

23 September 2022

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Dear Dan,

Re: Consultation on amending the methodology for setting the Earnings Before Interest and Tax (EBIT) allowance

Thank you for the opportunity to comment on the above consultation document. While we appreciate the reason for the tight timelines, we firmly believe that on a topic of this magnitude, Ofgem should have commenced consultation earlier and allowed suppliers – who are critically impacted by these proposals – a reasonable amount of time to respond. Had we wished to do so, timelines precluded us commissioning expert reports, given the requirement to identify, commission, fund and review.

We are therefore concerned that by this approach Ofgem has put at risk the ability of suppliers to respond critically and effectively to such a complex area. The risk faced by suppliers in the current market is unparalleled in recent memory and allowed returns must reflect this.

For Ofgem to raise a consultation of this type as soon as the value of returns increases to a positive value after so many years of suppliers facing negative returns reflects poorly on the quality of regulation provided to the industry by Ofgem. The proposed way forward shows clearly the neglectful approach to healthy competition displayed by Ofgem, placing as it does short term regulatory cost cutting at the expense of long-term market resilience and stability.

We have set out below our representations in respect of the questions posed in the consultation. We welcome the contribution of CEPA to the debate, and trust that Ofgem will consider carefully their remarks on the relative risk faced by networks and suppliers and the necessary consequences.

Question 1: What efficient theoretical supplier assumptions should we use?

Ofgem is deliberating between considering the efficient supplier to be either part of a group, with cheaper capital costs, or an independent supplier, with more expensive capital costs. Utilita believes the answer to be obvious, as the energy retail market is open to independent suppliers and Ofgem must not prohibit independent suppliers from generating normal profit by intentionally setting the price cap below efficient costs.

As a general point, Ofgem has in the past considered an efficient supplier to be the lower quartile supplier for any cost category. As Utilita has stated in previous submissions, cost categories must not be assessed separately as suppliers have different degrees of efficiency in different aspects of the business of energy supply, and to assess each cost category separately posits a degree of assumed efficiency that is impossible for any one supplier to attain. Furthermore, the purpose of the price cap is to prohibit excessive prices, not to set the price cap at (or below) the bare minimum a perfectly efficient supplier would require to not exit the market. As such, rather than using the lower quartile approach, Ofgem should use a mean or median average of actual suppliers' costs.

Question 2: Do stakeholders agree the CAPM model is still appropriate to estimate the CoC for supply businesses moving forward? If not, then why?

Utilita does not believe the CAPM model is appropriate for assessing the cost of capital of an energy supplier. CAPM evaluates the return of a sector relative to returns of the market as a whole and gives a value for the sector's relative risk. The problem with applying this to the energy sector is that the underlying driver of variability of returns is not related to returns of the market, but unpredictable events like the weather. In the long run, therefore, the beta value is likely to be low, not because the sector is low risk, but because there is little causal correlation between the returns of the energy supply sector and the wider economy.

The CMA acknowledged this in its final report, stating 'While we accept...[the] argument that there can be significant volatility in the profits of a retail supply business due to weather-related demand fluctuations, government scheme costs and input price changes, we note that these would only have an effect on beta to the extent that the volatility is correlated with overall market returns. Neither volumetric risk arising from fluctuations in the weather, nor changes in government scheme costs, exhibit this correlation'.¹

This is correct. The CMA, however, failed to follow through to the logical conclusion, which is that since there is no causal correlation use of the CAPM is inappropriate. The CAPM assumes, contrary to the view of most academics and practitioners², that 'unsystematic' risks, such as those in energy supply, attract no risk premia.

Using the returns of the Big Six energy suppliers only, the CMA calculated a beta value of 0.7 – 0.8, which being less than 1 and above zero suggests energy is a normal good, with a lower risk than the market in general. This corresponded with the CMA's view of energy suppliers, which it considers to be 'regulated utilities' with a low underlying risk profile. While this may be a reasonable approach when considering network businesses, it is not so for suppliers; energy supply is far from being a monopoly regulated utility with guaranteed revenues and returns; being subject to active competition and substantial risks.

¹ CMA Energy Market Investigation Provisional Findings Report, Appendix 10.4: Cost of Capital, page 24.

² Laghi, E., and Di Marcantonio, m., 2016. Beyond CAPM: estimating the cost of equity considering idiosyncratic risks. *Quantitative Finance*, 16(8), pp. 1273 – 1296.

