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

6 June 2018

Dear Sir

1. Executive Summary

1.1 The purpose of this Policy Letter is to set before the States the latest triennial Actuarial Valuation (as at 31st December 2016) of the Superannuation Fund prepared by BWCI Consulting Limited which is included as Appendix I.

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 Old Age pension" funded by the Guernsey Insurance Fund administered by the Committee *for* Employment & Social Security.

1.3 The overall value of the Superannuation Fund as at 31st December 2016 was £1,301million and the Actuarial Valuation calculates the liabilities of the Public Sector Pension Scheme (Combined Pool and Guernsey Electricity Limited Actuarial Account) to be £1,392million which means that the Scheme is 93.5% funded (2013: 93.4%).

1.4 This Report recommends no changes to the employers' contribution rates.

1.5 As set out in Section 6, the 93.5% funding position of the Scheme as per the Actuarial Valuation is considerably higher than the 52.8% calculated under Financial Reporting Standard (FRS) 102. This is due to the requirement to use a discount rate (assumption of future investment returns) under FRS102 which is significantly below that used in the Actuarial Valuation. 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. 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 Scheme and the States Members Pension Scheme. Within the Public Sector Pension Scheme element of the Superannuation Fund is a separate Actuarial Account for Guernsey Electricity Limited[1]. The Combined Pool comprises all other Public Sector Pension Scheme Employees including teachers, nurses, civil servants, public service employees, police officers, etc. Previously, there were also separate Actuarial Accounts for Guernsey Post Limited and Guernsey Financial Services Commission but these closed to future accrual of benefits with all members effectively becoming deferred members and the liabilities with the full asset value of these liabilities being transferred to the Combined Pool.

2.2 The Public Sector Pension Scheme is predominantly a defined benefit scheme 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). 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 with a defined contribution scheme for earnings in excess of this cap (which was £87,434 from 1 May 2016). The revised arrangements include a fixed cost ceiling (excluding the investment risk) on the employer's future contribution rate.

2.4 An Actuarial Valuation is carried out 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 For valuations since 31 December 2007, the Combined Pool Section had a funding target of 90% of benefits accrued up to 31 December 2007, and 100% of benefits thereafter. However, this was not sustainable over the long term as the States of Guernsey were still responsible for paying 100% of benefits. Therefore,

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[1] 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 Policy & Resources Committee has restored a 100% funding target for all benefits for the Combined Pool Section for the 2016 valuation.

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

3. Actuarial Valuation Results

3.1 The Actuarial Valuation Report includes detailed explanation and analysis on the membership data; developments since the last Valuation (31st December 2013); 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. The findings of the valuation will 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.

<u>Combined Pool</u>

3.3 The results of the Actuarial Valuation as at 31st December 2016 are summarised below:

	£'000
Market Value of Scheme Assets	1,236,551
Present Value of Scheme Liabilities	1,329,202
Surplus / (Deficit)	(92,651)
Funding Percentage	**93.0%**

3.4 The funding percentage has improved slightly since the 92.2% recorded within the 2013 Actuarial Valuation.

3.5 The current rate of employer contribution rate is 14.1%. The overall future service contribution rate required is 12.6%. Maintaining the contribution rate at 14.1% will enable the past service deficit to be reduced. Under this approach and assuming that the assumptions are borne out in practice, this would eliminate the shortfall in a period of around thirty four years. **It is recommended that the base level rate of employer contributions remains at 14.1% of Pensionable Pay with additional contributions payable in respect of the special benefit groups (as set out in Appendix II).**

Guernsey Electricity Limited

3.6 The results of the Actuarial Valuation as at 31st December 2016 are summarised below:

	£'000
Market Value of Scheme Assets	60,650
Present Value of Scheme Liabilities	57,142
Surplus / (Deficit)	3,508
Funding Percentage	**106.1%**

3.7 The current employer contribution rate is 11.5%. The overall future service contribution rate required is 11.8%. Maintaining the contribution rate at 11.5% will slowly reduce the past service surplus.

3.8 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, subject to a minimum of 100% funding of liabilities. Guernsey Electricity Limited has requested that its contribution rates remain at 11.5% with the remaining surplus being maintained as a prudent margin to help cover any future adverse experience within the Final Salary section. **Therefore, it is recommended that the employer contribution rate for Guernsey Electricity Limited remains at 11.5%.**

4. States Members Pension Scheme

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

4.2 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 past service deficits. Since 2015, this sum has been £149,000 (maintained in real terms) which was intended to eliminate the deficit over a period of twenty five years.

4.3 The results of the Actuarial Valuation of the States Members Pension Scheme are that there is a reduction in the funding shortfall from £1,819,000 to £1,493,000 and continuation of the payment of the annual sum would eliminate the deficit over a period of fifteen years.

5. Superannuation Fund

5.1 The assets of the Superannuation Fund as at 31 December 2016 totalled £1,301,156,000, attributed to the Fund constituents as follows:

Combined Pool	£1,236,551,000
Guernsey Electricity Limited	£ 60,650,000
States Members	£ 3,955,000

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

	2016	2013	2010	2007	2004
	£m	£m	£m	£m	£m
Employer contributions	29	27	26	16	13
Employee contributions	14	13	12	10	8
Refunds and Transfers (net)	-	1	1	(1)	(1)
Pensions and Lump Sums paid	(57)	(49)	(40)	(28)	(21)
Net decrease before investment returns	(14)	(8)	(1)	(3)	(1)
Net investment income and Investment appreciation / (depreciation)	163	108	102	52	49
Net increase	149	100	101	49	48
Balance at 1 January	1,152	976	829	847	608
Balance at 31 December	1,301	1,076	930	896	656
Scheme Liabilities at 31 December	1,392	1,152	1,003	940	764
(Deficit) / Surplus	(91)	(76)	(73)	(44)	(108)
Funding Ratio	93.5%	93.4%	92.7%	95.3%	85.9%

6. Financial Reporting Standard (FRS) 102 disclosures

6.1 FRS102 is an Accounting Standard which includes the following main requirements in respect of pension scheme disclosures:

- Pension Scheme assets are to be measured using market values;
- Pension Scheme liabilities are to be discounted having regard to the yield on AA corporate bonds;
- The Pension Scheme surplus (to the extent it can be recovered) or deficit is recognised in full on the balance sheet in the Accounts of the sponsoring employer.

6.2 There are extensive disclosures required under FRS102 which are intended to be an aid in comparing pension costs and liabilities between companies. FRS102 is prepared for accounting purposes whereas an Actuarial Valuation is carried out to compare the value of the Scheme's assets with a funding target which calculates the value of the benefits that will be paid from the scheme in the future using information about the scheme at the valuation date.

6.3 The General Revenue Accounts are not currently prepared fully in accordance with Accounting Standards and, therefore, the deficit on the Fund calculated using FRS102 assumptions is not included on the Statement of Financial Position. However, the FRS102 position is calculated and detailed information is disclosed within the notes to the Accounts.

6.4 The basis of preparing FRS102 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.

6.5 The FRS102 calculations for 31 December 2016 effectively assumed a discount rate of inflation less 0.8% (based on the return on an AA corporate bond) whereas the Actuarial Valuation assumes a discount rate of inflation plus 2.5% (which is in line with that used when determining the revised pension arrangements and lower than the Superannuation Fund target rate of future investment return). The two bases result in material differences in the calculation of liabilities and the resultant net funding position of the scheme.

For example, in respect of the Superannuation Fund:

	Using FRS102 Assumptions £'000	As per the Actuarial Valuation £'000
Market Value of Scheme Assets	1,301,155	1,301,155
Present Value of Scheme Liabilities	2,462,415	1,391,792
(Deficit)	(1,161,260)	(90,637)
Funding Percentage	52.8%	93.5%

7. Compliance with Rule 4

7.1 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.

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

7.3 In accordance with Rule 4(3), there are no Propositions which request the States to approve funding.

7.4 In accordance with Rule 4(4) of the Rules of Procedure of the States of Deliberation and their Committees, it is confirmed that the Propositions have the unanimous support of the Committee.

7.5 In accordance with Rule 4(5), the Propositions relate to the duties of the Committee to advise the States on the States' financial affairs.

Yours faithfully

G A St Pier
President

L S Trott
Vice-President

A H Brouard
J P Le Tocq
T J Stephens

BWCI Consulting Limited

States of Guernsey

Superannuation Fund

Actuarial Valuation as at 31 December 2016

Prepared for

The States of Guernsey Policy & Resources Committee

Prepared by

BWCI Consulting Limited

30 May 2018

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Executive summary

We have carried out an actuarial valuation of the States of Guernsey Superannuation Fund ("the Fund") as at 31 December 2016. 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)	(92,651,000)	3,508,000
Funding level (%)	93.0	106.1
Overall future service contribution rate	12.6%	11.8%
split as follows:		
Final Salary section	20.9%	19.0%
CARE section	10.2%	9.8%

The different sections of the Fund contain different benefit structures and age profiles and so the contribution rates that apply specifically to a section will be different and will change over time as the age profile changes. Generally, significantly higher contribution rates apply to higher ages than to lower ages. As the Final Salary section is made up of older protected members, the rate applying to that section is significantly higher.

There is a cost floor and ceiling that applies to the overall Employer future service contribution rate (see section 3.4 for more details). This will be used to assess the overall cost of pension provision for the entire membership of the Combined Pool and not just the cost applying to a group of members (eg Final Salary or CARE sections). If the floor and ceiling had applied at this valuation then the overall cost would be above the floor and below the ceiling and no changes to future accrual or contributions would be required.

The **surplus/shortfall** amounts shown above have been assumed to relate to the Final Salary sections of the Fund. As the CARE section has been in force for a short period of time (CARE Transition Members since 1 March 2016 and CARE New Members since 1 May 2015) and the contributions paid into the CARE section have been sufficient to cover the cost of benefits accruing, this is a reasonable assumption at this time.

Action to eliminate surplus/shortfall

Combined Pool section

The Combined Pool section includes the Public Servants' Pension Scheme and the Teachers' Scheme and all the assets and liabilities transferred from the Guernsey Post Limited (GPL) Actuarial Account. In addition, we understand that the assets and liabilities from the Guernsey Financial Services Commission (GFSC) Actuarial Account were transferred to the Combined Pool with effect from 30 April 2017. We have allowed for this post valuation event within our valuation results, and have therefore included the GFSC Actuarial Account's assets and liabilities within the results for the Combined Pool section.

The current rate of Employer contributions being paid is an overall rate of 14.1% of Pensionable Salary. This rate could continue unchanged and comprise an overall rate of 12.6% of Pensionable Salary for all active members to cover the cost of future accrual of benefits (split 20.9% for Final Salary members paid into the Final Salary section and 10.2% for CARE members paid into the CARE section) and 1.5% of

Executive summary (continued)

Pensionable Salary for all active members paid into the Final Salary section to reduce the **shortfall** of the Final Salary section revealed at 31 December 2016. Under this approach and assuming the assumptions are borne out in practice, we would expect the **shortfall** of the Final Salary section to be eliminated in around 34 years from the valuation date.

If allowance were made for the spreading of the **shortfall** of the Final Salary section over the average future working lifetime of all current active members, a period of 15 years, the contribution rate required would be 3.3% of Pensionable Salary for all active members, resulting in a total overall contribution rate from the Employer of 15.9% of Pensionable Salary. Alternatively fixed contributions could be paid over an agreed number of years to eliminate the **shortfall** of the Final Salary section.

Additional contributions are required in respect of the special benefit groups.

