P.2022/56

THE STATES OF DELIBERATION
of the
ISLAND OF GUERNSEY

POLICY & RESOURCES COMMITTEE

SUPERANNUATION FUND – ACTUARIAL VALUATION

The States are asked to decide:-

Whether, after consideration of the Policy Letter entitled 'Superannuation Fund – Actuarial Valuation', dated 9 June 2022, they are of the opinion:-

1. To note the Actuarial Valuation of the States of Guernsey Superannuation Fund as at 31 December 2020.

2. To agree that, except for Guernsey Electricity Limited, the employer contribution rate in respect of the States of Guernsey Superannuation Fund be decreased to 10.3% with effect from 1 August 2022 and that the employer additional contribution rates shall remain as set out in Appendix III.

3. To agree that the following funding parameters are set for the Combined Pool:

    a) A lower boundary level of 90% with any corrective action to be taken over a period not exceeding the average future working lifetime of the active membership; and

    b) An upper boundary level of 120%.

4. To agree that the employer contribution rate for Guernsey Electricity Limited be decreased to 7.5% with effect from 1 August 2022.

5. To agree that no annual sum is paid into the Superannuation Fund in respect of the States Members Pension Schemes from the revenue budget of the Policy & Resources Committee in 2022 and subsequent years.

The above Propositions have been submitted to Her Majesty's Procureur for advice on any legal or constitutional implications in accordance with Rule 4(1) of the Rules of Procedure of the States of Deliberation and their Committees.

THE STATES OF DELIBERATION
of the
ISLAND OF GUERNSEY

POLICY & RESOURCES COMMITTEE

SUPERANNUATION FUND – ACTUARIAL VALUATION

The Presiding Officer
States of Guernsey
Royal Court House
St Peter Port

9 June 2022

Dear Sir

1. Executive Summary

1.1 The purpose of this Policy Letter is to set before the States the latest Actuarial Valuation of the Superannuation Fund (as at 31st December 2020) prepared by BWCI Consulting Limited which is included as Appendix I. The valuation was scheduled to be carried out as at 31st December 2019 but was deferred by a year due to the impact of the COVID-19 pandemic in 2020. The carrying out of the valuation and production of the report and this policy letter were further delayed due to the impact of the COVID-19 pandemic in 2021.

1.2 For the avoidance of doubt, this Report deals solely with the pension benefits for public sector employees and States Members. There is no impact on the 'States Pension' funded by the Guernsey Insurance Fund administered by the Committee *for* Employment & Social Security.

1.3 There are a number of technical terms included in this policy letter; a glossary to explain them is included as Appendix II.

1.4 The overall value of the Superannuation Fund as at 31st December 2020 was £1,615million and the Actuarial Valuation calculates the liabilities and funding position of each section as:

	Assets £'000	Liabilities £'000	Surplus / (Deficit) £'000	Funding %
Combined Pool	1,574,515	1,472,796	101,719	106.9
Guernsey Electricity	36,685	23,141	13,544	158.5
States Members	4,139	4,247	(108)	97.5
Total	**1,615,339**	**1,500,184**	**115,155**	**107.7**

1.5 The overall funding percentage has increased from 93.5% (deficit of £91m) at the 2016 valuation to 107.7% (surplus of £115.2m) at the 2020 valuation.

1.6 This Report recommends reductions, effective from 1 August 2022, in the employers' contribution rates for the Combined Pool from 14.1% (which included an element to eliminate the past service deficit which existed at the time of the 2016 valuation) to 10.3% which is the future service contribution rate. As employer, the States currently expects to make contributions of approximately £35million per annum into the Combined Pool. A reduction in the contribution rate to 10.3% would reduce this amount by approximately £9million per annum, of which £8million would accrue to General Revenue. It is also recommended that the Guernsey Electricity employer contribution rate is reduced from 11.5% to 7.5%.

1.7 The Policy & Resources Committee is recommending the introduction of a funding framework for the Combined Pool such that employer contributions are paid in line with the future service contribution rate calculated at each valuation with no adjustment being made for a surplus or deficit that exists at each valuation unless it exceeds a set boundary level.

2. Background

2.1 The Superannuation Fund exists to pay the pensions of the employees of the States of Guernsey and other members of the Public Sector Pension Schemes[1] and the States Members Pension Scheme. Within the Public Sector Pension Schemes element of the Superannuation Fund is a separate Actuarial Account for Guernsey Electricity Limited[2]. The Combined Pool comprises all other Public Sector Pension Schemes employees including teachers, nurses, civil servants, public service employees, police officers, etc. Previously, there were also separate Actuarial Accounts for Guernsey Post Limited and the Guernsey Financial Services Commission, but these closed to future accrual of benefits with all members effectively becoming deferred members and the liabilities, together with the full asset value of these liabilities, being transferred to the Combined Pool.

2.2 The Public Sector Pension Schemes are predominantly defined benefit schemes funded by contributions from both the employer and employee.

2.3 In 2015, the States agreed revised pension arrangements for members joining after 1 May 2015 and for service from 1 March 2016 for those members who are not protected members (those close to retirement age were protected members and continued to accrue final salary benefits). The revised arrangements replaced the final salary defined benefit arrangements with defined benefits on a career average re-valued earnings (CARE) basis up to a salary cap. A defined contribution scheme

[1] Comprises the Public Servants' Pension Scheme and the Teachers' Pension Scheme.

[2] A separate Actuarial Account is maintained for Guernsey Electricity Limited to ensure that there is no cross subsidy between the contributions paid to the Superannuation Fund by Guernsey Electricity Limited and those by other participating employers. The Guernsey Electricity Limited Actuarial Account closed to new members from 1 October 2017

was introduced for earnings in excess of this cap (which was £92,236 at 31 December 2020). The revised arrangements include a fixed cost ceiling (excluding the investment and other financial risks) on the employer's future contribution rate of 14.5% (Final Salary and CARE Transition Members) or 14% (CARE New / Elected CARE Transition Members).

2.4 One of the key calculations performed when carrying out an Actuarial Valuation is to compare the value of the Scheme's assets (Superannuation Fund) with a funding target which calculates the value of the benefits that are likely to be paid from the scheme in the future using information about the scheme at the valuation date. This relates solely to benefits already accrued by members. The actuary makes assumptions about factors which have an influence on the scheme's finances in the future including investment returns (discount rate), inflation, pay increases, pension increases, when members will retire and how long members will live.

2.5 In order to ensure that there is sufficient funding available to pay the pensions and other benefits from the Fund, the results of the Actuarial Valuation are used to inform the investment strategy and determine the required level of contribution rates.

2.6 In considering the valuation as at 31 December 2007, the States decided to introduce a funding target of 90% of benefits accrued up to 31 December 2007, and 100% of benefits thereafter for the Combined Pool. However, this was not sustainable over the long term as the States of Guernsey were still responsible for paying 100% of benefits. Therefore, the Policy & Resources Committee restored a 100% funding target for all benefits for the Combined Pool Section for the 2016 valuation.

2.7 The funding target for the Guernsey Electricity Limited Actuarial Account has been retained at 100% of liabilities.

3. Combined Pool

Valuation Results

3.1 The Actuarial Valuation Report includes detailed explanation and analysis on the membership data; developments since the last Valuation (31st December 2016); assumptions used to calculate the funding target; and the funding position.

3.2 These assumptions are derived from historical data, present knowledge and future projections. The one thing of which we can be certain is that the actuarial assumptions will almost invariably never be precisely borne out in practice and, in the short-term, actual experience can vary significantly from that assumed. For example, inflation rates are currently significantly above the long-term assumption. The findings of the valuation result in an assessment of the surplus or deficit in the scheme at the valuation date. The Actuarial Valuation will also include an estimation of the employer contribution rate needed to fund future service of existing employees.

3.3 The results of the Actuarial Valuation as at 31st December 2020 are summarised below:

	2020 £'000	2016 £'000
Market Value of Scheme Assets	1,574,515	1,236,551
Present Value of Scheme Liabilities	1,472,796	1,329,202
Surplus / (Deficit)	101,719	(92,651)
Funding Percentage	**106.9%**	**93.0%**
Future Service Contribution Rate	**10.3%**	**12.1%**

3.4 The funding percentage as at 31st December 2020 has improved significantly since the 93% recorded within the 2016 Actuarial Valuation. This improvement is mainly due to a combination of higher investments returns than expected and lower salary increases, deferred pension increases and pension increases (primarily due to lower than expected inflation) over the intervaluation period.

3.5 The employer contribution rate following the 2016 valuation was maintained at 14.1% although the future service contribution rate had reduced to 12.1% as result of the revised pension arrangements which were introduced in 2015. The remaining 2% was used towards eliminating the past service deficit at that time.

3.6 The overall future service contribution rate now required is 10.3%. It might be possible to use the surplus as at 31 December 2020 in order to support a reduced employer contribution rate, below the required future service contribution rate. This could reduce the employer contribution rate by 3.2% (to 7.1%) over a fifteen-year period. However, the current surplus is small relative to the size of the Fund and could be rapidly eliminated if the assumptions are not borne out in practice.

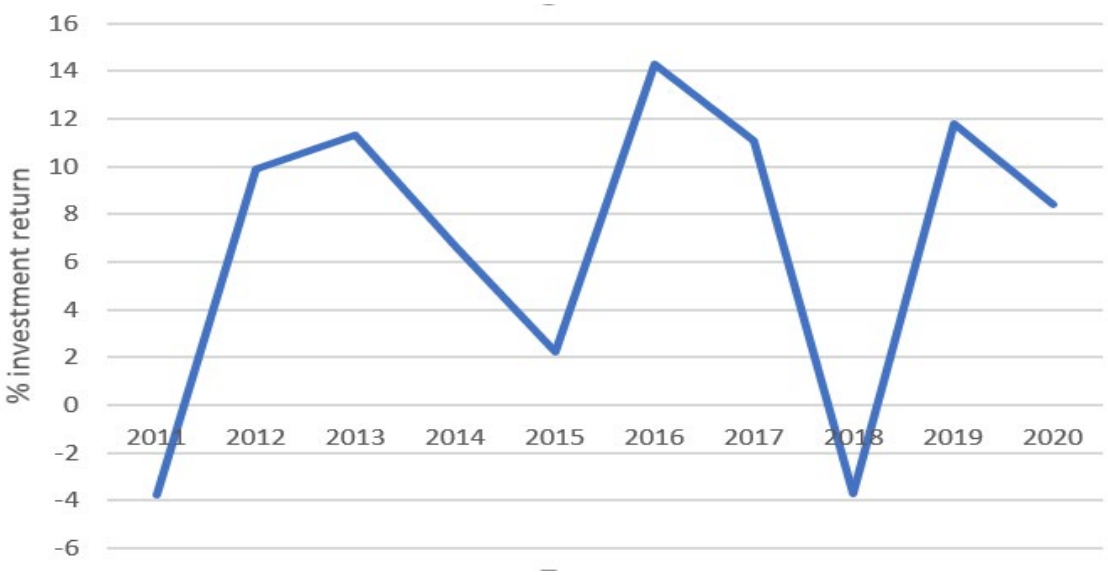
3.7 Therefore, the Policy & Resources Committee is of the view that, given the volatility of the funding position (moved from a deficit of 7% at the 2016 valuation to a surplus of 6.9% at the 2020 valuation) and uncertainty surrounding how it might evolve over time, this surplus should instead be retained within the Fund to help protect against future adverse experience and reduce the risk of having to pay significantly higher contribution rates at future valuations.

3.8 **It is recommended that the base level rate of employer contributions is reduced from 1 July 2022 to 10.3% of Pensionable Pay with additional contributions payable in respect of the special benefit groups (as set out in Appendix III).** As employer, the States currently expects to make contributions of approximately £35million per annum into the Combined Pool. A reduction in the contribution rate to 10.3% would reduce this amount by approximately £9million per annum, of which £8million would accrue to General Revenue.

Funding Parameters

3.9 In considering the recommendation for employer contribution rates, the Policy & Resources Committee considered that determining recommendations for these rates should not be an arbitrary decision at each valuation, based on the surplus or deficit that exists at that particular date, but instead be considered within a funding framework.

3.10 The Superannuation Fund invests significantly in asset classes such as equities and other return-seeking assets that are expected to produce much higher returns than gilts over the long-term. However, these expected higher returns have an accompanying risk of increasing volatility between years as depicted below:



3.11 This volatility in investment returns consequentially impacts on the funding position and means that Employer contributions could be required to be adjusted significantly and on a regular basis in order to target a funding level of 100%. If investment returns exceed the assumption of inflation plus 2.5% then the funding position will improve; conversely, if investment returns are below the assumption, then there will be a deterioration in the funding position.

3.12 The introduction of funding parameters would allow the funding level to fluctuate between set boundaries, without corrective action being taken. While the funding level is between the boundaries, Employer contributions are paid in line with the future service contribution rate and no adjustments are made in respect of any funding shortfall or surplus. This would smooth the Employer contributions being paid into the Fund and enable a consistent and transparent long-term funding approach to be adopted.

3.13 The Policy & Resources Committee is recommending that the following funding parameters are set for the Combined Pool:

- A lower boundary level of 90% with any corrective action to be taken over a period not exceeding the average future working lifetime of the active

membership (currently fifteen years). For illustration, a lower boundary of 90% currently equates to a funding shortfall of approximately £150million which, to achieve a fully funded position, would equate to additional contributions of 4.7% of pensionable pay over fifteen years. This would equate to an employer contribution rate of 15% which is slightly higher than the 14.1% rate which is currently being paid.

- An upper boundary level of 120% which would enable a surplus to be retained which would provide a reasonable cushion against future adverse experience. The current funding level is 107% and an upper boundary of 120% equates to a funding surplus of approximately £300million which would provide a cushion sufficient to cover a fall in the value of assets of around 17%.

  The Policy & Resources Committee would, at the time of a surplus existing which exceeds the upper boundary level, make a recommendation to the States of the period over which the excess surplus will be removed.

3.14 This means that, following future valuations, the recommendation will be to set the Employer contribution rates in line with the future service contribution rate with no adjustments being made in respect of any funding shortfall or surplus unless the funding level fell to below 90% or rose above 120%.

4 Guernsey Electricity Limited

4.1 The Guernsey Electricity Limited Actuarial Account closed to new members from 1 October 2017. The assets and liabilities in respect of non-active members of the Actuarial Account were subsequently transferred to the Combined Pool with effect from 30 June 2018 and it was agreed that annual transfers will be made each year in relation to members that leave Guernsey Electricity Limited employment. This is not expected to have any impact on the funding position of the Combined Pool, as the transfer was calculated using the assumptions adopted for the valuation.

4.2 The results of the Actuarial Valuation as at 31st December 2020 are summarised below:

	2020 £'000	2016 £'000
Market Value of Scheme Assets	36,685	60,650
Present Value of Scheme Liabilities	23,141	57,142
Surplus	13,544	3,508
Funding Percentage	**158.5%**	**106.1%**

4.3 This funding percentage as at 31 December 2020 is a significant improvement from the valuation at 31st December 2016 (funding percentage of 106.1%) mainly due to a combination of significantly lower salary increases and higher investment returns than expected over the intervaluation period.

4.4 The current employer contribution rate is 11.5%. The overall future service contribution rate required is 11.3%. However, it has been calculated that the significant surplus would enable the employer contribution rate to be reduced to nil.

4.5 Under Rules 2(2)(f) and (g) of the Superannuation Fund, the States of Guernsey determines the contribution rates payable by Guernsey Electricity Limited. The Committee has consulted with Guernsey Electricity Limited as to the level of contribution rate they would wish to be set. Guernsey Electricity Limited has requested that its contribution rate is reduced to 7.5% with the remaining surplus being maintained to help mitigate any future adverse experience of funding levels.

4.6 The Policy & Resources Committee agrees that this is a prudent approach given the potential volatility of the funding position and uncertainty that exists in respect of the future assumptions. The contribution rate would be subject to further review and potential adjustment following the next Actuarial Valuation to take account of subsequent movements in the funding position. **Therefore, it is recommended that the employer contribution rate for Guernsey Electricity Limited is reduced from 1 August 2022 to 7.5%.**

5. States Members Pension Scheme

5.1 This Scheme represents approximately 0.3% of the overall Superannuation Fund assets and liabilities.

5.2 On 1 May 2012, the States Members Pension Scheme was closed to future accrual of benefits and all active members became deferred pensioners on that date. Since 2012 an annual sum is being paid into the Superannuation Fund to eliminate the past service deficit. Since 2017, when the deficit was £1,493,000, this sum has been £153,000 per annum (maintained in real terms) which was intended to eliminate the deficit over a period of fifteen years.

