Advice to the Civil Aviation Authority

RP2 price control review for NATS (En Route) plc

Analysis of pension costs

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1 Executive summary

1.1 The Civil Aviation Authority (CAA), in its role as economic regulator, is carrying out a price review for NATS (En Route) plc ("NERL"). This report sets out the results of our analysis of the reasonableness of the assumptions used by NERL to project its pension contributions for the price control period (2015-19). Our analysis enables the CAA to understand the factors affecting NERL's pension contributions and the extent to which the NATS pension scheme's funding approach is consistent with that of other UK private sector defined benefit pension schemes. This report also comments on the CAA's stewardship test.

Projected pension contributions

1.2 NERL's overall pension contributions are projected to decrease from 43% of pensionable pay in 2013-14 to 36% of pensionable pay in 2015-16 and then remain broadly constant (as a percentage of pay) over the period to 2019-20. These are the overall contribution rates considering NERL's defined-benefit (DB) and defined-contribution (DC) pension arrangements together. Almost all of NERL's projected pension contributions are in respect of the NATS pension scheme (a defined benefit scheme).

1.3 Most of this report considers NERL's projected contributions to the defined-benefit NATS pension scheme only. This is because future defined-contribution pension costs depend more directly on the scheme's fixed contribution rates rather than requiring projections of future pension costs.

1.4 The majority of the projected contributions to the NATS pension scheme reflect standard contributions (in other words, contributions to cover the expected cost of benefits accruing to active members). The standard contribution rate is expected to decrease from 36.7% of pay to 29.4% of pay from January 2015 in line with the results of the 2012 funding valuation of the NATS pension scheme and taking into account changes to indexation for future benefit accruals. This reduction in the standard contribution rate explains most of the projected decrease in NERL's pension contributions for RP2. The CAA should consider the implications of the reduction in standard contributions not taking effect until January 2015, while taking into account the consequential increase in deficiency contributions that would otherwise be required.

1.5 In addition, NERL is currently paying deficiency contributions of around £20 million a year. Deficiency contributions are projected to continue at broadly the same level following the 2012 valuation and throughout most of RP2. These have been calculated using a recovery period of 11 years and assuming that excess investment returns during the recovery period (rather than deficiency contributions) will meet around one third of the deficit.

1.6 NERL assumes its deficiency contributions will reduce in the last year of RP2 due to a projected improvement in the scheme's funding position at future valuations.

1.7 NERL's projected contributions appear to represent approximately 75-80% of the total expected employer contributions to the NATS pension scheme. The CAA should confirm that this split is consistent with data and analysis for other components of the price review.

Scheme benefits

1.8 Scheme benefits are one of the main determinants of contribution rates to defined benefit pension schemes.

1.9 The NATS pension scheme was closed to new entrants in 2009 and replaced with a defined contribution (DC) pension scheme. Replacing DB provision with DC provision for new entrants reduces NERL's exposure to the risk of deficiency contributions, and is expected to reduce overall pension costs. These effects will increase over time, as more entrants join the DC arrangement rather than the DB scheme.

1.10 The NATS scheme's benefits are more generous than those provided by typical UK private sector DB schemes. Approximate calculations suggest that, if the NATS scheme's benefits were to be more typical, the employer's standard contribution rate could be around 25% of pay, compared to the current rate of 37% of pay.[1] The purpose of this calculation is solely to illustrate the broad effect of the level of the NATS scheme's benefits on NERL's projected contributions. We recognise that the NATS scheme's benefits reflect the scheme's public sector origins and protections put in place at privatisation. The CAA is taking legal advice on the extent of these protections.

1.11 Recent changes to the NATS pension scheme have reduced NERL's expected pension costs for RP2. These include the introduction of (and subsequently reduction to) a cap on pensionable pay increases, and the reduction in the level of indexation applied to future benefit accruals.

Investment strategy

1.12 The NATS pension scheme's investment strategy affects its investment returns (and therefore its current and future funding levels) and the choice of actuarial assumptions for funding valuations, and therefore NERL's projected contributions. Further, the CAA wishes to consider whether the NATS scheme's investment strategy is consistent with that of other schemes. A number of factors affect schemes' investment strategies.

1.13 Around 65% of the NATS pension scheme's assets were invested in return-seeking assets in 2012 (a reduction from 70% in 2009). Data on average UK pension schemes' strategic investment strategies suggest that this is higher than a more typical proportion of around 50%. Other things being equal, a higher proportion in return-seeking assets implies higher long-term expected investment returns and therefore an expectation of lower long-term employer contributions, at the expense of higher investment risk and therefore potentially more volatile contribution rates.

1.14 I recommend that the CAA participates in future discussions with NERL and the scheme's trustees on moving towards a lower-risk longer-term investment strategy in view of the potential effects on future pension allowances and user costs.

[1] Going forward, the NATS scheme's standard contribution rate is due to decrease to 29% of pay in line with the results of the 2012 valuation of the scheme and taking into account changes to the scheme's benefits.

Funding valuation assumptions

1.15 The results of actuarial funding valuations depend critically on the assumptions used. This report explains the assumptions used for the 2012 valuation of the NATS pension scheme, and compares the assumptions used with publicly available information on other UK private sector defined benefit pension schemes. In general, and considering the set of assumptions as a whole, the assumptions adopted for the funding valuation are within a reasonable range.

1.16 The allowance for asset outperformance relative to gilt yields before retirement (3% a year) is unchanged from the 2009 valuation and is higher than the assumptions typically used by other schemes as reported by Pensions Regulator data. The allowance for asset outperformance after retirement (¼% a year) is also unchanged from 2009 and is slightly lower than the assumptions typically used by other schemes.

1.17 Relatively large allowances are made for future pay increases due to promotion and progression. Such allowances for promotional pay increases affect the standard contribution rate and also the value of the scheme's liabilities (and hence projected deficiency contributions).

1.18 The allowance for future longevity improvements is in line with that typically used by other pension schemes (as reported in Pensions Regulator data). The implied expectations of life from the valuation are slightly higher than the median levels for other schemes but this is likely to reflect the scheme's membership and experience.

Stewardship test

1.19 The CAA applies a stewardship test to assess whether the NATS pension scheme's assets are being managed efficiently. The information provided to the CAA summarises the scheme's operation and governance arrangements and does not suggest any reasons for concern regarding the operation of the NATS pension scheme.

1.20 Data on the NATS pension scheme's past investment returns do not highlight any material concerns, taking into account the approximate nature of the analysis.

Limitations of the analysis

1.21 This report considers NERL's projected pension contributions only. We have not been asked to advise the CAA on its proposed approach to pension costs for the price review.

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

1.23 A large number of factors will be taken into account by a pension scheme's trustees and sponsoring employer when setting its investment strategy and carrying out actuarial funding valuations. This report must not be interpreted as advising that one particular approach or set of assumptions is necessarily inappropriate.

2 Introduction

Section summary
The Civil Aviation Authority (CAA), in its role as economic regulator, is carrying out a price review for NATS (En Route) plc (NERL). This report sets out the results of our analysis of the reasonableness of the assumptions used by NERL to project its pension contributions for the price control period (2015-19). Our analysis enables the CAA to understand the factors affecting NERL's pension contributions and the extent to which the NATS pension scheme's funding approach is consistent with that of other UK private sector defined benefit pension schemes. This report also comments on the CAA's stewardship test. Limitations of the analysis are noted.

Background and terms of reference

2.1 This report has been prepared by GAD at the request of the Civil Aviation Authority (CAA).

2.2 The CAA is the economic regulator of NATS (En Route) plc ("NERL"). Every five years the CAA sets price controls which limit the maximum revenue NERL is permitted to earn from its regulated businesses. The CAA is currently reviewing the price controls for period RP2, 1 January 2015 to 31 December 2019.

2.3 When setting price limits, the CAA considers the costs which an efficient company incurs to carry out its functions. Such costs include contributions to pension schemes.

2.4 NERL's revised business plan details its projected pension contributions for RP2, the majority of which are contributions to the NATS Section of the Civil Aviation Authority Pension Scheme (referred to as the "NATS pension scheme" in this report).

2.5 The CAA asked GAD to advise on the reasonableness of the actuarial assumptions used by NERL for its projections. This report sets out the results of our analysis. It explains the methods and assumptions used by NERL to project its pension contributions for RP2. It also illustrates the sensitivity of the results to key assumptions. Our analysis enables the CAA to understand the factors affecting NERL's pension contributions and the extent to which the NATS pension scheme's funding approach is consistent with that of other UK private sector defined benefit pension schemes.

2.6 The management of the NATS pension scheme is the responsibility of the scheme's trustees. The trustees are subject to the requirements of trust law and pensions law, in common with other pension schemes. The pension scheme is regulated by the Pensions Regulator. The scheme trustees' responsibilities include deciding the scheme's funding principles and investment strategy.

2.7 NERL has a number of powers under the pension scheme's governing documentation and pensions legislation, including approving the scheme's funding principles, assumptions and contributions; commenting on proposed changes to the investment strategy; and appointing some of the trustees. Further, NERL (not the scheme trustees) has presented business plan projections based on its projections of the outcome of future actuarial valuations. For the purposes of this review, the CAA's focus is on outcomes which depend on NERL's powers, decisions and projections.

2.8 At its CP2 review, the CAA confirmed that it would apply a stewardship test to assess whether the NATS pension scheme's assets were being managed efficiently. The test involves "the trustees to the pension scheme in all material respects fulfilling the requirements of pensions legislation and the codes of practice issued by the Pensions Regulator (formerly OPRA) under the Pensions Act 2004". The NATS pension scheme's trustees have reported on the procedures the trustees have put in place to fulfil their obligations under legislation and the scheme's rules.

2.9 The CAA asked GAD to review the trustees' report. This report sets out the results of our review, to assist the CAA in carrying out its stewardship test.

2.10 The terms of reference for this report are shown in Appendix A.

2.11 I carried out a similar review for the CAA in respect of its CP3 price control review of NERL. My report dated 26 May 2010 sets out the results of that review.

Structure of this report

2.12 This report contains the following sections:

> ***Section 3*** provides some background on pension contributions and defined benefit pension scheme funding requirements. It also summarises NERL's projected pension contributions that are the subject of most of this report.

> ***Section 4*** summarises the history of the NATS pension scheme and the benefits provided by the scheme. The level of benefits provided by a pension scheme is one of the key factors affecting the scheme's contribution requirements.

> ***Section 5*** discusses the NATS pension scheme's strategic investment strategy. Investment strategy is a key factor in considering the scheme's funding assumptions. As part of its stewardship test, the CAA wishes to consider whether the NATS pension scheme's investment strategy is consistent with that of other schemes.

> ***Section 6*** analyses the actuarial assumptions used for the actuarial valuation of the NATS pension scheme as at 31 December 2012, the results of which are used to project NERL's pension contributions for RP2.

> ***Section 7*** discusses NERL's projected contributions to the NATS pension scheme in the light of the discussion in the previous sections of the report.

> ***Section 8*** comments on the CAA's stewardship test.

> ***Section 9*** summarises the report's conclusions.

2.13 Further information is provided in the appendices.

Information used

2.14 Appendix B lists the information which we have used for our analysis. In preparing this report, we have relied solely on the information listed in Appendix B. While we consider the information provided to be reasonable for this purpose, we have not carried out a full independent audit of the information. We have not independently calculated or checked NERL's projected pension contributions or the results of the actuarial valuation of the NATS pension scheme. We accept no responsibility for any inaccuracies or omissions due to any errors or omissions in the information provided to us in respect of the NATS pension scheme or NERL's projected pension contributions.

Consultation

2.15 A meeting between the CAA, GAD and NERL took place on 29 November 2013 to discuss NERL's projected pension costs and for NERL to explain the recent changes to its pension arrangements.

2.16 The CAA and NERL were shown drafts of this report before it was finalised, for comment and to check factual accuracy. The CAA's and NERL's comments have been borne in mind when preparing the final version.

Limitations of the analysis

2.17 This report considers NERL's projected pension contributions only. We have not considered, or reviewed, other aspects of NERL's business plan.

2.18 We have not been asked to advise the CAA on its proposed approach to pension costs for the price review.

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

2.20 A large number of factors will be taken into account by a pension scheme's trustees and sponsoring employer when setting its investment strategy and carrying out actuarial funding valuations. It is beyond the scope of this report to consider all such factors. It is recognised that schemes' investment strategies and funding valuation assumptions should reflect each scheme's particular circumstances, and that a "one-size fits all" approach is not appropriate. This report must not be interpreted as advising that one particular approach or set of assumptions is necessarily inappropriate.

Distribution and publication of this report

2.21 This report is addressed to the CAA. We are aware that the CAA may make this report available to other parties, including NERL and the trustees of the NATS pension scheme. We are aware that the CAA may choose 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 document in which the CAA quotes or refers to this report in part. In all other circumstances, this report must not be reproduced or disseminated to third parties without the prior consent of GAD.

2.22 Advice provided by GAD to the CAA is intended solely for the use of the CAA. GAD does not accept any liability to third parties, whether or not GAD has agreed to the disclosure of its advice to the third party.

