Public Employees Contributory Retirement Scheme (PECRS)

Actuarial Valuation at 31 December 2007

2 July 2009

Prepared for

The PECRS Committee of Management

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Executive Summary

Valuation results

We have carried out a valuation of the Public Employees Contributory Retirement Scheme (PECRS) (the Scheme) as at 31 December 2007. The purpose of the valuation is to review the operation of the Scheme since the previous valuation, and to report on the financial condition of the Scheme and the adequacy or otherwise of the contributions to support the benefits of the Scheme.

The main conclusions from the valuation are that:

- **There is a past service surplus of £30.7M as at 31 December 2007**
- **However the anticipated future contributions are less than the value of future service benefits in respect of active members as at 31 December 2007 by £93.9M**
- **Putting these two elements together, the Scheme's overall deficiency as at 31 December 2007, expressed as a capital sum, is £63.2M, equivalent to a funding ratio of 95.5%**

Funding methodology review

A report on the review of the Scheme's funding methodology was made to the Committee of Management in June 2008. The three recommendations we made in that report were adopted by the Committee of Management and passed to the States Employment Board for consultation. The States Employment Board endorsed the proposed funding approach and the use of best-estimate assumptions. The third recommendation, to apply a funding corridor strategy for determining whether or not a deficiency or surplus disclosed at a valuation should be carried forward, remains under discussion between the parties.

Next steps

We understand that agreement on proposals to deal with the deficiency of £63.2M has not yet been reached. Discussions will now need to take place in accordance with the timetable under the Regulations set out in the Summary and Conclusions section of this report.

Contents

1. Introduction

Legislation

In accordance with Article 3(3) of the Public Employees (Retirement) (Jersey) Law, 1967 and Regulation 6(1) of the Public Employees (Contributory Retirement Scheme) (General) (Jersey) Regulations, 1989 we have carried out a valuation of the Public Employees Contributory Retirement Scheme (the Scheme) as at 31 December 2007.

Under the legislation, valuations of the Scheme are required at least once every five years. However, it is the policy of the Committee of Management to require valuations once every three years so as to keep the finances of the Scheme under more frequent scrutiny.

The results of the valuation are based on the Regulations of the Scheme in force at the date of signature of this report.

Purpose

The purpose of the valuation is to review the operation of the Scheme since the previous valuation, and to report on the financial condition of the Scheme and the adequacy or otherwise of the contributions to support the benefits of the Scheme.

Previous valuation

Our previous valuation report dated 13 March 2006 considered the financial position of the Scheme as at 31 December 2004. The valuation reports dated 23 November 2006 and 7 July 2006 considered respectively the financial position of the Jersey Post Limited (JPL) and Jersey Telecom Limited (JTL) sub-funds as at 31 December 2004.

Contributions since the previous valuation

Since the previous valuation contributions have continued to be paid at the rates specified in the Scheme's Regulations from time to time. The contributions that have been paid in respect of JPL and JTL employees are set out in Appendix P and Appendix Q respectively.

Next valuation

In accordance with the policy of the Committee of Management, the next valuation is due to be carried out as at 31 December 2010.

A snapshot view

The report concentrates on the Scheme's financial position at the valuation date. As time moves on, the Scheme's finances will fluctuate. If you are reading this report some time after it was produced, the Scheme's financial position could have changed significantly.

Words used

Our report includes some technical pension terms. The words shown in **bold print** are explained further in the glossary.

For brevity, we have also used the following shorthand:

Shorthand	What it means
Salaries, Service	As defined in the Regulations
Regulations	See Appendix C
Scheme	Public Employees Contributory Retirement Scheme
Valuation date	31 December 2007

Legal and actuarial framework

The report is prepared for the Committee of Management. It meets professional guidance requirements, and was peer-reviewed by another actuary. Please see Appendix A for further details.

2. What's Happened Since the Previous Valuation

Purpose of section

This section summarises what has happened since the previous valuation.

Key developments

The financial health of the Scheme depends fundamentally on how much cash is paid in, how well the assets perform, and on what benefits are paid out. The key developments since the previous valuation therefore include:

- The amount of contributions paid to the Scheme.
- The actual returns on the Scheme's investments.
- Whether there are changes to future expectations of benefit payments or investment returns.

These items are discussed later in this report (sections 4 and 6). As well as these high level points, please note the developments below.