5.3 The results of the Actuarial Valuation of the States Members Pension Scheme as at 31 December 2020 are that there is a funding shortfall of £108,000. This shortfall was eliminated by a single lump sum payment of £114,000 (which allowed for interest on the shortfall) paid at the end of 2021.

6. Superannuation Fund

6.1 The assets of the Superannuation Fund as at 31 December 2020 totalled £1,615million, attributed to the Fund constituents as follows:

	2020 £'000	2016 £'000
Combined Pool	1,574,515	1,236,551
Guernsey Electricity Limited	36,685	60,650
States Members	4,139	3,955
Total	**1,615,339**	**1,301,156**

6.2 The Superannuation Fund's annual performance is reported as part of the overall States Accounts and can be summarised as follows:

	2020	2016	2013	2010	2007
	£m	£m	£m	£m	£m
Employer contributions	33	29	27	26	16
Employee contributions	17	14	13	12	10
Refunds and Transfers (net)	-	-	1	1	(1)
Pensions and Lump Sums paid	(64)	(57)	(49)	(40)	(28)
Net decrease before investment returns	(14)	(14)	(8)	(1)	(3)
Net investment income and appreciation/(depreciation)	128	163	108	102	52
Net increase	114	149	100	101	49
Balance at 1 January	1,501	1,152	976	829	847
Balance at 31 December	1,615	1,301	1,076	930	896
Scheme Liabilities at 31 December	1,500	1,392	1,152	1,003	940
Surplus / (Deficit)	115	(91)	(76)	(73)	(44)
Funding Ratio	**107.7%**	**93.5%**	**93.4%**	**92.7%**	**95.3%**

7. Accounting disclosures

7.1 The 107.7% funding position of the Scheme as per the Actuarial Valuation is considerably higher than the 57.1% calculated under accounting rules and disclosed within the 2020 States of Guernsey Accounts (Billet d'État XIII, 2021):

	Using Accounting Assumptions £'000	As per the Actuarial Valuation £'000
Market Value of Scheme Assets	1,615,339	1,615,339
Present Value of Scheme Liabilities	2,830,243	1,500,184
(Deficit) / Surplus	(1,214,904)	115,155
Funding Percentage	57.1%	107.7%

7.2 The basis of preparing the accounting disclosures is very prescriptive and, whilst many of the assumptions used are the same or very similar to those used in the

Actuarial Valuation, there is a major variance in the key assumption of discount rate (assumption of future investment returns) which makes a substantial difference to the size of the reported deficit. The higher the discount rate, the lower the present value of the scheme liabilities.

7.3 The accounting disclosure calculations for 31 December 2020 effectively assumed a discount rate of inflation less 1.3% (based on the return on an AA corporate bond, which is prescribed for use in the accounting disclosures) whereas the Actuarial Valuation allows for the actual assets held and assumes a discount rate of inflation plus 2.5%. This is in line with that used when determining the revised pension arrangements but lower than the Superannuation Fund target rate of investment return which is currently inflation plus 4%. The two bases result in material differences in the calculation of liabilities and the resultant net funding position of the scheme.

7.4 The Fund is largely invested in return seeking assets which are expected to provide substantially higher returns than corporate bonds over the long-term. The investment funds have a target rate of return of inflation plus 4% and actual returns over the last 5 years (2016-2020) have averaged 5.4% above inflation per annum (3.6% above inflation per annum over the last 10 years).

8. Future pension arrangements

8.1 Notwithstanding the revised pension arrangements introduced in 2015 were designed to make the Schemes more sustainable and reduce the risk to the employer, some elements of risk remain with the employer, notably investment return. In the future, further consideration may need to be given as to whether it is affordable and sustainable to continue to offer these arrangements to new joiners. At such time, the Policy & Resources Committee would, in accordance with the agreed procedure, enter into discussions with the Pensions Consultative Committee.

9. Compliance with Rule 4

9.1 Rule 4 of the Rules of Procedure of the States of Deliberation and their Committees sets out the information which must be included in, or appended to, motions laid before the States.

9.2 In accordance with Rule 4(1)(a), the Propositions relate to the duties of the Committee to advise the States and to develop and implement policies and programmes relating to: fiscal policy, economic affairs and the financial and other resources of the States.

9.3 In accordance with Rule 4(1)(c), the Propositions have been submitted to Her Majesty's Procureur for advice on any legal or constitutional implications.

9.4 In accordance with Rule 4(2)(b), the Propositions have the unanimous support of the Committee.

Yours faithfully

P T R Ferbrache
President

H J R Soulsby MBE
Vice-President

M A J Helyar
J P Le Tocq
D J Mahoney

BWCI Consulting Limited

States of Guernsey Superannuation Fund

Actuarial Valuation as at 31 December 2020

Prepared for

The States of Guernsey Policy & Resources Committee

Prepared by

BWCI Consulting Limited

6 June 2022

Location | PO Box 68, Albert House
South Esplanade, St Peter Port
Guernsey, GY1 3BY
Tel | +44 (0)1481 728432
Fax | +44 (0)1481 724082
Web | www.bwcigroup.com

Registered Address: Albert House, South Esplanade, St Peter Port, Guernsey, GY1 1AW
Guernsey Registered Company No. 41627

EXECUTIVE SUMMARY

Valuation results

The financial position of the States of Guernsey Superannuation Fund ("the Fund") was assessed at 31 December 2020. The main purposes of the valuation are to review the financial position of the Fund as a going concern and to help establish the contributions payable to the Fund in the future. The results are summarised below:

	Combined Pool	GEL Actuarial Account
Surplus/(shortfall)	£101,719,000	£13,544,000
Funding level	106.9%	158.5%
Overall employer future service contribution rate	10.3%	11.3%
split as follows:		
- Final Salary section	19.8%	20.4%
- CARE section	9.4%	9.9%

Future service contribution rate

The different sections of the Fund contain different benefit structures and age profiles and so the contribution rates that apply to a specific section will be different and will change over time as the age profile of that section changes. The overall future service contribution rate reflects the combination of rates depending on the mix of membership within each section of the Fund. The cost of benefits accruing under the Final Salary section is higher than under the CARE Transition and Elected CARE sections, which are in turn higher than the cost under the CARE New section. Over time, as more of the membership is made up of CARE New Members accruing lower cost benefits, the overall future service contribution rate is expected to fall and this is the case over the intervaluation period.

For illustration of the changing mix of membership in each section, the number of Final Salary Protected members within the Combined Pool section has reduced from 1,095 (22% of active membership) at the 2016 valuation to 466 (9% of active membership) at the 2020 valuation.

The rates of contribution payable will be reviewed at the next actuarial valuation which is due to take place as at 31 December 2023.

Combined Pool section

The current rate of Employer contributions being paid is an overall rate of 14.1% of Pensionable Salary. The required future service Employer contribution rate at this valuation is 10.3% of Pensionable Salary.

EXECUTIVE SUMMARY (CONTINUED)

As there is a **surplus** in the Fund at the valuation date, the Employer could pay contributions in line with this future service contribution rate of 10.3% of Pensionable Salary.

Additional contributions are required in respect of the special benefit groups (see Appendix G for more details).

Guernsey Electricity Limited (GEL) Actuarial Account

GEL is currently paying contributions of 11.5% of Pensionable Salary, which is slightly above the future service contribution rate of 11.3% of Pensionable Salary required at this valuation. However, as the GEL Actuarial Account is in a significant **surplus**, it would be possible for GEL to pay reduced contributions, below the required rate of 11.3% of Pensionable Salary.

Contribution caps and floors

There is a cost floor and ceiling mechanism which applies to elements of the overall Employer future service contribution rate (see section 4.5 for further details). These limits have not been reached at this valuation and therefore no changes to future accrual or contributions are required in the CARE Section as a result of the floor and ceiling mechanism.

Utilising the surplus

As both the Combined Pool and the GEL Actuarial Account had a **surplus** relative to their **funding targets** at the valuation date, no **shortfall** contributions are required to be paid into the Fund at the current time.

It would be possible to use the **surplus** revealed at the valuation date to support a reduced Employer's contribution rate, below the required future service contribution rate. However, given the volatility of the funding position and uncertainty surrounding how it might evolve over time, the **surplus** could be retained within the Fund to help protect against future adverse experience. In particular, the Fund invests significantly in asset classes such as equities and other return-seeking assets that are expected to produce higher future returns than other asset classes over the long term. One of the risks that must be traded off against these expected higher returns is the increased volatility of the Fund's returns and therefore a volatile funding position. It should also be noted that there is significant uncertainty surrounding climate change and the impact it might have on the Fund. We have set out some climate change scenarios in Appendix F, to show the potential impact on the Fund. It is possible that climate change could have a significantly negative impact on the **funding level** and so it would be prudent to retain the **surplus** within the Fund to help alleviate any adverse impact from climate change.

Retaining the **surplus** within the Fund will reduce the likelihood of future **shortfalls** arising and reduce the risk of having to pay significantly higher contribution rates at future valuations.

EXECUTIVE SUMMARY (CONTINUED)

As the GEL Actuarial Account is in significant **surplus**, it would be reasonable to retain part of the surplus in the Fund but to allow GEL to pay reduced contributions, below the Employer future service contribution rate. For illustration, for every 1% of Pensionable Salary that the future service contribution rate is reduced (for the remainder of the Actuarial Account's lifetime) £1m of **surplus** is expected to be used up from the GEL Actuarial Account.

Implementing a funding boundary mechanism

A funding boundary is a mechanism which allows the **funding level** to fluctuate between set boundaries, without corrective action being taken. It would smooth the Employer contributions paid into the Fund and enable a consistent and transparent long term funding approach to be adopted. Implementing a funding boundary mechanism would change the funding risk profile of the Fund.

States Members' Pension Fund

The two pension arrangements for States Members are combined with the Fund for investment purposes. However, a separate valuation for the States Members' Pension Fund has been carried out as at 31 December 2020 and the results have been summarised in Appendix H.

CONTENTS

1 INTRODUCTION

1.1 Regular valuations

This report is prepared for the Policy & Resources Committee of the States of Guernsey and sets out the results of our actuarial valuation of the States of Guernsey Superannuation Fund ("the Fund") as at 31 December 2020.

The valuation reviews the financial position of the Fund as a going concern and helps to establish what actions should be taken by the Policy & Resources Committee and the States of Guernsey regarding future contribution rates.

Our previous valuation report of 30 May 2018 considered the financial position of the Fund as at 31 December 2016.

1.2 A snapshot view

This report concentrates on the Fund's financial position at the valuation date. As time moves on, the Fund's finances will fluctuate. It will therefore be necessary to carry out further valuations to monitor the position. In the meantime, if you are reading this report some time after it was prepared, you should bear in mind that the Fund's position could have changed significantly.

We comment briefly on developments after the valuation date in section 6.2.

1.3 Definitions and technical terms

Definitions of technical terms, which are shown in bold type, are provided throughout this report.

1.4 States Members' Pension Fund

A valuation of the States Members' Pension Fund has also been carried out as at 31 December 2020. A summary of the results of that valuation is included as Appendix H.

1.5 Scope of advice and compliance

This report is prepared solely for the benefit of the Policy & Resources Committee. It should be considered in its entirety, as parts taken in isolation could be misleading. Please see Appendix A for further details.

2 DATA

2.1 Benefits valued

The valuation is based on the benefits defined in the Fund's legal documents at the valuation date. A summary of these benefits is set out in Appendix B.

2.1.1 Allowance for pension increases not guaranteed by the Rules

The pension and deferred pension increases provided in the Final Salary section of the Fund are not guaranteed in the Rules but determined by the States of Guernsey. However, in 1988, the States of Guernsey resolved that an increase of less than the increase in the Guernsey Retail Prices Index (RPI) should only be recommended if certain criteria apply. From 1 January 2017, increases are based on the Guernsey Index of Retail Prices excluding mortgage payments (RPIX).

The intention is to provide pension and deferred pension increases annually on 1 January for the Combined Pool section of the Fund and GEL Actuarial Account based on the annual increase in the Guernsey RPIX to the preceding June. The Teachers' Scheme provides pension increases in line with the increases granted by the UK Teachers' Scheme which are now based on the UK Consumer Prices Index.

We have assumed in our calculations that the current intention of providing these increases will continue in future and have allowed fully for future pension and deferred pension increases in the economic assumptions.

2.1.2 Left but not yet processed

As noted previously, there is some uncertainty in the data that the Policy & Resources Committee holds for those members of the Combined Pool who have previously left service but whose benefits have not yet been processed. As such, we do not have the required data with which to value these members accurately.

For the 2016 valuation, we included a very approximate funding reserve for these members, which was an estimate of the value of their preserved benefits within the Combined Pool. There were 1,303 cases at the 2016 valuation. Some of these cases have now been processed.

In addition, we have been provided with additional data for some of the remaining unprocessed cases and have therefore been able to calculate a more accurate estimate for them. However, we are still including a very approximate reserve for 911 cases as at 31 December 2020.

2.2 Benefit changes

2.2.1 Elected CARE Transition Members

As part of the introduction of the CARE sections, transitional arrangements applied for those who were active members of the Final Salary section on 29 February 2016. Those members are either protected

and remain accruing service in the Final Salary section of the Fund (if they were within 10 years of their Normal Pension Age on 31 December 2013 and did not opt to join the CARE section of the Fund) or they transferred to the CARE section of the Fund for future accrual of benefits from 1 March 2016 as CARE Transition Members.

During 2019, CARE Transition Members were given the option to elect to be subject to special transitional provisions. A Care Transition Member who made such an election is known as an Elected CARE Transition Member.

The CARE benefits for each section, in relation to standard members, are summarised in the table below:

	CARE Transition Member	Elected CARE Transition Member	CARE New Member
Normal Pension Age	SPA on 1 March 2016	65	linked to SPA
Member accrual rate	1/56	1/80	1/80
Terminal grant accrual rate	0	3/80	3/80
Indexation cap	7.5%	6.0%	6.0%
Member contribution rate	7.0% pa	7.5% pa	7.5% pa

2.2.2 Crown Officers

In May 2019, following a period of consultation, a revised benefit structure was agreed to be implemented for Crown Officers and Judges which mirrors the benefits available in the New Judicial Pension Scheme introduced in the UK in 2015. This benefit structure is briefly summarised as follows:

Member pension accrual rate	2.32% (approximately 1/43.1)
Spouse pension accrual rate	0.87% (approximately 1/114.94)
Normal Pension Age	UK State Pension Age
Member contribution rate	7.35% pa on salary up to £150,000 8.05% pa on salary over £150,000
Increases to benefits	Linked to UK CPI

2.2.3 GEL Actuarial Account closure and partial transfer to Combined Pool

The GEL Actuarial Account closed to new members from 1 October 2017. The assets and liabilities in respect of non-active members of the Actuarial Account were subsequently transferred to the Combined Pool with effect from 30 June 2018 and it was agreed that annual transfers will be made going forwards in relation to members that leave GEL employment each year. This is not expected to have any impact

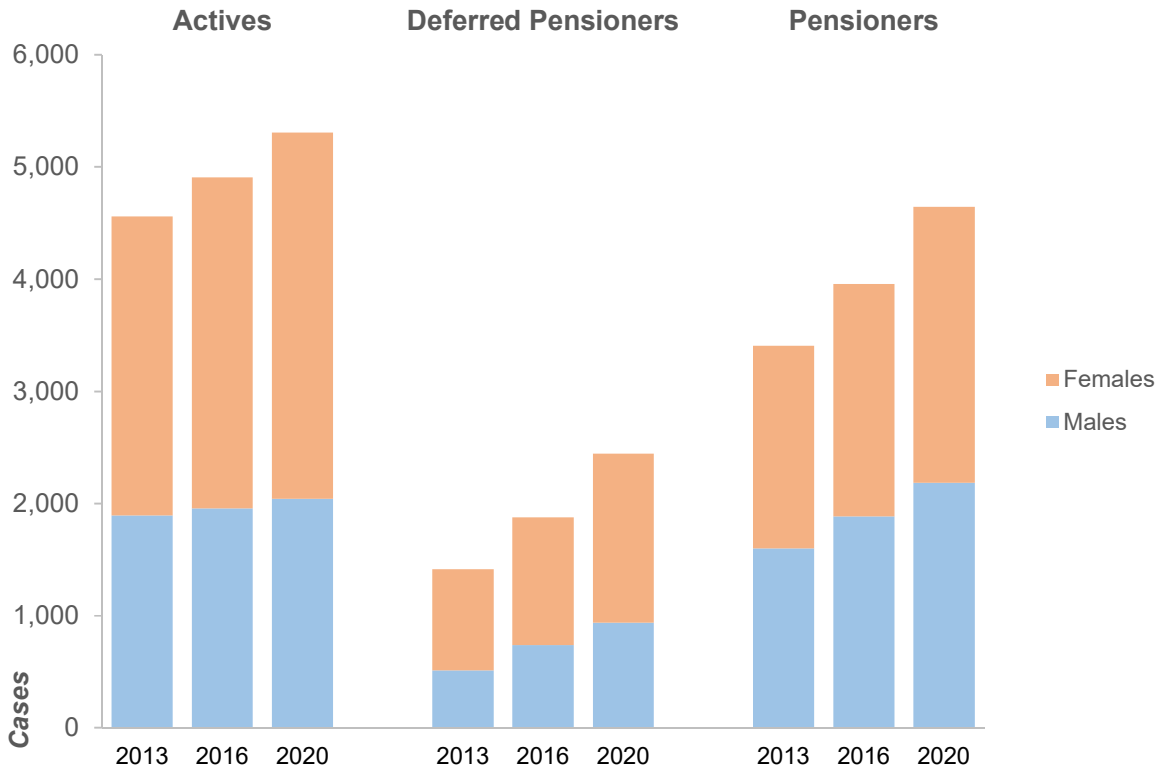
on the funding position of the Combined Pool, as the transfer is calculated using the assumptions adopted for the valuation.

