BWCI Consulting Limited

# STATES OF GUERNSEY SUPERANNUATION FUND

## Actuarial Valuation as at 31 December 2013

*Prepared for*

The States of Guernsey Treasury and Resources Department

*Prepared by*

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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 2013. 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.

In summary:

## Targeted funding levels

- Benefits accrued to 31 December 2007 in the Combined Pool Section have a target funding level at the valuation date (ie 31 December 2013) of 90%. Benefits accrued on or after 1 January 2008 have a target funding level of 100%. The benefits in the Actuarial Accounts have a target funding level of 100%.

## Current funding positions

- At the valuation date, the assets exceeded the target funding liabilities by £492,000 in respect of the Combined Pool Section. A **funding surplus** of £4,859,000 is revealed in respect of Guernsey Post Limited, corresponding to a **funding ratio** of 115.9%. A **funding surplus** of £3,365,000 is revealed in respect of Guernsey Electricity Limited, corresponding to a **funding ratio** of 107.2%. A **funding surplus** of £315,000 is revealed in respect of the Guernsey Financial Services Commission, corresponding to a **funding ratio** of 101.8%.

## Combined Pool Section

- The Combined Pool Section includes the Teachers' Scheme. The current rate of Employer contributions is 14.1% of Pensionable Pay.
- The long-term rate of Employer contributions required to be paid in the Combined Pool Section to cover the cost of benefits accruing in respect of future service amounts to 14.2% of Pensionable Pay. This rate includes an allowance of 0.25% of Pensionable Pay to meet the expenses of the Fund.
- If the target **funding level** in the Combined Pool Section was 100% for all accrued benefits there would be a **funding shortfall** of £82,109,000 corresponding to a **funding ratio** of 92.2%. If allowance were made for the spreading of this **funding shortfall** over the average future working lifetime of the current active members, a period of 12 years, the rate of contributions required would be increased by 4.1% of Pensionable Pay. The total rate of Employer contributions required would then be 18.3% of Pensionable Pay.
- We recommend that the additional contribution rates in respect of the special benefit groups are maintained. Full details are set out in Section 7.

# Executive Summary

## Guernsey Post Limited

- We have calculated that the long-term rate of Employer contributions to cover the cost of benefits accruing in respect of future service in the Guernsey Post Limited Actuarial Account amounts to 15.2% of Pensionable Pay. This rate includes an allowance of 0.25% of Pensionable Pay to meet the expenses of the Fund.
- If allowance were made for the spreading of the ongoing **funding surplus** in respect of Guernsey Post Limited over the average future working lifetime of the current active members, a period of 13 years, the rate of contributions required could be reduced by 5.8% of Pensionable Pay. The total rate of Employer contributions to be paid following the valuation could be 9.4% of Pensionable Pay.

## Guernsey Electricity Limited

- We have calculated that the long-term rate of Employer contributions to be paid to cover the cost of benefits accruing in respect of future service in the Guernsey Electricity Limited Actuarial Account amounts to 14.9% of Pensionable Pay. This rate includes an allowance of 0.25% of Pensionable Pay to meet the expenses of the Fund.
- If allowance were made for the spreading of the ongoing **funding surplus** in respect of Guernsey Electricity Limited over the average future working lifetime of the current active members, a period of 13 years, the rate of contributions required could be reduced by 3.4% of Pensionable Pay. The total rate of Employer contributions to be paid following the valuation could be 11.5% of Pensionable Pay.

## Guernsey Financial Services Commission

- We understand that following the GFSC's consultation with members, all active members have become deferred members from 1 July 2014. We have allowed for this post valuation event within the actuarial valuation calculations. We have allowed in our calculations for 6 months of expected Employer and member contributions together with further accrual of benefits (to 30 June 2014) and from that date for all active members to become deferred members ie the salary linkage to their accrued benefits has been removed from that date.
- Treasury and Resources will decide the basis of the charges to cover future administration expenses of the GFSC Actuarial Account. We suggest the **funding surplus** is utilised to pay the expenses of administration over the period until the next actuarial valuation.

## General

- Any changes to the contribution rates for Guernsey Post Limited and Guernsey Electricity Limited could be implemented from 1 April 2015.
- The rates of contributions payable will be reviewed at the next valuation which is due to be made as at 31 December 2016.
- The two pension arrangements for States Members are combined with the States of Guernsey Superannuation Fund for investment purposes. A valuation of the States Members Pension Fund has been made as at 31 December 2013. A summary of the results of that valuation are included as Appendix G.

# Contents



## Limitations on extent to which 3rd parties can rely on advice

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## Compliance statement

This report falls outside the scope of the Technical Actuarial Standards (TASs) issued by the Financial Reporting Council and therefore the TASs do not apply. This report forms part of a planning exercise that helps to determine the level of contributions to be paid to the Fund. It should be read in conjunction with our Assumptions report issued in March 2014 and our report on the preliminary results dated 2 June 2014.

# 1. Introduction

## 1.1 Regular valuations

This report, prepared for the Treasury and Resources Department of the States of Guernsey, sets out the results of our actuarial valuation of the States of Guernsey Superannuation Fund ("the Fund") as at 31 December 2013.

Rule 4(1) of the Fund's Rules requires the States Treasury and Resources Department to obtain regular actuarial valuations of the Fund.

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 27 September 2011 considered the financial position of the Fund as at 31 December 2010.

## 1.2 A snapshot view

This report concentrates on the Fund's funding position at the valuation date. As time moves on, the Fund's finances will fluctuate. It will therefore be necessary to carry out further valuations to monitor the position.

In the meantime, if you are reading this report some time after it was prepared, you should bear in mind that the Fund's position could have changed significantly.

We comment briefly on developments between the valuation date and the date of signing this report in Section 12.

## 1.3 Technical terms

A glossary of the technical terms used in this report is provided in Appendix F. These technical terms are shown in **bold type.** Pensionable Pay is as defined in the Rules of the Fund.

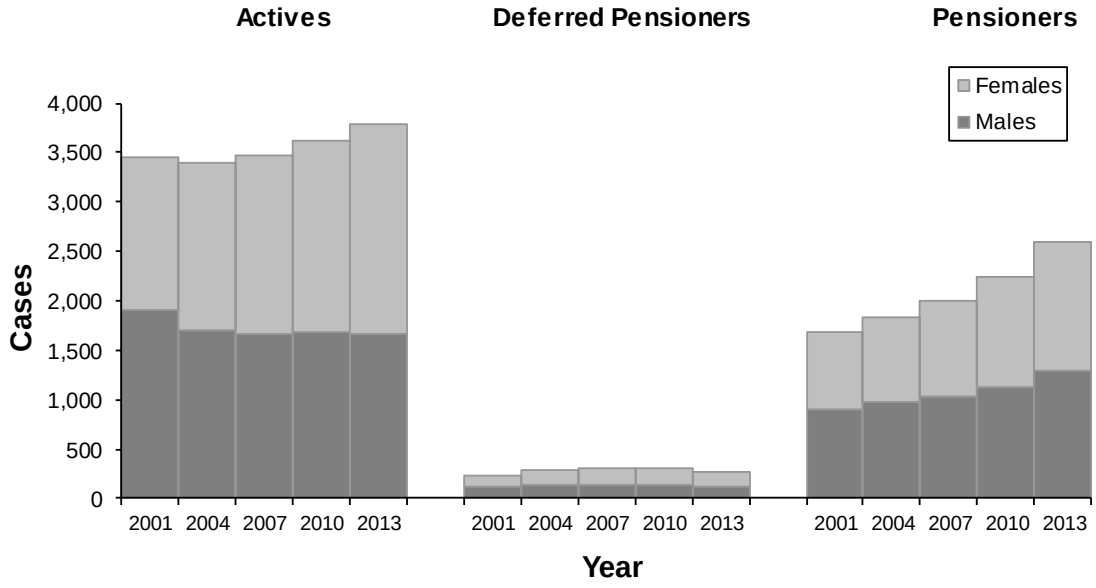
# 2. Data

## 2.1 Membership data

The valuation results are based on the membership data supplied to us by the States Payroll Section as at 31 December 2013. This is summarised in Appendix B.

## 2.2 Membership changes – Public Servants

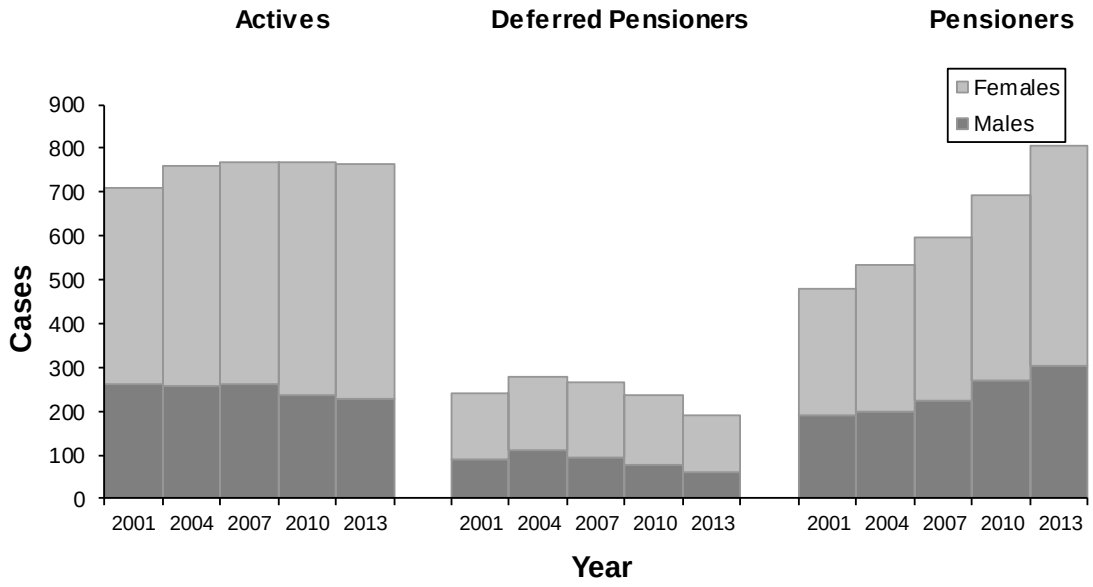
Changes in the number of members of the Public Servants' section of the Combined Pool since 31 December 2001 are illustrated below.




The Public Servants' section has experienced a rise in the number of active members, and a small decline in the number of deferred pensioners since the previous valuation. There has been a steady increase in the number of pensioners over time.

### 2.3 Membership changes – Teachers' sections

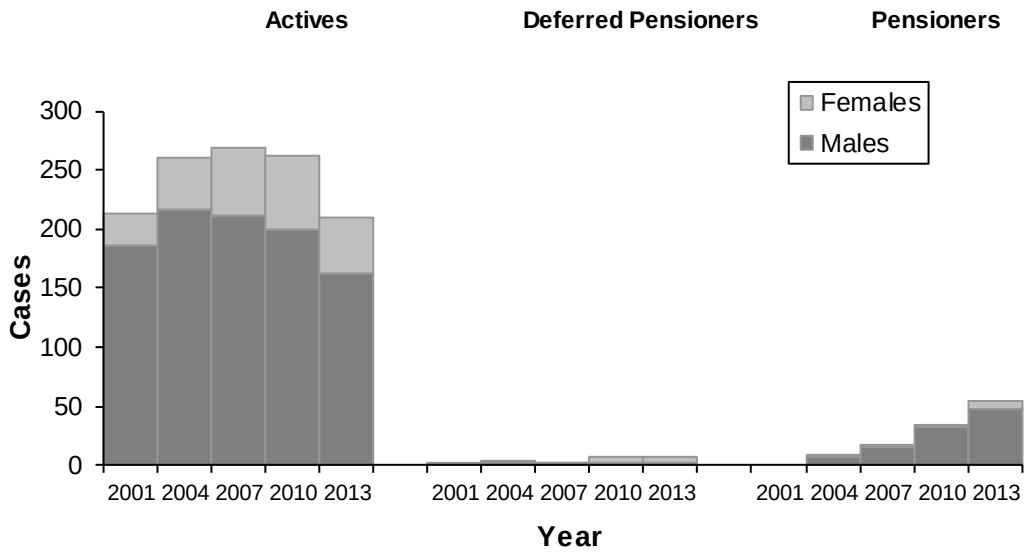
Changes in the total membership of the Teachers' Scheme and the new Teachers' section of the Combined Pool since 31 December 2001 are illustrated below.




The active membership of the combined Teachers' sections has remained stable since the previous valuation and there has been a steady increase in the number of pensioners over time. There has been a decrease in the number of deferred pensioners since the previous valuation.

