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29 August 2023

Dear Nick,

Subject: Public Service Pensions (Valuations and Employer Cost Cap) Directions 2023

1. Thank you for your letter of 24 August 2023, asking for my professional opinion on the draft Public Service Pensions (Valuations and Employer Cost Cap) Directions 2023 (the "2023 Directions"). In particular, you have asked me to set out my views on the extent to which the 2023 Directions meet the government objectives set out in your letter and the extent to which they are technically complete and coherent.

Executive summary

2. This letter exchange follows a period of significant change to the landscape of the public service pension schemes – the reforms to the cost control mechanism, the implementation of the remedy to the McCloud and Sargeant litigation and a new scheme for the Judiciary. This has necessitated such substantial changes to the Directions that they have been revoked and replaced by new ones. The structure of the new Directions, however, remains similar and there are large areas of commonality with previous versions of the Directions.

3. In my letter I comment on the implementation of the cost control mechanism reforms, before considering the changes made to the Directions, assessing the 2023 Directions against the Government's objectives and including some initial high-level results of the 2020 valuations.

4. My overall opinion on the draft 2023 Directions is that they achieve the eight primary purposes that you have set out, that they will deliver results for the 2020 valuations which largely meet the stated objectives, with some better met than others, and that they are, in the round, technically complete and coherent.

Background and context

5. Actuarial valuations of the public service pension schemes governed by the Public Service Pensions Act 2013, with an effective date of 31 March 2020, are currently being undertaken (the “2020 valuations”). The proposed 2023 Directions, attached to your letter, will set out the framework for these valuations. The previous set of Directions will be revoked and replaced.

6. The 2020 valuations are the third set of valuations undertaken under these, or previous versions of, the Directions, with the majority of schemes previously carrying out valuations with effective dates of 31 March 2012 and 31 March 2016. The 2020 valuations are the first valuations carried out since the reforms to the cost control mechanism. These reforms are:

   - A reformed-scheme-only cost control mechanism which assesses just the costs relating to reformed schemes. Prior to the cost control mechanism reforms, legacy scheme costs associated with active members were also captured in the mechanism.

     (A “reformed scheme” in this context is one which was established under the Public Service Pensions Act 2013. Whereas, a “legacy scheme” is one which was established prior to this Act.)[1]

   - Increasing the margin by which scheme costs need to vary from the employer cost caps in order for benefit changes to be required (the “cost corridor”), from 2% to 3% of pensionable pay. This change is implemented via HM Treasury regulations and not via these Directions.

   - An economic check, whereby benefit changes will result from the cost control mechanism only if the costs would still be outside of the same margin had the impact of a change in the long-term economic assumptions been included. Prior to the reforms, any change in these assumptions was excluded from the mechanism.

7. As part of the 2020 valuations process, therefore:

   - Scheme costs as measured by the cost control mechanism will be compared to the employer cost caps in a potentially 2-stage process.

   - First, scheme costs will be measured excluding the impact of a change in the long-term economic assumptions (the “core mechanism”).

   - If, for a particular scheme, costs in the core mechanism are outside a 3% margin above or below the employer cost cap, then the scheme costs will be re-measured but including the impact of a change in the long-term economic assumptions (the “economic check”)[2].

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[1] The reformed schemes have a career average (CARE) design, which means the benefits awarded to members are determined with reference to their average salary over their career. By contrast, the legacy schemes typically were of a final salary design, which means that the benefits awarded to members are determined with reference to their salary towards the end of their career. The reformed schemes also generally have higher Normal Pension Ages (NPA), which is the age at which benefits can be received unreduced.

[2] As set out later in this letter, in practice certain elements of the economic check calculations are required to be carried out regardless of whether the core mechanism breaches the 3% margin or not

- If under the economic check, costs are also outside of the 3% margin in the same direction as the core mechanism, the scheme's provisions will be amended to bring the costs back to the level of the employer cost cap. (Exactly how this works is set out in the "Assessment against objectives" section of this letter).

- The resulting employer contribution rates to be paid from 1 April 2024 to 31 March 2027 will be determined after allowing for the impact of any scheme amendments made as a result of the cost control mechanism.

- There are also scheme specific outcomes for the Judiciary who have a new reformed scheme as of April 2022 and hence require an employer cost cap to be calculated. The Civil Service (Other Crown Servants) Pension Scheme also requires an employer cost cap to be retrospectively calculated at their previous valuation date.

Cost control mechanism reforms

8. I note that there is more than one way to implement a reformed-scheme-only cost control mechanism, and below I set out two elements of the chosen design which are material to the approach set out in the 2023 Directions.

Employer cost caps

9. As set out in the government's response to the 2021 consultation[3] on these reforms, the existing employer cost caps, typically set at the 2012 valuations, will be retained. This has various implications which are discussed below and can be seen in the initial 2020 valuation results later on in this letter.

10. Although this is the first valuation using the reformed cost control mechanism, changes in cost from the point the reformed schemes were originally introduced and that were recognised at the 2016 valuations are captured and still present. The likelihood of the lower 3% margin being breached in the core mechanism is thus greater than if the cost control mechanism were reset and schemes started operating under the revised mechanism in the middle of the new, wider cost corridor. Indeed, this feature has contributed to core mechanism breaches in the initial 2020 valuation results.

11. Furthermore, the employer cost caps were assessed using a discount rate of CPI+3% a year. The discount rate for the 2020 valuation economic check is CPI+1.7%, which significantly increases the assessed costs within the economic check relative to the core mechanism.

12. The combination of the above two effects means the mechanism is in somewhat of a stalemate with the weakening of the GDP outlook (which feeds into the discount rate) offsetting the downwards cost pressures caused by a reduction in projected future life expectancy and other factors.

[3] See paragraph 3.36 of https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1022938/CCM_RESPONSE.pdf

13. In line with the policy and design intentions, for there to be any changes in schemes' provisions triggered by the cost control mechanism in the future then large movements in assumptions would need to occur, for example

- GDP growth expectations returning to near CPI+3% a year which could then lead to benefit improvements.

- GDP growth expectations increasing to somewhere beyond the 2016 valuation SCAPE discount rate[4] of CPI+2.4% a year, alongside further reduction in costs due to other assumptions, for example a continued downturn in projected future life expectancy. This could also lead to benefit improvements.

- Significant non-economic increases in costs emerging, such as projected future life expectancies returning to, and going beyond, those assumed at the 2012 valuations. This may need to be in the region of an expected additional 5 years of life with no associated change to State Pension Age or any other demographic factors. These circumstances could then lead to benefit reductions.

14. If GDP expectations do return to the region of CPI+3% then the potential breaches due to existing cost pressures at the time of the reforms to the cost control mechanism will essentially have been stored up until a later date when the economic performance of the country was judged to be able to support any resulting benefit improvements. This is an inherent feature of the economic check, but it is exacerbated due to retaining the existing employer cost caps.

McCloud and Sargeant remedy

15. When the reformed schemes were introduced those members closest to retirement were allowed to remain in their legacy schemes. This was known as transitional protection. In its McCloud and Sargeant judgments in 2018, the Court of Appeal found transitional protection to be unlawful discrimination. As a result, the Government is in the process of implementing a remedy whereby in-scope members can access either reformed scheme or legacy scheme benefits with respect to the period of the discrimination.

16. I note that a recently published policy statement[5] sets out the details of how members in scope of the remedy for the McCloud and Sargeant litigation will be treated in a reformed-scheme-only cost control mechanism.