2.3 Membership data

The valuation results are based on the membership data supplied to us by the Policy & Resources Committee as at 31 December 2020. This data, together with the membership data used for the previous valuation, is summarised in Appendix C.

2.3.1 Combined Pool

Changes in the number of members of the Combined Pool section since 2013 are illustrated below.

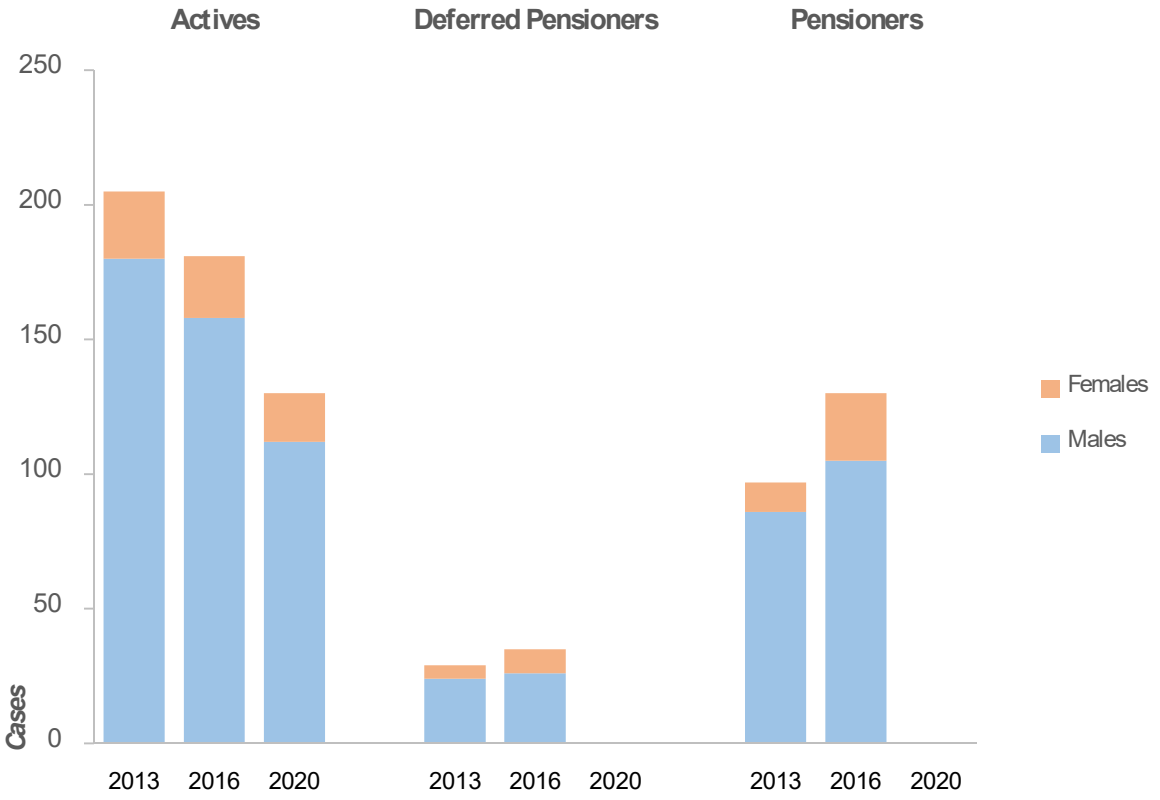


The Combined Pool section has experienced an increase in all membership groups since the previous valuation. The number of deferred pensioners in the chart above includes those members who have left but not yet been processed (see section 2.1.2).

2.3.2 GEL Actuarial Account

Changes in the number of members of the GEL Actuarial Account since 2013 are illustrated below.

DATA (CONTINUED)

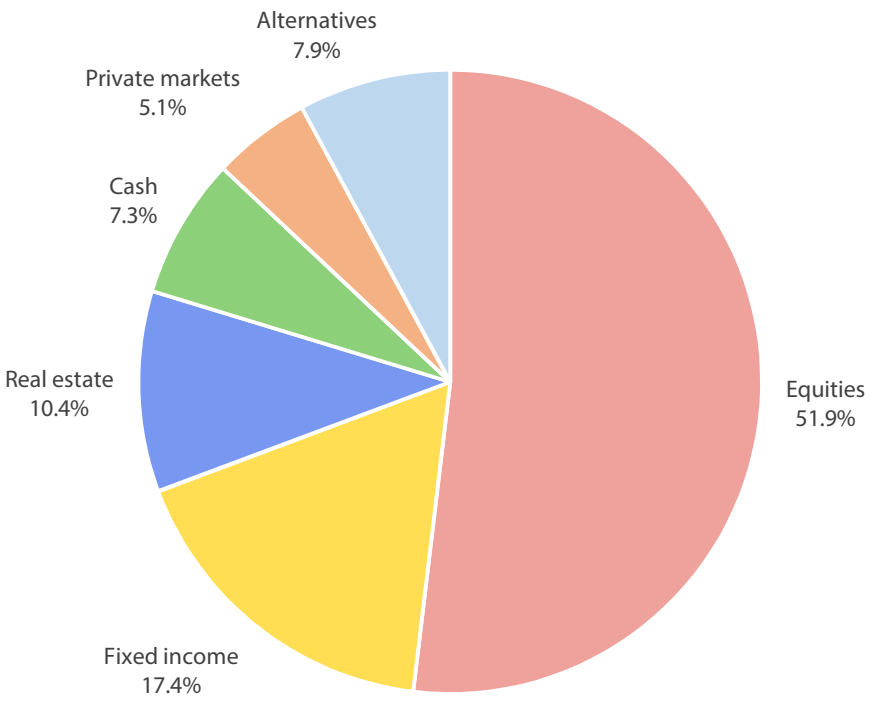


The active membership of the GEL Actuarial Account has declined since the previous valuation as the Actuarial Account is now closed to new entrants. There are no longer any deferred pensioners or pensioners within the Actuarial Account as these members have now been transferred into the Combined Pool (see section 2.2.3). The number of deferred pensioners in the chart above includes those members who have left but not yet been processed (see section 2.1.2).

2.4 Assets

The final accounts of the Fund as at 31 December 2020, as provided by the Policy & Resources Committee, show total assets of £1,615,339,000. Of this, £1,574,515,000 relates to the Combined Pool section. The assets allocated to the GEL Actuarial Account amounted to £36,685,000. The assets were split as follows:

DATA (CONTINUED)



These assets include the value of the defined contribution (DC) section of the Fund. Therefore, we have also added to the liabilities of the Combined Pool and the GEL Actuarial Account the value of the DC section, in order that the assets and liabilities are valued consistently. In the DC section, the value of the liabilities is equal to the value of the assets. For the avoidance of doubt, we have excluded the value of the States Members' Pension Fund from the assets (and this is considered separately in Appendix H).

2.5 Reliability of information

The results in our report rely on the accuracy of the information supplied. We have carried out some general checks to satisfy ourselves that:

- the information used for this valuation is reasonable compared with the information used for the previous valuation; and
- the results of this valuation can be reconciled with the results of the previous valuation.

However, please let us know if you believe the data we have used may be incomplete or inaccurate.

3 METHOD AND ASSUMPTIONS

3.1 Funding objective

The funding objective is that the Fund should meet its **funding target**.

Term	Definition
Funding target	A **funding target** is an assessment of the **present value** of the benefits that will be paid from a pension scheme in the future, based on pensionable service prior to the valuation date. In order to calculate a **funding target**, assumptions need to be made about the various factors that will influence the scheme in the future, such as the level of pay increases, when members will retire and how long members will live. These assumptions are used to project future cashflows out of the scheme, which are then discounted back to the valuation date using the assumed rate of investment return to place a **present value** on the scheme's liabilities, ie the **funding target**.
Discount rate	This is used to place a **present value** on a future payment. A **discount rate** can allow for some of the extra investment return that is expected over the long term by investing in return seeking assets.
Present value	The actuarial valuation involves projections of pay, pensions and other benefits into the future. To express the value of the projected benefits in terms of a cash amount at the valuation date, the projected amounts are discounted back to the valuation date by a **discount rate**. This value is known as the **present value**. For example, if the **discount rate** was 5% a year and if we had to pay a lump sum of £1,050 in one year's time the **present value** would be £1,000.

3.2 Funding target

The **funding target** for both the Combined Pool and the GEL Actuarial Account is that the value placed on the liabilities of the Fund should be equal to the market value of the assets of the Fund (ie they should be 100% funded).

The **funding targets** are the same as those adopted for the 2016 valuation.

3.3 Funding method

If each section of the Fund had no **surplus** or **shortfall** and its assets were exactly equal to its **funding target**, contributions would still be required to cover the cost of benefits expected to accrue to members in the future and to cover the administration expenses of the Fund.

METHOD AND ASSUMPTIONS (CONTINUED)

It has been agreed to use the projected unit method with a one year control period to calculate the future service contribution rate. This method calculates the **present value** of the benefits expected to accrue to members over the year following the valuation date, allowing for projected future increases to Pensionable Salary to the date of retirement or earlier leaving service. This is the same method as adopted for the 2016 valuation.

3.4 Financial assumptions

The table below shows the key financial assumptions used to calculate the **funding target** for this valuation, compared with those used for the previous valuation. An explanation of the derivation of these assumptions is given in Appendix E.

Assumption	Previous valuation	This valuation	Comments on assumption
Discount rate	6.05% pa	5.6% pa	Set equal to UK RPI inflation plus 2.5% per annum.
UK RPI inflation	3.55% pa	3.1% pa	The annual inflation spot rate that broadly replicates the Bank of England's inflation curve at the valuation date, having regard to the approximate cashflow profile of the Fund.
UK CPI inflation	2.85% pa	2.8% pa	Assumed to be 0.7% pa below UK RPI inflation until 2030, and equal to UK RPI inflation from 2030.
Guernsey RPIX inflation	3.8% pa	3.2% pa	The single rate that broadly replicates the results of a full yield curve valuation, carried out using the BWCI Guernsey inflation curve plus 0.25% pa, having regard to the approximate cashflow profile of the Fund.
Salary increases in additional to a promotional scale	4.3% pa	3.7% pa	Equal to Guernsey RPIX inflation plus 0.5% pa.
CARE revaluation	3.8% pa	3.2% pa	Equal to Guernsey RPIX inflation.
Deferred pension increases	3.8% pa	3.2% pa	Equal to Guernsey RPIX inflation.

Assumption	Previous valuation	This valuation	Comments on assumption
Pension increases			
- Teachers	2.85% pa	2.8% pa	Equal to UK CPI inflation
- All other sections	3.8% pa	3.2% pa	Equal to Guernsey RPIX inflation.

3.5 Demographic and procedural assumptions

The demographic and procedural assumptions used for this valuation are set out in Appendix E.

The post-retirement mortality assumption adopted for this valuation implies the following life expectancies for a non-teacher at age 65:

Life expectancy at age 65	Male (Years)	Females (Years)
Current 65 year old	22.1	24.5
Current 45 year old, assuming survival to age 65	23.8	26.2

For comparison, the life expectancies for a non-teacher implied by the assumptions adopted for the previous valuation are:

Life expectancy at age 65	Male (Years)	Females (Years)
Current 65 year old	22.5	24.5
Current 45 year old, assuming survival to age 65	24.4	26.3

3.6 Changes in assumptions

The valuation results are sensitive to the choice of financial assumptions. Important points to bear in mind are:

- the differences between the rates have a greater impact than the absolute levels of each assumption
- the assumptions were derived from market yields at the valuation date to ensure compatibility with the market value of the assets.

The valuation results are also sensitive to the assumptions made for the life expectancy of current and prospective pensioners. These sensitivities are considered further in Appendix F.

The assumptions differ from those used for the previous valuation in the following areas:

METHOD AND ASSUMPTIONS (CONTINUED)

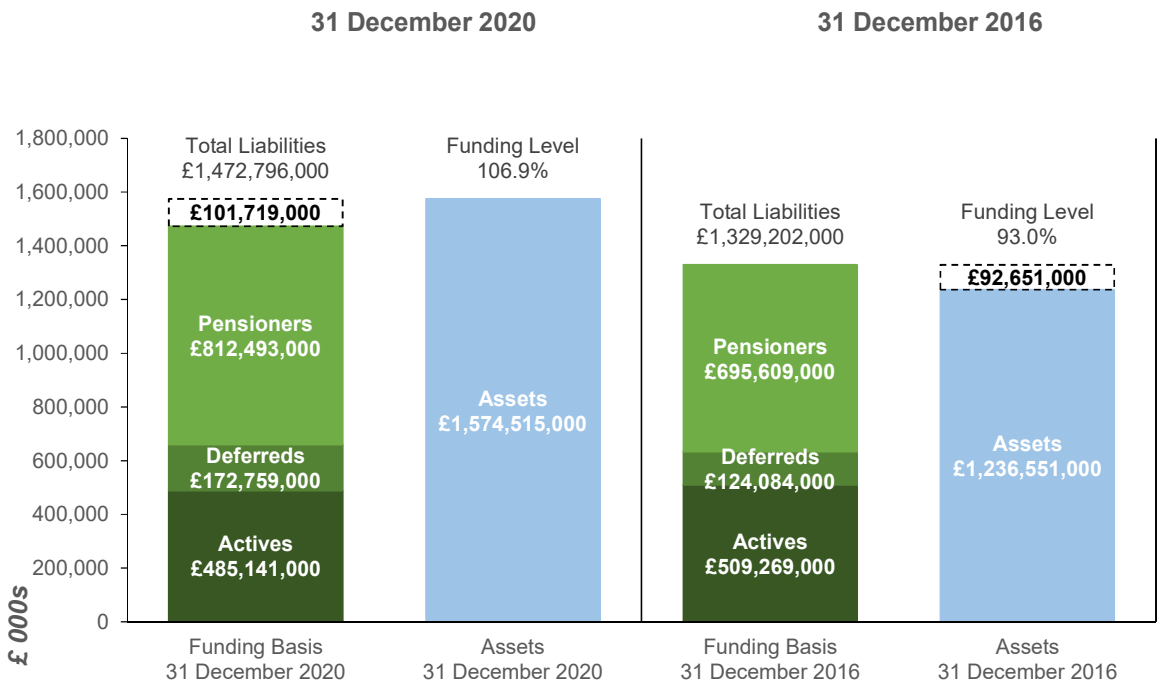
- the financial assumptions have been updated to reflect changes in market conditions
- the Guernsey inflation assumption and the UK CPI inflation assumption have been updated to include an allowance for the expected changes in the methodology used to calculate UK RPI from 2030
- the post-retirement mortality assumption has been updated to allow for the latest base tables and improvement factors that were available at the valuation date, published by the Continuous Mortality Investigation, a body supported by the Institute and Faculty of Actuaries. The scaling factors applied to Teachers have also been updated in light of actual experience
- minor other adjustments have been made to assumptions regarding retirements and withdrawals for certain categories of membership, as a result of an analysis of experience over the intervaluation period. Further details are set out in our assumptions paper dated 26 March 2021.

