We present a holistic and comprehensive set of proposals to put the domestic energy retail sector on a pathway to genuine stability and investability. Our proposals include reducing risks that are caused by price cap design, including by: recovering any outstanding backwardation and BSUoS costs via the Market Stabilisation Charge (MSC); and changing the wholesale MSC parameters to 0% fall compared to the cap index and 100% cost recovery.

In the Appendix we answer Ofgem’s specific consultation questions.

The context

The context to the consultation is that high and volatile wholesale energy prices have exposed fundamental flaws in domestic energy retail market design and regulation, at huge cost to consumers. On the regulation side, suppliers have been permitted – even encouraged – to offer below cost unhedged tariffs and use customers’ money to run their businesses. With consumers being encouraged to focus on price above all else, and healthy competition being judged solely on switching, the result was a race to the bottom. Ofgem accepts that it needs to be broader in its objectives for the retail sector than “simply focusing on one metric”².

Ultimately, as the National Audit Office report³ outlines, between July 2021 and June 2022:

- 29 suppliers failed.
- Around 2.4m customers were switched via the Supplier of Last Resort (SoLR) process.
- At an Ofgem-estimated cost of £2.7bn.

The OBR estimates that the cost of the Special Administration of Bulb and its 1.6 million customers will be a further £6.5bn⁴.

On the market design side, high and volatile prices have exposed fundamental flaws in the price cap. The mismatches between: (a) the cap hedging index and spot wholesale prices and (b) the cap hedging index and energy that can be purchased for delivery have necessitated a series of interventions to ensure suppliers have sufficient revenues to remain solvent. The most material of these interventions include:

- Two ad hoc allowances for unexpected SVT demand costs⁵;
- One ad hoc allowance for backwardation costs incurred in cap period seven⁶;
- The MSC, which is currently due to expire on 31 March 2023⁷ and is set at sub-optimal parameters;
- Moving from six-monthly to quarterly cap changes⁸; and

² Jonathan Brearley Industry and Regulators Committee [Corrected oral evidence: Ofgem and net zero, Tuesday 30 November 2021](#)

³ [REPORT by the Comptroller and Auditor General](#), 22 June 2022, Key Facts page 4

⁴ <https://obr.uk/efo/economic-and-fiscal-outlook-november-2022/>

⁵ [Decision on the potential impact of increased wholesale volatility on the default tariff cap](#), 4 February 2022

[Price Cap – Decision on possible wholesale costs adjustment](#), 4 August 2022

⁶ [Decision on the potential impact of increased wholesale volatility on the default tariff cap](#), 4 February 2022

⁷ Ofgem is currently consulting on extending the MSC until 31 March 2024, with an option for the Authority to extend it on an annual basis.

⁸ [Price cap - Decision on changes to the wholesale methodology](#), 4 August 2022

- Introducing an explicit backwardation allowance calculated ex ante, recovered with a lag to when costs are incurred⁹.

Against this backdrop of supplier exits and partially effective temporary measures, Ofgem's EBIT review should be an opportunity to take stock of all the risks that suppliers face and explain what Ofgem intends to do – on a holistic basis - to put the sector on a pathway to genuine stability and investability. Ofgem has a particular duty to restore investor confidence, given its role in causing the problems that have crystallised over the past two years.

A meticulous and systematic review of supplier risks is needed

The starting point for Ofgem's EBIT review should be a meticulous and systematic review of:

- The risks that suppliers face in the market today, and how they compare to when the CMA last observed the market and set the EBIT allowance in 2016; and
- The extent to which suppliers are able to manage those risks.

In doing so, Ofgem should carefully analyse which risks are caused by price cap design – and therefore would not exist in a competitive market – and the extent to which they have been mitigated by regulatory remedies.

Ofgem has made no serious attempt to undertake this meticulous and systematic review. Instead Ofgem makes unsubstantiated assertions that do not stand up to scrutiny. Ofgem asserts that:

*"[S]ome recent cap developments have reduced suppliers' risks in comparison to a pre-price cap counterfactual. For instance, the MSC has consequentially likely to have resulted in less switching than would have otherwise been the case, and the ex-post volume risk allowance granted in relation to cap periods 7 and 8 demonstrates Ofgem's ability to step in and protect against systematic market risks."*¹⁰

These claims suggest that Ofgem has – so far – failed to properly consider or analyse:

- A counterfactual market without the price cap;
- How market movements translate into financial risks; and
- The limitations of the current MSC and previous volume risk allowances in mitigating the financial risks that the price cap creates.

The price cap itself causes the financial risks that the MSC is designed to mitigate. The MSC is designed to mitigate the financial risk of suppliers hedging for their SVT customers in line with the cap, and then being forced to sell those hedges at a loss in a falling prices scenario when customers switch. The root cause of the financial risk is that the cap gives consumers a free option. Consumers can take the better of the hedge in the cap or spot wholesale prices, and the two are different because the price cap index is set at a lag to spot wholesale prices.

If the cap did not exist, suppliers could manage the financial risks arising from the potential for customers to switch away in a falling prices scenario, for example by \propto . Customer churn is not a short-term financial risk in itself; the financial risk in this case is having to sell hedges

⁹ [Price cap - Decision on changes to the wholesale methodology](#), 4 August 2022

¹⁰ Ofgem consultation paragraph 3.11

at a loss. In a counterfactual without the price cap, more customers are also likely to be on fixed tariffs - as can currently be observed in the non-domestic market. The free option that the price cap creates drives the large proportion of domestic customers on SVT, which doesn't have exit fees.

The MSC also only partially mitigates the financial risk of having to sell hedges at a loss in a falling prices scenario. It is only triggered once wholesale prices fall by 10% compared to the cap hedge and even then only 85% of the value of the lost hedge is recovered. These parameters mean that suppliers are exposed to significant financial risk if they hedge for their SVT customers in line with the cap. Because of this unmanageable risk, ✕.

There would also have been no need for the ex-post allowances for unexpected SVT demand in a counterfactual without the price cap. The allowances were needed because customers took the free option to stay on the cap when spot wholesale prices were higher than the cap. If the cap did not exist, suppliers could again manage that risk by changing their hedging and pricing for their default tariffs.

Whilst it is true that the provision of allowances for unexpected SVT demand "*demonstrates Ofgem's ability to step in*", Ofgem only had to step in because of the price cap it designed. Ofgem has also indicated that it does not intend to systematically provide any future allowances¹¹. A market will not be investable if participants are forced to rely on unpredictable and uncertain ex post interventions by the sectoral regulator to shore up revenues due to flaws in the regulatory framework.

Ofgem's assertions that the MSC and past volume risk allowances reduce supplier risks compared to a counterfactual without the price cap are obviously spurious. It is disappointing that Ofgem has made these assertions given that we met with Ofgem on 27 October 2022 and presented a slide deck¹² that debunked the same spurious assertions being made by a consumer group. Ofgem assured us at this meeting that our presentation would be taken into account as part of our consultation response; this does not seem to be true.

A holistic and comprehensive set of proposals

At a further meeting with Ofgem on 13 December 2022, you challenged us to present proposals in our consultation response. In the table below we present a holistic and comprehensive set of proposals to put the domestic energy retail sector on a pathway to genuine stability and investability.

The key principles underpinning our proposals are that they genuinely protect consumers from risks, and that risks are better prevented than cured.

¹¹ In its [Price Cap – Decision on possible wholesale costs adjustment](#), Ofgem stated that: "5.92. We will therefore remain open to representations from stakeholders about whether we should carry out future reviews for the areas where we have not made an adjustment from 1 October 2022. We consider that it would be up to stakeholders to make the case for any future reviews." Ofgem being "open to representations" cannot be relied upon as a guarantee that further efficient unexpected SVT demand costs will be recovered.

¹² The Centrica slide deck from meeting with Ofgem on 27 October 2022 is included as a confidential attachment to this submission.

	Proposal	Rationale
1	Incorporate outstanding unrecovered backwardation and BSUoS costs in the MSC. ¹³	<p>It will avoid having to add these costs into the price cap, either through bespoke allowances or EBIT.</p> <p>Backwardation costs are caused by the mismatch between the cap index and energy that can be purchased for delivery. If the cap did not exist, suppliers could incorporate their BSUoS cost forecasts into their default tariffs.</p>
2	Change the wholesale MSC parameters to 0% fall compared to the cap index and 100% cost recovery. ¹⁴	<p>It will avoid having to add these costs into the price cap, either through bespoke allowances or EBIT.</p> <p>As discussed above, the mismatch between the cap index and spot wholesale prices drives unmanageable volume risk. The current MSC parameters for wholesale prices and cost recovery only partially mitigate this risk.</p>
3	Provide for the MSC to be available as long as the cap is in place, and automatically activated if there are outstanding unrecovered backwardation and/or BSUoS costs, and in line with the wholesale price fall parameter above. ¹⁵	<p>It will avoid having to add these costs into the price cap, either through bespoke allowances or EBIT.</p>
4	Introduce a reconciliation mechanism to true up any difference between forecast and outturn CfD costs. ¹⁶	<p>It will avoid having to add these costs into the price cap, either through bespoke allowances or EBIT.</p> <p>If the cap did not exist, suppliers could incorporate more accurate CfD forecasts into their default tariffs than those provided by the LCCC.</p>
5	Introduce an automatic mechanism via licence conditions for recovering efficient unexpected SVT demand costs that lasts as long as the price cap.	<p>It will avoid having to add these costs into the price cap, either through bespoke allowances or EBIT.</p>

¹³ For further detail please see our response to Ofgem's consultation on extending the MSC and BAT

¹⁴ For further detail please see our response to Ofgem's consultation on extending the MSC and BAT

¹⁵ For further detail please see our response to Ofgem's consultation on extending the MSC and BAT

¹⁶ Please see letter from Tim Dewhurst to Neil Lawrence, sent on 7 September 2022, which we attach to this response as part of this response. To the extent that the LCCC forecast understates true CfD costs and these need to be recovered at a lag further to reconciliation, the outstanding unrecovered costs should be included in the MSC.

