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Oracle UK Pension Plan

Actuarial valuation as at 31 May 2019

Scheme Funding Report

Paul Hubbold FIA
Barnett Waddingham LLP

29 October 2020

1 Summary

In accordance with Section 224(1) of the Pensions Act 2004 the Trustee has asked me to prepare an actuarial valuation of the Oracle UK Pension Plan (the Plan) as at 31 May 2019.

A summary of the results of the valuation is as follows:

- Using the method and assumptions agreed by the Trustee, the Plan had assets sufficient to cover 48% of its Technical Provisions as at 31 May 2019, corresponding to a deficit of £308m.
- In light of the results of this valuation, the Trustee has agreed with Oracle Corporation UK Limited (the Employer) that:
    - Contributions of £35m pa will be paid by the Employer with effect from 31 May 2020 to 30 May 2029 to address the deficit revealed by the valuation.
    - Subject to review following the next actuarial valuation, due as at 31 May 2022, contributions will be paid in monthly instalments split between the existing escrow arrangement (£15m pa) and payments made directly to the Plan (£20m pa) for the period to 30 May 2024. The full contributions of £35m pa will be paid to the escrow arrangement in respect of the period from 31 May 2024 to 30 May 2029.
    - The Employer will pay the expenses of running the Plan directly (excluding any "de-minimis" expenses which are met by the Plan), including any levies payable to the Pension Protection Fund (PPF) or the Pensions Regulator (TPR).
- The Trustee's assessment of the Technical Provisions assumes the continued support of the Employer. I understand that, based on the financial position of the Employer and the extension of the parental guarantee to £800m, the Trustee believes the support for the Plan to be strong and has determined the level of the Technical Provisions and the manner in which the deficit is to be corrected on this basis.
- If the Plan had secured benefits with an insurance company using deferred and immediate annuities, I estimate it would have enough assets to cover 26% of its liabilities as at 31 May 2019, corresponding to a deficit of £795m. This means that, had the Plan wound up at the valuation date with no further funds available from the Employer, there would not have been sufficient assets available to secure members' full benefit entitlements. This assessment excludes any recovery under the parental guarantee.
- Using the assumptions prescribed for the Section 179 valuation, the Plan had sufficient assets to cover 39% of its liabilities as at 31 May 2019 in respect of the compensation that would be paid by the PPF. The Section 179 valuation is one of the factors that determines the levy that is paid to the PPF by the Plan and the results were provided via The Pensions Regulator's "Exchange" system in March 2020.

The next actuarial valuation should be carried out with an effective date no later than 31 May 2022 and the contributions payable by the Employer will be reviewed as part of that valuation.

Paul Hubbold FIA
Barnett Waddingham LLP
29 October 2020

2 Methodology and assumptions

Actuarial valuations under the Pensions Act 2004

In accordance with Section 224(1) of the Pensions Act 2004 the Trustee has asked me to prepare an actuarial valuation of the Plan as at 31 May 2019.

This report summarises the results of the valuation, including the information required by Regulation 7 of the Occupational Pension Schemes (Scheme Funding) Regulations 2005 and Appendix A of TAS 300: Pensions issued by the Financial Reporting Council. This report complies with Technical Actuarial Standards issued by the Financial Reporting Council – in particular TAS 100: Principles for Technical Actuarial Work and TAS 300: Pensions. These are the only TASs that apply to this work.

This report is addressed to the Trustee, but it has been written so that an informed reader can understand the financial position of the Plan, including how it has developed since the previous valuation and how it might develop in the future. However, this report is not intended to assist any user in making decisions, and valuations required for specific purposes (e.g. employer accounting, corporate transactions and advice to individual members) should be calculated in accordance with the specific requirements for such purposes. Neither I nor Barnett Waddingham LLP accepts liability to third parties in respect of this report.

A copy of this report should be provided to the Employer within seven days of the Trustee receiving it.

Membership data

The membership data has been provided by the Plan's administrators. I have relied on information supplied to the administrators by the Trustee being accurate. A summary of the membership data used in the valuation is shown in Appendix A. The membership data from the previous valuation is also shown for comparison.

