Government Actuary's Department

MRC Pension Scheme: University section

Interim funding update as at 31 December 2018

4 July 2019

Sue Vivian

Contents

At GAD, we seek to achieve a high standard in all our work. We are accredited under the Institute and Faculty of Actuaries' Quality Assurance Scheme. Our website describes **the standards** we apply.

1 Executive Summary

1.1 This report sets out the results of the interim funding update of the University section of the MRC Pension Scheme as at 31 December 2018. The report is addressed to the Trustee. UKRI (Medical Research Council) should be given a copy of this report within 7 days of its receipt. There is no specific requirement to provide members with a copy of this report unless requested. The key results will be communicated to them by means of the annual Summary Funding Statement.

1.2 The purpose of this interim funding update is to provide information to the Trustee on significant changes (if any) to the funding position of the University Section since the last formal actuarial valuation which was conducted as at 31 December 2016.

1.3 The principal results of the interim funding update are as follows

> The University section is estimated to have a surplus of £18 million as at 31 December 2018 under the Statutory Funding Objective. This reflects the market value of assets (net of AVCs) of £91 million and an assessed value of liabilities (the Technical Provisions) of £73 million

> this corresponds to a funding level of 125%, which compares to 133% at the 31 December 2017 funding update, and 146% at the 31 December 2016 formal valuation

> the slight deterioration in funding position over the past year is primarily due to lower than expected investment returns

1.4 In my opinion there is nothing in this interim review which would necessitate bringing forward the date of the next formal valuation, which is due as at 31 December 2019.

2 Introduction

2.1 At the request of the Trustee, and in my capacity as Scheme Actuary, I have carried out an interim funding update of the University section of the MRC Pension Scheme (‘the Section’) as at 31 December 2018 in accordance with Section 224(1) of the Pensions Act 2004. This report sets out the results of this exercise.

2.2 The Scheme was sectionalised with effect from 1 January 2014 with some members employed by participating university employers transferring to the University section with effect from that date. This report only covers the University section. A funding update has also been carried out for the MRC Section and this is the subject of a separate report. This report should be considered in conjunction with the most recent full actuarial valuation of the Section as at 31 December 2016 and the interim funding update as at 31 December 2017.

2.3 This report is addressed to the Trustee and, although there is no requirement to consult the employer[1] regarding the results of the interim review, the employer should be given a copy of this report within 7 days of its receipt. There is no specific requirement to provide members with a copy of this report unless requested. The key results will be communicated to them by means of the annual Summary Funding Statement.

2.4 This interim review does not constitute a formal actuarial valuation. The purpose of this interim review is to provide information to the Trustee on significant changes (if any) to the funding position of the University section since the last formal actuarial valuation. The Trustee is not required to make any decisions regarding the funding method and assumptions, and the review does not give rise to any changes in the Schedule of Contributions. However, should this review indicate that events have made it inappropriate to rely on the results of the last valuation as the basis for the current level of contributions, the Trustee could consider whether to instigate an early actuarial valuation. The next formal actuarial valuation of the University section is due to be carried out as at 31 December 2019.

Approach

2.5 The results set out in this report have been calculated in accordance with the Section’s Statement of Funding Principles dated 30 November 2017. That Statement, and the report on the actuarial valuation of the Scheme as at 31 December 2016 dated 7 December 2017, provides details of the methodology and assumptions adopted for the full valuation. This report should be considered in conjunction with these documents.

2.6 In accordance with legislation, the Section’s assets are taken into account at market value for funding purposes, and the Section’s liabilities are valued by discounting expected future cashflows using financial assumptions derived from current market conditions in line with the Statement of Funding Principles. The results in this report take into account the market value of the Section’s assets as at 31 December 2018 and market conditions as at that date.

[1] Under the terms by which other employers participate in the Scheme, UKRI (Medical Research Council) as Principal Employer is empowered to act on behalf of all Participating Employer in regards to Part 3 of the Pensions Act 2004.

2.7 The use of market-related values and assumptions can lead to significant year-on-year volatility in the Section's funding position. The purpose of this review is to alert the Trustee to any factors arising since the last actuarial valuation which may be considered to affect the *long-term* financial position of the Section. The Trustee should not have too much regard to the effects of short-term volatility caused by market movements, as it does not necessarily have a major impact on the long-term ability of the Section to meet its liabilities.

Reliance statement

2.8 In preparing this report, GAD has relied on data and other information supplied by the Scheme's administrators (JLT), as described in this report. Any checks that GAD has made on this information are limited to those described in the report, including any checks on the overall reasonableness and consistency of the data. These checks do not represent a full independent audit of the data supplied. In particular, GAD has relied on the general completeness and accuracy of the information supplied without independent verification.