17. The policy statement sets out that accrued service subject to the remedy will be excluded from the cost control mechanism in its entirety for unfunded schemes. For local government workers, who have a somewhat different remedy[6], the underpin will be excluded but otherwise the accrued service over the relevant period will be included.

[4] SCAPE stands for Superannuation Contributions Adjusted for Past Experience, and is the methodology used to determine the discount rate used to set contributions rates for the unfunded public service pension schemes through valuations

[5] https://www.gov.uk/government/publications/public-service-pensions-cost-control-mechanism-and-the-reformed-scheme-only-design

[6] In the Local Government Pension Schemes (LGPS) the remedy provides an underpin which automatically assigns members the pension they would have received in their legacy pension scheme if it is higher than that in their reformed scheme, subject to various rules and conditions.

18. The exclusion of pensionable service subject to remedy in its entirety for the unfunded schemes will ensure that the design of the legacy schemes does not have undue influence over the cost control mechanism outcomes. It should be noted, however, that some members in scope of the remedy in the unfunded schemes will ultimately end up receiving reformed scheme style benefits for that period. The number of such members will be influenced by the level, and therefore cost, of their alternative legacy scheme benefits. As a result of this approach, some benefits which are reformed scheme in nature are therefore not being controlled by the mechanism and the risk associated with them sits solely with government.

19. In summary, the treatment of the remedy is consistent with a reformed-scheme-only mechanism, noting that there is more than one way to implement a reformed-scheme-only mechanism. For the avoidance of doubt, the Directions ensure that the impact of the remedy will be included in the calculation of the employer contribution rate consistently with all other pension scheme liabilities.

Changes to the Directions

20. This letter exchange follows a period of significant change to the landscape of the public service pension schemes. In addition to the reforms to the cost control mechanism and the implementation of the remedy to the McCloud and Sargeant litigation that I have referred to above, there is also a new scheme for the Judiciary. In total these require such substantial changes to the Directions that the Directions have been revoked and replaced by new ones. The structure of the 2023 Directions remains similar to, and there are large areas of commonality with, previous versions of the Directions, particularly the version following the 2018 amendments, and therefore my professional opinion in some areas remains similar to that expressed in my letter of 22 November 2018[7].

21. In my opinion, each of the eight primary purposes listed in paragraph 6 of your letter is being met in the 2023 Directions, subject to the further comments I make below regarding the valuation objectives set out in paragraph 8 of your letter.

22. Appendix A sets out which Directions achieve each of these purposes and provides some comment on those purposes that do not directly correlate to any of the objectives. I also provide some comments on the Judicial 2022 scheme employer cost cap below given this represents a new element to the 2023 Directions.

Judicial 2022 scheme employer cost cap

23. The 2023 Directions set out how the cost control mechanism should operate for the new Judicial 2022 scheme. In particular that:

- The employer cost cap should be set using the same assumptions as were used to set the previous Judicial reformed scheme employer cost cap at the 2012 valuation. However, it will be set as at the 2020 valuation, so will use up–to–date membership data.

[7] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/758851/2018-11-22_-_amending_valuation_directions_-_GA_to_CS_1.pdf

- When the mechanism is first tested at the next set of valuations with an effective date of 31 March 2024, the past service impacts will include those in the 2015 Judges reformed schemes that have emerged since the opening of that scheme in 2015.

24. This approach provides consistency with the valuations of the other workforces. It should mean that the same general cost pressures are likely to emerge, in particular a reduction in costs within the core mechanism will already exist due to the downwards revisions of future life expectancy (based on ONS projections), albeit that no test is taking place at the 2020 valuation. It will also result in the economic check at future valuations having similar impacts because the comparisons will all be against employer cost caps set using a discount rate of CPI+3% a year. Therefore, any future breach of the lower 3% margin in the core mechanism would be offset by a reduction in the discount rate relative to the 2012 valuation assumptions if the SCAPE discount rate remains below CPI+3% a year.

25. If the employer cost cap were instead set according to the 2020 valuation assumptions, then the absolute level of the cap would be higher and the Judges mechanism would start in balance. Under such an approach the stalemate currently present in the mechanism for all the other schemes would not apply to the Judiciary and they may therefore be more likely to be subject to subsequent benefit changes compared to other workforces.

26. Given there is a new scheme for the Judiciary but not the other workforces, it does not easily fit into the same framework. Whilst the approach taken improves consistency with the other workforces it does mean that an employer cost cap is being set on out–of–date assumptions which could be seen to conflict with the no bias objective. The consequence of this is that the Judges 2022 scheme has certain cost pressures within its cost control mechanism that are present from the outset and that pre-date the creation of the scheme. Whilst this could be considered unusual it is a pragmatic approach to ensure consistency of outcomes across the various workforces.

Assessment against objectives

27. Overall, I consider the 2023 Directions will deliver results which are, in the round, technically complete and coherent. I would note however that because this is the first valuation at which the reformed cost control mechanism has been tested and in view of the complex nature of actuarial valuations, it is impossible to be completely certain at a detailed level that the 2023 Directions are fully technically complete and coherent until the valuations they apply to have been completed. Accordingly, it will be appropriate to keep the Directions under review.

28. There are areas of conflict between some of the government's stated objectives (in particular between no bias and consistency) which mean they cannot all be met in full and there are some trade-offs between them - although this is not due to a particular change in approach in the Directions for the 2020 valuations.

29. I comment below on the ten objectives set out in paragraph 8 of your letter.

<u>Completeness</u> – *"employer and employee contributions, taken together, reflect the full costs of the benefits provided by public service pension schemes, including any past service effects that arise between valuations"*

30. The specified actuarial methodology of the projected unit method (see Direction 12) provides for contributions to reflect the expected cost of benefits provided over the period following the valuation, based on the assumptions adopted.

31. The determination of notional assets (see Direction 28) and past service liabilities (see Direction 27) fits with this objective, by including any past service effects that have arisen since previous valuations. Any difference between the notional assets and past service liabilities is spread over 15 years. The length of this period reflects the pace at which HM Treasury wants to correct any deficits or surpluses that are attributable to past experience and assumption changes.

<u>No bias</u> – *"assumptions used to assess costs should be best estimates, with no margin for prudence or optimism"*

32. The 2023 Directions specify a number of assumptions that must be used by all schemes in their valuations (see Directions 15 to 19). These include:

- Economic and financial assumptions – these are based on economic forecasts produced by the OBR, as set out in the Economic and Fiscal Outlook (EFO) published in March 2023, which are intended to be best estimates without any margins for prudence or optimism.

- Assumptions for future changes in life expectancy – these are based on the 2020 principal population projections for the UK produced by the ONS which are intended to be best estimates.

- The pattern of future State Pension ages to be assumed in the valuations is in line with primary legislation governing such changes

33. The financial assumptions include earnings increases which apply to all workforces. In practice earnings increases would be expected to vary between different workforces. However, setting a single assumption is transparent and objective given the lack of independent forecasts of specific workforces' earnings increases. Using a single set of assumptions is also in line with the consistency objective.

34. It should be noted that any assumption for future changes in life expectancy is somewhat speculative due to the long-term nature of the assumption combined with the inherent uncertainty as to how life expectancy will change many years into the future. This uncertainty has been highlighted by the implications of the COVID-19 pandemic. The ONS 2020 principal population projections allow for the significant worsening in life expectancy over 2020 and 2021 due to the impact of COVID-19, but then assume that by 2024 the rate of improvement in life expectancy will have returned to where it was projected to be prior to the pandemic[8]. The actual impact of COVID-19 on long-term life expectancy trends will not be known for many years and may vary significantly to any current best estimate.