Since the previous valuation, the Trustee completed the rectification of benefits relating to the use of Basic Salary and Total Annual Earnings when determining Final Pensionable Salary applicable for the period from 1 June 1993 to 31 December 1998. The additional liability in respect of this exercise was included in my actuarial update as at 31 May 2017. The impact of this change on the results of this valuation, along with some small changes arising as a result of GMP reconciliation work, is shown in section 3.

The membership data has been checked for reasonableness and I have compared the membership data with information in the Trustee's Report and Accounts. Whilst this should not be seen as a full audit of the data, I am happy that the data is sufficiently accurate for the purposes of the valuation.

Guaranteed Minimum Pension (GMP) equalisation

In October 2018 the long-running issue of GMP equalisation took a step forward with the publication of the High Court judgement in the landmark Lloyds case. The judge re-confirmed the requirement on all pension schemes to equalise benefits between men and women to allow for differences in GMPs, and commented on the potential calculation methods for ongoing schemes.

While the Lloyds judgement does provide some additional clarity about the approach to GMP equalisation – in particular, ruling out some potential methods – it does not specify a single approach that should be adopted. Given that all schemes are required to equalise their GMPs and the uncertainty surrounding the method the Trustee should include a reserve for the cost of GMP equalisation in the valuation for prudence. The cost will vary significantly from scheme to scheme as well as depending upon the final approach taken.

2 Methodology and assumptions

No adjustment has previously been made to members' benefits to equalise GMPs and doing so will increase the value placed upon the liabilities.

For the purpose of this valuation I have included an allowance of 1.5% of the liabilities based upon my previous advice.

Benefits

The Plan provides pension benefits in retirement and benefits on death either before or after retirement. The benefits provided by the Plan are as set out in the Definitive Trust Deed & Rules dated 23 December 1993 and subsequent amendments (including the most recent Definitive Trust Deed and Rules dated 5 February 2008) and are summarised in Appendix B. This summary is intended for quick reference only and full details of the benefits are set out in the Plan's governing documentation. I have made no allowance for discretionary benefits as there is no past practice of granting such accords.

I am not aware of any significant changes to the benefits since the previous valuation.

In accordance with previous instructions, I understand the following:

- The 23 December 1993 Definitive Deed and Rules are unclear in relation to some of the benefits provided to members. In particular the benefits associated with the "Pension Guarantee Formula" are not clearly specified. I understand that the Trustee and Employer have previously agreed that benefits are to be administered and the Plan funded in line with the Underpin Formula set out in the 5 February 2008 Definitive Trust Deed.

- I understand that legal advice provided to the Trustee in relation to the 10 December 1998 Definitive Deed and Rules states that the Rules may be void due to the absence of a Section 67 certificate. However, the Trustee has agreed to administer the Plan on the basis that the prospective benefit changes introduced by the 1998 Rules are valid and the calculations in this report are in accordance with this practice.

Assets

The Plan includes both Money Purchase and Final Salary sections. The Money Purchase section of the Plan includes both Core and Non-Core contributions:

- Core Contributions – DC assets allocated to members to which the Pensions Underpin applies.
- Non-Core Contributions - DC assets allocated to members on a pure DC basis.

In addition, the Final Salary Section Underpin Reserve includes the following:

- Pensioner Reserve Fund (PRF) – assets currently used to back the liabilities of Pensioner members
- Trustee Reserve Account (TRA) - assets used to fund the difference between a member's notional account and the value of the Pensions Underpin when members retire or transfer out.
- Underpin Reserve bank account and net current assets.

For the purpose of this report, the Non-Core Contributions are excluded from both the assets and liabilities since their inclusion would have a neutral effect on any deficit.

I have been provided with a copy of the Trustee's audited Report and Accounts for the period ending 31 May 2019. This shows that the total market value of the Plan's assets, is £403m (rounded), of which £285m relate to the Pensions Underpin (i.e. the Final Salary Section Underpin Reserve and Core Contributions). This asset figure also excludes any assets invested in the escrow arrangement that was put in place following the 2013 actuarial valuation.