Pre-1987 debt

In 2003, agreement was reached between the Policy and Resources Committee (Act of Committee dated 20 November 2003) and the Committee of Management for dealing with the pre-1987 debt. By "pre-1987 debt" we mean the shortfall transferred to the Scheme arising from the changes made to the Scheme in 1987.

The contribution framework agreed between the Policy & Resources Committee and the Committee of Management for dealing with the pre-1987 debt was as follows:

1. The employers' overall contributions were increased with effect from 1 January 2002, from 15.16% to the equivalent of 15.60% of members' salaries.
2. Of this sum, the equivalent of 2.0% of members' salaries has been converted into a cash sum increasing each year in line with average pay awards for PECRS members, payable for 82 years (this stream of payments being earmarked to pay off the pre-1987 debt). On this basis, the employers' contribution rate was re-expressed with effect from 1 January 2002 as 13.60% of members' salaries, plus an appropriately defined indexed cash sum paid over a finite period.
3. After 82 years, the employers' contribution rate is due to revert to 15.16% of members' salaries.

Full details of the agreement are included in Appendix M.

The provisions of the agreement were reflected in changes to the Scheme's Regulations approved by the States of Jersey on 27 September 2005.

Jersey Financial Services Commission

On 15 June 2005, the Jersey Financial Services Commission paid its share of the pre-1987 debt, through a lump sum payment of £1,540,723.

Amendments to Regulations with effect from 1 January 2006

Following the valuation of the Scheme as at 31 December 2001 where a deficiency was disclosed, it was agreed that for members who first entered employment on or after 1 January 2006 the benefit structure would be modified so that reduced benefits are payable on retirement before normal retirement age. The amendments to the Regulations were approved by the States on 27 September 2005.

Details of the amendments made are given in Appendix C.

Jersey Post Limited

Jersey Post Limited (JPL) has participated in the Scheme as an Admitted Body with effect from 1 July 2006, under an agreement including a notional ringfencing of the assets and liabilities attributable to its employees.

A Terms of Admission document, dated 10 May 2007 and agreed between JPL, the Chief Minister and the Committee of Management, describes how the contributions to and assets of JPL's notional sub-fund are to be determined under the ringfencing approach.

A lump sum contribution of £12.3M was paid into the Scheme on 3 July 2006. This represents JPL's share of the pre-1987 debt as described above.

Under the Terms of Admission document a separate **funding target** applies for JPL and, recognising this, a separate employer contribution rate applies to them also.

The contribution rate is subject to regular reassessment and recertification following the completion of each Scheme valuation. Recognising this, the benefits, contributions and assets attributable to the JPL membership are excluded from the main valuation. We comment on the results of the separate JPL sub-fund valuation in Appendix P.

Jersey Telecom Limited

Jersey Telecom Limited (JTL) has participated in the Scheme as an Admitted Body since 1 January 2003, initially under a Terms of Admission document dated 19 August 2003. A revised Terms of Participation document, dated 10 May 2007 and agreed between JTL, the Chief Minister and the Committee of Management, describes how the contributions and assets of JTL's notional sub-fund are to be determined under the ringfencing approach.

A lump sum contribution of £14.6M was paid into the Scheme on 19 August 2003. This represents JTL's share of the pre-1987 debt as described above.

Under the Terms of Participation document a separate **funding target** applies for JTL and, recognising this, a separate employer contribution rate applies to them also.

In the same way as for JPL, the benefits, contributions and assets attributable to the JTL membership are assessed separately and excluded from the main valuation. We comment on the results of the separate JTL sub-fund valuation in Appendix Q.

Other amendments

A number of other minor amendments have been made to the Regulations but none of these changes have had a material impact on the funding position of the Scheme.

Employer changes

With effect from 9 December 2005, the functions of the Policy and Resources Committee in relation to the Scheme were transferred to the Chief Minister of the States. From the same date, the States employer for the purposes of the Scheme changed to the States Employment Board.

3. Information Used

Key information

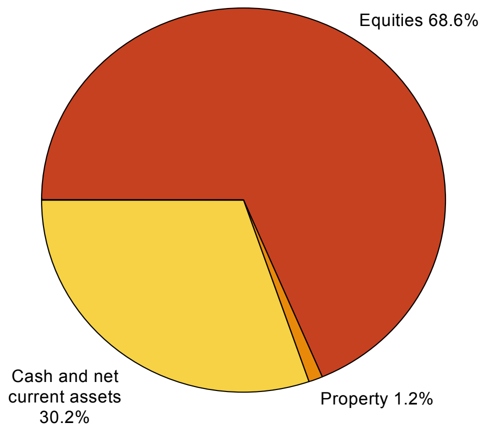
To carry out the valuation, we have obtained information on:

- The assets held by the Scheme.
- How benefit entitlements are calculated.
- Member data.