The changes to the assumptions have reduced the value placed on the Fund's liabilities compared to the previous valuation.

4 RESULTS – COMBINED POOL SECTION

4.1 Funding position

As noted in section 3.2, the funding objective is to hold assets equal to the **funding target**. We have therefore compared the market value of the assets in the Fund in respect of the Combined Pool section with the **funding target** as at the valuation date on the assumptions set out in Appendix E. The chart below compares the Combined Pool's financial position at the valuation date with that at the previous valuation date:



The Combined Pool section had a **surplus** of £101,719,000 as at 31 December 2020, corresponding to a **funding level** of 106.9%. It has not been possible at this valuation to separately identify the funding position for the CARE Section and Final Salary Section, as the asset values for these Sections have not been separately identified. However, we may need to assess the funding position for the CARE Section separately in future, as the revaluation applied to CARE benefits can depend on the health of the CARE Section when inflation rises above 7.5% pa.

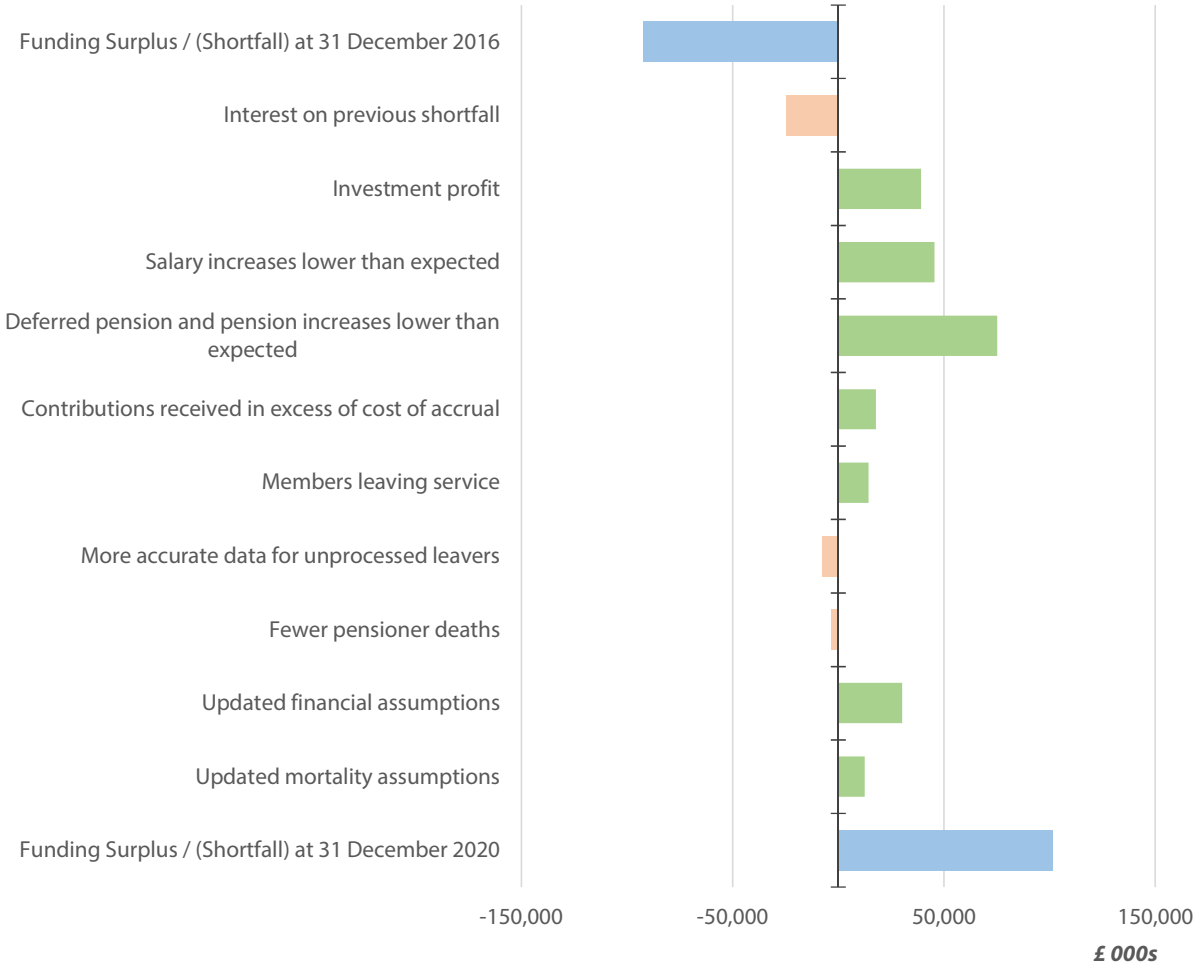
It is important to appreciate that the Combined Pool's funding position is dependent on the assumptions used to calculate the **funding target**. If these assumptions are not borne out in practice then the **funding level** will change. Appendix F covers the key risks faced by the Combined Pool and illustrates the sensitivity of the funding position to changes in the key assumptions.

RESULTS – COMBINED POOL SECTION (CONTINUED)

Term	Definition
Funding level	This is the ratio of the value of the assets to the value of the liabilities on a particular set of assumptions.
Surplus/shortfall	This is the difference between the value of the assets and the value placed on the liabilities using a particular set of assumptions. If the market value of the assets is greater than the value placed on the liabilities, then the difference is called the **surplus**. If the value placed on the liabilities is greater than the market value of the assets, then the difference is called the **shortfall**.

4.2 Change in funding position

This valuation has revealed a **surplus** relative to the **funding target** of £101,719,000. At the previous valuation the Combined Pool had a **shortfall** of £92,651,000. Therefore, the funding position has improved by £194,370,000 since the previous valuation. We have analysed below the reasons for the change, indicating the impact of each factor on the valuation result this time.



RESULTS – COMBINED POOL SECTION (CONTINUED)

The past service position has improved mainly due to a combination of:

- higher investment returns than expected over the intervaluation period; and
- lower salary increases, deferred pension increases and pension increases (primarily due to lower than expected inflation) over the intervaluation period.

The experience since the previous valuation is analysed further in Appendix D.

4.3 Future benefit accrual

We have also calculated the Employer's future service contribution rate for benefits expected to accrue to members in future. This is the rate of contribution that would normally be appropriate if there was no funding **surplus** or funding **shortfall**.

4.3.1 Results

The table below sets out the Employer's future service contribution rate for the Combined Pool section, split between the Final Salary section and the CARE section, together with the equivalent rates from the 2016 valuation for comparison purposes.

	31 Dec 2016 % pa	31 Dec 2020 % pa
Final Salary section	19.7	19.8
CARE section	10.0	9.4
Overall Employer's future service rate*	**12.1**	**10.3**

**Additional contribution rates in excess of the basic Employer rate are required in respect of the special benefit groups. The rates quoted in the 2016 valuation report were average rates which included the additional contributions. The rates applicable to the special benefit groups are set out in Appendix G.*

The current rate of Employer contributions being paid is an overall rate of 14.1% of Pensionable Salary. The required Employer contribution rate at this valuation is 10.3% of Pensionable Salary. As there is a **surplus** in the Fund at the valuation date, the Employer could pay contributions in line with the Employer's future service contribution rate of 10.3% of Pensionable Salary.

However, it should be noted that Employer contribution rates could be required to be increased at future valuations, in order to eliminate any **shortfalls** arising, if the assumptions are not borne out in practice (eg if investment returns were significantly lower than expected).

For illustration, if a **shortfall** of £200m were to have been revealed at the valuation date then additional Employer contributions of 6.3% of Pensionable Salary would be required to be paid, in order to eliminate

the **shortfall** over the average future working lifetime of all current active members (a period of around 15 years).

4.3.2 Change in future service rate

The overall Employer's future service contribution rate reflects the combination of the different rates that would apply to each section of the Fund in isolation. Therefore, the overall future service contribution rate depends on the mix of membership within each section of the Fund. The cost of benefits accruing under the Final Salary section is higher than under the CARE Transition and Elected CARE Transition sections, which are in turn higher than the cost under the CARE New section. Over time, as more of the membership is made up of CARE New Members accruing lower cost benefits, the overall future service contribution rate is expected to fall and this can be seen to be the case over the intervaluation period.

For information, the number of Final Salary Protected members within the Combined Pool section has reduced from 1,095 (22% of active membership) at the 2016 valuation to 466 (9% of active membership) at the 2020 valuation.

4.4 Utilising the surplus

It would be possible to use the **surplus** revealed as at 31 December 2020 to support a reduced Employer's contribution rate, below the required future service contribution rate.

However, given the volatility of the funding position and uncertainty surrounding how it might evolve over time, the **surplus** could instead be retained within the Fund to help protect against future adverse experience. In particular, the Fund invests significantly in asset classes such as equities and other return-seeking assets that are expected to produce higher future returns than other asset classes over the long term. One of the risks that must be traded off against these expected higher returns is the increased volatility of the Fund's returns and therefore a volatile funding position. Retaining the **surplus** within the Fund would help alleviate any adverse impact from volatile investment returns.

It should also be noted that there is significant uncertainty surrounding climate change and the impact it might have on the Fund. We have set out some climate change scenarios in Appendix F, to show the potential impact on the Fund. It is possible that climate change could have a significantly negative impact on the **funding level** and so it would be prudent to retain the **surplus** within the Fund to help alleviate any adverse impact from climate change.

Retaining the **surplus** within the Fund will reduce the likelihood of future **shortfalls** arising and reduce the risk of having to pay significantly higher contribution rates at future valuations.

The rates of contribution payable will be reviewed at the next actuarial valuation which is due to take place as at 31 December 2023.

RESULTS – COMBINED POOL SECTION (CONTINUED)

4.5 Contribution caps and floors

The Employer's future service contribution rate is subject to contribution caps and floors at this valuation. These caps and floors apply to the future service costs and also to past service costs in relation to the longevity of members (for service accrued since CARE was implemented). All other past service costs, including any additional costs if investment return is lower than anticipated, will be met by the Employer.

Additional calculations have been carried out as part of this valuation, in order to assess whether these caps and floors have been breached. These calculations are carried out using the review basis (as set out in Appendix B of our assumptions paper dated 26 March 2021) but updated for the changes to the demographic assumptions adopted at each valuation.

Other than CARE New Members, each membership group is a closed group and will age over time. Separate caps and floors apply to different groups and in order to assess the caps and floors fairly we need to adjust for the closed groups, otherwise the cost of the ageing Final Salary and CARE Transition Members would breach the cap solely because they are a closed ageing group. In order to adjust for this, each set of caps and floors are assessed against the cost of those benefits but applied to the full membership profile of the Fund.

If the caps or floors are breached at any valuation then action is required to be taken, resulting in either a change to the accrual rates for CARE benefits accruing in future or a change to CARE member contributions, in order to bring the costs back within the caps/floors.

The resultant contribution rates at 31 December 2020 against which the caps and floors are tested are as follows:

Member type	Cost floor (% pa)	Cost at 31 Dec 2020 (% pa)	Cost cap (% pa)
Final Salary / CARE Transition	10.5	12.2	14.5
CARE New / Elected CARE Transition	7.5	9.4	14.0

As can be seen, the caps and floors have not been breached for this valuation and no action is required.

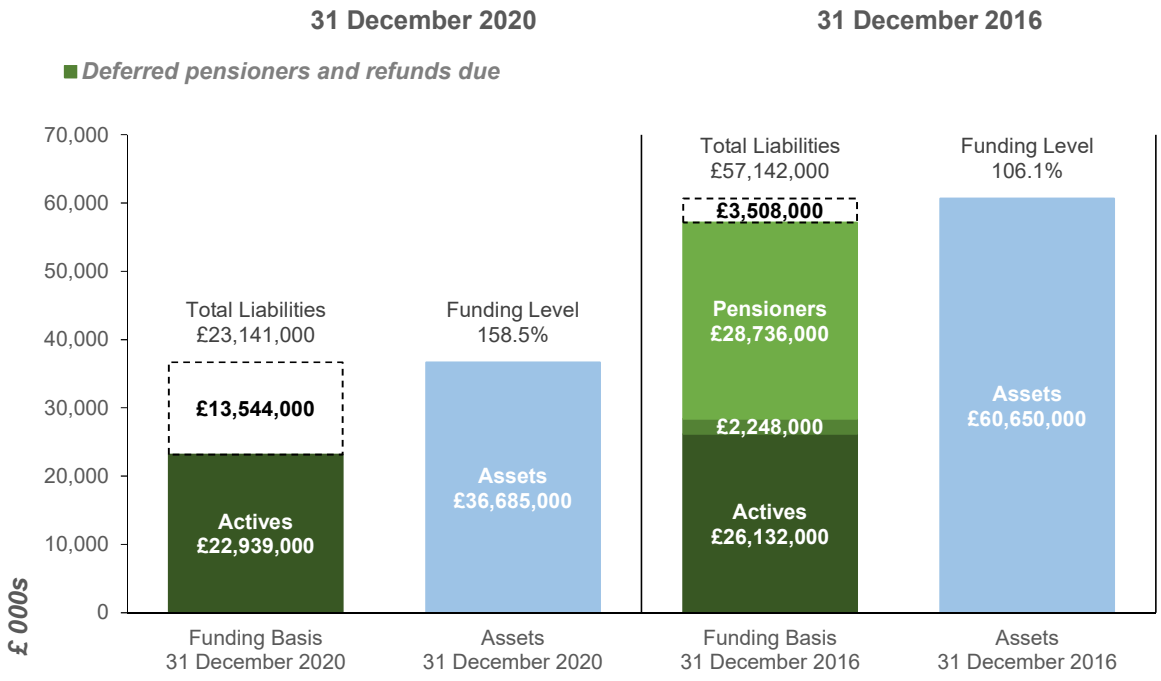
4.6 Implementing a funding boundary mechanism

A funding boundary is a mechanism which allows the **funding level** to fluctuate between set boundaries, without corrective action being taken. It would smooth the Employer contributions paid into the Fund and enable a consistent and transparent long term funding approach to be adopted. Implementing a funding boundary mechanism would change the funding risk profile of the Fund.

