Impact Assessment Form

ofgem

Title: Ofgem's policy for funding Network Operators' Pension Scheme Established Deficits	**Impact Assessment (IA)**
Date: 7 April 2017	
Stage: Final	
Division: Networks Team: RIIO Finance	Source of intervention: Ofgem
Type of IA: Not Qualified under Section 5A UA 2000.	Type of measure: Price control
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Summary: Intervention and Options

Rationale for intervention, objectives and options

What is the problem under consideration? Why is Ofgem intervention necessary?

As part of the RIIO price controls Ofgem provides allowances for the Pension Scheme Established Deficits (PSED) of Network Operators (NWOs) that relate to employee remuneration packages that existed before privatisation.

There is an ambiguity about how we would treat any increase in valuations of established deficits at the end of the initial 15 year funding periods. Further, our focus in reasonableness reviews on valuation assumptions with a view to penalising 'inefficient' assumptions causes some nervousness and inhibits new thinking in investment and other strategy by pension trustees.

Clarification of our commitment to funding PSEDs should avoid any perverse incentives to influence higher deficit valuations before the end of the initial funding periods and minimise the systematic risk that NWOs are exposed to through the regulated portion of their pension schemes.

What are the policy objectives and intended effects?

To provide clear rules on the treatment of PSEDs.

To allow greater flexibility over the funding period for PSEDs thereby removing perverse incentives to influence higher deficit valuations before the end of the initial funding period.

To encourage NWOs to advocate for consumers in their dealings with pensions trustees.

To enable new thinking in investment and other strategy relating to PSEDs.

To reduce equity beta. Equity beta is a measure of systematic risk of a portfolio in comparison to the market as a whole.

To minimise the cost to consumers of financing the PSED and networks in general.

What are the policy options that have been considered, including any alternatives to regulation? Please justify the preferred option (further details in Evidence Base)

The status quo (do nothing option) would leave it unclear how we would treat PSED after the initial funding period. It would also encourage higher deficit valuations before the end of the initial funding period. Continuing to focus on valuation assumptions would led to nervousness and inhibit new thinking in investment and other strategy. This would be reflected in an equity beta that is higher than necessary.

The option we prefer is making a commitment to fund PSED over an 'indicative deficit repair period' with a minimum of the time that current repayments will pay off the deficit and a maximum of 15 years. We will also shift the focus of our reasonableness reviews from PSED valuations. Instead we will deal with any concerns in setting the Base Annual PSED Allowances and Payment History Allowances. We will also required licensees to advocate for consumers in their dealings with pension trustees. We prefer this option because it provides certainty about our commitment, removes perverse incentives, encourages new thinking in investment and other strategy and reduces equity beta.

The option of paying down deficits over an 'indicative deficit repair period' with a minimum of 15 years (instead of a maximum) has been considered, but this has the potential to lead to the indefinite deferral of funding the PSED, which we consider would disproportionately place the burden on future consumers, decrease trustees confidence in our funding regime and inhibit the development of more consumer focused investment strategies.

Monetised Impacts (£m)

Business Impact Target Qualifying Provision	As part of the Price Control mechanism this would not be a qualifying measure.
Business Impact Target (EANDCB)	Not relevant
Net Benefit (Explain the basis of monetised impacts e.g. NPV or other).	We have used an order of magnitude estimate of 0.1 equity beta. Equivalent to £100m gross benefit per annum. This is a subjective estimate based on likely parameters. We do not have insight into NWOs additional costs in conforming to the rules but do not expect that they would significantly erode the potential gross benefit.

Hard to Monetised Impacts

Describe any hard to monetise impacts, including mid-term strategic and long-term sustainability factors (maximum 7 lines).

Reduced risk of over-funded deficits

Approach focusses on consumer concerns

Will the policy be reviewed? **No**	**If applicable, set review date: month/Year**

Evidence:

Problem under consideration and policy objective

We highlighted in our first consultation paper, that the clarification of our commitment to funding PSEDs "should minimise the systematic risk that NWOs are exposed to through the regulated portion of their pension schemes."

We also identified that some uncertainty around what would happen if established deficits re-emerged, under our current fixed funding period approach, would create perverse incentives on NWOs, and trustees, to influence higher deficit valuations to secure maximum funding and minimise the risk of unfunded deficits in due course. This would increase the risk of over-funding to the detriment of consumers.

Other reasons for change included significant concerns expressed by NWOs and trustees around the operation of our existing regime that could have the effect of discouraging innovative approaches to investment and other strategy that might benefit consumers.

