Assessment of Ofgem's Cashflow Floor Proposals

Prepared for ENA

14 March 2019

1 Contents

1	Contents	2
2	Important notice	3
3	Executive summary	4
4	Context and scope	10
5	Objectives and justification for the introduction of the cashflow floor	14
6	The relationship between the floor and financeability	19
7	Considering financial impact of the floor	22
8	Implications for incentives	28
9	Complexity and distortions	33
10	Alternative mechanisms available to Ofgem	37

2 Important notice

This Report has been prepared on the basis set out in our Engagement Letter of 29 January 2019 with the Energy Networks Association ('ENA').

This Report has not been designed to be of benefit to anyone except the ENA. In preparing this Report we have not taken into account the interests, needs or circumstances of anyone apart from the ENA, even though we may have been aware that others might read this Report. We have prepared this report for the benefit of the ENA alone.

The information contained in this Report, including market data, has not been independently verified. No representation, warranty or undertaking, express or implied, is made as to, and no reliance should be placed on, the fairness, accuracy, completeness or correctness of the information, the opinions, or the estimates contained herein. The information, estimates and opinions contained in this presentation are provided as at the date of this Report, are subject to change without notice.

Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

Whilst the information presented and views expressed in this Report have been prepared in good faith, KPMG LLP accepts no responsibility or liability to any party in connection with such information or views.

This Report is not suitable to be relied on by any party wishing to acquire rights against KPMG LLP (other than the ENA) for any purpose or in any context. Any party other than the ENA that obtains access to this Report or a copy and chooses to rely on this Report (or any part of it) does so at its own risk. To the fullest extent permitted by law, KPMG LLP does not assume any responsibility and will not accept any liability in respect of this Report to any party other than the ENA.

This Report is made by KPMG LLP, a UK limited liability partnership, a subsidiary of KPMG Europe LLP and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ('KPMG International'), a Swiss entity, and is in all respects subject to the negotiation, agreement, and signing of a specific engagement letter or contract. KPMG Europe LLP and KPMG International provide no client services. No member firm that is part of KPMG Europe LLP or any other KPMG member firm has any authority to obligate or bind KPMG Europe LLP, KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm.

The address of KPMG LLP is 15 Canada Square, Canary Wharf, London, E14 5GL.

3 Executive summary

The overarching design of the next RIIO price review outlined in Ofgem's consultation indicates that regulator's objective is to reduce customer bills under RIIO-2 with a large number of mechanisms designed specifically to reduce networks' returns and remove or limit different sources of potential outperformance for networks. A number of these sources of potential outperformance were put in place by Ofgem only a few years ago as part of the RIIO-1 framework to focus on outputs and innovation and to strengthen networks' incentives to deliver value for customers.

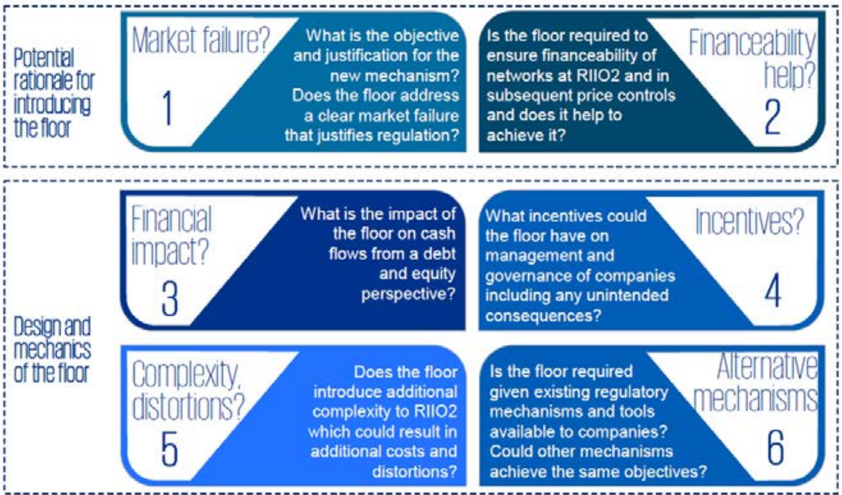
Nowhere is the impact of Ofgem's proposals on networks' returns more evident than in the changes to the 'base' cost of capital. Ofgem's indicative cost of equity range of 2.96—3.95% (RPI deflated), with a point estimate of 2.96%, implies an unprecedented reduction of the allowed equity return by nearly a half compared with the last determination at RIIO-1.

It appears that Ofgem considers that the financial consequences of its proposed approach necessitates an introduction of additional new regulatory measures. In particular, Ofgem considers that the expected large negative financial impact of its changes to the allowed returns (and hence a significant erosion of financial headroom for absorbing risks) can be addressed by the introduction of a 'cashflow floor' to improve networks' financeability.

The cashflow floor as proposed can be seen as a creation of a new, contingent public claim on the business, to provide conditional funding in the case of difficulty, which would be paid by consumers to bailout debt, but repaid later from returns to equity.

The floor is a major regulatory intervention that would impact respective rights of different capital providers. Ofgem states that the introduction of the floor allows it to avoid 'arbitrarily' setting the cost of equity at a higher level. It appears designed to avoid concerns about potential downside scenarios, but suggests that the proposed reduction in the allowed cost of equity would need to be recalibrated in the absence of this new mechanism.

In this context the ENA has asked KPMG to review the proposed new cashflow floor (CFF) mechanism and provide an assessment of its justification and potential implications. The assessment is based on the criteria set out below.



It is an appropriate (if high) hurdle for a significant, new regulatory innovation to be supported by a robust impact assessment that shows that it remedies market distortions and promotes economically efficient market outcomes, which ensure value for customers.

Ofgem's consultation does not appear to identify any market failures that the floor is designed to remedy. Instead, the Consultation suggests that the floor is a response to a reduction in the cost of equity, rather than to a specific market failure or distortion.

In the absence of Ofgem's specific economic justification for the floor to address a clear market failure, which typically would be identified as a reason for a significant new regulatory intervention, it is worth considering whether any such reasons might potentially exist. The floor's design suggests that high probability and significant public costs of a default on debt that could result from normal market operations could be potentially a justifiable motivation.

From a regulatory perspective, the relevant test in this case would then be whether the risk and potential costs of financial distress of a regulated network are significant enough to imply an unacceptable public cost (externality), and whether there is any evidence that this risk has now independently increased to the extent that it requires a new regulatory intervention.

In practice, this is probably least likely to be the case for regulated networks compared with most other sectors of the economy, simply because there are various mechanisms and solutions in place to reduce the risk and costs of financial distress of a regulated network already in existence and that are absent in other sectors.

Even if the risk of financial difficulty was expected to increase for regulated networks, this does not appear to be a result of inefficient market outcomes or a market failure, but rather a consequence of the proposed changes to the regulatory regime itself.

Ofgem has not indicated what conditions have changed, or why the existing protections previously accepted as sufficient to ensure financial resilience, including adequate returns to ensure financeability, are now no longer sufficient. This needs to be considered first, including the likely market outcome, before the question whether the proposed mechanism could in fact reduce the likelihood of financial difficulty, or ensure efficient restructuring.

The consideration of a likely market outcome is also important for comparing the floor against alternatives—the relevant counterfactual for the introduction of the floor is not simply the absence of the floor, but what outcome would result in an efficient market in the absence of this regulatory intervention.

Ofgem does not demonstrate that the application of the CFF would approximate an efficient, competitive market outcome.

Instead, the floor seems to move in the opposite direction—it substitutes new regulation for what might otherwise be the expected market outcome, i.e. a higher price of equity capital, or rather a lower reduction in returns, which would be implied by efficient pricing of risk and required financial headroom.

An efficient market outcome would be expected to reflect fully the pricing of risks, which is likely to differ quite fundamentally from the solution promoted by the floor. The floor does not price in downside risks or secure financial headroom, but instead seeks to provide temporary liquidity. As designed, it also appears costly compared with market-based liquidity mechanisms that can be arranged *ex ante* if a network is generally solvent and financeable.

The floor risks undermining the role of the finance duty and financeability tests as a cross check and is a binding constraint on regulatory outcomes and hence might undermine financeability itself.

Ofgem's objectives appear to be to introduce the floor to maximise the reduction in the allowed cost of equity, but in practice the proposal risks undermining the role of the financeability test as a cross check and a binding constraint on regulatory determinations.

— The floor could undermine the extent to which financeability tests are meaningful, binding and robust as a cross check on the calibration of a regulatory package;
— It would change the risk-return balance for different capital providers—it might reduce probability of default on debt (in the short term), but do so at the cost of returns to equity, which would also bear more risk; and
— The floor may in fact aggravate rather than reduce risks to lenders through explicit weakening of Ofgem's financeability duty as a binding constraint as well as incentives for financial restructuring.

Regulatory precedents indicate that financeability tests act as a binding constraint on price control parameters and calibration as evidenced by CMA appeals. In recent cases like SONI (System Operator Northern Ireland), the CMA explicitly increased *ex ante* financial headroom to address financeability challenges and ensure that headroom corresponded to downside risk exposure, including an explicit premium for exposure to asymmetric downside risk.

Public guarantees for *all* capital might ensure financeability, but still not deliver efficient market outcomes. Nor can financeability be ensured simply by shifting risk from one type of capital provider (debt) to another (equity). Protecting debt capital at the cost of equity is likely to create distortions and disenfranchise equity capital.

A proposal to introduce the floor mechanism also makes rating agency metrics and rating assessments less relevant. That might be justifiable if Ofgem were to cite rating agency assessments as a source of market failure. However, Ofgem has not demonstrated or provided evidence to suggest that rating agencies are overstating credit risk.

The risk in the business, reflecting the relevant risk protections and risk sharing mechanisms in the regulatory framework, is priced through the cost of capital. If Ofgem believes that the allowed return on equity is consistent with networks' risk exposure, then the rationale for introducing the floor – in the absence of which companies might not be able to manage the risks to which they are exposed – is not clear.

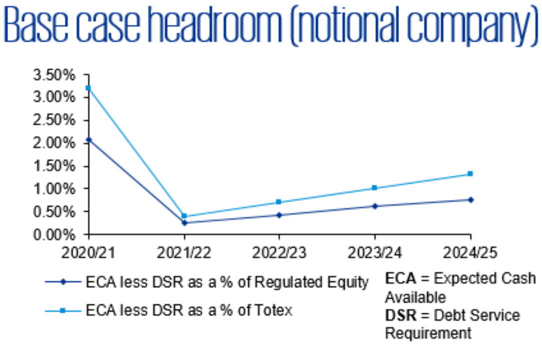
In practice, the floor might provide liquidity for a time-limited period by shifting cash flows over time, similar to existing regulatory levers such as the split between fast and slow money or depreciation rates rather than ensuring financial sustainability. But improving liquidity in the short term is not the same as improving creditworthiness or financial viability. The floor as designed cannot reduce company or asset risk, or improve the financial position of a firm, on a sustainable basis.

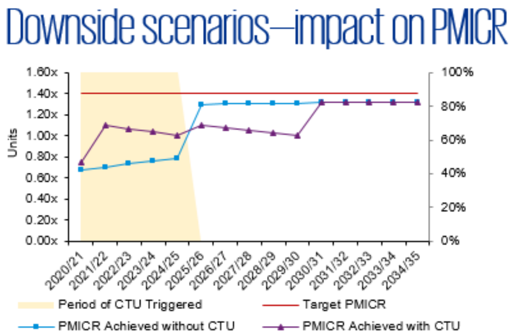
If there is evidence that networks might not be financeable i.e. not able to maintain a solid investment grade credit rating, or have appropriate headroom to manage exposure to downside risks, then this problem cannot be addressed by cash transfers over time.

Moreover, there appears to be no reason to believe that the market could not provide an equivalent solution itself. As long as a regulated company is financially viable, i.e. solvent and financeable to start with, additional market-based financing (or, *in extremis*, a financial restructuring) would ensure that the business is refinanced and continues as going concern.