3 Cash contributions

Section summary

NERL's overall pension contributions are projected to decrease from 43% of pensionable pay in 2013-14 to 36% of pensionable pay in 2015-16 and then remain broadly constant (as a percentage of pay) over the period to 2019-20. Almost all of NERL's projected pension contributions are in respect of the NATS pension scheme (a defined benefit scheme).

Most of this report considers NERL's projected contributions to the DB NATS pension scheme only. This is because future DC pension costs depend more directly on the scheme's fixed contribution rates rather than requiring projections of future pension costs.

This section gives some background on funding defined benefit pension schemes, including how employer contribution rates are calculated.

The majority of the projected contributions to the NATS pension scheme reflect standard contributions (in other words, contributions to cover the expected cost of benefits accruing to active members). The standard contribution rate is expected to decrease from 36.7% of pay to 29.4% of pay from January 2015 in line with the results of the 2012 funding valuation of the NATS pension scheme and taking into account changes to indexation for future benefit accruals. This reduction in the standard contribution rate explains most of the projected decrease in NERL's pension contributions for RP2.

In addition, NERL is currently paying deficiency contributions of around £20 million a year. Deficiency contributions are projected to continue at broadly the same level following the 2012 valuation and throughout RP2.

NERL's projected pension contributions

3.1 Figures 3.1 and 3.2 show NERL's projected pension contributions for financial years 2013-14 to 2019-20. Figure 3.1 shows NERL's total contributions as a percentage of pensionable pay. Figure 3.2 shows amounts separately for contributions to the NATS pension scheme, which is a defined benefit (DB) final salary pension scheme, and contributions to NERL's defined contribution (DC) pension scheme.

Figure 3.1: NERL's projected pension contributions – DB and DC schemes combined – *percentage of pensionable pay*

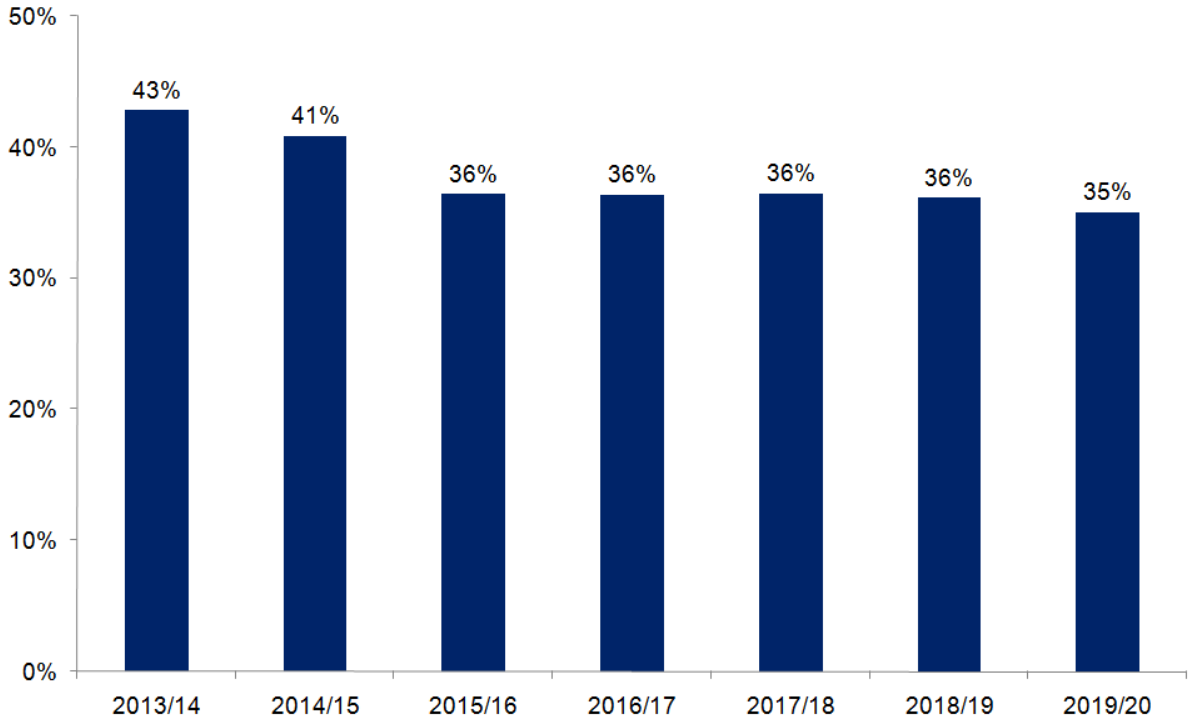
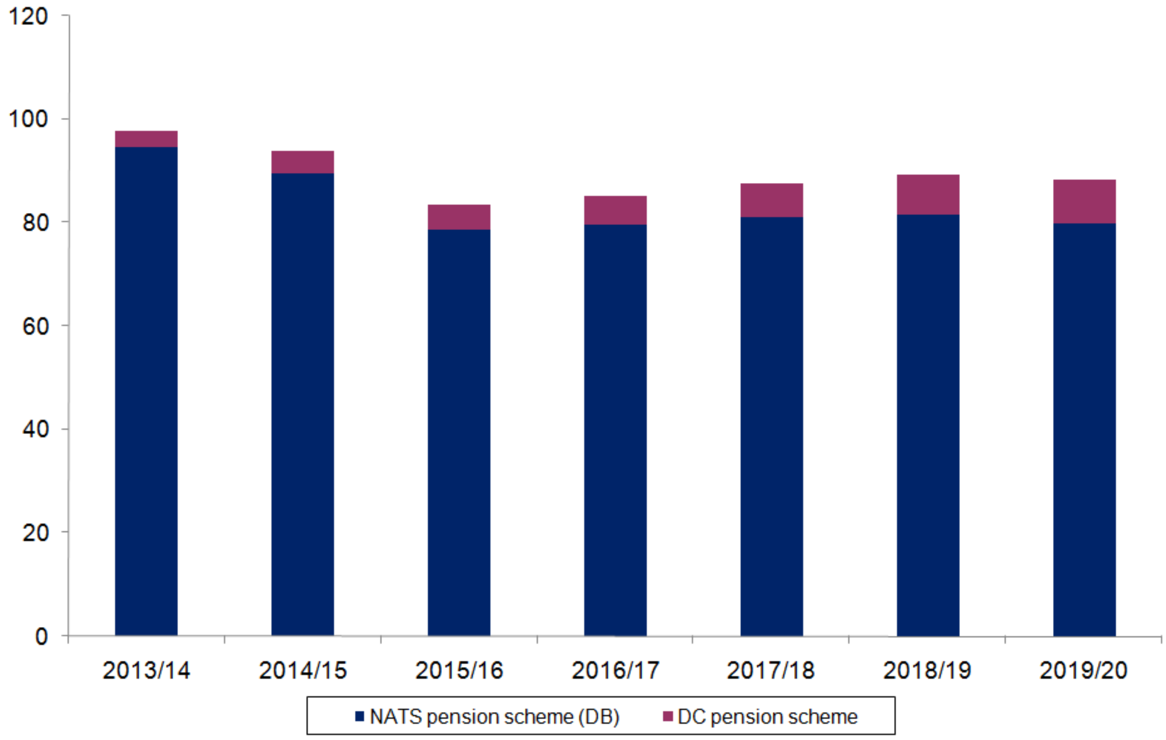


Figure 3.2: NERL's projected pension contributions, separately for DB and DC schemes – *£ million (in nominal terms)*



3.2 Figure 3.1 shows that NERL's pension contributions are projected to decrease from 43% of pensionable pay in 2013-14 to 36% of pensionable pay in 2015-16 and then remain broadly constant over the period to 2019-20.[2]

3.3 Figure 3.2 shows that almost all of NERL's projected pension contributions are in respect of the (DB) NATS pension scheme. There are two reasons for this:

> The DC scheme was established for new entrants from 1 April 2009. The number of members of the DC scheme is expected to increase gradually over time but is currently low relative to the DB scheme.

> Employer contribution rates to the DC scheme are expected to be lower than those to the DB scheme.

3.4 Most of this report considers NERL's projected contributions to the DB NATS pension scheme only. This is because future DC pension costs depend more directly on the scheme's fixed contribution rates rather than requiring projections of future pension costs.

3.5 NERL's revised business plan projections include projected future DC pension costs at the rate of between 14% and 15% of pensionable payroll for members of the DC pension arrangements. This is in line with the rate assumed at the time of my previous review. Please refer to my report dated 26 May 2010 for further comments on NERL's projected DC pension costs.

DB pension contributions – background and scheme funding requirements

3.6 NERL's business plan reflects its projected cash contributions to the NATS pension scheme. An employer's contributions to its defined benefit pension scheme are determined by actuarial funding valuations. The following paragraphs give some background on pension scheme funding requirements and actuarial valuations.

3.7 Most UK private sector defined benefit pension schemes are subject to the scheme funding requirements of Part 3 of the Pensions Act 2004.[3] Pension schemes must have a full actuarial valuation carried out at least every three years. The purposes of such an actuarial valuation are:

> To check whether the pension scheme's assets are sufficient to cover its accrued liabilities (referred to as its *Technical Provisions* in the Pensions Act 2004); and

> To determine the contribution rate payable by the employer going forward.[4]

[2] Unless stated otherwise, all contribution rates and amounts in this report refer to employer contributions paid by NERL and exclude member contributions paid by employees (and notional member contributions under the salary sacrifice arrangement).
[3] For further information, please refer to "Code of Practice 03: Funding defined benefits" (tPR).
[4] The pension scheme's rules usually determine the rate of members' contributions. In a defined benefit scheme, the employer's contributions are usually variable, and depend on the scheme's experience. In other words, given a fixed rate of member contributions, the employer must ensure the scheme has sufficient assets to pay the specified benefits.

3.8 Employers' contribution rates comprise two elements:

> The employer's share of the *Standard Contribution Rate (SCR)*: this is the contribution rate required to meet the expected cost of pension benefits accruing to active members in respect of service in the relevant period (often the next three years), after deducting the members' contribution rate. The higher the members' contribution rate, the lower the employer's share of the SCR.

> Adjustments for past service surplus or deficit: where an actuarial valuation shows that the scheme's assets are less than required to cover the expected cost of members' benefits which have accrued up to the valuation date, additional *deficiency contributions* are required from the employer to make up the shortfall. Conversely, where the scheme's assets are more than sufficient, the employer's contributions may be reduced, depending on the scheme's rules.

3.9 The Standard Contribution Rate (SCR) therefore depends on the following three main factors:

> The level of benefits being provided: The more generous the benefits, the higher the SCR. Also, the lower the members' contribution rate (as specified in the scheme rules), the higher the employer's share of the SCR.

> The actuarial assumptions used: The more optimistic the assumptions, the lower the expected cost now of providing the defined benefits.[5]

> The membership profile of the pension scheme: The expected cost of providing a pension depends on the age of the members. Differences in age profiles will result in different SCRs.

3.10 The amount of any deficiency contributions depends on the following factors:

> The scheme's funding position: This depends on the scheme's actual past experience, and also on the assumptions used for the valuation with regard to the scheme's future experience. Past experience affects both the scheme's liabilities (its obligations to pay members' benefits) and the scheme's assets (the fund which has built up from past contributions and the actual investment performance achieved to date).

> The *recovery period*: In other words, the period over which any deficit must be met by the employer through additional contributions. For any given deficit, the annual deficiency contribution will be lower the longer the period over which the deficit is to be repaid.

[5] Note that, other things being equal, the more optimistic the assumptions used to calculate the SCR, the greater the risk of actual future experience being worse than the assumptions used and hence of a deficit emerging in the pension scheme in the future.

3.11 Some key points on the scheme funding process are[6]:

- The assumptions to be adopted for funding purposes are not prescribed in legislation or guidance.

- Assumptions must be set by the pension scheme trustees, after taking actuarial advice, and they generally must be agreed by the sponsoring employer.[7] Assumptions must reflect the scheme's and the sponsoring employer's specific circumstances, in particular the trustees' view of the sponsoring employer's covenant.[8] Assumptions affect the standard contribution rate and the amount of deficiency contributions.

- When calculating past service liabilities, assumptions must be prudent.[9]

- The recovery period must also be agreed with the sponsoring employer. The trustees should aim to eliminate any funding shortfall "as quickly as the employer can reasonably afford".[10] Therefore, affordability affects the level of deficiency contributions.

3.12 While the scheme funding valuation is the responsibility of the trustees, the sponsoring employer has the ability to influence the outcome through discussion and negotiation with the scheme trustees, in view of the statutory requirement that the funding principles and outcomes have to be agreed by the sponsor.

3.13 The Pensions Regulator has recently issued for consultation a revised draft of its code of practice on funding defined benefits and a draft defined benefit regulatory strategy. These documents have not yet come into force and may be revised before they do so. Further, at this time, it is not expected that the changes proposed by the Pensions Regulator will lead to an immediate step change in funding objectives or outcomes. Therefore, my comments in this report reflect the current funding regime.