2 Methodology and assumptions

The net current assets include £6.7m as an amount held in the escrow arrangement but due to the Plan under the funding arrangements put in place following the previous valuation. If this was excluded, the total asset value in respect of the Pensions Underpin would reduce accordingly.

Investment Strategy

The Trustee's current investment strategy is set out in a Statement of Investment Principles dated September 2020. A breakdown of the actual investments held at the valuation date along with the Trustee's target asset allocation is set out in Appendix C. I have also included in Appendix C a summary of the contributions paid and the investment performance since the previous valuation.

Funding objectives

The Trustee's funding objectives are described in a Statement of Funding Principles dated 23 October 2020, a copy of which is included in Appendix F. In summary, the Trustee has adopted the "Statutory Funding Objective", which is that the Plan should have sufficient and appropriate assets to meet its liabilities. The Trustee is currently developing its Long Term Objective for the Plan, however, given the funding deficit, meeting the Statutory Funding Objective is the current priority.

The principal purpose of the valuation is therefore to examine the financial position of the Plan at the valuation date and to agree the contributions payable to ensure that the Statutory Funding Objective is expected to be met.

Methodology used to achieve objectives

The valuation has been carried out on a "market-related" basis. This means that assets are taken into account at their market value. For comparison with the assets, a consistent measure is needed for the liabilities that are expected to arise in respect of benefits already earned at the valuation date – otherwise known as the "Technical Provisions". This is achieved by projecting the benefits that are expected to be paid to members of the Plan as a result of:

- pensions already in payment;
- pensions arising from future retirements;
- lump sums payable to future retirees in exchange for part of their pension;
- lump sums payable following the death of a member; and
- pensions payable to eligible dependants following the death of a member.

To estimate the amount of these future benefit payments, assumptions need to be made regarding:

- how the Pensions Underpin and the associated assets in respect of the Pensions Underpin will increase prior to payment;
- how pensions will increase while in payment;
- whether members will leave service or die before reaching retirement;
- how long members will live in retirement;
- whether members will have an eligible dependant on death and, if so, the age of their dependant; and
- whether members will exercise certain options, such as exchanging pension for cash at retirement.

However, the benefits are expected to be paid over a long period of time and, during that time, the assets held are expected to earn investment returns. Therefore, for comparison with the assets, the projected benefit payments are reduced to allow for the investment return that is anticipated prior to payment. This methodology is commonly referred to as "discounting" and the investment return allowed for is referred to as the "discount rate". For consistent comparison with the market value of the assets at the valuation date, the choice of discount rate reflects relevant market indicators at the valuation date.

2 Methodology and assumptions

As the Plan is closed to all future accrual (although some members, referred to as "in service deferreds", continue to have the benefits linked to their salary), it is anticipated that the investment strategy will become more cautious as the membership matures. This is allowed for by assuming a lower discount rate for the period after a member's retirement.

Valuations on other bases

As part of the valuation, I am required to include an estimate of whether the Plan would have had sufficient assets to secure benefits with an insurance company and meet the expenses associated with winding-up the Plan. This is referred to as "the solvency estimate".

The solvency estimate is expected to be significantly higher than the Plan's Technical Provisions, as insurers will assess the liabilities assuming investment only in low-risk asset classes such as gilts and bonds, whereas the assumptions used for the calculation of the Technical Provisions make allowance for expected outperformance from investment in riskier asset classes.

The Trustee is also required under Section 179 of the Pensions Act 2004 to obtain a valuation at least every three years on a basis that is set by the PPF. The results of this valuation are used by the PPF to determine the levy that is paid by the Plan to the PPF to provide compensation for members of pension schemes that are underfunded and the employer has become insolvent. Although not strictly part of the actuarial valuation, I have included details of the Section 179 valuation in this report.

Assumptions

The assumptions agreed by the Trustee for the purpose of the Statutory Funding Objective as at 31 May 2019, along with the assumptions used at the previous valuation, are summarised in Appendix D. My advice on the assumptions and derivation of the assumptions is set out in my report dated 17 July 2019.