[8] This does not mean that the mortality rates (the expected likelihood of death) will return to the level they would have been projected to be prior to COVID-19, just the rate of mortality improvement which is how the underlying mortality rates change over time

35. It should also be noted that the use of population level assumptions may not always be appropriate for future valuations, as more evidence on any socio-economic differences in how life expectancy changes over time emerges.

36. With regards to the State Pension age assumption there is considerable uncertainty about how State Pension age will change in the future and therefore adopting the current timetable in primary legislation is an appropriate best estimate. This is the same assumption as was used at the previous set of valuations.

37. For assumptions determined on a scheme-by-scheme basis, the 2023 Directions state that these "must be the responsible authority's best estimates and not include margins for prudence or optimism" (see Direction 21) which is in line with this objective. The commutation assumption is no longer directed and instead is now determined by the responsible authority. This will allow schemes to set different assumptions where their scheme experience warrants it, which is in line with this objective.

38. As previously discussed in paragraph 26 this objective is less well met with regards to setting the new Judicial 2022 scheme employer cost cap, given the use of previous valuation assumptions. However, there is a trade-off here with the consistency objective as I have previously mentioned.

39. In aggregate, the set of assumptions included in the 2023 Directions should result in an appropriate best estimate of the liabilities. Best estimate in this context means that there is no explicit margin for prudence or optimism, or in other words there is expected to be an equal 50% chance of the ultimate costs being either lower or higher.

40. More detailed comments on the actuarial assumptions are included in Appendix B.

Discount rate – "the discount rate will be 1.7% a year above CPI, in line with the Office for Budget Responsibility's long-term growth forecasts, as set out in their July 2022 Fiscal Risks and Sustainability Report"

41. The SCAPE discount rate is subject to a separate review process. A review of the methodology behind the discount rate was completed in March 2023[9], and subsequently the discount rate was reduced to CPI+1.7% a year[10]. We have previously exchanged letters on the SCAPE discount rate methodology in which I expressed my support for how this assumption is set[11]. The 2023 Directions reflect this confirmed change to the SCAPE discount rate (see Direction 19).

42. I note that the level of the SCAPE discount rate is lower than it ever has been in the past and that this results in a substantial increase in employer contribution rates. These contribution rates will reflect the costs today for future pension promises in an era of low forecast economic growth and will accordingly increase the overhead to the cost of employment.

[9] The review concluded that the SCAPE discount rate should continue to be set in line with expected long-term GDP growth. Government's response to the review is published here: https://www.gov.uk/government/consultations/public-service-pensions-consultation-on-the-discount-rate-methodology

[10] Confirmed via a Written Ministerial Statement on 30 March 2023: https://questions-statements.parliament.uk/written-statements/detail/2023-03-30/hcws697

[11] https://www.gov.uk/government/consultations/public-service-pensions-consultation-on-the-discount-rate-methodology

<u>Consistency</u> - *"valuations of all public service schemes should be consistent, allowing for comparisons to be made across schemes, including over time. Where different scheme workforces have different characteristics, then there should be consistency in the way that assumptions are set"*

43. As noted above under the no bias objective, the 2023 Directions specify a number of assumptions that must be used by all schemes in their valuations and also state that other scheme-specific assumptions should be set on a best estimate basis. Whilst this is broadly in line with the consistency objective, there could still be inconsistencies between schemes for the simple reason that best estimates may be set in different ways for different schemes, based on experience levels that will differ by scheme. Thus, certain assumptions may vary for different schemes for reasons which may not be entirely attributable to genuine differences in workforce characteristics. For example, for the commutation assumption smaller schemes are likely to have to rely on grouped data from the largest schemes as opposed to their own data, when setting this assumption. In this regard, the 2023 Directions effectively give the no bias objective precedence over the consistency objective, which was also the case in previous versions of the Directions.

44. The approach to how the remedy for the McCloud and Sargeant judgment will be treated in a reformed-scheme-only cost control mechanism is somewhat inconsistent between the unfunded schemes and the Local Government Pension Scheme (LGPS). As discussed in paragraph 17 the "base" accrual is in the mechanism with regards to the remedy period (with the underpin excluded) for the LGPS but all accrual is excluded for unfunded schemes (see Direction 49). This will mean a greater amount of past service is in the mechanism for LGPS, and hence a greater amount of the risk associated with the costs of accrued benefits is shared with members in the LGPS relative to the other workforces. Whilst this might at first sight appear to be contrary to this objective, it does reflect the differing nature of the remedies and ensures as complete as possible reformed-scheme-only mechanism for the LGPS.

45. A lack of consistency will also emerge within the cost control mechanism between those schemes that were affected by the data error discussed in paragraph 53 and those that were not.

46. As previously discussed, the Judicial 2022 scheme employer cost cap will be set using the same assumptions as existing cost caps to ensure consistency with other workforces (see Direction 57(i)). Similarly, for the Civil Service (Other Crown Servants) Pension Scheme the 2023 Directions ensure that an employer cost cap can be set retrospectively at their preliminary valuation (in 2015) using consistent assumptions with other workforces' employer cost caps (see Directions 51 and 53). Both of these approaches are in line with this objective.

47. The Judicial 2022 scheme employer cost cap will be set using up to date 2020 valuation membership data. This is a reasonable approach to ensure that the cost cap is calculated by reference to those members who are expected to be subject to the new Judicial scheme. When considering this against the objectives it is more in line with the no bias objective than the consistency objective.

48. I also note that because of the reforms to the cost control mechanism the results are not directly comparable to previous valuations.

Clarity – *"the Directions should lead to valuation reports that include sufficient information to allow those who are technically competent to understand how the valuation has been carried out. Valuations reports should provide clear and transparent assessments of schemes' costs, and reports should include information that may be helpful to scheme members and stakeholders in understanding the costs of providing benefits"*

49. The requirements for certain information to be published in scheme valuation reports are consistent with this objective (see Directions 22 to 25). In particular, clarity is improved by requiring the disclosure of information relating to the costs measured by the economic check, even when the economic check has not been triggered. This enables stakeholders to judge the prospects for benefit changes (or member contribution changes) arising from the cost control mechanism in the future. This objective is also well served by the non-directed elements of the valuation reports

Cost control – *"the Directions ensure that the 2020 valuation report includes valuation results that measure changes in the costs of the schemes against the employer cost cap (in line with Section 12(4)(b) of the Act and as required by Section 12(5) of the Act)"*

50. The 2023 Directions require disclosure of this information in the valuation reports (see Direction 25), thus meeting the requirements of this objective.

51. Following the reforms to the cost control mechanism, costs associated with legacy schemes and the McCloud and Sargeant litigation are excluded which does result in a material amount of past service no longer being controlled by the mechanism, with government being solely on risk for these costs. However, as discussed in my report on the review of the cost control mechanism, there are other advantages to a reformed-scheme-only mechanism. These include improving the intergenerational fairness of the mechanism by no longer allowing the experience in the legacy schemes (which will relate typically to older members) to influence the benefit levels in the reformed schemes, and improving the stability of the mechanism.