3.14 Actuarial valuations may be carried out for other purposes, for example to determine pension costs and liabilities for the sponsoring employer's financial statements under FRS17 or IAS19, or to assess the extent to which the pension scheme's assets would be sufficient to buy out the accrued liabilities with an insurer if the scheme were to wind up (referred to as a solvency valuation). Different types of actuarial valuations use different methods and assumptions, as appropriate for the purposes of the valuation, and therefore the results are not directly comparable. This report considers scheme funding valuations of the NATS pension scheme only, which are used to determine the employer's cash contributions to the scheme.

[6] This list is not exhaustive.
[7] For the NATS scheme, there is a further requirement on the scheme actuary to certify that the contributions resulting from the valuation are no lower than those which the scheme actuary would have set if he or she had been responsible for determining contribution rates.
[8] In broad terms, the sponsoring employer's covenant to the pension scheme means the ability and willingness of the sponsor to support the scheme financially both now and in the future.
[9] A prudent (or cautious) assumption increases the value of the liabilities compared to a best-estimate assumption.
[10] "Code of Practice 03: Funding defined benefits" (tPR), paragraph 101.

Ultimate pension costs versus contributions

3.15 A defined benefit pension scheme's ultimate *cost* to the employer depends on three factors:

> The scheme's benefits (including to what extent members pay for their own benefits);

> The scheme's investment returns; and

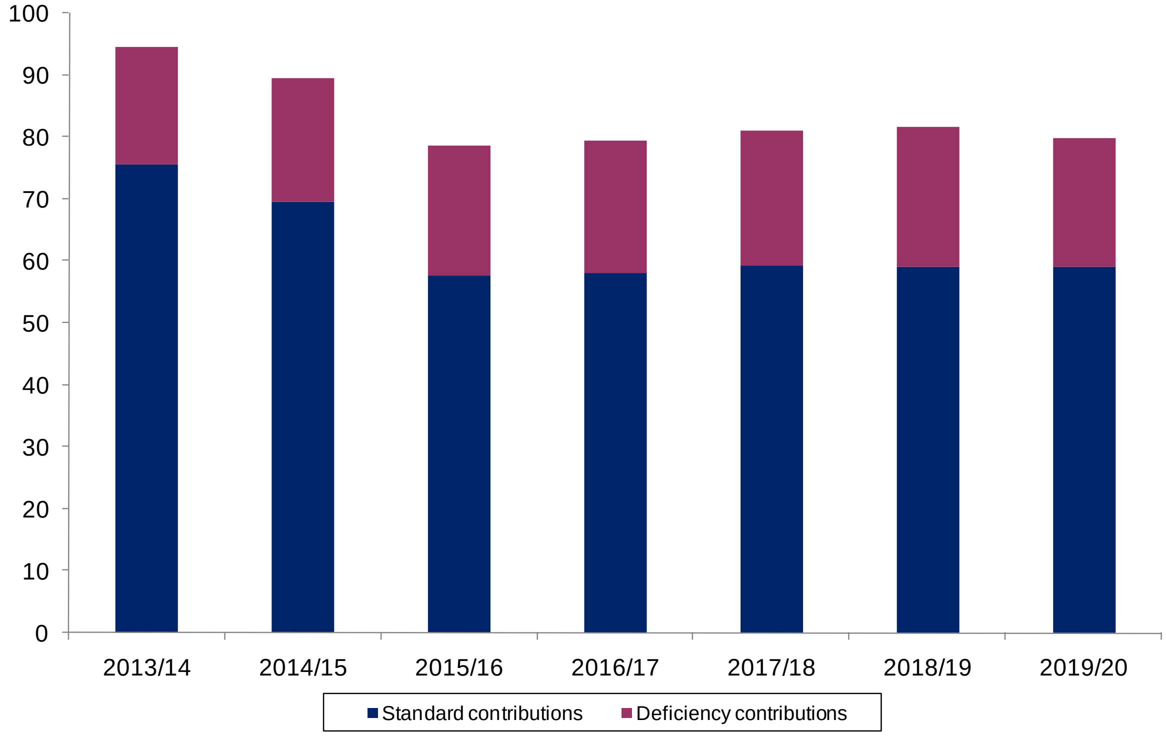
> Members' experience (for example employees' pay rises, and pensioners' longevity).

3.16 However, an employer's *contributions* to a pension scheme also depend on the method and assumptions used to calculate the contribution rates (in other words, the assumptions made regarding future investment returns and future experience). The use of more prudent assumptions causes a higher initial contribution rate, but would be more likely to result in a future valuation surplus and hence lower future contribution rates (assuming that surpluses are used to reduce contribution rates rather than to improve members' benefits). Therefore, differences in contribution rates which are caused by different methods and assumptions might, in broad terms, be expected to even themselves out over time (assuming the scheme is ongoing), but raise issues of equity between customers of different companies at different times if they are reflected in price limits.

NERL's projected contributions to the NATS pension scheme

3.17 Figure 3.3 shows NERL's projected pension contributions to the NATS pension scheme only, separately for standard contributions and deficiency contributions.

Figure 3.3: NERL's projected pension contributions to the NATS pension scheme, separately for standard contributions and deficiency contributions – *£ million (in nominal terms)*



3.18 Figure 3.3 shows that the majority of the projected contributions to the NATS pension scheme reflect standard contributions (in other words, contributions to cover the expected cost of benefits accruing to active members) despite the closure of the scheme to new entrants in April 2009. Deficiency contributions are projected to be around £20 million a year in each year from 2013-14 to 2019-20.

3.19 NERL is currently paying standard contributions to cover the expected cost of benefits accruing to active members of 36.7% of pay in line with the results of the funding valuation of the NATS pension scheme as at 31 December 2009. The standard contribution rate is expected to decrease to 29.4% of pay from January 2015 in line with the results of the funding valuation of the NATS pension scheme as at 31 December 2012 and taking into account changes to indexation for future benefit accruals. This reduction in the standard contribution rate explains most of the projected decrease in NERL's pension contributions for RP2.

3.20 In addition, NERL is currently paying deficiency contributions of around £20 million a year (representing its share of the total deficiency contributions due to the NATS pension scheme) in line with the results of the funding valuation of the NATS pension scheme as at 31 December 2009. Deficiency contributions are projected to continue at broadly the same level following the 2012 valuation and throughout RP2.

3.21 Sections 6 and 7 of this report discuss the assumptions and results of the 2012 funding valuation of the NATS pension scheme, which determine NERL's projected contributions for RP2. When considering the results of the 2012 funding valuation, it is important to consider that standard contributions, rather than deficiency contributions, are currently the more significant item overall.

3.22 The end of section 7 of this report discusses the method and assumptions used to project the results of the 2015 and 2018 funding valuations of the NATS pension scheme, which determine NERL's projected contributions later in RP2.

4 Scheme benefits

Section summary

Scheme benefits are one of the main determinants of contribution rates to defined benefit pension schemes. This section describes the background to the NATS pension scheme and summarises its benefits.

The NATS pension scheme was closed to new entrants in 2009 and replaced with a defined contribution (DC) pension scheme. Replacing DB provision with DC provision for new entrants reduces NERL's exposure to the risk of deficiency contributions, and is expected to reduce overall pension costs. These effects will increase over time, as more entrants join the DC arrangement rather than the DB scheme.

The NATS scheme's benefits are more generous than those provided by typical UK private sector DB schemes. Approximate calculations suggest that, if the NATS scheme's benefits were to be more typical, the employer's standard contribution rate could be around 25% of pay, compared to the current rate of 37% of pay. The purpose of this calculation is solely to illustrate the broad effect of the level of the NATS scheme's benefits on NERL's projected contributions. We recognise that the NATS scheme's benefits reflect the scheme's public sector origins and protections put in place at privatisation. The CAA is taking legal advice on the extent of these protections.

Recent changes to the NATS pension scheme have reduced NERL's expected pension costs for RP2. These include the introduction of (and subsequently reduction to) a cap on pensionable pay increases, and the reduction in the level of indexation applied to future benefit accruals. These changes will serve to decrease the standard contribution rate by 4.6% of pay going forward. Taking into account the results of the 2012 valuation, the employer's standard contribution rate will decrease to 29.4% of pay from January 2015.

Background

4.1 Scheme benefits are one of the main determinants of contribution rates to defined benefit pension schemes. This section describes the background to the NATS pension scheme and summarises its benefits. The purpose of this is to assist in understanding the level of NERL's projected contributions.

4.2 In 2001, the business of NATS was separated from the CAA in advance of a public-private partnership (PPP) transaction. The NATS Section of the Civil Aviation Authority Pension Scheme (referred to as the "NATS pension scheme" in this report) was established in 2001. At its inception, it contained only active members (those employed by NATS at that time).

4.3 We understand that provisions in the scheme's Trust Deed and Rules and the PPP "Trust of a Promise" document protect certain employees' pension benefits in respect of past and future service. This protection restricts the extent to which the scheme's benefits and member contribution rates can be changed. I have commented on this further later in this section.

Closure of scheme to new entrants

4.4 The NATS pension scheme was closed to new entrants with effect from 31 March 2009. Existing active members of the scheme continued to accrue benefits in respect of future service after that date, but new employees are offered membership of a defined contribution (DC) pension scheme instead.

4.5 Employees in the DC pension scheme can choose to contribute between 4% and 9% of pay. NERL contributes twice the employee's rate, in other words between 8% and 18% of pay depending on the amount the employee chooses to contribute. NERL's contributions also cover the scheme's administration costs and provide protection benefits.

4.6 The main difference between DB and DC provision relates to who bears the risk: in a DB scheme the employer bears the risk of adverse future experience through the possibility of deficiency contributions being required, whereas in a DC scheme the risk of adverse future experience rests with the member through lower than expected benefits. Conversely, there is also a difference in the party benefiting from better than expected future experience. A DC pension usually, but not necessarily, involves lower employer pension contributions than a defined benefit pension. Whether contributions are lower to a DC arrangement than to a previous DB scheme depends on the relative generosity of the two schemes. NERL's maximum contribution rate to the DC pension scheme (18% of pay) is around half of the current standard contribution rate to the DB NATS pension scheme (37% of pay).

4.7 Therefore, the closure of the NATS pension scheme to new entrants reduces the company's exposure to the risk of deficiency contributions, and is expected to reduce overall pension costs. These effects will increase over time, as more entrants join the DC scheme rather than the DB scheme.

4.8 The closure of the NATS pension scheme to new entrants, and its replacement with a DC scheme, is broadly consistent with trends in UK private sector pension provision. Please refer to the report on my previous review for further comments on this.

NATS pension scheme benefits

4.9 The principal benefits provided by the NATS pension scheme are summarised in Table 4.1. This table also illustrates the benefits offered by "typical" UK private sector defined benefit pension schemes from ONS survey data.[11]

Table 4.1: NATS pension scheme benefits (principal benefits only)

	NATS scheme	"Typical" UK scheme
Age at which unreduced benefits are paid (NRA)	60	65
Accrual rate	58ths	60ths
Dependants' pension after death of member	67% [1]	50%
Benefits on ill-health	Enhanced pension	Enhanced pension
Lump sum on retirement	By commutation	By commutation
Member contributions (% of pay)	6% [2]	5%
Pension increases (in payment)	Full RPI [3]	RPI-based [4]

[1] Increased to 100% in the period of 10 years following the member's retirement.

[2] Some members pay lower rates of contribution.

[3] Benefits earned in respect of service after 31 October 2013 will be increased in line with the Consumer Prices Index (CPI). The CPI is expected to increase by less than RPI on average over the long-term.

[4] "RPI-based" pension increases are related to the increase in the Retail Prices Index (RPI), but are subject to a cap. The level of the cap affects the relative generosity of the benefits.

4.10 Table 4.1 shows that the NATS pension scheme's benefits are more generous than those provided by typical UK private sector DB schemes. This is due to:

> the lower age at which unreduced benefits may be paid (60, rather than 65);

> pensions in payment being increased fully in line with price inflation (rather than being subject to a cap – but see below regarding changes to indexation for future accruals);

> the higher rate of dependants' benefits (67%, rather than 50%, of the member's pension); and

> the slightly higher accrual rate (58ths rather than 60ths).

4.11 Conversely, the rate of member contributions in the NATS pension scheme (6% of pay) is slightly higher than the typical rate of 5% of pay, although some members of the NATS scheme pay lower contributions.

[11] "Occupational Pension Schemes Annual Report 2011" (ONS), Tables 3.19, 4.2, 5.1, 5.8 and 5.14, and Figure 5.13.

4.12 We recognise that the NATS pension scheme's benefits reflect the scheme's public sector origins and protections put in place at privatisation (see further comments below). This comparison with a "typical" UK private sector DB scheme is approximate only. It considers pension benefits in isolation, ignoring industry- or company-specific factors and other elements of the remuneration package.

4.13 Approximate calculations suggest that, if the NATS scheme's benefits were to be in line with those shown for the "typical" UK scheme in table 4.1, the employer's share of the standard contribution rate would decrease from its current rate of 37% of pay to perhaps around 25% of pay (using the NATS scheme's 2009 funding valuation assumptions that were used to calculate the current contribution rate).