The assumptions I have used for the solvency estimate are also summarised in Appendix D. Whilst I am satisfied that these assumptions are appropriate for the purpose of the solvency estimate, and in particular that they satisfy the requirements of Regulation 7(6a) of the Occupational Pension Schemes (Scheme Funding) Regulations 2005, the Trustee should understand that:

- The assumptions are only intended to give a broad indication of likely annuity costs, and that an actual quotation could differ materially from this estimate, particularly given the underpin nature of the Plan.
- The expenses associated with discontinuing a pension scheme are difficult to predict and the expense assumption should not be seen as a quotation of the likely expenses involved.

The assumptions for the Section 179 valuation are prescribed by the PPF.

3 Results

Statutory Funding Objective

Using the methodology described above and the assumptions set out in Appendix D, the results of the valuation are as follows.

Benefits already earned at the valuation date:	£m
In Service Deferreds	109
Deferreds	445
Pensioners	39
Technical Provisions	**593**
Market value of assets	**285**
Deficit	**(308)**
Funding level	**48%**

It should be understood that these results indicate the expected cost of providing the Plan benefits using the chosen method and assumptions. The actual cost of providing the benefits will depend on the actual experience. The sensitivity of the results to the key assumptions is included as Appendix E.

My certificate confirming that the calculation of the Technical Provisions has been carried out in accordance with the relevant legislation is included in Appendix F.

Contribution requirements

Details of the contributions agreed between the Trustee and the Employer are set out in a formal Schedule of Contributions and Recovery Plan. These documents are included in Appendix F. My certificate confirming that the Statutory Funding Objective is expected to be met by the end of the period covered by the Schedule of Contributions is also included in Appendix F.

Reconciliation to previous valuation

The previous valuation was carried out as at 31 May 2016. The results are summarised in my report dated 26 July 2017 and show a funding level of 59% corresponding to a deficit of £166m. The key factors that have influenced the funding level of the Plan over the period are as follows:

Reconciliation of funding position	£m
Surplus / (deficit) at previous valuation:	**(166)**
Interest on deficit	(22)
Deficit contributions	27
Investment experience	13
Salary growth experience	2
Change in market conditions	(142)
Changes to assumptions	8
Data rectification (TAE/GMP)	(19)
GMP equalisation	(9)
Surplus / (deficit) at this valuation:	**(308)**

3 Results

Solvency estimate

The results of the valuation using the assumptions for the solvency estimate described in Appendix D are as follows:

Solvency estimate:	£m
In Service Deferreds	200
Deferreds	810
Pensioners	50
Expenses*	20
Estimate of solvency liabilities	**1,080**
Market value of assets	**285**
Deficit	**(795)**
Funding level	**26%**

* This item estimates the costs that the Plan might incur during a buy-out, excluding insurer expenses which are allowed for in the solvency basis assumptions.

As at 31 May 2016 the solvency funding level was estimated to be 30%.

The Plan would not have had sufficient assets at the valuation date, based on the assumptions, to secure full benefits with an insurance company. If the Plan had wound up at the valuation date, the Employer would have been obliged to make good any shortfall. However, if the Employer were unable to do so, for example due to insolvency, the assets would have been applied to secure benefits in line with the statutory priority order that applied at the valuation date. The coverage of benefits falling into each priority class is estimated in the following table:

Category of benefit	Coverage level
Expenses and defined contribution benefits	100%
Benefits equivalent to PPF compensation	36%
Other benefits	0%

This shows that the Plan would not have had sufficient assets to secure benefits equivalent to the compensation provided by the PPF. Therefore, had the Plan wound up with no further funds available from the Employer (including any amounts either held in the escrow arrangement or payable under the parental guarantee), it is likely that the Plan would have entered the PPF and members would only receive benefits up to the PPF compensation level rather than their full Plan benefits. Broadly speaking, this means that:

- Members below their normal pension age would only receive 90% of their pension subject to a cap. The amount of the cap depends on retirement age and increases in line with average earnings, but assuming retirement at age 65 the cap that applied at the valuation date was £40,020 (prior to application of the 90% factor).
- All members would receive no increases in payment on pensions accrued prior to 6 April 1997 and increases linked to inflation but capped at 2.5% pa for pensions accrued after 6 April 1997.