### 2.4 Membership changes – Guernsey Post Limited

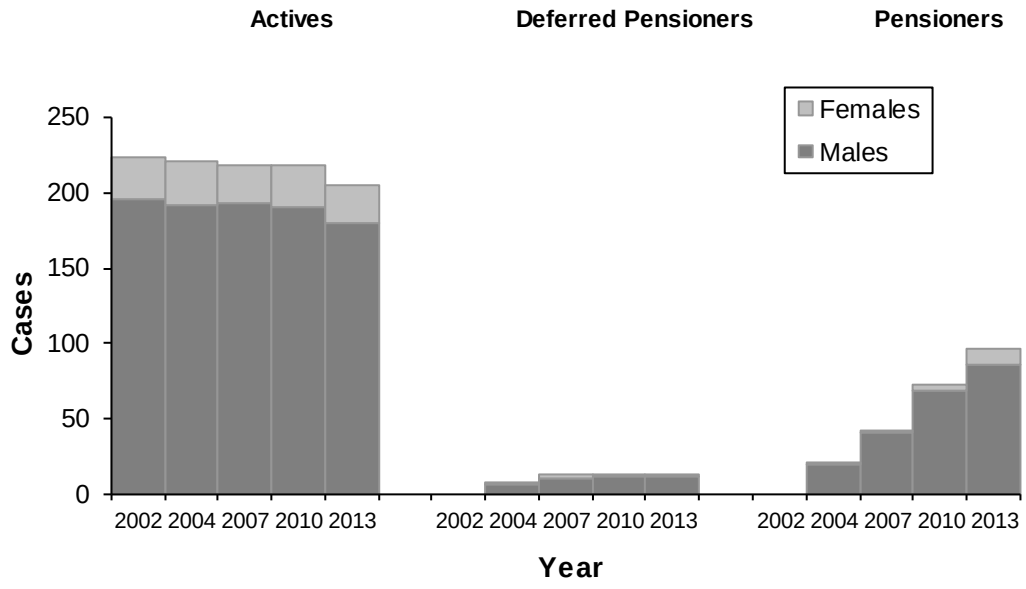
Changes in the number of members of the Guernsey Post Limited Actuarial Account since 31 December 2001 are illustrated below.




The Guernsey Post Limited Actuarial Account has experienced a fall in the number of active members and a small increase in the number of deferred pensioners since the previous valuation. There has been a steady increase in the number of pensioners over time.

### 2.5 Membership changes – Guernsey Electricity Limited

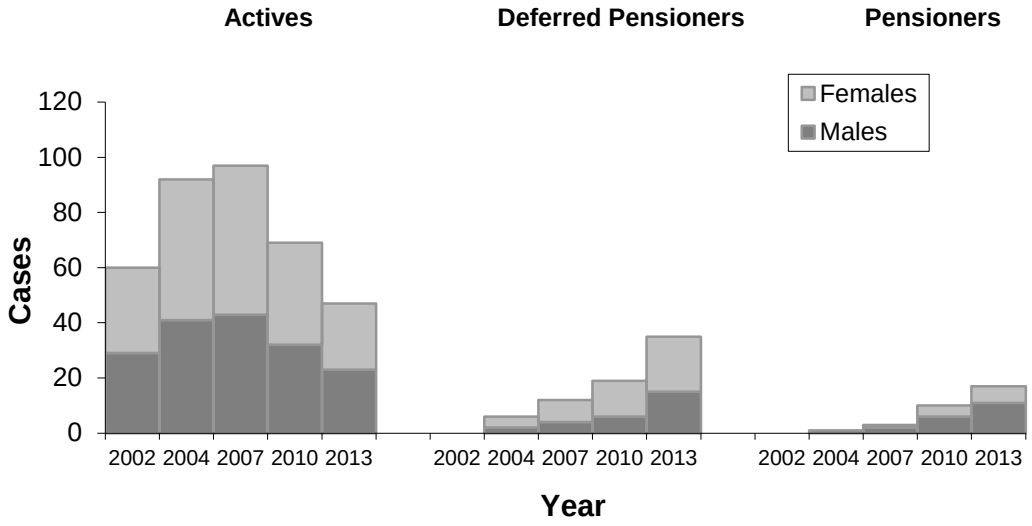
Changes in the number of members of the Guernsey Electricity Limited Actuarial Account since the Actuarial Account was established (1 February 2002) are illustrated below.




The active membership of the Guernsey Electricity Limited Account has fallen since the previous valuation. The number of deferred pensioners has remained stable. There has been a steady increase in the number of pensioners over time.

### 2.6 Membership changes – Guernsey Financial Services Commission

Changes in the number of members of the Guernsey Financial Services Commission Actuarial Account since the Actuarial Account was established (1 January 2002) are illustrated below.

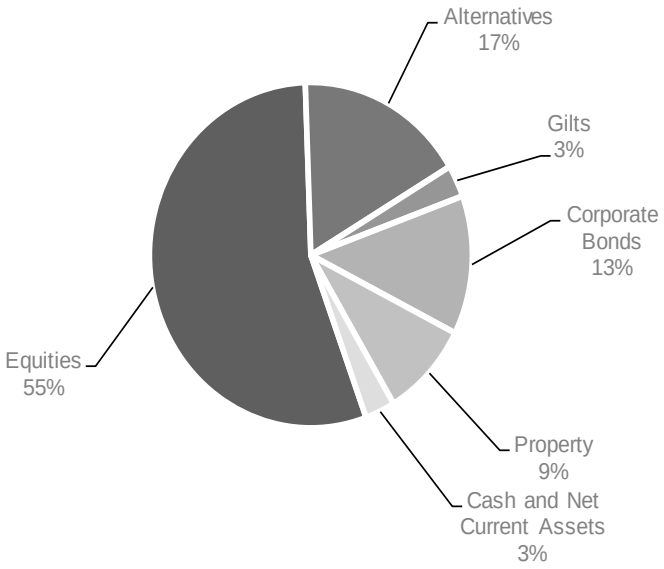


The Guernsey Financial Services Commission Actuarial Account closed to new members from 1 January 2008. Consequently the Guernsey Financial Services Commission Actuarial Account has experienced a significant fall in the number of active members. There has been an increase in the number of deferred pensioners and pensioners since the previous valuation.

From 1 July 2014, the Actuarial Account closed to future accrual of benefits and all active members became deferred pensioners on that date.

### 2.7 Assets

The Fund's audited report and accounts show that its assets had a market value of £970,123,000 in respect of the Combined Pool Section (including teachers) at the valuation date. The assets allocated to the Actuarial Accounts for Guernsey Post Limited, Guernsey Electricity Limited, and the Guernsey Financial Services Commission were £35,486,000, £49,952,000, and £17,130,000 respectively. The total assets held in respect of the Superannuation Fund, excluding the States Members' Pension Fund, amounted to £1,072,691,000 at the valuation date. These assets are analysed as follows:




A summary of the Fund's investments at the valuation date is included in Appendix C.

### 2.8 Reliability of information

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
- the results of this valuation can be reconciled with results of the previous valuation.

# 3. Benefits

## 3.1 Benefits valued

The valuation is based on the benefits defined in the Fund's legal documents at the valuation date. There are no external insurance arrangements in place to provide any of the benefits of the Fund.

## 3.2 Pension increases

The pension and deferred pension increases provided by the Fund 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 should only be recommended if certain criteria apply. The intention 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 Retail Prices Index to the preceding June. The Teachers' Scheme provides pension increases in line with the increases granted by the UK Teachers' Scheme which are now based on the UK Consumer Prices Index.

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

## 3.3 Future accrual of benefits

The Fund remains open to new members, but the benefits available to new joiners have been changed from 1 January 2008 onwards. The calculation of the contribution rate required for future service benefits assumes that the current benefit structures are unchanged.

# 4. Developments since the previous valuation

## 4.1 Previous valuation – Combined Pool Section (including teachers)

The previous valuation showed that the assets of the Combined Pool Section exceeded the target funding liabilities by £6,235,000 as at 31 December 2010. However, there was a **funding shortfall** of £77,338,000 relative to a target funding level of 100% of accrued benefits.

The rate of Employer contributions in respect of this section was 13.9% of Pensionable Pay in respect of future service accrual. This rate could have been reduced by 0.4% of Pensionable Pay in order to spread the assets in excess of the target funding liabilities over the average future working lifetime of the active members.

The actual rate of Employer contributions paid over the intervaluation period was 14.1% of Pensionable Pay.

The additional contributions paid in respect of and by members of the Special Benefits Groups have remained unchanged since the previous valuation.

## 4.2 Previous valuation – Guernsey Post Limited

The previous valuation showed that the Guernsey Post Limited Actuarial Account had a **funding surplus** of £2,702,000 as at 31 December 2010.

The rate of Employer contributions in respect of this section was 14.2% of Pensionable Pay in respect of future service accrual. This rate could have been reduced by 3.0% of Pensionable Pay in order to spread the **funding surplus** over the average future working lifetime of the active members.

The rate of contributions paid into the Guernsey Post Limited Actuarial Account decreased from 15.0% to 14.2% of Pensionable Pay with effect from 1 April 2012.

## 4.3 Previous valuation – Guernsey Electricity Limited

The previous valuation showed that the Guernsey Electricity Limited Actuarial Account had a **funding surplus** of £2,183,000 as at 31 December 2010.

The rate of Employer contributions in respect of this section was 14.6% of Pensionable Pay in respect of future service accrual. This rate could have been reduced by 2.8% of Pensionable Pay in order to spread the **funding surplus** over the average future working lifetime of the active members.

The rate of contributions paid into the Guernsey Electricity Limited Actuarial Account decreased from 17.3% to 14.6% of Pensionable Pay with effect from 1 April 2012.

## 4.4 Previous valuation – Guernsey Financial Services Commission

The previous valuation showed that the Guernsey Financial Services Commission Actuarial Account had a **funding surplus** of £1,145,000 as at 31 December 2010.

The rate of Employer contributions in respect of this section was 15.6% of Pensionable Pay in respect of future service accrual. This included the cost of insuring the death in service and ill health retirement benefits within the Combined Pool Section, which we calculated as 2.1% of Pensionable Pay. The contribution rate payable could have been reduced by 2.7% of Pensionable Pay in order to spread the **funding surplus** over the average future working lifetime of the active members.

The rate of Employer contributions paid by the Guernsey Financial Services Commission was decreased from 17.8% of Pensionable Pay to 15.6% of Pensionable Pay with effect from 1 January 2012.

## 4.5 Benefit changes

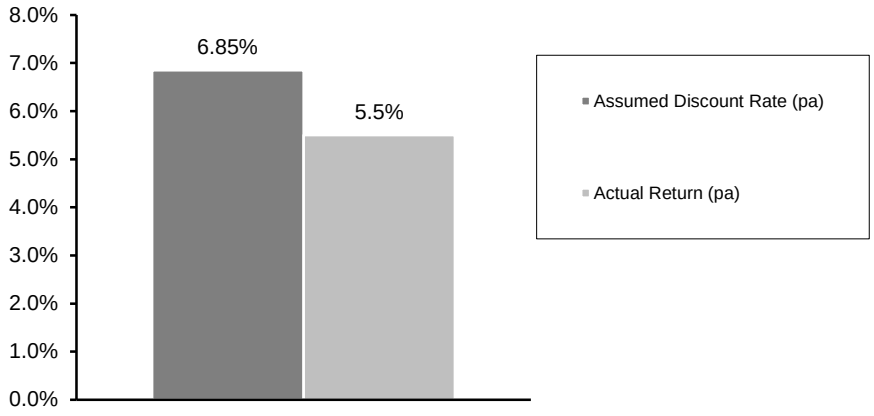
The GFSC Actuarial Account closed to future accrual of benefits with effect from 1 July 2014. We have allowed for this post valuation event within our actuarial valuation calculations. There have been no further benefit changes since the previous valuation. Our calculations consider the contribution rates required for the current benefit structure.

## 4.6 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**;
- 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**).

**Investment return achieved compared with discount rate used**



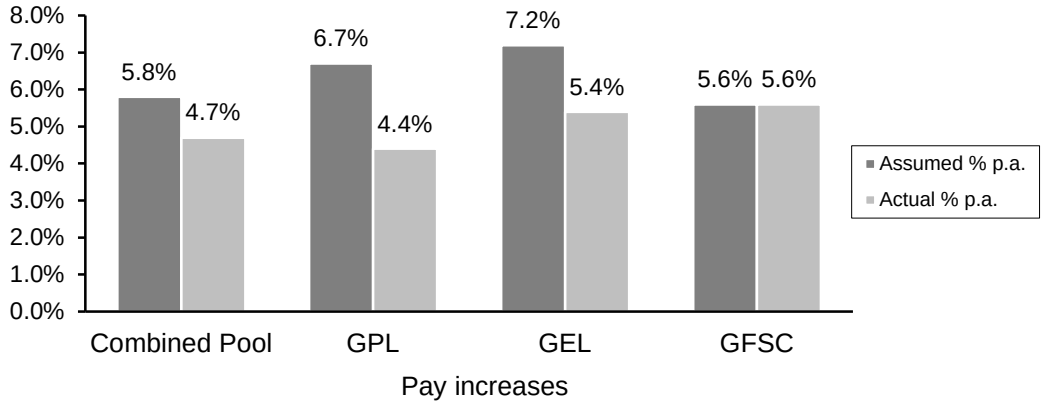
# 4. Developments since the previous valuation (continued)

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

**Pension increase comparison**


Average pension increases during the intervaluation period have been higher than expected for members of the Teachers' Scheme, and lower than expected for all other members. The pension increase for the Teachers' Scheme was based on UK CPI, rather than on Guernsey RPI.