The rationale of our intervention is designed to protect the interests of consumers by reducing the risk for companies that would ultimately be passed on to consumer.

Development of options and consultation process

We have published two consultation papers and undertaken workshops with interested parties. The first consultation paper set out what we considered to be an appropriate direction of travel on a range of issues and asked stakeholders for views on the future focus for reasonable reviews. Our second consultation paper set out more developed proposals in light of responses to consultation and our dialogue with interested parties.

The options considered were continuing with the status quo or developing an enduring scheme to better protect the interests of consumers. We also considered BG's suggestion of a minimum 15 years.

Monetised and non-monetised costs and benefits

Any uncertainty around our funding commitment would affect beta, or systematic, risks for NWO investors and thus our assessments of the cost of equity. This is because pension schemes hold a proportion of their assets in risky asset classes meaning that investors in an unprotected sponsoring employer would be exposed to the corresponding market risks. In principle, for a sponsoring employer with a 65% gearing ratio, a scheme with assets worth half the employer's enterprise value that are 35% held in diversified equities would make a contribution of 0.5 to the employer's equity beta, potentially 2% to 2.5% to the cost of equity. Pension scheme assets for NWOs do average around half the RAV values.

It is difficult to quantify how much of this potential risk issue would affect investor perception under our current regime when the fixed funding periods reach their end, and indeed how much of it already affects those perceptions in light of that longer term uncertainty. For each 0.1 on equity beta, assuming an equity risk premium of about 4% on RAV of £60bn, such uncertainty would translate to a detrimental (pre-tax) impact on consumers of about £100m per annum.

Based on the evidence presented below under 'Risks and assumptions' we estimate that the potential effect of clarifying our commitment to the funding of established deficits could be of this order of magnitude.

Distributional effects

Introducing greater flexibility in the way pension schemes are funded will have inter-generational distributional effects. We would expect these to potentially go both ways – eliminating the fixed funding periods opens up scope for longer funding periods that extend beyond the original fixed periods, while companies and trustees might use flexibility to propose shorter periods than our indicative deficit repair period methodology specifies. In the latter case, NWOs would need to explain why they believe the consumer interest remains appropriately protected.

Our duties extend to both existing and future consumers. In light of the emphasis in our proposals on introducing the consumer interest into the governance of pension schemes, we consider these distributional effects should on balance benefit consumers. We are however aware of a risk that NWOs do not respond in the way we hope to the challenge to introduce the consumer interest into their discussions with trustees and use the increased flexibility inherent in our proposals to shorten funding periods, with the potential impact of increasing the risk of stranded surpluses arising. However, we believe the mechanisms we have included for regulatory override of funding proposals where we consider it is in the consumer interest mitigates this risk.

Hard-to-monetise considerations

Clarifying that our funding commitment is an enduring one should reduce uncertainty around what would happen if established deficits re-emerge after the end of our current fixed funding periods. We identified that this uncertainty would create perverse incentives on NWOs, and trustees, to influence higher deficit valuations to secure maximum funding and minimise the risk of unfunded deficits in due course. This would create a risk of over-funding to the detriment of consumers. These proposals should therefore reduce this risk, although it is difficult to monetise

Following our revised approach to reasonableness reviews we would expect this to lead to opportunities for consumer benefits and reduce risks of over-funding by consumers, but the effects are difficult to monetise.

It is also difficult to monetise the potential effects of explicit consideration of consumer interests in the dialogue between NWOs and trustees in developing investment and other risk strategies.

Risks and assumptions

A key assumption is the impact of clarifying Ofgem’s commitment to funding deficits on beta risks of these businesses The question arises, what effect does this commitment have on our assessment of beta risk in these businesses?

To consider this question, this IA refers to two papers:

- Jin, Merton, Bodie, 'Do a firm's equity returns reflect the risk of its pension plans', NBER Working Paper Series, August 2004 (JMB paper)
- Professor Ian Cooper, 'The effect of defined benefit pension plans on measurement of the cost of capital for UK regulated companies, Ofcom, 2 September 2009

The JMB paper cited what the authors considered was considerable empirical evidence that the market valuation of firms takes into account pension surpluses and liabilities. JMB considered that we would expect pension risk to be accurately reflected in the firm's equity beta in an informationally efficient market. JMB articulated this in an expression that related the beta of the firm, the beta of its operating assets and the betas of its pension plan's assets and liabilities. The JMB paper found evidence the market risk of the firm's equity does indeed reflect the risk level of the pension plan and that the results were robust. They concluded that "we show as an empirical matter that the resulting overstatement of the cost of capital [ie relating to its operating assets] can be substantial".