Stylised modelling of potential financial impact indicates limited financial headroom in the base case and potentially negative consequences of the floor in the medium term.

Under networks' actual financing structures – especially where pressure on ratings is exacerbated by debt raised in high interest rate environment or gearing that is higher than assumed under the notional financing structure set out by Ofgem – some networks may not be able to maintain current credit ratings at RIIO-2, even with significant operational outperformance.





Source: KPMG stylised modelling

Under a sustained, moderate downside shock under the notional financing structure, in the absence of the floor there is a significant decline in coverage metrics such as the Post Maintenance Interest Cover Ratio (PMICR), which then recover to base case levels. With the floor, the PMICR is sustained at a level of approximately 1.0x for the duration of the shock; he liquidity injection results in lower PMICR in the medium term than if floor had not been triggered because improving liquidity in the short term does not improve creditworthiness or the financial position of a firm on a sustainable basis over the medium term.

Overall, whilst the floor increases cashflows, (1) it does not target thresholds for key credit metrics assessed by rating agencies (assuming that rating agencies would take liquidity support provided by the floor into account); and (2) headroom across the repayment period for the floor is materially lower than in the base case or when the floor is not triggered. This is likely to limit the extent to which the floor would be credit positive in the medium term.

The floor is likely to have negative implications for incentives, reducing monitoring and contingent control rights of debt capital providers while undermining equity.

The stated purpose of the cashflow floor mechanism is to address downside exposure of bondholders only. It is not clear, however, why this support in particular is required and how such a design might avoid creating wrong incentives associated with reduced risk exposure of lenders and potential for more risky strategies by equity.

In normal circumstances, the prospect of a company earning required equity returns in the future would provide some comfort that debt will still be serviced and repaid in the event of potential downside scenarios. It would also preserve the interest of debt holders to ensure company's financial viability by retaining debt exposure to risks, and encourage debt to participate in any potential financial restructuring by allowing the company more financial resources in the short term. Instead, the floor would appear to aim to support debt holders rather than viability of the company itself.

The introduction of the floor, if intended to preserve investor confidence and avoid financial distress in a low financial headroom environment, could in fact negatively impact the incentives on management and capital providers to undertake efficient financial restructuring as well as negatively affect corporate governance.

Where the floor avoids or delays restructuring due to poor performance it could reduce financial pressure on management and weaken corporate governance. This could create the conditions for business underperformance to persist for longer and weaken the pressure to restructure, if the floor meant that the business would be NPV-negative in the long term.

When annual debt service might be protected by the floor for a period, this could reduce the incentive for lenders to monitor companies where financial or operational performance is deteriorating. More generally, this can reduce the role of lenders in corporate governance; and the regulatory oversight proposed by Ofgem is neither the appropriate nor sufficient substitute for private debt capital providers' monitoring and exercise of their rights.

The floor could also introduce additional complexity and market distortions

The floor can be seen as introducing a new form of contingent public capital. When it is viewed from this perspective, the floor can be seen as a conditional part-mutualisation of the business. The company subject to the floor might be seen as under a mix of public and private ownership with a major potential impact on corporate governance and incentives.

The justification for such an intervention would normally have to be very clear and robust evidence that such a wide ranging intervention creating a redistribution of different capital providers' financial claims on the business is indeed necessary and justified from an economic perspective.

Design of financing structures, contractual specifications of financial claims, and transfers of cash flow and control rights across different capital providers are very complex; the floor will not benefit from detailed contractual designs normally governing financial claims and could be easily mis-calibrated resulting in unintended consequences.

Such an intervention also goes against the general approach to tax policy and regulation of financial markets, which typically aim at *reducing* any potential impact of a public policy that would favour one type of capital over another to avoid market distortions.

The proposed floor mechanism also appears to be mechanistic. Given its nature, there is a risk that in some situations it might be used when it is not intended to be applied (or vice versa). The existence of company specific factors further complicates the floor's operation and increases the potential for introducing market distortions and unintended consequences for incentives.

There are alternative mechanisms available to ensure financeability and approximate market outcomes that might better meet the criteria for targeted, efficient regulation.

There are several mechanisms and tools already in place that can be used to achieve the same objectives as the floor. In addition to the *de facto* requirement to maintain an investment grade credit rating, there are a number of existing regulatory mechanisms and ring-fencing arrangements to further protect regulated companies' ability to access financing. These include reporting requirements (confirmation that the company has adequate financial, facilities and management resources for the regulated business), restrictions on dividend policy and cash lock-up licence conditions. Ofgem has not indicated what conditions have changed, or provided evidence around why the existing protections previously accepted as sufficient protection mechanisms of financial resilience are now no longer sufficient.

If existing mechanisms are not sufficient to manage risks, recalibration of the RIIO-2 framework and assumptions could be considered as a first step rather than the introduction of a new regulatory mechanism such as the floor. The likely market outcome would be higher required returns.

If recalibration of the RIIO-2 framework does not obviate the need for actual additional financial support and allow companies to finance their activities (including meeting market-based tests), adjustments to risk exposure could be considered to de-risk the underlying assets (which could weaken incentives). In this case a number alternative mechanisms to reduce risk and thereby remedy financeability problems appear to be preferable to the proposed floor mechanism.

It has been noted that the introduction of the floor may in part have been based on the examples of protections for debt built into the frameworks for Irish interconnectors such as the East West Interconnector (EWIC). However, the mechanism in place for EWIC is different to the cashflow floor: the recovery of all debt and operational costs from customers is guaranteed (not repayable). EWIC in general is a pass through business with minimum equity and no financial incentives, so it operates in a fundamentally different environment.

The mechanisms for EWIC were provided because of the promoter's light balance sheet characteristics, which are very different to typical, asset-heavy regulated networks, and cannot be directly transferred to regulated networks. The floor is also not the same as the 'hard floor' applied for other NI interconnectors such as Moyle or the cap and floor regime for interconnectors in GB.

Although the interconnector floor mechanisms discussed above were designed in a different context and for a single asset, the concept of a hard floor could similarly de-risk cashflows at the enterprise level for networks at RIIO2. A 'hard floor'-type support at the company level – which would prevent revenues from falling below a pre-determined floor and would be non-repayable – could improve financeability in the context of low financial headroom while avoiding interfering with the priority of claims. It would still be deficient, however, compared with a market pricing solution of an appropriate return on equity because it would not simulate efficient market outcomes.

Re-openers are also often used to deal with special circumstances that are not of regulated companies' own making, such as exposure to catastrophic risk. If a new mechanism is required to protect against e.g. *force majeure* events, material changes in circumstances or catastrophic risks, a re-opener would be a more appropriate mechanism than the floor, as it would protect against changes in circumstances outside of a company's control and could be bespoke to the prevailing issue at the time.

In its March consultation Ofgem also considered accelerating depreciation and modifying capitalisation rates as a means to address financeability issues on a NPV neutral basis. The key difference between acceleration of cashflows based on these rates and the floor is that the former allows companies to factor in sufficient headroom into their base case *ex ante* to manage risk exposure, with no "repayment" of accelerated cashflows. Use of these levers may not address financeability concerns for networks.

Overall, based on detailed analysis, the cash flow floor scores poorly against the criteria set out. It is not justified by a specific market failure; it is unlikely to correspond to an efficient market outcome, where the latter would imply pricing in financial headroom required to deal with risks and ensure financeability of all capital sources. It shifts risks from debt to equity without justification; it appears designed to provide liquidity, but cannot improve financial viability (and it is unclear why the market could not provide the same solution if networks were financeable in the first place). There is also a significant risk that the floor will weaken financeability checks as a binding constraint on regulatory determinations and hence undermine overall business financeability, while introducing additional costs and distortions. It is also likely to create wrong incentives. The alternative would be either to de-risk the underlying assets and further weaken incentives, or to ensure financeability with market pricing. The latter might seem unattractive because it might appear to reduce prices to consumers by less in the short term, but underpricing of any factors of production, including specific sources of capital, does not lead to market efficiency in the longer term.

4 Context and scope

4.1 Context

Ofgem proposed important changes to the RIIO regulatory framework for the regulated energy networks sector. The publication of Ofgem's RIIO-2 sector specific consultation (the Consultation) on 18 December 2018 has provided significant additional detail around Ofgem's proposed approach to and methodology for key regulatory parameters for the next price controls.

The overarching design of the next RIIO price review outlined in Ofgem's consultation indicates that regulator's objective is to reduce customer bills under RIIO-2 with a large number of mechanisms designed specifically to reduce networks' returns and remove or limit different sources of potential outperformance for networks. A number of these sources of potential outperformance were put in place by Ofgem only a few years ago as part of the RIIO-1 framework to focus on outputs and innovation and to strengthen networks' incentives to deliver value for customers.

Nowhere is the impact of Ofgem's proposals on returns networks will be able to earn over the next control more evident than in the changes to the 'base' cost of capital. Ofgem's indicative cost of equity range of 2.96—3.95% (RPI deflated) with a point estimate of 2.96%, which implies an unprecedented reduction of the allowed equity return by nearly a half compared with the last determination at RIIO-1 on a like for like basis.

This is one of the largest changes in the cost of equity allowance in the history of UK regulation and would substantially reduce baseline financial headroom for all networks. Furthermore, a number of other mechanisms put forward by Ofgem are designed to reduce potential returns further, either ex ante or prevent a rise in returns ex post. Combined with other measures, Ofgem's methodology means that, if it is implemented, networks' profits might reduce by well over 50%.

It appears that Ofgem considers that the financial consequences of its proposed approach necessitates an introduction of additional, new regulatory measures. In particular, Ofgem considers that the expected large negative financial impact of its changes to the allowed returns (and hence a significant erosion of financial headroom for absorbing risks) can be addressed by the introduction of a 'cashflow floor' to improve networks' financeability. This would facilitate the carrying out of its 'finance duty' to have regard to network companies' ability to finance their activities.

The cashflow floor as proposed is essentially a creation of a new contingent public claim on a regulated business. It is designed to provide conditional funding to a firm in difficulty, paid by consumers, and designed to bailout debt, and to be repaid later from the allowed equity returns.

This is a major regulatory innovation that would directly impact rights of capital providers. Ofgem states clearly that the introduction of the floor allows it to avoid arbitrarily setting the cost of equity at a higher level to avoid downside concerns, raising questions as to whether the proposed reduction in the allowed cost of equity would need to be recalibrated based on the estimated range in the absence of this new mechanism.

Notably, Ofgem's proposal comes at a time of increased focus on going concern. The Financial Conduct Authority is currently going through a consultation which will result in the UK auditing standards becoming more stringent in this area and going beyond the provisions of international standards. While companies should already be producing robust going concern analysis, they may face more challenge to support the analysis of going concern and this could enhance focus on financeability assessment in the context of reduced financial headroom.

4.1.1 Ofgem's stated rationale for the cashflow floor

The cashflow floor is said to be designed to ensure that revenues are sufficient to meet networks' debt service obligations, but only for a limited period. Details around the mechanics of the floor based on the Consultation are set out section 9. Ofgem's stated objectives for the floor are that it should:

- "*Strengthen the ring-fence and support the creditworthiness of actual Licensees in the current low cost equity environment.*
- *Protect consumers and debtholders from downside scenarios while leaving shareholders fully exposed to incentives on cost and quality of service.*
- *Preserve incentive on Licensees to manage their financial structures in a reasonable and prudent manner*".[1]

The implicit premise here is that under Ofgem's new price control design regulated companies are likely to struggle to withstand shocks and the resulting greater probability and potential impact of financial difficulty or distress could negatively affect customers. This regulation appears intended to prevent such situations from occurring.