This section sets out a high level summary of the information used. Further details are included in Appendices B, C, D, N and O.

Assets

The Scheme's assets had an audited market value of £1,182.5M at the valuation date, split as follows:



The value of assets notionally attributed to JTL's and JPL's employees at 31 December 2007 were £46.7M and £31.5M respectively. The Scheme also holds insurance policies worth £0.8M.

After disregarding the assets notionally attributed to JTL's and JPL's employees and adding in the value of the Scheme's insurance policies, the value of Scheme assets taken into account for the purposes of this valuation was £1,105.1M.

For further details, please see Appendix B.

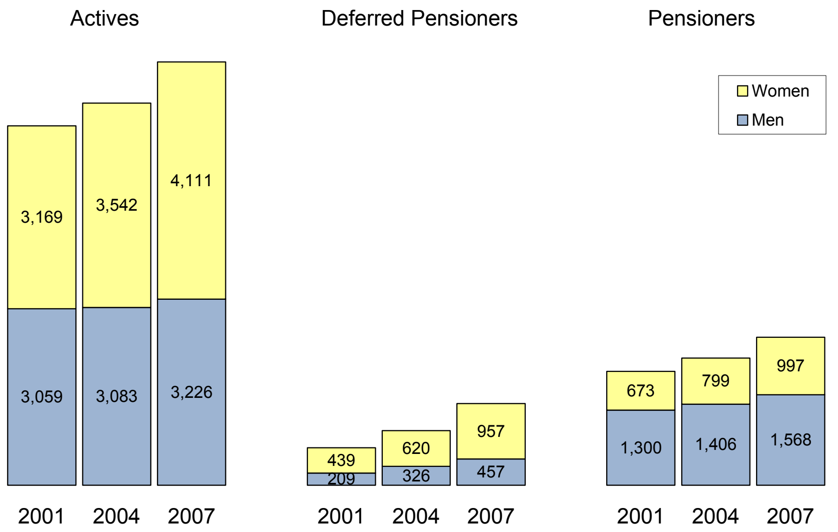
Benefits valued

Members are entitled to benefits defined in the Regulations. We are not aware of any established practice of granting additional discretionary benefits and no allowance for such benefits has been made in this valuation. A summary of the benefits valued is set out in Appendix C.

Membership data

The valuation calculations use membership data supplied by the Dedicated Pensions Unit of the States Treasury Department at 31 December 2007.

The following chart illustrates how the membership profile (including JTL and JPL active members) is evolving. Please see Appendix D for a more comprehensive summary of the data excluding JPL and JTL active members. Summaries of the JPL and JTL active member data are set out in Appendices N and O respectively.



Note: The number of pensioners shown in the above illustration excludes spouses and dependants.

The illustration shows that there has been an increase in the number of members in each of the membership categories since the last valuation.

Reliability of information

We have carried out general checks to satisfy ourselves that:

- The information used for this valuation is sensible compared with the information used for the previous valuation.
- The results of this valuation can be traced from the results of the previous valuation.

However, the results in our report rely entirely on the accuracy of the information supplied.

4. Valuation Approach

Adequacy of contributions

The contributions to the Scheme are specified in the Regulations governing the Scheme and are paid so as to provide the benefits which will become payable to members when they retire or otherwise leave the Scheme.

The factors affecting the Scheme's finances are open to changing circumstances. Consequently it is necessary to review the operation of the Scheme from time to time, by means of an actuarial valuation, to determine the adequacy or otherwise of the contributions to support the benefits payable under the Scheme.

Funding target and funding objective

In our review we start with the known facts about the Scheme at the valuation date, i.e. the benefit and contribution structure, the membership and the assets. We then must make assumptions about the factors affecting the Scheme's future finances such as investment returns, pay increases and rates of mortality, leaving service and retirement.

For the purpose of assessing whether the contributions are adequate to support the current benefits, it is appropriate to set a "**funding target**" and "funding objective".

The terms "surplus" and "deficiency" are referred to in the Scheme's Regulations but are not explicitly defined. In practice, we say there is a surplus if the **funding target** is more than fully met and we say there is a deficiency if the **funding target** is less than fully met.

