



Government
Actuary's
Department

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Dear Renee

Subject: Actuarial Valuation data quality

Introduction

This letter is addressed to you in your capacity as scheme manager to the Judicial Pension Schemes (JPS) and provides an overview of how a scheme's membership and movements data may impact valuation outcomes, both the current 2020 valuation and future actuarial valuations.

Background

Actuarial valuations of public service pension schemes are carried out primarily to:

- 1) Calculate the required employer contribution rate
- 2) Assess the cost of the scheme for comparison against the cost cap

GAD rely on the membership and movements data supplied to us by our clients to carry out the valuation calculations and reassess the appropriateness of the scheme set assumptions. The reliability of our valuation results and reported liabilities is critically dependent on the quality of the data we use to carry out the calculations. In other words, the more confidence we have in the accuracy of the data used for our calculations, the more confidence we have in the accuracy of (1) the employer contribution rate result and (2) the cost cap mechanism result.

GAD also produce annual accounting figures using valuation data, with more frequent data provided by some schemes for this purpose. Again, the material correctness of liability figures quoted in accounts is dependent on the quality of the data we use to carry out these calculations.

In addition, GAD use the valuation assumptions to calculate actuarial factors. The quality of the experience data used to inform the scheme set assumptions will therefore influence the appropriateness of the factors being implemented.

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Assessing Data Quality

For every actuarial valuation GAD carries out a significant review of the data supplied to us by our clients to enable us to form a view on how accurately it mirrors the scheme membership and thus will impact on the reliability of the results based on that data. This review may involve dialogue with the scheme administrators and additional data submissions. Broadly speaking, we expect at the end of this data review process to reach one of the following conclusions:

- a) GAD is able to use the data provided, without adjustments and is confident the valuation results will be correct within the margins of materiality agreed with the client.
- b) GAD is able to use the data provided, subject to certain adjustments being made to the data (and/or supplementary data being provided) and is confident the valuation results will be correct within the margins of materiality agreed with the client.
- c) Concerns remain about how closely the data provided reflects the scheme membership and GAD is unable to report that the valuation results fall within an acceptable margin of materiality, as agreed with the client.

For most of the main public service pension schemes, the outcome of the review of the data provided for valuation purposes, falls into category (b) above and this is indeed the case for JPS for the 2020 valuation. However, even within this category, there is a considerable range in the number and significance of the adjustments to the data that are deemed necessary.

For the 2020 valuation where we have considered it necessary to apply adjustments to the data, GAD has formed a view of the potential uncertainty that this introduces into the valuation results and brought this to our MoJ's attention. Full details and commentary on the adjustments are set out in our Membership data report dated 7 February 2024.

For future valuations where we consider it necessary to apply adjustments to the data, GAD will form a view of the potential uncertainty this introduces into the valuation results and will bring this to your attention so that we may mutually agree whether this falls within the margins of materiality.

Implications of Data Uncertainty

Employer contribution rate

The SCAPE methodology lends itself to making corrections in the employer contribution rate at subsequent valuations for previously unidentified data errors. The spreading of past service surpluses or deficits over 15 years does also tend to mean any data inaccuracies have relatively small impact, with typically far larger changes in contribution rates emerging from valuation to valuation, when the discount rate is changed.

Cost cap comparison

As this is the first valuation for the JPS 2022 scheme, a revised employer cost cap has been calculated, however, the cost control mechanism is not tested. At subsequent valuations cost of this scheme will be tested against the revised employer cost cap. Therefore, it is worth noting that inevitably some of the inaccuracies or omissions in the data received for the 2020 valuation will have been incorporated into the revised calculation of the employer cost cap. Although, ultimately we determined that we were able to use the data provided for this purpose subject to various adjustments being made which again are details in our Membership data report dated 7 February 2024.

Whether inaccuracies or omissions in the data received are material to the cost cap comparison at future valuations will depend on where the cost cap result is positioned within the corridor at each valuation (which won't be known until later in the valuation process). If the cost falls close to the corridor boundary, there will be little scope to accommodate inaccuracies in the data whilst remaining confident the result is materially correct. If we are not confident that data uncertainty will not lead to a change in whether or not a breach of the cost cap corridor occurs, **it is likely we would have to recommend that the cost cap result should not be implemented**. If this situation did arise, we expect to recommend that corrective action is taken to address the data uncertainty immediately, to allow a further reassessment of the cost cap mechanism based on revised data to take place.

The viable operation of the cost cap mechanism in the long term is critically dependent on data being of a suitable quality to support the level of accuracy which may be required at each valuation. For this reason, any scheme which is facing considerable levels of adjustment to allow for data issues, should give priority to improving the quality of the data for future valuations. **We suggest that work commences on remedying this for the 2024 valuation as soon as possible**. Whether this requires improvement in the underlying data held on administrator systems or the functionality of the extraction process may need to be explored as an initial step. We understand that there are already ongoing discussions between MoJ and XPS regarding data improvements and preparations for the 2024 data extract.

Accounting

When preparing figures for accounts, we agree with clients and auditors the level of materiality to which calculations are subject. If it is not possible for us to produce the results within this level of accuracy, we must report that fact which can result in qualification of the accounts. Typically, this will result in schemes (and administrators) having to commit to a program of work to rectify the position for future exercises, with ongoing audit scrutiny.

Actuarial Factors

Factors are calculated using the assumptions adopted for a scheme's most recent valuation. To the extent that a scheme's experience data (which informs the assumptions) is deficient, it may lead to inappropriate factors being implemented, which in turn, impacts benefits being paid to members.

Communicating Data Uncertainty

GAD has provided a summary of the key adjustments made as well as the remaining level of data uncertainty in our Membership data report dated 7 February 2024. Overall, based on our analysis we are comfortable that the checks and adjustments that have been made are reasonable and that the data is appropriate for the purpose of the 2020 valuation.

We will also continue to support ongoing discussion regarding data quality between MoJ and XPS going forward.

Yours sincerely

Ken Starr
Actuary