It seems intuitive that there would be exposure to systematic risk through the sponsorship of a defined benefit pension scheme that is itself invested in risky assets. If a company with market value of its equity E operates a zero beta business but sponsors a pension scheme with gross assets equal to $k \cdot E$ which have a beta of βP (and liabilities with zero beta), we might suppose the beta of the firm should be $k \cdot \beta P$.

However, the empirical confidence of JMB has been questioned. Klumpes and Wang, in 'Pension Transparency and Idiosyncratic Risk: An Empirical Study of Debt-Equity Implications for Cost of Capital', February 2011, found an association between pension risk and overall firm risk but not in the way implied by JMB.

Ian Cooper also investigated the JMB results. He sought a robust way to adjust the asset betas for seven regulated UK companies regulated by Ofcom but found that there wasn't a robust way. He concluded that the direction of the adjustment was probably downward but its size is indeterminate. He noted that "the most naïve version of the JMB method gives implausibly low estimates of the cost of capital for firms with very large DB plans."

Ian Cooper identified key assumptions in the JMB analysis that were questionable:

- *Changes in the pension fund belong to shareholders* - The alternative view is that ownership is shared between shareholders and employees, or more generally beneficiaries of the scheme, and also by the tax authorities (since contributions are allowable for tax).

- *Pensions risk does not affect operating betas* - The alternative view is that a pension scheme is part of a general bargain between employees and the firm, which is likely to lead to a sharing of the pension fund risk with the firm's employees.

- *Share prices immediately and fully reflect pension surpluses and deficits* - The evidence in the literature suggests that unfunded liabilities are reflected in stock prices, but there are large standard errors in cross-sectional tests. Researchers found lags between changes in pension fund valuations and

share prices. Ian Cooper suggested these mean the JMB method will overstate the impact of the net pension fund beta on the measured asset beta.

Reflecting on these questions, it would appear relevant that the schemes operated by our RIIO-regulated companies are now all closed to new members and presumably therefore represents a diminishing part of the general bargain between employees and the firm. Many of the pre-privatisation employees are also subject to protected persons legislation. It seems reasonable to suppose that the labour market in which the firm operates will be relatively insensitive to issues arising in these legacy pension schemes, at least within the horizon of the next price control decisions.

It would also seem reasonable to suppose that increasing accounting transparency around sponsored pension schemes would tend to reduce the information lags between pension schemes and share prices, especially in respect of pension scheme assets (where we would expect beta to reside) where investors can readily interpret the effect of changes in the markets for risky asset classes for the valuation of a sponsoring firm.

It seems therefore at least plausible that the existence of large defined benefit pension schemes in our RIIO-regulated energy networks could have a material effect on underlying firm betas. Similarly, the existence of (not quite so large) DB pension schemes in listed regulated water companies could have a material effect on their observed betas, which have been taken as evidence in regulatory assessments of betas for cost of capital decisions.

For reference, the Government Actuary's Department's 27 November 2014 report for Ofgem on its last reasonableness review identified that most of the energy network schemes' strategies are to invest between 40% and 60% of their assets in return-seeking assets, slightly greater than typical schemes of similar maturities. The JMB analysis used a beta 0f 0.59 for pension assets and a beta of 0.175 for pension liabilities. It would seem likely the pension asset betas for our schemes would be lower than 0.59 but, as schemes have been closed to new members and with relatively high proportions of members who are pensioners (50% to 75%), we might expect liabilities to be less driven by future final salaries and therefore also have a lower beta. Subject to the Ian Cooper questions, translating a first order indicative estimate of post-tax net pensions beta of 0.25 to the regulatory portions of the pensions assets which, at the last valuation date, represent about 50% of the aggregate RAVs of the businesses or about 130% of regulatory equity, would indicate a potential contribution of 0.3 to the equity betas of our regulated businesses. We have taken an 'order of magnitude' estimate of a little less than 0.1 as the basis of our draft impact assessment.

Wider impacts

Our proposals should have no identifiable effect on competition.

Summary and preferred option

The monetisable benefits are uncertain, but could in the future be in the magnitude of £100m per annum. We believe the scale of the potential benefits compares positively with the relatively balanced other potential impacts and the appreciable risks to the consumer interest they carry.

We consider this impact assessment supports the decision to revise the way we treat pension costs within our RIIO price controls as set out in our decision of March 2017.