5 RESULTS – GEL ACTUARIAL ACCOUNT

5.1 Funding position

As noted in section 3.2, the funding objective is to hold assets equal to the **funding target**. We have therefore compared the market value of the assets in the Fund in respect of the GEL Actuarial Account with the **funding target** as at the valuation date on the assumptions set out in Appendix E. The chart below compares the Actuarial Account's financial position at the valuation date with that at the previous valuation date:



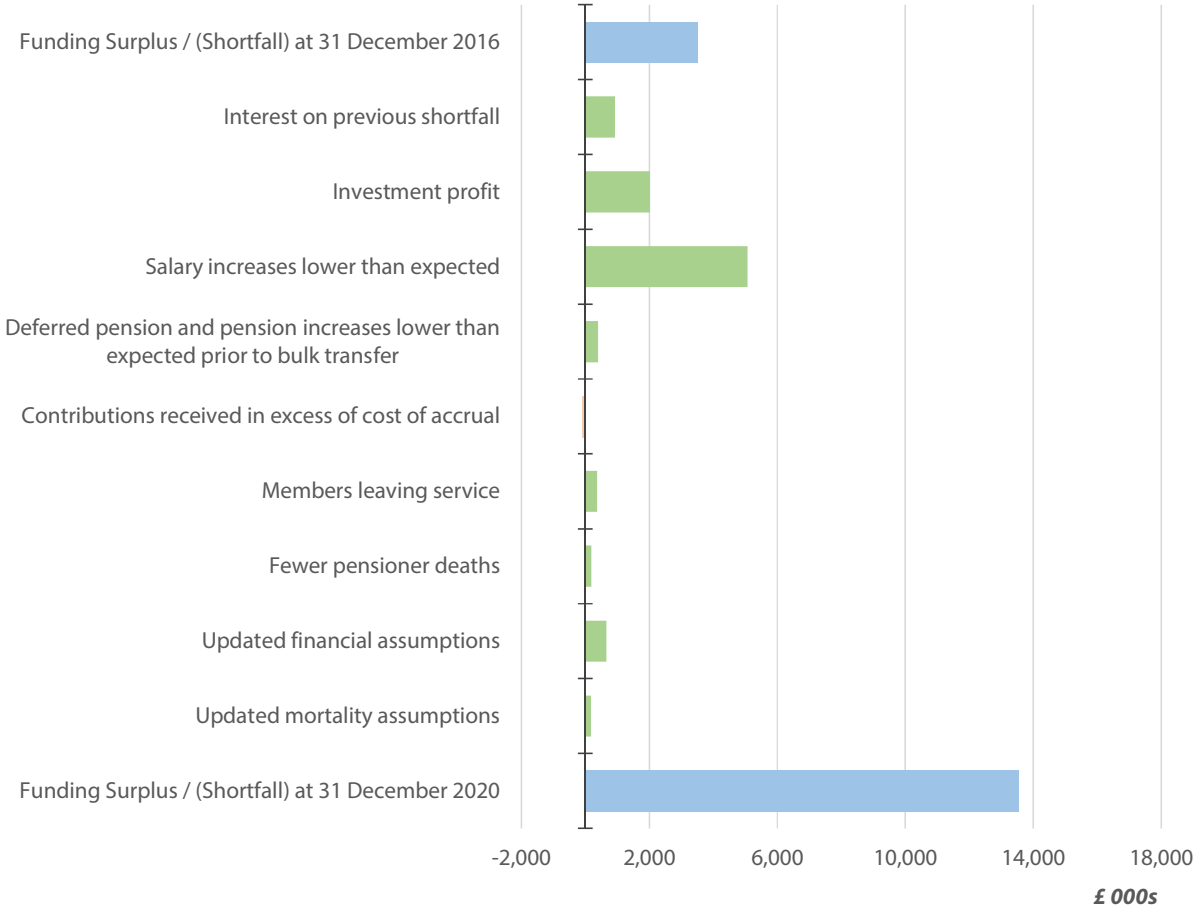
Term	Definition
Funding level	This is the ratio of the value of the assets to the value of the liabilities on a particular set of assumptions.
Surplus/shortfall	This is the difference between the value of the assets and the value placed on the liabilities using a particular set of assumptions. If the market value of the assets is greater than the value placed on the liabilities, then the difference is called the **surplus**. If the value placed on the liabilities is greater than the market value of the assets, then the difference is called the **shortfall**.

The GEL Actuarial Account's funding position is dependent on the assumptions used to place a value on the liabilities. If these assumptions are not borne out in practice then the Fund's **funding level** would be expected to change at subsequent valuations. Appendix F covers the key risks faced by the Actuarial Account.

RESULTS – GEL ACTUARIAL ACCOUNT (CONTINUED)

5.2 Change in funding position

This valuation has revealed a **surplus** of £13,544,000. At the previous valuation the GEL Actuarial Account had a **surplus** of £3,508,000. Therefore, the funding position has improved by £10,036,000 since the previous valuation. We have analysed below the reasons for the change, indicating the impact of each factor on the valuation result this time.



The past service position has improved mainly due to a combination of:

- significantly lower salary increases than expected over the intervaluation period; and
- higher investment returns than expected over the intervaluation period.

It should be noted that the transfer of assets and liabilities to the Combined Pool has had no impact on the funding position of the Actuarial Account, as the transfer values were calculated on the **funding target** basis. The experience since the previous valuation is analysed further in Appendix D.

RESULTS – GEL ACTUARIAL ACCOUNT (CONTINUED)

5.3 Future benefit accrual

We have also calculated the Employer's future service contribution rate for benefits expected to accrue to members in the future. This is the rate of contribution that would normally be appropriate if there was no **surplus** or **shortfall** and the assets were exactly equal to the **funding target**.

5.3.1 Results

We have set out in the table below, the Employer's future service contribution rate on the **funding target** basis (split between the Final Salary section and the CARE section) together with the equivalent rates from the 2016 valuation for comparison purposes.

	31 Dec 2016 % pa	31 Dec 2020 % pa
Final Salary section	19.0	20.4
CARE section	9.8	9.9
Overall Employer's future service rate	**11.8**	**11.3**

This shows that the overall future service contribution rate required for the GEL Actuarial Account is now 11.3% of Pensionable Salary. The Employer is currently paying a contribution rate of 11.5% of Pensionable Salary.

5.4 Change in future service rate

The overall future service contribution rate reflects the combination of the different rates that would apply to each section of the Fund in isolation. Therefore, the overall contribution rate depends on the mix of membership within each section of the Fund. The cost of benefits accruing under the Final Salary section is higher than under the CARE Transition and Elected CARE Transition sections, which are in turn higher than the cost under the CARE New section. Over time, as more of the membership is made up of CARE Members accruing lower cost benefits, the overall contribution rate is expected to approach the lower rate applicable for the CARE section and this can be seen to be the case over the intervaluation period.

5.5 Utilising the surplus

As the GEL Actuarial Account is in significant **surplus**, it would be reasonable to retain part of the surplus in the Fund (to help alleviate any future adverse experience) but to allow GEL to pay reduced contributions, below the Employer contribution rate. For illustration, for every 1% of Pensionable Salary that the future service contribution rate is reduced (for the remainder of the Actuarial Account's lifetime) £1m of **surplus** is expected to be used up from the GEL Actuarial Account.

RESULTS – GEL ACTUARIAL ACCOUNT (CONTINUED)

The rates of contribution payable will be reviewed at the next actuarial valuation which is due to take place as at 31 December 2023.

6 SUMMARY AND CONCLUSIONS

6.1 Key results

A summary of the actuarial valuation results for each section of the Fund is as follows:

	Combined Pool	GEL Actuarial Account
Surplus/(shortfall)	£101,719,000	£13,544,000
Funding level	106.9%	158.5%
Overall Employer future service contribution rate	10.3%	11.3%
split as follows:		
- Final Salary section	19.8%	20.4%
- CARE section	9.4%	9.9%

There is a cost floor and ceiling that applies to the overall Employer future service contribution rate (see section 4.5 for further details). These limits have not been breached at this valuation. Therefore, no changes to future accrual or contributions are required in the CARE section, as a result of the floor and ceiling.

6.2 Developments since the valuation date

The method of deriving the financial assumptions effectively fixes the net **discount rate** (ie the **discount rate** net of the benefit increase assumptions). This means that the value of the liabilities is not sensitive to changes in market conditions, whereas the assets still fluctuate with market conditions over time. Therefore, the return on assets has a significant impact on the funding position over time.

The Policy & Resources Committee has advised us that the assets have returned 10.3% over the year to 31 December 2021, which will have improved the funding position. However, other factors may have had an impact on the funding position since the valuation date (such as membership movements) which will not be known until the next triennial valuation of the Fund which is due as at 31 December 2023.

6.3 Utilising the surplus

As both the Combined Pool and the GEL Actuarial Account had a **surplus** relative to their **funding targets** at the valuation date, no **shortfall** contributions are required to be paid into the Fund at the current time.

It would be possible to use the **surplus** revealed at the valuation date to support a reduced Employer's contribution rate, below the required future service contribution rate. However, given the volatility of the funding position and uncertainty surrounding how it might evolve over time, the **surplus** could be

retained within the Fund to help protect against future adverse experience. Retaining the **surplus** within the Fund will reduce the likelihood of future **shortfalls** arising and reduce the risk of having to pay significantly higher contribution rates at future valuations.

As the GEL Actuarial Account is in significant **surplus**, it would be reasonable to retain part of the surplus in the Fund but to allow GEL to pay reduced contributions, below the Employer contribution rate. For illustration, for every 1% of Pensionable Salary that the future service contribution rate is reduced (for the remainder of the Actuarial Account's lifetime) £1m of **surplus** is expected to be used up from the GEL Actuarial Account.

6.4 Implementing a funding boundary mechanism

A funding boundary is a mechanism which allows the funding level to fluctuate between set boundaries, without corrective action being taken. It would smooth the Employer contributions paid into the Fund and enable a consistent and transparent long term funding approach to be adopted. Implementing a funding boundary mechanism would change the funding risk profile of the Fund.

6.5 Review of actuarial factors

Actuarial factors are used to calculate member options and transfer values. In view of the updated mortality rates that have been published since the previous actuarial factors were produced, we recommend that these factors be reviewed in light of the assumptions adopted for this valuation.

6.6 Monitoring the Fund

The next formal valuation is due to take place as at 31 December 2023. However, we provide funding updates to the Policy & Resources Committee on an annual basis.

SUMMARY AND CONCLUSIONS (CONTINUED)

6.7 Signed for BWCI Consulting Limited

Andrew Mountford

Fellow of the Institute and Faculty of Actuaries

Diana Simon

Fellow of the Institute and Faculty of Actuaries

APPENDIX A LEGAL AND ACTUARIAL FRAMEWORK

Overview

This appendix sets out the background to the legal and actuarial framework under which this report is issued.

Rule 18 of the Fund's Rules requires the Policy & Resources Committee to obtain actuarial valuations of the Fund at least every three years.

Scope of advice

This report has been commissioned by the Policy & Resources Committee and is produced in compliance with the terms of the Client Agreement of 13 April 2004 between BWCI Consulting Limited and the States of Guernsey on the understanding that it is solely for the benefit of the addressees.

This report shows the results of the actuarial valuation and is addressed to the Policy & Resources Committee of the States of Guernsey. It is provided solely for its purposes in the management of the Fund and in particular to fulfil the requirements of the Fund's Rules. It should not be used for any other purpose. It should not be released or otherwise disclosed to any third party except as required by law or with our prior written consent, in which case it should be released in its entirety as parts taken in isolation could be misleading. We give consent for this report to be shared in its entirety, at the discretion of the Policy & Resources Committee.

Notwithstanding such consent, BWCI Consulting Limited does not accept or assume any responsibility to anyone other than the addressees of this report.

Professional guidance

In our view, this report and the work relating to it comply with "Technical Actuarial Standard 100: Principles for Technical Actuarial Work" ("TAS 100"). This is on the basis that:

- it is read in conjunction with our assumptions paper dated 26 March 2021; and
- the States of Guernsey Policy & Resources Committee is the addressee and sole user of this report.

APPENDIX B OUTLINE PROVISIONS OF THE FUND

The Fund has been established to provide for the payment of pensions and other benefits to or in respect of employees of the States of Guernsey who are either Public Servants or Teachers.

The Fund in respect of Public Servants was established with effect from 1 October 1972 by The States of Guernsey (Pensions and Other Benefits) Rules, 1972, and has been subsequently modified by various Resolutions of the States of Guernsey.

The Fund in respect of Teachers was established with effect from 1 January 1977 by the Teachers' Superannuation (Guernsey) Regulations, 1978, and has been subsequently modified by a number of amendments. This Fund was closed to new entrants on 31 October 2005. Since that date new teachers join a separate section established in the Public Servants scheme. The majority of members of the Teachers' Scheme transferred to this new section.

An Actuarial Account was established with effect from 1 October 2001 for Guernsey Post Limited in accordance with paragraph 1 of the Third Schedule to the States of Guernsey (Public Servants) (Pensions and Other Benefits) Rules. This account closed on 31 July 2016 and all assets and liabilities were transferred to the Combined Pool on that date.

An Actuarial Account was established with effect from 1 January 2002 for the Guernsey Financial Services Commission in accordance with paragraph 2 of the Third Schedule to the States of Guernsey (Public Servants) (Pensions and Other Benefits) Rules. This account was closed to new entrants from 1 January 2008 and closed to future accrual of benefits with effect from 1 July 2014. All active members became deferred members at that date. The assets and liabilities of the account were then transferred to the Combined Pool with effect from 30 April 2017.

An Actuarial Account was established with effect from 1 February 2002 for Guernsey Electricity Limited in accordance with paragraph 1 of the Third Schedule to the States of Guernsey (Public Servants) (Pensions and Other Benefits) Rules. This account closed to new entrants on 1 October 2017 and all non-active assets and liabilities were transferred to the Combined Pool on with effect from 30 June 2018. It was agreed that annual transfers would be made going forward in relation to members that leave GEL employment each year.

By a resolution passed on 12 December 2007 the States of Guernsey amended the Rules of all sections to introduce a new tier of benefits for all sections that applies for all members who commence service on or after 1 January 2008.

The States of Guernsey (Public Servants) (New Pensions and other Benefits) Rules, 2016 came into force on 1 March 2016 and introduced a new CARE structure. Transitional arrangements apply to those members who were active members of the Final Salary section on 29 February 2016. Members recruited after 1 May 2015 join the CARE section as CARE New Members. In addition, special provisions were introduced which apply to Elected CARE Transition Members and Crown Officers and Judges.

APPENDIX C MEMBERSHIP DATA

Combined Pool section

Active members

		Number	Total Pensionable Salaries (£'000 pa)
Men	2020	2,042	90,365
	2016	*1,955*	*79,609*
Women	2020	3,262	125,435
	2016	*2,952*	*102,360*
Total	**2020**	**5,304**	**215,800**
	2016	***4,907***	***181,969***

Deferred pensioners

		Number	Total deferred pensions (£'000 pa)
Men	2020	621	4,352
	2016	*304*	*2,125*
Women	2020	961	4,685
	2016	*312*	*1,480*
Total	**2020**	**1,582**	**9,037**
	2016	***616***	***3,605***

Notes

- The deferred pensions include revaluations up to the valuation date.
- There were also 911 cases at the valuation date where benefits are not known. These members have been included in the liabilities as deferred pensioners using a very approximate calculation but they are excluded from the above summary.

MEMBERSHIP DATA (CONTINUED)

Pensioners

		Number	Total pensions (£'000 pa)
Men	2020	2,099	32,824
	2016	*1,815*	*26,562*
Women	2020	1,937	17,744
	2016	*1,599*	*13,833*
Widowers	2020	86	313
	2016	*69*	*261*
Widows	2020	523	3,803
	2016	*475*	*3,040*
Total	**2020**	**4,645**	**54,684**
	2016	***3,958***	***43,696***

GEL Actuarial Account

Active members

		Number	Total Pensionable Salaries (£'000 pa)
Men	2020	112	5,313
	2016	*158*	*6,447*
Women	2020	18	783
	2016	*23*	*921*
Total	**2020**	**130**	**6,096**
	2016	***181***	***7,368***

APPENDIX D EXPERIENCE SINCE THE PREVIOUS VALUATION

Previous valuation

Combined Pool section

The previous valuation showed that the Combined Pool had a **shortfall** relative to its **funding target** of £92,651,000 as at 31 December 2016. The overall rate of Employer contributions in respect of future service accrual was 12.1% of Pensionable Salary.

The Policy & Resources Committee agreed that the overall Employer contribution rate would remain at 14.1% of Pensionable Salary, with the excess going towards the **shortfall**. The additional contributions paid in respect of and by members of the special benefit groups have remained unchanged since the previous valuation.

GEL Actuarial Account

The previous valuation showed that the GEL Actuarial Account had a **surplus** relative to its **funding target** of £3,508,000 as at 31 December 2016.

The rate of Employer contributions in respect of future service accrual was 11.8% of Pensionable Salary. However, contributions paid into the GEL Actuarial Account remained at 11.5% over the intervaluation period. This was expected to utilise a small amount of the **surplus** revealed at the 2016 valuation, with the remaining **surplus** being maintained as a prudent margin against future adverse experience.