		The cap creates the free option that gives rise to these costs; they would therefore not exist without the price cap.
6	Require suppliers to ringfence gross customer credit balances net of unbilled consumption. To the extent that ringfencing is not required by regulation, all suppliers should be required to disclose to customers whether they voluntarily ringfence.	To protect customers' money in the event of supplier failure. To promote financial resilience and sustainable competition by mitigating the moral hazard of suppliers' using customer money to prop up their businesses.
7	Reapply the cold weather (i.e. high demand) overlay in the very high prices scenario in the stress test RFI. Include a warm weather overlay (i.e. low demand) to the low price scenario.	It will improve Ofgem understanding of supplier financial resilience to plausible high impact scenarios. This improved understanding will enable Ofgem to consider appropriate regulatory implications, including the risk capital provisions in the EBIT allowance.
8	Provide an EBIT allowance that is commensurate with the capital requirements of a standalone supplier that will remain solvent in a low likelihood high impact risk scenario.	It will protect consumers by promoting sustainable competition, investment and innovation by ensuring that suppliers are financially resilient and can recover their efficient costs. It will also promote sustainable competition, investment and innovation by lowering barriers to entry and enabling a variety of business models.
9	Ofgem to disclose any and all models for calculating the capital requirements of a standalone supplier that will remain solvent in a low likelihood high impact risk scenario.	To ensure a full and proper consultation by enabling stakeholders to engage with Ofgem's proposals.
10	Include fixed assets as a component of capital employed.	Suppliers utilise some fixed assets to provide services to customers. The £85/customer value suggested by Ofgem is likely to be reasonable because it ensures that the price cap is internally consistent.
11	Ofgem to investigate the amount and purpose of funding provided by the Government as part of the Bulb transaction. ¹⁷	To ascertain whether the amount and purpose of funding provides insight to the capital requirements of a supplier in today's market, and is therefore pertinent to the EBIT consultation.

¹⁷ The Government press release announcing the transaction discloses that Government funding is part of the deal. <https://www.gov.uk/government/news/uk-government-approves-agreement-between-bulb-and-octopus-energy-providing-certainty-to-15-million-customers>

		An article on the Bloomberg website published on 21 December 2022 ¹⁸ suggests that the Government has provided a cash injection of £4.5billion to Bulb as part of the transaction. On this face of it, this suggests capital requirements of over £2,800 per customer.
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We believe that this holistic and comprehensive set of proposals would put the domestic energy retail sector on a pathway to genuine stability and investability.

In light of the various concerns set out in this response - including a failure to disclose any models used to determine the capital requirements for a supplier - we do not believe that Ofgem can safely proceed from this consultation straight to statutory consultation.

Given the holistic nature of this response in respect of the price cap, this response should also be considered in response to Ofgem's Price cap Programme of Work¹⁹.

Yours sincerely

Tim Dewhurst
Director of Regulation and Policy

Attachments (in addition to Appendix below) to be considered part of this response – all of which are confidential and contain commercially sensitive information:

1. Letter from Tim Dewhurst to Neil Lawrence, sent on 7 September 2022, regarding Ofgem's Decision on the Contract for Difference (CfD) allowance methodology in the default tariff cap.
2. Centrica slides sent to Ofgem EBIT team and presented at the meeting on 27 October 2022.
3. Centrica's response to Ofgem's Consultation on reflecting potential changes to BSUoS charges in the price cap, 23 December 2022.
4. Centrica's response to Ofgem's Statutory Consultation on extending the MSC and BAT beyond 31 March 2023, 29 December 2022.

¹⁸ <https://www.bloomberg.com/news/articles/2022-12-21/uk-sets-up-4-5-billion-funding-facility-for-bulb-takeover?leadSource=verify%20wall>

¹⁹ <https://www.ofgem.gov.uk/publications/price-cap-programme-work>

Appendix – responses to consultation questions

Question 1: Are there any issues we should consider in relation to our proposed 1 July 2023 implementation?

In a policy consultation on the EBIT allowance we would expect Ofgem to have undertaken a meticulous and systematic review of:

- The risks that suppliers face in the market today, and how they compare to when the CMA last observed the market and set the EBIT allowance in 2016; and
- The extent to which suppliers are able to manage those risks.

In doing so, we would expect Ofgem to carefully analyse which risks are caused by price cap design – and therefore would not exist in a competitive market – and the extent to which they have been mitigated by regulatory remedies.

Ofgem has made no serious attempt to undertake this meticulous and systematic review. Instead Ofgem makes unsubstantiated assertions that do not stand up to scrutiny. We give examples of these in the cover letter.

In a policy consultation on the EBIT allowance we would also expect Ofgem to present detailed proposals for scrutiny, including disclosing any models used to determine the capital requirements for a supplier. Ofgem has not done this.

In light of these omissions, we do not believe that Ofgem can safely proceed from this consultation straight to statutory consultation – i.e. straight to final proposals with licence drafting.

Unlike interventions such as the MSC that are required to ensure supplier resilience and avoid failure, Ofgem has provided no evidence to suggest the review needs to be completed within urgent timescales. For such a critical review, which will be key to the investability of the sector for year to come, it is essential that Ofgem takes time to ensure that its proposals and reasoning are robust, rather than pressing ahead with proposals that may have damaging consequences for the sector and consumers as a result.

To illustrate a minimum level of detail in proposals and reasoning that we would expect for a policy consultation of this importance and scope, we would refer Ofgem to the policy consultation for implementing the price cap that was published on 25 May 2018.²⁰

Question 2: Do you agree with our assessment on the case for change?

No, not entirely. Whilst we agree with Ofgem's conclusion that it is reasonable to review the EBIT allowance in the default tariff cap we do not agree with some of Ofgem's articulation of the case for change.

There have been significant changes in the regulatory and market circumstances faced by retail energy suppliers since the default tariff cap was first assessed in 2018 and implemented in 2019. On this basis we consider that it is reasonable for Ofgem to review the EBIT allowance in the cap although this does not imply that the EBIT margin currently in the

²⁰ <https://www.ofgem.gov.uk/publications/default-tariff-cap-policy-consultation-overview>

cap is inappropriate. Therefore, to support a change in the allowed margin Ofgem will need to clearly and transparently evidence that the alternative that it proposes is more appropriate.

In setting out its case for change, and elsewhere in its consultation document, Ofgem makes unsubstantiated statements with which we do not agree. We give examples of these in the cover letter.

Question 3: Do you agree with our proposal to include fixed assets as a component of capital employed and the suggested level?

Yes. Suppliers utilise some fixed assets to provide services to customers. Therefore, we agree with Ofgem's proposal to include fixed assets as a component of capital employed. We also consider the £85/customer value suggested by Ofgem is likely to be reasonable because it ensures that the price cap is internally consistent.

Whilst Ofgem may be able to gather recent supplier data on the level of fixed assets involved in the business, any standalone assessment of supplier fixed asset data is susceptible to cherry picking.

In recent years, some suppliers have adopted 'infrastructure as a service' or 'software as a service' models for the provision of some functions that would otherwise employ fixed or intangible assets. Where this is the case, suppliers will not invest in a capital asset to provide the services but will instead incur an operational cost to the provider of the service (the service provider itself will hold the capital asset). This changes the cost structure of retail energy supply by moving some capital costs into operating costs.

It is, therefore, possible that if Ofgem were to assess the level of fixed assets employed in supply businesses today it may find a level lower than £85 per customer. However, if Ofgem were to allow for a lower value of fixed capital in the business based on such data, without also reassessing the operational cost allowance this would constitute cherry picking and risk setting the total allowance below the efficient cost of supply. This is because those suppliers with lower fixed capital in the business can be expected to also be incurring higher operational costs as a result of outsourcing fees.

Question 4: Do you agree that our estimate of fixed assets for a notional supplier is representative of current market conditions?

In general, fixed assets are fixed and therefore do not vary with market conditions. Furthermore, whilst the level of fixed assets may have changed since the price cap was first set, any standalone assessment of fixed assets without a corresponding consideration of operating costs would be inappropriate for the reasons set out in our response to question 3 above. Therefore, we believe that Ofgem's estimate of fixed assets remains appropriate for use in the current market conditions.

Question 5: What do you see as the minimum level of working capital required for a supplier to be able to operate and which method should we use to set it?

In our response below, we first address the question of the appropriate level of working capital before responding to the question of how Ofgem should set the allowed level of working capital.

The appropriate level of working capital

The appropriate level of working capital required for a supplier to operate sustainably in the domestic energy retail market depends on a number of factors including:

- Timing of customer acquisition;
- Wholesale costs and retail pricing trends;
- Supplier business practices; and
- Customer payment methods.

Timing of customer acquisition

As Ofgem has identified in respect of its modelling of working capital, the working capital requirement is “*sensitive to the starting point in which the supplier operates.*”²¹ The real world factor that this modelling result illustrates is the impact on working capital of acquiring a customer depending on when the customer joins. If a supplier acquires direct debit customers at the start of winter then it needs a greater volume of working capital to support those customers than if the same customers were acquired at the end of winter.

Wholesale costs and retail pricing trends

As we explained in our previous consultation response,²² the act of changing the level of the price cap drives working capital requirements and the impact depends on when in the year the price cap is changed (see our response to question 9 of the previous EBIT consultation).

Supplier business practices

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Suppliers that do not protect gross customer credit balances but instead use them to support ongoing business operations may need to raise less working capital as a business, but in doing so put customers money at risk. Comparing two suppliers that do not protect customer credit balances, one supplier that takes direct debits in advance of supply or at higher levels than the other will have lower working capital requirements.