After receiving and taking account of advice from ourselves as Actuary, the Committee of Management determined the following **funding target** and funding objective:

- The **funding target** is that, based on best-estimate assumptions, the assets and future contributions should be sufficient over the long term to support the benefits payable from the Scheme in respect of the current members of the Scheme.
- The funding objective is that the **funding target** should be met and that any variations in outcome should be dealt with following each valuation in accordance with the PECRS Regulations, by adjustments to contributions and/or benefits or by carrying forward surpluses and deficiencies where appropriate.

For the purposes of assessing suitable assumptions, the Committee of Management agreed that the Actuary should make allowance for continued future investment in return-seeking assets, such as equities, by assuming that pre-retirement liabilities will be backed ⅔ by return-enhancing assets and ⅓ risk-reducing assets and that post-retirement liabilities will be backed ⅓ by return-enhancing assets and ⅔ by risk-reducing assets.

Changes from previous valuation

We carried out a review of the Scheme's funding methodology and a report was made to the Committee of Management in June 2008. The key recommendations of our report were:

- to use the funding approach described above for future valuations; and
- to use best-estimate assumptions for future valuations; and
- to use a funding corridor strategy for determining whether or not a deficiency or surplus disclosed at a valuation should be carried forward.

These recommendations were adopted by the Committee of Management and passed to the States Employment Board for consultation. The States Employment Board endorsed the first two recommendations. The third recommendation, to apply a funding corridor strategy, remains under discussion between the parties.

The **funding target** and funding objective reflect the first two recommendations referred to above. The **funding target** and funding objective are the same as those for the previous valuation except that at the previous valuation, the **funding target** allowed for a continued flow of new entrants to the Scheme over the indefinite future. The **funding target** is now based on the ability of the Scheme to support the benefits of current members and the financing of future new entrants' benefits is considered in isolation as a separate item.

The rationale for using best-estimate assumptions is discussed in Appendix E.

Valuation methods

A description of the methods used for the main valuation calculations, and for the separate JPL and JTL sub-fund valuations, is set out in Appendix F. This includes a description of the separate **funding target** and funding objective which apply for the JPL and JTL sub-fund valuations.

Valuation assumptions

The results of a valuation are very sensitive to the assumptions made. The financial assumptions have a significant effect on the results of a valuation. However, the other assumptions, particularly the mortality assumptions, are also very important.

Use of market-led financial assumptions

In both this and the previous valuation of PECRS we have adopted a market-led approach, which involves:

- market-led financial assumptions for valuing the liabilities, future contributions and future pre-1987 debt repayment supplements.
- valuing the assets at market value.

Key financial assumptions

The following table shows the key financial assumptions used for this valuation, with the assumptions used for the previous valuation shown alongside for comparison. 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.

We have derived the **discount rates** prior to and after retirement by adding margins of 2.4% p.a. (before retirement) or 1.4% p.a. (after retirement) over the returns available on index-linked gilts at the valuation date. These margins reflect our best estimate of the out-performance the Scheme may obtain through the assets assumed to be held.

The derivation of financial assumptions in this way is compatible with taking assets at market value.

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	Net of UK price inflation 2007 %	Net of UK price inflation 2004 %
Discount rate (investment return):		
■ For valuing liabilities over the period prior to retirement and for valuing future service contributions	3.50	3.75
■ For valuing liabilities over the period after retirement	2.50	2.75
■ For valuing future debt repayment supplements	2.95	3.75
Increases to pensions in payment and deferred pensions (Jersey price inflation)	0.25	0.00
General salary increases (in addition to promotional increases)	1.50	1.25

Full details of the financial assumptions used for this valuation, and the reasons for the changes compared to the previous valuation, are set out in Appendix G to this report. Before finalising our choice of assumptions, we have taken account of the views of the Committee of Management regarding future pay and price inflation in Jersey.

Comparison of financial assumptions with 2004 valuation

Overall (ignoring any changes to the demographic assumptions), the financial assumptions we have used result in a higher deficiency than if the assumptions used for the 2004 valuation had been retained. The main reasons for this are:

- The higher assumed increases to pensions in payment, deferred pensions and general salary increases. This in turn arises from the increase to the assumption made for Jersey price inflation
- The reductions to the **discount rates** used to value the liabilities.

The effect of these changes, which serve to increase the deficiency, has been countered to an extent by the effect of the reduction in the **discount rate** used to value the pre-1987 debt contributions.