Sustainability – *"for each scheme, the measurement of changes in the cost of the scheme against the employer cost cap (in line with Section 12(4)(b) of the Act and as required by Section 12(5) of the Act) includes effects of scheme experience and future valuation assumptions differing from the assumptions used to determine the employer cost cap"*

52. The methodology set out in the 2023 Directions (see Directions 33 to 48 and 59 to 70) is in line with the requirements of this objective and is consistent with previous versions of Directions. As discussed in my previous letter of 22 November 2018 on the 2018 amendments to the Directions, most of the changes in the scheme costs have resulted from changes to the actuarial assumptions being adopted, with very little of the changes resulting directly from the effect of actual observed experience over the period since the employer cost caps were set.

53. I am aware that as part of the 2020 valuations process an historic data error has been discovered in the data supplied for the purpose of setting mortality assumptions at the 2012 and 2016 valuations of the NHS (England and Wales) Pension Scheme. This influenced the mortality assumption used to set the employer cost cap. This error is no longer present in the 2020 valuations which will result in a reduction in costs relative to the employer cost cap of up to 1% of pensionable pay. This assessed change in cost is due to the data error and is not reflective of any actual change in experience. This issue will also affect some of the devolved administrations and smaller schemes that set mortality

assumptions with reference to the NHS (England and Wales) Pension Scheme. Under the treatment in these Directions, the change in costs due to this data error will remain in the cost control mechanism for this scheme in perpetuity. From an actuarial perspective, it would be preferable to revisit the employer cost cap to remove the effect of the data error. HM Treasury has decided not to revisit the employer cost caps in this instance. Whilst this treatment will have no influence on member outcomes at this valuation, it could result in an increase to member benefits at future valuations (for example, if long-term GDP growth expectations return to the region of CPI+3% a year as discussed in paragraph 13). Similarly, it could stop a reduction to member benefits that would otherwise occur at future valuations if, for example, projected future life expectancies return to, and go beyond, those expected at the 2012 valuations. Therefore, this will provide inconsistent results between those schemes affected by this data issue and those that are not.

<u>Stability</u> – *"for each scheme, the measurement of changes in the cost of the scheme against the employer cost cap exclude:*

- *costs of the scheme which relate to the benefits accrued in legacy schemes, ie those introduced prior to the introduction of the 2013 Act*
- *costs of the schemes which relate to the benefits associated with the remedy of the McCloud and Sargeant litigation.*
- *changes in the cost of the new schemes which arise due to the effects of members having service in those legacy schemes."*

54. The methodology set out in the 2023 Directions (see Directions 33 to 49 and 59 to 69) is broadly in line with the requirements of this objective.

55. In order to implement a reformed-scheme-only mechanism alongside retaining the original employer cost caps, the notional assets (the "cost cap fund") need to be reconstructed back to the introduction of the reformed schemes in 2015 as if a reformed-scheme-only mechanism had always been in place. Otherwise, the 2016 valuation cost control mechanism assessment, which considered legacy scheme costs, would continue to influence future cost control mechanism outcomes due to the building up of the cost cap fund using results from the previous valuations. This is achieved via Directions 33A and 59A which require a "reconstructed first cost cap valuation". These Directions revise the cost cap fund but do not re-open the previous cost cap valuations.

56. I am aware that when the employer cost caps were calculated at the 2012 valuations, they included an allowance for expected funding strains arising from participation in the Public Sector Transfer Club (the "Club"). These funding strains were determined with reference to transfers occurring at the time, which would have been primarily with respect to legacy scheme benefits. Under the 2023 Directions, the assessment of costs at this and subsequent valuations will be restricted to only those funding strains expected from transfers of reformed scheme benefits within the Club. Therefore, the measurement of changes in the cost of the scheme against the employer cost cap will be influenced by the legacy schemes to the extent that expected Club funding strains will differ when considering only the reformed schemes. Typically, funding strains due to such transfers of reformed scheme benefits will be lower than those anticipated in the employer cost caps both due to a reduction in volume but also due to the operation of the Club[12]. Therefore, a reduction in costs is expected to occur, particularly so for the devolved schemes. Similar

[12] For legacy scheme Club transfers a strain occurs due to the total cost of maintaining a final salary link, whereas for reformed scheme Club transfers a strain occurs for the cost of offering continued in-service revaluation, where such revaluation is above CPI, which will typically represent less of a strain.

to the mortality data error in the NHS (England and Wales) Pension Scheme discussed above, this change in cost will remain within the cost control mechanism in perpetuity. Again, from an actuarial perspective it would be preferable if this were not the case. HM Treasury has, however, decided not to revisit employer cost caps in this instance.

<u>Technical immunity</u> – *"the core measurement of changes in the costs of the scheme against the employer cost cap excludes effects caused by changes to the discount rate, the long-term earnings assumptions or changes in the actuarial methodology used in the valuations"*

57. Following the reforms to the cost control mechanism this objective is now only relevant to the core mechanism and not the economic check.

58. Technical immunity is achieved by tracking a cumulative adjustment for the impact of a change in long-term economic assumptions (see Directions 40 and 46 to 47). This enables the calculations at each valuation to be carried out on the prevailing set of long-term economic assumptions. The impact of a change in long-term economic assumptions relative to the previous valuation is determined as part of the reconciliation of the results. This impact is then accumulated with the previously determined impacts for changes in such assumptions at previous valuations.

59. This represents a change in approach compared to the 2016 valuations. This change is sensible as the previous approach required revisiting all previous valuations to redo certain calculations on the current long-term economic assumptions. Whilst this was relatively easy to achieve for the 2016 valuations, this would soon become impractical over multiple valuation cycles.

60. The methodology adopted is largely in line with this objective. However, some secondary impacts of a change in long-term economic assumption will remain, albeit they should be marginal. In order to not have any secondary impacts would require "hardcoding" the long-term economic assumptions to their 2012 valuation assumptions at all future valuations, i.e. a discount rate of CPI+3% would be used for evermore. Whilst more precisely complying with this objective, such an approach would have the disadvantage that any non-financial impacts (such as a change in life expectancy) would be measured using an out–of–date discount rate. This could produce what might be perceived as counter–intuitive outcomes, for example where costs (measured on current terms) would have to diverge by greater than 3% of pensionable pay (the chosen margin) before being corrected. Secondary impacts of a change in long-term economic assumptions were also present at the 2016 valuations.

Validation – "the Directions ensure that a breach of the cost control mechanism will be implemented only if it would have still occurred had the measurement of changes in the cost of the scheme against the employer cost cap included effects caused by changes to the long-term economic assumptions"

61. The methodology set out in the 2023 Directions (see Directions 59 to 70, 72 to 74 and 76 to 77) is in line with the requirements of this objective. Direction 67 requires a cost of the scheme to be calculated which includes the effects caused by changes to the long-term economic assumptions. Direction 70 then ensures that a breach of the cost control mechanism is deemed to have occurred only if both the core mechanism and the economic check breach the same margin. Directions 76 and 77 then set out that the cost to be rectified (either that of the core mechanism or economic check) is the one closest to

the margin that has been breached. In combination these Directions work to ensure that the impact of a change in long-term economic assumptions (either discount rate and/or long-term earnings assumption) can only offset a breach of the mechanism occurring, either partially or completely, and not cause or contribute to one. The economic check therefore works the same way in practice as set out in the Government's consultation response on the cost control mechanism reforms[13], even if the presentation is slightly different.

62. In the 2023 Directions, the SCAPE discount rate is used for the economic check. The Government's consultation response on the reforms to the cost control mechanism explicitly referenced a discount rate based on long-term expected GDP growth and not necessarily the SCAPE discount rate. Since that consultation, it has been confirmed that the methodology for the SCAPE discount rate will continue to be long-term expected GDP growth and therefore it is in line with the Government's consultation response to use the SCAPE discount rate.

