



Government  
Actuary's  
Department

# Advice to the Utility Regulator, Northern Ireland

Review of SONI's pension arrangements

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# 1 Introduction

- 1.1 The Utility Regulator for Northern Ireland (the 'Utility Regulator') is the economic regulator of the electricity system operator for Northern Ireland ('SONI'). The Utility Regulator commissioned the Government Actuary's Department ('GAD') to review certain aspects of SONI's pension arrangements to assist the Utility Regulator in formulating its approach to pension costs over the price control period, 1 April 2020 to 31 March 2025. The scope of my review is detailed in Appendix A.
- 1.2 SONI is required by law to provide a pension scheme for all of its employees. Some employees have additional rights as 'Protected Persons' under Northern Ireland law. Consequently, SONI maintains two sections within its pension arrangements:
- a *defined benefit scheme* referred to as the Focus Section; and
  - a *defined contribution scheme* known as the Options Section.
- 1.3 This report mainly covers the *defined benefit* ('DB') costs arising from the Focus Section of the SONI Limited Pension Scheme (the 'Scheme').
- 1.4 In my report, I have set out comments on:
- the data, method and assumptions used for the actuarial valuation as at 31 March 2019;
  - the contributions required to fund the future accrual of benefits within the Scheme;
  - the contributions required to bridge the deficit identified at the 2019 actuarial valuation;
  - The contributions paid in respect of the Options Section
- 1.5 The valuation at 31 March 2019 and corresponding Schedule of Contributions have recently been finalised. SONI are now required to make these payments, regardless of the allowance the Utility Regulator provides.
- 1.6 Our overall view is that the assumptions used within the valuation and to request pension costs are within a reasonable range. However, it is important to note that there is a range of assumptions that might be viewed as reasonable. It is important to consider scheme circumstances and objectives when setting assumptions.
- 1.7 The next valuation is due as at 31 March 2022. Contribution requirements after 30 June 2023 (the statutory deadline for completing the 2022 valuation) will be subject to change. The Utility Regulator may therefore wish to separately consider costs requested after 30 June 2023. The 2022 valuation will provide an opportunity to explore the merits of alternative approaches in light of relevant objectives (for example, ensuring that the consumer interest is considered and appropriately represented).

## Limitations

- 1.8 This report is a high-level review of SONI's pension arrangements intended to support the Utility Regulator's Final Determination on the costs requested by SONI.
- 1.9 Scheme benefits are one of the main determinants of DB pension schemes' ultimate costs. There have been no changes to benefits since the previous price control. Reviewing the benefits was not specified in the work package, therefore we have not considered these as part of this review.

- 1.10 The Scheme's investment strategy affects its investment return (and therefore its current and future *funding levels*) and the choice of actuarial assumptions for funding valuations. A number of factors affect schemes' investment strategies such as *employer covenant*, *risk appetite* and *maturity*. Reviewing the Scheme's investment strategy is not in the scope of this report.
- 1.11 The Scheme's *employer covenant* is a fundamental factor which underpins both the investment and funding strategies. The strength of the sponsoring *employer's covenant* relates to the ability and the willingness of the sponsor to pay contributions into the scheme such that it is suitably funded. Reviewing the strength of the *employer covenant* is outside the scope of this review. However, we understand that the Trustees have assessed the *covenant* to be 'strong' for purposes of the most recent actuarial valuation (the highest category in the Pensions Regulator grading).
- 1.12 Scheme expenses will also impact the ultimate costs of SONI's pension arrangements. Reviewing the expenses associated with SONI's pension arrangements is not in the scope of this report.
- 1.13 This review considers SONI's pension arrangements only. It is recognised that pension arrangements are only part of overall remuneration packages.
- 1.14 This report compares the Scheme with publicly available information on other UK private sector *DB pension schemes*. Such comparisons do not take into account factors which affect particular industries, sponsoring employers or pension schemes in isolation, and are provided as a guide only.
- 1.15 Pension schemes' benefits, investment strategies and funding approaches should reflect each scheme's particular circumstances. It is beyond the scope of this report to consider all such factors. It is recognised that a 'one-size fits all' approach is not appropriate. This review must not be interpreted as advising that a particular approach is necessarily inappropriate.

## Information used

- 1.16 Appendix B lists the information on SONI's pension arrangements which has been provided to us by the Utility Regulator, as well as information in the public domain, such as that published by The Pensions Regulator ('TPR') and the Pension Protection Fund ('PPF'). My analysis is based solely on this information and relies on it being complete and accurate. I have not independently verified any of the information provided.
- 1.17 The Utility Regulator was shown a draft of this report before it was finalised, for comment and to check factual accuracy. The Utility Regulator's comments have been borne in mind when preparing the final version.

## Distribution and publication of this report

- 1.18 This report is addressed to the Utility Regulator for Northern Ireland. I am aware that the Utility Regulator may make this report available to other parties, including SONI and the Scheme's Trustees. GAD reserves the right to review and comment on any documents in which the Utility Regulator quotes or refers to this report in part.
- 1.19 Advice provided by GAD to the Utility Regulator is intended solely for the use of the Utility Regulator. GAD does not accept any responsibility to third parties who may read this report or extracts from it.

## Compliance

- 1.20 This work has been carried out in accordance with the applicable Technical Actuarial Standard: TAS 100 issued by the Financial Reporting Council ('FRC'). The FRC sets technical standards for actuarial work in the UK.
- 1.21 GAD are accredited under the Institute and Faculty of Actuaries' Quality Assurance Scheme, our website describes [the standards](#) that we apply.



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**7 December 2020**

## 2 Valuation approach

Overall, we have no major concerns with the approach used to determine SONI's defined benefit pension costs at the most recent valuation. There were, however, several notable changes from the valuation at 31 March 2016.

The mortality assumptions have been updated for the valuation at 31 March 2019. The updated assumptions have increased liabilities, all else being equal. The approach in setting mortality assumptions has been updated to introduce more prudence within the assumption. However, we note that over the three-year period between the 2016 and 2019 valuations, there was a general reduction in life expectancies assumed by other schemes in the DB universe. If the Scheme followed this trend of assuming a lower life expectancy in the 2019 valuation, then the reported liabilities and employer contribution rate would be lower.

The financial assumptions such as the discount rate and the CPI inflation assumption have moved in a way which increases the expected cost of future pension benefits at the 2019 valuation. However, the methodology for setting the financial assumptions is broadly unchanged, and therefore we understand that the prudence allowed for in these assumptions is consistent with that allowed for in the 2016 valuation.

The Scheme's funding level on the *Technical Provisions* basis decreased from 98% in the 2016 valuation to 89% in the 2019 valuation. However, over the same period the estimated solvency funding level increased from 58% to 68%. The solvency funding level shows the level of benefits the Scheme would be able to provide should the liabilities be transferred to an insurer, known as a *buy-out*. This would suggest that the *Technical Provisions* basis at the 2019 valuation is a stronger measure than at the 2016 valuation.