Demographic assumptions

Other important assumptions used to value the liabilities include:

- the assumed future rates of mortality
- the allowance made for the extent to which members will choose to exchange pension for a cash lump sum at retirement (at the rate of £13.50 cash lump sum for each £1 annual pension given up)
- the allowance for additional increases to salaries due to promotion, service or seniority
- the allowance made for the range of ages at which members in each membership category will retire in future.

Comparison of demographic assumptions with 2004 valuation

We have reviewed the extent to which the demographic assumptions adopted for the 2004 valuation of the Scheme remain appropriate for the current valuation as at 31 December 2007 after analysing the experience of PECRS during the 3 years 2005-2007 and taking account of other relevant data. Full details of the demographic assumptions used for this valuation, and the reasons for any changes compared to the previous valuation, are set out in Appendix H to this report.

In the light of this review we have made a number of changes to the demographic assumptions. The overall effect is to increase the deficiency. The most financially significant change we have made is to change the assumed future rates of mortality in retirement, reflecting improvements in life expectancy.

General comments on the assumptions

In our opinion, the financial and demographic assumptions, taken as a whole, are an entirely reasonable best-estimate basis for assessing the funding of the Scheme.

Interaction with transfer value terms

We are required by Guidance Note GN9 issued by the Board for Actuarial Standards to comment on the Scheme's ability to pay transfer values if the Scheme were fully funded up to the **funding target** at the valuation date. We estimate that (excluding any allowance for expenses) transfer values could have been met in full for all members. This calculation assumes hypothetically that all active members left service on the valuation date and also allows for transfer values hypothetically to be payable in relation to pensioners (as well as active members and deferred pensioners) even though in practice the Scheme's Regulations would not permit this.

5. Valuation Results

Summary of results in monetary terms

A detailed breakdown of the results of the main valuation calculations is given below. The results of the JPL and JTL sub-fund valuations are set out in Appendices P and Q.

The past service position as at 31 December 2007 is as follows:

	£M
Value of past service benefits:	
For current pensioners	600.7
For current deferred pensioners	99.4
For current non-JTL/JPL active members	598.9
	1,299.0
Less:	
Value of assets (excluding JTL/JPL asset shares)	1,105.1
Value of future "pre-1987 debt contributions"	224.6
	1,329.7
Past service (shortfall)/surplus	30.7

The future service position as at 31 December 2007 is as follows:

	£M
Value of future service benefits for current non-JTL/JPL active members	523.6
Less:	
Value of future contributions due in respect of current non-JTL/JPL members	
— at the employer's rate of 13.6% of payroll	310.5
— contributions paid by members	118.4
Future service (shortfall)/surplus for current members	(94.7)
Additional contributions in respect of Emergency Ambulance Service	0.8
Total future service (shortfall)/surplus	(93.9)

The anticipated future contributions fall short of the value of future service benefits by £93.9M.

Putting this element together with the past service surplus of £30.7M, the overall deficiency as at 31 December 2007, expressed as a capital sum, is £63.2M. This is equivalent to a **funding ratio** of 95.5%.

Employers' new entrant rate

The global employers' contribution rate that would be required to finance benefits for future new entrants (the "new entrant rate") is 15.51% of members' salaries. Further details of the calculation of the new entrant rate are given in Appendix J.

The new entrant rate exceeds the employers' contribution rate of 13.6% of salaries provided for in the Regulations. This means that on the assumptions adopted, the continued admission of new entrants can be expected to result in a strain on the finances of the Scheme. An illustration of the potential impact on the valuation deficiency is set out in Appendix J.

6. Comments on Valuation Results

Development of the Scheme's financial position

In this section we demonstrate how the Scheme's financial position has developed since the previous valuation.

We start with the result quoted in the formal report on the previous valuation, which showed a deficiency of £17.4M.

Positive and negative effects

In the context of a deficiency, positive (+) and negative (-) effects shown in the following analysis of the development of the Scheme's financial position since the previous valuation are interpreted as follows:

- a positive effect increases the extent of the deficiency
- a negative effect reduces the extent of the deficiency.

Change in methodology

As noted in section 4, there has been a change in the funding objective being adopted for this valuation. If this change had been made at the previous valuation, the deficiency would have increased by £45.8M to £63.2M.