Benefit changes

As discussed in section 2.2, benefit changes have been introduced into the Fund during the intervaluation period.

In addition, as discussed in section 2.2.3, the GEL Actuarial Account closed to new members during the intervaluation period and the assets and liabilities in respect of non-active members of the Actuarial Account were subsequently transferred to the Combined Pool.

Financial development

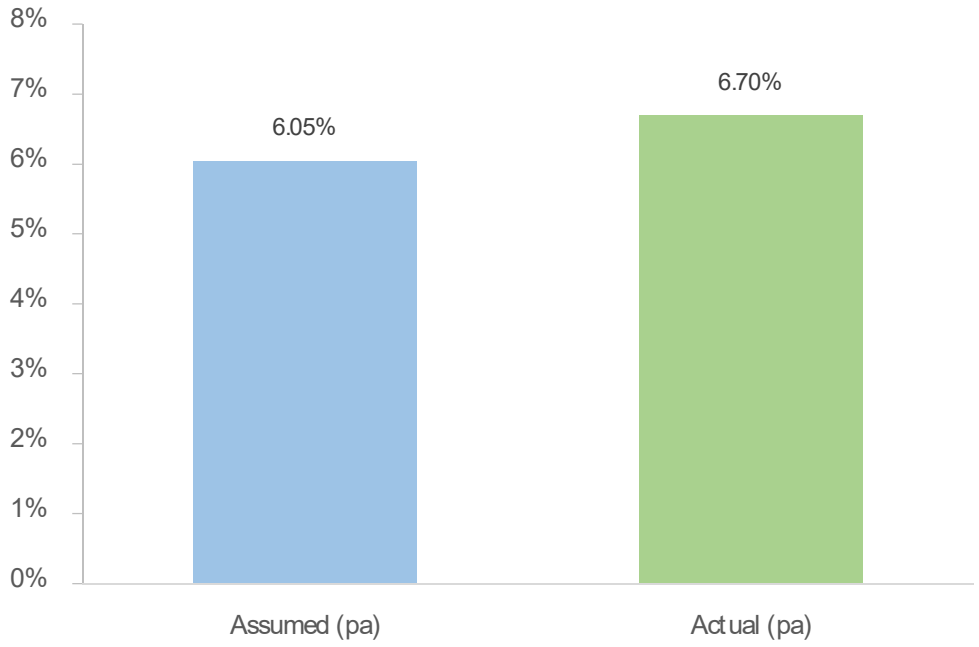
A variety of factors affect the financial position of the Fund, including investment returns, pension increases, pay increases, and changes in the assumed level of inflation. To illustrate the Fund's financial development since the previous valuation, we have compared in the charts below:

- the investment return achieved on the Fund's assets with the **discount rate** used to calculate the value of the Fund's **funding target** for the previous valuation;

EXPERIENCE SINCE THE PREVIOUS VALUATION (CONTINUED)

- the assumptions made at the previous valuation for pension and pay increases with the actual increases awarded; and
- the market derived implied inflation at the previous valuation with the market derived implied inflation at this valuation (used to set the **discount rate**).

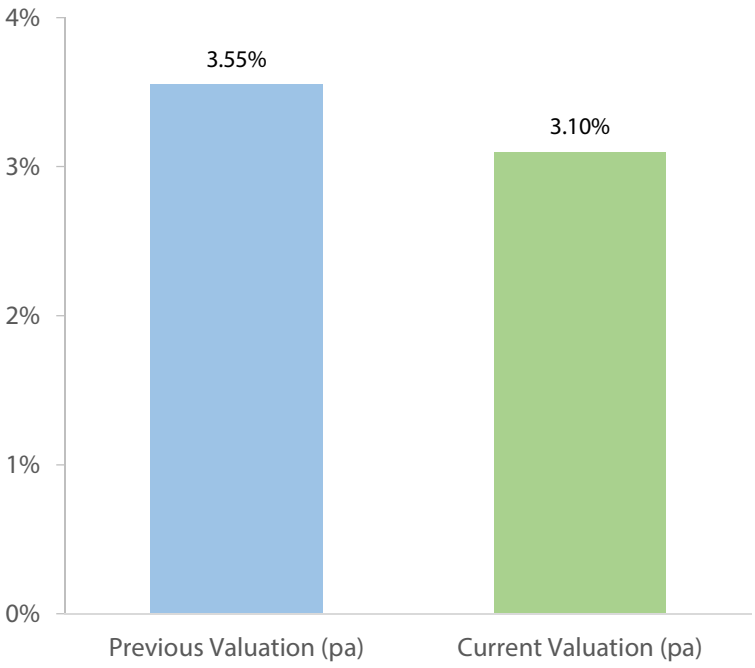
Investment return achieved compared with discount rate used



Over the four years since the previous valuation the rate of investment return achieved on the Fund was higher than expected.

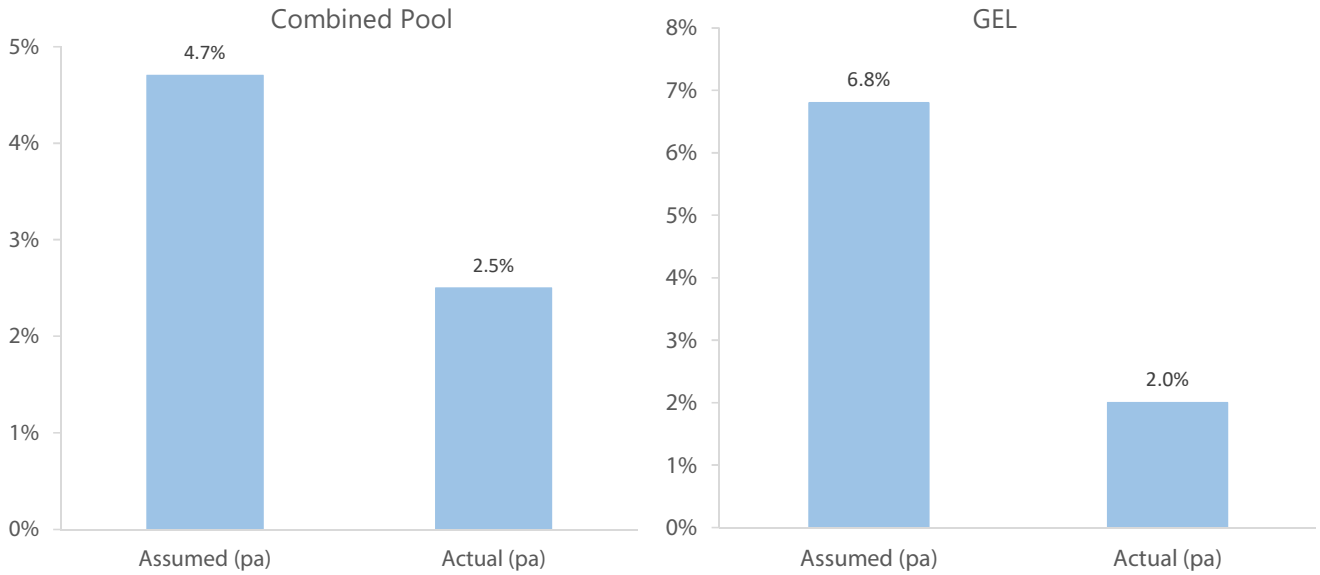
EXPERIENCE SINCE THE PREVIOUS VALUATION (CONTINUED)

Comparison of UK RPI inflation rates



The market derived implied UK inflation at this valuation has reduced since the previous valuation.

Pay increase comparison

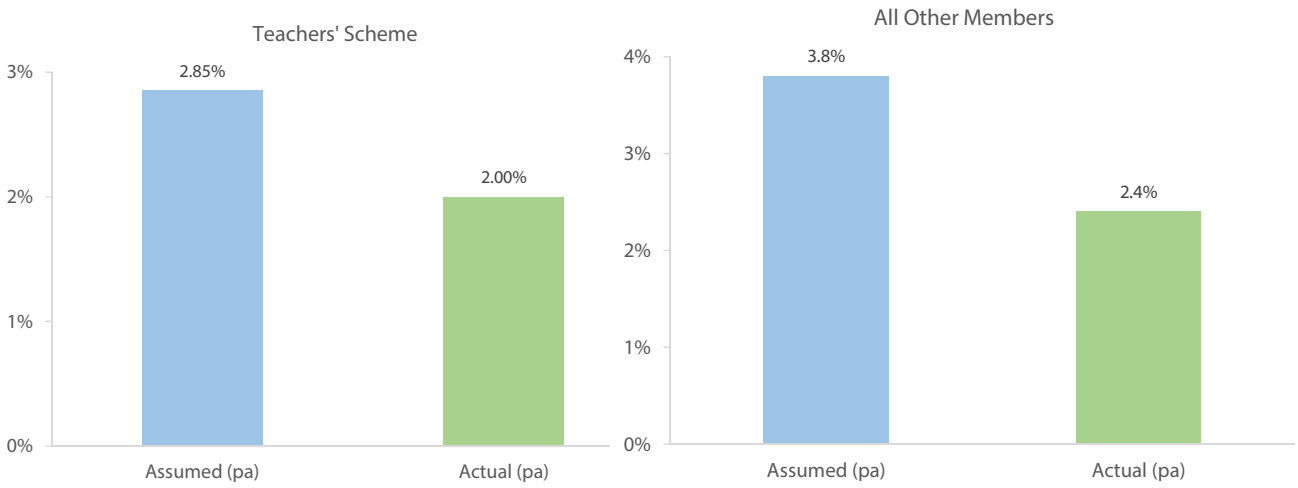


Average pay increases over the intervaluation period have been lower than expected.

The expected pay increase figures shown on the chart above include expected promotional increases.

EXPERIENCE SINCE THE PREVIOUS VALUATION (CONTINUED)

Pension increase experience



Average pension increases during the intervaluation period have been lower than expected for both the Teachers' Scheme and all other members.

APPENDIX E ASSUMPTIONS FOR FUNDING TARGET

Introduction

The benefit structure of the Fund, its membership and its assets at the valuation date are all known facts. However, the Fund's future finances also depend on uncertain factors such as future investment returns, pay and pension increases, how long members live and employee turnover. Assumptions are therefore needed about the long-term future, covering the period until all the present members have retired and all benefits arising from their membership have been paid. The assumptions should therefore reflect the outlook for the long term rather than recent experience or the experience expected over the period until the next actuarial valuation. The assumptions adopted for this valuation have been agreed by the Policy & Resources Committee.

Investment strategy

Other than immediate and deferred annuities purchased from an insurance company, the assets that would provide the closest match to these cash flows are a combination of index-linked gilts and derivative instruments. However, funded occupational pension schemes may choose not to hold assets which match the liabilities in this way.

The Fund's assets are currently invested in equities and other return seeking assets. This investment strategy is expected to produce a higher return over the long term than investing solely in matching assets. The Policy & Resources Committee has decided to take part of this higher expected return into account in setting the **funding target** and to accept the risks that this involves.

Funding target basis

Discount rate

It should be noted that the **discount rate** is not an asset return projection for the three years until the next actuarial valuation, but the return that needs to be achieved (on average) every year into the future until all liabilities are met. The **discount rate** should therefore be appropriate for the long term.

The investment strategy of the Fund is not expected to change over time (ie the target return for the Fund on which the investment strategy is based is expected to remain unchanged over time) in view of its particular circumstances. Therefore, it is appropriate at this time to assume the same **discount rate** both pre and post retirement.

The Fund's investment strategy is expected to produce a target real return of 4% above UK RPI inflation over the long term. UK RPI is currently significantly higher than recent levels and UK inflation targets. It should be noted that this target return could be challenging to achieve while UK RPI remains high.

A **discount rate** of UK RPI + 4.0% pa would therefore represent the Policy & Resources Committee's long term target investment return. However, it is prudent to use a lower **discount rate** for funding

purposes, so that advance credit is not taken for this investment target being reached for each and every future year. If the investment target is reached in practice then funding profits will come through as and when they actually occur.

The **discount rate** has been set equal to the UK inflation assumption at the valuation date plus 2.5% pa both for active members and deferred pensioners over the period to retirement and during the period while benefits are in payment to pensioners.

UK RPI inflation assumption

The method for calculating UK RPI was deemed flawed by the UK Government, as it incorporates a systematic upward bias in the calculation of UK RPI. The UK Government confirmed in November 2020 that the method of calculating UK RPI will be amended from 2030 to remove this flaw. This change is expected to result in a fall in UK RPI from 2030 by around 1% pa (around 0.75% of this change is due to what is termed "the Formula Effect").

For the purposes of this valuation, we have assumed that the investment target will not be adjusted to reflect the UK RPI reform and will remain at UK RPI plus 4% pa.

The Policy & Resources Committee has therefore set the UK RPI inflation assumption to be the single annualised rate that broadly replicates the Bank of England's inflation curve at the valuation date, having regard to the approximate cashflow profile of the Fund. This gives a UK RPI inflation assumption of 3.1% pa at the valuation date.

Guernsey inflation assumption

As there is no Guernsey bond market from which to derive an inflation assumption, Guernsey inflation assumptions are derived with reference to the UK RPI inflation assumption but with an appropriate adjustment.

Guernsey inflation is expected to be strongly correlated with UK inflation due to having the same central bank base rates and currency. However, we need to consider whether to apply an adjustment to allow for any expected differences between Guernsey inflation and the market implied UK RPI rate. This could be due to the differences between the underlying methods for calculating inflation or in underlying macro-economic factors.

Different methods are currently adopted for calculating UK RPI and Guernsey RPI. As noted above, the method for calculating UK RPI was deemed flawed by the UK Government. However, the Guernsey method for calculating RPI does not contain this flaw.

From consideration of the calculation methods alone, it could be expected that Guernsey RPI would have historically been 0.75% pa below UK RPI (by removing the Formula Effect which does not apply in the Guernsey RPI measure). However, historical analysis of RPI in Guernsey and the UK over the past 30

years has not shown this to be the case. The analysis shows that RPI in Guernsey was higher than UK RPI for most of the period prior to the 2008 financial crisis. However, since the 2008 financial crisis, UK RPI has been mostly higher than Guernsey RPI, by an average of around 0.5% pa over the past 10 years (after removing the impact of changes to sales tax). As we move further away from the 2008 financial crisis, there is now growing evidence that this trend is persisting and is less likely to revert back to pre-2008 levels.

Therefore, we have constructed the BWCI Guernsey inflation curve, which allows for this change in trends, as well as the theoretical long term difference due to the Formula Effect. Further details were set out in our assumptions paper dated 26 March 2021.

For funding purposes, we have added a prudent addition of 0.25% pa to this BWCI Guernsey inflation curve, to reflect the uncertainty in this assumption. This 0.25% pa addition to the best estimate assumption is consistent with the approach adopted at the previous actuarial valuation of the Fund.

Based on the above, we have adopted a Guernsey RPI inflation assumption of 3.2% pa at the valuation date. This single Guernsey RPI inflation assumption has been set equal to the single annualised rate that broadly replicates the BWCI Guernsey inflation curve plus 0.25% pa at the valuation date, having regard to the approximate cashflow profile of the Fund.

We have assumed that Guernsey RPIX inflation is equal to Guernsey RPI inflation for valuation purposes.

UK CPI inflation assumption

There is currently no market for UK CPI-linked gilts to be used to derive an assumption for UK CPI increases. Therefore, a practical method for deriving an assumption for UK CPI at the present time is to start with the assumption for UK RPI inflation and make an appropriate adjustment to reflect the expected long term difference between UK RPI and UK CPI.

As noted above, the method for measuring UK RPI has been deemed flawed by the UK Government and will be amended from 2030 to remove this flaw. However, the UK CPI method does not contain this flaw and will remain the same.

We have assumed that UK CPI inflation will be 0.7% pa below UK RPI inflation until 2030 and that the two measures will be equal from 2030.

This results in an overall pension increase assumption for the Teachers' Scheme of 2.8% pa as at 31 December 2020.

Pensionable salary increases

We have assumed that Pensionable Salaries will increase at the rate of Guernsey RPIX inflation plus 0.5% pa. This gives an assumption of 3.7% pa as at 31 December 2020. This assumption should be a long

ASSUMPTIONS FOR FUNDING TARGET (CONTINUED)

term assumption and not the expectation of salary awards over the period to the next valuation. Over the long term, salaries have tended to increase at a rate higher than inflation. In addition, promotional salary scales have also been included.