Payment terms

Customers that pay in arrears on standard credit terms require the most working capital to serve. Less working capital is necessary to serve direct debit customers than standard credit customers, although working capital requirements for direct debit customers exhibit significant seasonal fluctuations. Customers on pre-payment meters require the least working capital to serve. Therefore, at the supplier level, the total level of working capital depends strongly on the proportion of a suppliers’ customers that pay by each payment method.

In addition to the breakdown of customers by payment method being important, additional details about payment arrangements can also significantly affect the level of working capital requirements.

²¹ Para A1.11, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

²² Page 9, British Gas EBIT Consultation Detailed Response Appendix

For customers that pay for their energy in arrears, the frequency of payment is important. Whilst some customers pay monthly in arrears, many will pay quarterly in arrears. < We understand that quarterly payment arrangements for standard credit customers are also used by other suppliers in the market.

For customers that pay by direct debit, it is important to consider whether the direct debit is fixed or variable. Typically, direct debit arrangements attempt to spread the total annual cost of energy for the customer evenly across the twelve months of the year. However, some suppliers operate variable direct debits which increase in high consuming months and fall in low consuming months to clear the account balance in full each month. Variable direct debit arrangements imply a different level of working capital to fixed direct debit arrangements.

How should Ofgem set the level of allowed working capital

While Ofgem will be able to collect actual accounting data from suppliers on their working capital positions, we anticipate that this data will be hard to interpret with consistency due to the impacts of various accounting adjustments. Furthermore, as Ofgem itself has highlighted *“Data obtained through previous RFIs show a wide range of working capital per supplier, ranging from negative hundreds of £GBP to positive hundreds of £GBP per customer.”*²³

In light of these difficulties with using supplier accounting data, Ofgem should directly model the working capital requirements of a notional efficient supplier. Modelling the requirements is broadly in line with Ofgem’s proposed approach. However, as with any modelling exercise that will affect the level of the price cap, Ofgem will need to provide transparency around its modelling approach and input assumptions to allow stakeholders to ensure that the detail of the approach is reasonable. Ofgem should make the model available to consultees in its entirety.

Whilst Ofgem has not made its working capital model available to consultees at this stage, it has provided some description of its intended approach and assumptions. Based on the information that Ofgem has made available we would make the following points.

- a. Ofgem states that the *“model calculates the starting shareholder equity injection needed and assumes the notional supplier maintains a positive net cash balance or prespecified liquidity ratio over the two-year period.”*²⁴ It appears likely to us that the liquidity ratio targeted by the notional supplier could have a significant impact on the level of working capital that the model calculates. It is therefore important that Ofgem is clear about the assumption it makes for this parameter and that its assumption is consistent with its approach to supplier financial resilience and stress testing.
- b. Ofgem notes that the model results are sensitive to the starting point in which the supplier operates.²⁵ This is an expected result from such working capital modelling and Ofgem says it *“would carry out sensitivity tests to measure the effect of different starting points”*.²⁶ Again this seems reasonable. However, given that we would expect the sensitivity tests to show that the results are sensitive and that different starting points imply materially different working capital requirements, Ofgem must put

²³ Para 4.35, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

²⁴ Para A1.4, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

²⁵ Para A1.11, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

²⁶ Ibid

forward clear proposals for comment on how it will treat the range of results that it observes for the purposes of setting an allowance.

- c. Ofgem states that by “(u)sing historical gas and electricity forward curves, we applied stochastic modelling to forecast a wide range of potential price paths (we ran 5,000 simulations).”²⁷ However, it is not clear what historical period Ofgem has used to calibrate its model. If Ofgem were to exclude the recent period of volatility it would be highly likely to underestimate the extreme ranges of the distribution (circa the P98 level). Given that Ofgem proposes to use the same model to inform its view of risk capital - and that for such a purpose it is the circa P98 values of the distribution that will be influential - it is important that Ofgem includes the recent period of wholesale price volatility in the historic data it uses to calibrate its models.
- d. Ofgem’s model uses “the monthly average of wholesale cost allowances ... for each three-month cap period, although in practice wholesale costs vary month-to-month within the cap period.”²⁸ Ofgem recognises that the monthly average of wholesale cost allowances for each three-month cap period is a clear simplification that will understate the variation in costs between months. Given that Ofgem plans to use the model to estimate risk capital - and that risk capital will need to capture the peak of working capital - Ofgem should not make undue assumptions within the model that artificially smooth wholesale costs and therefore understate peak working capital.
- e. Ofgem proposes to assume that standard credit customers pay one month in arrears. However, many standard credit customers in the market pay quarterly in arrears. An assumption of monthly payments will considerably understate suppliers working capital requirements to serve those customers that pay quarterly.
- f. Ofgem states that it incorporates “some opening balances into the model. This includes opening fixed assets, direct debt balances, standard credit debit balances, fuel liabilities, RO liabilities, and tax liabilities”.²⁹ It appears likely to us that the assumed opening balance could have a significant impact on the level of working capital that the model calculates. It is therefore important that Ofgem is clear about the assumption it makes for this parameter and that its assumption is consistent with its approach to supplier financial resilience and stress testing.

Question 6: How can the relationship between wholesale prices and their volatility, and working capital be quantified?

As noted above, actual supplier accounting data on working capital is likely to be difficult to interpret consistently. Therefore, to quantify the relationship between working capital and wholesale prices it is likely to be necessary to model supplier working capital directly and to assess the modelled impact on working capital of scenarios for different levels of wholesale prices and different levels of volatility in wholesale prices. Such modelling needs to be sufficiently transparent to allow for stakeholders to assure its accuracy and reasonableness and Ofgem should be clear about the assumptions it makes about parameters and business

²⁷ Para A1.13, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

²⁸ Para A1.12, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

²⁹ Para A1.6, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

practices. For example, Ofgem should be clear about what policy it models for the timing of customer direct debit reviews in response to changes in retail price levels.

Question 7: Do you agree with our proposal to include wholesale cost volatility and unexpected demand shock as key drivers of volume risk when calculating suppliers' risk capital requirements?

Yes. Ofgem should include wholesale cost volatility and unexpected demand shock (e.g. unexpected weather events and changes in expected SVT customer numbers) as drivers of volume risk when calculating suppliers' risk capital requirements. Both of these factors are key drivers of risk capital for suppliers.

Whilst Ofgem proposes to include wholesale cost volatility and unexpected demand shock as drivers of suppliers' risk capital requirements, Ofgem proposes to exclude the wholesale price level from its assessment of risk capital.

Ofgem argues that the wholesale cost allowance reflects the costs to suppliers if their hedging strategy follows the wholesale indexation in the cap and therefore it is only suppliers that deviate from the index hedging strategy that are exposed to risks linked to the wholesale price level.³⁰ This logic is flawed and misses the link between wholesale volatility and wholesale price level.

As explained in our previous consultation response,³¹ for a given level of volatility, the level of wholesale prices is also a driver of risk capital. For example, if volatility is such that a +/- 20% movement in wholesale prices is a reasonable scenario to consider, then it is clear that the capital that must be held to withstand a +/- 20% movement in wholesale prices doubles if the starting wholesale price doubles (20% of 100 being 20 and 20% of 200 being 40). Thus wholesale prices and wholesale volatility have a joint and multiplicative impact on supplier risk exposure. Therefore, given that Ofgem accepts that variation in wholesale costs is a risk capital driver for suppliers, it should also recognise that this risk has a multiplicative relationship with the wholesale price level.

Question 8: Do you agree with our assessment that backwardation, bad debt, and shaping and imbalances costs are accounted for in the existing cap allowances and that their inclusion within the EBIT allowance could lead to double counting?

No, we do not agree with Ofgem's decision to exclude these risks from its assessment of risk capital. It is important that Ofgem's analysis of risk capital captures all residual risks that suppliers face. Suppliers face residual risks in respect to every one of these factors.

Ofgem proposes to exclude backwardation recovery risk, shaping and imbalance risk and bad debt risk from its assessment of supplier risk capital. In addition, Ofgem makes no mention of the CfD forecast risk and BSUoS recovery risk that suppliers are exposed to and therefore, de facto, wrongly excludes these from their considerations as well.

With regards to backwardation, whilst Ofgem has provided a backwardation allowance, this is recovered over a six-month period. Therefore, suppliers are still exposed to a risk that customers churn before the full value of the allowance is recovered. As set out in the cover

³⁰ Para 4.55, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

³¹ Page 8, British Gas EBIT Consultation Detailed Response Appendix

letter, the cheapest and fairest way to address the backwardation recovery risk is to factor outstanding unrecovered cost into the MSC, and to make the MSC available for cost recovery as long as the cap is in place. To the extent that Ofgem does not mitigate backwardation cost recovery via the MSC, it will need to either provide specific cost allowances or assume that suppliers have to hold necessary risk capital to cover it, the costs of which would need to be recovered via EBIT. Please see our response to the consultation on extending the MSC and this cover letter for further information.

Ofgem states that it considers “*that the headroom and wholesale risk allowances cover the time difference between the incurrence of backwardation costs and their recovery under the cap.*” However, Ofgem presents no evidence to support this position. Ofgem should not use ‘headroom’ as a cure all for the unquantified risks in the cap without evidence to support this. Centrica has repeatedly submitted and referenced detailed breakdowns that show that the headroom allowance is exceeded by costs not accounted for in the cap, most recently in our response to Ofgem’s Consultation on the potential impact of increased wholesale volatility on the default tariff cap³². Ofgem has never disputed the breakdowns that we have submitted that show that the headroom allowance is exceeded by costs not accounted for in the cap.