3 Results

Projected future results

The progression of the funding level over time is influenced by a large number of factors, including the experience of the Plan's membership, the investment return achieved and the contributions paid.

I estimate that three years after the valuation date (i.e. at the next valuation) the funding position on a Technical Provisions basis will be 58% and on a solvency basis will be 34%. This allows for contributions to be paid as described in Appendix F (i.e. £10m paid to the Plan in the first year after the valuation date and £20m pa for the next two years) and assumes that investment returns and other experience over the next three years are in line with the assumptions used for the Technical Provisions. The projections exclude assets held in the escrow arrangement as it is assumed that these assets will be transferred to the Plan after the period of the projections.

Section 179 valuation

A certificate setting out the results of the Section 179 valuation using the method and assumptions prescribed by the PPF is included in Appendix F. The details set out on this certificate were provided to the PPF via TPR's Exchange system in March 2020.

Changes since the valuation date

With the spread of the coronavirus, among other factors, current market conditions are significantly different to that at the valuation date of 31 May 2019. The Pensions Regulator's guidance suggests that trustees should consider whether to allow for such post valuation experience and revisit the valuation agreement (although they are not required to do so).

My draft actuarial report dated 16 October 2020 sets out my estimate of the updated funding position as at 31 May 2020. The report shows a funding level of 46% as at 31 May 2020 which is below the funding position projected by the agreed Recovery Plan. Therefore, at 31 May 2020, the agreed contributions would not be sufficient to clear the deficit by the end date of the Recovery Plan of 30 April 2030.

Given the parental guarantee in place and the potential for positive experience before 30 April 2030, the Trustee has decided not to amend the assumptions or the Recovery Plan to allow for post-valuation experience at this time, although I understand the Trustee will continue to monitor the position.

4 Risks

There are many factors that affect the financial position of the Plan which can lead to the Plan being unable to pay members' benefits. In this section I comment on some of the factors that could have a material impact, in particular: the Employer covenant, the assumptions used to determine the Technical Provisions, the expected asset returns, and the future membership experience.

Employer Covenant risk

One of the greatest risks to the ability of the Plan to pay members' benefits is that the Employer may be unable to fund future deficits.

The Trustee's chosen assumptions and deficit recovery period reflect an objective assessment of the risk that the Employer will not be able to support the Plan in the future. The Trustee should monitor the strength of the Employer over time (including the strength of the parent company providing the £800m guarantee), so that any sudden changes in the Employer's position can be mitigated.

Investment risk

Allowance is made in the assumptions for the expected long-term performance of asset classes such as equities. There is a risk that these returns will not be achieved in practice, which would result in further contributions being required.

Further, the value of the Plan's assets may not move in line with the Plan's liabilities – either because the Plan invests in volatile assets whose value might fall, or because the value of the liabilities has increased due to falling interest rates and the assets are not of sufficient duration to keep up (or a combination of these).

The sensitivity of the valuation results to changes in the investment return assumptions is included in Appendix E. The Trustee should regularly review its investment strategy to ensure they understand the risks being taken and that those risks are being appropriately managed.

Inflation

In projecting the expected future benefit payments, assumptions are made regarding future price inflation and salary increases. There is a risk that the actual rate of inflation or salary increase will be higher than assumed which will increase the cost of providing the benefits. This would result in additional contributions being required and a deterioration in the financial position unless investment returns are similarly higher than expected.

The sensitivity of the results to the choice of inflation assumptions is included in Appendix E. The Trustee should consider the inflation risk present within the Plan when reviewing the investment strategy.

Mortality

It is not possible to predict with any certainty how long members of the Plan will live, and if members live longer than expected, additional contributions will be required and the Plan's financial position will deteriorate.