- 2.1 The results of a pension scheme's actuarial funding valuation, and therefore the sponsor's future cash contributions depend on the assumptions adopted for that assessment. Assumptions must be made in relation to both the financial aspects of the pension scheme and the demographic aspects of the scheme membership. This section looks at the assumptions adopted for the funding valuation at 31 March 2019 and compares the assumptions used with publicly available information on other UK private sector *DB schemes*.
- 2.2 The pension costs requested by SONI are primarily driven by the cost of funding the Scheme. The Scheme underwent an actuarial valuation as at 31 March 2019, with the next valuation due no later than 31 March 2022 and finalised by 30 June 2023.
- 2.3 The Scheme Actuary prepares an actuarial valuation on behalf of the Trustees in accordance with the prevailing legislation. The Trustees will take advice and consult with the sponsor, but they are ultimately responsible for setting the method and assumptions to use in calculating the size of the Scheme's benefit obligations.
- 2.4 Scheme benefits are one of the main determinants of DB pension schemes' ultimate costs. The benefits that the Scheme provides are established by the Trust Deed and Rules. We understand that there have been no changes to benefits since the previous price control. Reviewing the benefits was not specified in the work package, therefore we have not considered these as part of this review.
- 2.5 The Trustees are responsible for determining the cost of providing the scheme's benefits on a *Technical Provisions* basis. This basis is set prudently and assumes the continued support of the SONI as the sponsoring employer.

- 2.6 An actuarial valuation can be separated into three constituent parts: the method; the data; and the assumptions. In this section I have reviewed the actuarial valuation as at 31 March 2019 of the Scheme broken down by these areas. The assumptions chosen are the most material to the ultimate cost.
- 2.7 At the actuarial valuation as at 31 March 2019, the ongoing funding position of the scheme is assessed on a '*Technical Provisions*' basis. The *Technical Provisions funding level* had fallen to 89% (resulting in a deficit of £4.39m) and the employer contribution rate increased to 52% as at 31 March 2019. In 2016 the Scheme was 98% funded and the employer contribution rate was 38.4%.

**Table 2.1: Results of the actuarial valuations of the Scheme**

|                                    | 31 March 2016 | 31 March 2019 |
|------------------------------------|---------------|---------------|
| Technical Provisions funding level | 98%           | 89%           |
| Deficit (£000)                     | £706          | £4,390        |
| Employer Contribution Rate*        | 38.4% p.a.    | 52.0% p.a.    |
| Solvency estimate funding level    | 58%           | 68%           |

\*The contribution rate quoted includes 0.7% p.a. in respect of premiums to insure death in service benefits for active members.

- 2.8 Individually the assumptions in the valuation are within a reasonable range. Specific assumptions are discussed in more detail below. Overall the valuation basis is stronger than the previous valuation, placing a greater value on the scheme liabilities.
- 2.9 Despite the reduction in the *Technical Provisions funding level*, the *solvency estimate funding level* has increased from 58% to 68%. The *solvency estimate* is what the Scheme would need to pay to *buy-out* the benefits with an insurer. The *solvency* assumptions are lower risk than the *Technical Provisions* assumptions, reflecting those adopted by insurance companies, and hence lead to a higher assessment of the value of the liabilities (in particular, a lower future return on assets is assumed).
- 2.10 A valuation process involves consultation between trustees and sponsoring employer to agree an appropriate outcome. We understand a key objective from the Utility Regulator is to ensure that the consumer interest is appropriately taken into account when assessing pension costs. We recommend the Utility Regulator seeks to understand the extent to which SONI have represented consumer interests in its recent valuation discussions, having appropriate regard to the impact for current and future consumers. The Utility Regulator should consider engaging with SONI to ensure it is satisfied that suitably robust discussions with the Trustees about the level of *prudence* in the assumptions occur at future valuations.

## Method

- 2.11 The actuarial method chosen for the valuing of the scheme's benefit obligation is the *Projected Unit method*. This is the method most typically chosen by trustees of *Defined Benefit pension schemes* in valuing benefit obligation.

## Data

- 2.12 I have not been provided with membership data from the Scheme and a review of the membership data is outside of the scope of my review.

- 2.13 From summary data provided by the Scheme Actuary within the Scheme Funding Report, I note the size of the active membership has significantly decreased since the previous valuation from 28 to 12 members, and the number of members currently in receipt of a pension has doubled, from 10 members as at 31 March 2016, to 20 members three years later. The profile of the membership will in part determine the *maturity* of the scheme and the cashflow profile.

## Assumptions

- 2.14 Generally, assumptions will affect the timing of when contributions are made rather than the actual cost of providing benefits (higher contributions in the short-term will result in lower contributions in the long term and vice versa). However, noting the Utility Regulator's consumer interest objective, there is also the issue of inter-generational equity between consumers when considering the timing of contributions or payment of *deficit repair contributions*.
- 2.15 The risk of a Scheme being unable to pay benefits in future years is reduced if it is funded on a lower risk (*Technical Provisions*) basis. It reduces the reliance on SONI to pay *deficit repair contributions*, in excess of those to meet benefit accrual. It also increases the estimated present value of the liabilities. This is important as it determines how much money current (and future) consumers are required to pay through pass through costs.
- 2.16 The strength of the basis could therefore be considered a matter of timing. All else being equal, a lower risk basis means more money is required earlier, hence the increase in employer contribution rate and *deficit repair contributions* now.
- 2.17 The assumptions used for funding purposes are set by the pension scheme trustees, after taking actuarial advice, and are agreed by the sponsoring employer. The assumptions for assessing the *Technical Provisions* must be prudent, with the degree of *prudence* depending on the scheme's circumstances, in particular the trustees' view of the sponsoring *employer covenant*. Typically, the stronger the *employer covenant* the lower the margin for *prudence*. The main source of *prudence* is generally contained within the *discount rate*.

## Discount rate

- 2.18 The *discount rate* is the rate at which a scheme's expected future benefit outgo is discounted back to provide a current capitalised value. It can be thought of as corresponding to an assumed rate of return on the scheme's assets. The assumed *discount rate* is usually the most important valuation assumption in determining contribution requirements because valuation outcomes are very sensitive to changes in the *discount rate*. For example, a 0.5% p.a. increase in the *discount rate* could reduce SONI's ongoing contributions calculated at the 2019 funding valuation in respect of new benefit accrual from 52% to 46.7% and increase the *funding level* from 89% to 97.2%.
- 2.19 The *discount rates* used in 2016 and 2019 valuations are consistent when comparing the returns relative to the yields available on UK government bonds (gilt yields) at the relevant dates. This approach is typical of other pension schemes, it is market related, and schemes then adjust their expected return above the risk-free rate to allow for the excess returns that might be expected from the schemes' investment strategies. However, we have not considered the Scheme's investment strategy to comment on whether the assumed outperformance is reasonable, but we note it is within a reasonable range when benchmarking against other DB schemes.