4.14 The purpose of this approximate calculation is solely to illustrate the broad effect of the level of the NATS scheme's benefits on NERL's projected contributions. I recognise that the NATS pension scheme's standard contribution rate is expected to decrease from 37% of pay to 29% of pay going forward in line with the results of the 2012 valuation of the scheme and taking into account changes to the scheme's benefits.

4.15 Some members of the scheme (ATCOs) have beneficial terms on taking early retirement from active service from age 55 (subject to fulfilling certain service requirements). The funding valuation assumptions make some allowance for the expected extra costs of this provision, but the scheme's actual future costs will depend on the extent to which such members retire early in the future. The CAA should be aware that these provisions could, for example, result in a redundancy exercise increasing pension costs to the extent that members made redundant start to draw their pension before their normal retirement age on relatively generous terms. It is also possible that redundancies reduce actual future costs under the scheme's terms.

Recent changes to the NATS scheme's provisions

4.16 NERL introduced salary sacrifice in respect of its pension schemes from 1 April 2009, referred to as "SMART pensions". A salary sacrifice arrangement in respect of pension scheme benefits is where the member's salary is reduced by the amount of the member pension contributions that he or she would normally pay, and instead the employer meets the cost of the member pension contributions. The pension scheme should be broadly unaffected by any salary sacrifice arrangement: the benefits provided to members and the total contributions to the scheme should be unchanged. The advantage of such an arrangement is a saving in National Insurance Contributions for both the member and the employer. Please refer to the report on my previous review for further comments on this.

4.17 In 2009, an agreement between NATS and Trades Unions capped future increases in pensionable pay to price inflation (then taken to be using the RPI measure) plus ½% a year, for a period of 15 years. In 2013, a supplemental agreement reduced the cap to price inflation (using the CPI measure) plus ¼% a year.

4.18 In 2010, the Government decided that statutory minimum pension increases in deferment and payment for private sector occupational pension schemes should be determined by reference to the CPI measure of price inflation rather than the RPI. The trustees of the NATS pension scheme subsequently reviewed the scheme's indexation provisions and concluded that the trustees have discretion to select an appropriate index, but that making changes in respect of service accrued to date was not considered acceptable to a number of stakeholders.

4.19 The trustees therefore concluded that pension benefits accrued after 31 October 2013 will be increased in line with the CPI measure of price inflation going forward, with no changes to benefits accrued before that date. This change reduces the expected cost of providing benefits accruing from November 2013 onwards, with no change to benefits already accrued. The scheme actuary's report on the 2012 valuation reports that this change in indexation reduces the company's future service contribution rate by 4.6% of pay. The ONS survey data referred to above indicates that UK private sector defined benefit pension schemes are split broadly equally between those using CPI and those using RPI for pension increases.

4.20 The effect of these changes in aggregate is to reduce NERL's expected pension contributions for RP2 relative to the situation had these changes not been made.

Extent to which other changes could be made to the NATS pension scheme's provisions

4.21 Many sponsors of UK defined-benefit pension schemes have made changes to reduce the value of pension benefits accruing in their schemes, or to increase the share of the scheme's cost met by employees, in recent years. Table 4.1 above shows that the NATS pension scheme's benefits are more generous than those provided by typical UK private sector DB schemes according to 2011 ONS survey data. It is likely that many employers have recently considered, or made, greater reductions in DB scheme benefits than are reflected in the ONS data.

4.22 It is appropriate for the CAA to consider the extent to which the RP2 price control allowance should reflect the provision of pension benefits which are more generous than those being provided by other private sector employers, according to survey data. The terms of reference for this review require me to comment on the extent to which NERL might reasonably be expected to make further changes to its scheme.

4.23 I understand that provisions in the scheme's Trust Deed and Rules and the PPP "Trust of a Promise" document protect certain employees' pension benefits in respect of past and future service. This protection restricts the extent to which the scheme's benefits and member contribution rates can be changed.

4.24 NERL has explained that it was able to make the changes described in paragraphs 4.16 to 4.20 above, due to the fact that those changes did not require explicit amendments to the pension scheme's governing documentation, which would be restricted by the restrictions referred to above.

4.25 NERL has provided me with a copy of a note summarising the legal effects of the protections included in the Trust Deed and Rules and the "Trust of a Promise" document. I understand that the CAA is taking separate legal advice on the effects of these documents and on the extent to which the NATS pension scheme's provisions can be amended. These are legal points, and I do not comment on them further.

4.26 The CAA should, in addition to the legal position, consider Human Resources (HR) relationship aspects. Even if a change in benefits is permitted legally, as with other changes to employment terms and conditions, the extent to which the business can gain the support of employees to benefit reductions (and the potential consequences of their being unable to do so) should be considered alongside the other issues noted above. NERL has explained that the changes described above were achieved after extensive consultation with trades unions and staff.

5 Investment strategy

Section summary

The NATS pension scheme's investment strategy affects its investment returns (and therefore its current and future funding levels) and the choice of actuarial assumptions for funding valuations, and therefore NERL's projected contributions. Further, the CAA wishes to consider whether the NATS scheme's investment strategy is consistent with that of other schemes. A number of factors affect schemes' investment strategies.

Around 65% of the NATS pension scheme's assets were invested in return-seeking assets in 2012 (a reduction from 70% in 2009). Data on average UK pension schemes' strategic investment strategies suggest that this is higher than a more typical proportion of around 50%. Other things being equal, a higher proportion in return-seeking assets implies higher long-term expected investment returns and therefore an expectation of lower long-term employer contributions, at the expense of higher investment risk and therefore potentially more volatile contribution rates. Such a simplified comparison ignores many factors, some of which are discussed in this section.

I recommend that the CAA and other stakeholders participate in future discussions with NERL and the scheme's trustees on moving towards a lower-risk longer-term investment strategy in view of the potential effects on future allowances and user costs.

Introduction

5.1 The NATS pension scheme's investment strategy affects its investment returns (and therefore its current and future funding levels) and the choice of actuarial assumptions for funding valuations, and therefore NERL's projected cash contributions.

5.2 Further, the CAA wishes to consider whether the NATS pension scheme's investment strategy is consistent with that of other schemes.

5.3 It is for the scheme trustees, not the sponsoring employer, to decide the scheme's investment strategy. However, the scheme sponsor can influence the scheme's investment strategy through the statutory requirement for the trustees to consult the employer on their investment principles, and through the scheme funding process.

Factors affecting investment strategy

5.4 A number of factors affect the investment strategy for a funded defined benefit pension scheme. The choice of investment strategy represents a trade-off between:

> Return – In isolation, assets which are expected to generate higher returns would be preferred to assets with lower expected returns. Such assets include equities and property, and are referred to as *return-seeking assets* in this report.

> Risk – The scheme's trustees wish to minimise the risk of sufficient assets not being available to meet the scheme's benefit payments as they fall due. The employer may also want to minimise the risk of large deficiency contributions being required in the future. Investing in *matching assets*, such as government and corporate bonds, can reduce risk by providing an approximate match to future pension liabilities, and by their market values broadly reflecting changes in the present value of the scheme's liabilities[12].

5.5 In their consideration of risk, one key factor for the trustees is the sponsoring employer's covenant. The trustees wish to minimise the likelihood of there being insufficient assets in the scheme with no continuing sponsoring employer being able to meet the deficiency. The greater the trustees' perceived risk of the sponsoring employer's insolvency, the more cautious the scheme's investment strategy is likely to be, although this may be influenced by the size of any existing surplus or deficit.

5.6 The maturity of the scheme is also important. Mature schemes, for example schemes where a large proportion of their liabilities relate to current pensioners, generally have net cash outflow and need certainty of investment income to ensure payments to pensioners can be met. Immature schemes with significant cash inflows (in other words, where contributions exceed pension payments) may choose to take a more risky approach to investment, as there is a longer time horizon to deal with fluctuations in asset values (subject to the strength of the sponsor's covenant) and less of a need for liquid assets.

5.7 When comparing investment strategies across different schemes, it is therefore important to take such factors into account.

5.8 The analysis in this section concentrates on the high-level allocation between return-seeking assets and matching assets. A more detailed analysis of specific asset classes is beyond the scope of this report. In particular, I am aware that a more complete discussion of investment strategy and risk might consider separately factors such as inflation and interest rate risk. The analysis in this section uses the term "risk" widely, encompassing such items.

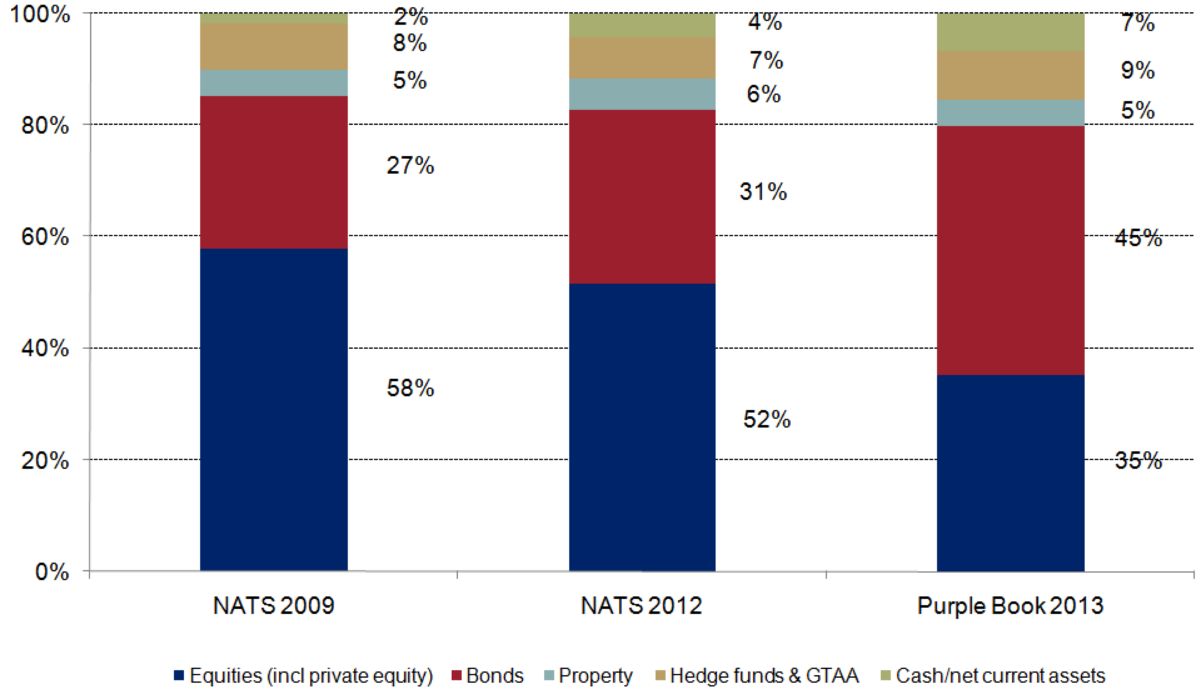
5.9 The analysis comparing schemes' percentage allocations to return-seeking assets ignores factors such as the extent of any liability hedging in schemes' investment strategies. These factors can have material impacts on a pension scheme's expected returns and investment risks. However, there is relatively little, robust, publicly available information on hedging strategies to inform any such analysis.

[12] Depending on the method used to value the scheme's liabilities.

NATS pension scheme's investment strategy

5.10 Figure 5.1 illustrates the NATS pension scheme's current investment strategy as shown in the 2012 funding valuation report. It also shows the equivalent position at the 2009 valuation, and the average asset allocation for UK private sector defined benefit pension schemes from PPF/tPR data[13].

Figure 5.1: NATS pension scheme's investments (from actuarial valuation reports) and average allocation for UK private sector defined benefit schemes (from the Purple Book) – *percentage of assets*



Note: For Purple Book data, "other" investments are included under hedge funds and GTAA[14].
Source: Average UK private sector scheme data from the Purple Book 2013 (PPF/tPR)

5.11 Figure 5.1 shows that around 65% of the NATS pension scheme's assets are currently invested in return-seeking assets (including equities and property). The allocation to return-seeking assets has reduced from around 70% in 2009. In general, a reduction in return-seeking assets over time is consistent with increasing scheme maturity (or age profile).

[13] "The Purple Book: DB pensions universe risk profile 2013" (PPF and tPR), Table 7.2.
[14] Global tactical asset allocation.

5.12 The Purple Book reports that the equivalent allocation to return-seeking assets for UK private sector defined benefit pension schemes on average was slightly less than 50%. Therefore, this data suggests that a higher proportion than average of the NATS pension scheme's assets is invested in return-seeking assets, despite the reduction from 70% to 65% in return-seeking assets between 2009 and 2012. To some extent, this is consistent with the relatively strong covenant offered by a regulated entity. Other things being equal, a higher proportion in return-seeking assets implies higher long-term expected investment returns and therefore an expectation of lower long-term employer contributions, at the expense of higher investment risk and therefore potentially more volatile contribution rates.