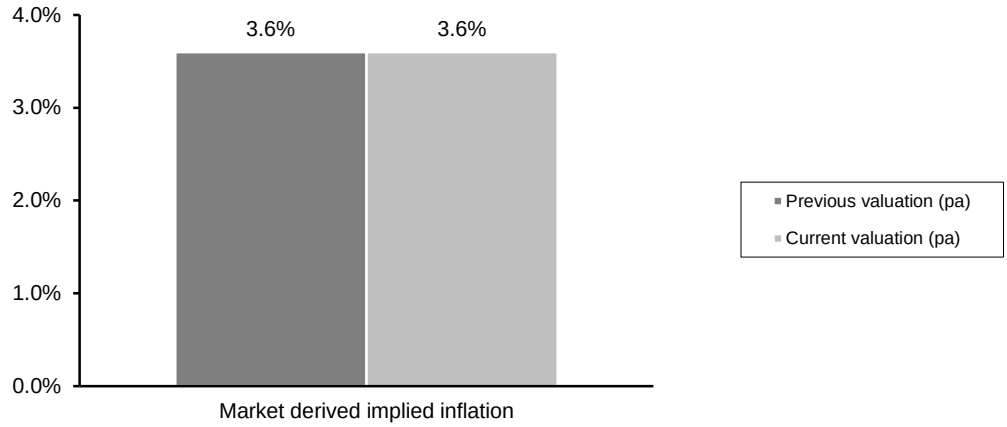
**Pay increase comparison**




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 for each section for the members who were present at both valuation dates and will reflect the different age profiles of these members in each section.

**Comparison of inflation rates**




The market derived implied UK inflation at this valuation is the same as the market derived implied UK inflation at the previous valuation.

# 5. Funding objective

## 5.1 Introduction

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**.

## 5.2 Rule requirements

Under Rule 2 of the Fund, the States of Guernsey determine the Employer contributions to be paid into the Fund. For the Teachers' Scheme this is covered by Regulation 68.

The funding objective and the level of contributions payable is therefore determined by the States of Guernsey. In accordance with Rules 2(2)(f) and (g), the States of Guernsey also determine the contribution rates payable by the States Trading Companies and any other body for which an Actuarial Account has been established.

## 5.3 Setting the funding objective

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

The **funding target** which was adopted at the 2010 actuarial valuation by Treasury and Resources for the Combined Pool Section was to target a level of funds that would be sufficient to cover 90% of benefits that had accrued to 31 December 2007, and 100% of benefits accruing from 1 January 2008.

It was decided at the 2007 valuation that in a government backed scheme, such as the Fund, 100% funding is not necessary as part of members' pensions could be met by a pay-as-you-go system. If the assets held in respect of benefits accrued to 31 December 2007 remain at 90% of accrued benefits over time, then broadly 10% of the pension benefits would be payable from general revenue. If the whole of the benefit is paid from the Fund (despite the target underfunding) then in the absence of other sources of surplus emerging (such as better than expected investment returns) the funding level will worsen over time. Accordingly, targeting below 100% of accrued benefits on a long term basis would mean that at some stage pension benefits would need to be paid from general revenue unless additional funds were received into the Fund (eg from investment return that is higher than expected). The States of Guernsey is still responsible for paying 100% of the benefits from States' funds and so responsible over the long term for the funds which make up a funding target of 100%, even if some of the benefits have to be paid from general revenue.

The **funding target** for the Actuarial Accounts was that their liabilities should be 100% funded.

These **funding targets** were adopted by Treasury and Resources for the 2013 actuarial valuation.

## 5.4 The funding target

Pension scheme liabilities are a series of future cash payments. Other than immediate and deferred annuities provided by an insurance company, the assets that would provide the closest match to these cashflows are a combination of fixed interest and index-linked gilts. Hence a **funding target** could be equal to the **present value** of the expected payments discounted at the market yields on gilts of appropriate term. The expected payments for active members would relate to pensionable service up to the valuation date and would include an allowance for expected future increases to Pensionable Pay.

However, funded occupational pension schemes may not hold assets which are equal to the full amount of the liabilities valued in this way. Instead, the **funding target** could be set at a lower level.

The **funding targets** 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.

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. Treasury and Resources have decided to take most of this higher expected return into account in the **funding target** and to accept the funding risks that this involves. The **funding target**, assuming 100% funding, is therefore calculated as the **present value** of the expected payments discounted at the expected rate of UK inflation over the appropriate mean term of the liabilities plus 3.25% pa. In the case of the Combined Pool Section this value is then reduced to 90% of the calculated value in respect of benefits accrued to 31 December 2007, in accordance with the **funding target** adopted by Treasury and Resources as described in section 5.3. It should be noted that if the assumed investment return is not achieved, the funding position could worsen, and additional contributions may be required. To the extent that the expected funds are not achieved from investment returns they would need to be met from additional States' contributions.

The **discount rate** was set on the basis that the investment strategy of the Fund would not 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. 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 assumptions adopted are set out in Section 6.

## 5.5 Speed of reaching funding target

An adjustment to the contribution rate could be used to eliminate a **funding surplus** or a **funding shortfall** relative to the **funding target** over an agreed period of time. There are a number of ways in which such an adjustment may be determined. For example the **funding surplus** or **shortfall** for each section could be eliminated over the future working lives of the section's current active membership. Alternatively the **funding surplus** or **shortfall** could be eliminated over a shorter, fixed, period.

# 5. Funding objective (continued)

## 5.6 Funding target - method

If each section of the Fund had no **funding surplus** or **funding 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.

It has been agreed to use the **Projected Unit Method** with a 1 year control period to calculate this future service contribution rate. This measures the increase in the **funding target** (assuming 100% funded) 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. We assume that there will be sufficient new entrants for the future service contribution rate to remain stable until the next valuation.

## 5.7 Comparison with funding objectives for previous valuation

The funding objective is unchanged from the previous valuation of the Fund.

We have measured the funding position of the Combined Pool Section relative to the **funding target** of 90% of accrued liabilities up to 31 December 2007 and 100% of accrued benefits for service on or after 1 January 2008.

The funding target of 100% of accrued liabilities has been maintained for the Actuarial Accounts.

## 5.8 Stability of contribution rate

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

However, as the Combined Pool Section liabilities in respect of service to 31 December 2007 are targeted to be 90% funded at the valuation date but 100% of all the benefits are to be paid from the Fund, the funding level for benefits accrued at 31 December 2007 would be expected to fall by the time of the next valuation and additional contributions may be required at that time.

# 6. Assumptions used to calculate funding target

## 6.1 Facts and 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 Treasury and Resources Department.

## 6.2 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 Section 11.

## 6.3 Derivation of financial assumptions

As set out in Section 5, 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 3.25% pa both for active members and deferred pensioners over the period to retirement and during the period while benefits are in payment to pensioners. As the target return adopted by Treasury and Resources applies to the whole of the assets, it is appropriate, at this time, to assume the same **discount rate** both pre and post retirement.

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 an allowance of 0.25% pa to allow for higher expected levels of inflation to be experienced locally compared with those in the UK.

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 (assumed to be UK RPI inflation less 0.7% pa) during deferment and when in payment.

Pensionable Pay has been assumed to increase at the rate of local inflation plus 0.5% pa for all sections. As stated above, 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 tend

to increase at a higher rate than inflation. For example analysis has shown that general salary increases awarded over the last nine years have been in excess of 0.5% pa above inflation. In addition promotional salary scales have been included as described in Appendix D.

In our opinion, the derivation of financial assumptions in this way is compatible with taking assets at market value.

The table below shows the key financial assumptions used for this valuation and those used for the previous valuation.

| Key financial assumptions | | |
|---|---|---|
| | **Current valuation % pa** | **Previous valuation % pa** |
| **Pre-retirement outperformance premium** | 3.25 (over UK inflation) | 3.25 (over UK inflation) |
| **Post-retirement outperformance premium** | 3.25 (over UK inflation) | 3.25 (over UK inflation) |
| **UK Price inflation** | 3.6 | 3.6 |
| **Guernsey Price Inflation** | 3.85 | 3.85 |
| **Pre-retirement discount rate** | 6.85 | 6.85 |
| **Post-retirement discount rate** | 6.85 | 6.85 |
| **Pay increases** | 4.35 | 4.35 |
| **Pension increases – Teachers' Scheme** | 2.9 | 2.9 |
| **Pension increases – All Other Sections** | 3.85 | 3.85 |

## 6.4 Financial assumptions

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

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

## 6.5 Changes in financial assumptions

The financial assumptions are unchanged from those used for the previous valuation.

## 6.6 Changes to post-retirement mortality assumption

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

# 6. Assumptions used to calculate funding target (continued)

The S2 series contain "All" tables which summarise the mortality experience of the full data received and also the following tables based on subsets of the data received:

- "Light" tables which summarise the mortality experience of those pensioners with the largest pensions (in excess of £14,750 pa for males and £5,500 pa for females). This represents the top 17% and 18% of pensioners in the data collected for males and females respectively. These pensioners tend to experience "lighter" mortality, ie they live for longer.
- "Heavy" tables which summarise the mortality experience of those pensioners with the lowest pensions (below £1,700 pa for males and below £850 pa for females). This represents the bottom 19% and 22% of the data collected for males and females respectively. These pensioners tend to experience "heavier" mortality.

In addition, there is a set of "Middle" tables for males which summarises the mortality experience of those pensioners not in the light or heavy tables.

Following analysis of the experience of the Fund over a 6 year period, it was agreed to adopt the following tables:

- the "Light" tables for female teachers and GFSC
- the "Middle" tables for male teachers
- the "All" tables for non-teachers, GPL, GEL and dependants, as these groups comprise both office and manual workers.

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_2013". 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 Treasury and Resources Department, was to update the post-retirement mortality assumption to make use of the latest available information. Our recommended assumption was:

- S2 "All" base tables for non-teachers, GPL, GEL and dependants, S2 "Middle" tables for male teachers and S2 "Light" tables for females teachers and GFSC
- with the following scaling factors:
    - Males – non-teachers, GEL, GPL 110%
    - Females – non-teachers, GEL, GPL 100%
    - Males – teachers 100%
    - Females – teachers 80%
    - Dependants 95%
    - GFSC 100%
- allowing for future improvements in line with the CMI_2013 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:

| | 2010 valuation basis years | 2013 valuation basis years |
|---|---|---|
| **Male aged 65** | 22.5 | 21.8 |
| **Female aged 65** | 24.7 | 24.6 |
| **Male aged 45** | 24.4 | 24.0 |
| **Female aged 45** | 26.6 | 26.9 |

## 6.7 Changes to other demographic assumptions

Following our recommendations, it has been agreed to adopt other 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.

### 6.7.1 Normal health retirements

Our analysis of Public Servants over the six year period up to the valuation date showed that more members than expected retired at age 60. In relation to police officers, more members than expected retired at age 50. We have revised the assumed incidences of retirement to allow for this experience.

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

### 6.7.2 Ill health retirements

We have revised our ill health retirement assumptions for some of the membership groups to reflect actual experience over the intervaluation period. The revised assumptions anticipate a lower number of ill health retirements over the next intervaluation period.

### 6.7.3 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 2010 valuation. However, for male Police/Fire members and GEL members the number of withdrawals was below the expected number. It is important not to overestimate the number of withdrawals. We have revised our assumptions for male Police/Fire members and GEL members to anticipate a lower number of withdrawals over the next intervaluation period.

### 6.7.4 Promotions

We have revised the salary scales which are adopted. These include an age based allowance for future promotional increases. After analysis, we believe that the allowance included in the scales for promotional increases for older members, who would for the most part have already reached the top of their relevant salary scales is now excessive. We have therefore capped these

increases at age 50, such that no further promotional increases are assumed from that age onwards.

#### 6.7.5 Family statistics

At the 31 December 2010 valuation, we assumed that 85% of male members and 80% of female members were married at retirement or earlier death. We have amended our assumptions to 85% of male members and 75% of female members to be married at retirement or earlier death. This is the standard assumption required in actuarial valuations for the purpose of the UK Pension Protection Fund.