Initial valuation results

63. The initial provisional results from the 2020 actuarial valuations, based on the draft 2023 Directions, indicate that employer contribution rates should generally increase from their current levels and that there will be no changes required to the schemes' provisions under the cost control mechanism. Detailed initial results are currently available for four of the largest schemes[14] and the discussion in this section is based on those results.

64. The general increase in employer contribution rates is primarily due to a reduction in the SCAPE discount rate from CPI+2.4% a year at the previous valuation, to CPI+1.7% a year at the 2020 valuations. A reduction in the discount rate places a higher value on future benefit payments.

65. Various other factors such as, but not limited to, downwards revisions of future life expectancy (based on ONS projections), the remedy to the McCloud and Sargeant litigation, higher than required contributions being paid since 2019, a change in earnings growth and other demographic assumptions have also had an impact on the resulting employer contribution rates, and in aggregate will partially offset the impact of the SCAPE discount rate. Scheme specific issues will also influence individual employer contribution rates, in particular for the Fire schemes which will see an increase in cost due to the remedy for the Matthews legal case. With regards to the four schemes, the overall increase in the employer contribution rate based on the draft 2023 Directions ranges from +2% to +7% of pensionable pay. This range reflects the influence that scheme specific issues and characteristics can have on the resulting employer contribution rate.

66. With regards to the cost control mechanism, within the core mechanism there has been a reduction in assessed cost relative to the employer cost caps. The size of this reduction varies by scheme, but with respect to these four schemes, scheme costs as measured by the core mechanism are on average 3.5% of pensionable pay below employer cost caps, with three of those schemes experiencing a reduction in cost greater than the 3% margin

[13] https://www.gov.uk/government/consultations/public-service-pensions-cost-control-mechanism-consultation
[14] The schemes for the civil service, NHS, Teachers and Armed Forces (only for those schemes which include members in England).

which triggers the economic check. The primary reason for this assessed reduction in cost is due to the downwards revisions of future life expectancy (based on ONS projections).

67. However, where scheme costs include the impact of a change in the long-term economic assumptions for the purposes of the economic check, there has been an increase in assessed cost relative to employer cost caps. This is primarily due to the impact of a reduction in the SCAPE discount rate to CPI+1.7% a year, compared to CPI+3% a year used to set the employer cost caps at the preliminary valuations (typically the 2012 valuations). The size of this increase varies by scheme, but with respect to the four[15] schemes, scheme costs as measured within the economic check are on average 7.5% of pensionable pay above employer cost caps. This more than offsets the reduction in costs due to the mortality and other factors. Such an outcome is consistent with the increase in employer contribution rates which have occurred since the setting of employer cost caps.

68. For those schemes that triggered the economic check (because their core costs were below the lower 3% margin), the cost including the impact of a change in the long-term economic assumptions is above the upper 3% margin. However, as per the workings of the economic check, the long-term economic assumptions cannot cause or contribute to a breach, and therefore the outcome is that there are no changes required to schemes provisions as a result of the cost control mechanism.

69. The table below shows a high-level analysis of the main differences between the original employer cost caps (which were set at the 2012 valuations) and the updated costs of the schemes (from the initial 2020 valuation results under both the core mechanism and economic check), averaged across the four schemes[16].

Table 1. Initial cost control mechanism results (average movements in cost relative to employer cost caps)

Core mechanism	
Change in mortality assumptions	-2.6%
Changes in other demographic assumptions	-0.6%
Other impacts	-0.3%
Change in cost of the schemes (core mechanism)(1)	**-3.5%**
Economic check(2)	
Change in long-term economic assumptions	+11.0%
Change in cost of the schemes (economic check)	**+7.5%**

(1) There is variation within schemes so the average change in cost of the schemes (core mechanism) does not mean that all schemes are below the 3% lower margin.
(2) For completeness the economic check impact has been shown for all four schemes even if they have not formally triggered the economic check.

70. The change in costs of the schemes in the core mechanism of -3.5% of pensionable pay at the 2020 valuations in Table 1 can be broadly compared with the change in accrual

[15] Not all these schemes breached the core mechanism and hence are required to complete an economic check. However, for completeness we have included all the schemes in these results
[16] The figures in this table are a weighted average (by 2023/24 projected payroll) across the schemes.

cost[17] of -1.5% of pensionable pay at the 2016 valuations reported in my letter of 22 November 2018[18]. Therefore, a reduction in costs within the core mechanism of around 2% of pensionable pay has, on average, occurred between the 2016 and 2020 valuations.

Conclusion

71. My overall opinion on the 2023 Directions is that they achieve the eight primary purposes that you have set out (as discussed further in Appendix A), that they will deliver results for the 2020 valuations which largely meet the stated objectives, with some better met than others, and that they are, in the round, technically complete and coherent.

72. In particular the cost control mechanism reforms have been implemented consistently with my review and the Government's consultation response, although I note there is more than one way to implement a reformed-scheme-only mechanism. There are, however, a couple of areas where changes in cost will emerge in the mechanism which are not due to an actual change in experience in the reformed scheme – the mortality data error in the NHS (England and Wales) Pension Scheme and the impact of the Public Sector Transfer Club funding strains.

73. It is important to recognise that there is a high degree of professional judgement involved in the scheme valuation process, particularly around the derivation of best estimate actuarial assumptions.

74. I note that there would be more than one way to reasonably meet the objectives and that another set of Directions and assumptions may do so just as sufficiently.

Compliance, limitations, and third-party disclaimer

75. This letter has been prepared in accordance with the applicable Technical Actuarial Standards: TAS 100 and TAS 300 issued by the Financial Reporting Council (FRC). The FRC sets technical standards for actuarial work in the UK.

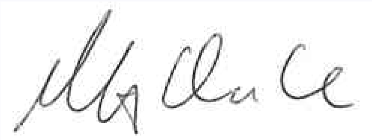
76. The analysis in this letter draws upon the initial results from the 2020 actuarial valuations which were provided to HM Treasury by the respective schemes in June to August 2023. These results are subject to further review and are based on provisional assumptions which may be subject to change.

77. This letter is addressed to HM Treasury. The purpose of this letter is to give my professional opinion on the draft Public Service Pensions (Valuations and Employer Cost Cap) Directions 2023 in accordance with section 11(4) of the Public Service Pensions Act 2013. I understand that HM Treasury may publish this letter. Other than HM Treasury, no person or third party is entitled to place any reliance on the contents of this letter. GAD has no liability to any person or third party for any action taken or for any failure to act, either in whole or in part, on the basis of this letter.

[17] This will broadly reflect what a reformed-scheme-only mechanism result would have been at the 2016 valuations given there would have only been a maximum of 1 year of past service in these reformed schemes.

[18] The 2016 valuation figure includes results for the Police (England and Wales) and Fire (England) schemes and so is not an exact like-for-like comparator. This will, however, have a limited effect on the comparison since the figures are averages weighted by payroll and the two schemes excluded from the 2020 average accounted for only around 5% of the total payroll of the six schemes considered for the 2016 valuation exercise.

Yours sincerely



Martin Clarke CB
Government Actuary

Appendix A - changes to the Directions

A.1. Paragraph 6 of your letter sets out the eight primary purposes of repealing the existing Directions and replacing them with the 2023 Directions. Some of these overlap with the valuation objectives also set out in your letter. I have provided comments relating to these purposes in the main body of the letter. For those purposes that do not overlap with the valuation objectives, I provide further comments in paragraphs A.3-A.7 below.