Scheme experience

We have calculated that over the 3 years since the previous valuation, Scheme experience has been favourable, creating a reduction in the deficiency of £163.3M. We have broken down the overall experience effect into the following broad constituents:

	Effect on deficiency £M
a) investment returns having been higher than assumed	-171.5
b) effect of difference between actual and expected salary increases (including promotional increases) on liabilities	+20.4
c) effect of difference between actual and expected pension increases	+11.4
d) effect of difference between actual and expected salary increases on future pre-1987 debt repayments	-9.0
e) effect of difference between actual and expected ill-health retirement experience	-8.6
f) effect of approximations in this analysis, and other experience items	-6.0
Total impact of the Scheme experience	**-163.3**

Changes in assumptions

Since the previous valuation there have been a number of changes to the assumptions, which have an overall effect of increasing the deficiency by £150.7M. We have broken this effect down into the following items:

	Effect on deficiency £M
a) change in financial assumptions on liability valuation	+122.1
b) change in financial assumptions for valuing pre-1987 debt contributions	-89.1
c) change in allowance for withdrawals	+2.0
d) change in allowance for ill-health retirements	-34.0
e) change in assumed mortality rates after retirement	+152.0
f) reduction in allowance for expenses	-2.3
Total impact of changes in assumptions	**+150.7**

Further details of the changes to the assumptions are shown in Appendices G, H and I.

Overall summary

In summary, the change in the deficiency is analysed as follows:

	Effect on deficiency £M
Valuation deficiency at 31 December 2004	17.4
Adjustment for change in methodology	+45.8
Interest on adjusted valuation deficiency	+12.6
Scheme experience	-163.3
Changes in assumptions	+150.7
Valuation deficiency at 31 December 2007	**63.2**

A more detailed analysis, separately identifying the effect on the past service position and future service position, is set out in Appendix K.

Dealing with the deficiency

The deficiency will need to be dealt with in accordance with the terms of the Scheme's Regulations. This could be done by making good the deficiency:

a) by increases to the contributions of employers, or

b) by increases to the contributions of current or future members, or

c) by reductions in future pension increases, or

d) by reductions in the benefits of current or future members, or

e) by a combination of more than one of these things.

Alternatively, there is scope under the Scheme's Regulations for a deficiency to be carried forward if it appears to be of a temporary nature.

The Regulations governing the Scheme also require us to include a recommendation as to what reduction to future pension increases should be made by the Committee of Management in the event that agreement is not reached with the Principal Employer (the Chief Minister) on proposals to deal with the deficiency. The process and timescales required for agreement are set out in Section 9 of this report.

In the event that agreement is not reached within the required timescale, we recommend that all future increases to pensions and deferred pensions due on or after 1 January 2011 be reduced so that they are based on the annual increase in the Jersey Cost of Living Index minus an "offset factor". In this situation, we would need to carry out accurate calculations to confirm the "offset factor" but we estimate it to be 0.3% p.a., i.e. future pension increases each year would be 0.3% below the annual increase in the Jersey Cost of Living Index.

In this situation, members covered by the 1967 Regulations and FHS Regulations (defined within Appendix C) would be unaffected, as they are protected by a States guarantee and accordingly the States would be required to top up their pensions to ensure full indexation is maintained.

7. Accrued Benefits Test

Reason for accrued benefits test

Even though the Regulations governing the Scheme do not envisage the possibility of the Scheme being discontinued (i.e. the future accrual of benefits and payment of contributions into the Scheme being discontinued), we are required by Guidance Note GN9 issued by the Board for Actuarial Standards to check what the financial position of the Scheme would have been had discontinuance occurred on the valuation date. This is done by comparing the value of the basic accrued benefits as at 31 December 2007 with the market value of the Scheme's existing assets at that date.

Definition of basic accrued benefits

By basic accrued benefits we mean:

a) benefits in respect of current pensioners and their spouses and dependants.

b) retirement and death benefits in respect of former employees entitled to deferred pensions.

c) accrued retirement and death benefits in respect of current members (including JTL and JPL members) based on pensionable pay at 31 December 2007, no allowance being made for pay increases after that date.

We have taken the value of the basic accrued benefits on discontinuance at the valuation date as an estimate of the terms that might be offered by insurance companies for determining the cost of immediate and deferred annuities, plus a provision to cover expenses.

Although the liabilities may be too large to buy out in the market, we are nevertheless required by Guidance Note GN9 to indicate the degree of cover that would apply if the market had the capacity for the Scheme to effect a buy-out. In practice, if the Scheme were ever to be discontinued, it is possible that the Scheme would continue as a closed fund.