Ofgem has suggested that the concept of the floor will also allow for, what it sees as, otherwise justified large reduction in consumer charges in both the short and longer terms, through a lower cost of equity while avoiding financeability constraints from private capital. The floor:

"*may thus allow us to consider a less constrained cost of equity allowance. It is with this in mind that we have continued work on a potential cashflow floor*".[2]

Ofgem notes that the floor would be expected to have a lower cost than alternative mechanisms for addressing financeability concerns, for example: "*arbitrarily setting higher allowed returns purely to address potential company downside performance concerns*."[3] This is simply saying that bailing out networks' debt in case of difficulty is cheaper than providing sufficient financial headroom up front to avoid such situations.

According to Ofgem the introduction of a cashflow floor would: "*have the added benefit of strengthening the ring-fence, if appropriately structured*" [4]

Ofgem has set out three variants of the cashflow floor, preferring its third variant which would assess actual company cashflows versus actual levels of company debt service:

- "*As it is adjusted to reflect actual company cashflow and actual company debt service, we believe it provides stronger credit support than the other variants as it should protect against payment default.*
- *It can be clearly defined and would not be exposed to any changes in rating agency ratio definitions or metrics.*
- *It has less risk of being triggered before it is really required.*

[1] RIIO-2 Sector Specific Methodology Annex: Finance, Para 4.23
[2] Ibid, Para 4.19
[3] Ibid, Para 4.27
[4] Ibid, Para 4.26

— *It is therefore more likely to be considered proportional and should not place unnecessary risk on consumers*".[5]

Ofgem is also considering implementing variant 3 such that:

— the cashflow floor is subject to a gearing cap (to be determined based on notional gearing levels, but to include some headroom compared to each licensee's gearing levels as at 31 March 2018, adjusting downwards for any future de-gearing until gearing reaches the notional level), or

— a gearing penalty such that any CTU would escalate at WACC if the company is within 5% of notional gearing or at a higher amount for greater gearing levels, for example, WACC plus an additional 1% for each additional 5% gearing.[6]

As a result of Ofgem's stated preference for the third variant our analysis of the floor is focussed on variant 3.

4.2 Scope and limitations of scope

The ENA has asked KPMG to analyse Ofgem's consultation and in particular to:

— review the proposed mechanics of the cashflow floor and provide a critical assessment of the underlying basis and justification for this within a framework;

— assess whether the mechanism would be considered credit positive by financial stakeholders;

— consider the potential reaction of financial stakeholders, such as credit rating agencies, lenders and bond investors; and

— review alternative mechanisms available to Ofgem to address financeability concerns including regulatory precedents.

4.3 Our approach to the assessment of the floor and structure of the report

The ENA has asked KPMG independently to review the new cashflow floor (CFF) mechanism proposed by Ofgem as part of the next RIIO controls and to provide an assessment of the justification and basis for this solution put forward by Ofgem. This report presents findings from this analysis.

The analysis starts with a specification of the criteria used to assess the cash flow floor as a regulatory mechanism. The criteria applied are outlined below and correspond to standard economic and financial criteria and tests of regulatory mechanisms including:

— targeted objectives and rationale from the economic efficiency perspective;

— impact on financeability;

— implications for incentives and behaviours by different market participants and impact on customers; and

— potential costs of this regulation, externalities and distortions.

---

[5] Ibid, Para 4.25

[6] Ibid, Para 4.33

Criteria	Our approach and methodology
Objectives and justification for the introduction of the floor	
Objectives and justification for the introduction of the floor	**What is the objective and justification for the new mechanism? Does the floor address a clear market failure that justifies regulation?** Where a mechanism is not clearly targeting any particular market failure, this is likely to introduce inefficiency and distortion. We assess whether the floor as a regulatory intervention addresses an existing and well-evidenced market failure.
Financeability	**Is the floor required to ensure financeability of networks at RIIO-2 and in subsequent price controls and does it help to achieve it?** We assess whether the floor based on Ofgem's stated rationale for introducing the floor could enhance the financeability of networks at RIIO-2 and in subsequent price controls.
Design and mechanics of the floor	
Financial impact	**What is the impact of the floor on cash flows from a debt and equity perspective?** We assess the financial impacts of the floor on cash flows based on the design set out in the Consultation from both a debt and equity perspective. Our analysis includes stylised modelling of the floor and potential impacts on key credit metrics typically used by rating agencies to assess creditworthiness of networks.
Implications for incentives	**What incentives could the floor have on management and governance of companies including any unintended consequences?** We assess the potential incentives properties of the floor on management behaviours and corporate governance, in particular whether the floor would encourage or discourage management to remedy any underlying driver of underperformance relative to the regulatory framework.
Complexity and distortions	**Does the floor introduce additional complexity to RIIO-2 which could result in additional costs and distortions?** We assess whether the implementation of the floor is practicable, and whether the floor introduces additional complexity to RIIO-2.
Alternative mechanisms available to Ofgem	**Is the floor required given existing regulatory mechanisms and tools available to companies? Could other mechanisms achieve the same objectives?** We consider (1) whether a new mechanism is required and (2) alternative mechanisms and regulatory precedents that could achieve the stated intent of the floor.

These criteria have been selected taking into account key issues that a regulator would typically cover when considering new regulation as well as the specific justifications and rationale set out by Ofgem for the introduction of the floor in the Consultation summarised in the previous section. Considerations of all criteria outlined above are also likely to have an impact on the value of this mechanism to customers, although Ofgem has not presented any cost benefit analysis of the new mechanism.

5 Objectives and justification for the introduction of the cashflow floor

Ofgem has a statutory duty to have regard to whether licensees are able to finance their activities in a manner "*best calculated to promote efficiency and economy*"[7]. Therefore, an appropriate starting point for the assessment of the CFF is to consider whether:

(1) the regulator has clearly identified an explicit *market failure* that new regulation is designed to address,

(2) there is another *potential, unstated justification* for this type of new regulatory intervention,

(3) the new regulation delivers outcomes that would be *consistent with what would be expected to occur in a competitive and efficient market* equilibrium,

(4) there is a reason to believe that a regulatory intervention is *required to improve financial viability* and because the *market cannot provide a similar solution itself*, and

(5) the impact of the intervention on existing capital providers' respective risk exposures, control and cash flow rights is justified and unlikely to create distortions.

We consider these issues in turn.

5.1 Does Ofgem identify a specific market failure that the cash flow floor is designed to address?

It is an appropriate (if high) hurdle for a significant, new regulatory innovation to be supported by a robust impact assessment that shows that new regulatory mechanisms promotes economically efficient market outcomes, remedies potential distortions and creates value for customers.

However, Ofgem's Consultation does not appear to point at, or identify, any market failures that justify the floor, or that the floor is required to remedy. In fact, the Consultation suggests that the floor in fact a response to Ofgem's own regulatory proposals for an unprecedented reduction to the cost of equity, rather than as a response to a market failure.

In the case of regulated networks it is difficult to identify a specific market failure (other than a disconnect between Ofgem's revised estimate of the cost of equity and the required level of financial headroom or equity profitability) that requires the floor to be introduced.

Also, Ofgem does not provide a detailed impact assessment or a cost benefit analysis to justify the floor.

The floor does not appear to seek to address any particular market failure or market distortion requiring a regulatory intervention.

5.2 Is there any potential justification for this type of regulatory intervention?

In the absence of Ofgem's specific justification for the floor from the market failure perspective, which would normally be expected in case of a significant new regulatory

[7] Gas Act 1986 and Electricity Act 1989.

intervention of this type, it is worth considering whether, hypothetically, there could be a potential economic justification for the floor in specific market circumstances. A potential market failure that might justify, at least a consideration of, this type of intervention would be, for example, a very high likelihood and associated costs of financial distress that would otherwise result from normal market operations.

Although this is not stated in the Consultation, high public costs of financial distress could theoretically provide a valid reason for considering potential mechanisms to avoid them, if it can be shown that they are unavoidable under a competitive market outcome *and* the expected costs of distress exceed potential costs of the intervention itself.

From a regulatory perspective, the important test in this case would be whether for regulated networks the risk and potential costs of a default or financial difficulty are significant enough to impose what could be considered a highly likely and unacceptable public cost (externality), and, whether there is any evidence that this risk has increased now to the extent that it requires a new regulatory intervention.

If the default risk arises from a potential market failure that the floor is designed to address, this might be a justified concern, if regulatory and financial mechanisms already in place can be shown to be ineffective at protecting customers in case of financial distress of any of the licenced undertakers.

Such interventions are generally very rare in the market. And this is arguably least likely to be the case for regulated networks compared with most other sectors of the economy. This is simply because there are already many mechanisms and solutions in place to reduce the risk and costs of financial distress or financial difficulty of regulated networks that are absent in other sectors.

In addition to the de facto requirement to maintain an investment grade credit rating to control financial risk, there are a number of additional regulatory mechanisms and ring-fencing arrangements to further protect regulated companies' ability to access financing, including:

- reporting requirements (confirmation that the company has adequate financial, facilities and management resources for the regulated business);
- restrictions on the use of assets and resources for unregulated non-core activities;
- market solutions that support the same objectives: e.g. restrictions on dividend policy or cash lock up conditions; and
- provisions to ensure continued operations and provision of services to customers.

Finally, even if the risk of financial difficulty might be increasing for regulated networks, this does not appear to be a result of inefficient market outcomes, but rather a consequence of the proposed changes to the regulatory regime itself, and in particular, a significant reduction in financial resources that would be available to network companies due to reduced allowed returns.

Ofgem has not indicated what conditions have changed, or provided evidence around why the existing protections previously accepted as sufficient protection mechanisms of financial resilience, including adequate returns to ensure financeability, are now no longer sufficient to justify an intervention of this type. This is not withstanding the question as to whether the proposed mechanism could reduce the likelihood of financial difficulty or indeed ensure the most efficient financial restructuring in case of potential difficulties.

5.3 Does the floor ensure or approximate efficient market outcomes?

Ofgem also does not appear to demonstrate or attempt to argue that the application of the CFF would ensure an approximation of an efficient, competitive market outcome.

Instead, the floor seems to move in the opposite direction—it substitutes new regulation for what might otherwise be the expected market outcome, i.e. a higher price of equity capital, or rather a lower reduction in the required equity return, where the latter is likely to represent efficient pricing of risk and required financial headroom.

The floor does not appear to approximate the expected economically efficient outcome that would most likely result in a competitive market.

An efficient market outcome would be expected to reflect fully the pricing of risks, which is likely to fundamentally differ from the solution promoted by the floor. The floor does not price in under-remunerated risks or secure financial headroom, but instead seeks to provide a temporary, and costly, liquidity injection.

It appears that Ofgem does not accept the most likely competitive market outcome (i.e. the true price of equity capital and financial headroom) so uses the floor to justify what it considers a better price for customers based on a redistribution policy. This appears to confuse the role of regulation to approximate efficient market outcomes with the role of social policy to redistribute income.

In the most likely market dynamics that would result in an economically efficient outcome, the price of capital would rise (or rather not fall by as much as Ofgem proposes) if the capital is insufficient to provide the necessary financial headroom for the assumed debt and equity risks. This would attract more capital until sufficient financial headroom is secured, corresponding to present risk exposures and consistent with a financial buffer necessary to support debt at the target credit rating.

It could be argued that, if a solution akin to the cash flow floor was generally a justified intervention in the absence of a clear market failure, then it would be appropriate for similar public support to be introduced in many other industries. Indeed, in every sector, a form of public support for debt (assuming it can be effective and achieve desired outcomes, an issue we discuss later in this report) could reduce the price of (debt) capital to the industry. The difference compared with a regulated sector would be that in a competitive market if the risk was put on equity then the price of equity would rise or, if it was capped, the equity capital would leave until the price eventually rises.

The global financial crisis of 2007−8 is a potentially useful parallel here where many financial institutions faced increased risks and, in many cases, financial difficulty. This required the price of capital and required returns by financial institutions to *rise* rather than fall in order to make the industry viable. Indeed, the policy implemented at the national and EU level was to allow banks' profitability to increase to make it financially viable and avoid public support in the future.