A.2. In my opinion, each of the eight primary purposes in your letter is being met in the 2023 Directions, as set out in the below table, subject to the further comments I have made.

Table A.1 Direction references

Purpose	Direction numbers (in the 2023 Directions unless otherwise stated)
(a) To remove specific Directions that related to the pause, and subsequent completion, of the cost control element of the 2016 valuation process, and to remove Directions that related to new public body pension schemes;	43A, 47, 49-56, 58 (of the existing, pre-2020 valuation Directions)
(b) to update the assumptions that the Directions require schemes to use in completing their valuations to current central best estimates;	15-19, 21, 28(4), 40, 44
(c) to implement the government's decision to change the SCAPE discount rate from 2.4% a year above CPI to 1.7% a year above CPI, which was confirmed in March 2023;	19(a), 28(4)
(d) to implement a reformed scheme only cost control mechanism;	33-49 and 59-69
(e) to implement the economic check where there is a breach of the core cost control mechanism;	3, 25, 59-70, 72-74, 76-77
(f) to deliver the process whereby the impact of a change in the discount rate and long-term earnings assumptions is excluded from the core assessment in the cost control mechanism in a way that is deliverable over multiple valuations;	3, 25, 35, 40-42, 46-48, 68
(g) to enable the employer cost cap to be set where required, in particular for the new Judicial Pension Scheme that opened in 2022 and the Civil Service (Other Crown Servants) Pension Scheme; and	50-58

(h) to make miscellaneous changes to ensure that the valuations operate as intended - for example relating to valuation timing cycles and the approach to rectification, and subsequent certification, of a breach in the CCM (following the economic check) in line with amendments made to the 2013 Act via the Public Service Pensions and Judicial Offices Act 2022	In particular (but not limited to) 3, 7-9, 25, 28, 71-77

a) Removal of specific Directions

A.3. The specific Directions that related to the pause, and subsequent completion, of the cost control element of the 2016 valuation process have been removed. These are no longer relevant for the 2020 valuations, in particular given that remedy costs associated with the McCloud and Sargeant judgment are excluded from the mechanism as discussed above. Furthermore, all Directions, or parts of Directions, related to new public body pension schemes have been removed given that there are not currently any such schemes in scope of the Directions. Previously the Senedd Pension Scheme was in scope of the Directions, but this requirement was removed as part of the Public Service Pensions and Judicial Offices Act 2022.

g) Judicial 2022 scheme employer cost cap

A.4. Further to my comments in the main body of this letter I note that ensuring that the past service impacts will include those in the 2015 Judges reformed schemes that have emerged since the opening of those schemes in 2015 is achieved via the meaning of "reformed closed connected scheme" and Direction 56 sets out how this should be interpreted for valuations concerning the Judiciary. This also includes the Northern Ireland 2015 Judges reformed scheme which as set out in Direction 54A becomes a connected scheme as these members are eligible for the new 2022 scheme. Direction 57 disapplies various other Directions for the Judiciary to ensure that the mechanism need not be tested at the 2020 valuations. These will need to be removed for subsequent valuations.

A.5. Part 2A of the 2023 Directions sets out the general case for how an employer cost cap should be set, with additional Directions enabling this to be carried out for the Judges 2022 scheme and The Civil Service (Other Crown Servants) Pension Scheme. In the event of a new scheme requiring an employer cost cap, further Directions would be required, in particular to specify the data, methodology and assumptions to be used.

h) Certification and rectification

A.6. Part 6 of the 2023 Directions sets out the process for certification and rectification. I note that these Directions have been reinstated from the 2018 amending Directions and updated to reflect the presence of the economic check and for consistency with changes to the Public Service Pensions Act 2013 made in the Public Service Pensions and Judicial Offices Act 2022. In particular, this part directs that the steps to be taken to achieve the target cost of the scheme can be made only following certification by the scheme actuary. I note that the 2023 Directions included in this regard provide a framework only, as opposed to detailed Directions on the process and how all possible types of rectification may work. This appears appropriate as certain details of any rectification will be worked through at the point such rectifications are required, and as per my previous comments this is not expected at the 2020 valuations. Therefore, additional Directions may be required in this regard at future valuations, for example to set out the time at which any increase or decrease of members' benefits or contributions will take effect and to cater for any benefit changes that are more complex than adjusting the accrual rate.

h) Other miscellaneous changes – LGPS 50/50 option

A.7. I note that there has been a technical change to how the "50/50 option" in the Local Government Pension Scheme (LGPS) is treated within the cost control mechanism. The 50/50 option allows members to accrue 50% of the main scheme benefits in return for a payment of 50% of the normal contribution rate. I understand the policy is that changes in the take up of the 50/50 option should not trigger action under the cost control mechanism. Under previous Directions this has been achieved by assuming no members will take up the 50/50 option for future service and that no members have ever taken up the option for past service which requires adjusting the membership data and relevant cashflows where a member has taken up the option. The 2023 Directions have retained the same treatment for future service, but with respect to past service the cost cap liabilities and cost cap fund now both allow for where members have taken up the 50/50 option. Because this is captured in both the cost cap liabilities and cost cap fund it will still ensure changes in the take-up of the option do not trigger action under the cost control mechanism. However, it means that the liabilities and contribution and benefit cashflows used in the valuations can reflect their real-world values. This is a sensible change which results in a more robust calculation routine whilst meeting the original policy intent.

Appendix B - additional comments on the impact of actuarial assumptions and data quality

B.1. In this Appendix I set out some additional comments on various aspects of the 2023 Directions, including a more detailed analysis of the impact of actuarial assumptions upon the initial valuation results and how these features may affect future valuations. Please note that this Appendix does not alter in any way my professional opinion on the 2023 Directions, as stated in the main body of this letter, but is intended to provide some further context and relevant observations which may be worthy of further consideration.

Setting actuarial assumptions

B.2. The Directions specify a number of assumptions that must be used by all schemes in their valuations. These include the economic and financial assumptions (based on economic forecasts produced by the OBR), assumptions for future changes in life expectancy (based on population projections produced by the ONS), and assumptions for a member's State Pension age.

B.3. Most other assumptions are set on a scheme-specific basis, with a requirement that the Minister responsible for each scheme sets them as best estimates, without margins for prudence or optimism.

B.4. Whether assumptions are directed or set at scheme-specific level, it can be particularly challenging to set appropriate "best estimate" actuarial assumptions to project the future experience of pension schemes. Such assumption setting is an imprecise science – actual experience will almost inevitably deviate from previously set assumptions.

B.5. Even when there is a substantial body of past experience data, it can be challenging to analyse different aspects of scheme experience from the membership movement data. Trends can take decades to emerge and can change over time, making it difficult to determine suitable valuation assumptions. Where there are major changes to pension scheme design, as has been the case following the introduction of the new public service schemes, the process can be a lot more challenging given the limited volume of available relevant experience data, which will take many years, if not decades, to build up. Therefore, one can only have relatively limited confidence in any central "best estimate" basis.

B.6. Hence, whilst it is important to regularly review the appropriateness of the assumptions that have been adopted, assumption-setting is a process of continual updating over successive valuations. Actuarial valuation results can be very sensitive to some of the assumptions adopted, and the impact of changing certain assumptions can lead to material changes in the resulting costs, which can be seen from Table 1 on page 14 of this letter.