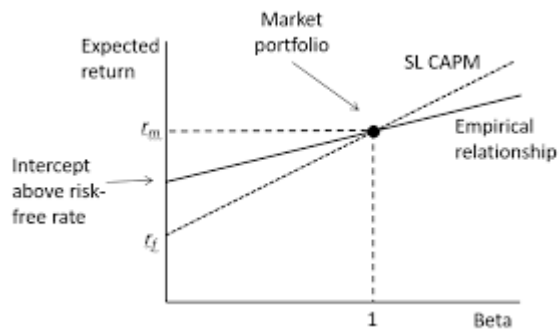


Figure 1 - illustration of underestimated returns of companies with low asset betas. Source: Gray, S., 2018, *Low-beta bias and the Black CAPM*, *Frontier economics*.

Energy suppliers are not managed as regulated businesses. The underlying issue is more fundamental in that low-risk network businesses are funded in a way which recognises they do face risk (albeit defined and manageable risk), and need to invest and hence need sufficient returns to allow appropriate access to risk capital. The main point of contention is usually over the level of risk 'allowed'. This is in a case where the business is clearly regulated, it is guaranteed revenue via RIIO based on its own business plans (plus interest on any under-recovery) and is a monopoly with customers that cannot leave. In addition, its customers must provide credit cover to underwrite its risk on having its bills paid.

In contrast, the current crisis shows that energy suppliers face strong competition and abusive pricing practices due to a failure of regulation. Suppliers' bills, by contrast, are not protected (or underwritten) by the regulator. Instead, suppliers are required to provide ever increasing levels of customer support with no payment certainty, and no recognition of the costs of meeting increasing regulatory burdens under the price cap. Far from having business plans assessed and funded, suppliers must fund all industry developments required by the regulator, at the same time as making negative margins and not being allowed to recover their efficient costs. The lost opportunity costs of responding to underfunded regulatory programmes may also preclude significant investment by suppliers in their chosen efficiencies or product innovations.

A primary activity of an energy supplier is managing wholesale risk on behalf of its customers; weather has a large impact on both demand and marginal wholesale prices, and hence on the returns of an energy supplier. The correlation of marginal volume and price creates a multiplicative risk for energy suppliers that is well documented in academic literature³. In cases of material idiosyncratic risks, modified versions of CAPM should be employed,⁴ or an entirely different basis to assess cost of equity should be used.

³ E.g., Oum Y. and Oren, S., 2010. Optimal static hedging of volumetric risk in a competitive wholesale electricity market. *Decision Analysis*, 7(1), pp. 107 – 122.; Vehvilainen, I. and Keppo, J., 2003. Managing electricity market price risk. *European Journal of Operational Research*, 145, pp. 136 – 147; Bessembinder, H. and Lemmon, M., 2002. Equilibrium Pricing and Optimal Hedging in Electricity Forward Markets. *The Journal of Finance*, 52(3), pp.1347 – 1382.

⁴ Laghi, E., and Di Marcantonio, m., 2016. Beyond CAPM: estimating the cost of equity considering idiosyncratic risks. *Quantitative Finance*, 16(8), pp. 1273 – 1296.

Question 3: Do stakeholders agree with CEPA's approach to estimating beta? Are there other comparators that stakeholders believe should be used to estimate beta?

CEPA's approach to estimating the asset beta is appropriate given the paucity of relevant information available. As noted above, any estimation of an asset beta will underestimate the idiosyncratic risk associated with energy suppliers, most of which are not publicly traded entities, and all of which will attract additional risk premia because of the idiosyncratic risk of energy supply.

Question 4: Do stakeholders agree with CEPA's suggested approach to estimating the other components of the CAPM model?

CEPA's assessment of the other components of the CAPM model is reasonable. As noted above, CAPM is an inappropriate model for assessing the risks of energy retailers.

Question 5: What are stakeholder views on the appropriate balance between using long-term or short-term market evidence in our estimation of the CoC?

The current energy crisis is not likely to subside quickly. Even if prices do reduce, which they may do should there be a mild winter, price volatility and energy suppliers' risks will remain high. Given the great long-term changes in the energy market that are likely to come about in the energy transition, it is unlikely the previous understanding of supplier will be applicable to the future. As such, a short-term view should be taken, with this assessment updated in future should the risks of energy supply change materially.

Question 6: How often should we update the CoC, and what might the trigger(s) be? Should there be a periodic review?

Surety of economic returns are of great importance to any company. The cost of capital should be reviewed only where some obvious change in market conditions has occurred. This is subject to the cost of capital being set at an appropriate level.

Question 7: Do you agree with the above components of capital employed? If not, what other components should we consider?