- 2.20 The Trustees have adopted a dual *discount rate* approach. The obligation in respect of current pensioners is discounted at a rate of 2.05% p.a. For those either still accruing pension, or with deferred pensions, the *discount rate* assumption up until their retirement date is higher at 3.40% p.a. This reflects the higher levels of risk that can be taken in respect of the active or deferred members as there is a longer period for experience to prove favourable. This approach is fairly common practice.
- 2.21 The dual *discount rate* approach for a closed scheme, such as the Scheme, implies that a scheme will reduce their risk over time, as pensioners become a larger proportion of the scheme's membership.
- 2.22 There has been a decrease in gilt yields between 2016 and 2019 which in turn lowered the *discount rate*. Beyond this, the Trustees have not made a change in the approach deriving the *discount rate*. The *discount rate* has decreased by 0.70% p.a. pre-retirement and 0.75% p.a. post-retirement. A decrease in *discount rate* increases the present value of the liabilities and the employer contribution rate required.
- 2.23 In isolation, it would be expected that the impact of market conditions changes on the *discount rate* have placed approximately a 12% higher value on the value of the liabilities.
- 2.24 The *discount rate* is within a reasonable range when benchmarking against other publicly available data, as shown in Table 2.2 below.

**Table 2.2: Discount rate assumptions benchmarked**

|                                  | SONI Limited Pension Scheme –<br>Focus section<br>Discount rates at actuarial valuations<br>dated 31 March |       | TPR scheme<br>funding analysis<br>average nominal<br>discount rate |
|----------------------------------|--|-------|--|
|                                  | 2019   | 2016  | Tranche 13 <sup>1</sup>  |
| Pre-retirement<br>discount rate  | 3.40%  | 4.10% | 3.54%  |
| Post-retirement<br>discount rate | 2.05%  | 2.80% | 2.20%  |

- 2.25 In setting the *discount rate* assumptions the Trustees will allow for a margin for *prudence*, it is necessary to take account of factors such as the variance in the return on scheme assets and the strength of the employer covenant. Accordingly, there is scope for the valuation assumptions to vary between triennial valuations depending on factors such as a changing level of risk, a changing strength of the employer covenant and affordability considerations.
- 2.26 Assessing the appropriateness of the *discount rate* selected by the Trustees at the 2019 actuarial valuation in more detail would require consideration of the Scheme's investment strategy. This is outside the scope of my review. However, we note that it is within a reasonable range when benchmarking.

<sup>1</sup> The Pensions Regulator produce summary statistics on submitted valuations each year in their yearly [Scheme Funding Analysis](#) and the [Annex](#). Tranche 13 refers to valuations submitted to regulator between 22 September 2017 and 21 September 2018. This is the latest information provided by the Pensions Regulator, it should be noted that the valuation as at 31 March 2019 would be covered by the period after this and included in Tranche 14.

## Inflation

- 2.27 The Trustees determine as a part of their valuation an assumption for future inflation. Pensions provided by the Scheme are linked to inflation, and therefore this assumption dictates the size of the benefit that will be awarded in the future.
- 2.28 The pensions in payment are increased in line with the Pension Increase Order for Northern Ireland, currently in line with CPI (Consumer Prices Index). The approach to setting this assumption remains unchanged from the previous valuation, the Statement of Funding Principles describes the method for setting the inflation assumption. RPI (Retail Prices Inflation) is calculated with reference to:
- the average market view of future price inflation derived through the comparison of the yield available on government bonds that are not linked to inflation and those that are linked to RPI inflation
  - the Treasury targets for UK inflation
  - inflation swap pricing
- 2.29 CPI is the more material assumption than RPI, as this is the assumption that drives inflation increases for pensions. CPI is set relative to RPI with an inflation wedge, the expected long-term gap between CPI and RPI. This is a common approach, and it is used because there are no market instruments that are CPI linked, and therefore there is no way of determining a market expected CPI assumption.
- 2.30 The CPI inflation wedge is unchanged from the 2016 valuation to the 2019 valuation, and the Trustees have assumed that long term CPI will be 1.0% p.a. lower than the market consensus of RPI. This was not an unreasonable assumption for the 2019 valuation. However, since the 2019 valuation the House of Lords Economic Affairs Committee published its report on 'Measuring Inflation', which initiated a consultation published in January 2020 into the future of RPI. On the 25<sup>th</sup> November 2020 the UK Statistics Authority and HM Treasury published their joint response to the consultation on the potential reform of RPI. This confirmed that the methodology for calculating RPI will be aligned with that for CPIH in February 2030. All else being equal, we would expect to see a reduction in the assumed RPI to CPI gap applying for the 2022 valuation.
- 2.31 It does not appear that the method for setting this assumption allows for an inflation risk premium (which would reduce the inflation assumption). The argument for the inflation risk premium is an academic one. It is a theory of the yield curve that investors holding instruments for long periods of time take on inflation risk. To compensate investors for this risk taken on, the yield (the compensation for taking on the risk) is therefore higher. For those using the yield curve to derive an inflation assumption, it is therefore necessary to adjust the yield curve to remove the assumed premium. This is one area that employers may propose is reflected in valuation assumptions. We suggest you discuss with SONI whether an allowance was considered and the approach to take at future valuations.
- 2.32 Varying the inflation assumption would have a significant effect on the liabilities, as shown by the sensitivity analysis in the Scheme Funding Report. For example, a 0.5% reduction in the CPI assumption from 2.65% to 2.15% would reduce the employer contribution rate by 6% and increase the *Technical Provisions funding level* by approximately 7.5%.

- 2.33 The Utility Regulator has noted that the inflation assumption of 2.65% is higher than that included in the Business Plan. This assumption has increased from 2.30% in the previous valuation. The inflation assumption set by the Trustees is market derived at the effective date of the valuation and set independently from the sponsoring employer SONI, although SONI would be consulted on the assumptions used. I suggest the Utility Regulator discuss this with SONI. There may be justifiable reasons why the assumptions vary. For example, the Trustees may have included a margin for *prudence* within the expected long-term inflation assumption, or the Business Plan may have been using a CPI assumption derived at a different date or using a different method.

## Salary increases

- 2.34 The salary increase assumption does not appear unreasonable relative to general industry assumptions. It appears to be set as an addition of 1.25% to the CPI inflation assumption. It is expected that salary inflation may be higher than prices inflation, including allowances for promotion. This is a common approach, and the method is unchanged between the 2016 and 2019 valuations.
- 2.35 According to the sensitivity analysis in the Scheme Funding Report, it is noted that the assumption around salary increases has limited impact on the estimated value of the liabilities or the contribution rate.
- 2.36 In the absence of further information, it is not possible to comment on other factors which may have been relevant in setting the assumption, and discussions that SONI have had with the Trustees around expected salary increases.
- 2.37 The *Technical Provisions* basis is set prudently, and therefore it may be that the Trustees have included a margin for *prudence* within the expected long-term salary increase assumption. The salary increases assumed by the Trustees may therefore be higher than those included within SONI's business plan. This is something that should be discussed with SONI.