Changes to short-term assumptions

B.7. The tables below set out a summary of the short-term economic assumptions which are specified in the 2023 Directions in relation to the 2020 valuations. They also show how they have changed since those used in the previous valuations, mainly as at 31 March 2016 (as set out in the 2018 amending Directions).

Table B.1 Short term assumptions at the previous valuations, mainly as at 31 March 2016

Assumption	CPI (April following year-end)	Earnings (April following year-end)	Public service earnings growth
Direction no.	14	16	17
Year			
2020/21	Long-term (2.0%)	2.5%	2.6%
2021/22	Long-term (2.0%)	2.8%	2.8%
2022/23	Long-term (2.0%)	3.0%	3.0%
2023/24	Long-term (2.0%)	Long-term (4.2%)	Long-term (4.2%)
2024/25	Long-term (2.0%)	Long-term (4.2%)	Long-term (4.2%)
2025/26	Long-term (2.0%)	Long-term (4.2%)	Long-term (4.2%)
2026/27	Long-term (2.0%)	Long-term (4.2%)	Long-term (4.2%)
2027/28	Long-term (2.0%)	Long-term (4.2%)	Long-term (4.2%)

Table B.2 Short term assumptions at the current valuations, as at 31 March 2020

Assumption	CPI (April following year-end)	Earnings (April following year-end)	Public service earnings growth
Direction no.	15	17	18
Year			
2020/21	0.5% (order made)	2.4% (order made)	7.6%
2021/22	3.1% (order made)	4.1% (order made)	4.7%
2022/23	10.1% (order made)	7.0% (order made)	2.8%
2023/24	4.1%	4.7%	2.5%
2024/25	0.6%	1.6%	1.6%
2025/26	0.0%	1.7%	1.6%
2026/27	0.8%	1.9%	1.9%
2027/28	1.7%	2.5%	2.7%
2028/29 onwards	Long-term (2.0%)	Long-term (3.8%)	Long-term (3.8%)

Earnings growth

B.8. The 2023 Directions specify the assumptions to be used for general earnings growth. In the short-term period of 8 years from the valuation date, these assumptions are derived from a combination of observed experience (over the initial period from the valuation date) and OBR projections for payroll per head for government employment. The long-term assumption after this initial 8-year period is based on the OBR's long-term earnings forecast; this has reduced from 4.2% a year at the 2016 valuations to 3.8% a year at the 2020 valuations.

B.9. The cut-off point of 8 years for the switch from short-term to long-term earnings assumptions is somewhat arbitrary, in line with the period of short-term projections published by the OBR. An alternative approach to smooth the transition from short-term to long-term assumptions could be to allow for the OBR's projected earnings assumptions beyond the initial 8-year period, noting that these do not reach the long-term rate of 3.8% a year until 9 years later in 2036/37 in the July 2022 Fiscal Risks and Sustainability report[19]. However, in this case all the intervening years are projected to have an assumption of 3.7% a year, only slightly below the long-term assumption, so this would have minimal impact on the results.

B.10. With regards to the public service earnings growth assumptions, some individual years standout somewhat. In particular, the figure for 2020/21 is much higher than the general earnings increase and known pay settlements, whereas the 2022/23 figure is somewhat lower. Both figures are based to a certain extent on observed experience. In 2020/21 where public service workers increased their hours in response to the Covid-19 pandemic, this may have distorted the observed increase in payroll per head. However, such an increase may then have been subsequently unwound. Indeed, looking at the whole short-term period in aggregate, the assumptions do not appear unreasonable. Furthermore, I can see the advantage of using an independent forecast, and using it in its entirety over the short-term period to ensure internal consistency within the assumptions. It should be noted that the pay deals that have been negotiated after March 2023 will not have been taken into account in OBR's projections and therefore the valuation assumptions. Given the next set of OBR projections are not due for several months, and that attempting to adjust existing projections to allow for these recent pay awards would compromise the internal consistency of the short-term assumptions as a whole, it does not seem possible or desirable to allow for this without delaying the valuation process.

B.11. The long-term earnings growth assumption of 3.8% a year is now above the long-term nominal discount rate of 3.7% a year, whereas at previous valuations it has been lower. There is a simple relationship between GDP growth and earnings growth in the model that OBR uses to derive its long-term assumptions. This is that GDP growth is equal to earnings growth plus workforce growth. Previously, OBR has assumed a growing workforce which meant that GDP growth, and therefore the SCAPE discount rate, was higher than earnings growth. OBR's assumption in 2022 was of a shrinking workforce in the longer term and this therefore leads to an earnings growth assumption that is higher than the SCAPE discount rate.

B.12. In aggregate, the current set of public service earnings growth assumptions (net of CPI) are lower than those at the 2016 valuations. In isolation, this will lead to a decrease in employer contribution rates. Given the passage of time, change in economic conditions and the nature of forecasting such assumptions, it is not surprising that the short-term assumptions are different to the previous valuation.

B.13. Following the move to a reformed-scheme-only cost control mechanism, the public sector earnings growth assumptions no longer influence cost control mechanism outcomes. Furthermore, their influence on the employer contribution rates will diminish with time now the legacy schemes have been closed to future accrual.

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[19] See "Long-term economic determinants" spreadsheet at [Fiscal risks and sustainability – July 2022 - Office for Budget Responsibility (obr.uk)]

Mortality assumptions

B.14. The impact of changing the post-retirement mortality assumptions is mainly the result of moving from using the ONS 2016-based population projections to the 2020-based projections, as specified in Direction 19(b). Schemes have also changed their baseline mortality assumptions in line with recent scheme experience, which has typically had a smaller impact on the results.

B.15. The ONS 2020-based projections are based on actual population experience up to 2020 then converge to a long-term rate of mortality improvement of 1.2% a year for most ages in 2045 (the 25th year of the projections) and thereafter. This is the same general long-term rate of improvement as the 2016-based projections. Some allowance has been made in the projections for the impact of the COVID-19 pandemic. The significant worsening in life expectancy over 2020 and 2021 has been recognised, but it is then assumed by 2024 that the rate of improvement in life expectancy will have returned to where it was projected to be prior to the pandemic, but not allowing for any catching-up of the lower improvements in the interim.

B.16. Life expectancies using the ONS 2020-based projections are on average lower[20] than the comparable life expectancies using the 2016-based projections, reflecting a statistically significant continuation in the slowdown in the long-term improvement in age-standardised mortality rates which has taken place since the early 2010s, as well as the allowance for the COVID-19 impact mentioned above. This will result in a reduction in employer contribution rates, and a further reduction in cost relative to the employer cost caps in the cost control mechanism as shown in Table 1 on page 14 of this letter, illustrating how sensitive the cost control mechanism is to changes in the mortality assumptions.

B.17. The ONS publishes new sets of population projections typically every two years and, despite the smoothing methodologies adopted, successive sets of ONS projections can produce significant variations in future improvement rates over the short to medium term (resulting in the effect noted in the previous paragraph). It is worth noting that initial population mortality experience in 2022 has been heavy and if this continues to the next valuation then this is likely to lead to further future downwards pressure on the employer contribution rates and cost of the schemes measured in the cost control mechanism at the next valuations. Furthermore, any future ONS population projections will be based on Census 2021 data which may also result in changes to projected life expectancies.

B.18. Further, whilst the long-term improvement rate has remained consistent at 1.2% a year between the 2016-based and 2020-based projections, any change to this long-term rate in the future could have a much larger impact on the results of any future valuations which use such a new rate.