Suppliers face a similar cost recovery risk for BSUoS costs that are recovered at a lag to when they are incurred. As we describe in our response to the consultation on extending the MSC and this cover letter, the remedy for the BSUoS recovery risk should be the same as that for backwardation. To the extent that Ofgem does not mitigate BSUoS cost recovery via the MSC, it will need to either provide specific cost allowances or assume that suppliers have to hold necessary risk capital to cover it, the costs of which would need to be recovered via EBIT.

With regards to shaping and imbalance costs, whilst it is true that Ofgem has provided a percentage in the wholesale allowance to address shaping and imbalance costs, suppliers are still exposed to a residual risk. In some scenarios suppliers shaping and imbalance costs from following the price cap hedging index may still exceed the value of the allowance provided. Where this to happen, this will result in unrecoverable costs for suppliers that suppliers must, implicitly or explicitly, hold risk capital for.

Whilst Ofgem recognises that there are liquidity issues in the forward power market that expose suppliers to additional shaping costs it dismisses this as a driver of shaping and imbalance risk on the basis that Ofgem has plans to review the wholesale cost allowance by summer 2024.³³

We do not agree that Ofgem’s forward work programme justifies excluding considerations of shaping and balancing costs from considerations of risk capital. Instead, Ofgem should consider the impact of shaping and imbalance costs on supplier risk capital requirements given status quo arrangements. If and when Ofgem subsequently takes action that changes the shaping and imbalance risk faced by suppliers, it can then consider whether to further review the EBIT margin. This is a more appropriate course of action as it does not rely on either:

³² Centrica response to Ofgem’s Consultation on the potential impact of increased wholesale volatility on the default tariff cap, December 2021, para 88 to 92

³³ Para 4.69, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

- The workstreams in Ofgem's forward work programme being delivered to schedule (which cannot be guaranteed); or
- The scale of the issue being de minimis ahead of Ofgem's future review (which Ofgem has presented no evidence to suggest is the case).

With regards to bad debt, in its previous consultation, Ofgem recognised that suppliers were exposed to unrecoverable losses if bad debt exceeds the bad debt allowance in the price cap. However, Ofgem proposes not to consider this risk in its risk capital analysis because of uncertainty about future policy arrangements.³⁴ Again, this is the wrong approach for Ofgem to take to the possibility of future regulatory change. Instead, Ofgem should consider the impact of bad debt costs on supplier risk capital requirements given status quo arrangements. If subsequent developments mean that the scale of the risk is altered materially, then Ofgem can reconsider the EBIT allowance in light of new information rather than pre-emptively dismissing the existing risk level.

With regards to CfD forecast risk, Ofgem makes no mention of this as a risk to which suppliers are exposed to and therefore makes no consideration of it in its consultation document. This is despite Centrica:

- Highlighting the risk and asking for a reconciliation mechanism in response to Ofgem's consultation on the matter;³⁵
- Writing to Ofgem on 7 September 2022 raising concerns that Ofgem had not mitigated the risk in its Decision on the CfD methodology;³⁶
- Discussing our concerns on the CfD methodology at a dedicated meeting with the Ofgem price cap team 10 October 2022; and
- Highlighting our concerns explicitly at a meeting with the Ofgem team leading on the EBIT consultation on 26 October 2022.

We reattach our consultation response on the CfD methodology, our 7 September 2022 letter and our 26 October 2022 slides.

As we have explained to Ofgem previously, its approach to the CfD levy creates a risk capital and working capital exposure for suppliers. This is because Ofgem requires suppliers to pass through CfD credits before the funds to support these are received from the LCCC. At current power prices this is significant. In September 2022 the LCCC forecast an industry CfD credit of £2.2bn for January – March 2023.³⁷ Ofgem's methodology required this to be included as part of the annualised credit, reducing the 2023 Q1 CfD allowance. However, suppliers are only scheduled to receive CfD credits in April 2023 and the true level of CfD credits can differ from the LCCC's forecast. Therefore, suppliers are perennially exposed to the risk that the LCCC mis forecasts CfD credits. Given that Ofgem has thus far refused to introduce a reconciliation mechanism, suppliers must hold additional risk capital against LCCC CfD credit forecast error risk. This risk can be considerable to accurately forecast CfD

³⁴ Para 4.67, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

³⁵ Price Cap Consultation: Amending the methodology for setting the Contracts for Difference (CfD) allowance, Centrica Response, 17 May 2022

³⁶ Letter from Tim Dewhurst to Neil Lawrence and Dan Norton, 7 September 2022

³⁷ lowcarboncontracts.uk/index.php/events/webinars/cfd-interim-levy-rate-and-total-reserve-amount-iltra-q1-2023

credits the LCCC must accurately forecast CfD generation volumes. This task is complicated by the impact of two “free options” held by generators.

The first free option is held by baseload CfD generators who are able to sell output ahead in the seasonal contract market and then buy it back and reduce generation if the profit from trading exceeds the profit from operating. This is evidenced by the actual generation data published by the LCCC and illustrated by the following example.

- a. A rational baseload CfD plant would hedge by selling forward their power at the season ahead index used as the baseload market reference price (BMRP).
 - Currently this is around £400/MWh.
- b. If the CfD plant generates it will not earn net revenues equal to the BMRP as it will have to make difference payments and will incur fuel and variable operation and maintenance (VOM) costs. Rather its net revenue will be approximately equal to its strike price minus fuel and VOM costs.
 - For Q1 2023 the average strike price for biomass conversion plants was around £130/MWh.³⁸
 - Illustratively we assume such a plant would face fuel and VOM costs equal to £80/MWh.
- c. If, during the delivery season, spot wholesale prices were to drop below £350/MWh the baseload CfD generator would be able to choose to buy back its output and not generate and in doing so would increase its profits.
- d. If spot prices were £340/MWh then the CfD plant faces earning net revenues of £50/MWh for generating, or £60/MWh for not generating.

This effect has led and is likely to continue to lead to baseload CfD generation reducing in periods of volatile wholesale prices. Whilst we understand that the LCCC updates its forecasts over time it is not clear how the LCCC forecast load factors for baseload CfD plants. If the LCCC does not adequately account for the effect of this free option on CfD generation then it will systematically overestimate CfD generation and CfD credits at times of high wholesale prices.

The second free option is held by CfD generators that have not yet triggered their CfD start dates. The LCCC relies on the expected start dates provided to it by generators to produce its forecasts. Whilst this is a reasonable approach when generators are expected to receive payments from the LCCC, when power prices increase significantly above generator strike prices, it is rational behaviour for the generator to delay triggering its CfD start date. Even if fully operational, generators can use the start date flexibility inherent in the CfD contract to allow it to sell its volume at the prevailing high market prices, without paying significant sums back into the CfD scheme. CfD generators also have the option to start the CfD contract if power prices suddenly fall below the strike price. By not assuming rational behaviour by CfD generators in a high-power price environment, the LCCC forecasting approach will systematically overstate generation capacity subject to CfDs and therefore overstate CfD credits.

If Ofgem were to introduce a reconciliation mechanism (as Centrica has requested) this would reduce the need for suppliers to hold risk capital in relation to this risk. Whilst

³⁸ <https://www.lowcarboncontracts.uk/dashboards/cfd/levy-dashboards/interim-levy-rate-and-total-reserve-amount>

mitigating the risk capital requirements, the reconciliation mechanism would increase the working capital requirements because revenue recovery is still delayed.³⁹

Question 9: Do you propose an alternative approach for measuring risk capital which is preferable to the approach we describe in this section and Appendix 1? In your approach, how do you model the relationship between wholesale price volatility and risk capital under stress test scenarios?

Scenario based modelling is a reasonable way for Ofgem to estimate risk capital employed by a notional efficient supplier. However, suppliers with robust financial business models must have access to sufficient risk capital to withstand high impact and plausible yet low probability events. Therefore, it is important that the scenarios that are used to assess the level of risk capital that suppliers must have access to are realistic about the level of probability that suppliers need to be able to withstand across a variety of factors, including weather risk.

A guide for how low probability a scenario a supplier should be able to withstand can be taken from Ofgem's supplier financial resilience work. In its supplier financial resilience impact assessment, Ofgem targets small and challenger suppliers achieving a credit rating of B or BB on the basis that this minimises customer costs.⁴⁰ Ofgem reports that BB rated firms have a one year default rate of 0.36% and B rated firms have a default rate of 2.20%.⁴¹ To be consistent with Ofgem's target default rate, it should be modelling scenarios with input assumptions that reflect P97.8 to P99.64 level events in any given year. To target a level of default rate higher than 0.36-2.20%, and therefore scenarios less remote than P97.8-P99.64, would be inconsistent with Ofgem's assessment of the level of risk that it is optimal for suppliers to be able to withstand.

In addition to the modelling of risk capital that Ofgem proposes in its Appendix 1 we think that it is important for Ofgem includes in its consideration of risk capital, and hence in its EBIT margin allowance, the risk that suppliers must manage in relation to variations in their requirement for collateral capital.

As explained further in our response to question 13, suppliers must be able to meet collateral requirements as they fall due. Movements in wholesale prices can lead to large collateral demands at short notice. Therefore, given that Ofgem is considering modelling risk capital as the peak of working capital requirements in downside scenarios, Ofgem should also consider the corresponding collateral requirements that suppliers would face in those scenarios.

Figure 1 below provides an illustration of the variation in variation margin requirements faced by suppliers due to wholesale volatility. The supplier in the figure is assumed to follow the price cap hedging strategy⁴² and to trade all its volume on exchanges. Based on actual wholesale price data, the chart shows that the example supplier would have had to meet a margin call on 30 August 2022 of £393 per customer in response to the daily reduction in wholesale prices. Over a 3-week period, w/c 29 August – w/c 12 September, they would

³⁹ To the extent that the LCCC forecast understates true CfD costs and these need to be recovered at a lag further to reconciliation, the outstanding unrecovered costs should be included in the MSC.