These categories cover, from a theoretical point of view, the capital requirements of an energy retailer. Risk capital includes, crucially, uncertainty related to weather and wholesale market spot price on uncertain energy purchases or sales.

Setting a level of capital employed in line with theoretical perfectly efficient supplier will almost certainly understate the true capital employed, so an adequate headroom allowance must also be included to allow for the likelihood of understatement. The resulting headroom allowance must be allowed to stand for this purpose and should not be subject to re-allocation to cover increased and unfunded regulatory demands which cannot be reasonably categorised as 'uncertainty', being regulatory impositions.

Question 8: Do you agree with our view on the potential drivers of capital employed by a market representative efficient theoretical supplier?

Ofgem has identified the main constituents of capital employed for an energy retailer. Ofgem's description of 'Unexpected weather events' suggests, however, a misunderstanding of the nature of weather risk.

While it is true that this risk can be realised as either a favourable or adverse variance in any given year, and that over the long term these variances will even out such that the expected variance over the long run is nil, the very existence of uncertainty necessitates risk capital, without which energy suppliers would become insolvent in any year where weather risk causes a large adverse variance in cash flows.

Question 9: What are your views on what components and drivers are fixed and variable?

All the components of capital employed that Ofgem identifies are at least in part variable and increase as the price cap level increases and vice versa. Only the effect on working capital created by the renewable obligation scheme does not vary with the level of the price (and this scheme is likely to change soon in any case).

Question 10: What are the appropriate business metrics to measure capital employed?

Balance sheet measures are not adequate to measure true capital employed, which being largely in the form of risk capital will not be on suppliers' balance sheets. Ofgem must also assess an appropriate degree of risk capital employed, given the riskiness of market conditions and the probability of insolvency appropriate for an energy supplier, as described below in the answer to question 15.

Question 11: Do stakeholders agree that using an alternative efficient theoretical supplier-based approach is reasonable?

In adopting this approach, Ofgem must make use of all empirical data available. As noted above, Ofgem has in the past considered an efficient supplier to be the lower quartile supplier for any cost category.

As Utilita has stated in previous submissions, cost categories must not be assessed separately as suppliers have different degrees of efficiency in different aspects of the business of energy supply, and to assess each cost category separately creates a degree of assumed efficiency that is impossible for any one supplier to attain.

Furthermore, the purpose of the price cap is to prohibit excessive prices, not to set the price cap at the bare minimum a perfectly efficient supplier would require to not exit the market. As such, rather than using the lower quartile approach, Ofgem should use a mean or median average of suppliers' costs.

Question 12: Do stakeholders consider the existing approach to be the most appropriate in calculating the EBIT allowance in the cap?

The existing approach is appropriate in that the absolute EBIT moves approximately in line with capital employed. It is inappropriate in that the estimation of EBIT required to generate normal profit is understated.

Question 13: Do stakeholders consider it is appropriate to undertake periodic reviews for the EBIT allowance or not? If not, what might be grounds for reviewing EBIT allowance in future? If so, how often should it be reviewed and why?

Surety of economic returns is of great importance to any company. The EBIT allowance should be reviewed only where some obvious change in market conditions has occurred. This is subject to the EBIT allowance being set at an appropriate level in the first place.

Question 14: Which of our suggested alternative approaches is the most appropriate for setting the EBIT allowance going forward?

Of the three alternative approaches suggested by Ofgem, only the hybrid approach is suitable. A hybrid approach will be entirely inappropriate given that capital requirement is in a large part determined by the level of retail prices.

A cap and collar would artificially constrain EBIT within arbitrary bounds that could result in further supplier failures due to continuing insufficient margin. A fixed approach would account for the small amount of capital employed that is required for servicing a customer regardless of the retail price and the large proportion of capital employed that varies with retail prices.

Question 15: If the proposed approaches are not appropriate what alternative approaches not proposed in this policy consultation would be appropriate for setting the EBIT allowance going forward?

While the consultation document refers to the degree of risk and risk capital in energy supply, it has not addressed the method Ofgem would employ in measuring this, or acknowledged that in accounting for risk capital, the EBIT allowance in the price cap will certainly increase. This is contrary to Ofgem's assumption of 'profits being unduly high in a high-price and high-cost environment'.

The current price cap methodology fails to properly consider the risks energy suppliers face: as the current crisis illustrates, energy suppliers must either hold significant risk capital, with a commensurate allowance for return on this capital, or be allowed a larger margin to enact complex risk management strategies, neither of which is provided for to a sufficient degree within the price cap arrangements.