CARE revaluation

Benefits accrued in the CARE section will be increased annually in line with Guernsey RPIX but subject to a cap each year. The revaluation cap is set at 7.5% for CARE members who were moved across to the CARE section from the Final Salary section from 1 March 2016 and who have not subsequently elected to be subject to the special transition provisions. For all other CARE members the cap is 6%. Increases above the cap can be granted if funds allow.

As set out above, we expect that Guernsey RPI and Guernsey RPIX will increase at broadly the same rate over the long term.

Accordingly, this gives an assumption for CARE revaluation of 3.2% pa as at 31 December 2020.

Deferred pension and pension increases

Pensions in payment and in deferment, for all Final Salary sections except the Teachers' Scheme, are increased each year by the increase in the Guernsey RPIX. Accordingly, we have assumed that pension in payment and in deferment will increase at the rate of 3.2% pa as at 31 December 2020.

For the Teachers' Scheme, future pension and deferred pension increases are linked to UK CPI. We have therefore assumed that pensions in payment and in deferment will increase at a rate of 2.8% pa as at 31 December 2020.

Demographic and procedural assumptions

The table below shows the key demographic and procedural assumptions used for this valuation.

ASSUMPTIONS FOR FUNDING TARGET (CONTINUED)

Assumption	Details of assumption
Pre-retirement mortality	Males: Standard table DML08 Females: Standard table DFL08
Post-retirement mortality - Base table - Improvement factors - Long term rate - Scaling factors	 S3 series CMI_2019 Core Projections 1.5% pa 90% for teachers 100% for non-teachers 95% for Dependants
Retirements	Allowance made for retirements by means of age-related scales. 100% of ill health retirements assumed to be due to total incapacity.
Withdrawals	Allowance made for withdrawals by means of age-related scales.
Proportion of members taking a refund	70% of Public Servants 60% of GEL 35% of Teachers 50% of Police/Fire
Family details	Male members are assumed to be three years older than their spouses Female members are assumed to be three years younger than their spouses 85% of males/75% of females married at retirement or earlier death
Commutation	Final Salary pension commuted to receive 75% of maximum lump sum available. 15% of CARE pension commuted.
Management expenses	0.25% of Pensionable Salaries.

Calculation method

The liabilities of the Fund have been calculated by projecting forward the expected future benefits payable to the active, deferred and pensioner members of the Fund using the assumed rates of increases to Pensionable Salaries, deferred pensions and pensions in payment. Allowance has also been made for likely rates of retirement, withdrawals and death using the demographic assumptions set out above.

ASSUMPTIONS FOR FUNDING TARGET (CONTINUED)

We have then determined the **present value** of these projected benefits by discounting them back to the valuation date using the **discount rate**.

This is the same as the calculation method used for the previous valuation.

APPENDIX F KEY RISKS

The primary purpose of funding is to provide members with more security for their pensions than if they relied on their employer to pay them directly. However, the Fund faces some significant risks in relation to its funding position. These risks remain in the Final Salary section and, although risk is reduced within the CARE section, some of these key risks remain in the CARE section, including investment risk. Despite a scheme being funded, there is still the risk that the assets would not be sufficient to pay all of the promised benefits. This appendix highlights some of the key risks faced by the Fund.

Key risks	
Funding approach	If no additional contributions are made to remove a **shortfall**, it will increase unless there are other items of experience profit.
Investment	The return achieved on the Fund's assets may be lower than allowed for in the valuation.
Inflation	Salaries and pensions could increase at a higher rate than expected if inflation is higher than expected.
Mortality	Members could live longer than anticipated, for example, as a result of a medical breakthrough. This would mean that benefits are paid for longer, resulting in higher liabilities.
Sponsor covenant	Although the Policy & Resources Committee can request additional support from the States if additional **shortfalls** materialise, the Fund has the enduring risk of the willingness and ability of the States to continue to pay contributions to the Fund to make good any **shortfalls**.
Options	Members might exercise options resulting in extra costs that were not funded for. For example, if members choose to commute less of their pension for tax free cash at retirement than allowed for in the valuation calculations, then this will result in higher costs for the Fund. Another risk is that members retire earlier than assumed in cases where members are able to retire unreduced from an early age.
Climate change	Climate change is an unprecedented challenge and poses significant risks to the economy and financial system. The impacts are difficult to predict, quantify and model but we have considered the potential economic impacts on the Fund at the end of this Appendix.

We have set out below more detail on some of these risks. We have then shown the potential impact on the **surplus** of the Fund due to various risk factors.

KEY RISKS (CONTINUED)

Funding approach risk

Although there is currently a **surplus** within the Combined Pool section of the Fund as at 31 December 2020, if a **shortfall** materialises at any future point and no additional contributions are paid to eliminate the **shortfall**, then additional investment returns would be required (in excess of the **discount rate**).

Investment risk

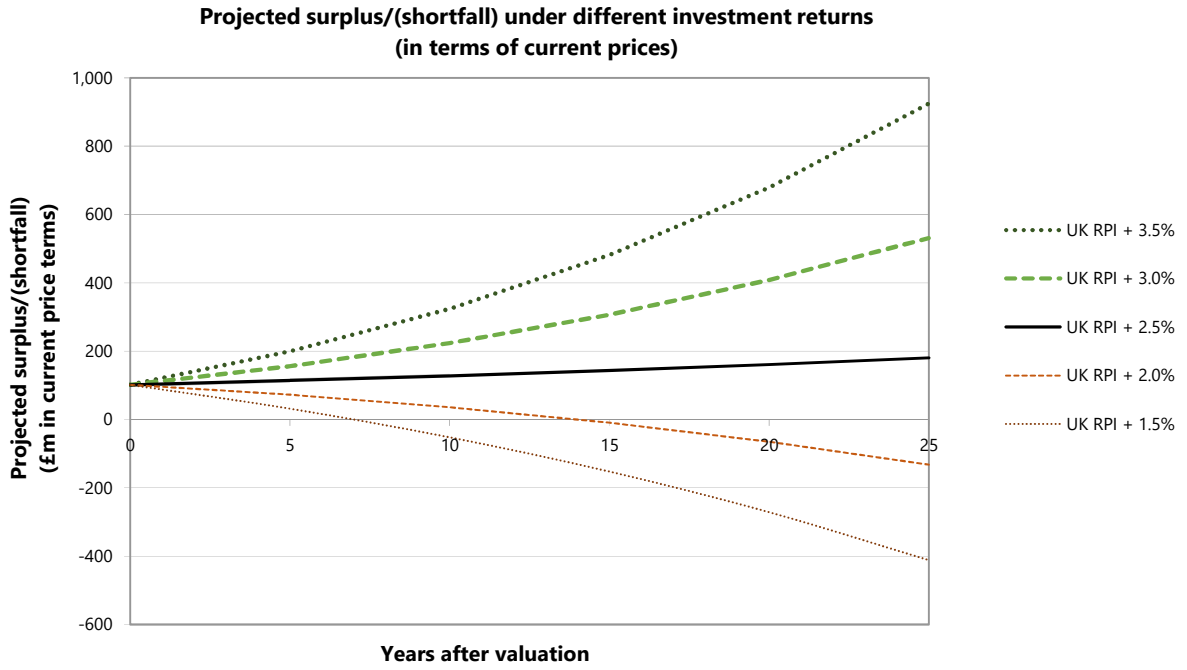
The majority of the Fund's liabilities are linked to inflation via either pension increases or pay increases. The assets that most closely match the Fund's liabilities in terms of future cashflows are therefore a combination of index-linked gilts and derivative instruments.

The Fund's investments are mismatched because the Policy & Resources Committee has (having taken advice) chosen to invest some of the Fund's assets in asset classes, such as equities, that are expected to produce higher future returns than other asset classes over the long term with the aim of reducing the contributions that would otherwise be required. The more mismatched the investment strategy is, the greater the potential risks. Equity markets can fall significantly and hence investing in equities exposes the Fund to the risks of falls in the **funding level** relative to accrued liabilities. These risks are compounded where additional returns from equities are anticipated in the **discount rate**. The Policy & Resources Committee will need to consider the States' ability to cope with the funding of the Fund in such situations. Alternatively, the future investment return on the assets may be positive, but insufficient to meet the funding objective. The more mismatched the investment strategy, the greater the risks.

The return achieved on the Fund's assets may be lower than allowed for in the valuation. It is for the Policy & Resources Committee to decide upon the level of the investment outperformance to assume for the valuation calculations. This will depend upon how much risk they are willing to accept for funding purposes. To the extent that the expected funds are not achieved from the investment returns, they would need to be met from additional Employer contributions.

The following graph illustrates the projected **surplus/shortfall** of the Combined Pool section of the Fund in terms of current prices, under different investment returns, highlighting how the **surplus** reduces if investments underperform relative to the assumed discount rate of UK RPI + 2.5% pa. The projections assume that contributions are paid at the required future service contribution rates and no adjustments are made to contribution rates to reflect the **shortfalls** or **surpluses** that arise.

KEY RISKS (CONTINUED)



Climate change

The physical and transition impacts of climate change will depend on the speed and magnitude of the changes and the policy response. There are many possible pathways, varying from those in which behaviour does not change (leading to more severe physical impacts) to those in which drastic action is taken to counteract climate change (leading to more severe transition impacts).

Ortec Finance developed a modelling tool which combines climate science with macro-economic and financial modelling and the Institute and Faculty of Actuaries ("IFoA") have used this to consider three plausible climate pathways. The IFoA translated the impacts of climate-adjusted GDP from this modelling tool onto a wide range of financial and economic variables. The three climate pathways considered were:

- Paris Orderly – co-ordinated action to limit global average temperature rises to 2°C which financial markets price in gradually
- Paris Disorderly – same real-world outcomes as the Paris Orderly pathway but financial markets' reaction is delayed and abrupt
- Failed Transition – no additional climate policies are implemented and global average temperature rises by 4 °C by 2100

These were considered to be three plausible pathways and were not intended to be forecasts or "worst case" scenarios. The IFoA compared the financial outcomes of these scenarios against a climate-uninformed baseline which assumes no increase of physical risks due to climate change and does not make any explicit assumptions about the transition to a low carbon economy.

KEY RISKS (CONTINUED)

We have very approximately used these outputs to derive three possible climate change sensitivity scenarios for the Fund. These are necessarily approximate and there is material uncertainty in all aspects of climate scenario modelling but we believe it to still be useful in highlighting the financial risks of climate change.

The three scenarios considered by the IFoA assessed the financial impacts over the next 40 years but for simplicity we have assumed that the changes occur uniformly over the 40 years projection period and the same pattern continues after 40 years.

However, we would highlight that climate change will lead to significant timing risks and in practice the changes would not occur uniformly. Instead, the likelihood is that the Fund would experience volatile **funding levels** as markets abruptly react to changes. The exact impacts will depend on the actual investments held by the Fund and the analysis below implicitly assumes that the Fund's assets are invested in line with the market average for each asset class. In addition, we have assumed that the asset split remains unchanged from the split provided in the Fund's accounts as at 31 December 2020.

We have illustrated the sensitivity of the funding position to the three alternative climate change pathways. For all scenarios, benefits are assumed to increase at 0.1% pa lower than would otherwise be the case and asset returns are expected to reduce by differing amounts under each scenario (the extent to which is shown in the section below).

Impact of adverse risks on the Fund

It is important for the Policy & Resources to understand the situations in which **shortfalls** could arise, to form a view on the willingness and ability of the States of Guernsey to support the Fund, and to consider what actions to take if this view changes.

To help the Policy & Resources Committee to understand the susceptibility of the funding position to these risks, we have produced valuation results on a range of alternative assumptions to indicate how sensitive the results are to changing assumptions and the actual experience of the Fund.

The results have been produced on the following alternative bases. All results show the change from the assumptions adopted for the valuation, with all other assumptions unchanged.

i) The **discount rate** is set as UK inflation plus 2.0% pa (ie 0.5% pa lower)

ii) The **discount rate** is set as UK inflation plus 4.0% pa (ie 1.5% pa higher)

iii) Guernsey RPIX is set 0.25% pa higher

iv) General pay increases are set equal to Guernsey inflation (ie 0.5% pa lower)

v) General pay increases are set equal to Guernsey inflation plus 1% pa (ie 0.5% pa higher)

vi) Life expectancy from age 65 for current and future pensioners is one year higher

KEY RISKS (CONTINUED)

vii) Final Salary section existing members retire at their Normal Retirement Dates ie at age 50 for Police/Fire and at age 60 for all other groups.

viii) Members do not exchange any part of their pension to receive an additional lump sum on retirement

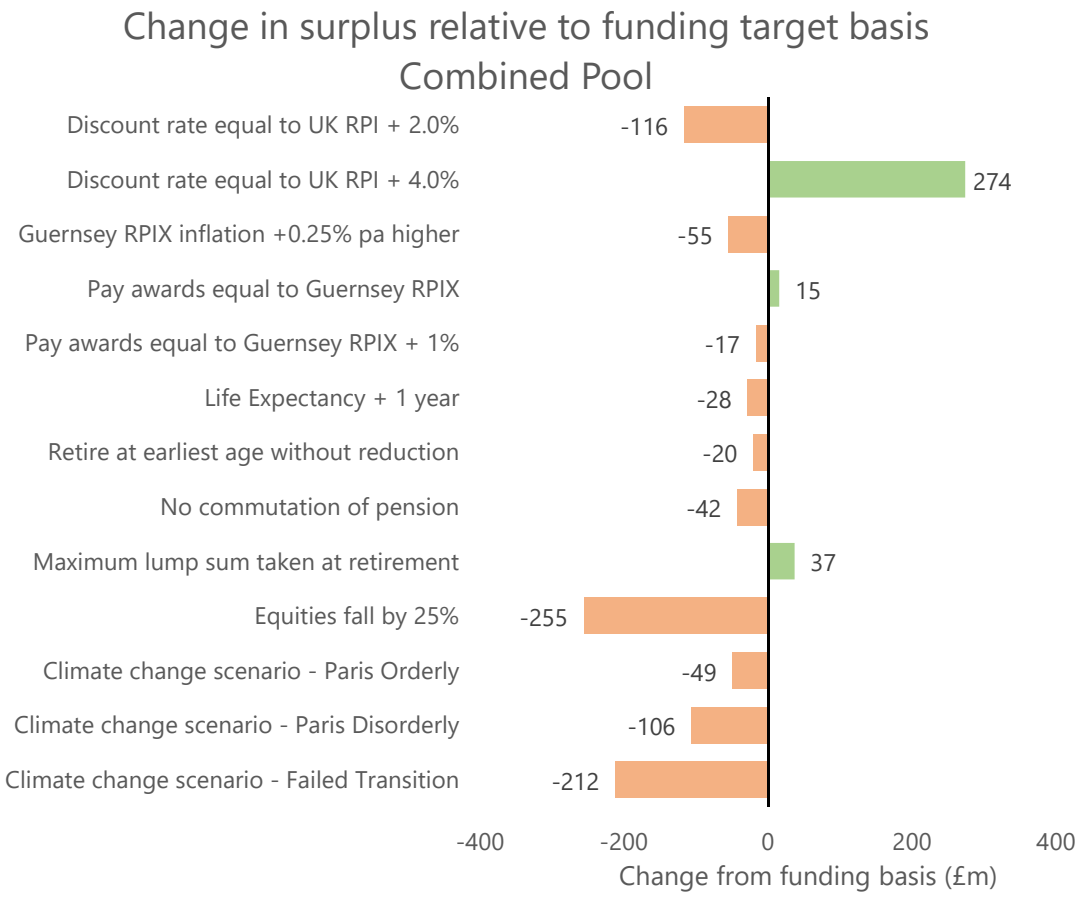
ix) Members exchange their pension to receive the maximum lump sum available on retirement

x) The market value of equities falls by 25% (with no change in bond markets)