2.9 Other than the Trustee, no person or third party is entitled to place any reliance on the contents of this report, except to any extent explicitly stated herein, and GAD has no liability to any person or third party for any act or omission taken, either in whole or in part, on the basis of this report.

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

3 Valuation data, method and assumptions

Membership data

3.1 This annual funding update is based on the full scheme membership data provided for the actuarial valuation as at 31 December 2016. The Scheme's 2017 and 2018 annual accounts include details on membership numbers and movements since 31 December 2016, which despite showing some reduction in active membership do not indicate any unexpected movements over the period to 31 December 2018 that would have a material impact on the conclusions of this interim funding update. Please refer to Appendix B of the 2016 valuation report for a summary of the data as at 31 December 2016.

Pension Increases

3.2 Increases to pensions awarded since the 2016 valuation were as follows:

> April 2017 – 1.0%

> April 2018 – 3.0%

> April 2019 – 2.4%

These increases have been factored into my estimate of the Section's liabilities as at 31 December 2018.

Scheme assets and revenue account

3.3 Details of the Section's assets as at 31 December 2018 have been taken from the Scheme's audited accounts for the year ending 31 December 2018. The market value of the Section's assets increased from £81 million at 31 December 2017 to £91 million at 31 December 2018.

3.4 Table A1 in Appendix A summarises the Scheme's revenue account over the year from 1 January 2018 to 31 December 2018.

3.5 Over the year to 31 December 2018, the return on the Scheme's assets was -2.8% (+4.5% for 2017). This is significantly lower than the return of +2.6% a year anticipated at the 2016 valuation and, all else being equal, would result in a deterioration in the funding position over the year. On average since the 2016 valuation the return on scheme assets has also been lower than expected.

Developments since 31 December 2016

3.6 On 1 April 2018 UK Research and Innovation (UKRI) was created as a new consolidated research body, within which Medical Research Council (MRC) now forms a part of. As a consequence of this, UKRI replaced MRC as the principal sponsoring employer of the Scheme from that date. This change was known at the time of the 2016 valuation and was considered as part of the covenant assessment undertaken. As of 1 April 2018 all new entrants to the Scheme will be offered 'career average' (CARE) benefits in nature. Existing members will continue to accrue final salary benefits as outlined in the scheme rules.

3.7 No allowance has been made in this assessment for new entrants accruing CARE benefits instead of final salary benefits, however given the cost of the benefits are expected to be broadly similar this is not expected to be material to the results of this interim funding update.

Methods and Measures

3.8 The valuation method adopted for this interim assessment is the same as adopted for the full actuarial valuation as at 31 December 2016, the Defined Accrued Benefit Method[2]. This is in accordance with the Statement of Funding Principles. An explanation of the Defined Accrued Benefit Method is given in the report on the 2016 valuation.

3.9 For the purposes of my calculations, I have estimated the liabilities as at 31 December 2018 by first calculating the liabilities as at 31 December 2016 based on the membership data as at that date and assumptions set as at 31 December 2018, and have then adjusted the results as follows:

Actives: Liability as at 31 December 2016 'rolled forward' from 31 December 2016 to 31 December 2018 to allow for unwinding of the discount rate. An additional 2 years of accrual cost is then added

Deferreds: Liability as at 31 December 2016 'rolled forward' from 31 December 2016 to 31 December 2018 to allow for unwinding of the discount rate. Further adjusted for known pension increases

Pensioners: Liability as at 31 December 2016 'rolled forward' from 31 December 2016 to 31 December 2018 to allow for unwinding of the discount rate and then reduced to account for benefits paid out of the Scheme over the period. Further adjusted for known pension increases

The resultant aggregate liability was then further reduced to take account of the other net benefit outgo over the period.

3.10 The method used does not take account of variations in demographic experience compared to the valuation assumptions after 31 December 2016. Therefore the calculated liability should be considered as an estimate of the amount which might result from a full valuation. In my opinion the data supplied and the approach taken is adequate for the purposes of this interim review.

3.11 The assumptions used for the purposes of this interim review are explained below. If different assumptions were used the results would be different. The sensitivity of the result to key assumptions is covered in paragraphs 4.6 – 4.7.

Demographic Assumptions

3.12 As this is an interim assessment, it is not necessary to carry out a review of the Scheme's experience over the period since the last formal valuation, with a view to re-assessing the appropriateness of the demographic assumptions. Accordingly, the demographic assumptions used for this interim assessment are the same as those adopted for the 2016 valuation. The details of these assumptions are set out in the Statement of Funding Principles and in the report on the full 2016 actuarial valuation.

