Government Actuary's Department

Analysis of pension costs for NATS (En Route) plc – supplementary note

The Civil Aviation Authority ('CAA') is the economic regulator of NATS (En Route) plc ('NERL'). The CAA commissioned the Government Actuary's Department (GAD) to review certain aspects of NERL's pension arrangements and to provide a view on the reasonable and efficient pension costs in NR23 (covering the period from 1 January 2023 to 31 December 2027). The CAA published their Initial Proposals[1] for NR23 in October 2022 alongside GAD's review[2] dated June 2022. The CAA published their Provisional Decisions[3] in July 2023 alongside GAD's supplementary note[4] dated June 2023. This note should be read in conjunction with these papers.

This note sets out supplementary analysis and factors to assist CAA in considering NERL's pension costs and covers the defined benefit (DB) costs arising from the NATS Section of the Civil Aviation Authority Pension Scheme (referred to as the 'NATS Section' in this note). NERL's pension costs also include contributions towards the defined contribution (DC) scheme and a Pensions Cash Alternative for employees close to pension tax thresholds; these have not been considered further in this note.

The purpose of this note is to provide updates to projected pension costs and the GAD estimated reasonable and efficient ranges previously produced, following The Pensions Regulator publishing their latest analysis of scheme valuation submissions; our previous analysis utilises analysis of scheme valuation submissions in prior periods. The scope of this note is thus limited to these specific concerns and the relevant updates required to address them.

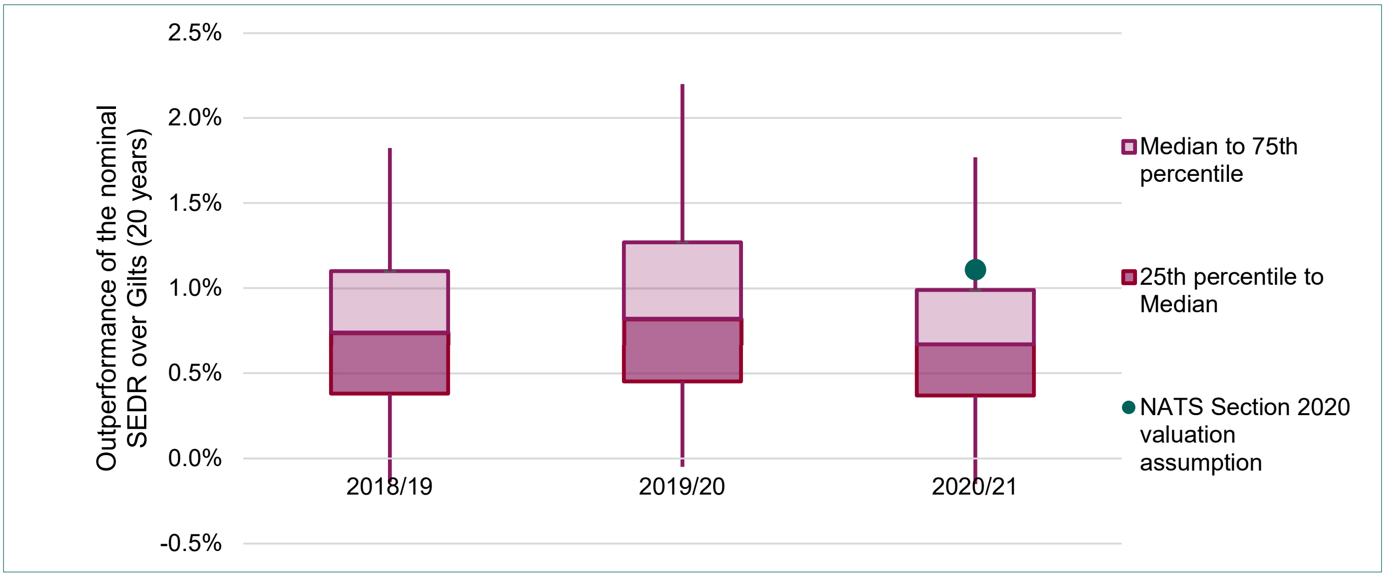
2023 Scheme Funding Annex

GAD conducted a review in June 2022 and provided a supplementary note in June 2023 using the latest industry-wide data published by the Pensions Regulator (TPR). The most up-to-date scheme funding analysis available at that time was for schemes with valuation dates between 22 September 2018 and 21 September 2019 (Tranche 14) and 22 September 2019 and 21 September 2020 (Tranche 15). We have updated our benchmarking of the assumptions from the NATS Section's 2020 valuation against the latest available tranche, published by TPR in August 2023. The NATS Section's actuarial valuation at 31 December 2020 falls into TPR's 2020/21 analysis, Tranche 16.