## Mortality

- 2.38 Demographic assumptions impact the expected value of benefits to be paid. The most material of which is the mortality assumptions. Longevity is a principal risk for funding *defined benefit pension schemes*, as the ultimate cost of providing benefits depends on the period of time that members receive them in retirement. Such assumptions should reflect the membership of the scheme (in other words, whether the members' industry or geographical location suggests they might live for shorter or longer than average) and should allow for expected future improvements in longevity.
- 2.39 Actuarial assumptions for mortality are broken down into two features:
- **Base table** – this records the probability of death for male and female lives by age in a given calendar year, the base year
  - **Improvement table** – this records the improvements in longevity that are expected in future years by age and by gender. It is common for this assumption to be made up of a short term and a long-term assumption

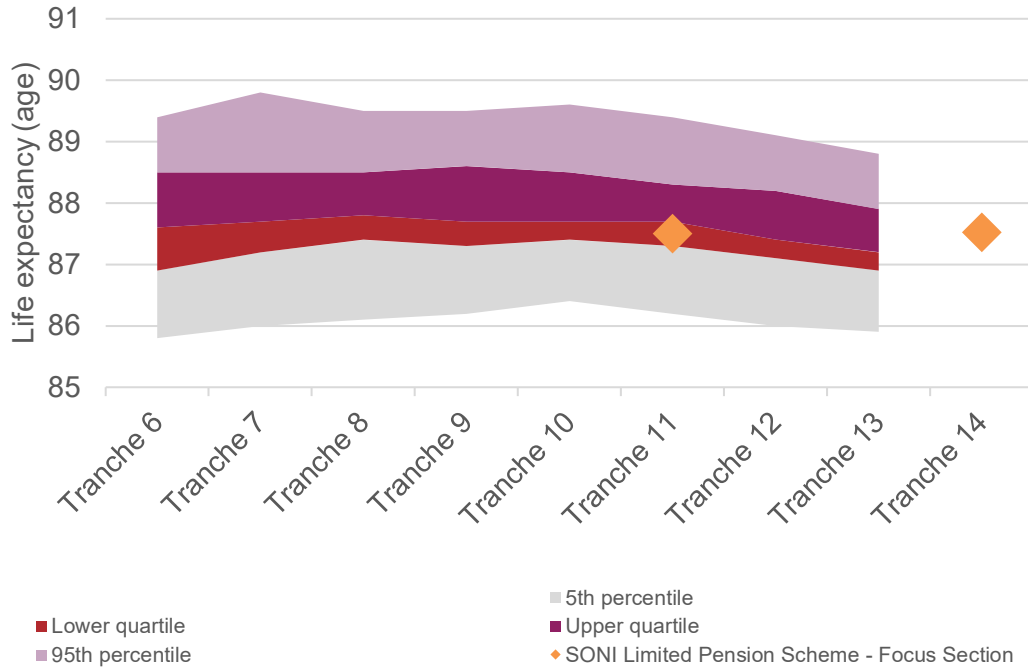
**Table 2.3: Mortality assumptions adopted by the Scheme in the 2019 and 2016 Technical Provisions bases**

| SONI Limited Pension Scheme – Focus section<br>Assumptions at actuarial valuations dated 31<br>March |   |  |
|--|---|--|
|  | 2019  | 2016   |
| Base table   | 95% of S3NA Light Tables  | 100% of S2NA   |
| Improvement tables   | 2018 CMI model with a long-term improvement rate of 1.5% p.a. and an initial improvement of 0.5% p.a. | 2015 CMI model with a long-term improvement rate of 1.25% p.a. |

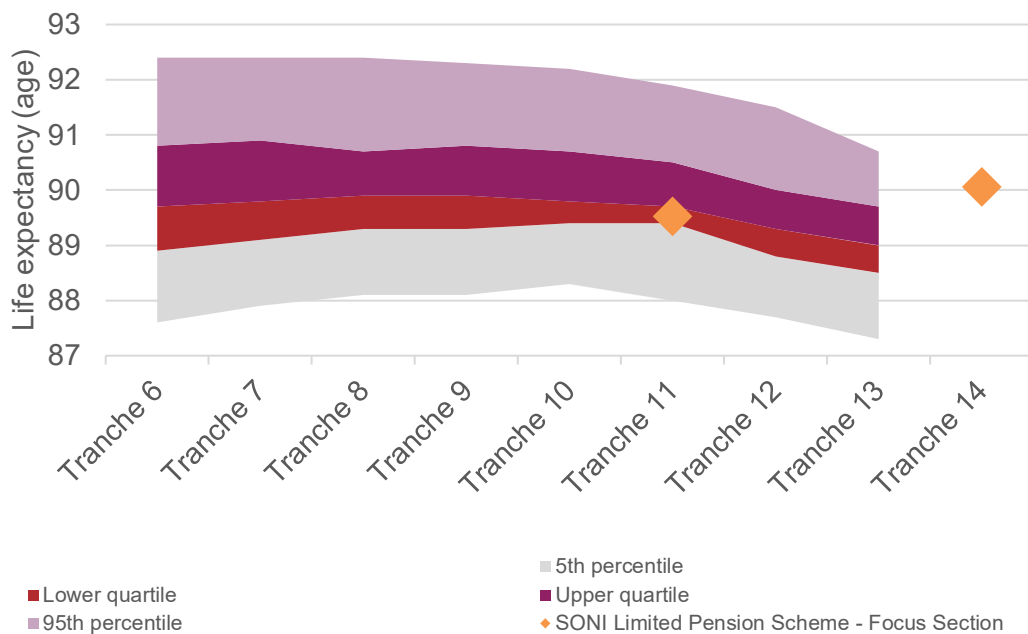
- 2.40 For the 2016 actuarial valuation, the Trustees adopted mortality assumptions in line with those typically used by many *DB pension schemes* at the time. For smaller sized schemes, limited scheme specific data experience is available to analyse and inform setting of assumptions. This means it is more likely that larger schemes will adopt variant assumptions. It also leads to the adoption of common mortality assumptions across the majority of *DB pension schemes*.
- 2.41 For the 2019 actuarial valuation, the Trustees have adopted the most recent series of base tables available. These are produced by the Continuous Mortality Investigation ('CMI') and relate to current mortality rates.
- 2.42 Since the 2016 valuation, the Trustees elected to vary the approach to setting mortality assumptions by:
- using the *light* tables. These tables are appropriate for a membership that is expected to experience lower rates of mortality (and longer life expectancy) than the typical *defined benefit* pensioner population that comprises the Series 3 (S3) dataset
  - decreasing assumed mortality rates by applying a weighting of 95%. This effectively reduces the expected chance of death in a year by 5% for each age
  - updating the long-term future improvement assumption to 1.5% each year. This marks an increase of 0.25% each year from the previous valuation
  - updating the initial rate of future improvement assumption to 0.5% each year. This marks a decrease of 0.75% each year from the previous valuation.
- 2.43 The first three bullet points in the preceding paragraph would serve to increase assumed life expectancies, whilst the fourth would lead to a reduction. Overall, the changes in approach will increase assumed life expectancies and therefore the expected length of time members will receive pensions. This increases the estimated value of the liabilities, all else being equal.
- 2.44 The Trustees will have received advice from the Scheme Actuary in setting assumptions. In the analysis of surplus included within the Scheme Actuary's Scheme Funding Report, the changes to assumptions, which I understand to be principally the change in the mortality assumption, has worsened the Scheme's funding position by £1.6m. The Utility Regulator may wish to discuss the rationale for increasing the longevity assumption with SONI and understand whether alternative approaches were considered.