Assumptions

In setting the assumptions for the accrued benefits test we have taken into account actual buy-out terms available in the market at the valuation date. However, we have not carried out a detailed analysis of the cost of risks that might apply specifically to the Scheme and so our estimate is only a guide. Market changes to both interest rates, and demand and supply for this type of business, mean that no reliable estimate can be made, and that ultimately the actual true position can only be established by completing a buy-out.

We have set the **discount rate** for this estimate equal to:

- Current pensioners: the yield on gilts of appropriate term at the valuation date plus 0.5% per annum

- Future pensioners: the yield on gilts of appropriate term at the valuation date (this applies over the period before and after retirement).

The allowance we have made for expenses is separate.

We have made an allowance for increases to pensions before and during payment in line with the UK Retail Prices Index. This differs from the provisions under the Regulations governing the Scheme, which provide for annual increases in line with the Jersey Cost of Living Index (although those are not guaranteed where an actuarial review has disclosed that the financial condition of the Scheme is no longer satisfactory).

The reason we have not made allowance for increases in line with the Jersey Cost of Living Index is that, based on the principles an insurer might use, these would be, at best, extremely expensive, and at worst, impossible to reserve for, as there are no available assets which match the increases in the Jersey Cost of Living Index. Therefore, it is unlikely to be possible to purchase annuities based on such increases in the market.

More details on the assumptions used for the accrued benefits test are set out in Appendix L.

Accrued benefits test results

We have considered the accrued benefits position on the assumption that in the event of the Scheme's discontinuance the capitalised value of the outstanding pre-1987 debt contributions would be assessed at the point of discontinuance and would be paid off in full by the States of Jersey at that point or over a period of time. This is consistent with the agreed arrangements for dealing with the pre-1987 debt, as set out in Appendix M.

The results of the accrued benefits valuation are as follows:

	£M	£M
Market value of assets	1,183.3	
Value of pre-1987 debt	224.6	
Total value of assets = A		1,407.9
Total value of accrued benefits (including expenses) = L		1,737.8
Discontinuance funding ratio = A/L		81%

Even after allowing for the outstanding pre-1987 debt contributions to be paid off in full by the States of Jersey, the Scheme's assets are therefore insufficient to cover the cost of members' accrued benefits together with pension increases in line with UK inflation in this hypothetical situation.

If the **funding target** had been exactly met on the valuation date, the discontinuance funding ratio, calculated as above, would have been 85%.

Comparison with accrued benefits test at previous valuation

The discontinuance funding ratio of 81% compares with a corresponding ratio of 69% at the previous valuation. The improvement is primarily due to better than assumed asset returns and to reductions in the estimated costs of buying out benefits with an insurance company. These factors have more than offset the effect of reductions to gilt yields.

Development of accrued benefits coverage allowing for future contributions

Based on assumptions consistent with the above test, we expect that payment of the contributions and pre-1987 debt repayment supplements defined in the Regulations will be sufficient to keep the overall proportion of accrued benefits covered by the Scheme's assets at broadly the above level.

Priority order

Under Guidance Note GN9 it would generally be appropriate in a valuation report to comment on the level of coverage for different classes of members' benefits in the event of hypothetical discontinuance of the pension scheme, based on the priority accorded to different classes of benefit. In the case of PECRS this is not possible, as the Regulations do not envisage the Scheme being discontinued and so no such priority order exists for consideration.

8. Risks and Sensitivity Analysis

Purpose of section

We are now required by Guidance Note GN9 issued by the Board for Actuarial Standards to comment on the key risks faced by the Scheme and the sensitivity of the funding position to those risks.

In line with the requirements of Guidance Note GN9, this section concentrates on the deterioration to the Scheme's finances that may arise in various hypothetical downside scenarios (where the actual experience is less favourable than the assumptions made at this valuation). However, as the assumptions used to determine the **funding target** are best-estimate assumptions, it needs to be recognised that upside scenarios (where the experience is more favourable than the assumptions) are just as likely.