[1] Economic regulation of NATS (En Route) plc: Initial Proposals - CAA October 2022
[2] Analysis of pension costs for NATS (En Route) plc - GAD June 2022
[3] Economic regulation of NATS (En Route) plc: Provisional Decisions - CAA July 2023
[4] Analysis of pension costs for NATS (En Route) plc – supplementary note – GAD June 2023

Chart 1 shows the distribution of discount rate outperformance in TPR's analysis in 2018/19, 2019/20 and 2020/21 between the 5th and the 95th percentiles, as well as the discount rate outperformance adopted at the NATS Section's 2020 actuarial valuation against the 2020/21 analysis.

Chart 1: Distribution of discount rates in TPR’s analysis (DB scheme only)



GAD have estimated the NATS Section’s single equivalent discount rate to be 1.1% per annum above gilts for the 2020 actuarial valuation.

Reasonable and efficient range – updates

GAD provided estimated ranges of pension costs that might be considered reasonable and efficient in comparison with similar DB schemes in our June 2022 report and Supplementary Note in June 2023. The principles underlying the reasonable range were set out within Section 6 of our previous paper.

Considering the NATS Section’s investment strategy, strong employer covenant and relative immaturity we suggested a reasonable range for a funding strategy would be between the 70th and 95th percentile of Defined Benefit pension schemes. In this assessment we have taken a “top-down” approach that reflects the universe of schemes and sets broad expectations given the two main risk factors we consider to be relevant in DB scheme funding and investment.

Table 2a and Table 2b below sets out the lower, mid and upper bounds – please see our previous advice for further explanation of terms. Table 2a illustrates GAD’s reasonable and efficient range, reflecting the most recent Scheme Funding data available from the Pensions Regulator covering schemes with an effective date of valuation between 22 September 2020 and 21 September 2021 (Tranche 16). Table 2b illustrates GAD’s reasonable and efficient range on the data submitted over Tranche 14, 15 and 16. These are comparable to Table B.1 of GAD’s June 2022 report and Table 2 of GAD’s June 2023 supplementary note respectively.

Table 2a: projected pension costs and GAD estimated range (DB scheme only) TPR 2020/21

Calendar years 2020 prices £m	2023	2024	2025	2026	2027
Defined Benefit (future service costs)	67	66	64	63	61
- Lower / Mid / Upper bound future service costs	29 / 60 / 69	29 / 59 / 68	28 / 58 / 66	28 / 57 / 65	27 / 55 / 63
Defined Benefit (deficit repair)	20	20	20	20	21
- Lower / Mid / Upper bound deficit repair costs	0 / 0 / 33	0 / 0 / 33	0 / 0 / 33	0 / 0 / 33	0 / 0 / 35
Total defined benefit	**87**	**86**	**84**	**83**	**82**
Total Defined Benefit: Lower / Mid / Upper bound	**29 / 60 / 103**	**29 / 59 / 102**	**28 / 58 / 100**	**28 / 57 / 99**	**27 / 55 / 98**

Note:
Dark plum shaded rows reflect pension costs requested by NERL within their Business Plan dated 7 February 2022.
Light plum shaded rows have been approximated by GAD.

Table 2b: projected pension costs and GAD estimated range (DB scheme only) average across TPR 2018/19, 2019/20 and 2020/21

Calendar years 2020 prices £m	2023	2024	2025	2026	2027
Defined Benefit (future service costs)	67	66	64	63	61
- Lower / Mid / Upper bound future service costs	22 / 50 / 67	21 / 49 / 66	21 / 48 / 64	20 / 47 / 63	20 / 46 / 61
Defined Benefit (deficit repair)	20	20	20	20	21
- Lower / Mid / Upper bound deficit repair costs	0 / 0 / 20	0 / 0 / 20	0 / 0 / 20	0 / 0 / 20	0 / 0 / 21
Total defined benefit	**87**	**86**	**84**	**83**	**82**
Total Defined Benefit: Lower / Mid / Upper bound	**22 / 50 / 87**	**21 / 49 / 86**	**21 / 48 / 84**	**20 / 47 / 83**	**20 / 46 / 82**