### 6.8 Net effect of changes in assumptions

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

# 7. Funding position – Combined Pool Section

## 7.1 Funding position

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. The result of this comparison is as follows:

| | £'000 | £'000 |
|---|---|---|
| **Funding target in respect of:** | | |
| Active members | 426,264 | |
| Deferred pensioners and refunds due | 49,098 | |
| Pensioners and dependants | 494,269 | |
| **Funding target (90% of accrued benefits to 31 December 2007, 100% thereafter)** | | **969,631** |
| Market value of the assets | | 970,123 |
| **Assets in excess of target funding liabilities** | | **492** |

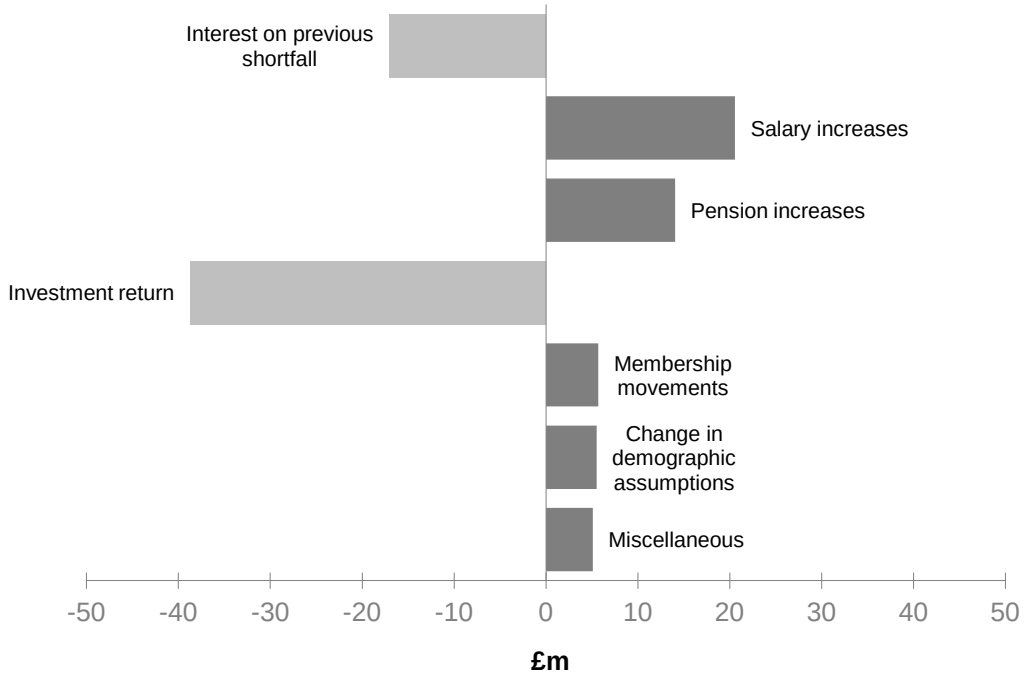
The Combined Pool Section has assets in excess of the target funding liabilities of £492,000 relative to the **funding target** of £969,631,000.

The assets represent 92.2% of the value of the total liabilities of the Combined Pool Section. If the **funding target** had been 100% of accrued liabilities, a **funding shortfall** of £82,109,000 would have been revealed.

# 7. Funding position – Combined Pool Section (continued)

## 7.2 Change in funding position

At the previous valuation the Combined Pool Section had a **funding shortfall** of £77,338,000 on the 100% **funding target** basis. The funding position (on a 100% **funding target**) has therefore worsened by £4,771,000 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 reason for the change in the past service position is that the investment return obtained on the assets was much lower than assumed. This effect was partially offset by the actual levels of pay and pension increases granted since the previous valuation which were lower than assumed.

The net effect of the changes in the demographic assumptions at this valuation has been to decrease the value placed on the liabilities in respect of the Combined Pool Section.

## 7.3 Future benefit accrual

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

The Employer's future service contribution rate on the basis of our assumptions is 14.2% of Pensionable Pay which includes an allowance for expenses of 0.25%. The corresponding rate at the previous valuation was 13.9%.

The main reasons for the increase at this valuation are the changes made to the demographic assumptions and the change in the age profile of the membership.

# 7. Funding position – Combined Pool Section (continued)

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 future service contribution rates applicable to each group is set out below.

| | **Employer future service contribution rate**<br>**% pa** |
|---|---|
| Base Employer rate | 14.2 |
| Special benefit groups | |
| Police and Firefighters | |
| entrants on or before 31.10.91 | 29.2 (+15%) |
| entrants between 31.10.91 and 31.12.07 | 24.2 (+10%) |
| entrants after 31.12.07 Police | 20.2 (+6%) |
| Fire | 18.2 (+4%) |
| Senior Police and Fire Officers – entrants before 01.01.08 | 21.2 (+7%) |
| Mental Health Officers – entrants prior to 01.12.98 | 23.2 (+9%) |
| Crown Officers | |
| entrants on or before 31.10.91 | 24.2 (+10%) |
| entrants between 01.01.92 and 31.12.03 | 23.2 (+9%) |
| entrants after 1.1.04 | 20.9 (+6.7%) |

## 7.4 Allowance for funding position

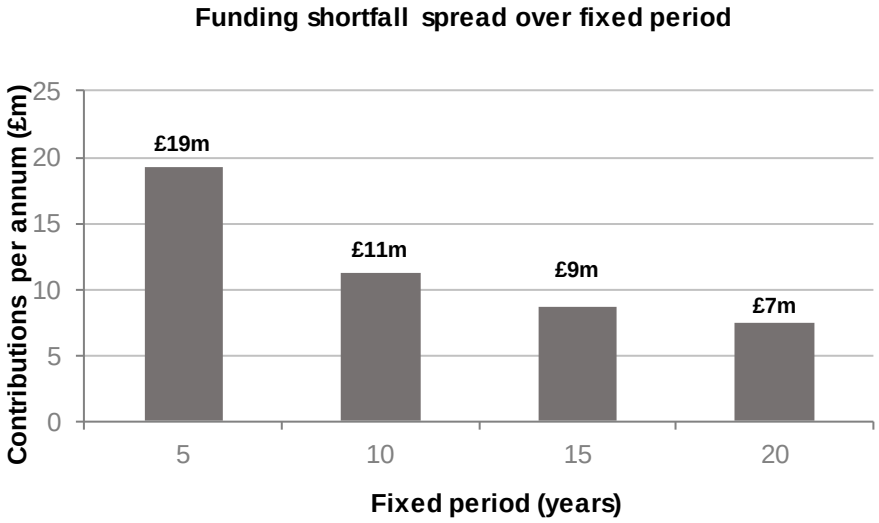
We have also calculated the required contribution rate if the assets in excess of the target funding liabilities were amortised over the average future working lifetime of the current active members, a period of 12 years. Since the **funding surplus** within the Combined Pool Section is relatively very small, the required basic rate of Employer contributions would remain at 14.2% of Pensionable Pay.

The additional contribution rates for the special groups, as set out above, would also be paid.

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 Pay would be required resulting in a total Employer contribution rate of 18.3% of Pensionable Pay.

# 7. Funding position – Combined Pool Section (continued)

The fixed annual contributions which would be required to meet the **funding shortfall** (relative to the 100% **funding target**) if the contributions were spread over 5, 10, 15 or 20 years from 1 January 2014 (rather than spread as an addition to the contribution rate) are shown in the following chart.



# 8. Funding position – Guernsey Post Limited

## 8.1 Funding surplus

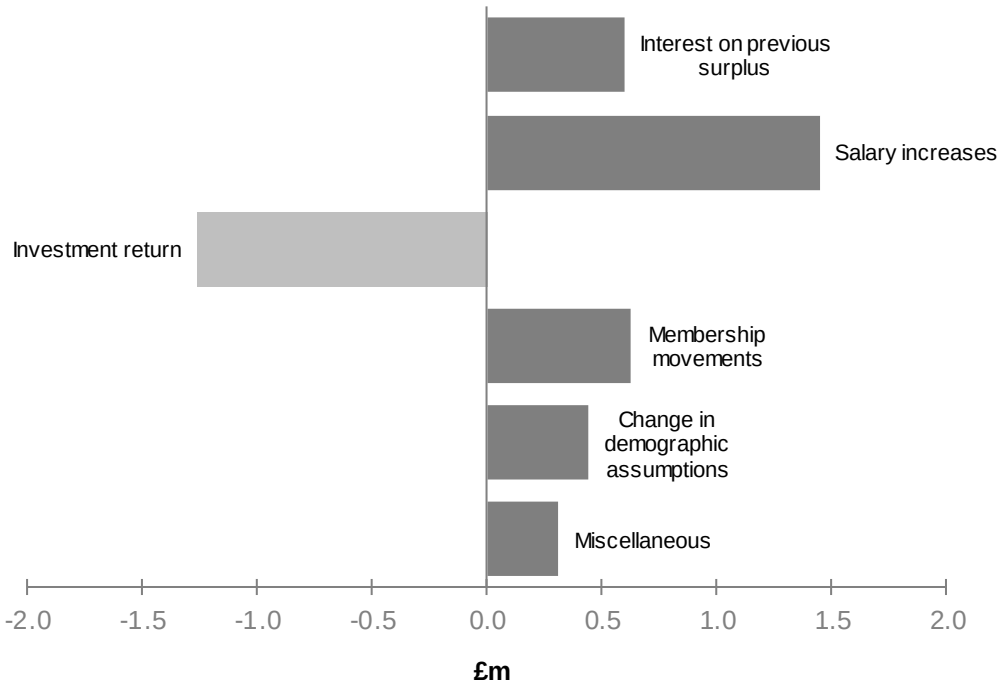
The funding objective is to bring the assets of each section of the Fund into line with the **funding target**. We have therefore compared the market value of the assets in the Fund in respect of the Guernsey Post Limited Actuarial Account with the **funding target** as at the valuation date. The result of this comparison is as follows:

| | £'000 | £'000 |
|---|---|---|
| **Value of past service ongoing liabilities:** | | |
| Active members | 20,561 | |
| Deferred pensioners and refunds due | 1,367 | |
| Pensioners and dependants | 8,699 | |
| **Funding target** | | **30,627** |
| Market value of the assets | | 35,486 |
| **Funding surplus** | | **4,859** |
| **Funding ratio** | | **115.9%** |

The Guernsey Post Limited Actuarial Account has a **funding surplus** of £4,859,000 relative to the **funding target** of £30,627,000 and a **funding ratio** (assets as a proportion of the **funding target**) of 115.9%.

## 8.2 Change in funding position

At the previous valuation the Guernsey Post Limited Actuarial Account had a **funding surplus** of £2,702,000. The funding position has therefore improved by £2,157,000 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 reason for the change in the past service position is that the actual levels of pay increases granted since the previous valuation were lower than assumed. This was partly offset by the investment return obtained on the assets which was much lower than assumed.

The net effect of the changes in the demographic assumptions at this valuation has been to reduce the value placed on the liabilities in respect of the Guernsey Post Limited Actuarial Account.

## 8.3 Future benefit accrual

We have also calculated the Employer contribution rate for benefits expected to accrue to members in future using the same method as was adopted for the Combined Pool Section.

The Employer's future service contribution rate on the basis of our assumptions is 15.2% of Pensionable Pay which includes an allowance for expenses of 0.25%. The corresponding rate at the previous valuation was 14.2%.

The increase is mainly due to the change in the age profile of the membership. However, this has been partly offset by the changes in the demographic assumptions.

## 8.4 Allowance for funding surplus

We have also calculated the contribution rate assuming that the **funding surplus** would be amortised over the average future working lifetime of the current active members, a period of 13 years. Allowing for this amortisation period, the required rate of Employer contributions could reduce by 5.8% of Pensionable Pay to 9.4% of Pensionable Pay.

This can be compared to the current contribution rate being paid by Guernsey Post Limited of 14.2% of Pensionable Pay.

# 9. Funding position – Guernsey Electricity Limited

## 9.1 Funding surplus

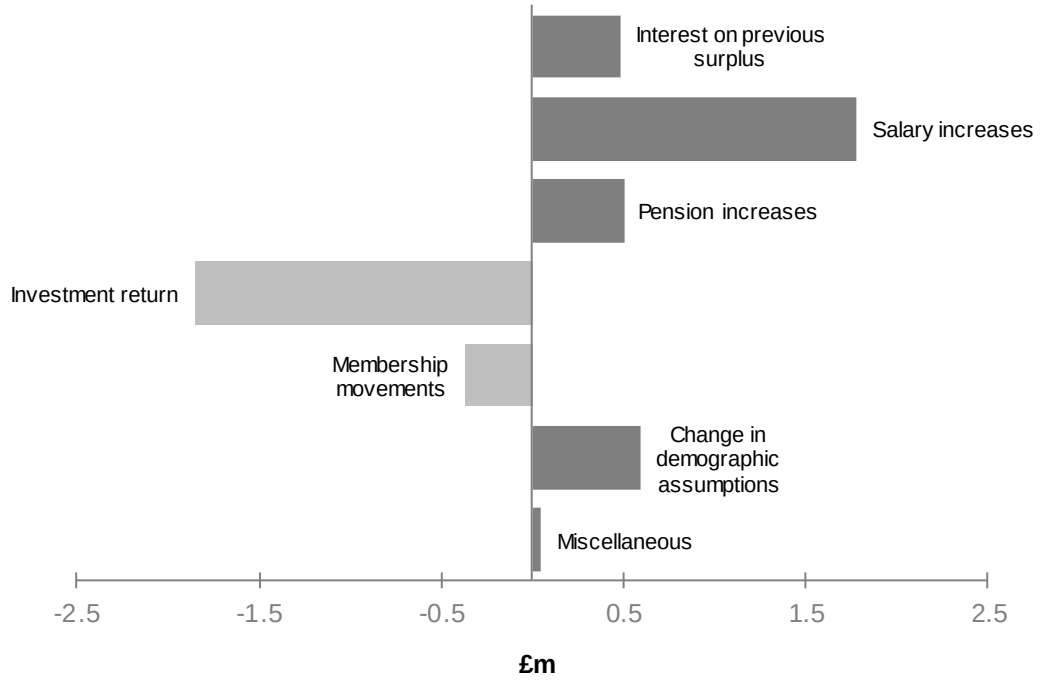
The funding objective is to bring the assets of each section of the Fund into line with the **funding target**. We have therefore compared the market value of the assets in the Fund in respect of the Guernsey Electricity Limited Actuarial Account with the **funding target** as at the valuation date. The result of this comparison is as follows:

| | £'000 | £'000 |
|---|---|---|
| **Value of past service ongoing liabilities:** | | |
| Active members | 24,636 | |
| Deferred pensioners and refunds due | 1,693 | |
| Pensioners and dependants | 20,258 | |
| **Funding target** | | **46,587** |
| Market value of the assets | | 49,952 |
| **Funding surplus** | | **3,365** |
| **Funding ratio** | | **107.2%** |

The Guernsey Electricity Limited Actuarial Account has a **funding surplus** of £3,365,000 relative to the **funding target** of £46,587,000 and a **funding ratio** (assets as a proportion of the **funding target**) of 107.2%.