The reference to a likely market outcome is also important for comparing the floor against alternatives—the relevant counterfactual for the introduction of the floor is not simply the absence of the floor, but what outcome would result in an efficient market in the absence of regulatory intervention.

5.4 Is the objective of the floor an improvement in liquidity or to ensure financial viability, and a reason to believe that the market cannot provide a similar solution itself?

The floor is also designed to provide liquidity for a time-limited period by shifting cash flows over time, similar to existing regulatory levers such as the split between fast and slow money or depreciation rates, rather than ensuring financial sustainability. Improving liquidity in the short or long term is not the same as improving creditworthiness or financial viability. The floor cannot reduce company or asset risk, or improve the financial position of a firm, on a sustainable basis.

The floor appears to be designed to provide liquidity rather than to improve financial position of a firm on a sustainable basis.

There also appears no reason to believe that the market could not provide an equivalent solution to the floor itself, as long as a regulated company is inherently solvent and financeable to start with. Markets can efficiently shift money over time, credit facilities can be arranged ex ante or even on ex post basis, if a business is financially viable.

Private contracts can efficiently shift risks across debt and equity, if required, or ring fence one type of capital provider, if this would create economic value, and would do this at a cost which is appropriately and efficiently priced. Efficient pricing of risk would also promote efficient management of such risk by financial markets and businesses themselves rather by a regulatory intervention.

It is unclear why financial markets would not be able to provide the same solution as the cashflow floor if it creates economic value, if regulated networks were financially viable in the first place.

The floor appears to obviate the need for market solutions to liquidity issues, which could efficiently price the risk involved and hold management properly to account for the cost of poor performance.

5.5 Potential impact of the floor on existing capital providers' control and cash flow rights

The floor can be seen as introducing a new form of contingent public capital. It creates a conditional public claim on the regulated company with regulator-specified, senior rights vis-à-vis other capital providers. This is the case irrespective of whether the claim would be actually recognised on the balance sheet as a new liability.

When it is viewed from this perspective, the floor can be seen effectively as a conditional part-mutualisation of the business. The company subject to the floor might be seen as under a mix of public and private ownership with a major potential impact on corporate governance and incentives. Any form of intervention of this kind is likely to introduce significant market distortions.

Ofgem is explicit in the Consultation that the floor "*should provide support for debt payments but not equity payments*"[8] and to leave equity 'fully exposed'. The floor is designed to increase cashflows to support servicing of debt whilst restricting payments to equity in certain downside scenarios. If a company were to be financed entirely by equity the floor would not be applied.

[8] RIIO-2 Sector Specific Methodology Annex: Finance, Para 4.30

This means that the floor is designed to re-distribute risks and claims across different capital providers.

In general, there is a full spectrum of different types of claims on a business (including different claims of debt/equity). Debt can have different rights, there are different forms of debt and equity, and the market provides different solutions to management of risk and, for example levels of gearing, various protections such as securitisation or financial restructuring. This intervention in existing financial claims and markets has not been analysed or justified.

Rather than leaving it to the market, the floor would directly interfere with respective debt and equity risk exposures, as well as control and cash flow rights on the business affecting different capital providers.

The justification for such an intervention would normally have to be very clear and robust evidence that such a wide ranging intervention based on a forced redistribution of financial claims on the business is indeed necessary and justified from an economic perspective.

This approach would also go against the general approach to tax policy and regulation of capital markets, which typically aim at *reducing* any potential impact of a public policy that would favour one type of capital over another to avoid market distortions. Ofgem's proposal appears to go in the opposite direction.

In summary, the Consultation does not analyse or identify a market failure that could justify regulatory intervention in network financing structures and financial claims. Without such a justification, introducing the mechanism could risk distorting the market and behaviours, potentially increasing actual or perceived risk and reducing the potential of natural market mechanisms to manage and price risk efficiently.

6 The relationship between the floor and financeability

Under RIIO-2, based on Ofgem's early estimates of the cost of capital and other regime proposals (e.g. asymmetrical business plan incentives), there is likely to be significantly lower financial headroom available to networks, both in terms of economic returns and cash.

Ofgem has stated that its objectives include to "*support the creditworthiness*"[9] of networks in this low return on equity allowance environment and "*protect consumers and debtholders*"[10] from downside scenarios.

The emphasis on debtholders seems to be at odds with Ofgem's general duty to "*have regard to… the need to secure that licence holders are able to finance*"[11] their activities, which does not prioritise one type of capital over another.

6.1 Importance of financial headroom

Ofgem has generally interpreted its financeability duty to mean that companies should be able to achieve a "comfortable" or "solid" investment grade credit rating. In practice, in order to achieve or outperform the cost of debt allowance based on the A/BBB rated iBoxx, companies would need to ensure that they maintain financial ratios and limit their financial risks such that they can preserve investment grade status on both actual and notional financing structures.

For the notional structure in particular – which reflects the regulator's view of an achievable capital structure and cost of debt – the financeability test provides an important cross check on key regulatory parameters including the cost of capital.

In the Consultation Ofgem states that where the floor addresses financeability constraints it:

"*should allow the removal of constraints on cost of equity judgements that might otherwise apply*" and it "*would avoid arbitrarily increasing the cost of equity to address any potential financeability concerns*."[12]

Ofgem's objectives appear to be to introduce the floor to maximise the reduction in the allowed cost of equity, but in practice the proposal risks undermining the overall role of the financeability test as a cross check and a binding constraint on regulatory determination.

Ofgem suggests that financeability can be ensured by a variety of means, not just by increasing the allowed return. This is true as long as (1) the regulatory mechanisms are designed to approximate market outcomes, which ensure economic efficiency, and (2) there is appropriate balance of risks and returns for all capital providers, a necessary condition for ensuring financeability in the first place.

Public guarantees for *all* capital might ensure financeability, but not deliver efficient market outcomes. Nor can financeability be ensured by simply shifting risk from one type of capital

---

[9] Para 4.23
[10] Ibid
[11] Section 4AA of the Gas Act 1986 and section 3A of the Electricity Act 1989 set out Ofgem's (and DECC's) principal objective and general duties under these acts.
[12] Para 4.24

provider (debt) to another (equity). Protecting debt capital at the cost of equity is likely to create market distortions and disenfranchise equity capital.

If there is evidence that networks might not be financeable, i.e. not able to maintain a solid investment grade credit rating, appropriate headroom and manage exposure to downside risks using market-based solutions, the question has to be why? Is there a market failure, or are the key regulatory parameters inappropriately calibrated? Either way, the transfers of cash over time which the floor seeks to achieve are not a structurally compelling solution.

Lenders are historically reluctant to lend purely on the basis of regulatory protection. Regulatory protection can be removed or weakened at a later date and it is crucial therefore that the underlying economics of an entity are financeable. Where a company has an enforced low return that doesn't reflect the real underlying risk exposure and relies wholly, or to a large extent, on regulatory protection it will struggle to raise funds and the business is not commercially viable in its own right.

Without evidence of market failure, the required return on equity, and hence headroom to absorb risks, is not arbitrary if parameters are calibrated so that networks pass robust, market-based tests. It is not possible to trade-off , on some continuous basis, a degree of company's financeability for consumer interest (e.g. lower bills), because securing finance on a sustainable and efficient basis - consistent with Ofgem's cost of debt assumptions - requires meeting certain financeability criteria. These criteria are largely binary, in a sense that they are either met or not.

This is particularly the case where rating agency risk assessments and credit metrics reflect the market view on the scope for market-based short term capital provision to manage exposure to downside shocks.

Ofgem appears to imply that the floor mechanism makes rating agency metrics and rating assessments less relevant. That might be justifiable if Ofgem were to cite rating agency assessments as a source of market failure. However, Ofgem has not demonstrated or provided evidence to suggest that rating agencies are overstating credit risk.

The risk in the business, reflecting the relevant risk protections and risk sharing mechanisms already embedded in the regulatory framework, is priced through the cost of capital. Ofgem might argue that returns on equity are consistent with networks' risk exposure, and, therefore, there is no requirement for higher returns. However, in this case, the rationale for introducing the floor – in the absence of which companies might not be able to manage the risks to which they are exposed – is not clear.

6.2 Potential implications for financeability

Ofgem has typically interpreted its finance duty as focussed (albeit not exclusively) on the notional structure, which serves as a cross-check on the cost of capital abstracting from actual network financing structures.

Based on regulatory precedent financeability tests act as a binding constraint on price control parameters and calibration as evidenced by CMA appeals. In recent cases like SONI (System Operator Northern Ireland), the CMA explicitly increased *ex ante* financial headroom to address financeability challenges and ensure that headroom corresponded to downside risk exposure, including an explicit premium for exposure to asymmetric downside risk. However, if (1) Ofgem views the floor as removing the need for a cross-check of the price control package (the purpose of a notional financeability test); and (2) Ofgem's finance duty is interpreted as relating predominantly to the notional structure, it is not clear that any tests of notional financeability would be meaningful. Indeed the floor could signal that Ofgem is willing for the creditworthiness of networks to deteriorate:

Moody's notes that:

"*If a mechanism is eventually devised that successfully removes the need for Ofgem to allow any headroom to financing costs, the credit quality of the sector is likely to be weakened*." [13]

S&P similarly questions:

"*Whether the introduction of the mechanism signals the regulator's willingness to allow credit quality in the industry to decline*."

Equity investors have adopted a similar position. For example Credit Suisse in its recent report on National Grid comments on a number of RIIO2 mechanisms including the Cashflow Floor:

"*Most radical for us is the concept of a cash flow floor… We would be surprised if this measure remains given the price controls should be financeable for most companies in the first place*."[14]

In summary, the floor could undermine the extent to which financeability tests are meaningful, binding and robust as a cross check on the calibration of the RIIO-2 package and increase the scope for regulatory discretion in determining the balance of risk and reward.

The floor appears designed to reduce lender risk but, by interfering with or precluding market-based solutions, it is more likely to increase investor risk (both equity and debt). It could induce an arbitrary departure from the risk-return balance.

The floor could further aggravate rather than reduce risks to lenders through explicit weakening of the financeability duty as a binding constraint.

In reality, the floor is unlikely to reduce risks from the perspective of the company on a sustainable basis over time but to increase the risk for companies that the RIIO-2 determinations – in particular the allowed cost of equity – do not ensure financial viability and do not approximate efficient market outcomes.

The floor might also reduce financial monitoring and prevent efficient financial restructuring with debt participation in case of actual financial distress.

Section 8 below discusses how the floor might be liable to prolong the effects of any management and governance failures and therefore structurally increase risks for investors and, ultimately, consumers.

---

[13] Moody's Sector In-Depth Regulated Gas Networks Great Britain 14 February 2019
[14] Credit Suisse, "National Grid" Equity Research 20 December 2018

7 Considering financial impact of the floor

Ofgem has signalled an allowed cost of equity for RIIO-2 of 3.0% (RPI-deflated), a reduction of c50% from RIIO-1 on a like for like basis. Changes to baseline returns have been introduced in parallel with a series of additional mechanisms designed to extract maximum value and remove many potential sources of outperformance from networks.

These proposed changes will necessarily decrease financially headroom against key coverage metrics and could result in a ratings downgrade if target metrics are not met and increase the risk of actual financial failure.

In this context Ofgem's stated objectives for the floor include that it should:

— "*Strengthen the ring-fence and support the creditworthiness of actual Licensees in the current low cost equity environment. (and)*

— *Protect consumers and debtholders from downside scenarios while leaving shareholders fully exposed to incentives on cost and quality of service*".[15]

This section presents the results of a high level, stylised financial impact assessment of the floor on cash flows based on the design set out in the Consultation from both a debt and equity perspective.