Note:
Dark plum shaded rows reflect pension costs requested by NERL within their Business Plan dated 7 February 2022.
Light plum shaded rows have been approximated by GAD, based on the average 70th, 85th and 95th percentiles inferred from the TPR scheme funding annex in 2018/19, 2019,29 and 2020/21

Having set broad expectations based on the universe of DB pension schemes we provide some assessment of the feasibility of implementing the range of funding approaches within the context of the scheme. This is simply an illustrative exercise at this stage to demonstrate how the range of funding approaches might be achieved in the context of the scheme.

The methodology for determining the GAD lower, mid and upper bound pension costs remains unchanged from our June 2022 report, Section 9, as we believe this represents a sufficiently wide range. The range represents 25% of the universe of defined benefit pension schemes which were submitted to the Pensions Regulator being based on the 70th percentile to 95th percentile of scheme discount rates. It is designed to assist the CAA in assessing NERL's pension costs, by illustrating a range of results that we might expect to see in practice.

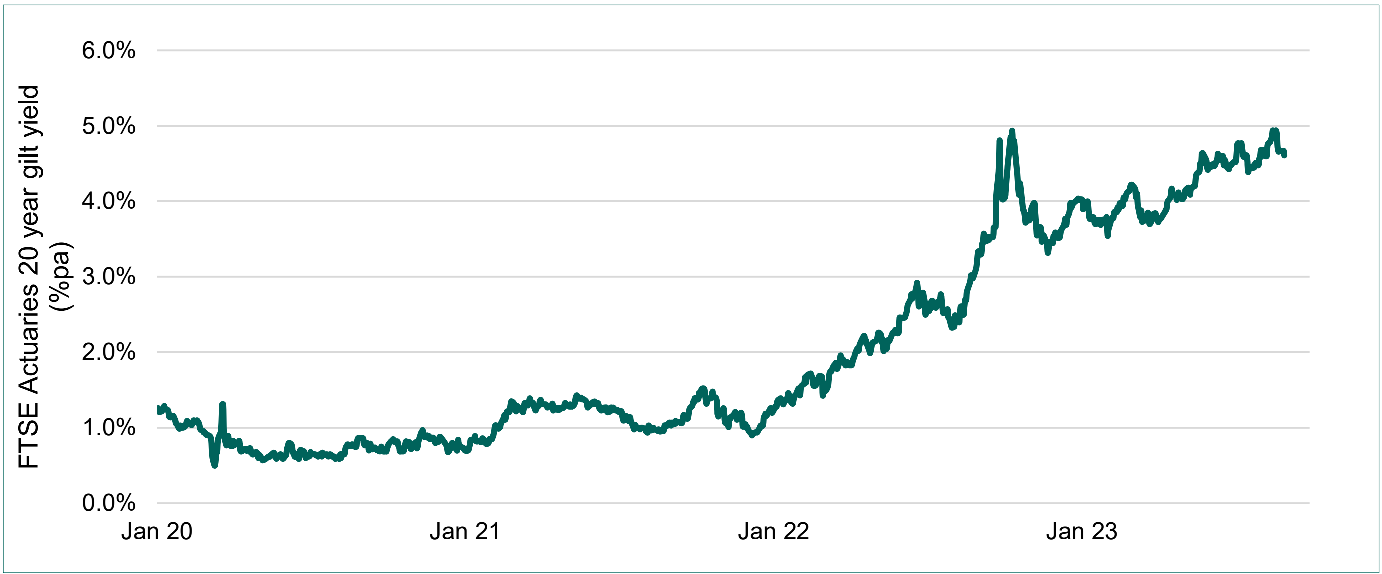
This information will enable CAA to assess what might be reasonable in the context of the scheme in comparison with the universe of DB schemes but also with some assessment of the changes that would be required withing the funding and investment strategy.