GEL Actuarial Account

Guernsey Electricity Limited (GEL) is currently paying contributions of 11.5% of Pensionable Salary. GEL could use some of the **surplus** in the Final Salary section to continue paying 11.5% of Pensionable Salary for Final Salary members. This is not expected to use up a material amount of the **surplus** in the Final Salary section over the future average working lifetime of the current Final Salary active members, a period of 5 years. The remaining **surplus** could be maintained as a prudent margin to help cover any adverse experience within the Final Salary section.

A contribution rate of 9.8% of Pensionable Salary for CARE members is required to be paid into the CARE section.

General

The rates of contributions payable will be reviewed at the next actuarial valuation which is due to take place as at 31 December 2019.

The two pension arrangements for States Members' are combined with the Fund for investment purposes. A valuation of the States Members' Pension Fund has been made as at 31 December 2016. A summary of the results of that valuation are included as Appendix G.

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 Fund as at 31 December 2016.

Rule 18 of the Fund's Rules requires the Policy & Resources Committee to obtain actuarial valuations at least every 3 years.

The valuation reviews the financial position of the Fund as a going concern at the valuation date, and helps establish what actions should be taken regarding future contribution rates.

Our previous valuation report of 10 December 2014 considered the financial position of the Fund as at 31 December 2013.

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 sometime 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 8.

1.3 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 been made as at 31 December 2016. A summary of the results of that valuation are included as Appendix G.

1.5 Scope of advice and compliance

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

2. Benefits valued and data

2.1 Benefits valued

The valuation is based on the benefits defined in the Fund's legal documents at the valuation date. A brief summary of the outline provisions of the Fund is set out in Appendix B. Our calculations assume that the current benefit structures are unchanged.

2.2 Benefit changes

Since the previous valuation, a new Career Average Revalued Earnings (CARE) section of the Fund has been established.

The CARE benefit structure has been designed to reduce risk and to make the Fund more sustainable over the long term. There are transitional arrangements which apply to 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 as Final Salary Protected Members (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.

Members recruited after 1 May 2015 join the CARE section as CARE New Members.

The main terms of the CARE benefit structure for each section, in relation to standard members, are summarised in the table below:

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

An earnings cap is applied to members' pensionable salaries within the CARE section. This is linked to civil service pay grade SO6. Contributions on pay above the earnings cap are made to a new defined contribution section within the Fund.

We have allowed for the introduction of the CARE benefit structure within our valuation calculations.

2.3 Closure of GFSC Actuarial Account and subsequent transfer to Combined Pool

The GFSC Actuarial Account closed to future accrual of benefits with effect from 1 July 2014. This closure was taken into account to produce the results of the 2013 valuation. We understand that the assets and liabilities of the GFSC Actuarial Account were transferred to the Combined Pool with effect from 30 April 2017. We have allowed for this post valuation event within our valuation results, and have therefore included the GFSC Actuarial Account's assets and liabilities within the results for the Combined Pool section.

2.4 Closure of GPL Actuarial Account and subsequent transfer to Combined Pool

The GPL Actuarial Account closed to future accrual of benefits on 31 July 2016 and all active members effectively became deferred members on that date. All the assets and liabilities of the GPL Actuarial Account were transferred to the Combined Pool with effect from 31 March 2016.

2.5 Allowance for pension increases

The pension and deferred pension increases provided by the Fund within the Final Salary section are not guaranteed in the Rules but determined by the States of Guernsey. In 1988, the States of Guernsey resolved that an increase of less than the increase in the Retail Prices Index (RPIX from 1 January 2017) should only be recommended if certain criteria apply. The intention, from 1 January 2017, is to provide pension and deferred pension increases annually on 1 January for the Combined Pool section and the Actuarial Accounts based on the annual increase in the Guernsey Index of Retail Prices excluding mortgage payments (RPIX) to the preceding June. Previously, increases had been based on the increase in the Guernsey Index of Retail Prices All items (RPI). 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.

2.6 Left no decision cases

There is some uncertainty in the data that the Policy & Resources Committee hold for a large number of members who have previously left service but whose benefits have not been processed. As such, we do not have the required data with which to value these members accurately.

Previously, these members were valued as though they would take a refund of their member contributions at the valuation date, as that was the only data that was available for them. However, for the 2016 valuation, based on some additional data we have now been able to obtain from the Administration System, we have included a very approximate additional funding reserve of £40m for these members in the Combined Pool section and £0.6m in the GEL Actuarial Account, which is an estimate of the value of their preserved benefits within the Fund in excess of the value of their contributions.

It is anticipated that the benefits of these leavers will be processed over the next few years and we will review the value of the actual benefits against the assumed funding reserve once the data is available.

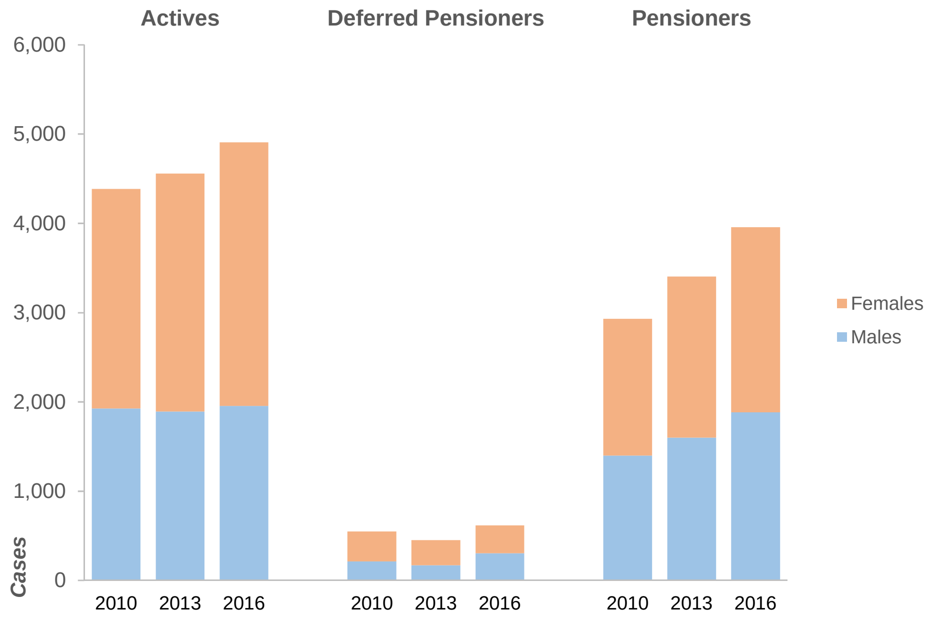
2.7 Membership data

The valuation results are based on the membership data supplied to us by the Policy & Resources Committee as at 31 December 2016. This is summarised in Appendix C.

2. Benefits valued and data (continued)

2.7.1 Membership changes – Combined Pool

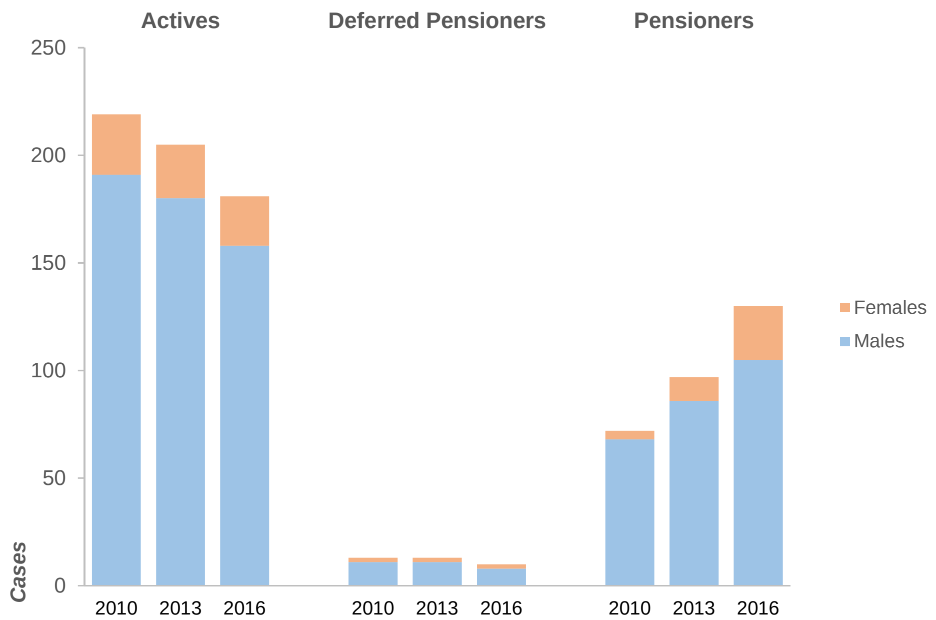
Changes in the number of members of the Combined Pool section since 2010 are illustrated below.



The Combined Pool section has experienced an increase in all membership groups since the previous valuation. The 2016 figures include deferred pensioners and pensioners transferred from the GPL and GFSC Actuarial Accounts.

2.7.2 Membership changes – GEL Actuarial Account

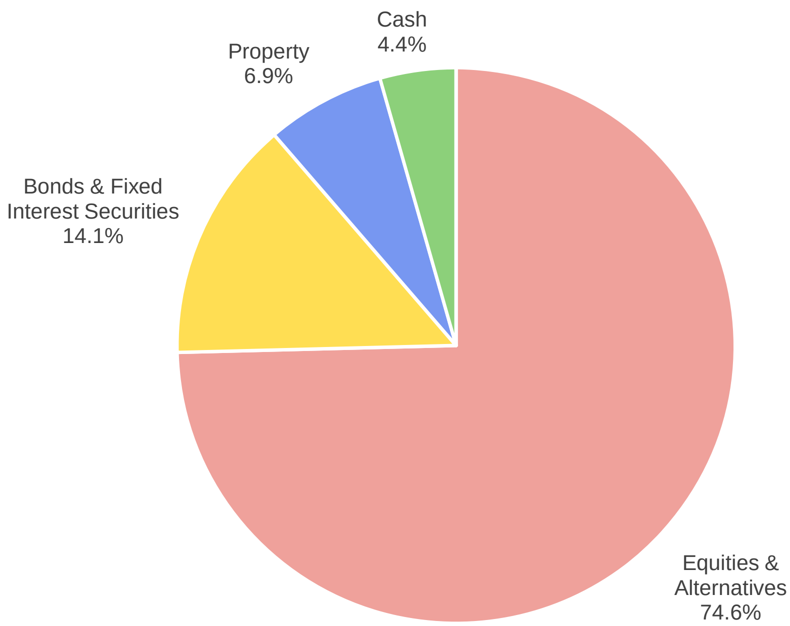
Changes in the number of members of the GEL Actuarial Account since 2010 are illustrated below.



The active membership of the GEL Actuarial Account has fallen since the previous valuation. There has been a corresponding increase in the number of pensioners. The number of deferred pensioners has fallen slightly.

2.8 Assets

The audited accounts of the Fund show that the total assets in respect of the Combined Pool section (including the GFSC Actuarial Account) had a market value of £1,236,551,000 at the valuation date. The assets allocated to the GEL Actuarial Account amounted to £60,650,000. These assets are analysed as follows:



These assets include the value of the defined contribution section of the Fund as at 31 December 2016. We have therefore added to the liabilities of the Combined Pool and the GEL Actuarial Account the amount of contributions paid to the defined contribution section (as an approximation of the value of the defined contribution section as at 31 December 2016, as this is not split out in the accounts) in order that the assets and liabilities are valued consistently. In the defined contribution section, the value of the liabilities is equal to the value of the assets.

2.9 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 results of the previous valuation.

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

3. Funding objective and assumptions

3.1 The 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 the future cash flows 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**.
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.
Discount rate	This is used to place a **present value** on a future payment. A "risk-free" **discount rate** is usually derived from the investment return achievable by investing in government stock ("gilts"). A **discount rate** higher than the "risk-free" rate is often used to allow for some of the extra investment return that is expected over the long term by investing in assets other than gilts.