## 9.2 Change in funding position

At the previous valuation the Guernsey Electricity Limited Actuarial Account had a **funding surplus** of £2,183,000. The funding position has therefore improved by £1,182,000 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 reason for the change in the past service position is that the actual levels of pay and pension increases granted since the previous valuation were lower than assumed. This was partially offset by the investment return obtained on the assets which was much lower than assumed.

The net effect of the changes in the demographic assumptions at this valuation has been to reduce the value placed on the liabilities in respect of the Guernsey Electricity Limited Actuarial Account.

## 9.3 Future benefit accrual

We have also calculated the Employer contribution rate for benefits expected to accrue to members in future using the same method as was adopted for the Combined Pool Section.

The Employer's future service contribution rate on the basis of our assumptions is 14.9% of Pensionable Pay which includes an allowance for expenses of 0.25%. The corresponding rate at the previous valuation was 14.6%.

The main reason for the increase at this valuation is the changes in the demographic assumptions since the previous valuation.

## 9.4 Allowance for funding surplus

We have also calculated the contribution rate assuming that the **funding surplus** would be amortised over the average future working lifetime of the current active members, a period of 13 years. Allowing for this amortisation period, the required rate of Employer contributions could be reduced by 3.4% of Pensionable Pay to 11.5% of Pensionable Pay.

This can be compared to the current contribution rate being paid by Guernsey Electricity Limited of 14.6% of Pensionable Pay.

# 10. Funding position – Guernsey Financial Services Commission

## 10.1 Funding surplus

The GFSC Actuarial Account closed to future accrual of benefits with effect from 1 July 2014. We have allowed for this post valuation event within the actuarial valuation calculations. We have allowed in our calculations for 6 months of expected Employees and member contributions together with further accrual of benefits (to 30 June 2014) and from that date for all active members to become deferred members ie the salary linkage to their accrued benefits was removed from that date.

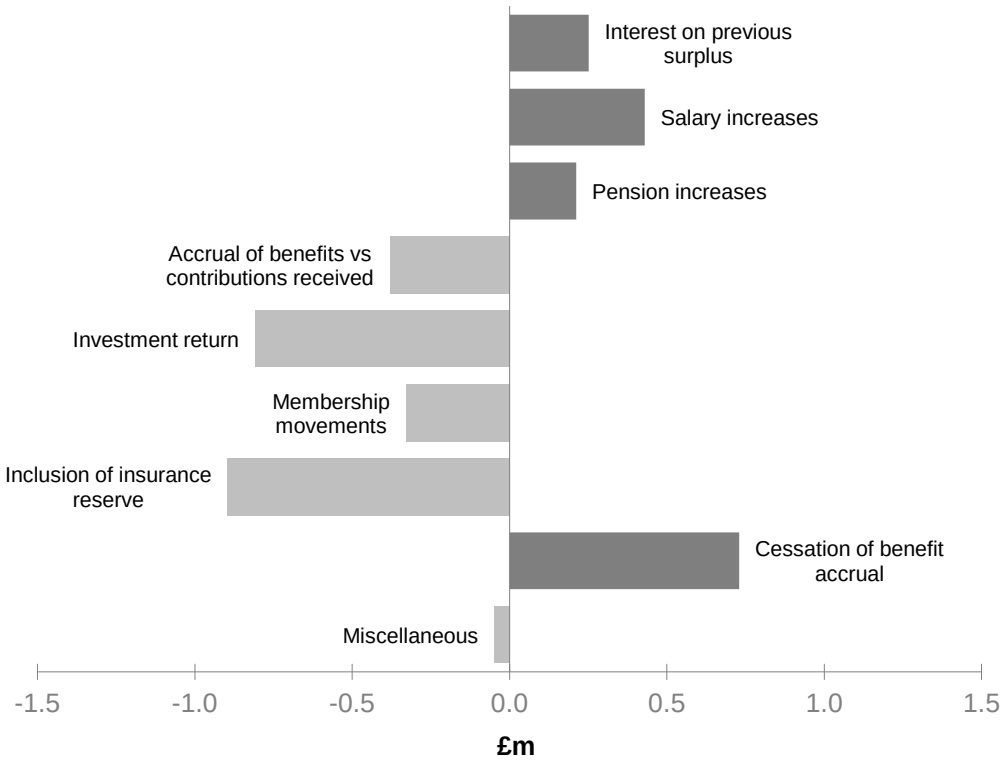
The funding objective is to bring the assets of each section of the Fund into line with the **funding target**. We have therefore compared the market value of the assets in the Fund in respect of the Guernsey Financial Services Commission Actuarial Account with the **funding target** as at the valuation date (with assets adjusted for 6 months of expected employer and member contributions and liabilities adjusted for 6 months' further accrual of benefits). The result of this comparison is as follows:

| | **£'000** | **£'000** |
|---|---|---|
| **Value of past service ongoing liabilities:** | | |
| Active members (until 30 June 2014) | 8,537 | |
| Deferred pensioners and refunds due | 4,291 | |
| Pensioners and dependants | 4,260 | |
| **Funding target** | | **17,088** |
| Market value of the assets | | 17,403 |
| **Funding surplus** | | **315** |
| **Funding ratio** | | **101.8%** |

The Guernsey Financial Services Commission Actuarial Account has a **funding surplus** of £315,000 relative to the **funding target** of £17,088,000 and a **funding ratio** (assets as a proportion of the **funding target**) of 101.8%.

## 10.2 Change in funding position

At the previous valuation the Guernsey Financial Services Commission Actuarial Account had a **funding surplus** of £1,145,000. The funding position has therefore worsened by £830,000 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 change in the past service position are the inclusion of an insurance reserve and the investment return obtained on the assets was much lower than assumed. These effects were partly offset by the reduction in liabilities resulting from the cessation of benefit accrual with effect from 1 July 2014.

The net effect of the changes in the demographic assumptions at this valuation has been to slightly reduce the value placed on the liabilities in respect of the Guernsey Financial Services Commission Actuarial Account.

## 10.3 Allowance for funding surplus

Treasury and Resources will decide the basis of the charges to cover future administration expenses of the GFSC Actuarial Account. We suggest the **funding surplus** is utilised to pay the expenses of administration over the period until the next valuation.

# 11. Risks

## 11.1 Purpose of funding

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. Some of the key factors that could lead to **funding shortfalls** are considered below.

## 11.2 Funding does not eliminate 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. There are a number of risks that a scheme is exposed to, including:

- Sponsor covenant risk
- Funding approach risk
- Investment risk
- Mortality risk
- Options risk

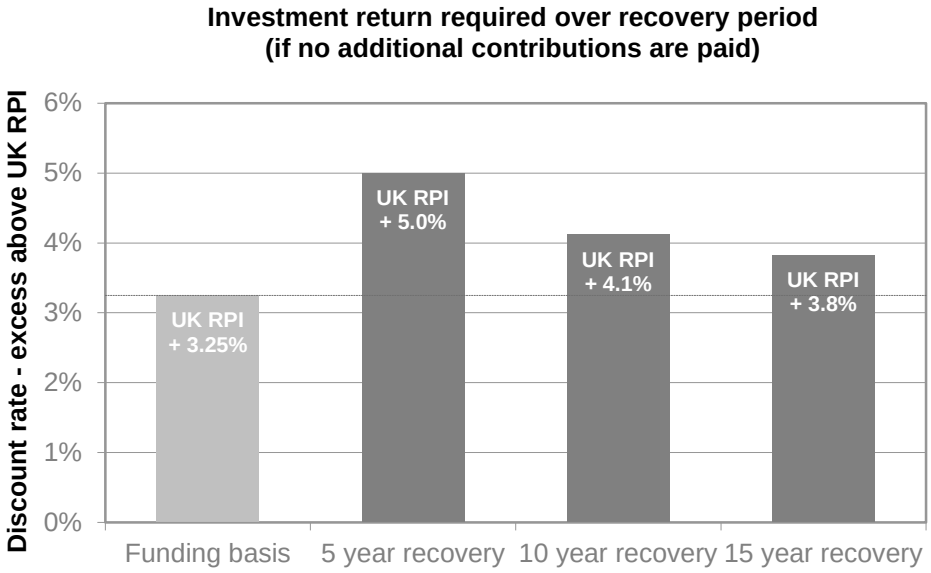
## 11.3 Sponsor covenant risk

Although the Treasury and Resources Department can request additional support from the States if additional **funding shortfalls** materialise, the Fund has the enduring risk of the willingness and ability of the States to continue to pay contributions to the Fund and to make good any shortfalls.

## 11.4 Funding approach risk

As the funding approach is to target only 90% of accrued benefits for service to 31 December 2007, this is expected to lead to a worsening funding level over time as 100% of benefits are paid out of the Fund. Accordingly, targeting below 100% of accrued benefits on a long term basis would mean that at some stage pension benefits would need to be paid from general revenue unless additional funds were received into the Fund (eg from investment return that is higher than expected). Thus, a **funding target** of 90% (for benefits accrued to 31 December 2007) is not sustainable over the long term. The States of Guernsey is still responsible for paying 100% of the benefits from States' funds and so responsible over the long term for the funds which make up a **funding target** of 100%, even if some of the benefits have to be paid from general revenue. Paying a significant proportion of pension benefits from general revenue rather than through the Fund would mean that members had less security for their benefits as the funding for their benefits would be drawn from the same pool as other direct States' expenditure.

The following chart illustrates the investment return required over 5, 10 or 15 year recovery periods to meet the **funding shortfall** on the 100% funding objective if no additional contributions are paid.



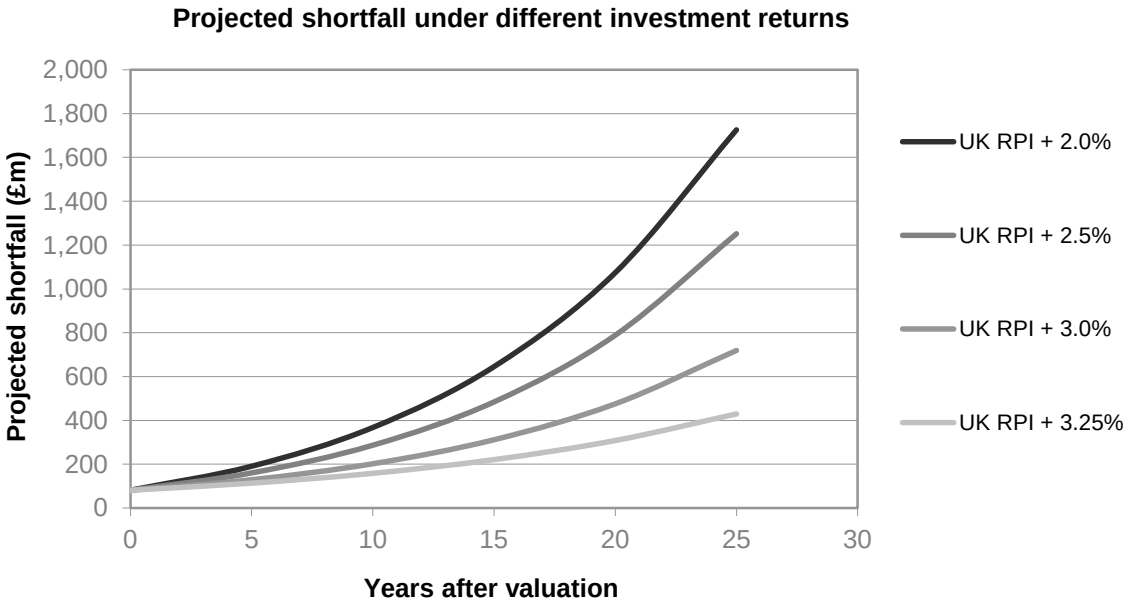

## 11.5 Investment risk

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 States of Guernsey 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**. Treasury and Resources 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 Treasury and Resources 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 **funding shortfall** 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 **funding 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 nominal terms.




## 11.6 Mortality risk

Members could live longer than foreseen, for example, as a result of a medical breakthrough. This would mean that benefits are paid for longer, resulting in higher liabilities.

## 11.7 Options risk

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 calculations, then this will result in higher costs for the Fund, or members could retire earlier than assumed.

## 11.8 Impact of adverse risks

It is important for the Treasury and Resources Department to understand the situations in which **funding 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 Treasury and Resources Department 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.

## 11.9 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 existing members retiring at their Normal Retirement Dates ie at age 50 for Police/Fire and at age 60 for all other sections. The assumption in the valuation is that Police/Fire members will retire between ages 50 and 55 and that members in other sections will retire between ages 60 and 65.

Commutation: this is the effect of members commuting their pensions to receive a different proportion of the maximum lump sum available 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.