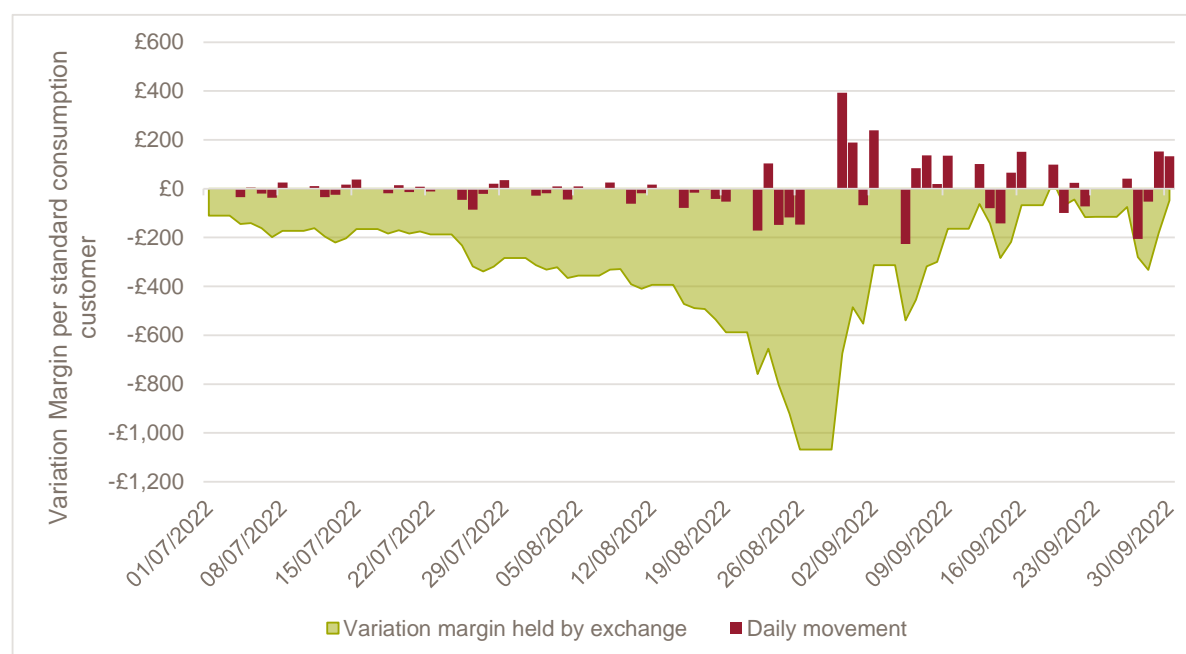
⁴⁰ Figure 10. Revised impact assessment of Strengthening Financial Resilience proposals, Ofgem, 25 November 2022

⁴¹ Table 4. Revised impact assessment of Strengthening Financial Resilience proposals, Ofgem, 25 November 2022

⁴² Strictly

have faced margin calls of £1,000 per customer, larger than the implied capital employed under the current EBIT margin allowance, which will be £756 in period 9b⁴³.

Figure 1 **Variation margin**



Source: *Modelling of historic pricing data*

Note: *The Y axis represents the amount of money held/received by the exchange per SVT customer. Positive daily movements indicate money moving from the energy company to the exchange; negative daily movement indicate the exchange giving/returning money to the supplier*

If it would be helpful for Ofgem's analysis, we would be happy to share the model of collateral costs for a notional supplier that we have developed to inform this response and from which Figure 1 is produced. The modelling assumptions are described in more detail in our response to question 11 below.

Additional information on the methodology used to calculate risk capital in response to RFI question 20

We have estimated the risk capital requirements for Σ by modelling the hedged volume against a P5 price move, based on 1000 simulations of outturn prices and calibrated to two years of historic prices. The calculated value represents how much capital could be required to meet margin calls from price moves.

In addition to this we have included the risks inherent in the portfolio including:

- Weather risk – P95 profit impact to the business due to weather related demand variations. Losses may arise in both warm & cold weather scenarios, where either excess volume is sold back at below the marginal selling price or additional hedges are bought at above the marginal selling price in stressed market conditions.

⁴³ See paragraph 4.2 of the consultation document.

- Shape risk – this measures the potential cost impact of closing the residual daily (gas) and half-hourly (elec) customer demand profiles in a tight system whereby half-hourly/daily/monthly spreads widen beyond that assumed when pricing to customers.
- Churn risk – variance from the assumed level of churn which would result in \propto .
- Backwardation recovery risk – where backwardation costs exceed the recovery mechanism in the cap and the associated risk that this is not fully recovered due to customer churn.

Question 10: Do you have a view on a preferred approach with regards to the treatment of collateral under the cap?

Ofgem should include collateral capital in capital employed, and the cost of collateral capital should be recovered through the EBIT allowance.

The EBIT margin in the price cap currently assumes that collateral is required for wholesale market trading. Consistent with this, the operational cost allowance in the price cap does not assume trading fees of the scale that would be implied by a collateral free intermediary trading arrangement. Ofgem should continue to implement this approach for the following reasons:

- Ofgem states that “several suppliers mentioned that it was no longer possible for any supplier to trade on a collateral free basis, including for suppliers using a trading partner”.⁴⁴ This evidence is consistent with the approach that has been taken in setting the default tariff cap to date, in which the EBIT margin in the price cap assumes that collateral is required for wholesale market trading. Consistent with this, the operational cost allowance in the price cap does not assume trading fees of the scale that would be implied by a collateral free intermediary trading arrangement.⁴⁵ This evidence emphasises the fact that suppliers must post collateral and thus it would be inappropriate for Ofgem to assume otherwise.
- Ofgem’s notional efficient supplier for the purposes of setting the price cap should be a standalone supplier of scale. Ofgem has noted evidence that letters of credit and parent company guarantees are only available for “larger, vertically integrated companies, but that smaller, independent suppliers still needed to post liquid assets/cash as collateral.”⁴⁶ Therefore, a notionally efficient standalone supplier would need to post liquid assets or cash as collateral and this should be reflected in the price cap allowances. Were Ofgem to fail to do this, it would effectively rule out the sustainability of standalone supplier business models.
- Gas and power exchanges typically require that cash is posted as collateral by all trading parties on equal terms.
- Ofgem’s suggestion that parent company guarantees (PCGs) may have not cost to the licensed entity is economically illogical.⁴⁷ Whilst there may not be a cost that appears on the balance sheet of the licensed entity, the corollary of Ofgem’s

⁴⁴ Para 4.79, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

⁴⁵ Para 4.55, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

⁴⁶ Para 4.81, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

⁴⁷ Para 4.89, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

suggestion is that parent companies are an unlimited source of free capital for licensed supplier. This is clearly not true. Although the cost of PCGs may be incurred by the parent company, these costs need to be taken into account, since it will only be in the interests of the group as a whole to provide the guarantee to the retail service if the return that the subsidiary makes is high enough to cover all the costs that both the parent and subsidiary incur.

Question 11: How are the collateral requirements calculated? Is it possible to quantify the relationship between collateral, wholesale prices and volatility?

As explained in our response to question 12 below, collateral requirements for OTC trades can vary widely, reflecting the credit rating of the trading entity. Exchange based trades have more standardised collateral requirements and may be more representative of the collateral requirements that a standalone supplier would face.

Exchange collateral requirements

For exchange-based trades, collateral requirements have two components: initial margin and variation margin.

Initial margin

Initial margin must be posted with the exchange when entering into a commodity transaction. The level of initial margin required is set by the exchange. The level at which the initial margin requirement is set is based on a risk calculation and is typically calibrated to cover a 1- or 2-day price exposure at a 99% confidence level, and before the exchange is able to make a further variation margin call. The 99% confidence level for price exposure is a function of volatility and hence the initial margin requirement increases in times of market stress.

Individual exchanges will be able to provide Ofgem with more information on their own initial margin policies.

Variation margin

Variation margin must be posted with (or received from) the exchange in respect of all open positions with the exchange. The level of variation margin is equal to 100% of the “mark to market” of the traded positions.

For example, if an energy supplier purchased energy with an initial contract value of £50k (based on exchange prices when the contract was agreed), but then due to price rises, the current fair value of the contract rose to £60k, then the supplier would receive £10k in variation margin from the exchange. Conversely, if the prices fell such that the fair market value of the contract was £40k then the supplier must post £10k in variation margin with the exchange.

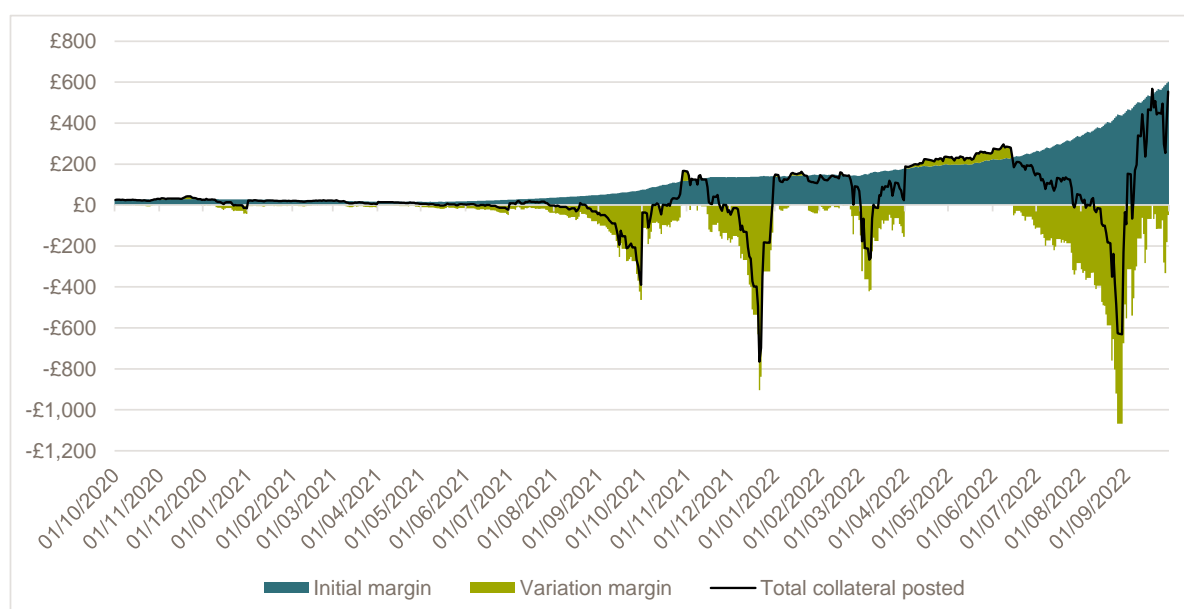
Variation margin is calculated daily and therefore suppliers must hold sufficient cash on hand to be able to meet margin calls at all times. Failure to meet variation margin requirements can result in the traded position being liquidated. As shown in our response to question 9, supplier exposure to margin calls can be significant.