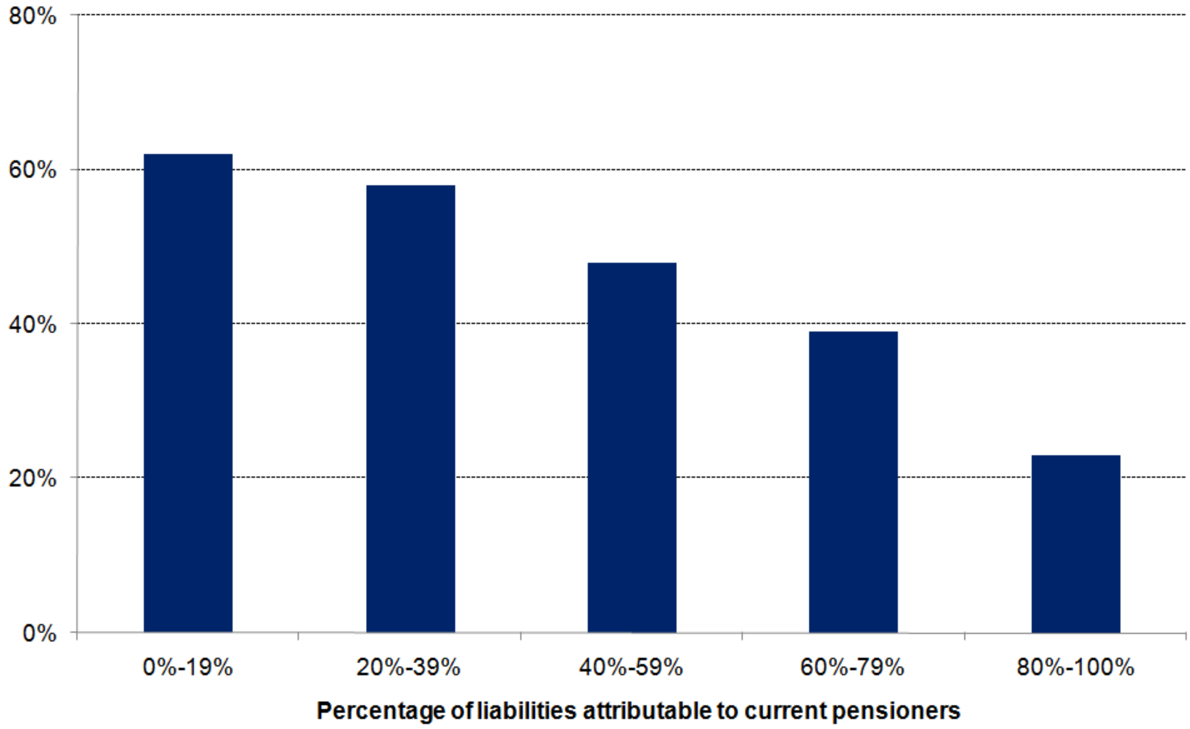
5.13 Comparisons may be affected, in part, by movements in market levels over time, as well as many other factors.

5.14 The scheme's actual allocation to return-seeking assets (which depends on market values and actual holdings on the relevant date) was broadly around the level of its strategic, target allocation (which was 70% in 2012 but decreased to 65% in 2013).

5.15 One of the main factors affecting investment strategy is the maturity of the scheme: other things being equal, a scheme with a more mature liability profile would be expected to invest a lower proportion of its assets in return-seeking assets.

5.16 Chart 7.4 in the Purple Book illustrates the relationship between investment strategy and scheme maturity, using the percentage of a scheme's liabilities attributable to current pensioners as a proxy for scheme maturity. Figure 5.2 shows approximate figures, based on Chart 7.4 in the Purple Book.

Figure 5.2: UK private sector defined benefit pension scheme average investment in return-seeking assets – by percentage of liabilities attributable to current pensioners – *percentage of assets*



Source: Approximate calculations based on Chart 7.4 of the Purple Book 2013 (PPF/tPR)

5.17 42% of the NATS pension scheme's liabilities at the 2012 funding valuation were attributable to current pensioner members. Figure 5.2 suggests that the average UK scheme with a similar membership profile would have around 50% of its assets invested in return-seeking assets (broadly in line with the percentage for all schemes as described above). Therefore, the NATS scheme's 65% investment in return-seeking assets still appears to be higher than average.

5.18 The scheme's trustees and NATS have agreed to enter discussions on moving towards a lower-risk longer-term investment strategy. To the extent that NERL's pension costs are (subject to the CAA price control process and stewardship test) ultimately borne by users, the effects of such a change could be to reduce the volatility of pension costs borne by users, but at the expense of an increase in expected long-term costs. NERL has indicated that it would wish to consult with the CAA and other stakeholders as part of the process of any change in investment strategy. I recommend that the CAA contributes to that process in view of the potential effects on future pension allowances and user costs.

NATS pension scheme's past investment returns

5.19 The CAA has indicated that, as part of its stewardship test, it wishes to ensure that the investment returns achieved on the NATS pension scheme's assets are not significantly out of line with expected returns or those achieved by pension schemes. My analysis of the scheme's past investment returns is discussed alongside the stewardship test in section 8 of this report.

6 Funding valuation assumptions

Section summary

The results of actuarial funding valuations depend critically on the assumptions used. This section explains the assumptions used for the 2012 valuation of the NATS pension scheme, and compares the assumptions used with publicly available information on other UK private sector defined benefit pension schemes. In general, and considering the set of assumptions as a whole, the assumptions adopted for the funding valuation are within a reasonable range.

The allowance for asset outperformance relative to gilt yields before retirement (3% a year) is unchanged from the 2009 valuation and is higher than the assumptions typically used by other schemes as reported by Pensions Regulator data. The allowance for asset outperformance after retirement (¼% a year) is also unchanged from 2009 and is slightly lower than the assumptions typically used by other schemes.

Relatively large allowances are made for future pay increases due to promotion and progression. Such allowances for promotional pay increases affect the standard contribution rate and also the value of the scheme's liabilities (and hence projected deficiency contributions).

The allowance for future longevity improvements is in line with that typically used by other pension schemes (as reported in Pensions Regulator data). The implied expectations of life from the valuation are slightly higher than the median levels for other schemes but this is likely to reflect the scheme's membership and experience.

Introduction

6.1 NERL's projected contributions to the NATS pension scheme are based on the results of the actuarial funding valuation of the scheme as at 31 December 2012. The results of an actuarial valuation depend critically on the assumptions used. More prudent (or cautious) assumptions will place a higher present value on the scheme's liabilities[15] and will result in a higher SCR[16], so total projected cash contributions will be higher, and vice versa.

6.2 This section explains the assumptions used for the 2012 valuation of the NATS scheme, considers any changes from those used for the 2009 valuation (which were analysed in my 2010 report) and compares the assumptions used with publicly available information on other UK private sector defined benefit pension schemes.

[15] In other words, it would suggest that the scheme would expect to be holding more assets now in order to meet its liabilities that have already been accrued.
[16] In other words, the sponsoring employer will be required to pay higher contributions to meet the expected cost of benefits accruing to active members.

6.3 The assumptions used for funding purposes are not prescribed in legislation or guidance. Assumptions must be set by the pension scheme trustees, after taking actuarial advice, and they must generally be agreed by the sponsoring employer. The CAA's focus for this purpose is on the powers of the sponsoring employer to influence and agree the funding valuation's outcomes.

6.4 Assumptions must reflect the scheme's and the sponsoring employer's specific circumstances, in particular the trustees' view of the sponsoring employer's covenant. Therefore, a range of assumptions could be considered reasonable.

6.5 When calculating past service liabilities, assumptions must be prudent. However, the degree of prudence is not defined in legislation, and will depend on the scheme's circumstances.

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

- Financial assumptions: including the discount rate (or equivalently, the assumed rate of return on the scheme's assets), pay increases, price inflation and pension increases.

- Demographic assumptions: including assumed longevity (allowing for expected future longevity improvements), assumed rates of withdrawal from active service (and whether this is through voluntary withdrawal, ill-health, death or retirement), and the proportion of members in respect of whom dependants' benefits will be paid.

6.7 This section considers in turn:

- The valuation method
- Discount rates
- Assumed rates of pay increases
- Assumed longevity
- Other assumptions

6.8 This section focuses on the assumptions used to value the NATS pension scheme's past service liabilities for the purposes of the 2012 actuarial funding valuation. Section 7 comments on the assumptions used to calculate standard contribution rates, deficiency contributions, and to project the results of the 2012 funding valuation.

Valuation method

6.9 The 2012 funding valuation used an actuarial method called the *projected unit method*. This is a standard method which is commonly used for funding valuations. For closed schemes (like the NATS pension scheme), an alternative method (called the *attained age method*) is sometimes used, but that method would be expected to result in higher contribution rates in the short term. The following paragraphs explain this further.

6.10 The expected cost of pension benefits accruing to active members, expressed as a percentage of payroll, usually increases with age (although this depends on the actuarial assumptions used to calculate the expected cost). In very broad terms, this is because there is less time before retirement in which to earn investment returns on contributions for older members. Where a pension scheme is closed to new entrants (like the NATS pension scheme), this would be expected to result in an increase in the average age of active members over time, and hence an increase in the expected cost of benefits accruing to active members, expressed as a percentage of payroll.

6.11 If the employer standard contribution rate (SCR) is calculated to be sufficient to meet the expected cost of benefits accruing to active members in the few (typically three) years following the valuation date, then the employer SCR (expressed as a percentage of payroll) would be expected to increase in the future for a closed scheme. Such an approach is called the *projected unit method*.

6.12 Alternatively, the employer SCR could be calculated to be sufficient to meet the average expected cost of benefits accruing to active members for the remainder of their expected working lifetimes. This can result in a higher initial SCR, but with no further increases being expected in the future as the average age of active members increases. This is called the *attained age method*.

6.13 Both the projected unit method and the attained age method are commonly used for funding valuations of closed pension schemes. The fact that the projected unit method has been used for the valuation of the NATS pension scheme is likely to result in lower initial employer contributions than if the attained age method had been used instead. The projected unit method may lead to future increases in the employer SCR as the average age of active members increases, but this should be considered in light of the corresponding expected reduction in pensionable payroll.

Discount rate

6.14 The discount rate is the rate at which a scheme's expected future benefit outgo is discounted for the purpose of an actuarial valuation. That is, to convert a stream of expected future benefit cashflows to a current capitalised value. It can be thought of as corresponding to an assumed rate of return on assets.

6.15 A higher discount rate (or assumed rate of return) means that the scheme's assets are expected to generate higher investment returns, and therefore the scheme needs to hold less money now in order to meet future benefit payments. Therefore, the value placed on its liabilities is lower, its funding level is higher, and its standard contribution rate is lower.

6.16 It is increasingly common for discount rates to be set by reference to gilt yields, plus an allowance for assumed *outperformance* of return-seeking assets relative to gilts.[17] This is the approach adopted for the 2012 valuation of the NATS pension scheme.

[17] Gilt yields are taken to represent the market's view of the expected rate of return on risk-free assets.

6.17 A comparison of the assumed *asset outperformance* (relative to gilts) adopted for schemes' funding valuations therefore provides a comparison of the relative prudence of the valuation assumptions: other things being equal (in particular investment strategy), assuming lower outperformance relative to gilts is more prudent than assuming higher outperformance. Such a comparison is somewhat simplified, but does provide a basis on which to compare different schemes' assumptions.

6.18 In common with many other schemes, the valuation of the NATS pension scheme uses different discount rates for valuing benefits in the period up to retirement (in which period investment is assumed to be in return-seeking assets) and for valuing benefits post-retirement (in which a greater degree of investment in matching assets is typically assumed). The assumed asset outperformance has therefore been considered separately for pre- and post-retirement.

6.19 The 2012 valuation of the NATS pension scheme assumes pre-retirement asset outperformance of 3% a year and post-retirement asset outperformance of ¼% a year. These rates are unchanged from the 2009 valuation.

6.20 Data from the Pensions Regulator[18] suggests that typical asset outperformance assumptions for funding purposes are just under 2% a year pre-retirement and around ½% a year post-retirement (slightly higher for more recent valuations).

6.21 However, the data from the Pensions Regulator only considers valuations with effective dates up to September 2011, whereas the valuation of the NATS pension scheme requires assumptions consistent with market conditions at 31 December 2012. In particular, it is important to consider the significant turbulence in equity markets in the past few years and the continuing low real yields on long-term index-linked gilts.

6.22 Considering market conditions as at 31 December 2012, I consider an assumed rate of outperformance of 3% a year on return-seeking assets to be a reasonable assumption, incorporating a small margin of prudence compared to a best-estimate view. Trustees wishing to incorporate a larger margin of prudence (for example, if they had concerns about the employer's covenant) might choose to use a lower rate of outperformance than 3%. The Pensions Regulator's data suggests that other schemes tend, on average, to adopt a lower pre-retirement rate of outperformance than 3%. The use of a higher rate of outperformance for the NATS pension scheme would be consistent with the relatively strong sponsor covenant offered by a regulated company.

6.23 Similarly, an assumed rate of outperformance of ¼% a year on matching assets seems a reasonable assumption and is unchanged from the 2009 valuation. The Pensions Regulator's data on post-retirement discount rates suggests that other schemes tend, on average, to adopt a slightly higher rate than this, but this comparison might be affected by different valuation dates (the Pensions Regulator data covers valuations with effective dates up to September 2011, whereas the difference between corporate bond yields and gilt yields narrowed somewhat between September 2011 and December 2012).