2.45 The Pensions Regulator has not yet released the information they collect on valuations agreed between September 2018 and September 2019 (Tranche 14), which would allow us to benchmark the assumptions set by the Trustees. In Chart 2.1 and 2.2 I have illustrated the trends seen in the *defined benefit pension scheme* universe since TPR's Tranche 6, which covers the period from September 2010.

**Chart 2.1: range of life expectancies assumed by defined benefit pension schemes for pension for male pensioners aged 65 at the valuation date**



**Chart 2.2: range of life expectancies assumed by defined benefit pension schemes for pension for male pensioners aged 45 at the valuation date**



- 2.46 We note that over the three-year period there was a general reduction in life expectancies assumed by other schemes in the DB universe, this is illustrated from the trend of reduced life expectancies across the percentiles shown in Charts 2.1 and 2.2. If the Trustees followed this trend of assuming a lower life expectancy in the 2019 valuation, then the reported liabilities and employer contribution rate would be lower.

### **Other assumptions**

- 2.47 The assumptions discussed in this section are the main assumptions in the valuation and those specifically mentioned in the work package. We have briefly considered the other assumptions and have not identified any particular issues.

## 3 DB pension contributions

An employer contribution rate of 52% of pensionable pay is consistent with the funding valuation assumptions and Schedule of Contributions in place from 1 July 2020 to 31 March 2026.

- 3.1 For the Trustees, a principal aim of their triennial valuations is to assess the contributions required from the Scheme's sponsor. The assumptions detailed in Section 2 help assess the size of contributions required. These are split into two categories:
- **Future service cost** - this is assessed as the cost of a member accruing an additional year of service, expressed as a proportion of their annual *pensionable pay*. This is the rate that the Trustees would calculate for SONI to pay into the Scheme for each member still actively accruing service on SONI's payroll (the rate includes any employee contributions)
  - **Deficit repair contributions** - the Scheme's past service liability is calculated based on the service accrued up to the date of the valuation. Where this liability (assessed on the Trustees' *Technical Provisions* basis) is higher than the value of the Scheme's assets, they will require contributions to be paid to bridge the shortfall, *deficit repair contributions*. It is common for sponsors of *defined benefit pension schemes* to spread these contributions out over an agreed recovery period. These are discussed further in Section 4.

### Contributions in respect of future accrual

- 3.2 SONI's requested costs are based on an employer contribution rate of 52.0% and a member contribution rate of 6% of pensionable pay. This is consistent with the Schedule of Contributions in place from 1 July 2020 until 31 March 2026.
- 3.3 The Scheme is closed to new members, but open to accrual for current active members. However, as noted in Section 2, my comments on the membership data point to a declining active membership, and therefore the overall cost (in £ terms) of continuously accruing new benefits decreases as the population of active members decreases.
- 3.4 The employer contribution in the previous valuation was 38.4% and previous price control costs were based on this rate.
- 3.5 The main reason for the increase in employer contribution rate is the change in the *discount rate* used to value the cost of new benefits being accrued. The lower *discount rate* has been primarily driven by decreasing gilt yields.
- 3.6 The increase in the assumed rate of CPI has increased the expected nominal value of pension in payment in the future. The change in these two assumptions accounts for most of the increase in the employer contribution rate. The cost of accrual will also be sensitive to the changes made to the mortality assumptions.
- 3.7 An employer contribution rate of 52% of *pensionable pay* is in line with our expectations given our understanding of the benefit structure and assumptions used.
- 3.8 The active membership of the Scheme reduced from 28 to 12 members over the three years between 2016 and 2019. Therefore, the employer contribution rate applies to fewer members, reducing actual costs in relation to future service. As this membership reduces over the next few years the total contributions paid in respect of accrual will also decrease until the active population become in-payment or deferred pensioners.

- 3.9 The costs requested in the Business Plan are consistent with the employer contribution rate and membership profile of the scheme.



## 4 Recovery plan

Given the strength of the *covenant* and the desire to create fairness for different generations of consumer, the recovery plan of 10 years proposed by the Utility Regulator in its Draft Determination does not seem unreasonable and does not appear to be out of line with the recovery plan lengths of other regulated companies.

### Deficit repair contributions and recovery plan

- 4.1 Between the 2016 and 2019 valuations, the deficit increased from £0.7m to £4.4million. The principal reason for the increase was the change in market conditions, i.e. the decrease in the *discount rate* and the increase in the CPI assumptions, which in isolation increased the Scheme's deficit by £7.3m. Amongst other factors, excess investment returns above that assumed at the 2016 valuation acted to reduce the deficit. The net increase in the deficit over the period was £3.7m.
- 4.2 To remedy the deficit, the Trustees of the Scheme and SONI agreed an updated recovery plan, requiring *deficit repair contributions* of £860k per year from 1 July 2020 to 31 March 2026. This led to an increase of approximately £800k per year relative to the previous *deficit repair contributions*.
- 4.3 I understand that the Utility Regulator would want to encourage SONI to seek cost efficiencies and ensure the consumer interest is appropriately represented when agreeing pension costs. For SONI, I expect a strong covenant assessment would provide comfort to the Trustees and allow a more flexible funding approach to be adopted relative to typical DB arrangement in the private sector, to the extent it's appropriate.
- 4.4 In view of a potentially significant increase in contribution amounts, a typical company might reasonably look to explore ways they could best manage any increase. For instance, the valuation process may involve suitably robust discussions relating to some, or all, of the following:
- The overall level of prudence in the assumptions adopted (see section 2 for further discussion)
  - Whether the recovery plan should reflect *outperformance* above the prudent *discount rate* to be allowed for in calculating the return on the scheme's assets
  - The option of longer recovery plan periods, such that the cost is spread further, and such that favourable asset returns can emerge and negate the need for the continuation of the recovery plan at future valuations
  - Other methods, such as a charge over the sponsoring employer's assets
- 4.5 In relation to the length of the Recovery Period, the proposal from the Utility Regulator in the Draft Determination is to spread the recovery plan over 10 years. SONI have objected to the timescale in their response to the Draft Determination, supported by the response from Northern Ireland Electricity Networks (NIE). They both refer to the TPR guidance around recovery plans. SONI argue that:
- 'It would be highly likely that The Pensions Regulator (TPR) would be concerned by a ten year recovery plan in these circumstances. TPR's data shows that only around 20% of schemes have a recovery plan length of ten years or longer and that these are mostly from covenants described as 'weak'.'*
- 4.6 It is important to note that the Scheme arrangements are not typical as it is funded by a regulated company. Two relevant factors are:

- TPR's concern around the length of *recovery periods* relates to funding security, and the extent to which the employer's ability to support the scheme may reduce over time. As SONI is able to pass through pension costs to consumers, this is arguably less of a concern relative to a typical scheme. It is therefore better placed than many schemes to adopt a non-standard approach, where that is justifiable based on wider objectives. I also note that more comparable arrangements, e.g. some of those regulated by Ofgem and Ofwat, have adopted 10-year recovery plans.
  - We understand that the Utility Regulator wishes to encourage SONI to consider the consumer interest. This suggests that the timing of contributions may be a more relevant consideration for the Scheme than for a typical scheme. For a typical scheme, if an employer contributes earlier on due to a shorter *recovery period*, they will pay less in the future. The timing doesn't necessarily affect how much they pay. However, the timing of the payments does make a difference as to who pays in relation to the Scheme. It is the consumers in each year who pay the costs. The interests of the consumers, both short term and long term, need to be taken into account when determining an appropriate recovery plan for the Scheme.
- 4.7 Further, we note that TPR guidance acknowledges that recovery plans should be based on scheme specific circumstances.
- 'Although affordability of deficit repair contributions is a factor to consider, this does not mean that an employer should be expected to pay deficit repair contributions at a particular level simply because it would be able to afford to contribute at that level or because it has been paying them at that level. Instead, trustees can use the flexibilities available in recovery plans to ensure that they are appropriately tailored to both scheme and employer circumstances.'*<sup>2</sup>
- 4.8 The Schedule of Contributions cannot be revised upon the completion of the valuation as at 31 March 2022, which will be required to be finalised no later than 30 June 2023. If the Utility Regulator does not allow for the full *deficit repair contributions* up until this point, then SONI will still have to pay them based on the current Schedule of Contributions up until a new Schedule of Contributions comes into effect.
- 4.9 We have not been provided with information which describes the negotiation process at the 2019 valuation, and evidences concessions on the valuation approach obtained by SONI. If the Utility Regulator has concerns around the 2019 valuation outcome, one potential option could be to allow for the requested costs up to 30 June 2023, but then reduce the allowance to ensure that suitably robust negotiations with the Trustees take place in future valuations in respect of:
- the assumptions used to calculate the Scheme's liabilities, and therefore the size of any deficit; and
  - the length of the recovery plan and the level of the *deficit repair contributions* required to bridge any deficit.
- 4.10 Given the strength of the *covenant* and an objective to ensure fairness for different generations of consumer, a recovery plan of 10 years proposed by the Utility Regulator in its Draft Determination does not seem unreasonable.

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<sup>2</sup> The Pensions Regulator publish the [funding defined benefits code of practice](#) on their website, the current code of practice has been in force for schemes based in Northern Ireland since July 2015.

## 5 DC pension contributions

- 5.1 We have performed a very high level review on the employer contribution rate for the *defined contribution scheme*. SONI appointed actuarial consultancy firm LCP to benchmark the DC scheme. This was shared with me in Appendix W to the Business Plan.
- 5.2 The average employer contribution rate of 7% is slightly below with what might be considered typical across other employers. Data collected on the FTSE100 companies suggest that the average employers on the index are paying 11.2% of *pensionable pay* (where some or all of employees' contributions are matched)<sup>3</sup>.
- 5.3 I have not considered the request *defined contribution* pension costs beyond this.

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<sup>3</sup> 15th edition of the Willis Towers Watson's [FTSE 350 DC Pension Scheme Survey](#)

## 6 Summary

- 6.1 Overall, we have no major concerns with the approach used to determine SONI's pension costs. The focus of my review has been on the costs requested in respect of the *defined benefit* section, the Focus Section.
- 6.2 The assumptions used as a part of the most recent actuarial valuation were not unreasonable when benchmarking with publicly available information. In considering the Scheme's assumptions compared to the assumptions adopted at the previous actuarial valuation I identified that the *Technical Provisions* basis, in particular the mortality assumption had strengthened when compared to other schemes in the DB universe. I suggest that the Utility Regulator engages with SONI to understand the rationale behind the strengthened basis and the process for setting other assumptions and determining the overall level of prudence.
- 6.3 The 2019 actuarial valuation identified a deficit within the scheme when assessed on the Trustees' *Technical Provisions* basis. The recovery plan agreed by the Trustees and SONI reflects a contribution schedule that bridges this deficit over seven years. Given the strength of the *covenant* and the desire to create fairness for different generations of consumer, the recovery plan of 10 years proposed by the Utility Regulator in its Draft Determination does not seem unreasonable and does not appear to be out of line with the recovery plan lengths of other regulated companies, as detailed in Section 4.
- 6.4 Should it be beneficial to the Utility Regulator, the Government Actuary's Department would be able to assist the Utility Regulator in any engagement they may have with SONI as a part of the consultation process following the next actuarial valuation, due as at 31 March 2022.

# Appendix A: Scope of work

A high-level summary of the requirements for this review is set out below, based on the Scope of Work, as described in the Pension Briefing – for GAD. The Utility Regulator engaged GAD to provide opinion on:

- 1) The reasonableness of assumptions used in the actuarial report. For example:
  - a) Salary forecasts of 3.9% p.a. which is higher than SONI own forecasts in the business plan.
  - b) Inflation forecasts higher than business plan and OBR or Bank of England.
  - c) Amended *discount rate* which appears to be having a material impact on the deficit valuation (based on sensitivity analysis).
- 2) The length of the recovery plan to bridge the deficit identified at the 2019 actuarial valuation
- 3) The level of contributions in respect of the Focus Section (the DB scheme)
- 4) The level of contributions in respect of the Options Section (the DC scheme)
- 5) Any other pertinent issues arising

# Appendix B: Information used for the review

B.1 The information listed in this appendix has been used as data under Technical Actuarial Standards 100. If there is any concern about the validity of this data then this will impact the information provided within this report.