Illustration of the collateral position for a supplier following the price cap hedging index⁴⁸

We have developed an illustrative model of how Initial Margin and Variation Margin requirements vary for a standalone (i.e. not vertically integrated) firm trading on an exchange. We assume that this firm follows a hedging strategy which is aligned with the new (quarterly) price cap methodology – i.e. that for each quarter of delivery, it purchases the necessary energy during an observation period from 4.5 to 1.5 months before the delivery period in question. However, we use historic pricing data from ICIS Heren from 2020 to 2022, to illustrate what the impact of the increase in both volatility and wholesale price level would have been if the new price cap methodology had been applied.

Figure 2 shows the Initial Margin and Variation Margin requirements on a per customer basis, assuming standard consumption,⁴⁹ and accounting for losses.⁵⁰ These values refer to the stocks of cash held by the exchange each day, with the day-to-day differences representing the flows to/from the supplier to the exchange.

Figure 2 Margin requirements of firms over time



Modelling of supplier collateral costs

Initial margin

Initial margin requirements would have increased dramatically during the period: During Q3 of 2021, the exchange would have held an average of £44 per SVT customer at standard consumption, whereas just a year later in Q3 2022 (during which the supplier is assumed to hold the same amount of energy), it would have held an average of £404 per customer – a

⁴⁸ Whilst we show the position for a supplier that follows the price cap index, we assume that they only purchase energy for the quarter of delivery of the price cap period itself and not for the whole 12 month delivery period assumed by the wholesale index. If we assumed that suppliers instead always purchased for the whole 12 month delivery period then this would imply suppliers taking on much larger collateral positions

⁴⁹ Figures used were 3,100 kWh of electricity and 12,000 kWh of gas, in order to be consistent with the price cap methodology.

⁵⁰ We assume losses of 10% for electricity and 2% for gas.

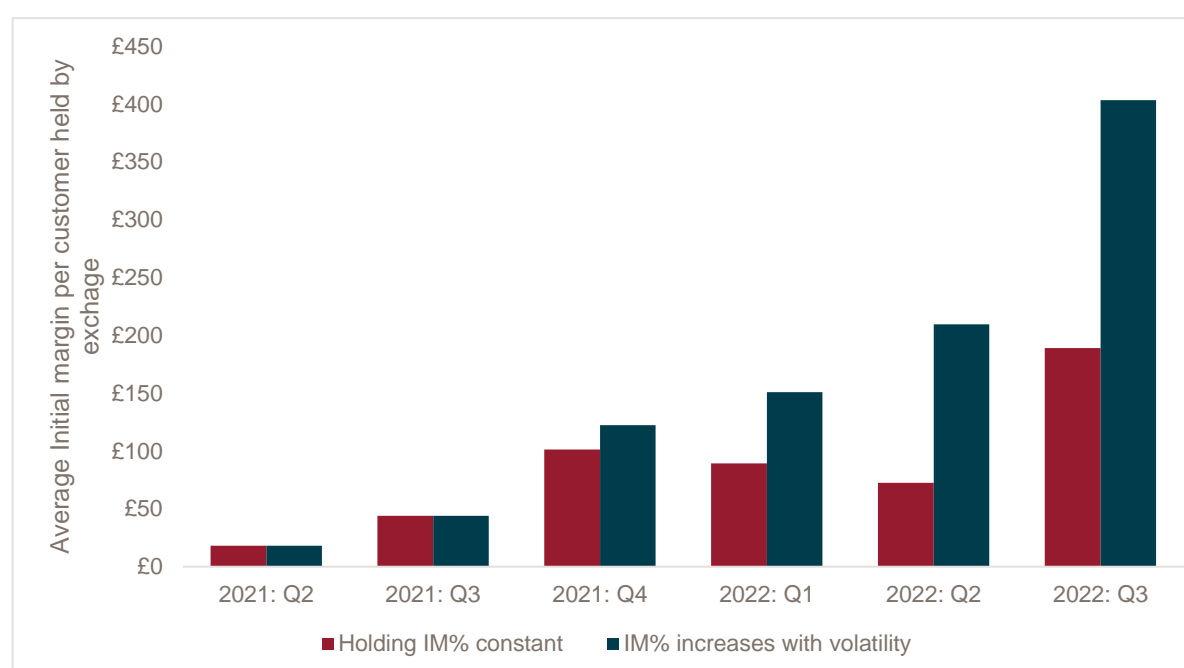
nearly 10-fold increase. As Ofgem describes in paragraph 4.2 of the consultation document, the current implied capital employed by the EBIT margin is £765, meaning initial margin requirements alone would be over half of this.

This dramatic increase is the function of:

- **Wholesale costs**, which were around 4 times larger for gas and nearly 5 times larger for electricity in the Q3 of 2022 relative to Q3 2021; and
- **Initial margin percentages**, required by the exchange, which in turn depend on the volatility of prices, as described above. The assumed percentages used by our model are based on data from ICE,⁵¹ and increased from 18%, peaking at around 70% in the first half of 2022 before falling to around 40% during Q3.

We modelled what the impact would have been, absent these increases in initial margin percentage, to separate the impact of wholesale costs from volatility. As shown in Figure 3, in this scenario, Q3 2022 initial margin requirements would have been £189, around 4 times the requirement in the previous year but less than half the value we get when the IM% increases are included.

Figure 3 Comparison of initial margin requirements, holding IM% constant and allowing it to vary



Modelling of supplier collateral costs

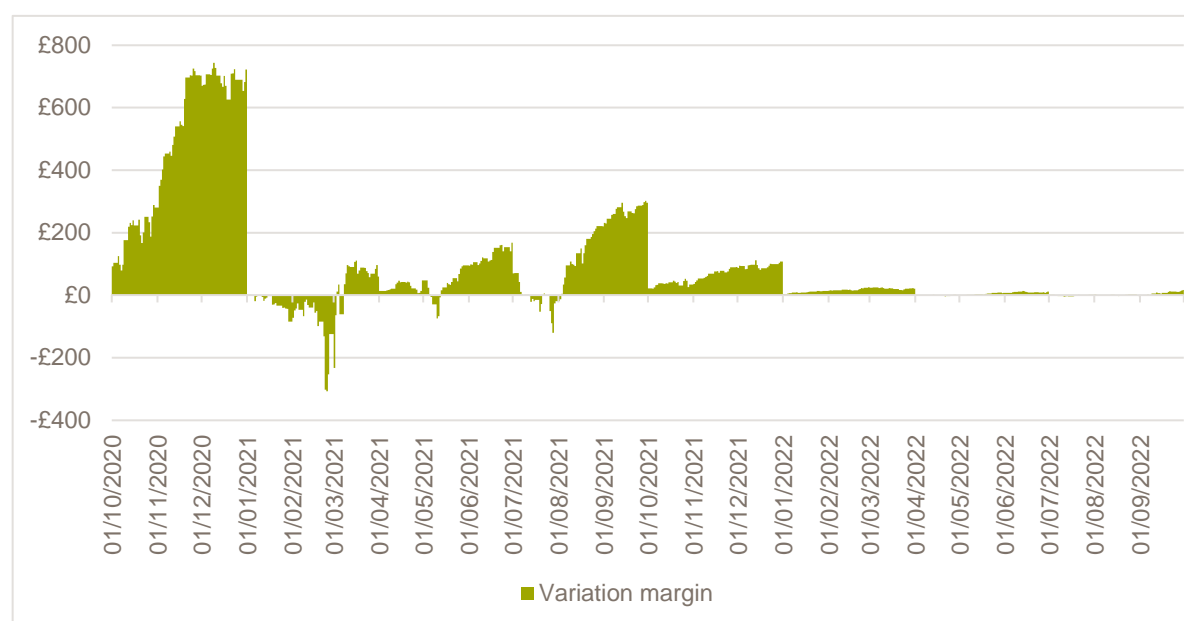
Variation margin

⁵¹ Prior to September 2021, we have no available data for IM percentage requirements and have assumed that they were the same as in September 2021 (18%). For simplicity, we have assumed that initial margin percentages for electricity are the same as for gas. Although in practice they may differ, they will follow the same trend since they increase with volatility, and volatility increased in the electricity market at the same time as in the gas market.