3.1.1 The funding target

For valuations since 31 December 2007, the Combined Pool section had a **funding target** of 90% of benefits accrued up to 31 December 2007, and 100% of benefits thereafter. However, the Policy & Resources Committee has agreed to restore a 100% **funding target** for all benefits for the Combined Pool section for the 2016 valuation. The previous **funding target** of below 100% of benefits was not sustainable over the long term as the States of Guernsey were still responsible for paying 100% of the benefits from States' funds. Therefore, the States of Guernsey were responsible, over the long term, for the funds which make up a **funding target** of 100% of benefits.

The **funding target** for the GEL Actuarial Account at previous valuations was that its liabilities should be 100% funded. This **funding target** has been retained for the 2016 valuation.

The **funding targets** adopted for the valuation assume the Fund continues in its present form. This is not the same as the cost of securing the benefits if the Fund were to wind-up.

3.2 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.

It has been agreed to use the projected unit method with a 1 year control period to calculate the future service contribution rate. This measures the increase in the **funding target** relating to benefits expected to accrue to active members over the year following the valuation date.

The projected unit method was also adopted for the previous valuation.

Surplus/shortfall	This is the difference between the value of the assets and the value of the liabilities on the chosen set of assumptions. If the value of the assets is greater than the value of the liabilities, then the difference is called the **surplus**. If the value of the liabilities is greater than the value of the assets, then the difference is called the **shortfall.**

3.3 Stability of contribution rate

The contribution rate for each section of the Fund will remain broadly stable before and after eliminating a **surplus** or a **shortfall** if the funding objective remains unchanged, all assumptions made are borne out in practice and the age/sex/salary/membership profile of the active membership of the section is stable. If the funding objective changes, contribution rates are likely to change.

However, the future service contribution rate for the Fund is expected to change over time as the membership profile changes and CARE New Members become a greater proportion of the overall membership.

3.4 Rule requirements

Under Rule 30, the Policy & Resources Committee determines the Employer contributions to be paid into the Fund.

There is a limit to the contributions paid by the States of Guernsey to the Combined Pool section of the Fund. However, in accordance with the Rules, this cost ceiling will not be applied until the valuation to be carried out as at 31 December 2019.

A fixed cost ceiling of 14.5% of Pensionable Salary will apply to the Employer's contribution for standard employees in the case of CARE Transition Members and Final Salary Protected Members, and 14% of Pensionable Salary in the case of CARE New Members. The cost of the Fund is reviewed every three years. If the cost of the Fund exceeds this, then negotiations will take place to either reduce future accrual or increase member contributions (or both). If agreement is not reached then the accrual rate will be reduced to limit the Employer's contribution to 14.5%/14% of Pensionable Salary. The fixed cost ceiling will include:

- the future service contribution rate
- any past service costs relating to improving longevity of active members

All other past service costs including any additional costs if investment return is lower than anticipated will be met by the Employer.

There will be a floor to the Employer's contribution rate for standard employees calculated in relation to future service benefits (and the saving within the new structure arising from reduced longevity for active members' past service benefits) equal to 10.5% of Pensionable Salary for CARE Transition Members and equal to the members' contribution rate for CARE New Members.

The floor and ceiling will be used to assess the overall cost of pension provision for the entire membership of the Combined Pool and not just the cost applying to a group of members (eg Final Salary or CARE sections). If the floor and ceiling had applied at this valuation then the overall cost would be above the floor and below the ceiling and no changes to future accrual or contributions would be required.

3.5 Assumptions

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.

3.6 Sensitivity of assumptions

Although the valuation results are sensitive to the choice of the absolute levels of the financial assumptions, it is important to note that the differences between the rates have a bigger impact on the results of the valuation than the absolute levels of each assumption. Hence the valuation results are particularly sensitive to the difference between the **discount rate** and the rate of pay or pension increases.

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 E.

3.7 Derivation of financial assumptions

The key financial assumptions used for this valuation and those used for the previous valuation are summarised in Appendix D.

The derivation of the financial assumptions is set out below. In our opinion, the derivation of the financial assumptions is compatible with taking assets at market value.

3.7.1 Discount rate

The Fund's assets are currently invested in equities and other return seeking assets. This investment strategy is expected to produce a target real return of 4% pa above UK inflation over the long term.

A **discount rate** of UK RPI + 4.0% pa would 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 Policy & Resources Committee has decided to take some of this higher expected return into account in the **funding target** and to accept the funding risks that this involves.

An analysis of the investment return actually achieved over the past 10 years to 31 December 2016 shows that the Fund return was 2.3% pa above UK RPI inflation.

At the previous valuation, a **discount rate** of UK inflation plus 3.25% pa was adopted. In order to determine the cost of the benefit changes which were introduced with effect from 1 March 2016 a **discount rate** of UK inflation plus 2.5% pa was adopted. Adopting a lower **discount rate** reduces the funding risk, as lower investment returns are required and so there is less reliance on achieving the higher investment returns in order to meet the **funding target**. This reduces the likelihood of a funding **shortfall** arising over time. This is important as the investment risk will continue to be borne solely by the States of Guernsey, even under the new structure where any investment losses are outside of the cost ceiling. If the actual investment return is lower than assumed, the difference has to be made up by the States of Guernsey.

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 target return adopted by the Policy & Resources Committee applies to the whole of the assets. In addition, 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 will 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 **discount rate** used to calculate the **funding target** has been set equal to the rate of UK inflation over the appropriate mean term of the liabilities 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.

A lower **discount rate** of UK RPI + 2.5% pa has been adopted for all benefits in order to reduce the funding risk of the Fund and to be consistent with the level of funding risk being taken for the new benefit structure. It should be noted that the adoption of this lower **discount rate** does not remove investment risk from the Fund.

3.7.2 Inflation

The UK inflation assumption used in calculating the **discount rate** has been derived as the annual UK inflation spot rate provided by the Bank of England as at the valuation date calculated at the mean duration of the Fund's liabilities. For the local inflation assumption, this is then combined with a prudent allowance of 0.25% pa to allow for higher expected levels of inflation to be experienced locally compared with those in the UK.

3.7.3 Pension increases

Pensions for all sections except the Teachers' Scheme have been assumed to increase at the rate of local inflation during deferment and when in payment. For the Teachers' Scheme future pension increases are instead effectively linked to UK CPI inflation, so it has been assumed that pensions will increase at the rate of UK CPI inflation (on grounds of prudence, assumed to be UK RPI inflation less 0.7% pa) during deferment and when in payment.

3.7.4 Pensionable Salary increases

Pensionable Salary has been assumed to increase at the rate of local inflation plus 0.5% pa for all sections. This assumption should be a long term assumption not the expectation of salary awards over the period to the next actuarial valuation. Over the long term salaries have tended to increase at a higher rate than inflation. In addition promotional salary scales have been included.

3.8 Changes in financial assumptions

The change to the derivation of the **discount rate** assumption is set out in section 3.7. The derivation of the other financial assumptions is unchanged from the previous valuation.

3.9 Changes to post-retirement mortality assumption

It has been agreed to adopt the latest published Self Administered Pension Schemes (SAPS) mortality tables (known as the "S2 series") which are based on UK occupational pension scheme experience from 2004-2011. These were the tables adopted at the previous valuation.

In order to allow for future improvements in mortality we have again used the latest available information which is a Mortality Projection Model published by the Continuous Mortality Investigation (CMI). The current version of the model is known as "CMI_2016". The model takes recent rates of mortality improvements and blends them into a long-term rate.

We have suggested that a long term trend of 1.5% pa for the annual improvements in mortality rates for both males and females is a reasonable fit to past data.

Our recommendation, which was accepted by the Policy & Resources Committee, was to update the post-retirement mortality assumptions to make use of the latest available information. Following analysis of the experience of the Fund over a 9 year period, our recommended assumption was:

- S2 "Light" tables for teachers and GFSC and S2 "All" base tables for all other members (including dependants) with the following scaling factors:
  - Female teachers 80%

  - Dependants 95%
  - All other members 100%
- allowing for future improvements in line with the CMI_2016 Core Projections assuming a long-term annual rate of improvement in mortality rates of 1.5% for men and women.

The life expectancy at age 65 for a non-teacher currently aged 65 and for a non-teacher currently aged 45, at age 65, is set out below:

	2013 valuation basis years	2016 valuation basis years
Male aged 65	22.1	22.2
Female aged 65	24.9	24.1
Male aged 45	24.3	24.0
Female aged 45	27.2	26.0

3.10 Changes to other demographic assumptions

Following our recommendations, it has been agreed to adopt other demographic assumptions, some of which differ from those used at the previous valuation. These have been based on an analysis of the experience of the Fund over the intervaluation period.

3.10.1 Normal health retirements

Different benefit categories have different Normal Pension Ages and the incidence of their retirements need to be considered separately. Benefits are reduced by a cost-neutral factor should members choose to retire before their Normal Pension Ages. Therefore, we need to consider whether retirements will occur beyond Normal Pension Age.

Our analysis of Public Servants' Final Salary Existing Members over the nine year period up to the valuation date showed that more members than expected retired at or before age 60. We have revised the assumed incidences of retirement to allow for this experience. We have also revised the assumed incidence of retirement for GEL members to reflect their experience.

Retirement rates for the other groups were found to remain appropriate and so we have retained the same assumptions for this valuation.

For Final Salary New Members, we have assumed members will retire at their Normal Pension Ages. We have assumed CARE Transition Members will retire in line with the assumptions made for Final Salary Members. We have assumed that all CARE New Members will retire at their Normal Pension Ages.

3.10.2 Ill health retirements

We have revised our ill health retirement assumptions to reflect actual experience over the intervaluation period. The revised assumptions anticipate a lower number of ill health retirements over the next intervaluation period. However, we have assumed that all ill health retirements would be on grounds of total incapacity, to reflect actual experience.

3.10.3 Withdrawals from service

Our experience showed that for most sections the number of withdrawals has greatly exceeded the expected number based on the assumptions used for the 2013 valuation. It is important not to overestimate the number of withdrawals. We have retained the assumptions adopted at the previous valuation.

We have assumed a lower percentage of members will opt to take a refund on leaving service. However, it is difficult to analyse the experience fully as the majority of members are yet to make a decision about their benefits.

3.10.4 Promotions

We have retained the salary scales which were adopted at the previous valuation.

3.10.5 Family statistics

At the 31 December 2013 valuation, we assumed that 85% of male members and 75% of female members were married at retirement or earlier death. This is the standard assumption required in actuarial valuations for the purpose of the UK Pension Protection Fund and we have retained these assumptions.

3.10.6 Commutation

We have retained the assumption that members commuting their Final Salary pension will receive a lump sum equal to 75% of the maximum, to reflect actual experience.

We do not have sufficient data to analyse the experience of the CARE section at this stage. We have therefore adopted the assumption used to determine the cost of the benefit changes, that 15% of the CARE pension will be commuted on retirement.