## 11.10 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. In the case of the Combined Pool Section we have shown these results on the 100% funding objective.

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.

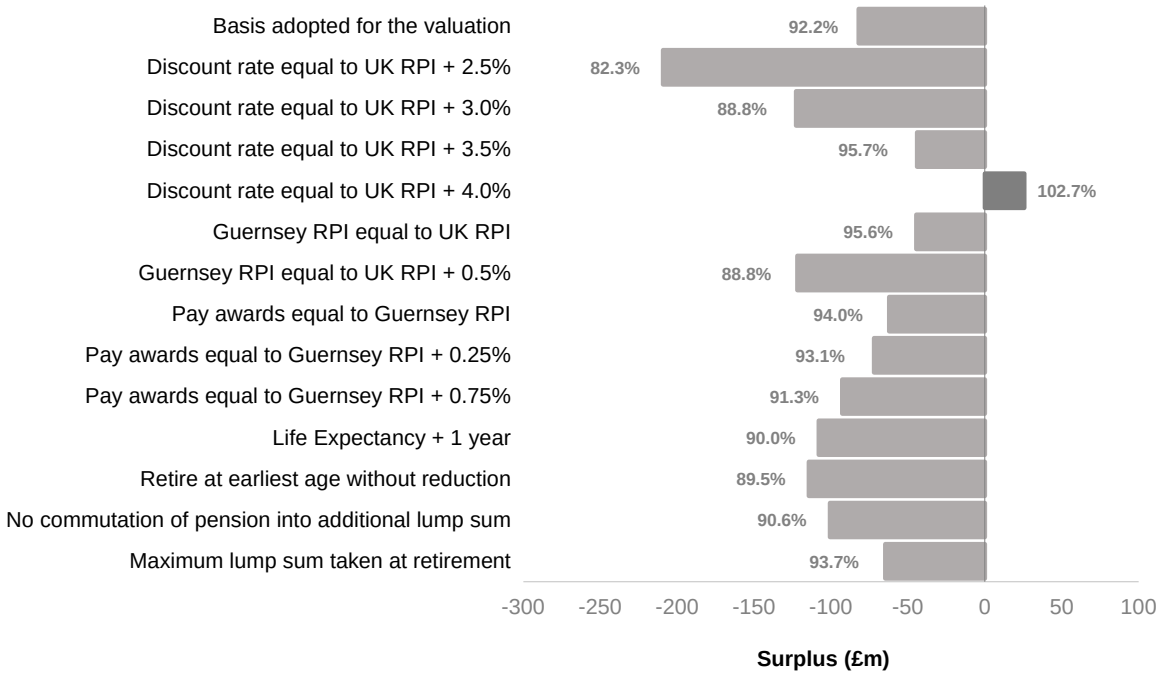
1. the discount rate is set as UK inflation plus 2.5% pa (ie 0.75% pa lower)
2. the discount rate is set as UK inflation plus 3% pa (ie 0.25% pa lower)
3. the discount rate is set as UK inflation plus 3.5% pa (ie 0.25% pa higher)
4. the discount rate is set as UK inflation plus 4% pa (ie 0.75% pa higher)
5. Guernsey inflation is set equal to UK inflation (ie 0.25% pa lower)
6. Guernsey inflation is set equal to UK inflation plus 0.5% pa (ie 0.25% pa higher)
7. general pay increases are set equal to Guernsey inflation (ie 0.5% pa lower)
8. general pay increases are set equal to Guernsey inflation plus 0.25% pa (ie 0.25% pa lower)
9. general pay increases are set equal to Guernsey inflation plus 0.75% pa (ie 0.25% pa higher)
10. life expectancy from age 65 for current and future pensioners is one year higher

11. existing members retire at their Normal Retirement Dates ie at age 50 for police/fire and at age 60 for all other sections.

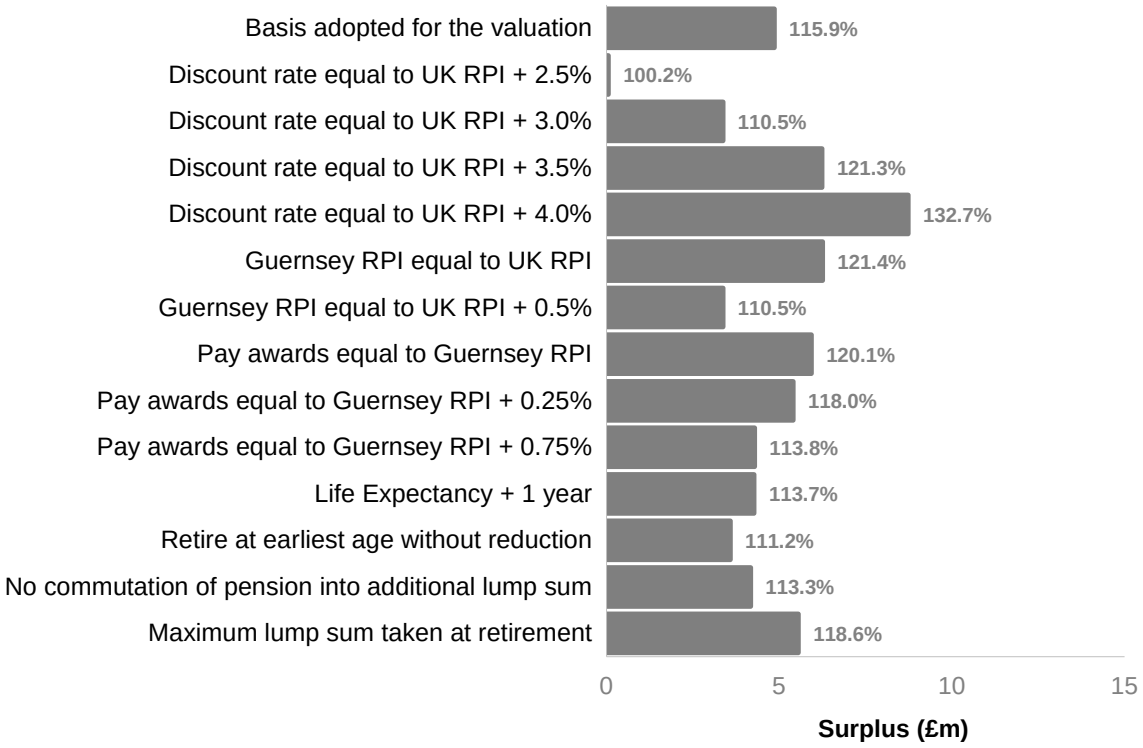
12. members do not exchange any part of their pension to receive an additional lump sum on retirement

13. members exchange their pension to receive the maximum lump sum available on retirement

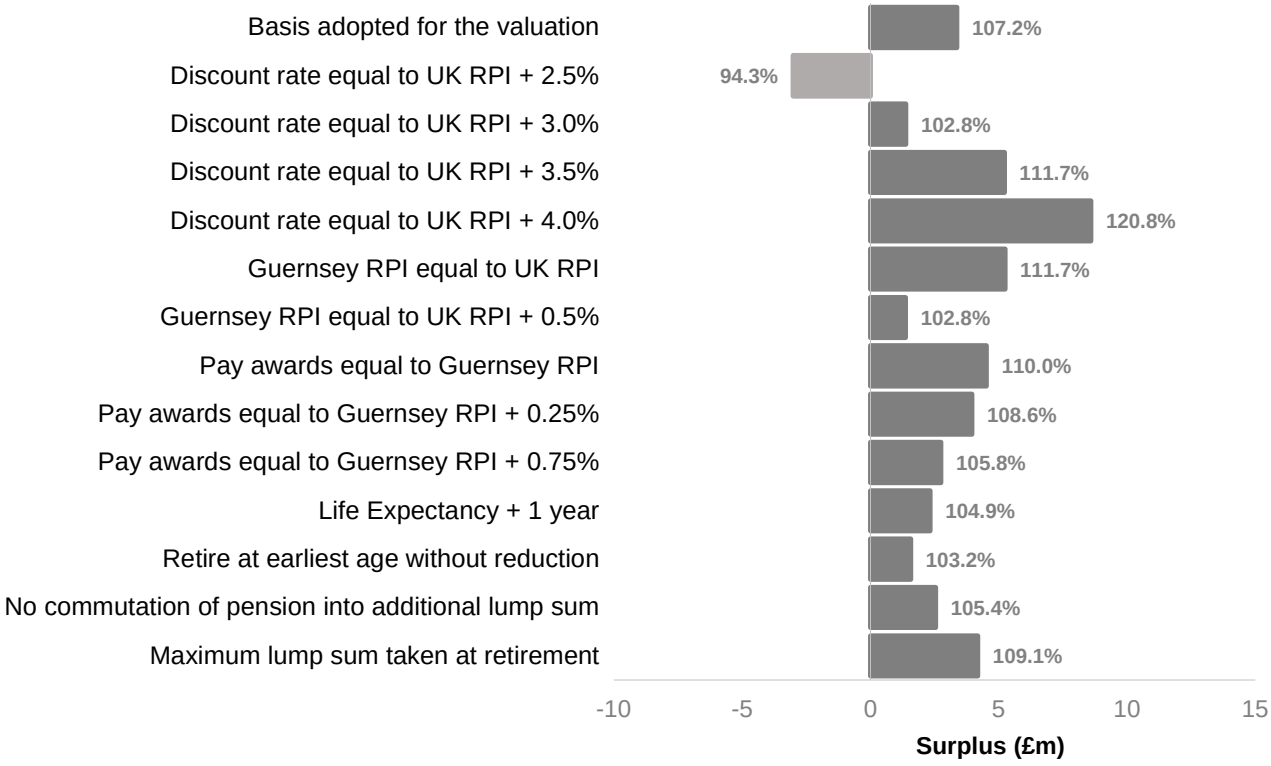
**Sensitivity of the funding level and the funding surplus to changes to the assumptions - Combined Pool**

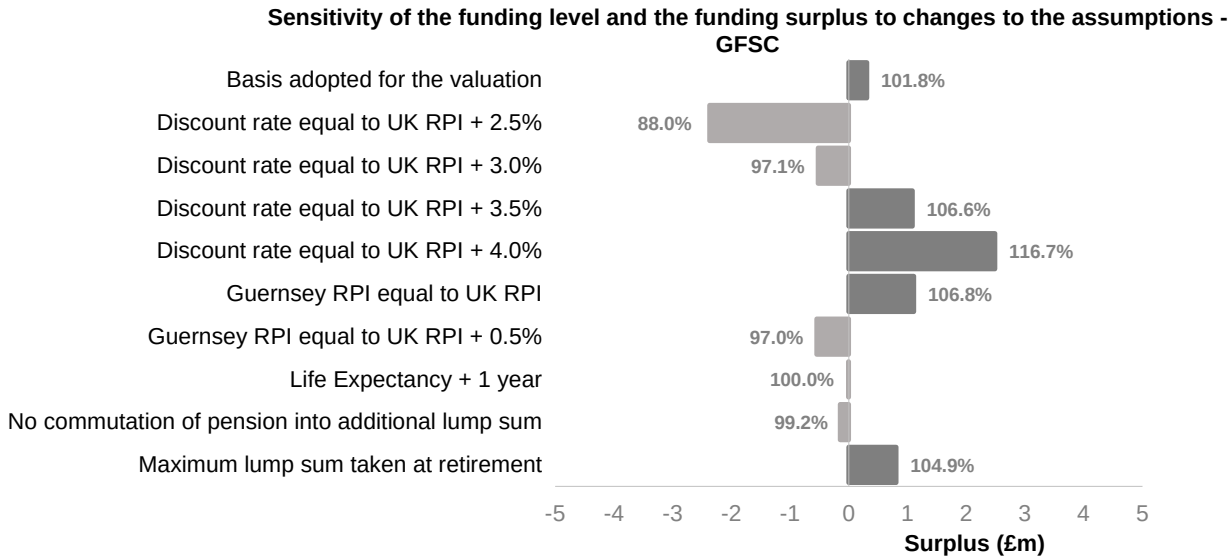


**Sensitivity of the funding level and the funding surplus to changes to the assumptions - GPL**




**Sensitivity of the funding level and the funding surplus to changes to the assumptions - GEL**






## 11.11 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 a reduction in the Fund's **funding ratio** and an increase to the contributions required.

The primary reason for the possible volatility in the funding position is that the States of Guernsey'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 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.