Another feature of Figure 2 is that the variation margin figures would have been negative for the majority of the period, meaning that firms would have received (temporary) cash from the exchange. This will be the case during periods in which the wholesale price is rising, such that the fair market value of the purchased energy is higher than its cost at the agreed purchase price. Since prices have risen during the last two years, this is frequently the case. In spite of this we would typically expect energy companies to set aside a significant volume of risk capital for variation margin, for two reasons:

- **High volatility:** As shown in Figure 2 and described in our response to question 9, firms would have frequently received significant margin calls from the exchange in instances where prices fell. Note that this uncertainty is likely to be highest in times of high volatility, when firms are also required to post a higher percentage of initial margin.
- **Potential for large positive variation margin requirements:** Although the price data considered relates to a period in which prices rose, they also have the potential to fall over time, meaning that the firm would need to post variation margin to the exchange. Figure 4 shows an illustrative example of what variation margin requirements⁵² would have been in the event that prices had moved in the opposite direction, by reversing the order of the price data used in Figure 2. In this event the firm would frequently have needed to post significant amounts of money (up to £700 per customer) on the exchange, and across the year ending September 2021, the exchange would have held an average of £164 per customer. Times of significant price declines also coincide with other risks that firms face, such as volume risk, meaning that these collateral requirements would exacerbate these risks.

Figure 4 Variation margin in alternative scenario in which prices fall



Modelling of supplier collateral costs

Question 12: Do the wholesale collateral requirements mechanisms differ for trading on exchange vs trading over-the-counter?

⁵² We do not include initial margin because we do not have data on what percentages the exchange would have demanded under these circumstances.

Yes. In general all exchange-based trades will require the posting of initial margin and variation margin with the exchange in the form of cash. This requirement is the same for all counterparties that trade on the exchange regardless of their credit ratings.

Bilateral over the counter trading can be on open terms (i.e. no margin is exchanged between counterparties) or under a Credit Support Annex (CSA).

Open, “collateral free” bilateral trading is typically only available to counterparties with investment grade credit ratings, albeit often backed by parent company guarantees or letters of credit. Suppliers may pay a premium on the energy costs in such contracts to avoid collateral requirements. However, whether such a price premium is effectively included will depend on commercial negotiations and the relative creditworthiness of the contract counterparties. ✂

The CSAs for bilaterally agreed OTC trades can be used to cap exposures to a counterparty at bilaterally agreed threshold levels. In general, trading counterparties with stronger credit ratings (i.e. presenting lower probability of defaulting) have a higher risk threshold, with pre-agreed reductions in threshold based on external credit ratings. Whilst counterparties with lower credit ratings are afforded lower thresholds. For positions captured under a CSA, collateral is only required once the threshold is exceeded, but is normally required to be posted daily whilst exposures exceed the threshold.

Question 13: Does posting collateral affect the level of risk capital employed?

Yes. A requirement to post a level of trading collateral that is regularly reassessed on short notice and reflecting wholesale market movements leaves suppliers subject to a risk of being unable to meet a margin call. This must be managed by ensuring that suppliers have access to sufficient capital to meet all credible margin call requirements in respect of the hedge portfolio.

As explained in our response to question 11, suppliers’ exchange-based wholesale hedging (and some OTC trades) require suppliers to provide variation margin in respect of their purchased volume. Suppliers either post or receive variation margin depending on whether their hedged positions are in the money or not.⁵³ The margin that suppliers post or receive is collateral capital. However, in addition to the collateral that suppliers actually post, they must also have access to additional capital to be able to cover their positions should collateral requirements increase.

As variation margin is typically assessed daily and applies to all of a supplier’s hedged volume, day to day movements in wholesale requirements, especially in volatile markets, can impose a significant need for additional capital at short notice. This is the case whether suppliers have positions that are in the money or not. If a position is in the money, a supplier will have received collateral from the exchange. However, even in this scenario the supplier needs to be in a position to be able to rapidly return this cash if wholesale prices fall. This means that the cash collateral received cannot prudently be invested in the running of the business as it may be required to meet a margin call.

⁵³ As suppliers are buying wholesale energy, rising wholesale prices over time will typically result in suppliers holding in the money hedges. Conversely, suppliers hedges will be out of the money in a falling wholesale market.

Question 14: Should the cost of capital allowance compensate for inflation risk? If so, how?

We are strongly of the view that, in the context of an energy supply business which faces limited protections from inflation risk, the CoC needs to compensate for inflation risk. As noted by CEPA in its report commissioned by Ofgem *“The context for the DTC is different. Notably, there is no inflation-linked RAV that can guarantee remuneration of outturn inflation. As such, the cost of capital is set in nominal terms and investors effectively face the same sort of inflation risk as most other investments—a risk that should be remunerated somewhere within the cost of capital (or at least not be subtracted from it)”*.⁵⁴

Such inflation risk should be captured through the (nominal) risk-free rate. In doing so, we suggest that nominal gilts be used to estimate the risk-free rate as opposed to ILGs. Such an approach is simpler to implement in capturing inflation risk and is more appropriate in the context of setting a nominal CoC under a nominal price cap. In contrast, the use of ILGs will tend to be a less accurate measure, given the need to adjust for inflation risk and the difficulty in deriving reliable estimates for this inflation risk.

Question 15: Do you have a strong preference between setting the risk-free rate using recent data, forward rates or recent data but with indexation?

We do not think that using recent data on its own will be appropriate in capturing the long-term risk-free rate. This is particularly true given current market conditions, and the level of uncertainty and volatility in government bond yields. However, we also recognise that there are trade-offs between the use of forward rates and indexation:

- While the use of forward rates as a predictive tool has been shown historically to be less accurate in estimating the risk-free rate, this approach would provide suppliers with greater certainty through setting a stable CoC.
- While an indexation approach provides more flexibility and accuracy in the CoC over time, it also provides less long-term certainty and stability in the CoC.

Given this, an approach that reflects both the forward rate adjustment and indexation might strike an appropriate balance. This is in line with Ofgem’s approach in the RIIO-ED2 Final Determinations. In doing so, updates for indexation would be more limited to only reflect inaccuracies in the predictive power of the forward rate adjustment, rather than any difference relative to estimates based on current market data.

We further note the following additional considerations with respect to Ofgem’s proposed methodology for estimating the risk-free rate:

- While we do not disagree with the use of 10-year gilts (in line with the 10-year time horizon for the CoC), we do not think that this needs to be locked in at this stage. In particular, the use of 5-year gilts could also be considered to reflect shorter retail asset lives. This is in line with observations in the earlier CEPA report that *“no assumption of the investor’s time horizon for estimating the cost of capital is perfect and, as a result, we consider the market evidence across these different tenors to reach in the round conclusions”*⁵⁵

⁵⁴ CEPA (25 August 2022), *Default Cap cost of capital*, p.17

⁵⁵ CEPA (2022), *Default Tariff Cap cost of capital*, page.13

- We disagree with the exclusion of a convenience premium. The unique features of government bonds are likely to lead to the existence of a convenience premium. Coupled with the fact that Ofgem as stated that it will not rely on AAA-rated corporate bonds in estimating the risk-free rate, excluding any convenience premium on government bonds used for estimating the risk-free rate is likely to underestimate the risk-free rate.

Last, we note the following additional considerations with respect to the estimation of beta and total market return (TMR):

- Beta - Ofgem's proposed beta range of 0.7 to 0.8 reflects CEPA's long-term range and draws upon the CMA's 2016 analysis.⁵⁶ As we noted in our response to Ofgem's September EBIT consultation,⁵⁷ the CEPA report highlighted a number of changes to risk in the market since the CMA's analysis, in particular energy costs as a key driver of inflation in the wider economy and energy costs becoming an increasing proportion of household disposable income. These risks contribute to greater cyclicity of the industry, with uncertainty in both the future profile of risk and whether these risks will be transitory or longer lasting. Beta values, reflecting relative risk against the market, may therefore be heightened over a longer duration than is reflected in Ofgem's proposed beta range of 0.7-0.8, particularly at the lower end of the range. We might expect the energy supply sector to move more in line with the market overall over the medium- to long-term, such that a higher beta may be relevant. For these reasons, our view is that a beta in the range of 0.8 – 1.0 would be more appropriate to capture the potential longer-term risks that the sector is likely to face, while remaining consistent with the evidence of beta across different sectors that face similar risks (such as retailers and airlines).⁵⁸ Ofgem's proposed range of 0.7-0.8 (and in particular a beta towards the lower end of this range) would only be appropriate if other measures are introduced that reduce supplier risk exposure.
- TMR – As noted in our response to Ofgem's September EBIT consultation,⁵⁹ while we do not disagree with Ofgem's proposed estimation approach, in line with that taken by Ofgem for RIIO-2, Ofgem's proposed range of 6.25%-6.75% (CPIH, real) with a midpoint of 6.5% fails to take account of the latest evidence that is available when estimating historical ex-post returns. Namely, it does not consider the updated historical estimates of inflation released by the Office of National Statistics (ONS) in May 2022. The latest CPI inflation estimates from the ONS are lower than previous estimates – which, all else equal, increases estimates of real historical equity returns. The ONS release also contains, for the first time, estimates of CPIH inflation back to 1950. These estimates of CPIH inflation are lower than CPI inflation over the same period. As CPIH is the preferred inflation measure of the ONS, we consider that the latest available CPIH evidence should be accounted for in estimating the TMR range. Updating ex-post historical TMR estimates for the latest CPIH evidence increases the TMR to approximately 7% (CPIH, real), above the current upper end of Ofgem's range of 6.75%.

⁵⁶ CEPA (2022), *Default Tariff Cap cost of capital*; and CMA (2016), *Energy market investigation final report*, June.

⁵⁷ Centrica (September 2022), *Appendix – responses to EBIT consultation questions*, page 2.

⁵⁸ CEPA (2022), *Default Tariff Cap cost of capital*, page 30.

⁵⁹ Centrica (September 2022), *Appendix – responses to EBIT consultation questions*, page 3.

Question 16: Should the tax rate be updated? If yes, how frequently?

We do not take a strong view on whether any updates for the tax rate might be appropriate. In practice, the need for any updates will likely depend on how often (and when) the tax rate might be expected to change, with careful consideration given to the trade-offs between stability and accuracy in the CoC estimate. For example:

- If a significant and sustained change in the tax rate is expected, there might be merit in allowing for a one-off update for the tax rate that limits any uncertainty for suppliers in the CoC but which provides greater accuracy in the allowance
- If a number of smaller but more frequent changes to the tax rate are expected, there is likely to be limited merit to reflecting this in the CoC, given the greater uncertainty that this approach presents.