[2] At both the 2016 valuation and this interim funding update the Defined Accrued Benefit Method is adapted slightly to include an allowance for pay increases over a 5 year period

Financial Assumptions

3.13 Under the Scheme Specific Funding requirements established by the Pensions Act 2004, the past service assessment is made by comparing the market value of the Scheme assets with the value of the accrued liabilities (the 'Technical Provisions'). To give consistency between the valuation of the assets and the liabilities the discount rate used for determining the Scheme's Technical Provisions is set based on market expectations of return, and other market data, at each review date. In particular, the discount rate is set as a prudent[3] estimate of the return expected from the Scheme's assets.

3.14 The discount rate is calculated from the best estimate return at the review date, as provided by the Scheme's investment advisers (Buck), less an explicit margin for prudence. The same margins for prudence against best estimate returns have been retained from the 2016 valuation of 0.5% a year for the growth assets and 0.1% a year for bonds.

3.15 Table 1 compares the derived discount rates as at 31 December 2016, 2017 and 2018.

Table 1: Derivation of discount rate for statutory funding objective

	Asset allocation	31 Dec 2018		31 Dec 2017	31 Dec 2016
		Best estimate	**Prudent**	**Prudent**	**Prudent**
Equity[(i)]	20%	5.95%	5.45%	5.40%	5.45%
Corporate bonds[(i)]	25%	2.85%	2.75%	2.40%	2.50%
Gilts[(i)]	55%	1.70%	1.60%	1.55%	1.60%
Discount rate		**2.8%**	**2.7%**	**2.5%**	**2.6%**
Margin over risk-free rate[(ii)]			**1.0%**	**0.9%**	**0.9%**

(i) Buck's 15 year best estimate (net investment expenses).

(ii) Over 15 year gilt return

3.16 The other main financial assumptions are price inflation (as used to determine pension increases) and general earnings inflation. Expected Retail Price inflation has been taken from statistics published by the Bank of England based on market yields on UK gilts. This measure is then reduced by 0.9% a year to allow for the anticipated difference between Retail Price inflation and Consumer Price inflation, as described in the Statement of Funding Principles.

3.17 Long-term earnings inflation has been derived from the market measure of Consumer Price inflation plus an addition of 1.5% a year as set out in the Statement of Funding Principles. No adjustment has been made for future pay restraint.

3.18 For the purpose of assessing the Technical Provisions, the discount rate in real terms (i.e. the investment return in excess of inflation) is far more important than the nominal rate of discount. At the 2016 valuation a real discount rate of 0.0% a year was adopted. The comparable discount rate at 31 December 2018 is also 0.0% a year. The key financial assumptions are summarised in Table 2.

[3] The margin for prudence is made by determining the discount rate as something lower than the best estimate of the expected return on the assets. The margin is intended to provide more security for scheme liabilities by creating a buffer against the risk of future experience being less favourable than expected.

Table 2: Proposed financial assumptions

Main financial assumptions	31 December 2018 % pa	31 December 2017 % pa	31 December 2016 % pa
Discount rate	2.7%	2.5%	2.6%
Earnings increases (long term)	4.2% + promotional scale	4.1% + promotional scale	4.1% + promotional scale
RPI	3.6%	3.5%	3.5%
CPI	2.7%	2.6%	2.6%
Pension increases	2.7%	2.6%	2.6%
Discount rate net earnings increase	**-1.5%**	**-1.6%**	**-1.5%**
Discount rate net pension increases	**0.0%**	**-0.1%**	**0.0%**

3.19 The Trustee should note that, if a full actuarial valuation were being carried out as at 31 December 2018, it would be appropriate to re-consider whether any modifications should be made to the assumptions or their method of determination.

Additional Funding Objective

3.20 The additional funding objective is that as far as possible the Trustee will seek to maintain sufficient assets in the scheme to avoid section 75 debts arising in the future. Liabilities are assessed on a buy-out basis with an explicit additional allowance for 5 years continued pay linking). An appropriate discount rate net of pension increases (that is net of price inflation) on a buy-out basis may be the average of the British Government index-linked gilt yields at the valuation date for terms over 15 years at the 0% and 5% inflation assumptions. This was the rate adopted at the 2016 valuation and I have continued to set the discount rate by reference to this measure for the funding update. The key financial assumptions for the additional funding objective are summarised in Table 3.

Table 3: Proposed financial assumptions – additional funding objective

Main financial assumptions	31 December 2018 % pa	31 December 2017 % pa	31 December 2016 % pa
Discount rate	2.0%	1.8%	1.9%
Earnings increases (long term)	5.1% + promotional scale	5.0% + promotional scale	5.0% + promotional scale
RPI	3.6%	3.5%	3.5%
CPI	3.1%	3.0%	3.0%
Pension increases	3.1%	3.0%	3.0%
Discount rate net earnings increase	**-3.1%**	**-3.2%**	**-3.1%**
Discount rate net pension increases	**-1.1%**	**-1.2%**	**-1.1%**

4 Results of the interim funding update

4.1 Table 4 below sets out the results of the interim funding update as at 31 December 2018, based on an approximate valuation using the asset data, membership data, financial assumptions and methodology described in Section 3 of this report. These calculations have been undertaken to comply with the requirements of Part 3 of the Pensions Act 2004. The results are provided mainly for the information of the Trustee (and to inform the Summary Funding Statement for members), and are not intended to be used, in isolation, for planning contribution rates or other immediate actions.