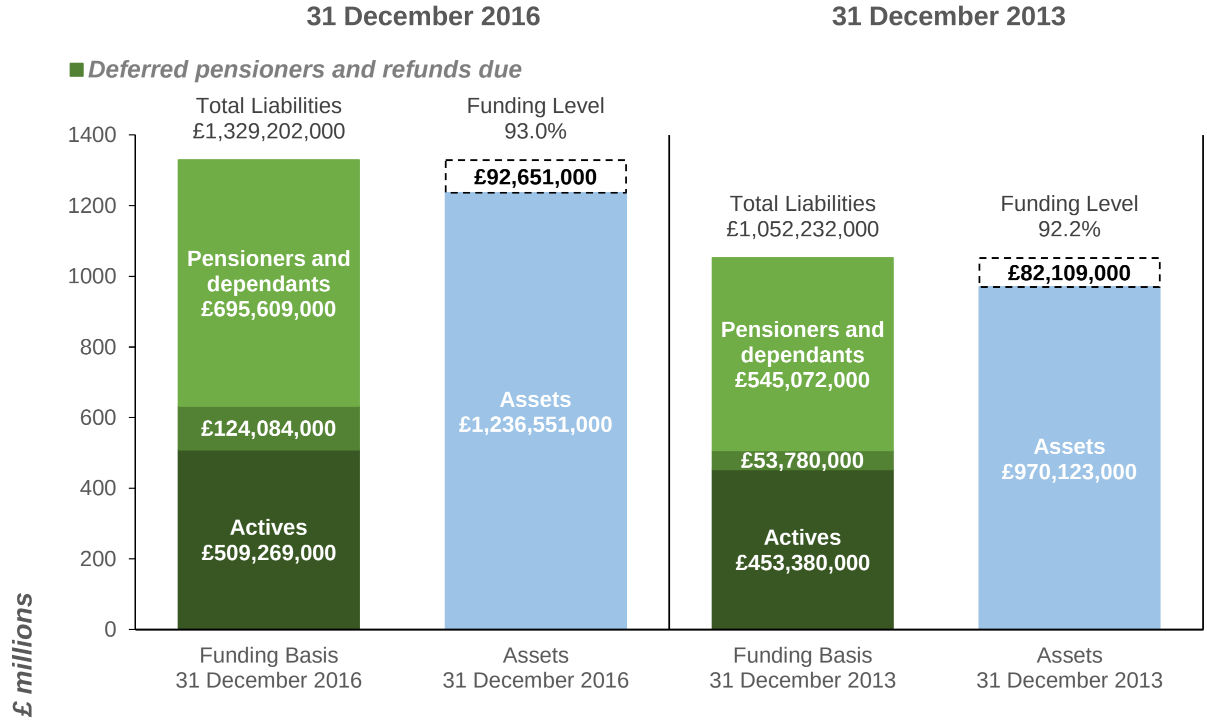
3.11 Net effect of changes in assumptions

Overall these changes increase the value placed on the Fund's liabilities compared with the previous valuation.

4. Results – Combined Pool section

4.1 Funding position

As noted in section 3.1, the funding objective is to bring the assets of each section of the Fund into line with 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 D. The chart below illustrates the result of this comparison at the valuation date along with that at the previous valuation date (on a 100% **funding target**).



Notes: Total liabilities includes an approximate value of the defined contribution account which is included in the assets. At the previous valuation, the GPL and GFSC Actuarial Accounts did not form part of the Combined Pool section.

The Combined Pool section had a **shortfall** of £92,651,000 relative to the **funding target** of £1,329,202,000 and a funding level of 93.0%. This **shortfall** has been assumed to relate to the Final Salary section. As the CARE section has been in force for a short period of time (CARE Transition Members since 1 March 2016 and CARE New Members since 1 May 2015) and the contributions paid into the CARE section have been sufficient to cover the cost of benefits accruing, this is a reasonable assumption at this time.

It is important to appreciate that the funding position is dependent upon the assumptions used to calculate the **funding target**. If the assumptions are not borne out in practice, then the **funding level** will change. Appendix E covers the key risks faced by the Fund.

Term	Definition
Funding level	This is the ratio of the value of the assets to the value of the liabilities on the chosen set of assumptions.

4.2 Future benefit accrual

We have also calculated the Employer 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**.

The overall Employer's future service contribution rate on the basis of our assumptions is an overall rate of 12.6% of Pensionable Salary which includes an allowance for expenses of 0.25%. The corresponding rate at the previous valuation was 14.2%.

The main reason for the decrease in the overall rate at this valuation is the change to the benefit structure. The new structure consists of protected members continuing to accrue benefits in the Final Salary section, CARE Transition Members and CARE New Members. These different sections each require different levels of Employer contribution rates and the overall contribution rate reflects the combination of rates depending on the mix of membership. The cost of benefits accruing under the Final Salary section is higher than under the CARE Transition section, which is 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 (if assumptions remain unchanged).

As discussed in section 3.4, under the new benefit structure there is a cost ceiling mechanism. However, the cost ceiling does not apply until the 31 December 2019 valuation.

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

4.2.1 Contribution rates required to be paid

In practice, the assets of the Final Salary and CARE sections need to be separately identifiable, as increases to CARE Transition Members' accrued benefits will depend on the funding position of the CARE section if inflation exceeds 7.5% pa. Therefore, the overall Employer contribution rate needs to be split out for each section and paid separately, to cover the cost of benefits accruing in each section.

The Employer contribution rate required to be paid to the Final Salary section is higher than for the CARE section due to the different benefit structure but also due to the different age profile of the section. Generally, significantly higher contribution rates apply to higher ages than to lower ages. As the Final Salary section is made up of older protected members, the rate applying to that section is significantly higher. The Employer's future service contribution rate in respect of Final Salary section members is 20.9% of Pensionable Salary, paid into the Final Salary section.

This rate is expected to increase over time, as the Final Salary section is a closed group and the average age of the membership is expected to increase. However, the size of the membership will reduce over time and the contributions are expected to reduce in monetary terms (eventually to zero).

The Employer's future service contribution rate in respect of CARE members is 10.2% of Pensionable Salary paid into the CARE section.

This rate is a combination of rates applying to members in the CARE Transition section and CARE New section. There are various factors expected to influence how this rate will develop over time, as follows:

- the average age of the CARE section is expected to increase, as the older protected members retire and are replaced by CARE members, which is expected to increase the CARE contribution rate over time
- more and more of the CARE membership is expected to become CARE New Members rather than CARE Transition Members (as the CARE Transition section is a closed group) which will reduce the CARE contribution rate over time
- the Normal Pension Age of the CARE membership will increase (eventually moving to age 70) which will reduce the CARE contribution rate over time.

As these factors do not all act in the same direction, it is uncertain how the CARE contribution rate will change over the short term.

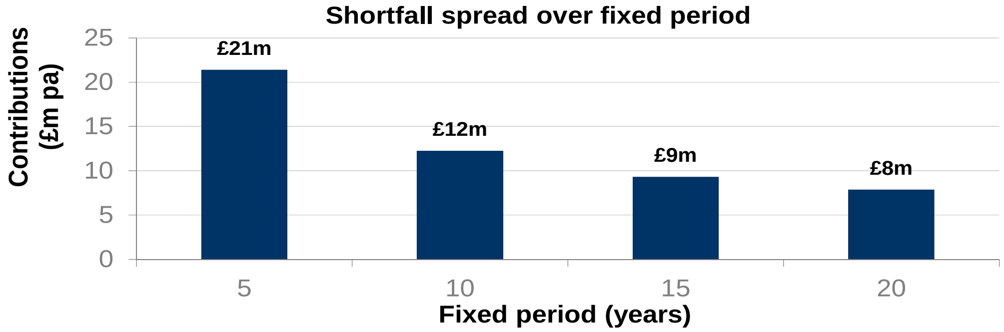
If the assumptions are borne out in practice, the combined overall contribution rate of 12.6% of Pensionable Salary is expected to reduce over the long term, until all members are CARE New Members with a Normal Pension Age of 70.

4.3 Eliminating the shortfall

If the Employer contribution rate remains unchanged at an overall rate of 14.1% of Pensionable Salary, this would represent an overall rate of 12.6% of Pensionable Salary for all active members to cover the cost of future accrual of benefits (split 20.9% for Final Salary members paid into the Final Salary section and 10.2% for CARE members paid into the CARE section) and 1.5% of Pensionable Salary for all active members paid into the Final Salary section to reduce the **shortfall** of the Final Salary section revealed at 31 December 2016. Under this approach and assuming the assumptions are borne out in practice, we would expect the **shortfall** of the Final Salary section to be eliminated in 34 years from the valuation date.

If allowance were made for the spreading of the **shortfall** of the Final Salary section over the average future working lifetime of all current active members, a period of 15 years, the contribution rate required would be 3.3% of Pensionable Salary for all active members, resulting in a total overall contribution rate from the Employer of 15.9% of Pensionable Salary. Alternatively, fixed contributions could be paid over an agreed number of years to eliminate the **shortfall** of the Final Salary section.

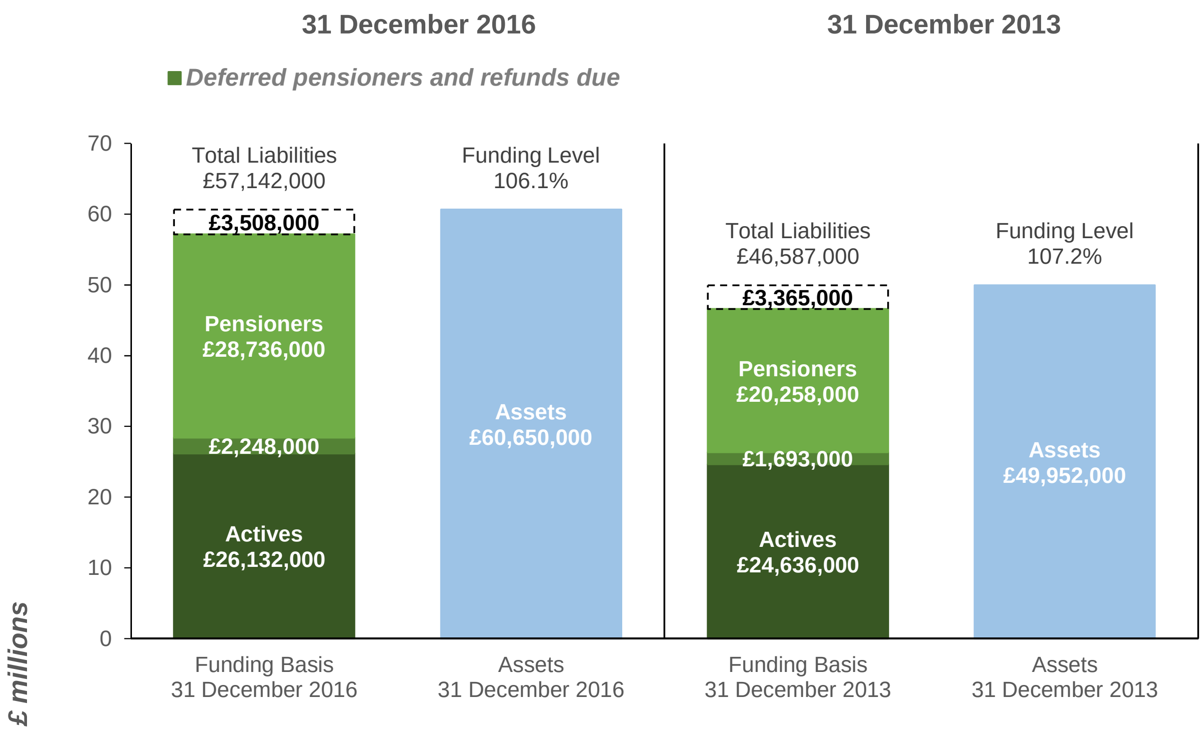
The fixed annual contributions which would be required to meet the **shortfall** of the Final Salary section if the contributions were spread over 5, 10, 15 or 20 years from 1 January 2017 (rather than spread as an addition to the contribution rate) are shown in the following chart.