The sensitivity of the results to the choice of mortality assumptions is included in Appendix E. The Trustee should review its mortality assumptions at each valuation, taking into account all available evidence, to ensure they remain appropriate for the Plan.

Member options

Certain benefit options may be exercised by members without requiring the consent of the Trustee or the Employer, for example exchanging pension for cash at retirement or taking a transfer value. Generally the terms for exercising these options should leave the Plan no worse off as a result and may in some cases be favourable to the financial position of the Plan. Therefore there is limited risk of further contributions being required or a deterioration of the financial position as a result of members exercising these options.

4 Risks

The sensitivity of the results to the assumed exercise of options by members is included in Appendix E. The Trustee should regularly review the transfer value basis and other actuarial factors to understand the financial implications of members exercising options and to ensure that the terms for doing so remain appropriate.

Appendix A - Summary of membership data

A summary of the membership data used in the valuation is as follows. The membership data from the previous valuation is also shown for comparison. All average ages are weighted by Scheme Funding liability.

In Service Deferred Members

	31 May 2019			31 May 2016		
	Number	**Average age**	**Basic Salary £m pa**	**Number**	**Average age**	**Basic Salary £m pa**
Males	417	54	33	551	52	40
Females	138	53	9	193	51	11
	555	54	42	744	52	51

Deferred Members

	31 May 2019			31 May 2016		
	Number	**Average age**	**Pension at Date of Leaving £m pa**	**Number**	**Average age**	**Pension at Date of Leaving £m pa**
Males	2,819	55	9	2,988	54	8
Females	1,328	54	3	1,351	52	3
	4,147	55	12	4,339	53	11

Pensioner Members

	31 May 2019			31 May 2016		
	Number	**Average age**	**Pension at Valuation Date £000s pa**	**Number**	**Average age**	**Pension at Valuation Date £000s pa**
Males	237	67	1.3	87	67	0.4
Females	76	66	0.2	39	65	0.1
	313	67	1.5	126	67	0.5

The above membership data excludes 337 members who have no Pensions Underpin benefits.

The above summary differs slightly to that shown in the Trustee's Report and Accounts as it is based upon a more recent data extract. Therefore it reflects member movements (such as transfers out and retirements) which are effective before 31 May 2019, but which were processed at a later date.

Appendix B - Summary of benefits

The following is a summary of the main Plan benefits only. Full details are set out in the Plan's documentation. No action should be taken based on the summary below without referring back to the formal documentation.

General provisions	
Member contributions:	The Plan closed to all future accrual from 31 December 2010.
Contracting-out status:	Prior to 31 May 2004 the Plan was contracted out of the State Second Pension on a Reference Scheme basis. After this date the Plan was contracted in.

Underpin pension benefits	
Normal Retirement Date:	Age 65 unless otherwise specified in the member's contract of employment.
Accrual rate:	1/80th
Commutation of pension:	Part of the member's pension may be exchanged for a lump sum on retirement.
Increases in payment:	Pensions in excess of GMP are increased in line with CPI inflation, up to a maximum of 5% pa. GMPs are increased in line with statutory requirements.
Increases in deferment:	Pensions in excess of GMP are increased in line with with CPI inflation, subject to an upper cap. GMPs are increased at the statutory fixed rate.

Death benefits	
Death in deferment:	A spouse's pension is payable provided it satisfies the contracting-out requirements. A lump sum is payable equal to the difference between the member's notional account as at date of death and the contracting-out benefits. Benefits from non-core contributions are also payable.
Death after retirement:	On death in the first five years, a lump sum equal to the outstanding balance of five years' pension payments is payable. A spouse's pension equal to one half of the member's pension in payment at death is payable. Benefits from non-core contributions are also payable depending on the options selected at retirement.