## ***Information regarding the SONI business plan***

- 1 Appendix W of SONI's business plan for the Price Control period 2020-2025

## ***Information regarding the SONI Pension Scheme – Focus Section***

- 2 The Scheme Actuary's actuarial valuation report as at 31 March 2019
- 3 Statement of Funding Principles, dated June 2020;
- 4 Schedule of Contributions, dated June 2020;
- 5 Recovery plan, dated June 2020;

## ***Publicly available reference information***

- 6 [‘Scheme funding analysis 2020’](#), The Pensions Regulator, 2020
- 7 [‘Scheme funding analysis 2020: Annex’](#), The Pensions Regulator, 2020
- 8 [‘FTSE 350 DC Pension Survey 2020’](#), Willis Towers Watson, 2020

## ***Information regarding approaches by other regulators***

- 9 Ofgem - <https://www.ofgem.gov.uk/publications-and-updates/revised-pension-allowance-values-and-completion-2017-reasonableness-review>
- 10 Ofgem's consultation - <https://www.ofgem.gov.uk/publications-and-updates/decision-ofgems-policy-funding-pension-scheme-established-deficits>
- 11 Utility Regulator, Northern Ireland - <https://www.uregni.gov.uk/consultations/nie-networks-transmission-and-distribution-price-control-rp6-draft-determination>
- 12 Ofwat's treatment of deficit costs - [https://www.ofwat.gov.uk/wp-content/uploads/2015/11/prs\\_in1317pr14pension.pdf](https://www.ofwat.gov.uk/wp-content/uploads/2015/11/prs_in1317pr14pension.pdf)
- 13 Ofcom's treatment of deficit cost - <https://www.ofcom.org.uk/about-ofcom/latest/media/media-releases/2010/ofcom-statement-on-bt-pensions>

- 14 Ofwat review of DB pension costs - <https://www.ofwat.gov.uk/wp-content/uploads/2019/01/Ofwat-Targeted-Review-of-DB-Pensions-v5.0.pdf>

# Appendix C: Background to scheme funding and contributions

- C.1 Most UK private sector *defined benefit pension schemes* are subject to the scheme funding requirements of Part 3 of the Pensions Act 2004<sup>4</sup>. Pension schemes must have a full actuarial valuation carried out at least every three years. The purposes of such an actuarial valuation are:
- to check whether the pension scheme's assets are sufficient to cover its accrued liabilities (referred to as its *Technical Provisions* in the Pensions Act 2004); and
  - to determine the contribution rate payable by the employer going forward<sup>5</sup>
- C.2 Employers' contribution rates usually comprise two elements:
- the employer's share of the *Standard Contribution Rate (SCR)*: this is the contribution rate required to meet the expected cost of pension benefits accruing to active members in respect of service in the relevant period (often the next three years), after deducting the members' contribution rate. The higher the members' contribution rate, the lower the employer's share of the SCR
  - adjustments for past service surplus or deficit: where an actuarial valuation shows that the scheme's assets are less than required to cover the expected cost of members' benefits which have accrued up to the valuation date, additional *deficit repair contributions* are required from the employer to make up the shortfall. Conversely, where the scheme's assets are more than sufficient, the employer's contributions may be reduced, depending on the scheme's rules
- C.3 The *Standard Contribution Rate (SCR)* therefore depends on the following three main factors:
- the level of benefits being provided: the more generous the benefits, the higher the SCR. Also, the lower the members' contribution rate (as specified in the scheme rules), the higher the employer's share of the SCR
  - the actuarial assumptions used: the more optimistic the assumptions, the lower the expected cost now of providing the *defined benefits*<sup>6</sup>

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<sup>4</sup> For further information, please refer to the Pensions Regulator's regulatory code of practice 03, '[Funding defined benefits](#)'.

<sup>5</sup> The pension scheme's rules usually determine the rate of members' contributions. In a *defined benefit scheme*, the employer's contributions are usually variable, and depend on the scheme's experience. In other words, given a fixed rate of member contributions, the employer must ensure the scheme has sufficient assets to pay the specified benefits.

<sup>6</sup> Other things being equal, the more optimistic the assumptions used to calculate the SCR, the greater the risk of actual future experience being worse than the assumptions used and hence of a deficit emerging in the pension scheme in the future.



- the membership profile of the pension scheme: the expected cost of providing a pension depends on the age of the members. SCRs are expected to increase as a member ages

C.4 The amount of any *deficit repair contributions* depends on the following factors:

- the scheme's funding position: this depends on the scheme's actual past experience, and also on the assumptions used for the valuation with regard to the scheme's future experience. Past experience affects both the scheme's liabilities (its obligations to pay members' pensions) and the scheme's assets (the fund which has built up from past contributions and the actual investment performance achieved to date)
- the *recovery period*: in other words, the period over which any shortfall must be met by the employer through additional contributions. For any given deficit, the annual *deficit repair contribution* will be lower the longer the period over which the deficit is to be repaid

C.5 Some key points on the scheme funding process are<sup>7</sup>:

- the assumptions to be adopted for funding purposes are not prescribed in legislation or guidance
- assumptions must be set by the pension scheme trustees, after taking actuarial advice, and they generally must be agreed by the sponsoring employer. Assumptions must reflect the scheme's and the sponsoring employer's specific circumstances, in particular the trustees' view of the sponsoring *employer's covenant*
- when calculating past service liabilities, assumptions must be prudent. The degree of *prudence* is not defined and will depend on the scheme's circumstances<sup>8</sup>
- the *recovery period* must also be agreed with the sponsoring employer. The trustees should aim to eliminate any funding shortfall 'as quickly as the employer can reasonably afford'

C.6 A number of assumptions affect the results of an ongoing funding valuation. These include:

- financial assumptions: including the *discount rate* (or equivalently, the assumed rate of return on the scheme's assets), pay increases, price inflation and pension increases
- demographic assumptions: including assumed longevity (allowing for expected future longevity improvements), assumed rates of withdrawal from active service (and whether this is through voluntary withdrawal, ill-health, death or retirement), and the proportion of members in respect of whom dependants' benefits will be paid

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<sup>7</sup> This list is not exhaustive.

<sup>8</sup> Please refer to Appendix D for a definition of '*prudence*' in this context.