Table 4 – Valuation summary (£m)

	31 December 2018 £ million	31 December 2017 £ million	31 December 2016 £ million
Total liabilities	73	61	46
Assets	91	81	67
Surplus / (deficit)	18	20	21
Funding level	125%	133%	146%

4.2 The Section's reported surplus of £21 million as at 31 December 2016 (the last formal valuation) has decreased slightly to £18 million as at 31 December 2018. The funding level has decreased from 146% to an estimated 125% over the same period.

4.3 The estimated surplus of £20 million as at 31 December 2017 (the last interim funding update) decreased over the year to 31 December by £2 million. The estimated funding level over the year decreased from 133% to 125%. Table 5 shows the breakdown of the different elements contributing to the change in surplus.

Table 5 – Analysis of estimated surplus emerging over the year

	£ million
Surplus at 31 December 2017	**20**
Interest on surplus	1
Contributions vs accrual cost	-
Change in financial assumptions	2
Investment performance	(5)
Pension increases (April 2019)	-
Surplus at 31 December 2018	**18**

Additional Funding Objective

4.4 The results of the additional funding objective, to seek to maintain sufficient assets in the scheme to avoid section 75 debts arising the future, are summarised in table 6 below.

Table 6 – Additional Funding Objective results

	31 December 2018 £ million	31 December 2017 £ million	31 December 2016 £ million
Total liabilities	103	85	66
Assets	91	81	67
Surplus / (deficit)	(12)	(4)	1
Funding level	88%	95%	102%

4.5 On the additional funding objective there is an estimated deficit of £12 million as at 31 December 2018, so the objective was not met at this date. This deficit has arisen due to the significant difference in accrual cost assessed on this measure compared to the rate of contributions being paid.

Sensitivity of valuation results

4.6 The results of the interim valuation are highly sensitive to the assumptions adopted. When considering the results set out in this report, the Trustee should bear in mind the potential effects on the Section's financial position of future experience differing from the assumptions adopted for the valuation. Please refer to the report on the actuarial valuation as at 31 December 2016 for detailed comments on this.

4.7 In particular, the use of market-related values and assumptions can lead to year-on-year volatility in the valuation results. The Trustee should not have too much regard to the effects of short-term volatility caused by market movements, as it does not necessarily have a major impact on the long-term adequacy of the Scheme to meet its liabilities.

5 Conclusions

5.1 In accordance with statutory requirements, I have carried out an interim funding assessment of the University section of the MRC Pension Scheme as at 31 December 2018. Under the Statutory Funding Objective, the market value of the Scheme’s assets is compared with the Scheme’s Technical Provisions.

5.2 Over the year to 31 December 2018 there has been a slight deterioration in the Section’s funding position, with the estimated funding level decreasing from 133% to 125%. This deterioration is primarily due to lower than expected investment returns over the period. The valuation result is sensitive to the assumptions made.

5.3 The Trustees are required to provide the key results of this interim funding update to Scheme members in the form of a summary funding statement.

5.4 The next formal actuarial valuation of the Section is due as at 31 December 2019. It should be noted that the methodology and assumptions adopted for that formal review may differ from those adopted for this assessment.

5.5 In my opinion there is nothing in this interim review which would necessitate bringing forward the date of the formal valuation due as at 31 December 2019.

Sue Vivian
Scheme Actuary
Fellow of the Institute of Actuaries **4 July 2019**

Appendix A: Financial data

At 31 December 2018 the University Section was 80% invested in UK Pooled Investment Bonds and 20% invested in equities.

Table A1. Revenue account from 1 January 2017 to 31 December 2018

	2018		2017	
	£000	£000	£000	£000
Market value at start of period		**80,842**		**66,894**
Income				
Contributions receivable	13,190		10,880	
Investment income	424		183	
Total income		**13,614**		**11,063**
Expenditure				
Benefits payable	(468)		154	
Payments to and on account of leavers	(19)		-	
Administrative expenses	(37)		35	
Investment management expenses	(244)		156	
Total expenditure		**(768)**		**(345)**
Net income		**12,864**		**10,718**
Change in market value of investments		**(2,587)**		**3,230**
Market value at end of period		**91,101**		**80,842**