Question 17: Do you agree that a hybrid approach strikes an appropriate balance between cost reflectivity and simplicity? Do you agree that it is the most appropriate approach to implement in practice?

In our previous consultation response we stated that the current implementation of the EBIT margin, as a fixed percentage, is broadly appropriate and is the simplest form of implementation. This remains our view. However, we also recognise that a hybrid approach can be justified.

Some elements of capital employed (such as IT systems) do not vary with suppliers' cost of sales whilst the majority of capital employed does vary with the cost of sales. Therefore a hybrid approach, whilst more complex, offers greater cost reflectivity.

Question 18: Do you agree that fixed assets and potentially RO ringfencing should be considered as part of the fixed components? Which other components may be fixed?

We agree that fixed assets should be considered as part of the fixed component.

RO receipts are not fixed with respect to consumption. However, for a given level of consumption RO receipts are fixed with respect to the level of the price cap. Therefore, RO receipts should also be included as part of the fixed component.

Question 19: Should the EBIT calculation include a component that adjusts based on market volatility? How could such an approach be quantified and implemented?

Market volatility is a key driver of capital employed in the retail supply business affecting risk capital (wholesale cost risk and shaping and balancing cost risk) and collateral capital (balancing, network and trading collateral). Therefore, the calculation should include a component or components that adjust based on market volatility for all the elements of capital employed that are affected by volatility.

Below we set out how a volatility adjustment could be implemented to address unexpected SVT demand risk for which market volatility is a key driver of the scale of the risk for suppliers. If Ofgem prefers not to account for a key driver of unexpected SVT demand risk, it should instead make its ad hoc ex post adjustment for unexpected SVT demand a permanent element of the price cap. This would significantly reduce the risk of unexpected SVT demand for suppliers and limit the importance of considering the impact of volatility on this risk.

The default tariff cap provides customers with the right but not the obligation to receive energy at the prices specified in the cap. This means that from the customers point of view, the default tariff cap is effectively an option that allows them to take energy supply at the lower of the default tariff cap rate or the prevailing market rate at the time. The value of this option to customers is the cost of providing this option to suppliers. Therefore, Ofgem could account for the cost to suppliers by valuing this option taking into account market volatility. The free option provided by the default tariff cap may be “in the money” for customers if wholesale costs rise after the start of the wholesale observation period. However, immediately prior to the start of the observation period, the option can be considered to be “at the money”. This is because immediately prior to the start of the observation period there is no difference between current market prices (for the relevant delivery period) and the expected value of the default tariff cap wholesale index.

Ofgem could calculate the value of this at the money option using a measure of historical volatility to assess possible future wholesale price paths and therefore option value.⁶⁰ If Ofgem used a recent observation period to assess historical volatility (e.g. the previous 18 months of trading data) then this calculation could be updated over time to reflect changes in volatility.

We would expect changes in volatility to have a material impact on the value of the free option for consumers and therefore the cost of holding this risk for suppliers because, as a first order approximation, the value of an at the money option increases one-for-one with volatility.

Question 20: Do you agree that Ofgem should not schedule periodic reviews for the EBIT allowance methodology? If you disagree, how frequent should those reviews be?

Ofgem’s derivation of the allowed EBIT margin in the default tariff cap is based on estimates of the cost of capital and the capital employed in a supply business. Therefore, in general the timing of reviews of the EBIT margin should be linked to when there are material changes in these variables rather than overly frequent periodic reviews.

In respect of the cost of capital, in a substantively stable regulatory and market environment it might be reasonable to review the CoC on a similar timeframe to the network companies (e.g. every 5 years). However, recent retail market regulation has been considerably less stable and therefore supplier risks may evolve more quickly and justify reviews.

In respect of the quantity of capital employed, this too is driven by market and regulatory changes.

Much of the market driven change in capital employed is substantially driven by changes in other cap allowance elements (e.g. hedging collateral is driven by wholesale prices, working capital is driven by the total level of the cap). Therefore, if Ofgem adopts a cost reflective approach for setting the EBIT allowance that allows the EBIT margin to automatically adjust for these factors there should be little need to have regular reviews of capital employed for market reasons.

⁶⁰ Ideally implied volatility data should be used for the calculation. However, we recognise that data availability may mean it is not possible to use implied volatility and so historical volatility data can be used instead.

Policy driven changes in the volume of capital employed by a supply business are not automatically adjusted for in the price cap. Therefore, a review of the EBIT margin could be justified when and if there are substantive changes to retail market regulation that materially affect the quantity of capital, including risk capital, that needs to be employed in a retail energy supply business.

Question 21: Do you agree with the conditions we identified as constituting significant changes to the context in which suppliers operate? Are there any other conditions that should be included?

Ofgem has identified three conditions as constituting significant changes to the context in which suppliers operate in and which could justify a review of the EBIT allowance methodology and parameters. We broadly agree that all of the conditions identified by Ofgem, if sufficiently substantial, could constitute significant changes to the context in which suppliers operate and therefore justify a review of the allowed EBIT margin. We explain our position in more detail below.

Wholesale price levels and wholesale price volatility

Changes in wholesale price volatility over time are not reflected in Ofgem's proposed EBIT methodology but are a driver of capital employed for suppliers. Therefore, significant changes in wholesale price volatility could justify a review of EBIT.

Ofgem's proposed approach to setting the EBIT margin allows a portion of the EBIT allowance to scale with the level of the price cap. Therefore, changes in wholesale price levels that drive changes in the level of the price cap will automatically be captured, at least to some extent, in revised EBIT allowances without the need for further review. Therefore, only very substantial changes in wholesale price levels could justify a review of allowed EBIT.

Energy retail regulation or policy

As noted in our response to the previous policy consultation on the EBIT margin,⁶¹ changes to regulation and policy can affect the volume of capital employed by a supply business. The impact of such changes will not be reflected in Ofgem's proposed EBIT methodology. Therefore, when and if there are substantive changes to retail market regulation or policy that materially affect the quantity of capital, including risk capital, that needs to be employed in a retail energy supply business then this could justify reviewing the EBIT allowance methodology or parameters.

The structure and number of suppliers that operate in the market.

It is not clear that changes in the market structure or the number of suppliers that operate in the market will affect the cost of capital or the level of capital employed in a retail supply business. However, significant reductions in the number of retail energy suppliers in the market could be an indicator that the retail energy market is not offering sustainable levels of return on capital employed and therefore could justify a review of the EBIT methodology and parameters.

⁶¹ Page 17, British Gas EBIT Consultation Detailed Response Appendix

Question 22: Do you agree with our proposal to apply the EBIT allowance in a way that does not change the ratio of standing charges to unit charges?

No.

Ofgem's bottom-up modelling of capital employed will identify which components of capital employed are fixed and which are variable with respect to consumption. Those elements which are fixed (e.g. fixed assets) should be included in the standing charge while those elements that are linked to consumption (e.g. trading collateral) should be included in the unit rate.

Ofgem itself recognises that an approach that would adjust the ratio of standing charges and unit charges would be more cost reflective.⁶² However, Ofgem proposes to hold fixed the current ratio of standing charges and unit charges despite the fact that Ofgem recognises that this ratio is not cost reflective.⁶³ Ofgem justifies this position based on concerns about disadvantaging low consumption households and with reference to its own 2018 decision to depart from cost reflectivity principles when setting the standing charge.⁶⁴

In its consultation process to set the default tariff cap in 2018, Ofgem observed that if it set standing charges on a cost reflective basis *"this would be a significant departure from how suppliers currently set their prices at nil consumption"*⁶⁵ and that *"Market prices at nil consumption were therefore materially lower than our proposed benchmark methodology would indicate."*⁶⁶ These observations are no longer relevant and do not justify a departure from cost reflectivity principles. Market prices are in large part determined by the structure of the cap and it is not sustainable for suppliers to set tariffs in a manner which is not cost reflective and risks significant under recovery of costs.

In its 2018 decision on the default tariff cap, Ofgem chose to *"set the cap at nil consumption in line with market prices for standing charges in 2017"*.⁶⁷ This meant that its benchmark standing charge was £152 (in 2017 prices) for a dual fuel direct debit customer,⁶⁸ whilst its bottom up assessment of supplier costs at nil consumption were £220 (in 2017 prices).⁶⁹ This meant that when Ofgem set the ratio of standing charges and unit charges it assumed that £68 (in 2017 prices) of supplier fixed costs would be recovered in the unit rate.

Given Ofgem's decision to depart from cost reflectivity principles, suppliers' ability to recover their fixed costs is dependent on consumption levels which have typically been trending downwards for a long time with this trend accelerating in 2022.⁷⁰ This places suppliers at risk of being unable to recover their fixed costs and is not a sustainable structure for the price cap. Therefore, Ofgem should adopt the option that it recognises is the more cost reflective of the two it is considering and not bake into the price cap a further departure from cost reflectivity principles.

⁶² Para 6.31, Further consultation on amending the methodology for setting the EBIT allowance, Ofgem, 25 November 2022

⁶³ Ibid

⁶⁴ Ibid

⁶⁵ Para 2.78, Default tariff cap – Overview document, Ofgem, September 2018

⁶⁶ Ibid

⁶⁷ Page 7, Default tariff cap – Overview document, Ofgem, November 2018

⁶⁸ Para 2.94, Default tariff cap – Overview document, Ofgem, November 2018

⁶⁹ Para 2.95, Default tariff cap – Overview document, Ofgem, November 2018

⁷⁰ Xoserve data shows that by November 2022 domestic AQ had fallen by 5% relative to average 2020 levels.