B.19. I note that many private sector schemes in the UK typically set mortality improvements using the projection model issued by the Continuous Mortality Investigation (CMI). However, I can see the merits of using ONS mortality improvements in the valuations of public service pension schemes to ensure consistency with other areas of long-term planning in government where the ONS population projections are generally used, for example in the review of the State Pension Age.

[20] By around 1 year for an existing 65 year old

Other demographic assumptions

B.20. There are a number of other demographic assumptions which can have an impact on both employer contribution rates and the cost control mechanism. These include assumptions for rates of withdrawals from active service, age retirement patterns, promotional pay scales, commutation, pre-retirement mortality rates, ill-health retirements and the proportion of members with dependants.

B.21. The initial 2020 valuation results indicate that the extent to which these assumptions have changed, and their impact on the results, varies between schemes. Table 1 on page 14 of this letter sets out that changes to these demographic assumptions have resulted in a reduction in costs as measured by the core cost control mechanism of 0.7% of pensionable pay on average. This is primarily due to a significant increase in the number of members expected to withdraw from some schemes. There has also been an increase in the assumed level of commutation for most schemes which will contribute to a reduction in costs. The reduction in SCAPE discount rate increases the differential in cost between a commuted cash lump sum and ongoing pension, for schemes with fixed commutation terms of 12:1, which will increase the materiality of this assumption.

State pension age

B.22. Some of the reformed public service schemes link normal pension age for future service accrual to a member's State Pension age (SPa). This design feature links the value of benefits accruing over time automatically to changes in SPa. To the extent that changes in SPa are driven by changes in life expectancy this provides some inbuilt protection to these schemes against unexpected changes in life expectancy.

B.23. However, there is a disconnect between the timing of changes to the mortality assumptions used in the scheme valuations (which under the current Directions policy will be updated every four years based on the latest ONS projections) and changes to legislated SPa timetables (which are less frequent, do not coincide precisely with valuation dates, and have a timing lag[21]). Further, this disconnect is effectively "hard-coded" into the starting point for the cost control mechanism (at which point calculations were based on the ONS 2012-based principal projections and the SPa timetables in place at that time).

B.24. Although the link of normal pension age to SPa allows for some of the impact of changes in life expectancy over the long-term, these measures are not moving in tandem. The initial 2020 valuation results highlight how this can potentially increase volatility in the short-term and lead to potential inconsistencies at valuations.

Implementation period

B.25. The implementation period is the period over which the cost of the future accrual of benefits is assessed (the "future service cost"). Typically, this is aligned with the period over which the outcome of the valuations will be applied, i.e. when the resulting employer

[21] Current legislation requires the SPa timetable to be reviewed at least every six years, but the legislated SPa timetable was not changed following the 2017 or 2023 review.

contribution rate will be charged or benefit changes will take effect as a consequence of the cost control mechanism.

B.26. Unlike previous valuations, separate implementation periods have been specified for the employer contribution rate and cost control mechanism (see Directions 8 and 9). For the employer contribution rate the period is 1 April 2024 to 31 March 2027, whereas for the cost control mechanism the period is 1 April 2023 to 31 March 2027. As set out in the technical annex accompanying your letter, this reflects the different periods over which the outcomes of the valuation will apply.

B.27. The employer contribution rate arising from the 2016 valuation will be charged up to 31 March 2024, a year longer than originally envisaged. Therefore, the employer contribution rate determined at the 2020 valuations will only apply for a 3–year period, between 2024 and 2027, as opposed to the 4–year period typically used. The implication of the previous employer contribution rate applying for a year longer will be captured at the 2020 valuation via Direction 30(c) which ensures that any under or over payments in actual contributions paid, relative to the cost of accrual between the effective date of the valuations and the start of the implementation period will result in increased or decreased contributions at this valuation, as appropriate.

B.28. The cost control mechanism has retained the typical 4–year implementation period, despite the delay in the implementation of new employer contribution rates. This results in there being no gap between the end of one implementation period and the start of the next.

Valuation data quality

B.29. Analysis of the data provided for the 2020 valuation highlighted a number of issues with the quality of the membership data provided. Full details will be provided in the relevant reports for each scheme. Valuation results are critically dependent on the quality and accuracy of the data used, and my colleagues at GAD working on the relevant schemes have noted the following issues:

- the data provided for the valuations was not fully correct and complete for all members and so approximations have necessarily been made to enable valuation calculations to be undertaken;
- data limitations have resulted in some difficulty in reconciling liability figures to a reasonable degree of certainty;
- a lack of confidence in the data at any particular effective date and concerns about inconsistency with data at other relevant dates.

B.30. For some schemes, it was also noted that there are issues with the membership movement data, which could potentially feed through into the analysis of experience. This could lead to assumptions being set with regards to data that does not reflect actual experience. This could then lead to unexplained changes from one valuation to the next which might need to be rectified by further changes to assumptions at future valuations, potentially introducing additional volatility.

B.31. Previously, there were a number of problems with data quality at the 2012 and 2016 valuations. The work to date on the 2020 valuations highlights that data quality continues to be a major issue. This may potentially lead to adjustment required at subsequent valuations to correct the employer contribution rates for potential over/under payments from April 2024 due to data deficiencies, which only become apparent in the future. Given the current stalemate in the cost control mechanism as discussed in paragraph 12, any data problems are not expected to influence the outcomes of the cost control mechanism in the short term. However, the NHS mortality data error discussed in paragraph 53 demonstrates the material impact on costs that incorrect data can have.

B.32. Accordingly, I would maintain that it is very important to consider initiatives to address valuation data deficiencies, in good time before the next round of valuations take place, to reduce the risk of these issues continuing to arise in the future. My colleagues in GAD are able to, and do, support these initiatives where appropriate.

Other data implications

B.33. There are a couple of specific areas where a lack of certain data is worth noting. Firstly, there is very limited data on those retained firefighters who may now opt-in to the Fire schemes following the Matthews legal judgment because the options exercise has not yet concluded. The uncertainty covers both the data surrounding the group of members who will be eligible under the exercise (including service and salary information) and also the level of eligible members who will actually take up the option to purchase historic benefits. This will result in an approximate liability estimate at the 2020 valuations which may be materially revised at the next valuation once the options exercise has been run and it is known who the opted-in members actually are. It could be that the estimates at this valuation turn out to be several percent of pensionable pay a year out on the employer contribution rate. There is no impact on the cost control mechanism because the additional liability is entirely in relation to legacy schemes.

B.34. To the extent that any liability estimate at the 2020 valuation turns out to be incorrect, this will work its way through the valuations in the usual way. If the liability, and hence the resulting employer contribution rate, has been overstated then a surplus will build up which will be recognised at the following valuation and result in a lower than otherwise employer contribution rate at that point. Conversely, if the liability has been understated then a deficit will build up which will result in a higher than otherwise employer contribution rate at the following valuation. However, you may like to consider any wider practical implications a materially incorrect liability estimate may have on departments.

B.35. It is also worth noting that the granular level of historic cashflow data required to reconstruct the notional assets in the cost control mechanism (the “core cost cap fund” and “the economic cost cap fund”) in the exact way set out by the Directions is not available (see Directions 33A and 59A), in particular contribution income split by members in or out of scope of the McCloud remedy. Instead, approximate methods will be used by reference to the liabilities. This should provide a more accurate result than attempting to approximate the cashflows required to follow the Directions exactly. Furthermore, given the relatively small amount of past service in the mechanism at this valuation, this approximate approach is not expected to have greater than a 0.1% of pensionable pay impact on results compared to if the required cashflow data were available.