[18] "Scheme funding: An analysis of recovery plans June 2013" (tPR), Appendices Tables 4.1 and 4.2.

6.24 NERL has commented that the scheme's trustees had noted that there were arguments for reducing the post-retirement outperformance assumption at the 2012 valuation. In view of other considerations, the trustees did not propose such a reduction. In this context, the maintenance of the 2009 valuation assumption represented a positive outcome for the company relative to the alternative of it being reduced in this way.

6.25 Valuation results are very sensitive to the discount rates used. For example, approximate calculations indicate that assuming 2% (instead of 3%) a year pre-retirement asset outperformance (with all other assumptions remaining unchanged) could increase the current employer standard contribution rate (from the 2009 valuation) from 37% of pay to around 43-44% of pay.

6.26 The approach used to derive the baseline gilt yields for the 2012 valuation of the NATS pension scheme, to which the assumed asset outperformance rates are added, seems broadly reasonable. In detail, these rates reflect gilt spot rates at appropriate durations, with an adjustment of 0.4% to the assumed rate of inflation to reflect the shapes of the yield curves and an inflation risk premium.

Assumed rates of pay increases

6.27 The allowance for future pay increases in the funding valuation comprises two elements:

- Assumed future general (inflationary) pay increases; and
- Assumed future pay increases due to promotion and progression.

6.28 The assumed rate of future general (inflationary) pay increases is equal to the assumed rate of CPI price inflation plus ¼% a year. This reflects the reduction in the cap on future pensionable pay increases agreed between NATS and Trades Unions in 2013, and is therefore lower than the assumption of RPI price inflation plus ½% a year used for the 2009 funding valuation. The actuary's report on the 2012 valuation states that this change has reduced the past service deficit by £226 million (relative to a total scheme deficit of £383 million).

6.29 To the extent that this assumption applies to all future years, even though the cap agreed with the Trades Unions only applies until the end of 2023, this assumption could be considered to be marginally on the optimistic side (assuming that there is a possibility that inflationary pensionable pay increases could exceed CPI plus ¼% a year following the expiry of the agreement).

6.30 Table 6.1 shows a sample of the assumed rates of pay increases due to promotion and progression. The rates shown are the equivalent average *annual* rates over the 10 years following the valuation date (assuming that an employee remains in service for that period).

Table 6.1: NATS pension scheme 2012 valuation – assumed annual rates of pay increases due to promotion and progression for sample members – *Annualised percentage increase*

Category of member	Assumed annual rate of increase over 10 years
ATCO band 4	9.1% a year
ATCO band 5	6.4% a year
ATCO band 7	0.6% a year
Non-ATCO age 40	1.5% a year

6.31 The rates illustrated in Table 6.1 are higher than might be expected to apply in many other companies and industries. However, the valuation report states that they reflect the scheme's recent experience. The assumed rate of promotional increase for non-ATCOs has reduced since the 2009 valuation. We have not undertaken any investigation of NATS' pay and progression scales. However, such allowances for promotional and progression pay increases affect the standard contribution rate, and also the value of the scheme's liabilities (and hence projected deficiency contributions).

6.32 Approximate calculations indicate that assuming 1% a year (whether due to inflationary or promotional increases) lower future pay increases could decrease the employer's current standard contribution rate (from the 2009 valuation) from 37% of pay to perhaps 31%-32% of pay.

Assumed longevity

6.33 The longer a pension scheme member lives after retirement, the greater the cost of providing a defined benefit pension. Ongoing funding valuations require an assumption regarding the assumed longevity of members and their dependants. Such assumptions should reflect the particular membership of the scheme (in other words, whether the members' industry or geographical location suggests they might live for longer or shorter than average), and should allow for expected future improvements in longevity.

6.34 Figures 6.1 and 6.2 show the expectation of life at age 65 for a male pension scheme member at the valuation date (in Figure 6.1) and for a male pension scheme member retiring at age 65 twenty years after the valuation date (Figure 6.2), as assumed for the 2012 valuation of the NATS pension scheme. Figures 6.1 and 6.2 also show the corresponding data published by the Pensions Regulator[19] on the range of longevity assumptions used for funding purposes by UK private sector defined benefit pension schemes.

[19] "Scheme funding: An analysis of recovery plans June 2013" (tPR), Appendices Table 5.11.

6.35 The Pensions Regulator's data in Figures 6.1 and 6.2 are shown separately for valuation dates occurring in each of the last three years for which data is available (September to September years in each case). For each year, the following statistics are shown:

> The 5th percentile of schemes (bottom of the red block);

> The median of schemes (boundary between the red and blue blocks); and

> The 95th percentile of schemes (top of the blue block).

Figure 6.1: Assumed expectation of life at age 65, for a male at the valuation date, from tPR data (September to September, the 5th percentile, median and 95th percentile) and for the 2012 valuation of the NATS scheme - ***years***

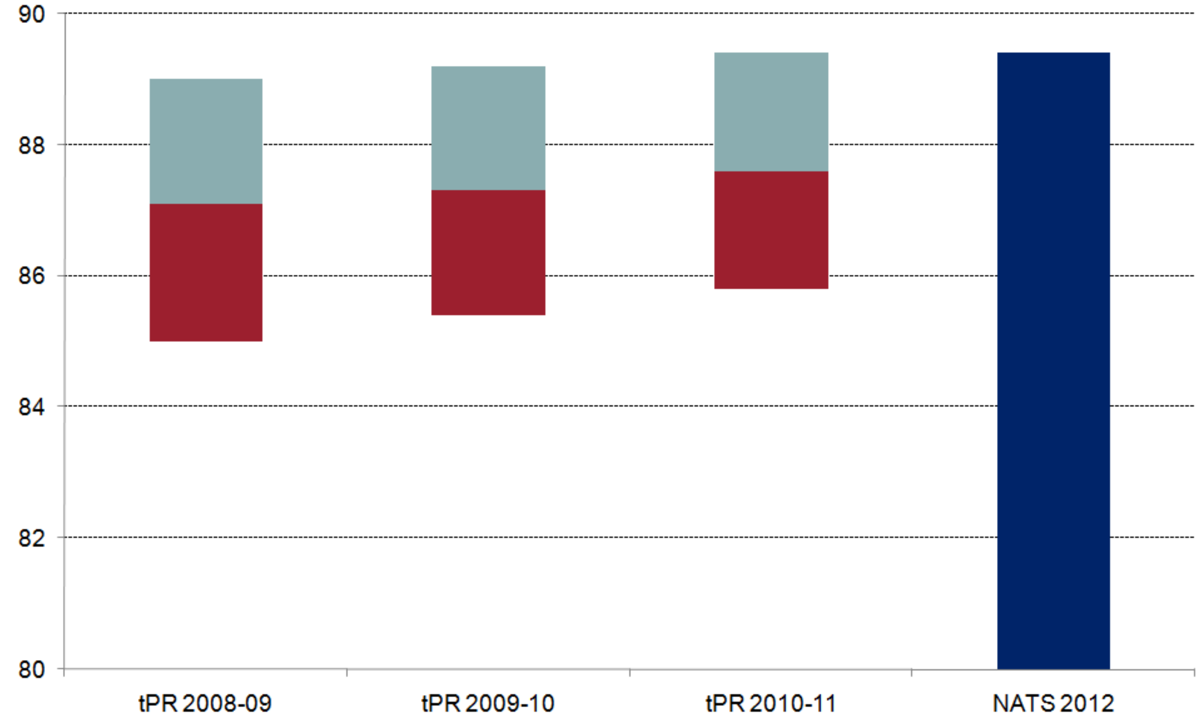
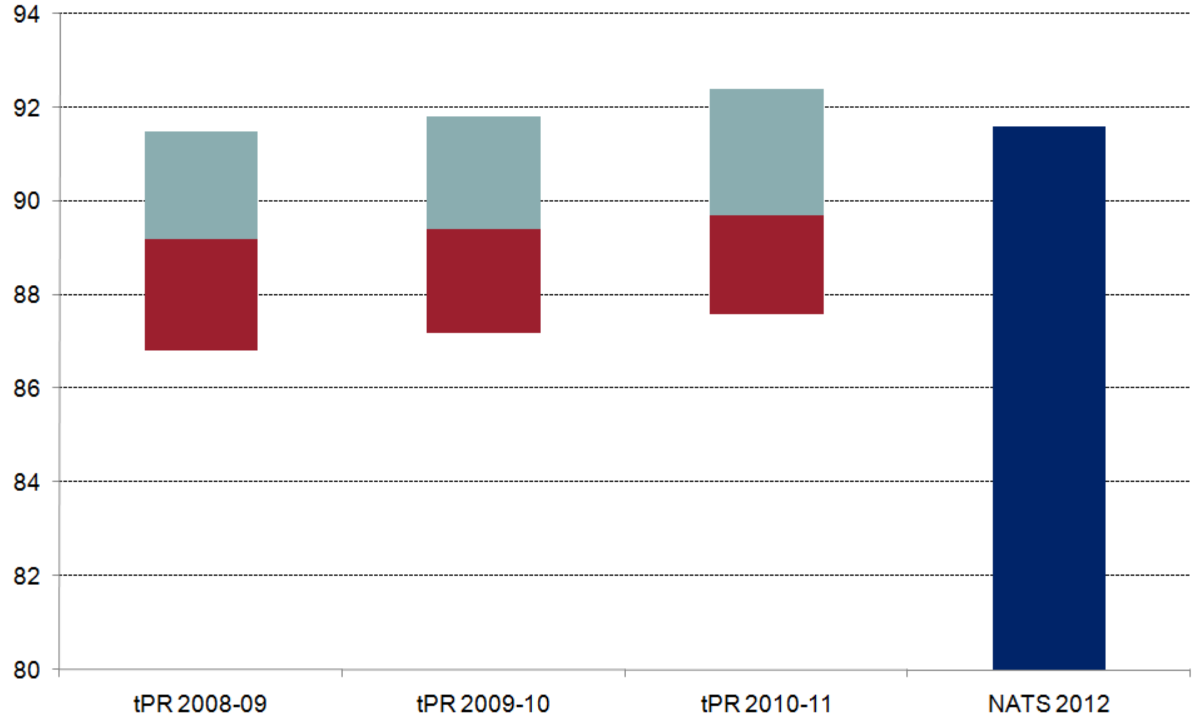


Figure 6.2: Assumed expectation of life at age 65, for a male retiring 20 years after the valuation, from tPR data (September to September years, the 5th percentile, median and 95th percentile) and for the 2012 valuation of the NATS pension scheme – ***years***



6.36 Figures 6.1 and 6.2 show the increasing trend in, and range of, longevity assumptions for actuarial valuations between September 2008 and September 2011 from the Pensions Regulator's data. The effective date of the NATS pension scheme valuation (31 December 2012) is later than that covered by the Pensions Regulator's data, and therefore we might expect the assumed expectations of life from the NATS scheme's valuation to be at least as great as those reported in the latest year of the Pensions Regulator's data. Such comparisons between schemes ignore differences in longevity which would be expected between due to geographic location, occupation, etc.

6.37 Figures 6.1 and 6.2 show that the assumed expectations of life from the NATS scheme's 2012 valuation are higher than the median, but no more than the 95th percentile, assumption reported by the Pensions Regulator for valuations between September 2010 and September 2011.

6.38 The NATS scheme's valuation assumes future longevity improvements based on the *"CMI 2011 core projection"* factors published by the actuarial profession, with a long-term rate of improvement of 1.5% a year. This is within the range of approaches that might be expected to be used by schemes at present. The Pensions Regulator data shows that around half of schemes used long-term rates of improvement of 1.5% a year for valuations between September 2010 and September 2011.

6.39 The longevity assumptions for the 2012 valuation of the NATS pension scheme appear to be reasonable. The higher assumed expectations of life compared to the Pensions Regulator data are likely to reflect differences in the scheme's membership and experience compared to other schemes. The assumed expectations of life for men are little changed from the 2009 valuation. Those for women have increased by around 2 years, but the 2012 assumptions show a more typical differential between male and female mortality.

Other factors

6.40 A number of other actuarial assumptions affect the results of an ongoing funding valuation. These include the allowance made for commutation, the assumed rates of ill-health and early retirement, and the allowance for expenses. We have not independently reviewed in detail every such assumption, but overall they seem reasonable with no significant concerns.

7 Projected contributions to the NATS pension scheme

Section summary

This section discusses NERL's projected contributions to the NATS pension scheme. NERL's projected contributions appear to represent approximately 75-80% of the total expected employer contributions to the scheme. The CAA should confirm that this split is consistent with data and analysis for other components of the price review.

NERL expects to pay standard contributions at the rate of 29.4% of pay from January 2015, in line with the results of the 2012 funding valuation of the NATS pension scheme. The CAA should consider the implications of the reduction in standard contributions not taking effect until January 2015, while taking into account the consequential increase in deficiency contributions that would otherwise be required.