5. Results – GEL Actuarial Account

5.1 Funding position

As noted in section 3.1, the funding objective is to bring the assets of each section of the Fund into line with 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 D. The chart below illustrates the result of this comparison at the valuation date along with that at the previous valuation date:



Note: total liabilities includes an approximate value of the defined contribution account which is included in the assets

The GEL Actuarial Account has a **surplus** of £3,508,000 relative to the **funding target** of £57,142,000 and a **funding level** of 106.1%. This **surplus** has been assumed to relate to the Final Salary section. As the CARE section has been in force for a short period of time (CARE Transition Members since 1 March 2016 and CARE New Members since 1 May 2015) and the contributions paid into the CARE section have been sufficient to cover the cost of benefits accruing, this is a reasonable assumption at this time.

It is important to appreciate that the funding position is dependent upon the assumptions used to calculate the **funding target**. If the assumptions are not borne out in practice, then the **funding level** will change. Appendix E covers the key risks faced by the Fund.

5.2 Future benefit accrual

We have also calculated the Employer 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**.

The overall Employer's future service contribution rate on the basis of our assumptions is 11.8% of Pensionable Salary which includes an allowance for expenses of 0.25%. The corresponding rate at the previous valuation was 14.9%.

The main reason for the decrease in the overall rate at this valuation is the change to the benefit structure. The new structure consists of protected members continuing to accrue benefits in the Final Salary section, CARE Transition Members and CARE New Members. These different sections each require different levels of Employer contribution rates and the overall contribution rate reflects the combination of rates depending on the mix of membership. The cost of benefits accruing under the Final Salary section is higher than under the CARE Transition section, which is 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 (if assumptions remain unchanged).

5.2.1 Contribution rates required to be paid

In practice, the assets of the Final Salary and CARE sections need to be separately identifiable, as increases to CARE Transition Members' accrued benefits will depend on the funding position of the CARE section if inflation exceeds 7.5% pa. Therefore, the overall Employer contribution rate needs to be split out for each section and paid separately, to cover the cost of benefits accruing in each section.

The Employer contribution rate required to be paid to the Final Salary section is higher than for the CARE section due to the different benefit structure but also due to the different age profile of the section. Generally, significantly higher contribution rates apply to higher ages than to lower ages. As the Final Salary section is made up of older protected members, the rate applying to that section is significantly higher. The Employer's future service contribution rate in respect of Final Salary section members is 19.0% of Pensionable Salary, paid into the Final Salary section.

This rate is expected to increase over time, as the Final Salary section is a closed group and the average age of the membership is expected to increase. However, the size of the membership will reduce over time and the contributions are expected to reduce in monetary terms (eventually to zero).

The Employer's future service contribution rate in respect of CARE members is 9.8% of Pensionable Salary paid into the CARE section.

This rate is a combination of rates applying to members in the CARE Transition section and CARE New section. As the GEL Actuarial Account has closed to new members from 1 October 2017, the average age of the CARE section is expected to increase, which is expected to increase the CARE contribution rate over time.

5.3 Allowance for surplus

GEL is currently paying contributions of 11.5% of Pensionable Salary. GEL could use some of the **surplus** in the Final Salary section to continue paying 11.5% of Pensionable Salary for Final Salary members. This is not expected to use up a material amount of the **surplus** in the Final Salary section over the future average working lifetime of the current Final Salary active members, a period of 5 years. The remaining **surplus** could be maintained as a prudent margin to help cover any adverse experience within the Final Salary section.

A contribution rate of 9.8% of Pensionable Salary for CARE members is required to be paid into the CARE section.

6. Experience since the previous valuation

6.1 Previous valuation

6.1.1 Combined Pool section

The previous valuation showed that the Combined Pool section had a **surplus** of £492,000 as at 31 December 2013 relative to the chosen **funding target** at the time (90% in respect of benefits accrued to 31 December 2007 and 100% in respect of benefits accrued after that date). However, there was a **shortfall** of £82,109,000 relative to a target **funding level** of 100% of accrued benefits.

The rate of Employer contributions in respect of future service accrual was 14.2% of Pensionable Salary.

If the target **funding level** was 100% and the funding **shortfall** revealed was amortised over the average future working lifetime of the current active members, an increase of 4.1% of Pensionable Salary would have been required resulting in a total Employer contribution rate of 18.3% of Pensionable Salary.

In practice, Employer contributions remained at 14.1% of Pensionable Salary throughout the intervaluation period. The additional contributions paid in respect of and by members of the special benefits groups have remained unchanged since the previous valuation, other than in relation to the CARE benefits introduced as part of the benefit changes.

6.1.2 GEL Actuarial Account

The previous valuation showed that the GEL Actuarial Account had a **surplus** of £3,365,000 as at 31 December 2013.

The rate of Employer contributions in respect of this section was 14.9% of Pensionable Salary in respect of future service accrual. However, this rate was reduced by 3.4% of Pensionable Salary in order to spread the **surplus** over the average future working lifetime of the active members.

Therefore the rate of contributions paid into the GEL Actuarial Account decreased from 14.6% to 11.5% of Pensionable Salary with effect from 1 April 2015.

6.2 Benefit changes

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

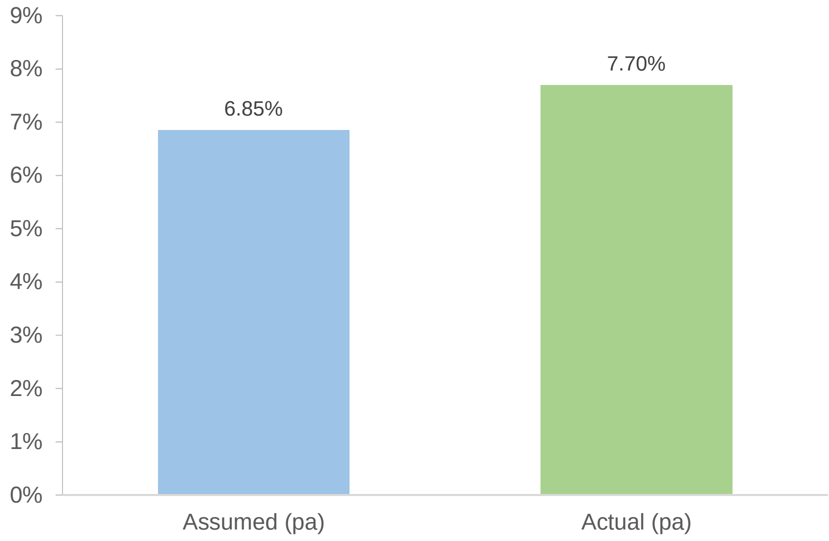
In addition, as discussed in sections 2.3 and 2.4, the GFSC and GPL Actuarial Accounts have been closed and the assets and liabilities have been transferred to the Combined Pool section.

6.3 Financial development

A variety of factors affect the financial position of the Fund, including investment returns, pension increases and 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:

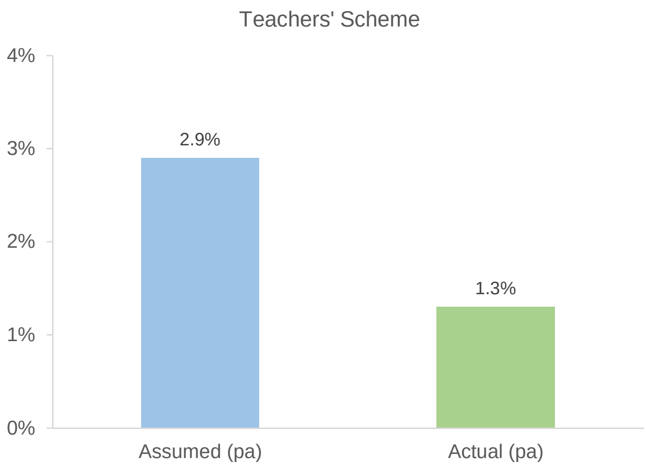
- the investment return achieved on the Fund's assets with the **discount rate** used to calculate the Fund's **funding target** for the previous valuation;
- the assumptions made at the previous valuation for pension and pay increases with the increases actually awarded;
- the market derived implied inflation at the previous valuation with the market derived implied inflation at this valuation (used to set the **discount rate**).

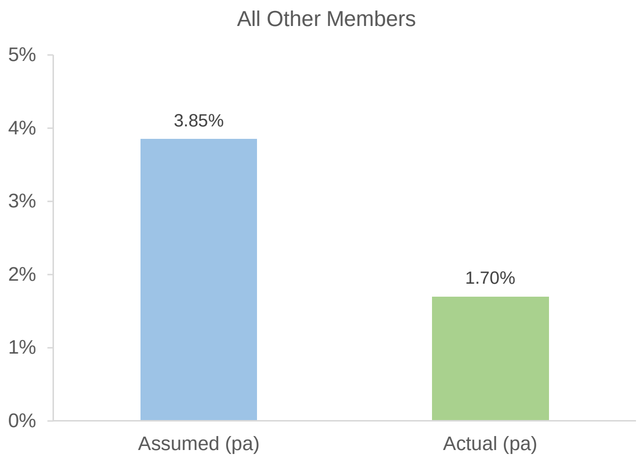
6.3.1 Investment return achieved compared with discount rate used



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

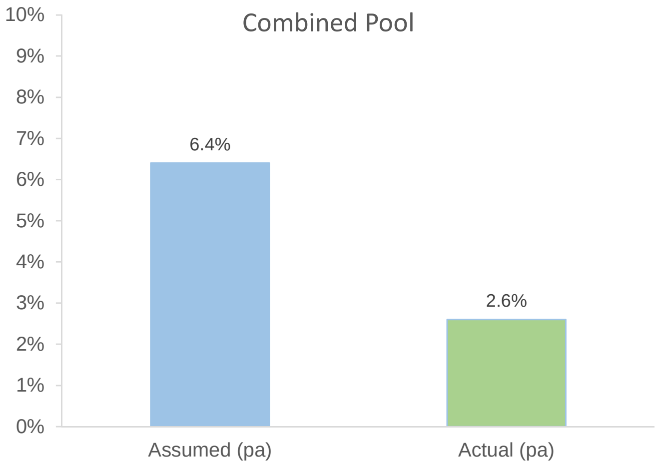
6.3.2 Pension increase experience

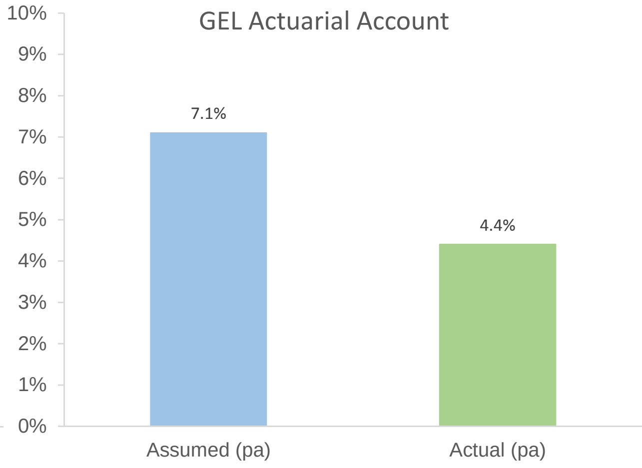




Average pension increases during the intervaluation period have been significantly lower than expected for both the Teachers' Scheme and all other members.

6.3.3 Pay increase comparison

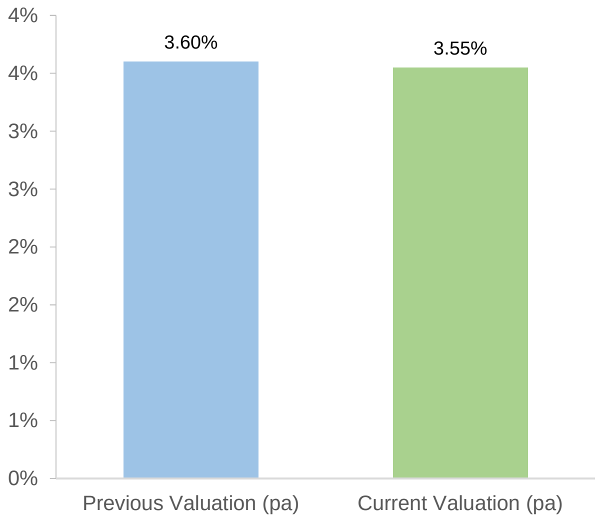




Average pay increases over the intervaluation period have generally been lower than expected.