# 12. Summary and conclusions

## 12.1 Summary of results – Combined Pool Section

- At the valuation date the assets of the Combined Pool Section exceeded the target funding liabilities by £492,000 relative to the **funding target** of 90% in respect of benefits accrued to 31 December 2007 and 100% in respect of benefits accrued from 1 January 2008.
- On the basis used to set the **funding target**, the recommended long-term rate of Employer contributions payable in respect of future benefit accrual within the Combined Pool Section is 14.2% of Pensionable Pay. Additional contributions are required in respect of the special benefit groups as detailed in Section 7.
- If the **funding target** was 100% of accrued liabilities there would be a **funding shortfall** of £82,109,000.
- A summary of the actuarial valuation results is as follows:

| | **Funding target 90% of accrued benefits to 31 December 2007, 100% thereafter** | **Funding target 100% of accrued benefits** |
|---|---|---|
| **Assets in excess of target funding liabilities** | £492,000 | (£82,109,000) |
| **Funding level in relation to target funding liabilities** | 100.1% | 92.2% |
| **Future service Employer contribution rate** | 14.2% | 14.2% |
| **Past service adjustment** | - | 4.1% |
| **Total contribution rate required from the Employer** | 14.2% | 18.3% |
| **Contribution rate currently being paid** | 14.1% | 14.1% |

## 12.2 Summary of results – Guernsey Post Limited

- At the valuation date, there was a **funding surplus** of £4,859,000 relative to the **funding target** in respect of the Guernsey Post Limited Actuarial Account. This corresponds to an ongoing **funding ratio** of 115.9%.
- On the basis used to set the **funding target**, the recommended long-term rate of Employer contributions payable in respect of future benefit accrual within the Guernsey Post Limited Actuarial Account is 15.2% of Pensionable Pay.
- A summary of the actuarial valuation results is as follows:

| | |
|---|---|
| **Funding surplus** | **£4,859,000** |
| **Funding level** | 115.9% |
| **Future service Employer contribution rate** | 15.2% |
| **Past service adjustment** | (5.8%) |
| **Total contribution rate required from the Employer** | 9.4% |
| **Contribution rate currently being paid** | 14.2% |

## 12.3 Summary of results – Guernsey Electricity Limited

- At the valuation date, there was a **funding surplu**s of £3,365,000 relative to the **funding target** in respect of the Guernsey Electricity Limited Actuarial Account. This corresponds to an ongoing **funding ratio** of 107.2%.
- On the basis used to set the **funding target**, the recommended long-term rate of Employer contributions payable in respect of future benefit accrual within the Guernsey Electricity Limited Actuarial Account is 14.9% of Pensionable Pay.
- A summary of the actuarial valuation results is as follows:

| | |
|---|---|
| **Funding surplus** | **£3,365,000** |
| **Funding level** | 107.2% |
| **Future service Employer contribution rate** | 14.9% |
| **Past service adjustment** | (3.4%) |
| **Total contribution rate required from the Employer** | 11.5% |
| **Contribution rate currently being paid** | 14.6% |

## 12.4 Summary of results – Guernsey Financial Services Commission

- At the valuation date, there was a **funding surplus** of £315,000 relative to the **funding target** in respect of the Guernsey Financial Services Commission Actuarial Account. This corresponds to an ongoing **funding ratio** of 101.8%.
- A summary of the actuarial valuation results is as follows:

| | |
|---|---|
| **Funding surplus** | **£315,000** |
| **Funding level** | 101.8% |

## 12.5 Developments since the valuation date

Since the valuation date, equity markets have been volatile.

This experience since the valuation date will have led to volatile funding positions for each section of the Fund on the **funding target** basis.

## 12.6 Contributions – Combined Pool

The total rate of Employer contributions to be paid following the valuation will be determined by the States. The Employer contributions required to fund for 100% of future benefit accrual would be 14.2% of Pensionable Pay.

This contribution rate includes an allowance for expenses of 0.25% of Pensionable Pay. Members will continue to contribute at the basic rate of 6.5% of Pensionable Pay, increased for the special benefit groups as detailed in the Rules of the Fund. This rate does not include any Additional Voluntary Contributions members may choose to make.

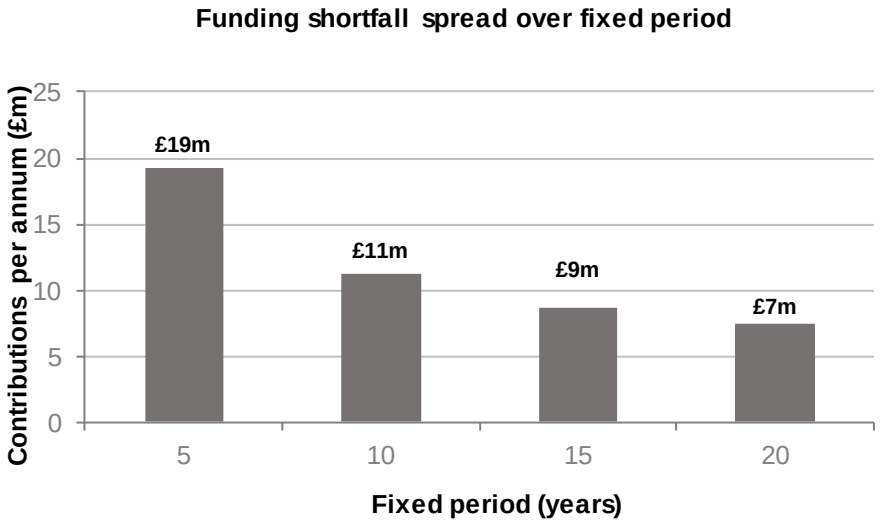
# 12. Summary and conclusions (continued)

Additional contributions should continue to be paid in respect of the special benefit groups as detailed in the table below.

| | Additional Employer contribution rate %pa |
|---|---|
| Special benefit groups | |
| 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 1.1.04 | +6.7% |

If the **funding target** was 100% of accrued liabilities, additional contributions of 4.1% of Pensionable Pay would be required to amortise the **funding shortfall** resulting in a base level of Employer contributions of 18.3% of Pensionable Pay.

The fixed annual contributions which would be required to meet the **funding shortfall** (relative to the 100% funding target) if the contributions were spread over 5, 10, 15 or 20 years from 1 January 2014 (rather than spread as an addition to the contribution rate) are shown in the following chart.



## 12.7 Contributions – Guernsey Post Limited

If allowance were made for a contribution reduction of 5.8% of Pensionable Pay to amortise the **funding surplus** in respect of the Guernsey Post Limited Actuarial Account, the total rate of Employer contributions to be paid following the valuation could be 9.4% of Pensionable Pay.

This contribution rate includes an allowance for expenses of 0.25% of Pensionable Pay. Members will continue to contribute at the basic rate of 6.5% of Pensionable Pay. This does not include any Additional Voluntary Contributions members may choose to make.

## 12.8 Contributions – Guernsey Electricity Limited

If allowance were made for a contribution reduction of 3.4% of Pensionable Pay to amortise the **funding surplus** in respect of the Guernsey Electricity Limited Actuarial Account, the total rate of Employer contributions to be paid following the valuation could be 11.5% of Pensionable Pay.

This contribution rate includes an allowance for expenses of 0.25% of Pensionable Pay. Members will continue to contribute at the basic rate of 6.5% of Pensionable Pay. This does not include any Additional Voluntary Contributions members may choose to make.

## 12.9 Contributions – Guernsey Financial Services Commission

Since the GFSC Actuarial Account is now closed to future accrual, no future service contributions are payable. We suggest the surplus is utilised to pay the expenses of administration over the period until the next valuation.

## 12.10 Implementation of any revised contributions

Any revised contribution rates for the Combined Pool Section could be implemented from 1 January 2015 and for Guernsey Post Limited and Guernsey Electricity Limited could be implemented from 1 April 2015.

## 12.11 Monitoring the Fund

The next formal valuation is due to take place as at 31 December 2016 when the contribution levels will be reviewed.

## Signed for BWCI Consulting Limited

Steven Jones, FIA

Diana Simon, FIA

# Appendix A 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.

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.

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.

# Appendix B Membership data

## Active members at 31 December 2013

| | | Number Of Cases | Total Pay (£ pa) |
|---|---|---|---|
| **Public Servants (including special groups)** | **Men** | 1,664 | 64,859,343 |
| | **Women** | 2,129 | 66,990,748 |
| **Teachers Scheme** | **Men** | 27 | 1,317,480 |
| | **Women** | 78 | 3,258,063 |
| **Teachers Section of Combined Pool** | **Men** | 202 | 9,898,912 |
| | **Women** | 459 | 20,260,625 |
| **Guernsey Post Limited** | **Men** | 162 | 5,055,792 |
| | **Women** | 48 | 1,516,329 |
| **Guernsey Electricity Limited** | **Men** | 180 | 6,482,552 |
| | **Women** | 25 | 865,769 |
| **Guernsey Financial Services Commission** | **Men** | 23 | 1,574,166 |
| | **Women** | 24 | 1,359,281 |
| **Total** | **Men** | **2,258** | **89,188,245** |
| | **Women** | **2,763** | **94,250,815** |

## Deferred pensioners at 31 December 2013

| | | Number Of Cases | Amount of deferred pension (£ pa) |
|---|---|---|---|
| **Public Servants (including special groups)** | **Men** | 110 | 766,502 |
| | **Women** | 151 | 820,179 |
| **Teachers Scheme** | **Men** | 50 | 233,649 |
| | **Women** | 107 | 356,858 |
| **Teachers Section of Combined Pool** | **Men** | 11 | 105,940 |
| | **Women** | 23 | 124,152 |
| **Guernsey Post Limited** | **Men** | 3 | 17,438 |
| | **Women** | 5 | 36,371 |
| **Guernsey Electricity Limited** | **Men** | 11 | 81,401 |
| | **Women** | 2 | 8,234 |
| **Guernsey Financial Services Commission** | **Men** | 15 | 163,327 |
| | **Women** | 20 | 98,665 |
| **Total** | **Men** | **200** | **1,368,257** |
| | **Women** | **308** | **1,444,459** |

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

*There were also 1,062 former members at the valuation date who were entitled to a refund of their member contributions to the Fund.*

## Pensioners at 31 December 2013

| | | Number of cases | Amount of pension (£ pa) |
|---|---|---|---|
| **Public Servants (including special groups)** | **Men** | 1,268 | 17,012,489 |
| | **Women** | 903 | 5,860,211 |
| | **Widowers** | 32 | 108,077 |
| | **Widows** | 397 | 2,307,501 |
| **Teachers Scheme** | **Men** | 34 | 487,823 |
| | **Women** | 57 | 414,338 |
| | **Widowers** | 4 | 8,060 |
| | **Widows** | 15 | 63,507 |
| **Teachers Section of Combined Pool** | **Men** | 254 | 4,542,458 |
| | **Women** | 379 | 4,913,491 |
| | **Widowers** | 10 | 39,313 |
| | **Widows** | 52 | 317,360 |
| **Guernsey Post Limited** | **Men** | 47 | 451,077 |
| | **Women** | 4 | 10,861 |
| | **Widows** | 3 | 16,461 |
| **Guernsey Electricity Limited** | **Men** | 86 | 1,087,942 |
| | **Women** | 7 | 68,567 |
| | **Widows** | 4 | 17,599 |
| **Guernsey Financial Services Commission** | **Men** | 11 | 210,348 |
| | **Women** | 5 | 21,912 |
| | **Widows** | 1 | 7,935 |
| **Total** | **Men** | **1,700** | **23,792,137** |
| | **Women** | **1,355** | **11,289,380** |
| | **Widowers** | **46** | **155,450** |
| | **Widows** | **472** | **2,730,363** |

*Note: This excludes children's pensions.*

## Assets

The Fund's audited accounts for the year ended 31 December 2013 show its assets (excluding the States Members' Pension Fund) as £1,072,691,000. These can be categorised as follows:

| | Market Value (£'000) | % of Total |
|---|---|---|
| **Equities** | 588,394 | 55 |
| **Alternatives** | 190,926 | 17 |
| **UK Gilts** | 31,328 | 3 |
| **Corporate Bonds** | 135,753 | 13 |
| **Property** | 97,587 | 9 |
| **Cash and Net Current Assets** | 28,703 | 3 |
| **TOTAL** | **1,072,691** | **100** |

# Appendix D Assumptions for funding target

The assumptions used for assessing the **funding target** are summarised below.

## Financial Assumptions

| | |
|---|---|
| Discount rate | |
| - before retirement | 6.85% pa |
| - after retirement | 6.85% pa |
| Rate of UK price inflation | 3.6% pa |
| Rate of Guernsey price inflation | 3.85% pa |
| Rate of pay increases (excluding promotional increases) | 4.35% pa |
| Rate of pension increases – Teachers Scheme | 2.9% pa |
| Rate of pension increases – All Other Sections | 3.85% pa |
| Rate of deferred pension increases – Teachers Scheme | 2.9% pa |
| Rate of deferred pension increases – All Other Sections | 3.85% pa |

## Demographic Assumptions

**Post-retirement mortality**

- S2 "All" base tables for non-teachers, Guernsey Electricity Limited, Guernsey Post Limited and dependants allowing for future improvements in line with CMI_2013 Core Projections assuming a long-term annual rate of improvement in mortality rates of 1.5%
- S2 "Middle" base tables for male teachers allowing for future improvements in line with CMI_2013 Core Projections assuming a long-term annual rate of improvement in mortality rates of 1.5%
- S2 "Light" base tables for female teachers and Guernsey Financial Services Commission allowing for future improvements in line with CMI_2013 Core Projections assuming a long-term annual rate of improvement in mortality rates of 1.5%
- with the following scaling factors of:
    - Males – non-teachers, GEL, GPL 110%
    - Females – non teachers, GEL, GPL 100%
    - Males – teachers 100%
    - Females – teachers 80%
    - Dependants 95%
    - GFSC 100%

Using these tables implies the following life expectancies for a non-teacher who retires in normal health at age 65:

| Life expectancy at age 65 | Males | Females |
|---|---|---|
| **Current 65 Year Old** | 21.8 | 24.6 |
| **Current 45 Year Old, assuming survival to age 65** | 24.0 | 26.9 |

**Pre-retirement mortality**

Males: Standard table AMC00

Females: Standard table AFC00

**Early retirements**

Allowance has been made for retirements before the age of normal retirement by means of age related scales (see sample rates below).