NERL's business plan projections assume a small increase in the standard contribution rate from 29.4% of pay to slightly over 30% of pay during RP2. This reflects an assumed increase in the standard contribution rate due to the ageing of the active membership (because the scheme is closed to new entrants). This is consistent with the use of the projected unit valuation method and therefore seems a reasonable approach.

In addition, deficiency contributions of £26 million a year initially (increasing in future years) for the scheme as a whole are expected from 2013 onwards. These have been calculated using a recovery period of 11 years and assuming that excess investment returns during the recovery period (rather than deficiency contributions) will meet around one third of the deficit.

NERL assumes its deficiency contributions will reduce in the last year of RP2 due to a projected improvement in the scheme's funding position at future valuations.

Introduction

7.1 This section discusses NERL's projected contributions to the NATS pension scheme, based on the results of the 2012 funding valuation. It considers separately:

> Standard contributions;

> Deficiency contributions following the 2012 funding valuation; and

> Deficiency contributions following future valuations as projected in the revised business plan.

7.2 This section does not consider projected DC pension scheme contributions for the reasons discussed in section 3.

Regulated proportion

7.3 NERL's projected contributions to the NATS pension scheme appear to represent approximately 75-80% of the total expected employer contributions to the scheme. I have assumed this is because around 20-25% of NATS' business (by payroll) is not covered by the current price review. The CAA should confirm that this split is consistent with data and analysis for other components of the price review.

7.4 NERL has advised us that, in practice, pension scheme deficit contributions are split between different parts of the business in proportion to DB pensionable payroll. The business plan projections are consistent with this approach. This approach seems reasonable to me if there have not been significant changes in the relative sizes of the regulated and unregulated businesses over time (such that current payroll would not represent an appropriate proxy for the split of accrued liabilities).

Standard contributions

7.5 As noted in section 3, NERL is currently paying standard contributions at the rate of 36.7% of pay, in line with the results of the 2009 funding valuation of the NATS pension scheme. This is due to decrease to 29.4% of pay from 1 January 2015, reflecting the results of the 2012 funding valuation and the change to indexation for future benefit accruals. The scheme actuary reports that, of the total reduction in the standard contribution rate of 7.3% of pay, 2.7% of pay is due to the assumptions and circumstances underlying the 2012 valuation, and the remaining 4.6% of pay is due to the change in indexation for future accruals.

7.6 The valuation report and schedule of contributions for the 2012 valuation were signed in June 2013, and the change in indexation took effect for accruals from November 2013. In my opinion, it would have been possible to agree that the standard contribution rate would decrease before 1 January 2015.

7.7 NERL stated that the reason for the change taking effect from 1 January 2015 is that the trustees agreed to align the change in the standard contribution rate with the new 5-year price control period. Further, NERL noted that the retention of the current standard contribution rate until December 2014 has been taken into account when calculating the scheme's deficit recovery contributions, such that the deficit recovery contributions would have been higher had the reduction in the standard contribution rate not been delayed until 1 January 2015.

7.8 Taking these factors into account, the overall effect is one of timing: retaining the higher standard contribution rate of 36.7% of pay until 31 December 2014 instead of it reducing to 29.4% of pay from 1 November 2013 (for example) increases NERL's standard contributions by around £17 million over this period. Were this not to be the case, then an equivalent amount (plus interest) would need to be added to NERL's deficit recovery contributions over the period to 2023 (or perhaps at the end of that period). The CAA should consider the implications of this in the context of the pass-through arrangements for the current price control period and relative to the overall price allowance.

7.9 The change in indexation (from the RPI to the CPI measure of price inflation) for benefits accrued from November 2013 requires an assumption regarding the future differential between RPI and CPI increases. The higher assumed differential the lower the expected future pension increases (relative to market-derived RPI expectations) and therefore the lower the standard contribution rates. There is currently no deep market in CPI-linked bonds from which to derive a robust market-based expectation.

7.10 The 2012 valuation of the NATS pension scheme assumes a forward-looking differential of 0.6% a year between RPI and CPI increases. Many observers and pension schemes currently assume a margin of nearer 1% a year than 0.6% a year. However, NERL has explained that the assumed differential of 0.6% a year has been chosen for consistency with market-derived asset values and yields at the valuation date of 31 December 2012. At that time, the Office for National Statistics (ONS) was consulting on proposed changes to the RPI which were expected to have the effect of reducing reported RPI inflation going forward and reducing the differential between CPI and RPI increases. The ONS reported on 10 January 2013 that no changes would be made to the RPI. Market-derived estimates of future RPI increased accordingly, affecting also the likely forward-looking differential between RPI and CPI increases.

7.11 NERL has suggested that it would be inappropriate to take account of current expectations of the difference between RPI and CPI while using market yields and values at 31 December 2012 (which reflected the then uncertain outcome of the ONS consultation). I agree that this conclusion is reasonable, and therefore I consider the use of a 0.6% margin to be reasonable for this purpose in these circumstances.

7.12 NERL's business plan projections assume a small increase in the standard contribution rate from 29.4% of pay to slightly over 30% of pay during RP2. This reflects an assumed increase in the standard contribution rate at the future actuarial valuations due to the ageing of the active membership (because the scheme is closed to new entrants). This is consistent with the use of the projected unit valuation method (please refer to my comments on this in section 6) and therefore seems a reasonable approach.

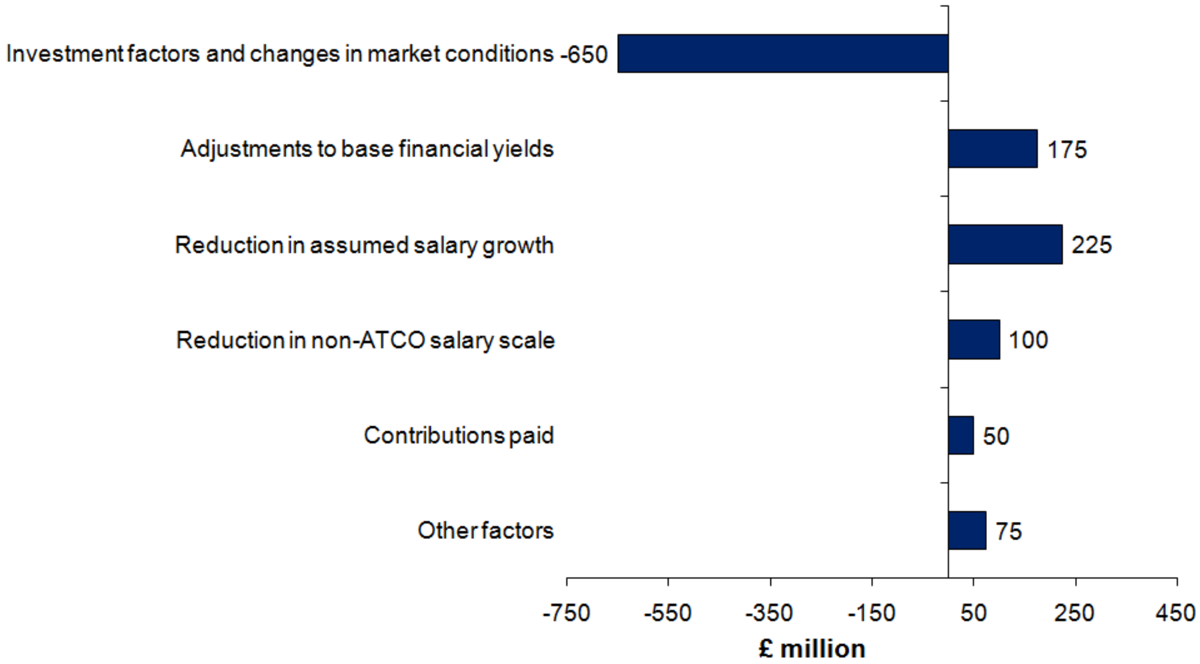
7.13 As illustrated in Figure 3.3, standard contributions represent the majority of NERL's projected contributions to the NATS pension scheme for RP2.

Deficiency contributions following the 2012 funding valuation

7.14 The actuarial funding valuation of the NATS pension scheme as at 31 December 2012 revealed a deficit of £383 million.

7.15 Figure 7.1 shows the principal reasons for the deterioration in the scheme's funding position relative to the deficit of £352 million at the 2009 valuation.

Figure 7.1: NATS pension scheme 2012 funding valuation – change in valuation surplus since the 2009 valuation – *£ million*



7.16 Figure 7.1 indicates that the main reasons for the increase in the deficit since 2009 are investment factors and changes in market conditions. Such factors would be expected, in general, to affect other pension schemes, although the precise effects will vary across schemes depending on investment strategy and other factors. Figure 7.1 also shows that the deficit would have been greater were it not for the reduction in the assumed rate of future salary growth (reflecting the supplemental agreement between NERL and the Trade Unions), the reduction in the allowance for promotional pay increases for non-ATCOs and the effect of deficit recovery contributions paid since 2009.

7.17 No allowance has been made for any improvement in the financial position of the scheme since the valuation date. This seems reasonable, to the extent that it is not possible to update constantly the scheme's funding position and because any allowance for improved market conditions would (in theory) also have to take into account any consequential amendments to the valuation assumptions.

7.18 It has been assumed that part of the valuation deficit of £383 million will be met by the NATS pension scheme's investment returns during the recovery period (11 years from the valuation date) exceeding the prudent investment return assumptions used for the valuation by 0.3% a year. The effect of this is to assume that one third of the deficit will be met by such excess investment returns, with the other half being met through employer deficiency contributions of £25.7 million in 2013, £26.6 million in 2014 and £28.6 million a year from 2015 to 2023 (increasing by 2.37% a year in January 2016 and each subsequent January).[20]

7.19 Assuming that some of the valuation deficit will be met by excess investment returns instead of employer contributions is relatively common, but not universally used. Were this assumption not to be used, increased deficit recovery contributions would be required, in order to meet all, rather than two-thirds, of the valuation deficit.

7.20 The assumed rate of excess investment returns during the recovery period (0.3% a year) has reduced from 0.5% a year at the 2009 valuation. Other things being equal, this has increased the required employer deficit recovery contributions. Anecdotally, I would not expect many pension schemes to have reduced this assumption for current pension scheme funding valuations (relative to the assumption used for the previous valuation) but I have no data to support this. However, this assumption should be considered in the context of the overall funding valuation outcome, noting also that not all employers make such an allowance. The effect of this assumption has been to reduce the required employer deficit contributions by a third. Taking all of these points into account, the assumption adopted is, in my opinion, reasonable.

7.21 The length of the recovery period was considered by the CAA and NERL in detail at the previous price control review. The CAA should refer to those previous discussions. The deficit reported at the 2012 funding valuation of the NATS pension schemes is expected to be repaid over a period of 11 years from the valuation date. Relevant points to note are:

- Data published by the Pensions Regulator shows that, for recent valuations, the median recovery period is around 7 to 9 years, with a recovery period of around 11 years representing around the upper quartile of schemes.
- Other economic regulators have typically used periods of between 10 and 15 years for price control purposes.
- The Pensions Regulator's statement in December 2009 confirmed that the period used by economic regulators for price controls might differ to that agreed between the scheme's trustees and sponsor for funding purposes.
- The interests of users might be served by a longer recovery period to the extent that it smoothes out some of the volatility in funding outcomes.
- A materially longer recovery period than that used for funding would require the additional contributions to be met by shareholders in the short-term.

[20] As explained in paragraph 7.3, only around 75-80% of this is included in NERL's business plan.

7.22 The NATS pension scheme's funding level at 31 December 2012, as reported in the 2012 actuarial valuation, is 90%.[21] This is slightly higher than the average funding level of 84% for 2012 reported by the NAPF[22]. In this context, the NATS pension scheme's funding level does not appear to be significantly out of line with, but may be slightly higher than, typical funding levels of UK private sector defined benefit pension schemes at an equivalent date.

Deficiency contributions following future funding valuations

7.23 NERL's projected contributions to the NATS pension scheme assumes that deficiency contributions will reflect the outcomes of future funding valuations of the scheme.

7.24 NERL's projections reflect a number of detailed calculations and assumptions that have been made. For the purposes of this review, I have not checked all such calculations in detail. Rather, I have considered the outcome of NERL's projection relative to the alternative approach of assuming future contributions in line with those agreed following the scheme's most recent full funding valuation (as at December 2012). This alternative approach is, in my opinion, a reasonable comparison for this purpose on the basis that:

> It has been used by other economic regulators for price controls; and

> Until the scheme funding documents are reviewed at future valuations of the scheme, it represents the latest agreed contribution schedule.

7.25 On this basis, the projected deficiency contributions shown in NERL's revised business plan appear to be broadly in line with those agreed following the 2012 valuation, except for an assumed reduction in contributions of around £2 million in the last year of RP2 (relative to the recovery plan agreed following the 2012 valuation). I do not, therefore, have any concerns that NERL's approach is expected to result in higher assumed contributions than those currently agreed following the 2012 scheme valuation. I note that different assumptions and projection methods could result in different projected contributions, and that plausible, alternative assumptions could result in lower projected contributions.

[21] The funding level is the ratio of the value of the pension scheme's assets to the value of its accrued liabilities.
[22] "Annual survey 2012" (NAPF).