- C.7 Actuarial valuations may be carried out for other purposes, for example to determine pension costs and liabilities for the sponsoring employer's financial statements under FRS102 or IAS 19, or to assess the extent to which the pension scheme's assets would be sufficient to *buy-out* the accrued liabilities with an insurer if the scheme were to wind up (referred to as a *solvency* or *buy-out* valuation). Different types of actuarial valuations use different methods and assumptions, as appropriate for the purposes of the valuation. This report considers scheme funding valuations of the SONI Pension Scheme – Focus Section, which are used to determine SONI's cash contributions to the scheme.
- C.8 The SONI Pension Scheme – Focus Section uses an actuarial method called the *projected unit method*. This is a standard method which is commonly used for funding valuations
- C.9 The expected cost of pension benefits accruing to active members, expressed as a percentage of payroll, usually increases with age (although this depends on the actuarial assumptions used to calculate the expected cost). Where a pension scheme is closed to new entrants, this would be expected to result in an increase in the average age of active members over time, and hence an increase in the expected cost of benefits accruing to active members, expressed as a percentage of payroll.
- C.10 If the employer *standard contribution rate* (SCR) is calculated to be sufficient to meet the expected cost of benefits accruing to active members in the few (typically three) years following the valuation date, then the employer SCR (expressed as a percentage of payroll) would be expected to increase in the future for a closed scheme. Such an approach is called the *projected unit method*.
- C.11 Alternatively, the employer SCR could be calculated to be sufficient to meet the average expected cost of benefits accruing to active members for the remainder of their expected working lifetimes. This can result in a higher initial SCR, but with no further increases being expected in the future as the average age of active members increases. This is called the attained age method.
- C.12 Both the *projected unit method* and the attained age method are commonly used for funding valuations of closed pension schemes. The *projected unit method* would be expected to result in lower initial employer contributions than if the attained age method were used. The *projected unit method* is expected to lead to future increases in the employer SCR as the average age of active members' increases, but this should be considered in light of the corresponding expected reduction in *pensionable pay*.
- C.13 A *defined benefit pension scheme*'s ultimate cost depends on three factors:
- the scheme's benefits (including to what extent members pay for their own benefits);
  - the scheme's investment returns; and
  - members' experience (for example employees' pay rises, and pensioners' longevity)
- C.14 However, an employer's contributions to a pension scheme also depend on the method and assumptions used to calculate the contribution rates (in other words, the assumptions made regarding future investment returns and future experience).

- C.15 The use of more prudent assumptions causes a higher initial contribution rate but would be more likely to result in a future valuation surplus and hence lower future contribution rates (assuming that surpluses are used to reduce contribution rates rather than to improve members' benefits). Therefore, differences in contribution rates which are caused by different methods and assumptions might, in broad terms, be expected to even themselves out over time (assuming the scheme is ongoing) but raise issues of equity between customers at different times if they are reflected in price limits.

## Appendix D: Glossary

**Best estimate basis** – An actuarial basis where the future assumptions do not contain any *prudence*. There is felt to be an equal chance that the future experience will either be better or worse than predicted.

**Buy-out** – A financial transaction whereby a *DB pension scheme* pays a fixed amount to an insurance company in order for the insurance company to take on the obligation of meeting future benefit payments. This relieves the sponsoring employer of any liability associated with these benefit payments.

**Covenant** – see *employer covenant*.

**Deficit repair contributions** – Where an actuarial funding valuation shows that the scheme's assets are less than required to cover the expected cost of members' benefits which have accrued up to the valuation date (so the scheme is in 'deficit'), additional *deficit repair contributions* will be required from the employer to make up the shortfall. *Deficit repair contributions* are payable for a fixed term, known as the **recovery period**, after which the deficit would be expected to have been eliminated.

**Defined benefit pension scheme (DB scheme)** – A pension scheme in which an employee's pension is determined under the scheme rules. In a **final salary scheme**, the pension is based on the number of years of service and on the employee's *pensionable pay* at, or shortly before, the employee leaves active service. In a **career average scheme**, the pension reflects the employee's *average pensionable pay* throughout his or her active service. The cost of providing the defined benefits will depend on the scheme's experience. In most schemes, the employer has to provide additional funds to the scheme to meet the cost of providing the defined benefits, if experience is worse than expected. In other words, the risk of adverse experience usually rests with the sponsoring employer. Conversely, the employer usually benefits from reduced contributions if experience is favourable.

**Defined contribution pension scheme (DC scheme)** – A pension scheme in which the benefits paid to an employee depend on the level of contributions to the scheme, the investment return earned on the contributions, annuity rates at retirement and the provider's expense charges. There is no guaranteed level of benefits. In other words, the risk of adverse experience rests with the employee (who also benefits from any favourable experience).

**Discount rate** – The rate at which a *defined benefit pension scheme's* expected future benefit expenditure is discounted for the purpose of an actuarial valuation. That is, to convert a stream of expected future benefit cash flows to a current capitalised value. It can be thought of as corresponding to an assumed rate of return on assets. A higher *discount rate* (or assumed rate of return) means that the scheme's assets are expected to generate higher investment returns, and therefore the scheme needs to hold less assets now in order to meet its liabilities, its *funding level* is higher, and its *standard contribution rate* is lower.

**Employer covenant** – The degree to which the employer is willing and able to meet the funding requirements of the scheme.

**Funding level** – The ratio of the value of the pension scheme's assets to the assessed value of its accrued liabilities. A *funding level* of 100% means that the pension scheme is deemed to be 'fully funded'; in other words, its assets are expected to be sufficient to meet the expected cost of the benefits accrued to the valuation date, on the basis of the assumptions adopted for the valuation. A 'fully-funded' scheme is not guaranteed to be able to meet its future liabilities; it is only an expectation based on the assumptions adopted.

**Maturity** – Pension schemes accrue a benefit obligation as active members accumulate service, and this benefit obligation is paid once members retire. *Maturity* is the relative level of accrual against the pensions being paid. For schemes with large pensioner populations, with high outgo in pension payroll and little to no active members accruing service they would be said to be very mature. For schemes with large proportion of members still accruing benefits they would be immature. Sometimes *maturity* can be framed in terms of the net cashflow of a pension scheme, ratioing the cashflow paid to the scheme in respect of contributions from the sponsors and members for accruing benefits, with the cashflow paid out of the scheme in respect of pensions benefits.

**Outperformance** – Assumed production of better returns than the risk-free rate.

**Pensionable pay** – The amount of an employee's salary which is used to calculate the amount of contributions to a pension scheme, and the benefits provided by a *defined benefit pension scheme*. *Pensionable pay* can exclude fluctuating elements of pay, such as overtime and bonuses.

**Projected unit method** – An actuarial method used in valuations where an allowance is made for the future growth of the overall *pensionable pay* between the valuation date and retirement. The cost of the benefits accruing is considered over a control period, typically three years.

**Prudence (in the context of scheme funding assumptions)** – A prudent (or cautious) assumption increases the value of the liabilities compared to a best-estimate assumption.

**Recovery period** – See *deficit repair contributions*.

**Risk appetite** – A quantification of the level of risk that an organisation is willing to accept in pursuit of their targets before either risk mitigation or transfer is required, or the targets are altered such that the level of risk reduces to the level that is able to be retained.

**Solvency** – See *buy-out*.

**Standard contribution rate (SCR)** – The level of contributions required to meet the expected cost of the additional pension to which active members will be entitled in respect of service in the relevant period. The *SCR* is assessed at full actuarial funding valuations.

**Technical provisions** – The present value of a pension scheme's past service liabilities for scheme funding purposes.