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

6.3.4 Comparison of inflation rates

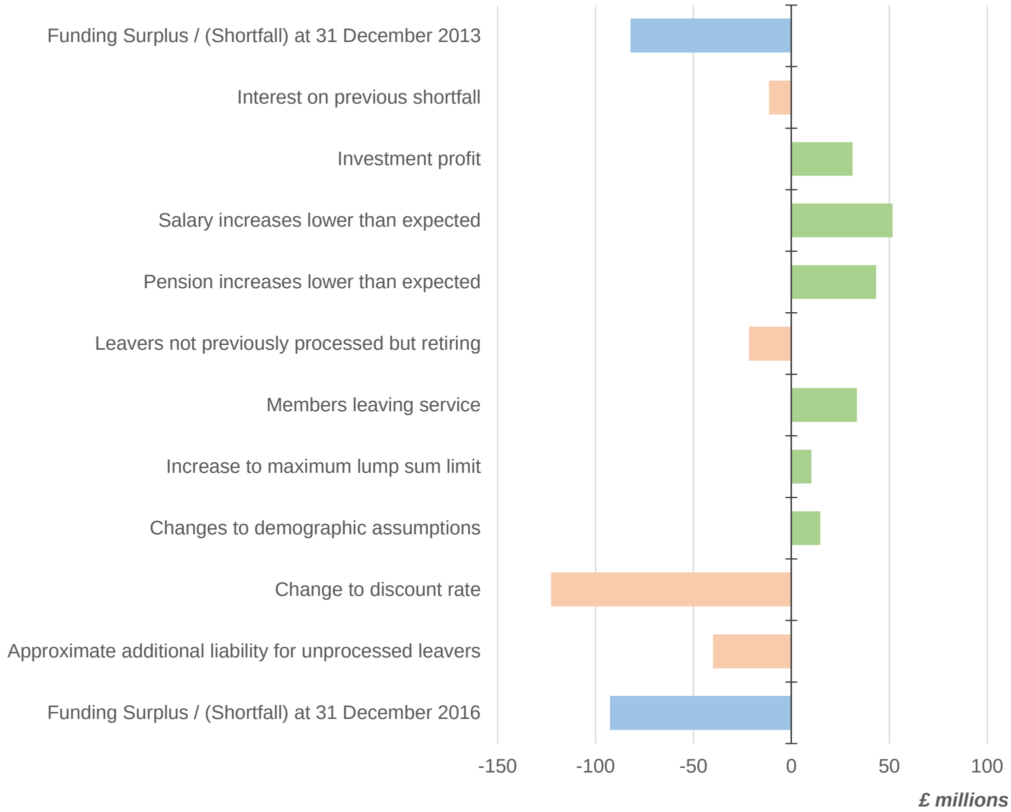


The market derived implied UK inflation at this valuation is broadly unchanged from the market derived implied UK inflation at the previous valuation.

6.4 Change in funding position

6.4.1 Combined Pool section

At the previous valuation the Combined Pool section had a **shortfall** of £82,109,000 on the 100% **funding target** basis. The funding position has therefore worsened by £10,542,000 since the previous valuation. We have analysed the reasons for the change and indicated the impact of each factor in the chart below.



The past service position has deteriorated mainly as a result of the reduction to the outperformance premium included in the **discount rate**, which has increased the value placed on the liabilities.

In addition, there is a funding strain of £40m due to the change in approach for valuing members who have previously left service but whose benefits have not yet been processed. As noted in section 2.6, we have included a very approximate additional funding reserve of £40m for the 2016 valuation, which is an estimate of the value of preserved benefits within the Fund in excess of the value of member contributions for those members.

There was also a funding strain of £22m due to unprocessed leavers reaching retirement age and retiring rather than taking a refund of their contributions.

These funding strains have been mostly offset by a combination of the following key sources of experience profit:

- higher investment returns than expected over the intervaluation period
- lower increases to salaries and pensions than expected, due to the lower inflation experienced over the intervaluation period
- more members than expected leaving pensionable service during the intervaluation period.

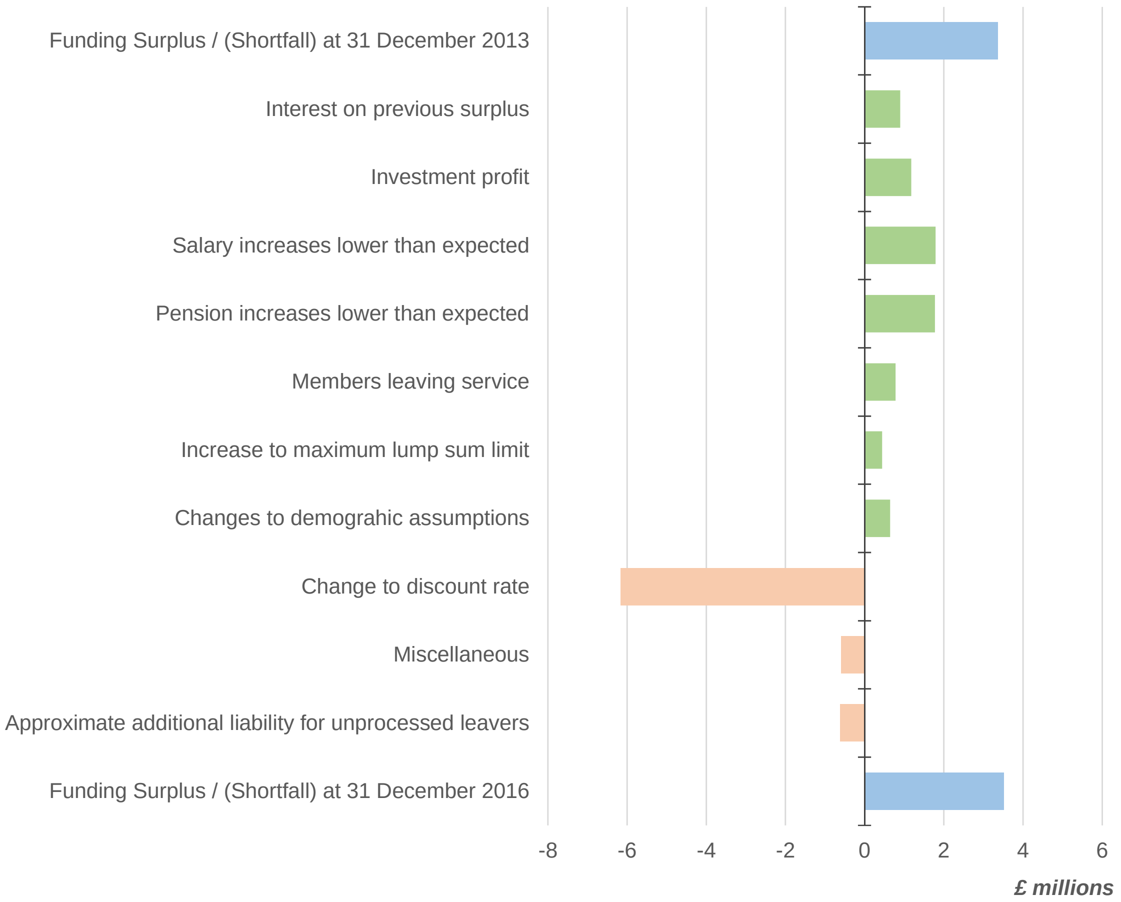
6. Experience since the previous valuation (continued)

The transfer of the assets and liabilities from the GPL and GFSC Actuarial Accounts into the Combined Pool section were carried out using a valuation of the liabilities on a **discount rate** of UK RPI + 2.5% pa. Therefore, there is no funding strain in respect of these transfers, as a result of moving to a **discount rate** of UK RPI + 2.5% pa for funding the Combined Pool section.

In addition to the change in funding position, the funding risk on the 2016 proposed assumptions is lower than for the 2013 assumptions, as a lower **discount rate** has been used and so a lower investment return is required to be achieved in order to meet the **funding target**.

6.4.2 GEL Actuarial Account

At the previous valuation the GEL Actuarial Account had a **surplus** of £3,365,000. The funding position has therefore improved by £143,000 since the previous valuation. We have analysed the reasons for the change and indicated the impact of each factor in the chart below.



The main reasons for the improvement in the past service position were:

- actual levels of pay and pension increases granted since the previous valuation being lower than assumed, due to inflation being lower than expected.
- investment returns being higher than assumed at the previous valuation.

Some of these sources of experience profit have been offset by the reduction in the outperformance premium included in the **discount rate** which has increased the value placed on the liabilities.

7. Summary and conclusions

7.1 Summary of results

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

	Combined Pool	GEL Actuarial Account
Surplus/(shortfall)	(92,651,000)	3,508,000
Funding level (%)	93.0	106.1
Overall future service contribution rate	12.6%	11.8%
split as follows:		
Final Salary section	20.9%	19.0%
CARE section	10.2%	9.8%

The different sections of the Fund contain different benefit structures and age profiles and so the contribution rates that apply specifically to a section will be different and will change over time as the age profile changes. Generally, significantly higher contribution rates apply to higher ages than to lower ages. As the Final Salary section is made up of older protected members, the rate applying to that section is significantly higher.

There is a cost floor and ceiling that applies to the overall Employer future service contribution rate (see section 3.4 for more details). This will be used to assess the overall cost of pension provision for the entire membership of the Combined Pool and not just the cost applying to a group of members (eg Final Salary or CARE sections). If the floor and ceiling had applied at this valuation then the overall cost would be above the floor and below the ceiling and no changes to future accrual or contributions would be required.

The **surplus/shortfall** amounts shown above have been assumed to relate to the Final Salary sections of the Fund. As the CARE section has been in force for a short period of time (CARE Transition Members since 1 March 2016 and CARE New Members since 1 May 2015) and the contributions paid into the CARE section have been sufficient to cover the cost of benefits accruing, this is a reasonable assumption at this time.

7.2 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 to 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 been estimated to have returned approximately 11% from the valuation date to 31 December 2017, 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 as at 31 December 2019.

7.3 Contributions – Combined Pool

The Combined Pool section includes the Public Servants' Pension Scheme and the Teachers' Scheme and all the assets and liabilities transferred from the GPL Actuarial Account. In addition, we understand that the assets and liabilities from the Guernsey Financial Services Commission (GFSC) Actuarial Account were transferred to the Combined Pool with effect from 30 April 2017. We have allowed for this post valuation event within our valuation results, and have therefore included the GFSC Actuarial Account's assets and liabilities within the results for the Combined Pool section.

The current rate of Employer contributions being paid is an overall rate of 14.1% of Pensionable Salary. This rate could continue unchanged and comprise an overall rate of 12.6% of Pensionable Salary for all active members to cover the cost of future accrual of benefits (split 20.9% for Final Salary members paid into the Final Salary section and 10.2% for CARE members paid into the CARE section) and 1.5% of Pensionable Salary for all active members paid into the Final Salary section to reduce the **shortfall** of the Final Salary section revealed at 31 December 2016. Under this approach and assuming the assumptions are borne out in practice, we would expect the **shortfall** of the Final Salary section to be eliminated in around 34 years from the valuation date.