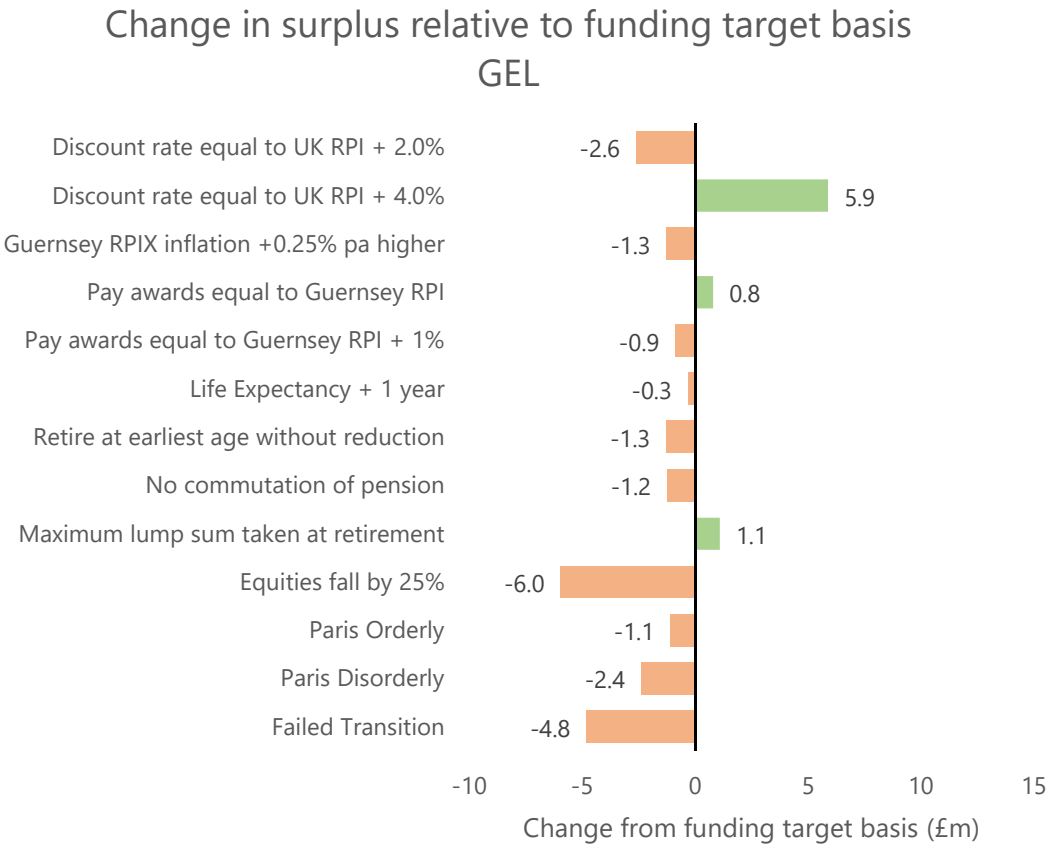
xi) Paris Orderly climate change pathway (equates to 0.32% pa lower **discount rate**, 0.1% pa lower benefit increases)

xii) Paris Disorderly climate change pathway (equates to 0.56% pa lower **discount rate**, 0.1% pa lower benefit increases)

xiii) Failed Transition climate change pathway (equates to 0.97% pa lower **discount rate**, 0.1% pa lower benefit increases)



KEY RISKS (CONTINUED)



The charts show the change in **surplus** relative to the **funding target** basis, rather than the level of **surplus/shortfall** under each scenario (ie the black vertical line at zero corresponds to the **funding target** basis).

Comments on scenarios

These scenarios are not "worst or best case" scenarios, and a combination of these events could either compound or (with a converse event) mitigate one another.

These results show that the **funding level** is very sensitive to future investment market changes. Reduced expectations of future investment returns could lead to a deterioration to the funding position and a consequential increase to the contributions required.

The primary reason for the potential volatility in the funding position is that the Policy & Resources Committee's investment policy involves a deliberate mismatch between the Fund's assets and liabilities, in the expectation that this will result in higher investment returns over the long term than a policy that was more matched.

Under the three climate change scenarios modelled, climate change would be expected to reduce the **surplus** by between £49m and £212m, mainly due to the assumed reduction in asset returns. However,

KEY RISKS (CONTINUED)

there is material uncertainty in all aspects of climate scenario modelling and the IFoA note that, in aggregate, it is quite likely that their modelling is biased to underestimate the potential impacts of climate-related risks, particularly for the Failed Transition pathway. In addition, the impacts of climate change and policies to limit climate change are expected to increase the volatility of the Fund's future funding position.

We suggest that climate related risks are factored into investment discussions going forward.

APPENDIX G CONTRIBUTIONS IN RELATION TO THE SPECIAL BENEFIT GROUPS

Additional contribution rates in excess of the basic Employer rate are required in respect of the special benefit groups. We have assumed that the additional rates for each of these groups will be maintained.

A summary of the additional future service contribution rates applicable to each group is set out below:

Special benefit group	Additional Employer future service contribution rate % pa
Final Salary Protected Members	
Police and firefighters - entrants on or before 31.10.91 - entrants between 01.11.91 and 31.12.07	 15 10
Police – entrants after 31.12.07	6
Fire – entrants after 31.12.07	4
Senior Police/Fire – entrants before 01.01.08	7
Mental Health Officers – entrants before 01.12.98	9
Crown Officers - entrants on or before 31.12.91 - entrants between 01.01.92 and 31.12.03 - entrants after 01.01.04	 10 9 6.7
CARE Members	
Police and firefighters	4.5

APPENDIX H STATES MEMBERS' PENSION FUND

We have carried out an actuarial valuation of the States Members' Pension Fund as at 31 December 2020.

Data, methodology and assumptions

The valuation has been carried out using the same assumptions as the actuarial valuation of the States of Guernsey Superannuation Fund as at the same date. These assumptions are summarised in Appendix D. The results are based on membership data supplied to us by the Policy & Resources Committee as at 31 December 2020.

The States Members' Pension Fund closed to the future accrual of benefits with effect from 1 May 2012.

Experience since the previous valuation

The previous valuation showed that the States Members' Pension Fund had a **shortfall** relative to its **funding target** of £1,493,000 as at 31 December 2016.

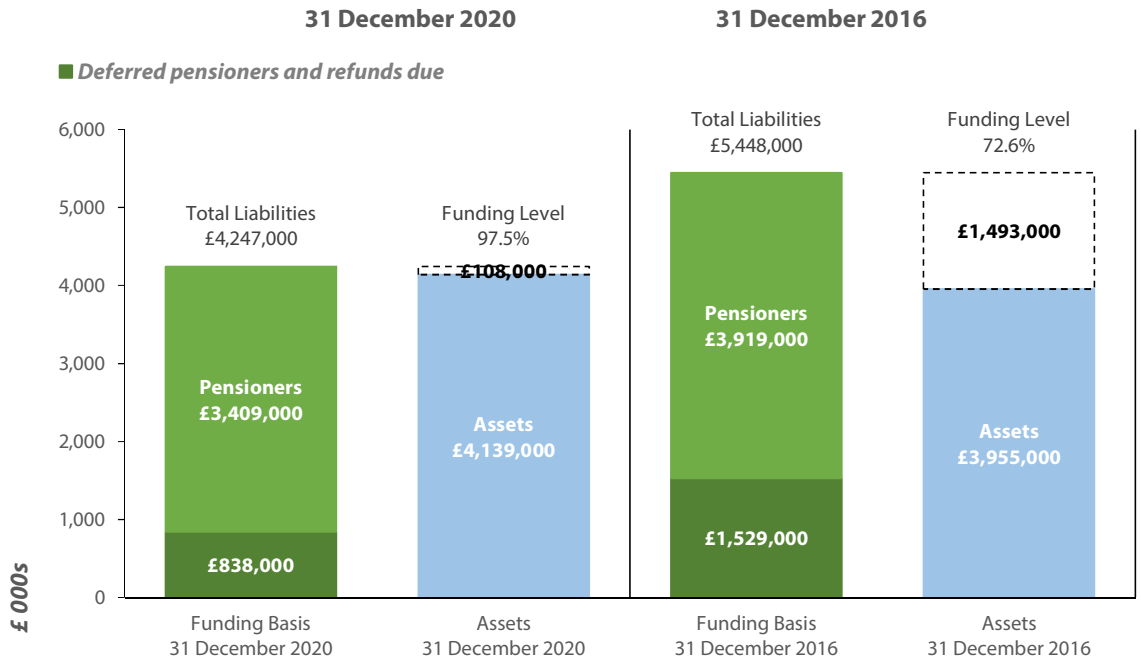
In light of this **shortfall,** the following capital payments were received over the intervaluation period:

Year	Capital payment (£'000s)
2017	153
2018	157
2019	160
2020	163

Funding position

We have compared in the chart below the market value of the assets of the States Members' Pension Fund with the value of the liabilities as at the 31 December 2020, together with the position at the previous valuation date. The results include both the Old and New States Members' Pension Funds.

STATES MEMBERS' PENSION FUND (CONTINUED)

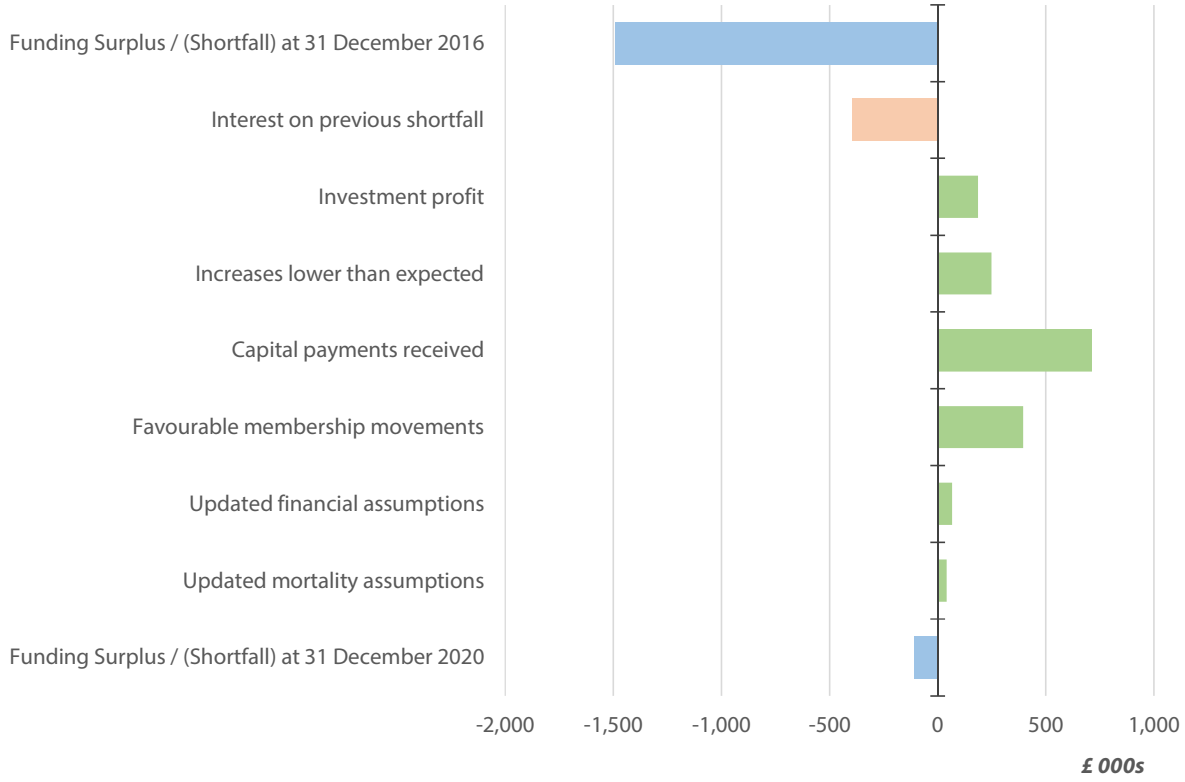


The chart illustrates that the States Members' Pension Fund had a **shortfall** of £108,000 as at 31 December 2020, corresponding to a **funding level** of 97.5%.

Change in funding position

At the previous valuation, the States Members' Pension Fund had a **shortfall** of £1,493,000. The funding position has therefore improved by £1,385,000 since the previous valuation. We have analysed below the reasons for the change, indicating the impact of each factor on the valuation result this time.

STATES MEMBERS' PENSION FUND (CONTINUED)



This improvement is primarily due to the capital payments received over the intervaluation period and favourable membership movements. In addition, the States Members' Pension Fund profited from investment returns being in excess of the **discount rate** assumed at the 2016 valuation and from lower than expected increases to pension rates.

Action to eliminate shortfall

There is no requirement to make regular contributions to provide benefits in relation to future service as the Fund is closed. Therefore, the **shortfall** will need to be met by capital payments. The **shortfall** could have been eliminated by a single lump sum payment of £114,000 paid at the end of 2021 (allowing for interest on the **shortfall**). However, it should be noted that the States Members' Pension Fund would only remain fully funded if experience is in line with the valuation assumptions. Additional **shortfall** contributions may be required at future valuations in the event of any adverse future experience.

Appendix II

GLOSSARY

Term	Definition
Defined Benefit	The benefits paid (pension and lump sum) are defined by a formula based on a proportion of salary for each year of service. The benefits could be final salary (ie based on salary just prior to retirement) or Career Average Re-valued Earnings (CARE) (ie based on salary throughout career). The benefit which the member will receive is defined, but the cost to the employer is uncertain.
CARE Sections	As part of the introduction of the CARE sections, transitional arrangements applied for those who were active members of the Final Salary Section on 29 February 2016. A CARE Transition Member transferred to the CARE section of the Fund for future accrual of benefits. An Elected CARE Transition Member opted during 2019 to be subject to special transitional provisions. A CARE New Member joined after 1 May 2015.
Defined Contribution	The benefits paid are based on the accumulation of funds that have been paid in. The contribution is known, but the benefit to the member is uncertain.
Deferred Member	An individual who is no longer accruing benefits, usually because they are no longer an employee, but is not yet receiving a pension.
Actuarial Account	A separate Actuarial Account is maintained for Guernsey Electricity Limited to ensure there is no cross subsidy between the contributions paid to the Superannuation Fund by Guernsey Electricity Limited and those by other participating employers.

Term	Definition
Funding target	A funding target is an assessment of the present value of the benefits that will be paid from a pension scheme in the future, based on pensionable service prior to the valuation date. In order to calculate a funding target, assumptions need to be made about the various factors that will influence the scheme in the future, such as the level of pay increases, when members will retire and how long members will live. These assumptions are used to project future cashflows out of the scheme, which are then discounted back to the valuation date using the assumed rate of investment return to place a present value on the scheme's liabilities, ie the funding target.
Discount rate	This is used to place a present value on a future payment. A discount rate can allow for some of the extra investment return that is expected over the long term by investing in return seeking assets.
Present value	The actuarial valuation involves projections of pay, pensions and other benefits into the future. To express the value of the projected benefits in terms of a cash amount at the valuation date, the projected amounts are discounted back to the valuation date by a discount rate. This value is known as the present value. For example, if the discount rate was 5% a year and if we had to pay a lump sum of £1,050 in one year's time the present value would be £1,000.
Funding level (percentage)	This is the ratio of the value of the assets to the value of the liabilities on a particular set of assumptions.
Funding surplus/deficit	This is the difference between the value of the assets and the value placed on the liabilities using a particular set of assumptions. If the market value of the assets is greater than the value placed on the liabilities, then the difference is called the (past service) surplus. If the value placed on the liabilities is greater than the market value of the assets, then the difference is called the (past service) deficit.
Future Service Contribution Rate	The employer contribution rate needed to fund future service of existing employees.

Appendix III

Special Benefit Groups	**Additional Employer future service contribution rate %pa**
Final Salary Protected Members	
Police and Firefighters	
entrants on or before 31.10.91	+15%
entrants between 31.10.91 and 31.12.07	+10%
entrants after 31.12.07 Police	+6%
Fire	+4%
Senior Police and Fire Officers – entrants before 01.01.08	+7%
Mental Health Officers – entrants prior to 01.12.98	+9%
Crown Officers	
entrants on or before 31.10.91	+10%
entrants between 01.01.92 and 31.12.03	+9%
entrants after 01.01.04	+6.7%
CARE Members	
Police and Firefighters	+4.5%