8 Stewardship test

Section summary
The CAA applies a stewardship test to assess whether the NATS pension scheme's assets are being managed efficiently. The information provided to the CAA summarises the scheme's operation and governance arrangements and does not suggest any reasons for concern regarding the operation of the NATS pension scheme.

Earlier sections of this report compare the NATS pension scheme's investment strategy and funding valuation assumptions with publicly available information on other pension schemes', in view of any concerns regarding NERL's incentives for negotiations with the trustees on such matters.

Data on the NATS pension scheme's past investment returns do not highlight any material concerns, taking into account the approximate nature of the analysis.

Introduction

8.1 At its CP2 review, the CAA confirmed that it would apply a stewardship test to assess whether the NATS pension scheme's assets were being managed efficiently. The test involves "the trustees to the pension scheme in all material respects fulfilling the requirements of pensions legislation and the codes of practice issued by the Pensions Regulator (formerly OPRA) under the Pensions Act 2004".

8.2 The CAA asked the NATS pension scheme's trustees to describe the steps they have taken to ensure the trustees fulfil the current requirements of pensions legislation. The trustees' response is set out in their letter report to the CAA dated 25 November 2013. Further information has been taken from a copy of an extract of the trustees' draft Stewardship Report for the year to 31 December 2013 and copies of the scheme's annual reports and accounts.

8.3 The CAA has asked GAD to review the trustees' report, and to comment on any implications for the CAA's stewardship test.

Role of the trustees and the NATS pension scheme's trustees' report

8.4 Trust law, pensions law and other trustees' responsibilities and obligations apply equally to all pension scheme trustees, regardless of the extent to which the sponsoring employer is subject to competition or economic regulation. The CAA, on behalf of NERL's consumers, wishes to monitor whether the NATS pension scheme's assets are being managed efficiently.

8.5 The information provided by the trustees summarises the scheme's operation and governance arrangements. In particular, the trustees' report confirms that:

> The scheme's accounts have not been the subject of any audit qualification;

> The Pensions Regulator has had no cause to intervene in the running of the scheme or to raise any issue relating to breaches of any law or regulation;

> The scheme has experienced only a low level of complaints from members, and has not been required to pay any penalty or change its system of working as a consequence of any dispute; and

> There have been no occurrences where any trustee or adviser has seen any reason to "whistleblow" to the Pensions Regulator on any breaches of the law.[23]

8.6 The information provided does not appear to suggest any reasons for concern regarding the operation of the NATS pension scheme.

8.7 In advising on this point, we have only considered the information provided to us for this review. I have not undertaken any independent review or audit of the NATS pension scheme, its accounts or its trustees.

Role of the employer

8.8 Economic regulators are principally concerned with the behaviour of the sponsoring employer in the light of its specific circumstances. In particular, there could be concerns regarding a regulated sponsoring employer's incentives for negotiations with the scheme's trustees on investment strategy and scheme funding. Such concerns have been addressed in this report as follows:

> Section 5 of this report compares the NATS pension scheme's strategic investment strategy with publicly available information on other UK private sector defined benefit schemes. It concludes that the NATS pension scheme's allocation to return-seeking assets is slightly higher than the typical proportion. Other things being equal, a higher proportion in return-seeking assets implies an expectation of lower long-term employer contributions, at the expense of higher investment risk and therefore potentially more volatile contribution rates.

> Section 6 of this report compares the assumptions adopted for the 2009 actuarial funding valuation of the NATS pension scheme with publicly available information on those used for funding valuations of other UK private sector defined benefit pension schemes. In general, the assumptions adopted for the funding valuation are within a reasonable range.

Achieved investment returns

8.9 As noted in Section 3, a defined-benefit pension scheme's ultimate costs, and therefore its contribution requirements, depend on the investment returns achieved on its assets (among other factors). The CAA should be concerned if, for some reason, the NATS pension scheme's investment returns were materially less than expected.

[23] Whistleblowing refers to the statutory obligation on pension scheme trustees and advisers to report any significant breaches of the law in relation to the pension scheme to the Pensions Regulator, if such a breach is likely to be of material significance to the Regulator.

8.10 For this purpose, it must be noted that investment returns depend on a number of factors. For a long-term investor such as a pension scheme, it is the rate of investment return achieved over long periods of time that is most relevant. Investment returns will be volatile over shorter time periods, particularly where there is significant investment in equities and other return seeking assets.

8.11 Table 8.1 summarises past annual equivalent rates of investment return for the NATS pension scheme over the one-, three- and eleven-year periods to December 2012 (the last representing, broadly, the period since the inception of the NATS pension scheme). The table also shows the scheme's benchmark rates of return, the median return on balanced funds from CAPS pooled pension fund updates[24], and returns on UK equities and index-linked gilts from FTSE-Actuaries indices, for comparison.

Table 8.1 – annual percentage investment returns

	1 year to 31/12/12 (%pa)	3 years to 31/12/12 (% pa)	11 years to 31/12/12 (since inception) (% pa)
NATS scheme returns [1]	**9.2%**	**6.7%**	**4.7%**
NATS scheme benchmark returns [1]	9.8%	7.5%	5.0%
CAPS balanced fund net return [2]	10.0%	6.4%	5.5%
UK equities [3]	12.3%	7.5%	5.4%
UK index-linked gilts [4]	0.6%	9.5%	7.5%

Sources:
[1] NATS pension scheme accounts.
[2] CAPS pooled pension fund updates, BNY Mellon P&RA Europe Limited (median net returns for a balanced fund)
[3] FTSE Actuaries UK equities all-share total return index.
[4] FTSE Actuaries UK index-linked gilts all stocks total return index.

8.12 Table 8.1 shows that, over the 11 years to 31 December 2012, the annual rate of investment return on the NATS pension scheme's assets has been slightly less than, but within 1 percentage point of, its own benchmark returns, the CAPS balanced fund net returns and returns on UK equities. In view of the broad-brush nature of this analysis, I do not consider such a shortfall to highlight any material concerns for the CAA.

8.13 The analysis reported above is high-level. Comparisons of investment returns have not been adjusted for investment risk or other factors. It is recognised that the NATS pension scheme's trustees regularly monitor investment returns relative to their stated objectives and benchmarks.

[24] CAPS pooled pension fund updates, BNY Mellon P&RA Europe Limited.

8.14 The use of the CAPS pooled balanced fund returns and the other indices used for comparison purposes does not imply that they are an appropriate benchmark for the NATS pension scheme's returns. The purpose of this analysis is to summarise the available information and to identify if there are any significant concerns shown by past experience.

9 Conclusions

9.1 NERL's projected pension contributions to the defined benefit NATS pension scheme reflect the results of the 2012 actuarial funding valuation of the scheme. The assumptions used for that valuation are within a reasonable range.

9.2 The majority of the projected contributions to the NATS pension scheme reflect standard contributions (in other words, contributions to cover the expected cost of benefits accruing to active members). The standard contribution rate is higher than might be expected for a typical UK private sector defined benefit pension scheme reflecting, in part, the relatively generous level of the scheme's benefits. The CAA should consider the implications of the reduction in standard contributions following the December 2012 funding valuation not taking effect until January 2015 (2 years after the valuation date), while taking into account the consequential increase in deficiency contributions that would otherwise be required.

9.3 Projected deficiency contributions to the NATS pension scheme assume that excess investment returns during the recovery period will meet around one third of the deficit. NERL assumes its deficiency contributions will reduce in the last year of RP2 due to an expected improvement in the scheme's funding position at the next funding valuation.

9.4 The trustees' stewardship report does not appear to suggest any reasons for concern regarding the operation of the NATS pension scheme.

Aidan Smith

Aidan Smith
Fellow of the Institute and Faculty of Actuaries
Government Actuary's Department
14 March 2014

Appendix A – Terms of reference

Purpose:

To advise the CAA on:

- The actuarial assumptions that NERL has adopted in estimating the pension contribution costs for its revised business plan for 2015-19 and
- NERL's stewardship of the pension plan, in conjunction with the Trustees, for the period 2011 to date.

Scope:

The CAA is now seeking advice on three issues relating to pensions:

1. the implementation of the stewardship test

2. the changes made to mitigate the cost of the defined benefit scheme

3. the actuarial assumptions underpinning the estimated pension costs that NERL will include in its Revised Business Plan in October 2013.

The stewardship test is intended to ensure that the charges that users pay reflect the efficient management of the pension scheme's assets. The test would involve the 'Trustees to the pension scheme in all material respects fulfilling the requirements of pensions legislation and the 'Codes of Practice' issued by the Pension Regulator (formerly OPRA) under the Pensions Act 2004'. The CAA also seeks the contractor's views as to whether these requirements have been met without unreasonable cost or cash contributions from NERL.

Expansion of scope of issues to be addressed by the Contractor:

On the first point above, the CAA will ask the trustees of the scheme to describe the steps they have or will take to ensure the trustees fulfill the current requirements of pensions legislation. The Contractor will be asked to review the response provided by the trustees and comment on how the CAA should interpret this when considering the stewardship test set out in the CP2 price control decision.

In relation to the second point above, the Contractor will be required to familiarise itself with the legal obligations of the employer including the NERL Trust of a promise and the steps that NERL has taken to mitigate its liabilities under the defined benefit scheme in recent years. The Contractor will be asked to review whether the steps that NERL has taken are what might reasonably be expected given changes made by other employers and NERL's legal obligations.

In relation to the third point above, the Contractor will be required to familiarise itself with NERL's Revised Business Plan including the detailed projections of pension costs and each of the actuarial and other assumptions which underpin NERL's projections.

The Contractor must then provide its views, having regard to prevailing pension funding rules and good actuarial practice, on: (i) the reasonableness of NERL's actuarial assumptions individually, and in the round, and (ii) where in the range of such assumptions NERL's might be said to sit. Where taken as whole the assumptions might be considered to be outside a reasonable range, this advice must include a quantitative assessment of the impact of adopting alternative assumptions and a detailed rationale for these, including a risk assessment as appropriate.

Appendix B – Information used for the analysis

Information regarding NERL and the NATS pension scheme

1. Chapter 9 (Pensions) of the CAA's October 2010 formal proposals paper for the CP3 price control review, and the CAA's December 2010 CP3 decision paper.

2. NERL's initial (January 2013) and revised (July 2013) business plan projections of pension costs revised business plan for RP2 (provided as Excel workbooks).

3. Notes from Mercer (advisers to NATS) on the process and assumptions for the initial business plan projections (March 2013), the process and assumptions for the revised business plan projections (October 2013) and the changes between the initial and final iterations of the projections (November 2013).

4. Details of monthly pension contributions paid by NATS to the CAAPS from January 2009 to October 2013.

5. Agreement between NATS and the Trade Unions dated 24 February 2009, and the Supplemental Agreement dated 28 April 2013.

6. Memo from Richard Churchill-Coleman (General Counsel & Company Secretary, NATS) on Restrictions on Changes to Benefits Provided under the NATS Section of CAAPS dated 13 November 2013 (including the Deed to Establish a Trust of a Promise dated 26 July 2001 as an Appendix).

7. Note from Mercer Limited dated December 2013 in response to questions raised by GAD.

8. The Scheme Actuary's reports on the actuarial valuations of the NATS section of the Civil Aviation Authority Pension Scheme at 31 December 2009 (dated 27 April 2010) and 31 December 2012 (dated 24 June 2013).

9. The Statement of Funding Principles, Recovery Plan and Schedule of Contributions for the NATS section of the Civil Aviation Authority Pension Scheme, all dated 27 April 2010.

10. The Statement of Funding Principles, Recovery Plan and Schedule of Contributions for the NATS section of the Civil Aviation Authority Pension Scheme, all dated June 2013.

11. The Scheme Actuary's interim actuarial funding reports for the NATS section of the Civil Aviation Authority Pension Scheme at 31 December 2010 (dated 31 March 2011) and 31 December 2011 (dated 11 May 2012).

12. The annual report and accounts for the Civil Aviation Authority Pension Scheme for the years ended 31 December 2009, 2010, 2011 and 2012.

13. The Statement of Investment Principles for the Civil Aviation Authority Pension Scheme dated 31 March 2008.

14. Pension Guide to the NATS Section of the Civil Aviation Authority Pension Scheme (CAAPS), 2012 edition.

15. Pensions notices to members of the NATS Section of the Civil Aviation Authority Pension Scheme (CAAPS) dated May 2009 (1/2009), February 2010 (1/2010), July 2013 (1/2013) and August 2013 (2/2013).

16. Draft Stewardship report for the Civil Aviation Authority Pension Scheme (extract for the NATS Section) for the nine months to 30 September 2013, and the letter from Jeff Butler (Pension Director, CAAPS) to Mike Goodliffe (CAA) dated 25 November 2013.

Publicly available reference information

17. "Regulatory Code of Practice 03: Funding defined benefits", the Pensions Regulator.

18. "The Purple Book: DB pensions universe risk profile 2013", Pension Protection Fund and the Pensions Regulator.

19. "Scheme funding: An analysis of recovery plans June 2013", the Pensions Regulator.

20. "Occupational Pension Schemes Annual Report 2011", Office for National Statistics.

21. "Annual survey 2012", National Association of Pension Funds.