It is common practice in industries that deal with this sort of uncertainty to account for the cost of risk capital in retail prices⁵. In banking, for example, banks will calculate, using statistical methods, the capital requirement to be x% confident of remaining solvent in any given year (for a bank targeting an AA credit rating this would be between 99.95% and 99.97% confident)⁶; the cost of

⁵ Crouhy, M. et al., 2014. *The Essentials of Risk Management*. 2nd ed. Chichester: McGraw Hill Education, p. 595.

⁶ Ibid, p. 598.

holding this capital at the bank's cost of capital is accounted for in the cost of retail services provided by the bank.

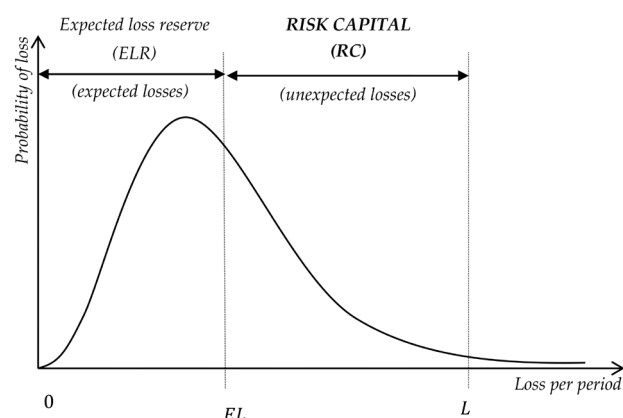


Figure 2 – illustration of risk capital requirement of a company exposed to uncertainty. Source: Dziwok E. (2018) *Different Approaches to Regulatory Capital Calculation for Operational Risk*. In: Jajuga K., Locarek-Junge H., Orlowski L. (eds) *Contemporary Trends and Challenges in Finance*. Springer Proceedings in Business and Economics. Springer, Cham. pp 135-143.

This approach of Risk Adjusted Return on Capital was first applied to energy markets in academic literature fifteen years ago⁷, and is now widely employed in energy markets. Were Ofgem to account for risk capital and the return on risk capital in the price cap, combined with increased prudential oversight of companies entering and operating in the market, there would be no need for future interventions during periods of extreme price or weather events; if no such allowance is provided, Ofgem should be prepared to make regular *ad hoc* interventions as any unusual circumstance arises. Such interventions must be bi-directional, reflecting a balanced approach to the interests of consumers and the needs of a resilient and flexible retail supplier market.

The amount of risk capital an energy supplier holds will depend not only on market conditions but also on the risk appetite of the company. The price allowance, therefore, should reflect the risk appetite, or insolvency risk, Ofgem expects of an energy supplier. If Ofgem expects energy suppliers to have a risk of insolvency equivalent to a BBB bond rating, i.e., one rating above 'junk bond' status, an energy supplier would have to be 99.9% confident of remaining solvent over a one-year period.

Utilita calculates that the risk capital requirement for weather and market risk under current market conditions to meet this standard would be over £2000 per customer, which at a 10% cost of capital requires an allowance of over £200 per customer. At a much riskier risk appetite of only 99% confidence of solvency, Utilita estimates the current risk capital requirement to be nearly £3,000, with the cost of this capital being over £50 per customer. In the latter case, the EBIT allowance in the current price cap barely covers the risk capital requirement for weather and market risk alone. In the former case, which is more realistic given the stability required in a market such as energy supply, the existing allowance for EBIT is woefully short of what is required for weather and market risk alone.

⁷ Prokopczuk, M., Rachev, S., Schindlmayr, G., and Trück, S. (2007) Quantifying risk in the electricity business: a RAROC-based approach. *Energy Economics*, 29:1033–1049.

Companies operating in a competitive market also incur risk from portfolio change. The price cap does not consider or quantify the price of risk on wholesale volume for new customer acquisitions. As the price cap is fixed for periods of three months, over a month in advance, a supplier seeking to win new customers must accept the risk of wholesale price movements between the setting of the cap and product delivery. Using the Black-Scholes model, and assuming a normal degree of price volatility, Utilita prices this risk relating to new customers at approximately £10 for each new dual fuel customer acquired after the setting of the price cap. Failing to provide for cost of risk on new customers alone eliminates the profit margin in the first year of supply and discourages competition. It is also of the greatest impact on smaller suppliers, which experience the highest proportionate portfolio changes and, therefore, the greatest proportionate volumetric risk.

We trust that this submission has been helpful, and we would be happy to arrange for a discussion on some of the more complex points raised if that would be useful. Please let me know and I would be happy to arrange it.

Yours sincerely,

By email only

Alison Russell
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