If allowance were made for the spreading of the **shortfall** of the Final Salary section over the average future working lifetime of all current active members, a period of 15 years, the contribution rate required would be 3.3% of Pensionable Salary for all active members, resulting in a total overall contribution rate from the Employer of 15.9% of Pensionable Salary. Alternatively fixed contributions could be paid over an agreed number of years to eliminate the **shortfall** of the Final Salary section.

Additional contributions are required in respect of the special benefit groups.

7.4 Contributions – GEL

GEL is currently paying contributions of 11.5% of Pensionable Salary. GEL could use some of the **surplus** in the Final Salary section to continue paying 11.5% of Pensionable Salary for Final Salary members. This is not expected to use up a material amount of the **surplus** in the Final Salary section over the future average working lifetime of the current Final Salary active members, a period of 5 years. The remaining **surplus** could be maintained as a prudent margin to help cover any adverse experience within the Final Salary section.

A contribution rate of 9.8% of Pensionable Salary for CARE members is required to be paid into the CARE section.

7.5 Monitoring the Fund

The next formal valuation is due to take place as at 31 December 2019 when the contribution levels will be reviewed. Funding updates are produced on an annual basis.

7. Summary and conclusions (continued)

Signed for BWCI Consulting Limited

Andrew Mountford, FIA

Diana Simon, FIA

Appendix A Legal and actuarial framework

Overview

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

Rule 18 of the Fund's Rules requires the Policy & Resources Committee to obtain regular actuarial valuations of the Fund.

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 dated 13 April 2004 between BWCI Consulting Limited and the States of Guernsey and is solely for the benefit of the addressee.

This report is confidential. It should be considered in its entirety as parts taken in isolation could be misleading. Unless express prior written consent has been given by BWCI Consulting Limited, this report should not be disclosed to or discussed with anyone else unless they have a statutory right to see it. Any third party recipient who does not have a statutory right to see it will be required to sign a specific undertaking to BWCI Consulting Limited before consent can be given.

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

Professional guidance requirements

In our view, this paper complies with "Technical Actuarial Standard 100: Principles for Technical Actuarial Work" ("TAS 100"). This is on the basis that:

- this paper is read in conjunction with our preliminary results paper dated 17 August 2017; and our Assumptions paper on the actuarial valuation as at 31 December 2016
- the Policy & Resources Committee of the States of Guernsey is the addressee and sole user of this advice.

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.

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.

Active members at 31 December 2016

		Number Of Cases	Total Pay (£ pa)
Combined Pool	**Men**	1,955	79,608,659
	Women	2,952	102,359,621
GEL	**Men**	158	6,446,931
	Women	23	921,064
Total	**Men**	**2,113**	**86,055,590**
	Women	**2,975**	**103,280,685**

Deferred pensioners at 31 December 2016

		Number Of Cases	Amount of deferred pension (£ pa)
Combined Pool	**Men**	304	2,125,166
	Women	312	1,479,644
GEL	**Men**	8	60,799
	Women	2	8,660
Total	**Men**	**312**	**2,185,965**
	Women	**314**	**1,488,304**

Notes: *Deferred pension amounts include revaluations up to the valuation date.*

There were also 1,328 former members at the valuation date whose 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.

Pensioners at 31 December 2016

		Number of cases	Amount of pension (£ pa)
Combined Pool	**Men**	1,815	26,562,115
	Women	1,599	13,833,125
	Widowers	69	261,288
	Widows	475	3,040,195
GEL	**Men**	105	1,369,680
	Women	13	104,330
	Widows	12	93,566
Total	**Men**	**1,920**	**27,931,795**
	Women	**1,612**	**13,937,455**
	Widowers	**69**	**261,288**
	Widows	**487**	**3,133,761**

Note: This excludes children's pensions

Appendix D Assumptions for funding target

A comparison of the assumptions adopted for the 2013 valuation and the 2016 valuation is set out below:

	2013 valuation	2016 valuation
Financial assumptions		
Discount rate	6.85% pa (UK inflation + 3.25% pa)	6.05% pa (UK inflation + 2.5% pa)
UK Inflation	3.6% pa	3.55% pa
Guernsey inflation	3.85% pa	3.8% pa
Salary increases in addition to a promotion scale	4.35% pa	4.3% pa
CARE revaluation	N/A	3.8% pa
Deferred pension increases	3.85% pa	3.8% pa
Pension increases		
Teachers	2.9% pa	2.85% pa
Public Servants	3.85% pa	3.8% pa
Demographic and procedural assumptions		
Mortality before retirement	AXC00	
Mortality in retirement		
- **Base table**	S2 tables Light: female teachers, GFSC Middle: male teachers All: all other members (including dependants)	S2 tables Light: teachers, GFSC All: all other members (including dependants)
- **Improvement factors**	CMI_2013	CMI_2016
- **Long term rate**	1.5% pa	
- **Scaling factors**	Female teachers 80% Dependants 95% Males non teachers (excluding GFSC) 110% All other members 100%	Female teachers 80% Dependants 95% All other members 100%
Retirement		
Age of retirement	Age-related scales	Updated age-related scales
Proportion of ill health retirements due to total incapacity	80%	100%
Withdrawals	Age related scales 75% of Public Servants take a refund 75% of GEL take a refund	Age related scales 70% of Public Servants take a refund 65% of GEL take a refund

	2013 valuation	2016 valuation
	50% of Teachers take a refund 75% of Police/Fire take a refund	35% of Teachers take a refund 55% of Police/Fire take a refund
Family statistics	85% males/75% females married at retirement or earlier death Males three years older than spouses	
Commutation		
Final Salary	75% of the maximum lump sum	75% of the maximum lump sum
CARE	N/A	15% of pension
Expenses	0.25%	0.25%

Death benefits

There are no separate insurance arrangements for the Fund. The cost of providing death benefits from the Fund is included in the contribution rates payable.

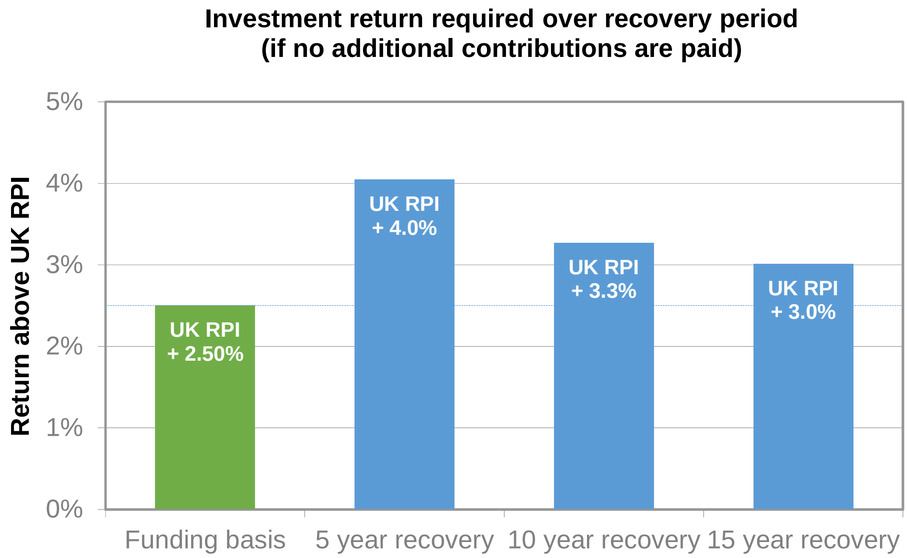
Appendix E Key risks and sensitivity analysis

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 considers some of the key risks faced by the Fund.

Key risks	
Funding approach	If no additional contributions are made to remove the **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 ensuring 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.

Funding approach risk

If no additional contributions are paid to eliminate the **shortfall** of the Combined Pool section of the Fund then additional investment returns would be required (in excess of the discount rate). The following chart illustrates the investment return required over 5, 10 or 15 year recovery periods to meet the **shortfall**.



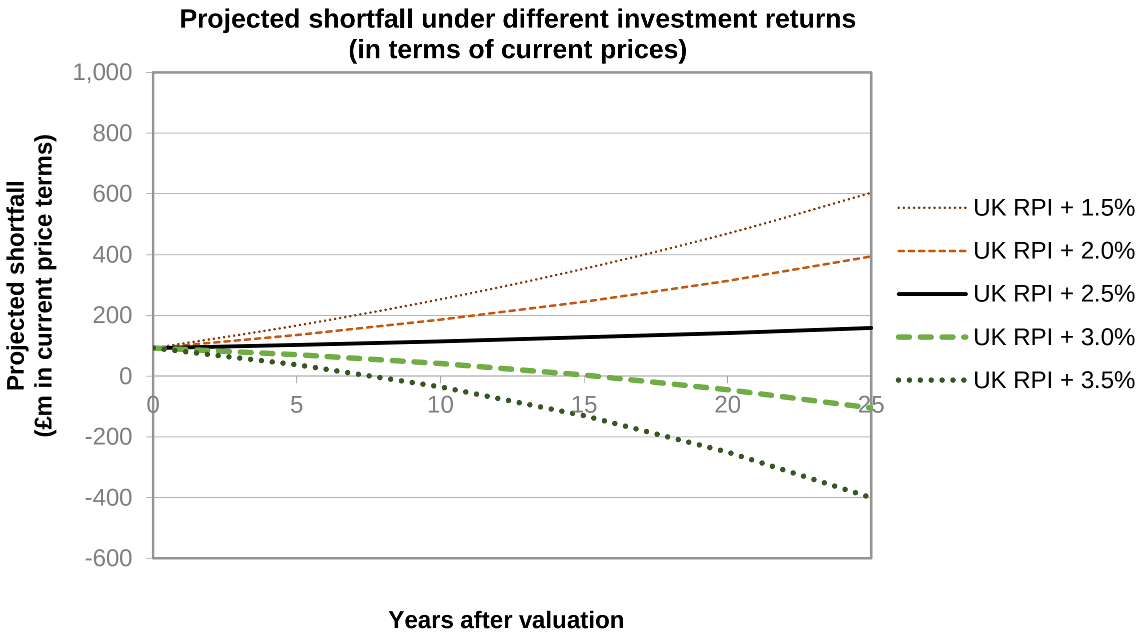
Investment risk

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 a combination of index-linked gilts and derivative instruments to match inflation-linked liabilities and fixed-interest gilts and/or investment grade corporate bonds to match the fixed liabilities.

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 gilts 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 risk 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 is, 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 **shortfall** of the Combined Pool section of the Fund in terms of current prices, under different investment returns, highlighting how the **shortfall** increases if investments underperform. It assumes no additional contributions are paid to meet the **shortfall**. It should be noted that if the experience of the Fund is as expected in all respects and no **shortfall** payments are made, the amount of the **shortfall** will increase over time. If asset return only matches liability growth, the **shortfall** will grow in real terms (ie after adjusting for inflation).



Impact of adverse risks

It is important for the Policy & Resources Committee to understand the situations in which **shortfalls** could arise, to form a view on the willingness and ability of the States 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 considered the valuation results on a range of bases and the results are considered below.

Risk factors

In order to illustrate the sensitivity of the funding position, we have investigated the following risk factors on the **funding target** basis:

Net **discount rate**: this is the effect of lower than expected investment returns or a potential change to the **discount rate** net of inflation. This could arise if there were a change in the expectations of future investment returns above inflation.

Guernsey inflation: this is the effect of Guernsey inflation exceeding UK inflation by a different level than expected over the long term.

Pay increases: this is the effect of pay increases exceeding Guernsey inflation by a different level than expected over the long term.

Life expectancy: this is the effect of a potential change in life expectancies, which is likely to arise due to new information becoming available eg new mortality tables being published. While in theory this may not result in a step change (since it will emerge over time), in practice the impact will appear immediately as a result of changing the relevant assumption.