7.1 Financial impact on debt

7.1.1 Overview of rating agency methodologies

Ofgem has a statutory duty (the finance duty) to "*have regard to… the need to secure that licence holders are able to finance*" their activities. From an economic and financial perspective, this means the regulator considers whether regulated companies can access financial markets to finance their activities under a reasonable set of assumptions and in a sustainable way.

A key aspect of the financeability test is the consistency of the financial projections with a target credit rating. The rating represents the rating agencies' judgement in respect of the creditworthiness of an issuer (or a particular security) and largely determines utilities' access to debt capital markets. As such, it is a critical reference point for determining financeability from a debt perspective. In practice this means companies would need to ensure that they limit financial risk, and maintain certain financial ratios required by rating agencies at levels required to preserve investment grade status.

Credit rating methodologies are based on a number of constituent sub-factors, which are individually assessed to determine the overall creditworthiness of regulated companies. Assessment of coverage and leverage metrics typically constitutes approximately 40% of rating agency methodologies. For networks, credit rating agencies consider a number of ratios as part of their assessment such as: Post Maintenance Interest Coverage Ratio ("PMICR", also known as AICR); Net Debt / Regulatory Asset Base ("RAB") or Net Debt / Fixed Assets and FFO / Net Debt.

[15] Para 4.23

7.1.2 Stylised modelling of the floor

The results presented in this section are based on a stylised modelling exercise to understand the potential financial impact of the floor on a network company.

The modelling approach tests the financeability of a stylised company under the RIIO-2 finance package. The key model assumptions are as follows:

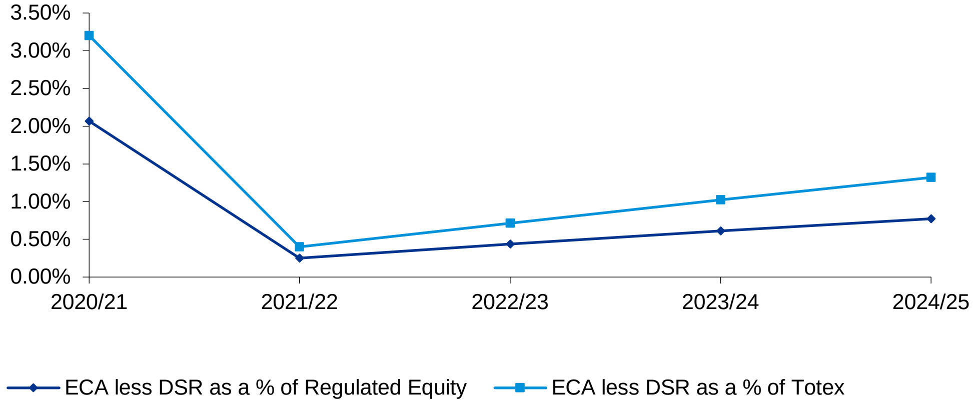
- A base scenario forecasting the evolution of a stylised network in absence of the floor across a 20 year timeline starting in 2021/22.
- The base case assumes 60% notional gearing, with the current implied RIIO-2 cost of equity of 3.00%. We target a base case whereby capex, net debt, and depreciation offset to 0, while we evolve the RAV for our network including the indexation approach applied as part of the RIIO-2 proposals.
- The model estimates the Expected Cash Available (ECA) consistent with the Ofgem definition as Funds From Operations, less Property, Plant and Equipment and Tax payable plus New Debt.
- The analysis proxies the debt service requirement (DSR) as the interest payable in period. The model advances cash flows to "top up" ECA using the cashflow floor under situations where it does not cover DSR.

Base case

Based on Ofgem's early view of key RIIO-2 parameters – in particular the cost of capital – the analysis indicates that even in the base case (based on a notional financing structure) there is very limited headroom against key credit metrics.

The cash flow headroom available for servicing debt requirements[16] is calculated as a proportion of regulated equity.

ECA-DSR Variance as proportion of regulated equity



Source: KPMG stylised modelling

The results of the analysis indicate that there is limited headroom in the base case to manage even moderate downside scenarios.

The simple stylised modelling suggests that under the notional financing structure there will be limited headroom in the base case against key metrics such as PMICR (assuming that

[16] Cash Available before debt service ("ECA") less Debt Service Requirements ("DSR")

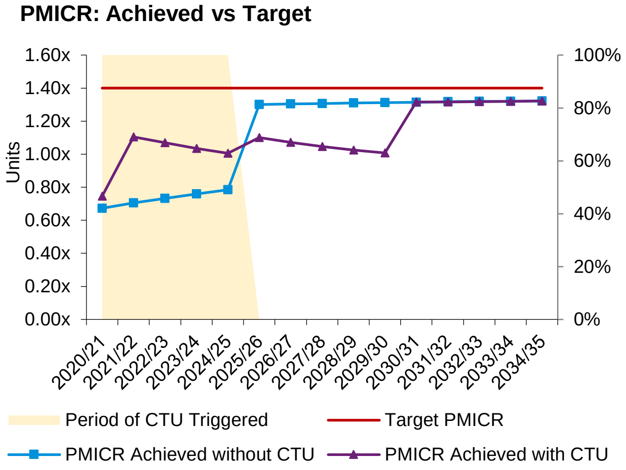
rating agencies do not “look through” the acceleration of cashflows for all networks arising from the transition to CPIH).

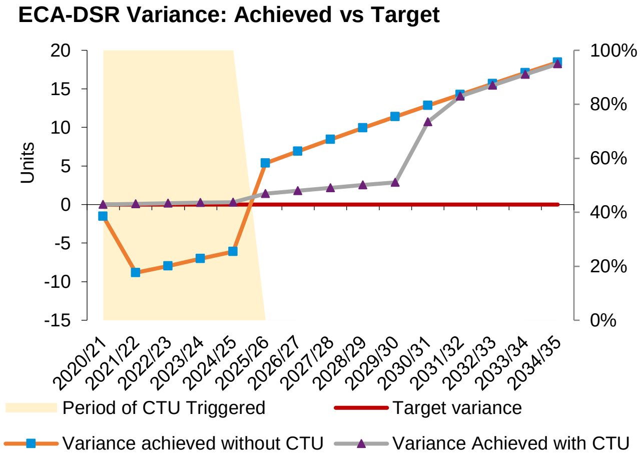
Headroom is sensitive to (1) levels of capex, (2) proportion of index linked debt, (3) depreciation rates (4), level of cash or other liquid investments assumed on the balance sheet and (5) other factors such as Totex, incentives, interest costs, the risk free rate and inflation downsides.

Under the actual financing structure – especially where pressure on ratings is exacerbated by debt raised in high interest rate environment or gearing that is higher than assumed under the notional structure – some networks may not be able to maintain current credit ratings at RIIO-2, even with significant operational outperformance. For example, we estimate that a company with 65% gearing (i.e. 5% higher than the notional capital structure and in line with the current notional structure for GDNs and DNOs) and cost of debt 50bps above notional would only be able to achieve an AICR (assuming no out- or under-performance) of approximately 1.05x.

Downside scenarios

Under a sustained, moderate downside shock[17] applied to the notional financing structure base case, we observe how in the absence of the floor there is a significant decline in coverage metrics such as PMICR, and thereafter PMICR returns to base case levels. Including the impact of the floor in credit metrics, the PMICR is sustained at a level of approximately 1.0x for the duration of the shock.





Source: KPMG stylised modelling

The liquidity injection results in lower PMICR in the medium term than if floor had not been triggered. Improving liquidity in the short term does not improve creditworthiness or the financial position of a firm on a sustainable basis over the medium term.

Whilst the floor clearly increases cashflows (1) it does not target thresholds for key credit metrics assessed by rating agencies (assuming that rating agencies would take liquidity support provided by the floor into account); and (2) headroom across the repayment period for the floor is materially lower than base case or a scenario where the floor is not triggered. This is likely to limit the extent to which the floor could be seen as credit positive in the medium term.

In the context of low expected financial headroom the likelihood of underperformance that is equivalent to 2%-3% of equity needs to be carefully assessed to inform any decision around

[17] A 5 year shock equivalent to £15m or c.3% of Regulated Equity per annum

whether financial headroom is sufficient to manage the risks to which networks are exposed at RIIO-2. In practice rating agencies may "look through" the acceleration of cash flows where the floor is triggered. Where rating agencies discount cash flows accelerated from future periods, this could mean the company is unable to realise associated benefits in its financial ratios (as set out above), limiting the extent to which the floor could be credit positive.

Use of such tools which accelerate cash flows from future periods are not guaranteed to protect credit ratings. Where fast money moves away from the "natural" expense / capitalisation rate, this may not be recognised[18,19] by agencies as acceleration implies reduced headroom in the future (all else equal), particularly where accelerated cashflows are not permanent or comparable across networks. The floor could be seen as analogous to this as short-term liquidity is facilitated through a loan from customers that is repaid over time (thereby reducing future headroom and resilience).

7.1.3 Credit rating agencies' views on RIIO-2 and potential financial impact of the floor

In a note before the RIIO-2 Framework Consultation, Moody's stated[20] that:

"*Lower returns on regulated network assets from 2021*" is a "*credit challenge*".

After the consultation was issued, by Moody's noted that RIIO-2 was "*credit negative*" due to:

"*A cut of up to 55% in the allowed cost of equity, on a comparable basis" and "even a company leveraged close to regulatory assumptions would come under pressure in RIIO-2*".

Moody's has more recently commented explicitly on the mechanics of the floor as set out in the Consultation, noting that:

"*Several significant limitations have been designed into the scheme, including that it could be accessed only an unspecified but limited number of times and that it could be made unavailable to companies whose gearing rose above a certain level".*[21]

Moody's acknowledges that despite the limitations of the floor: "*the mechanism is likely to provide some support for operating companies that would otherwise be in danger of breaching licence conditions or entering special administration".*[22]

Critically Moody's caveats this by noting that the mechanism could be credit negative where the counterfactual is re-calibration of key price control parameters:

"*Ultimately, the most significant effect of introducing the mechanism may be to allow Ofgem to avoid arbitrarily increasing the cost of equity to address any potential financeability concerns… If a mechanism is eventually devised that successfully removes the need for Ofgem to allow any headroom to financing costs, the credit quality of the sector is likely to be weakened*."[23]

---

[18] Moody's - '*We believe, however, that a faster pace of cost recovery may not necessarily correspond with a fundamental improvement in a company's financial strength. This would be reflected in the credit metrics we use to assess companies' financial performance. In particular, we will calculate our adjusted ICR in such a way as to remove the effect of variations in the speed of cost recovery – whether excessively fast or excessively slow.*'

[19] S&P's - '*Although we do not expect to reverse any such adjustments when we calculate our ratios, excessive use of these tools could increase business risk, in our view, if we consider that a company is maximizing its near-term cash flows at the expense of long-term investment.*'

[20] Moody's "British energy regulator's proposals would reduce returns for network owners" 12 March 2018

[21] Ibid

[22] Moody's "Credit quality likely to weaken in RIIO-GD2 regulatory period" 14 February 2019

[23] Ibid

Similarly S&P struggles "*to recognize the value of the cash flow floor mechanism and questions whether the introduction of the mechanism signals the regulator's willingness to allow credit quality in the industry to decline*."[24]

Fitch has also recently commented that the floor, noting that "*credit-enhancing mechanisms proposed by the regulator for gas and electricity markets in Great Britain, Ofgem, to offset the proposed cut in the allowed base equity return would provide only modest credit support for investment-grade ratings*."

In Fitch's view, "*the benefit of this mechanism in its proposed form is limited for companies with investment-grade ratings… Good liquidity is a necessary but not sufficient feature for a company to have investment grade rating… Secondly, the cashflow floor appears to merely buy time rather than address the underlying issue causing the liquidity emergency in the first place… Finally, the cost of liquidity support is high and could on its own put more pressure on a network's financial profile*".