Developments pertaining to the next actuarial valuation

Most UK DB schemes adopt funding approaches referencing UK government bonds or 'gilts', deemed to be a low-risk investment. Trustees will often follow a gilts-based funding strategy as it can reflect how pension liabilities are valued on company balance sheets, and has similarities with how insurers price bulk annuities, which are the aspiration for Trustees to purchase. Consequently, many schemes hold gilts as it helps the value of the scheme's assets to move in a similar way to the actuarial value of the liabilities.

It became common for pension schemes to use leverage to increase their exposure to gilts to reduce their funding risks. This did however introduce other (mainly operational) risks which presented a problem for many schemes in 2022.

Chart 2: the evolution of the UK government bond yield (20-year maturity)



Source: Financial Times

Over 2022 and 2023 the yield available on long-term fixed interest gilts has risen significantly, increasing from "all-time-lows" of less than 1% by around 3 percentage points a year. The yield available on these gilts is determined by factors such as the supply of gilts by government, as well as the demand by institutions such as UK pension schemes and insurers, as well as overseas investors. The last couple years have been volatile for gilt markets for the following reasons:

a) The UK's central bank, who operate independently from central government, have increased their base rate, the rate at which they will lend to the banks. This was to manage inflation to levels closer to their target rate of 2.0%. By increasing this rate, this moderates the market expectation of the yield available on comparable products, such as the bonds sold by the UK government.

b) In September 2022 market confidence in the UK government's policies was shaken at the announcement of a set of spending plans in a 'mini-budget'. Rapid increases in the effective yield of traded UK government bonds was observed. Pension schemes, who held these bonds as assets through levered positions in derivatives saw large decreases in the value of their holdings, and were forced sellers of other assets as they raced to meet collateral calls on their derivative positions. Many schemes have since reduced their effective leverage (or ‘gearing’) in response, and may not be able to achieve the same efficiency of capital allocation as they were previously able to; this has reduced their operational risks but would come at a cost such as increased funding risk and lower potential expected investment returns.

The CAA Pension Scheme has maintained a leveraged exposure to gilts, and GAD would therefore expect that the Trustee would have reviewed their investment strategy as a result of the events over the last couple of years. GAD have not been provided with relevant, up-to-date scheme specific information, and we have not considered this in detail.

It is likely that the Trustee and NATS will negotiate the next actuarial valuation of the CAA Pension Scheme against markedly different market and economic conditions and backdrop to the previous valuation. Experience and changes in the investment strategy will be critical considerations to the decisions that stakeholders make.

Government Actuary’s Department
11 October 2023

Appendix

This note is addressed to the CAA. We are aware that the CAA may make this note available to other parties, including NERL and the Trustee of the NATS Section and their advisers. We are aware that the CAA intend to publish this report in its entirety, or to quote this report in part, subject to confidentiality requirements. GAD reserves the right to review and comment on any documents in which the CAA quotes or refers to this report in part.

This note should be read in conjunction with GAD's report dated 17 June 2022. All comments on methodology, compliance and limitations apply.

Advice provided by GAD to the CAA is intended solely for the use of CAA. GAD does not accept any responsibility to third parties who may read this report or extracts from it.

Assumptions

To prepare the reasonable and efficient range GAD have inferred the distribution of outperformance above the gilt yield from summary data produced by the Pensions Regulator. The reasonable and efficient ranges produced by GAD show costs incurred were the discount rate to be set at the 70th, 85th and 95th percentiles. The table below sets out the discount rates at these percentiles based on GAD's analysis.

Table A: outperformance of the nominal SEDR over nominal gilt yield (% pa)

Percentile	TPR 2020/21 Tranche 16 *Table 2a*	TPR 2018/19, 2019/20, 2020/21 Average Tranche 14-16 *Table 2b*
75th	1.05	1.10
85th	1.30	1.45
95th-*	1.770	1.90

*95th percentile produced by TPR, Table 4.9a

Limitations

This review considers NERL's pension arrangements only. It is recognised that pension arrangements are only part of overall remuneration packages.

This report compares the NATS Section with publicly available information on other UK private sector defined benefit pension schemes. Such comparisons do not consider factors which affect specific industries, sponsoring employers or pension schemes in isolation, and are provided as a guide only.

Defined benefit 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.

The purpose of this report is to assist the CAA in considering its price controls for the period 1 January 2023 to 31 December 2027. This report does not represent advice on the appropriate funding of the NATS Section, or other pension schemes.

Compliance

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.