Appendix C - Summary of assets and contributions

Assets at 31 May 2019

The total assets of the Plan are summarised in the table below. This includes both Core and Non-Core contributions and is therefore not comparable with the asset value stated previously in this report:

	Final Salary Section (£m)	Money Purchase Section (£m)
Multi-asset	4.3	309.0
Equities	-	31.9
Bonds	35.1	4.8
Property	-	1.4
Cash	0.9	9.0
Total investments	**40.3**	**356.1**
Net current assets*	8.1	(1.1)
Total market value of assets	**48.4**	**355.0**

**The net current assets include £6.7m held in the escrow arrangement but due to the Plan under the current funding arrangements and £1.0m due from members' Core Funds to the Pensioner Reserve Fund from members who retired close to the valuation date.*

The actual return achieved on the Plan's investments since the previous valuation was approximately 5.9% pa.

Contributions since previous valuation

The previous valuation resulted in a formal Schedule of Contributions being put in place that continued contributions to the escrow arrangement at a rate of £10m pa. The Employer has paid these contributions over the period since the previous valuation although with effect from January 2019 contributions were instead paid directly to the Plan (rather than into the escrow arrangement).

Since the previous valuation payments of £5.4m and £9.2m were paid from the escrow arrangement into the Plan during the 2016/17 and 2017/18 Plan years respectively. These payments were in accordance with the amounts determined in the annual funding reviews for the Plan.

Appendix D - Summary of assumptions

	31 May 2016 Technical Provisions	31 May 2019 Technical Provisions	31 May 2019 Solvency estimate
Pre-retirement discount rate / asset return	4.3% pa	3.5% pa	0.75% pa
Post-retirement discount rate (non-pensioners)	3.2% pa	2.4% pa	1.35% pa
Post-retirement discount rate (pensioners)	3.2% pa	2.4% pa	1.45% pa
Price inflation (RPI)	3.25% pa	3.65% pa	3.65% pa
Price inflation (CPI)	2.25% pa	2.65% pa	3.35% pa
Salary inflation	4.25% pa	4.65% pa	n/a
Mortality table	104% (males) / 93% (females) of S2NA "light" tables	100% of S3NA "light" tables	
Mortality projections	CMI 2015 with a long-term improvement rate of 1.5% pa	CMI 2018 with a long-term improvement rate of 1.5% pa and initial improvement parameter of 1%	
Age difference between husbands and wives	3 years		
Proportion married	80% of males and 70% of females		
Allowance for early retirements	None		
Allowance for cash commutation	None		
Allowance for withdrawals	up to age 30: 20% pa age 31-40: 10% pa age 41-50: 8% pa age 51 and over: 10% pa	10% pa	n/a

Appendix D - Summary of assumptions

Allowance for expenses	Met directly by employer		See below
Allowance for discretionary benefits	None		
Allowance for GMP equalisation	None	1.5% of the liabilities	1.5% of the liabilities