Moody's has provided an early view[25] on the RIIO2 mechanisms designed to provide financial support to companies in financial distress, noting that these cannot support operating companies' current credit ratings:

"*Although Ofgem is consulting on mechanisms to support companies in the event of financial distress, this is unlikely to provide support to Scotland GN and Southern GN at the current rating levels*".

It appears that, although rating agencies may remain open to the concept that the floor could be credit positive if considered purely from the lenders' interest perspective, the RIIO-2 package constrains financeability to such an extent that the floor would be unable to maintain companies at current ratings.

Moody's has also stated for the GDNs that:

"*If a mechanism is eventually devised that successfully removes the need for Ofgem to allow any headroom to financing costs, the credit quality of the sector is likely to be weakened*."[26]

Notably, rating agencies have not commented on the other variants of the floor proposed by Ofgem described in detail in section 9.1. This is due to Ofgem's stated preference of the cashflow floor. However, neither of the other proposed option – 'maximum penalties' or the 'minimum coverage ratios' is likely to have a more meaningful impact on the companies' financial metrics in case of a downside compared to the third variant of the floor. For 'maximum penalties' variant, it not clear how the mechanism would address cases where the shortfall between financial headroom available and the level required for the investment grade credit rating is larger than or differs from the quantum of penalties this variant of the floor targets . Furthermore, its trigger is RoRE based and not directly related to the credit agency metrics, limiting its potential impact on ratings.

The 'minimum coverage ratios' variant is not unlike the third variant of the floor in that it would be triggered based on a ratio. However this variant is based on the notional financing structure and may not address financeability issues "in the real world". In addition for both alternative variants, as the injection of additional liquidity would be repayable and short-term (as well as non-comparable across networks), it is assumed that rating agencies would not

[24] S&P, Ofgem's Proposed RIIO-2 Regulatory Framework Will Test U.K. Energy Networks 20 February 2019
[25] National Grid Response RIIO-2 Framework Consultation. https://www.ofgem.gov.uk/publications-and-updates/riio-2-framework-consultation
[26] Moody's "Credit quality likely to weaken in RIIO-GD2 regulatory period" 14 February 2019

take associated cashflows into account and that the floor would not support a target investment grade credit rating.

7.2 Financial impact on equity

The floor construes financeability as relating solely to the ability of networks to service debt, and ignores potential impacts of the overall risk reward balance for equity investors, particularly as it increases the prospect of sustained periods of dividend lockup, prolonged by the terms of an 'artificial', public source of capital.

Ofgem as part of their draft determinations[27] to RIIO-1, considered the expected ability of network companies to pay dividend yields alongside the maintenance of adequate financial ratios. Ofgem specifically acknowledged that at a minimum, in the longer term, networks need to ensure that they can pay dividends: "refraining from paying dividends would not be sustainable longer term".[28]

Without the floor debt would be at risk and if debt is protected then the risk exposure must transfer to equity by definition. This risk would manifest itself under the floor mechanism where dividends and intercompany payments could be interrupted for significant periods of time. As part of our stylised modelling, we show how under RIIO-2 even moderately sized shocks can lead to networks being constrained from dividend payments for sustained periods.

This could lead to detrimental unintended consequences, such as changes to the incentives and behaviours of market participants, and the likelihood of sustained dividend restrictions could reduce investor appetite for the sector or make the sector unattractive to some investors/investment funds looking for characteristic qualities of income.

Ofgem shows little evidence that it sought to calibrate the balance of risk and return to maintain the attractiveness of the sector to a wide spectrum of equity investors. If Ofgem loses the diversity of interested investors, consumers will be poorly served in the longer run.

Overall, this analysis indicates that Ofgem has not thoroughly considered how a low headroom environment would affect the role of equity in the broader environment of a regulated sector. It proposes a radical change to one dimension of regulatory parameters and appears to assume that relationships between providers of capital and other stakeholders will otherwise remain largely unaffected, or at least would not create significant negative consequences.

Other proposed changes in the regime appear to be designed to address the issues of RIIO-1 rather than the structural consequences of this radical shift in RIIO-2. The balance of the regime may need to be re-framed and re-optimised to maintain incentive and governance alignments. The issues highlighted here in the cashflow floor context may be a symptom of this single-track approach and foreshadow other unintended consequences.

[27] Ofgem – RIIO-ED1: Draft determinations
https://www.ofgem.gov.uk/ofgem-publications/89072/riio-ed1draftdeterminationfinancialissuespdf

[28] Ibid

8 Implications for incentives

The stated purpose of the cashflow floor mechanism is to address downside exposure of bondholders only. It is not clear, however, why this support in particular is required and how such a design might avoid creating wrong incentives associated with reduced risk exposure of lenders and potential for more risky strategies by equity.

In normal circumstances, subject to review of forecast metrics as set out in the previous section, the prospect of being able to earn required equity returns in the future would provide a foundation for comfort that debt will still be serviced and repaid in the event of potential downside scenarios. It would also preserve the interest of debt holders to ensure overall financial viability by retaining debt exposure to risks, and ensure that debt would participate in any potential financial restructuring.

Ofgem accepts that its proposals for a reduction in the level of cost of equity allowances in RIIO-2 would reduce levels of headroom available to mitigate with downside scenarios (SSMFA para 4.19). A company would normally have some spare capacity in its capital structure (an ability to finance some short term losses) through additional borrowing (e.g. use of available debt facilities) or by injecting additional equity.

The market solutions mentioned above would be contingent on investors, lenders or new equity, having confidence in the company’s prospects for financial viability and meeting required returns in the future. However, a very large reduction in the cost of equity allowances would reduce both the level of return and hence headroom as well as prospects for positive returns in the future in the case of financial difficulty.

With the cashflow floor in place, the additional financial resources would be just enough to service debt, equivalent to a credit default swap (CDS), rather than providing actual financial resources to the business for a turnaround as would be the case under normal financial restructuring.

The introduction of the floor intended to preserve investor confidence and avoid financial distress in a low financial headroom environment could in effect negatively impact the incentives on management and capital providers to undertake efficient financial restructuring as well as negatively affect corporate governance.

This section discusses potential incentives properties of the floor from the perspective of different capital providers, in terms of potential management behaviour and corporate governance. In particular, we consider whether the floor might encourage or discourage management to remedy any underlying driver of underperformance relative to the regulatory framework.

8.1 Lender concerns

In normal circumstances, bondholders have enforceable claims and would expect to be repaid. Their concerns are therefore about the potential for *abnormal* circumstances that could render a company incapable of funding contracted debt service payments. Such abnormal circumstances could include:

— weak management and weak governance, leading to persistent poor performance;

— economic shocks, including shocks to the debt market, the company’s suppliers or customers, major project failures, systemic/catastrophic failures or weaknesses within the business or physical impairments to the company’s assets;

— adverse regulatory intervention, for example in a hostile political environment

Regulation may offer protection against some of these via uncertainty mechanisms, ring-fence provisions and periodic review processes. Nevertheless, bond spreads over risk-free yields provide evidence that the residual concerns are still material. The question considered in this section is whether, and how, the presence of a cashflow floor mechanism is likely to modify those concerns.

8.2 Characterising the cashflow floor

Central to this analysis is recognising that the cash top-up (CTU) mechanism, in providing for an escalating obligation to repay the providers of the cash top-up (from consumers via the relevant SO) is analogous to proving a new form of capital to support debt but not to offer financial resources to the business.

The obligation can alternatively be thought of as off-settable against the RAV, which is also reflected in Ofgem's proposal for a CFF Partitioned RAV. These two perspectives can be considered equivalent, but the capital analogy might be more helpful in articulating the issues.

Since the CTU is intended to provide a temporary, medium term facility to service debt, and provided the WACC-based escalation represents a fair interest rate for the risks involved, the cashflow floor does not structurally alter the economics of the enterprise.

This means that the practical effect of the mechanism can be considered in terms of whether it facilitates or hinders effective management of a potentially failing or an actually failing company.

8.3 Impact of the floor on the incentive environment

It is important to consider the incentive environment and resources available for a company's management prior to and following the triggering of the cash flow floor. The focus on management is pertinent. Lender concerns in large part reflect the risk of failures in corporate governance.

If good governance could be relied on to improve or remove weak management, lenders could be confident that a poorly performing management would be turned round. To the extent that financial risk derives from weak management, good governance would ensure the conditions for loss-making would not persist.

Of course, weak management supported by weak governance is not the only cause for lender concern, but it is likely to be a material one. It is appropriate therefore to consider circumstances where there are fault lines in a company's governance.

To consider incentives on a company's management, one needs to recognise what is known as the 'principal-agent problem', the well documented moral hazard that arises with conflicts between the self-interest of managers (as agent) and the interests of the company shareholders (as principal).

Good corporate governance is needed to realign the interests of the agent and redirect behaviours to protect the principal's concerns. It would seem, however, that the potential for conflicts is somewhat heightened when there is a risk of financial failure.

Weaknesses in governance, including weaknesses in performance reporting processes, information systems, accountabilities and personalities, might be latent in unstressed financial conditions. Such latent weaknesses could start to undermine the normal safeguards of corporate governance when economically rational outcomes for the company are seen as near-existential risks for its managers.

These economically rational outcomes would include a restructuring or removal of the company's management, including in extremis entering administration.

Avoiding the sort of financial distress that could prompt the restructuring or removal of the company's management is therefore liable to be a primary objective of self-interested managers of a company that is failing. Until the crisis hits, managers may be as or even more focused on shifting the blame for failure towards external factors, including the regulator, than on the causes of that failure.

Equally the floor may incentivise management to pursue higher risk approaches to management of the network, a possibility that is explicitly acknowledged by S&P in its recent paper on the RIIO-2 framework:

"*the introduction of the cash flow floor mechanism could undermine networks' incentives to manage their financial structures prudently and could encourage managers to adopt risky strategies in the knowledge that they are protected from failure*".[29]

The concern is that, in these circumstances, the presence of a cashflow floor mechanism could give poorly performing managements more time (assuming that the reputational impacts do not deter networks from triggering the floor as it would signal to markets that external support is required to meet debt service requirements) and create the conditions for economic failure to persist for longer, and possibly much longer.

The management and equity might be also encouraged to take on more risks which are not in the interests of customers.

The presence of a cashflow floor mechanism provides a ready source (and the reading of Ofgem's proposals suggests an automatic source) of funding but only to service debt. The escalation rate is prescribed and would therefore not reflect efficient pricing of the additional financial risk to the enterprise. This could further undermine accountability of management and reduce their focus on the efficient management of risk on behalf of investors.

As the funding would be treated as senior to even secured debt, the additional risk would instead impact on existing lenders and shareholders. At the same time, the remedies normally available to lenders, contingent control of assets and negotiated restructuring or administration, would be denied to them for at least a period of time, and the interests of shareholders in these circumstances would be compromised by the complexities of the principal-agent problem.

The overall effect might be to weaken the pressure on management to reform and to delay the imperative of management removal.

For lenders, therefore, the cashflow floor might heightens the risk of extending a period of economic damage to the enterprise and increasing the risk and scale of an economic shortfall in the eventual event of the company entering administration.

It is unlikely that the increased regulatory oversight Ofgem proposes is sufficient to offset this risk. The proposals recognise that the effectiveness of governance is centrally important. However, oversight by a body skilled in regulation (with a duty towards consumers) would be most likely of limited value compared with market-drive financial restructuring and,

[29] S&P, Ofgem's Proposed RIIO-2 Regulatory Framework Will Test U.K. Energy Networks, 20 February 2019

potentially, even an appointment of a skilled insolvency practitioner with extensive powers to protect the interests of creditors in a special Energy Administration.

Against this downside risk for lenders is the potential upside from giving the company time to reverse its underlying performance issues. This could be beneficial in many possible circumstances. However, it is in those circumstances that one would expect the market to be most likely to provide funding solutions, and properly-priced funding solutions. Market solutions should be better able to evaluate the quality of management and insist on the right sorts of reforms if any are necessary to remedy inherent weaknesses.