Retirement age: this is the effect of all Final Salary section Existing Members retiring at their Normal Retirement Dates ie at age 50 for Police/Fire and at age 60 for all other groups. The assumption in the valuation is that Police/Fire members will retire between ages 50 and 55 and that members in other groups will retire between ages 60 and 65.

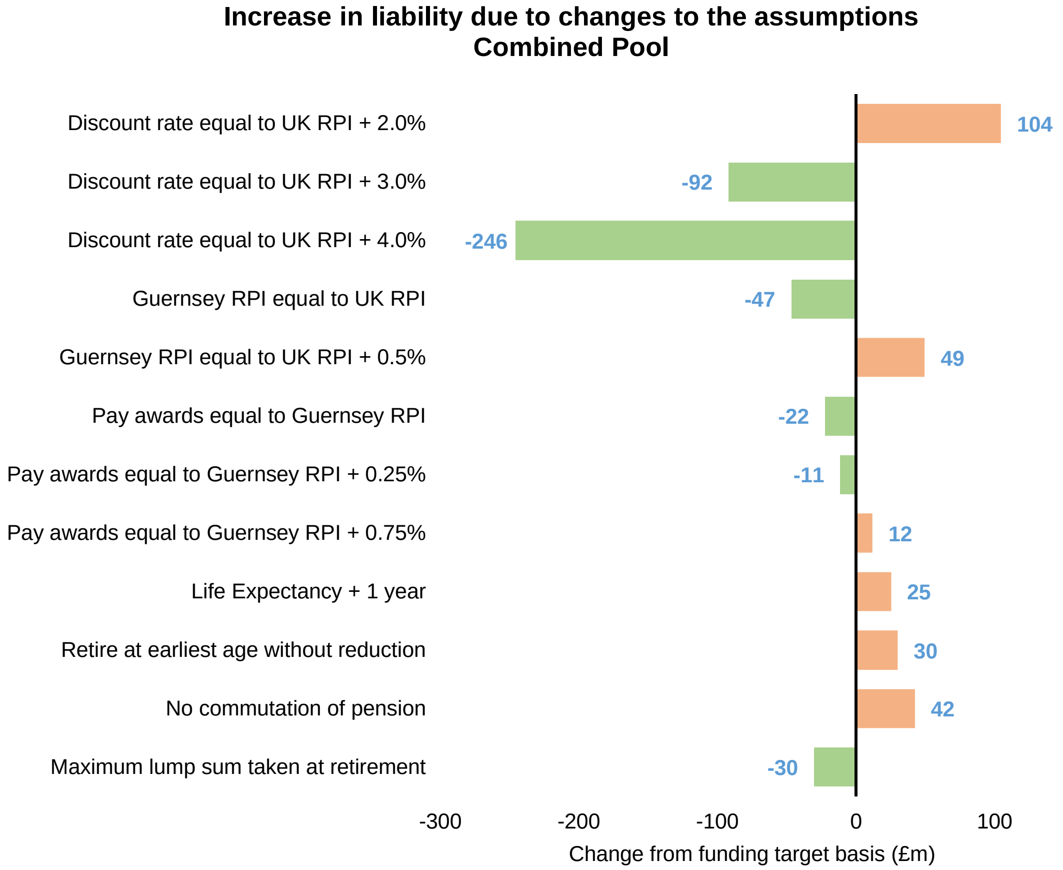
Commutation: this is the effect of members commuting their pensions to receive a different lump sum than expected over the long term. The assumption in the valuation is that members will choose to receive 75% of the maximum lump sum on retirement from the Final Salary section and will commute 15% of their CARE pension.

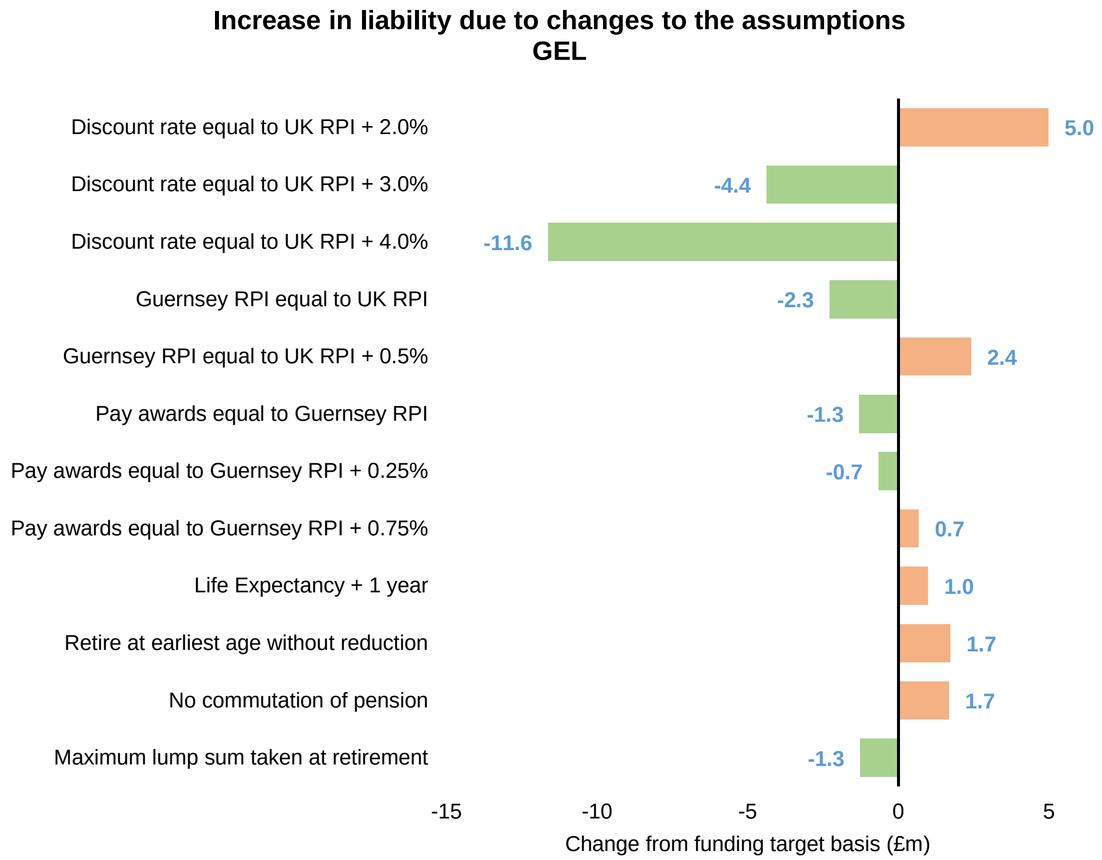
Risk modelling

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 assumption adopted for the valuation, with all other assumptions unchanged.

1. the **discount rate** is set as UK inflation plus 2.0% pa (ie 0.5% pa lower)
2. the **discount rate** is set as UK inflation plus 3% pa (ie 0.5% pa higher)
3. the **discount rate** is set as UK inflation plus 4% pa (ie 1.5% pa higher)
4. Guernsey inflation is set equal to UK inflation (ie 0.25% pa lower)
5. Guernsey inflation is set equal to UK inflation plus 0.5% pa (ie 0.25% pa higher)
6. general pay increases are set equal to Guernsey inflation (ie 0.5% pa lower)
7. general pay increases are set equal to Guernsey inflation plus 0.25% pa (ie 0.25% pa lower)
8. general pay increases are set equal to Guernsey inflation plus 0.75% pa (ie 0.25% pa higher)
9. life expectancy from age 65 for current and future pensioners is one year higher
10. 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.
11. members do not exchange any part of their pension to receive an additional lump sum on retirement
12. members exchange their pension to receive the maximum lump sum available on retirement


Increase in liability due to changes to the assumptions
Combined Pool
Discount rate equal to UK RPI + 2.0%
Discount rate equal to UK RPI + 3.0%
Discount rate equal to UK RPI + 4.0%
Guernsey RPI equal to UK RPI
Guernsey RPI equal to UK RPI + 0.5%
Pay awards equal to Guernsey RPI
Pay awards equal to Guernsey RPI + 0.25%
Pay awards equal to Guernsey RPI + 0.75%
Life Expectancy + 1 year
Retire at earliest age without reduction
No commutation of pension
Maximum lump sum taken at retirement
104
-92
-246
-47
49
-22
-11
12
25
30
42
-30
-300
-200
-100
0
100
Change from funding target basis (£m)


Increase in liability due to changes to the assumptions
GEL
Discount rate equal to UK RPI + 2.0%
Discount rate equal to UK RPI + 3.0%
Discount rate equal to UK RPI + 4.0%
Guernsey RPI equal to UK RPI
Guernsey RPI equal to UK RPI + 0.5%
Pay awards equal to Guernsey RPI
Pay awards equal to Guernsey RPI + 0.25%
Pay awards equal to Guernsey RPI + 0.75%
Life Expectancy + 1 year
Retire at earliest age without reduction
No commutation of pension
Maximum lump sum taken at retirement
5.0
-4.4
-11.6
-2.3
2.4
-1.3
-0.7
0.7
1.0
1.7
1.7
-1.3
-15
-10
-5
0
5
Change from funding target basis (£m)

Comments

These results show that the funding level is very sensitive to future investment market changes. Reduced expectations of future investment returns could lead to an increase in the Fund's **shortfall** and an increase to the contributions required.

The primary reason for the possible 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.

The results also show that, like many pension schemes, the Fund is susceptible to variations in future mortality experience. In addition, the results show that the Fund is also susceptible to the increases in salaries and pensions and to the choices members make regarding their retirement, such as when the member retires and whether they will exchange pension for a cash lump sum.

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

Appendix F 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 groups	Employer additional 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%
Police – entrants after 31.12.07	+6%
Fire – entrants after 31.12.07	+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 1.1.04	+6.7%
CARE Members	
Police and Firefighters	+4.5%

Actuarial valuation as at 31 December 2016

We have carried out an actuarial valuation of the States Members' Pension Fund as at 31 December 2016.

The valuation has been carried out using the same assumptions as the Superannuation Fund valuation which are summarised in Appendix D. The results are based on the membership data supplied to us by the Policy & Resources Committee as at 31 December 2016.

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

Developments since the previous valuation

Since the previous valuation date there have been capital payments into the States Members' Pension Fund amounting to £368,000 (£69,000 in 2014, £149,000 in 2015 and £150,000 in 2016).

Shortfall

The funding objective is to bring the assets of the Fund into line with the **funding target**. We have therefore compared the market value of the assets of the States Members' Pension Fund with the **funding target** as at the valuation date. The results below include both the Old and New States Members' Pension Funds. The result of this comparison is as follows:

	£'000	£'000
Value of past service ongoing liabilities:		
Deferred pensioners	1,529	
Pensioners and dependants	3,919	
Funding target		5,448
Market value of the assets		3,955
Surplus/(shortfall)		(1,493)
Funding level		72.6%

The States Members' Pension Fund has a **shortfall** of £1,493,000 relative to the **funding target** of £5,448,000 and a **funding level** of 72.6%.

Change in funding position

At the previous valuation the States Members' Pension Fund had a **shortfall** of £1,819,000. The funding position has therefore improved by £326,000 since the previous valuation. This is mainly due to the capital payments into the Fund and the increases to pension rates being lower than expected. This has been partly offset by the reduction in the outperformance premium included in the **discount rate** which has increased the value placed on the liabilities.

Allowance for funding 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. If contributions continue at their current level of £150,000 per annum, the **shortfall** is expected to be eliminated over 15 years from the valuation date (ie by 31 December 2031). At the 2013 valuation, contributions of £149,000 per annum were expected to eliminate the **shortfall** over 25 years.

Appendix II

Special Benefit Groups	**Employer additional 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%