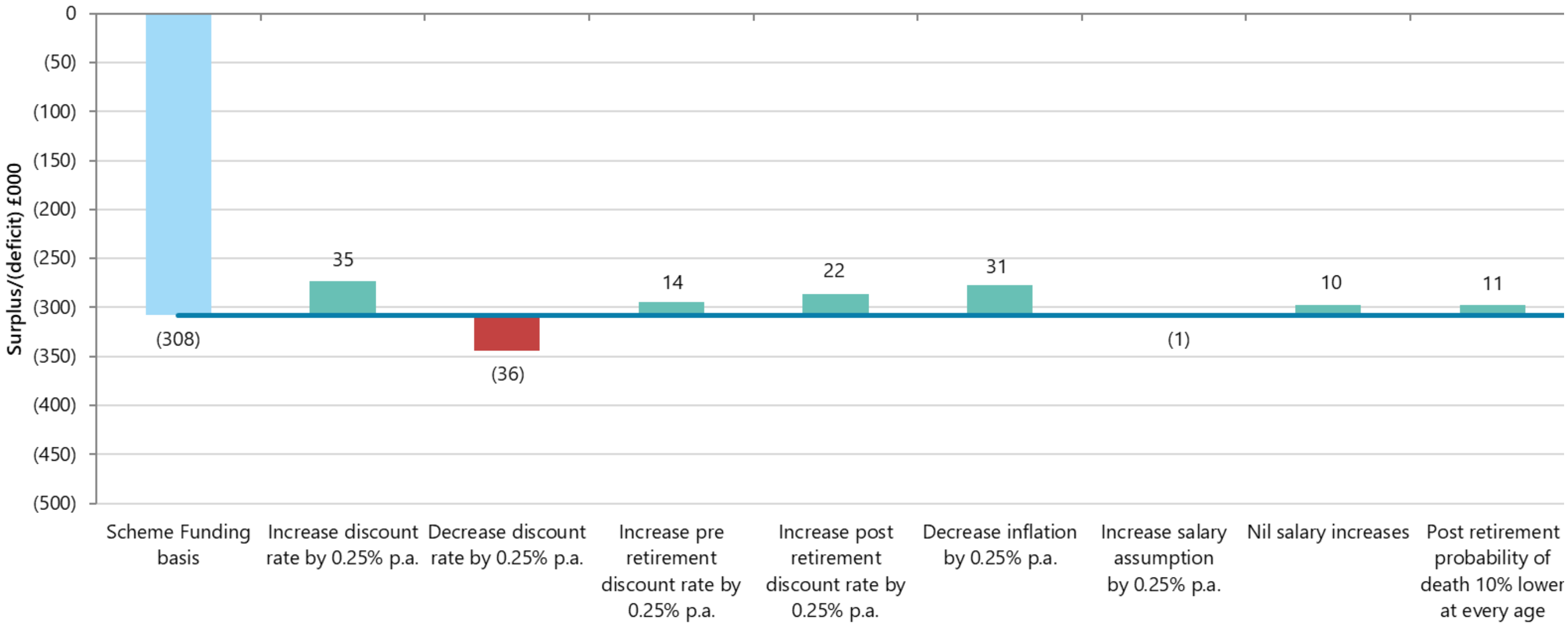
Some further notes on the method and assumptions for the solvency estimate are as follows:

- I have used principles which I consider may be adopted by insurance companies for determining annuity costs.
- Whilst I am satisfied that these assumptions are appropriate for the purpose of the solvency estimate, and in particular that this estimate satisfies the requirements of Regulations 7(4b) and 7(6a) of the Occupational Pension Schemes (Scheme Funding) Regulations 2005, the Trustee should understand that my calculations are only intended to provide a broad indication of likely annuity costs, and that an actual quotation could differ materially from this estimate.
- Assets have been taken at market value as set out in the final accounts.

The expenses associated with discontinuing a pension scheme are difficult to predict and can be significant. For the purposes of my calculations I have made an allowance for expenses of £20m, being approximately 2% of the solvency liabilities, in addition to insurer expenses which are allowed for in the solvency basis assumptions. I believe this allowance to be a reasonable provision for the purposes of the valuation, however it should not be seen as a quotation of the likely expenses involved.

Appendix E - Sensitivity analysis

The statutory funding position is sensitive to the assumptions made regarding future experience. The following chart illustrates the impact on the funding position of making different assumptions at the valuation date.



Appendix F - Valuation documents

The following documents have been agreed between the Trustee and Employer as part of the valuation process and are included in this appendix:

- Statement of Funding Principles, setting out the Trustee's funding objectives and the action to be taken if those objectives are not met.
- Schedule of Contributions, setting out the contributions payable to the Plan by the Employer from 31 October 2020.
- Recovery Plan, setting out further details of how the funding shortfall revealed by the valuation is being addressed.

The following actuarial certificates are required as part of the valuation process and are included in this appendix:

- Certification of the calculation of the Technical Provisions, which confirms that the Technical Provisions have been calculated in accordance with the regulations and the Trustee's Statement of Funding Principles.
- Certification of the Schedule of Contributions, which confirms that the Statutory Funding Objective could have been expected to be met at the valuation date by the end of the period covered by the Schedule of Contributions.

Section 179 valuation

A certificate setting out the results of the Section 179 valuation using the method and assumptions prescribed by the PPF is also included in this appendix. This was submitted to the Pensions Regulator in March 2020.