Where the floor overrides existing market mechanisms this can reduce the rights of lenders (e.g. lenders' ability to put a company into administration). Where market solutions can create a disciplined environment for management, and financial resources to the business rather than one type of capital providers, it is materially (and possibly comprehensively) undermined by a regulatory mechanism that offers that management an alternative source of funding to service debt.

The floor could be also viewed as an option to equity that prevents loss of access to network assets in the event of financial distress. Equity may choose not to inject additional capital but has right to extract its capital invested in the future when any liabilities associated with the floor have been repaid. However, through the introduction of the floor Ofgem is in practice effectively depriving equity of the option to walk away from an asset that may deteriorate during the period for which the floor is triggered and thereby overriding existing claims, rights and market solutions for the management of financial distress.

In summary, where the floor avoids or delays restructuring due to poor performance it could reduce financial pressure on a poorly performing company and weaken corporate governance. This could create the conditions for business underperformance or even failure to persist for longer and weaken the pressure to restructure, which would be NPV negative in the medium to long term.

When annual debt service might be protected by the floor for a period this could reduce the incentive for lenders to monitor companies where financial or operational performance is deteriorating. More generally, this can reduce the role of lenders in corporate governance; regulatory oversight proposed by Ofgem is neither the appropriate nor sufficient substitute for private debt capital providers' monitoring and exercise of their rights.

8.3.1 Financing structures and shareholders

When governance is effective, the dynamics of the board should help protect against poor performance and take action when action is necessary to deal with performance issues. However, lenders might be primarily concerned about circumstances where governance is not effective. Such ineffectiveness could be driven by many factors, including latent issues, and the managers' skills in exploiting weaknesses.

One of these factors could be the financial position of the company's shareholding group. The shareholding group is commonly more highly geared than the regulated subsidiary and may depend on a stream of dividends from the subsidiary to service its debt. The threat of a cash lockup could be something that concentrates the mind of the shareholding group, and its managers, who may have significant influence over the non-independent members of the company's board. Before the company reaches any financial difficulty, its financing strategy may therefore be subsidiary to the group's. Such a strategy may be consistent with creating enough time and distraction to extract as much value as possible before a company has to yield to any cash lockup.

In this context, the cashflow floor could exist alongside other ring fence protections that, in certain circumstances, trigger a cash lockup. Cash lockups may also be triggered by terms in debt covenants. The presence of the cashflow floor would not necessarily bring forward the timing of a cash lockup and, if its presence imparts or is exploited to encourage a sense of security in lenders and other stakeholders, could even defer that point.

Specifically, the presence of a cashflow floor mechanism could be used to justify a higher gearing level than would be prudent without it. The concern, in a weak governance context, would be that managers of the shareholding group skilled at managing relationships within and perceptions outside the company's board may be able to create and maintain a false sense of security to the detriment of the company and of its bondholders.

Application of a penalty where the floor is triggered for highly geared companies (or application of a gearing cap above which the floor would not be available) could also undermine the incentive for companies to determine the most efficient capital structure. A design of the floor that restricts intercompany interest payments could incentivise raising of new debt within the regulatory ring-fence, increasing gearing at the Opco level.

These factors may further aggravate lender concerns and frustrate the aim of addressing downside concerns of bondholders.

9 Complexity and distortions

This assessment also considers how simple or complex the floor is in terms of the design and practical implementation. This analysis focuses on the floor's calibration and whether it can lead to unintended consequences, whether its calculation can result in intentionally or unintentionally misleading results and whether it is a cost and time-efficient solution.

9.1 Summary of the key features of Ofgem's proposals

Ofgem has so far proposed three different variants of the cashflow floor. These proposals rely on differing combinations of both "triggers" and support routes to the licensee when required.

- The triggers relate to different financial metrics which when breached would mandate as per the new licence condition, the provision of additional support.
- While the support provision itself would involve guarantees or top ups to revenues through various potential avenues within the RIIO-2 package.

Variant 1: "Maximum penalties"

This variant[30] would place a maximum on the value of financial penalties for underperformance against ex ante incentives. This "trigger" under this variation has been touted by Ofgem as potentially being determined by the level of notional equity returns, as measured by return on regulated equity (RoRE). Whereby when if overall return to equity was less than 1%, support would be triggered.

The support provision (limitation of financial penalties) could be tailored to each notional company in terms of maximum annual penalties as a £m value of notional equity RAV.

This 'maximum penalty' would be taken into account when Ofgem (and rating agencies) stress test and make quantitative and qualitative assessments of the overall price control package.

Variant 2: "Minimum coverage ratios"

This variant[31] would mandate a minimum allowed revenue. The trigger of such a provision could be one out of a range of levels, such as notional debt repayment levels, or at a level sufficient to maintain a particular level of a particular ratio such as Adjusted Interest Cover Ratio (AICR) or Adjusted Debt Service Cover Ratio (ADSCR), all outlined by Ofgem as potential examples.

Variant 3: "Liquidity based cashflow floor"

This liquidity based cashflow floor variation[32] is the latest and most extensively illustrated proposal, outlined for the first time within the RIIO-2 Sector Specific consultations. Unlike variants 1 and 2, variant 3 is also based on an assessment of actual company cashflow compared to actual levels of company debt.

---

[30] Ofgem – RIIO-2 Framework Consultation, 7.85.
https://www.ofgem.gov.uk/ofgem-publications/130208
[31] Ibid, 7.87.
[32] Ofgem - RIIO-2 Sector Specific Methodology Annex: Finance, 4.25.
https://www.ofgem.gov.uk/system/files/docs/2018/12/riio-2_finance_annex.pdf

Variant 3 cashflow floor process is as follows:

1. **Additional reporting requirements**: Ofgem mandate through changes to licence conditions that companies confirm they have adequate financial resources, with the requirement to include new additional quarterly liquidity forecast for the subsequent 12 month period.
   - Liquidity forecasts would compare Expected Cash Available before debt service ("ECA")[33] to Debt Service Requirements ("DSR").[34]
2. **Cashflow Supported Status:** Where any liquidity forecast (or additional voluntary liquidity forecast) breaches the trigger and a shortfall in identified, the company would be placed into a special "Cashflow Supported Status**"** ("CSS").
   - Entering CSS would allow the licensee provisions to the support mechanism, alongside other mandated requirements on company function.
   - The company would also undergo ring-fence provisions including a ban on dividend provision and asset and loan restrictions.
   - Alongside, the company would face increased regulatory oversight as part of a review plan, which would require payment plans and potentially an Ofgem selected board representation.
3. **Financial support:** When placed into CSS, companies receive financial support equal to the shortfall identified within the liquidity forecast. This cash top up "CTU" would come directly from consumers, through increased network charges throughout the sector, paid (potentially via the SO or TO) to the CSS licensee.
   - Increased network charges flow through the delivery chain to end consumer, Gas example - GDN > Gas Shippers > Suppliers > Consumers.
   - Cashflow support payments subsequently paid to debt holders.
   - Limited number of uses of cashflow floor provisions across the price control period.
4. **Repayment:** The Company is required to repay in full, all funds received within the CTU support. The company would collect full charges from network operation, however, 75% of operating surpluses would be paid to the SO, to allow charge reduction and a rebate across the sector.
   - A portion of funds (potentially 25%) would be kept and to build up within the ring-fence for the benefit of creditors.
   - If the company fails to repay 100% of the CTU after 10 years, the RAV amount equal to the CTU would be partitioned "CFF Partitioned RAV", whereby an amount equal to the WACC and depreciation is paid to the SO.

[33] Ofgem - RIIO-2 Sector Specific Methodology Annex: Finance, 4.31 -

"ECA equals forecast funds from operations plus forecasted working capital inflows/outflows plus cash and liquid investments plus undrawn available portions of committed credit facilities with maturity dates longer than 12 months minus total expected operating and capital spending (including any cash-based pension top-up needs) minus contracted acquisitions."

[34] Ibid.

"DSR equals all debt interest (excluding any deferrable shareholder debt payments), all debt maturity or principal payments, all payments under derivatives (net of receipts) including principal accretion if payable on inflation-linked swaps, taking into consideration any credit puts that cause debt acceleration or new collateral posting requirements in the event of a downgrade of up to 3 notches (if applicable)."

- The cashflow floor is subject to a gearing cap based on notional gearing. Debt support would be limited to only the debt in line with the notional gearing and headroom.
- A gearing penalty would apply such that CTU would escalate at WACC if the company is within 5% of notional gearing or at a higher amount for greater gearing levels. For example, WACC plus an additional 1% for each additional 5% gearing.

9.2 Potential for mis-calibration and distortions

Design of financing structures, contractual specifications and transfers of cash flows and control rights are complex; the floor will not benefit from the detailed contractual designs that normally govern financial claims on a business and could be easily mis-calibrated resulting in unintended consequences. For example, the presence of the floor could prevent the servicing of debt held outside of the operating company and thereby impact the overall rating of the Group. Moody's has observed that dividend and intercompany payment lockup could be considered credit negative for holding companies (rated separately), due to limitations on dividend distributions and intercompany cash flows. This could mean that the investment credit rating of the overall corporate family group of companies is downgraded.

Several network companies operate with group structures whereby individual DNO level activity sits within an operational level company, which is owned by and pays dividends to a holding company. This could potentially be credit negative for leveraged holding companies such as National Grid Plc (Baa1) and Western Power Distribution Plc (Baa3 stable). Typically, Holdings Company will target leverage rates higher than those of a notionally structured company, WPD group[35] targets a debt/RAV ratio of around 80%, compared to a 65% target for the individual operating companies. Where any dividend provisions to these companies are restricted, the ability of the holding company to maintain adequate coverage financial ratios could be compromised.

It is not clear how effective the floor would be where in practice other mechanisms and interventions are likely to be triggered before the floor is called. This is acknowledged by Moody's, which states that "*cash flow stress is generally associated with low-rated companies, and under our methodology, a company that experiences a liquidity shortfall cannot maintain an investment-grade rating. Given the requirement to maintain an investment-grade rating, we expect the regulator to intervene long before a network faces a liquidity shortfall*".[36]

Similarly, Fitch Rating have commented that: *"the benefit of this mechanism in its proposed form is limited for companies with investment-grade ratings. Firstly, liquidity is rarely a core concern at investment grade, as we would generally expect liquidity concerns to arise towards the low 'B' rating territory. Good liquidity is a necessary but not sufficient feature for a company to have investment grade rating. In the most likely scenario, the liquidity support and dividend lock-up would come into force after a network migrates to speculative grade and its license is either revoked or questioned"*.[37]

The floor has implications on incentives and consequences that will impact existing stakeholder relationships and claims, which are complex by nature. The problem with mechanisms like the floor is that while it is helpful to try to keep them simple, if they have wide ranging consequences then simplicity necessarily leads to mis-calibration and externalities. This is true of all variants of the floor proposed.

[35] WPD - 2015-23 RIIO-ED1 WPD Business Plan, SA-07 Supplementary Annex – Financing the plan. http://www.westernpower.co.uk/About-us/Stakeholder-information/Our-Future-Business-Plan/Supporting-Financing-the-Plan-information.aspx
[36] Moody's "Credit quality likely to weaken in RIIO-GD2 regulatory period" 14 February 2019
[37] Fitch Ratings' "Ofgem's Credit-Enhancing Mechanisms Unlikely to Benefit Ratings" 28 February 2019

Lastly, an effective floor would also need to be applied consistently over time, which may not be practicable and cannot be guaranteed through the RIIO2 framework. Moody's observes that:

"*given that any bailout is likely to be politically sensitive, future regulators may find it difficult to renew the scheme if it were ever used. As a result, there is a significant risk that the mechanism could be removed or modified as soon as 2026*."