**Ill-Health retirements**

Allowance has been made for ill-health retirements before the age of normal retirement by means of age related scales (see sample rates below). It has been assumed that 80% of ill health retirements will relate to total incapacity.

**Withdrawals**

Allowance has been made for withdrawals from service by means of age related scales (see sample rates below).

On withdrawal, for most sections of the Fund, 25% of members are assumed to leave a deferred pension in the Fund and 75% are assumed to take a refund of their own contributions to the Fund. For Teachers, 50% of members are assumed to leave a deferred pension in the Fund and 50% are assumed to take a refund.

Members are not assumed to exercise their option to take a **transfer value**.

**Family details**

Male members are assumed to be three years older than their spouses. Female members are assumed to be three years younger than their spouses.

85% of males and 75% of females are assumed to be married at retirement or earlier death.

**Commutation**

Each member is assumed to commute their pensions to the extent required to receive 75% of the maximum lump sum available to them.

**Promotional salary increases**

Allowance made for age-related promotional increases (see sample rates below).

**Expenses**

0.25% of Pensionable Pay added to the value of future benefit accrual.

**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.

**Sample rates**

The tables below illustrate the allowances made for withdrawals from service, early retirements and ill health retirements at various ages. Also shown is the allowance included for promotional pay increases, which is shown as the percentage increase over the next year.

| | Percentage leaving the Fund in the next year as a result of withdrawal from service | | | |
|---|---|---|---|---|
| Current age | **Established Staff, Teachers and GPL employees** | **Unestablished Staff** | **Police and Fire members** | **GEL employees** |
| 20 | 17.7 | 26.5 | 8.8 | 13.2 |
| 25 | 12.7 | 19.0 | 6.3 | 9.5 |
| 30 | 8.8 | 13.1 | 4.4 | 6.6 |
| 35 | 5.7 | 8.5 | 2.8 | 4.3 |
| 40 | 3.3 | 4.9 | 1.6 | 2.5 |
| 45 | 1.4 | 2.1 | 0.7 | 1.0 |
| 50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 55 | 0.0 | 0.0 | 0.0 | 0.0 |
| 60 | 0.0 | 0.0 | 0.0 | 0.0 |

| Current age | Percentage of Existing Members leaving the Fund in the next year as a result of retirement in normal health | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Established Staff** | **Male Un-established Staff** | **Female Un-established Staff** | **Police and Fire members other than Senior Officers** | **Teachers** | **GEL** | **GPL** |
| 50 | **0** | **0** | **0** | **40** | **0** | **0** | **0** |
| 51 | **0** | **0** | **0** | **20** | **0** | **0** | **0** |
| 52 | **0** | **0** | **0** | **20** | **0** | **0** | **0** |
| 53 | **0** | **0** | **0** | **20** | **0** | **0** | **0** |
| 54 | **0** | **0** | **0** | **20** | **0** | **0** | **0** |
| 55 | **0** | **0** | **0** | **100** | **0** | **0** | **0** |
| 56 | **0** | **0** | **0** | **100** | **0** | **0** | **0** |
| 57 | **0** | **0** | **0** | **100** | **0** | **0** | **0** |
| 58 | **0** | **0** | **0** | **100** | **0** | **0** | **0** |
| 59 | **0** | **0** | **0** | **100** | **0** | **0** | **0** |
| 60 | **50** | **30** | **55** | **100** | **75** | **60** | **67** |
| 61 | **10** | **7.5** | **7.5** | **100** | **30** | **15** | **15** |
| 62 | **10** | **7.5** | **7.5** | **100** | **30** | **15** | **15** |
| 63 | **10** | **7.5** | **7.5** | **100** | **30** | **15** | **15** |
| 64 | **10** | **7.5** | **7.5** | **100** | **30** | **15** | **15** |
| 65 | **100** | **100** | **100** | **100** | **100** | **100** | **100** |

GFSC employees are assumed to start to receive their pensions from age 60. Senior Officers in the Police and Fire sections and New Members are assumed to retire at their Normal Retirement Ages.

| Current age | Percentage leaving the Fund in the next year as a result of retirement in ill health | | | | | |
|---|---|---|---|---|---|---|
| | Male Established Staff | Male Unestablished Staff, Male Teachers | Female Established Staff, Female Un-established Staff, Female Teachers | GEL and GPL Employees | Male Police and Fire members | Female Police and Fire members |
| 30 | 0.01 | 0.01 | 0.00 | 0.01 | 0.05 | 0.01 |
| 35 | 0.01 | 0.01 | 0.00 | 0.01 | 0.05 | 0.01 |
| 40 | 0.05 | 0.03 | 0.02 | 0.03 | 0.18 | 0.03 |
| 45 | 0.10 | 0.07 | 0.03 | 0.07 | 0.41 | 0.07 |
| 50 | 0.21 | 0.14 | 0.07 | 0.14 | 0.86 | 0.14 |
| 55 | 0.50 | 0.33 | 0.17 | 0.33 | 0.00 | 0.00 |
| 60 | 1.88 | 1.25 | 0.63 | 1.25 | 0.00 | 0.00 |

The assumption for ill health retirements is set to zero at the point at which normal retirement is assumed.

Age retirement and ill health retirement rates apply to active members of the Fund only, current deferred pensioners are assumed to start to receive their pensions immediately on reaching their normal retirement ages.

| Current age | Percentage promotional pay increase over year | |
|---|---|---|
| | Established Staff, Teachers, Police and Fire members, GEL and GPL Employees | Unestablished Staff |
| 20 | 9.1 | 3.1 |
| 25 | 5.6 | 1.1 |
| 30 | 4.3 | 0.5 |
| 35 | 3.9 | 0.5 |
| 40 | 3.5 | 0.5 |
| 45 | 3.2 | 0.5 |
| 50 | 0 | 0 |
| 55 | 0 | 0 |
| 60 | 0 | 0 |

# Appendix E General background

This Appendix explains the background to actuarial valuations.

## Background to valuations

The finances of a pension scheme fluctuate in response to both external and internal factors. Money continually flows into the scheme as contributions and investment income and flows out of the scheme as benefit payments. The main purposes of the actuarial valuation are to review the scheme's finances and to recommend the rate at which the employers contribute to the scheme in the future.

The actuarial valuation involves calculations which compare the scheme's assets with a **funding target**. The **funding target** calculations assess the value of the benefits that will be paid from the scheme in the future using information about the scheme at the valuation date.

## The information used in a valuation

The information about the scheme which is used in the actuary's calculations is as follows:

- Details about its members, supplied by the scheme's administrator
- Information about the assets, from the scheme's audited accounts
- The rules of the scheme which define the member's benefit entitlements

There are other factors which will have an influence on the scheme's finances in the future. These include:

- Investment returns
- Pay increases
- Pension increases
- When members will retire
- How long members will live

The actuary makes assumptions about how these factors will behave in the future and uses these assumptions to put present values on the scheme's assets and liabilities.

## The valuation process and the actuarial report

The valuation is carried out by a scheme's actuary. The main results of the actuarial valuation are:

- An assessment of the surplus or shortfall in the scheme at the valuation date, which shows how the scheme's assets compare to its **funding target**
- The long term cost of providing the scheme's benefits
- The actuary combines the results of these two calculations to estimate the contributions needed to meet the scheme's **funding target** in the future. This may be lower or higher than the long term cost in order to adjust for the past service surplus or shortfall.

## What happens next?

The pension scheme's legal documents will set out the process which must be followed to agree the rate of contribution which the employers pay to the scheme.

The results of the valuation will also be used to decide whether the investment policy needs to change. This is because as part of the report, the actuary is required by professional guidance to highlight any particular investment risks. These are useful pointers to consider as part of any investment review.

# Appendix F Glossary

## Attained Age Method (AAM)

This is one of the common methods used by actuaries to estimate the cost of future benefits from a pension scheme. This method calculates the cost of the benefits expected to accrue to members over their expected remaining membership of the scheme expressed as a percentage of their expected future pensionable pay. It allows for projected future increases in pay through to retirement or date of leaving service. The method is based on the current membership and takes no account of the possibility of further members joining the scheme. If there are no new members, this method would be expected to result in a stable contribution rate, once surpluses or deficits are taken into account. However if more members join the scheme to replace older leavers, the contribution rate can be expected to fall if all the other assumptions are borne out in practice.

## Defined accrued benefit method

This is one of the common methods used by actuaries to calculate a recommended contribution rate for a pension scheme. This method calculates the **present value** of benefits expected to accrue to members over a period (often one year) following the valuation date. The **present value** is usually expressed as a percentage of the members' pensionable pay. The accruing benefits are calculated on the assumption that the scheme is discontinued, firstly at the valuation date and then secondly at the end of the relevant period after the valuation date, allowing for pay increases over the period. **Present values** are, however, calculated on the assumption that the scheme is ongoing. Provided that the distribution of members remains stable with new members joining to take the place of older leavers, the contribution rate calculated can be expected to remain stable, if all the other assumptions are borne out. If there are no new members, however, the average age will increase and the cost of the benefits accruing will rise.

## 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 gilt-edged stock. A **discount rate** higher than the "risk-free" rate is often used to allow for some of the extra investment return that is expected by investing in assets other than gilts.

## Funding ratio

This is the ratio of the value of assets to the **funding target**.

## Funding surplus

This is the value of assets less the **funding target**. If the **funding target** is greater than the value of assets, then the difference is called the **funding shortfall**.

## Funding shortfall

This is the **funding target** less the value of assets. If the value of assets is greater than the **funding target,** then the difference is called the **funding surplus**.

## Funding target

This is defined individually for each scheme. Often, the **funding target** is the actuarial value of the past service ongoing liabilities calculated as the **present value** of members' benefits based on pensionable service to the valuation date. It allows for projected future increases to pay through to retirement or date of leaving service.

Under the **defined accrued benefit method** it is the **present value** of the benefits which members are entitled to based on service completed to the valuation date and on the assumption that the scheme is discontinued. In the case of a final salary scheme this means that no allowance is made for future pay increases. It also includes the value of the benefits for members who have already left service ie pensioners and deferred pensioners.

## Present value

Actuarial valuations involve 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 6% a year and if we had to pay a lump sum of £1,060 in one year's time the **present value** would be £1,000.

## Projected Unit Method (PUM)

One of the common methods used by actuaries to calculate a contribution rate for a pension scheme. This method calculates the **present value** of the benefits expected to accrue to members over a control period (often one year) following the valuation date. The **present value** is usually expressed as a percentage of the members' pensionable pay. It allows for projected future increases to pay through to retirement or date of leaving service. Provided that the distribution of members remains stable with new members joining to take the place of older leavers, the contribution rate calculated can be expected to remain stable, if all the other assumptions are borne out. If there are no new members however, the average age will increase and the contribution rate can be expected to rise.

## Transfer Value

Members generally have a legal right to transfer their benefits to another pension arrangement before they retire. In taking a transfer, members give up their benefits in the scheme, and a sum of money (called the **transfer value**) is paid into another pension scheme, which then provides the member with pension benefits.

## Actuarial valuation as at 31 December 2013

We have carried out an actuarial valuation of the States Members Pension Fund as at 31 December 2013. The valuation has been carried out on broadly the same actuarial basis as the Superannuation Fund valuation.

## Developments since the previous valuation

The States Members New Scheme closed to new members and to future accrual with effect from 1 May 2012. All active members of the Scheme became deferred pensioners on this date.

Previously we had assumed an active States Member would retire at age 70. However as a deferred member, we assume the member would start to receive their pension at age 65. The effect of the closure is therefore to place a higher value on the liabilities.

## Funding 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 (set in the same way as for the Superannuation Fund but with a **funding target** of 100%). 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** | 2,219 | |
| **Pensioners and dependants** | 3,406 | |
| **Funding target** | | 5,625 |
| **Market value of the assets** | | 3,806 |
| **Funding (shortfall)** | | (1,819) |
| **Funding ratio** | | 67.7% |

The States Members Pension Fund has a **funding shortfall** of £1,819,000 relative to the **funding target** of £5,625,000 and a **funding ratio** (assets as a proportion of the **funding target**) of 67.7%.

## Change in funding position

At the previous valuation the States Members Pension Fund had a **funding shortfall** of £1,304,000. The funding position has therefore worsened by £515,000 since the previous valuation. This is mainly due to the interest on the previous shortfall, the investment return being lower than expected and the change in the assumed age members will start to receive their pensions due to the Fund closure.

## 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 to benefit accrual. The shortfall will need to be met by capital payments. The fixed annual contributions which would be required to meet the **funding shortfall** if the contributions were spread over 5, 10, 15, 20, 25 or 40 years from 1 January 2014 are shown in the table below.

| Fixed period (years) | Contributions per annum (£) |
|---|---|
| **5** | 427,000 |
| **10** | 249,000 |
| **15** | 191,000 |
| **20** | 164,000 |
| **25** | 149,000 |
| **40** | 130,000 |