9.3 Can the floor be gamed or applied in the circumstances where it is not required?

The proposed floor mechanism appears to be mechanistic. Given its nature there is a risk that in some situations it might be used when it is not intended to be applied (or vice versa).

Ofgem has provided no analysis around how the floor could be gamed in practice (e.g. through maintenance of large revolving credit facilities, which abstracts from the creditworthiness of the company), or set out scenarios that consider how investors and companies might response to the possibility that the floor might be triggered.

The floor is sensitive to a number of key business plan assumptions, such as the level of capex spend, suggesting that companies can avoid triggering the floor by delaying capex. Similarly, the floor could incentivise companies to hold more cash on balance sheet and thereby inflate ECA and avoid triggering the floor.

The floor by design takes a short-term view and could be triggered in response to a downside that is confined to one period, whereas rating agencies may in practice 'look-though' one time shocks choosing instead to focus on the long-term profitability of the company. This will also trigger a restriction on raising committed debt facilities, with a downward biased ECA until the company exits the Cash flow Supported Status ('CSS'), which could impede a quick recovery that would have otherwise happened.

9.4 There are likely to be additional costs associated with the cashflow floor but they have not been analysed

Companies usually have financial instruments with different profiles, timing and cash flow impact which will have to be monitored at a granular level to provide the information required for reporting. There will be costs associated with additional quarterly reporting, both monetary and in terms of time.

The application of the floor is likely to be both costly and time consuming. The floor introduces additional complexity and costs in terms of both reporting and monitoring of the value impacts of the floor from a management and investor perspective. S&P states that in its view the floor would be of "*limited credit value, notably because of its complexity*" and that "*it could be difficult to implement*".[38]

We have not seen an impact assessment of potential costs and benefits of the floor despite its significance and complexity. In the absence of detailed impact assessment it cannot be assumed that the floor will create public benefits.

[38] S&P, Ofgem's Proposed RIIO-2 Regulatory Framework Will Test U.K. Energy Networks 20 February 2019

10 Alternative mechanisms available to Ofgem

The report has focussed on assessing the floor on its own merits. However, it is also important to consider whether alternative mechanisms could have achieved a similar outcome or addressed the problems that the floor is designed to address. Once this is clear, it is then easier to consider alternative solutions.

The floor is designed to:

— "*Strengthen the ring-fence and support the creditworthiness of actual Licensees in the current low cost equity environment.*

— *Protect consumers and debtholders from downside scenarios while leaving shareholders fully exposed to incentives on cost and quality of service.*

— *Preserve incentive on Licensees to manage their financial structures in a reasonable and prudent manner*."[39]

There are several mechanisms and tools already in place that can be used to achieve the same objectives. In addition to the de facto requirement to maintain an investment grade credit rating there are a number of existing regulatory mechanisms and ring-fencing arrangements to further protect regulated companies' ability to access financing. These include reporting requirements (confirmation that the company has adequate financial, facilities and management resources for the regulated business), restrictions on dividend policy and cash lock-up licence conditions.

A key question is whether these existing mechanisms are sufficient in different scenarios and when different risks might materialise or increase, for example under the RIIO-2 framework.

Ofgem has not indicated what conditions have changed, or provided evidence around why the existing protections previously accepted as sufficient protection for financial resilience are now no longer sufficient.

In fact Ofgem has in the past been clear that it would not accelerate cashflows or provide liquidity support for networks and that the onus should be on companies to manage the risks to which they are exposed and to maintain an investment grade credit rating:

"*we would not advance cash flow in light of apparent short-term dips in cash flow metrics. We would seek to understand the reason behind such failures (…) but the onus would be on the company to resolve the situation, including by injecting equity and/or reducing dividend payments as they see fit (…) By placing a greater onus on companies to take action to maintain their investment grade credit ratings, it reduces the requirement for Ofgem to make adjustments to other areas of the price control.*"[40]

Similarly, Ofgem notes in its 2012 financeability study that:

"*the significant risk of downside scenarios is an integral and normal part of equity investment (…) it would seem reasonable for Ofgem to recognise that it is normal for investors, including lenders, to be exposed to that kind of performance risk and to recognise that corporate*

[39] Para 4.23

[40] Ofgem, Regulating energy networks for the future: RPI-X@20, current thinking working paper on financeability 19 May 2010

governance and rights attaching to debt instruments should provide suitable safeguards against such risk".

If existing mechanisms are not sufficient to manage risks, recalibration of the RIIO-2 framework and assumptions should be considered as a first step. The likely market outcome would, in our view, be higher required returns. An increase in the cost of equity is the most likely market outcome in an efficient, competitive market.

On price control appeals the CMA typically carries out ratio-based financeability analysis at appropriate notional and actual gearing. The CMA has been generally sceptical in the past about regulatory innovation that departs from the core economic principles underpinning the established regulatory model. In recent cases like SONI (System Operator Northern Ireland), the CMA explicitly increased *ex ante* financial headroom to ensure that it corresponded to downside risk exposure, including an explicit premium for exposure to asymmetric downside risk.

If recalibration of the RIIO-2 framework does not obviate the need for actual additional financial support and allow companies to finance their activities (including meeting market-based tests), adjustments to risk exposure could be considered to de-risk the underlying assets (which could weaken incentives). In this case a number alternative mechanisms to reduce risk and thereby remedy financeability problems appear to be preferable to the proposed floor mechanism.

10.1.1 **Interconnectors as a precedent for the floor?**

It has been noted that the introduction of the floor may in part have been based on the examples of protections for debt built into the frameworks for Irish interconnectors such as the East West Interconnector (EWIC). However, the mechanism in place for EWIC is fundamentally different to the cashflow floor: for example, for EWIC the recovery of all debt and operational costs from customers is guaranteed (not repayable); and EWIC in general is a pass through business with minimum equity (and equity returns) and no financial incentives so it operates in a fundamentally different environment.

The mechanisms for EWIC were provided because of the promoter's light balance sheet characteristics, which are very different from those of typical, asset-heavy regulated networks, and cannot be directly applied or transferred to regulated networks (notwithstanding the fact that the proposed design for the floor differs in a number of key respects from the "hard" floors or protections for debt payments implemented for interconnectors).

The cashflow floor does not equate to a hard floor as has been applied in the case of interconnectors as it is repayable, can only be drawn a limited number of times and may not continue to be available to networks in subsequent price controls (although a substantial proportion of embedded debt will not have matured by the end of RIIO-2).

The floor is also not the same as the "hard" floor applied for other NI interconnectors such as Moyle or the cap and floor regime for interconnectors in GB.

Although the interconnector floor mechanisms above were designed in a different context and for a single asset, the concept of a hard floor could similarly de-risk cashflows at the enterprise level for networks at RIIO-2 and thereby address Ofgem's concerns around low financial headroom. The potential for the introduction of a hard floor at RIIO-2 was considered by Ofgem and this alternative mechanism is considered below.

10.1.2 Potential introduction of a 'hard floor'

In the March 2018 framework consultation for RIIO2 Ofgem set out another form of a revenue floor whereby returns would be restricted from falling below pre-determined levels on a non-repayable basis.

While it appears a more straightforward solution, which unlike the proposed floor options, does not shift risk from debt to equity and has the ability to decrease the enterprise risk to the benefit of both types of investors, its effectiveness is potentially somewhat undermined by the way it might limit the effectiveness of the incentive properties of the package and the fact that it may not encourage efficient behaviour by the companies.

Ofgem subsequently ruled out this hard floor option due to distortive effect on incentives and the removal of responsibility from companies to take mitigation action to prevent any further decline in performance.

Nevertheless, a 'hard floor'-type support at the company level could improve financeability through reduction of risk in the context of low financial headroom and avoid interfering with the priority of claims or introducing new capital claims to the business. It would still be deficient, however, compared with a market pricing solution of the appropriate return on equity in a sense that it would not simulate efficient market outcomes.

10.1.3 Re-openers for 'catastrophic' risk or changes in circumstances

Re-openers are often used to deal with special circumstances that are not of the Regulator's or regulated companies' own making, such as exposure to catastrophic risk. An example of this in the water sector would be an Interim Determination of K (or IDoK), which enables a regulated company to notify the regulator of a material change in circumstance during the price review period and ask the regulator to re-determine an aspect of the settlement.

- Under the terms of water licenses, the changes that can trigger an Interim Determination of 'K' (IDoK) are 'relevant changes of circumstance' and 'notified items'.
- IDoKs provide companies with a strong regulatory risk mitigant which enables them to avoid prolonged erosion of value until the end of the price review. IDoKs allow them to take action as and when material cost or revenue shocks arise.

In this context the floor is not designed to insure against catastrophic risk and erosion of value arising from changes in circumstances from the point at which the price control was set, as the assumption inherent in the floor is that the downside scenario against which the floor protects is within the control of management and should hence be repayable over time.

If a new mechanism is required to protect against force majeure events, material changes in circumstances or catastrophic risks a re-opener would be a more appropriate mechanism than the floor as currently designed, as it would protect against value loss arising due to changes in circumstance that could be outside of a company's control.

10.1.4 Acceleration of cashflows through use of levers such as capitalisation and depreciation rates

In its March consultation Ofgem considered accelerating depreciation and modifying capitalisation rates as a means to address financeability issues on a NPV neutral basis. This is most notably used in Ofwat's regulatory framework for UK water companies; the PAYG (totex recovery within period) and RCV run off (depreciation) rates can be used to move revenue between periods in an NPV neutral basis, although the rates affect the balance of bills between current and future consumers. However, Ofwat requires clear justification for a departure from natural economic rates, and does not allow acceleration of cashflows to alleviate financeability or liquidity issues based on the actual financing structure.

The key difference between acceleration of cashflows based on these rates and the floor is that the former allows companies to factor in sufficient headroom into their base case *ex ante* to manage risk exposure, with no "repayment" of accelerated cashflows.

However there is risk that a move away from the natural rates may introduce distortion and rating agencies may not take the accelerated cash flows into account as the additional cashflows are not permanent and reduce comparability across networks. For water sector Moody's target credit metrics are adjusted by excluding PAYG support. Furthermore, it has previously stated that:

"the use of regulatory levers to offset bill increases could erode confidence in the regulatory framework'[41].

Use of these levers may not address financeability concerns for networks.

10.1.5 Adjustments to the notional capital structure

Variant 3 of the floor focusses on the ability of networks to meet actual debt service requirements. However, if Ofgem's focus reverts to the financeability of the notional structure rather than ensuring networks' ability to meet actual debt service payments, changes to the notional capital structure could reduce the debt service requirement, increase financial headroom and reduce the scale of the financeability challenge implied by the RIIO-2 framework.

However, adjustments to the notional structure including levels of gearing would be arbitrary and could introduce a material wedge between (a) actual financing structures adopted; and (b) notional financing structures in previous controls where such adjustments are not justified with reference to market benchmarks and (to some extent) the evolution of networks' actual financing structures over time (which represent market outcomes).

Irrespective of whether changes to the notional capital structure could be supported with robust evidence, adjusting the notional structure would not address the potential liquidity constraints that could eventuate based on the actual capital structure (that the floor is designed to address) and would not remedy the potential impacts of low financial headroom on creditworthiness at RIIO-2.

10.1.6 Adopting a nominal instead of a real allowed return

The return networks earn can be split into two components: the real return on the RAV and the inflation component of the return achieved through indexation of the RAV. Conversely, the annual debt service payments that the companies make based on nominal interest rates need to be made from in-year cash flows. In theory, switching to nominal return would reduce this mismatch and alleviate the potential financeability concerns from a lower real WACC.

However, the introduction of nominal returns would be a significant change in the framework that could undermine existing hedging strategies and introduce additional distortions and mismatches between assets and liabilities, as well as significantly increasing customer bills, and has been discounted by Ofgem as a remedy for financeability concerns at RIIO-2.

[41] Use of Inflation Indices in Water Sector, NERA, Page 17

www.kpmg.com