Key risks

Here is a recap of some of the key factors that could lead to deficiencies in future:

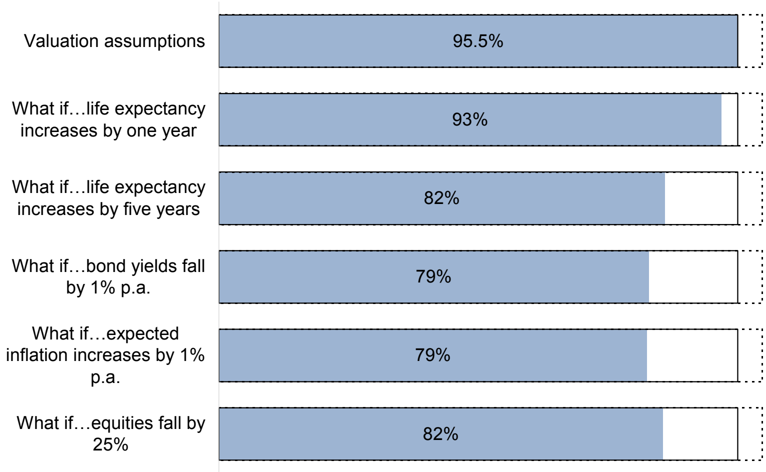
- Investment performance—the return achieved on the Scheme's assets may be lower than allowed for in the valuation.
- Investment volatility—the assets may not move in line with the value of benefits. The Scheme invests in assets (e.g. equities) that are expected to achieve a greater return than the assets (i.e. index-linked gilts and investment grade derivatives) that most closely match the expected benefit payments. The less matched the investment strategy is, the greater the risk that the assets may not move in line with the value of benefits.
- Mortality—members could live longer than foreseen, for example, as a result of a medical breakthrough. This would mean that benefits are paid for longer than assumed, resulting in a higher cost of providing the benefits.
- Options for Members—members may exercise options resulting in unanticipated extra costs. For example, members could swap less of their pension for cash at retirement than is assumed.

Quantifying the risks

To help the Committee of Management understand the susceptibility of the funding position on the valuation assumptions, we have considered the hypothetical impact on the **funding ratio** of the following one-off step changes.

- Life expectancy at age 60 is one year greater than anticipated (with corresponding increases at other ages).
- Life expectancy at age 60 is five years greater than anticipated (with corresponding increases at other ages).
- Yields on both gilts and corporate bonds decrease by 1% p.a. (with no change in equity markets and assuming the anticipated outperformance of the Scheme assets over gilt yields remains the same).
- Real yields on index-linked gilts decrease by 1% p.a. (with fixed-interest gilt yields, corporate bond yields, and equity markets unchanged)—this is equivalent to a 1% p.a. increase in the assumed rate of inflation.
- The market value of equities and property falls by 25% (with no change in bond markets).

Please see the chart below for the results.



The accrued benefits position is similarly sensitive to these factors.

The scenarios considered are not "worst case" scenarios, and could occur in combination (rather than in isolation). Opposite step changes, such as what happens if bond yields rise by 1% p.a. for example, would improve the funding position by broadly similar amounts to the reductions identified above.

Investment strategy

The majority of the Scheme's liabilities are linked to Jersey inflation via either pension increases or pay increases. The assets that most closely match the Scheme's liabilities are index-linked gilts and investment grade derivatives. However, a large proportion of the Scheme's assets are invested in asset classes such as equities which are expected to produce higher returns over the long term than those more closely matching assets.

The Committee of Management recognises the degree of risks, as well as the potential rewards, that this holds for the Scheme. In particular the financial position of the Scheme can be affected by sudden (or gradual) changes in market values of equities and/or changes in bond yields, as illustrated above.

The investment strategy of the Scheme is set by the Committee of Management following detailed asset-liability studies and is kept under regular review. We recommend that consideration is given to carrying out a further asset-liability study following the current valuation.

Implications

The analysis in this section emphasises that the Scheme is highly susceptible to:

- Members living longer than expected.
- Equity markets falling, or bond yields falling. This risk arises because the Scheme is not invested in the assets that most closely match the expected future cashflows (i.e. index-linked gilts and investment grade derivatives).

9. Summary and Conclusions

Headline results

Here are the headlines at the valuation date:

- There is a past service surplus of £30.7M.
- The overall deficiency, after allowing for the anticipated shortfall in future contributions, is £63.2M. This corresponds to a **funding ratio** of 95.5%.

The deficiency will need to be dealt with in accordance with the terms of the Scheme's Regulations. This could be done by making good the deficiency:

a) by increases to the contributions of employers, or

b) by increases to the contributions of current or future members, or

c) by reductions in future pension increases, or

d) by reductions in the benefits of current or future members, or

e) by a combination of more than one of these things.

Alternatively, there is scope under the Scheme's Regulations for a deficiency to be carried forward if it appears to be of a temporary nature.

Developments since the valuation date

The valuation results reflect the financial position of the Scheme as at the valuation date, 31 December 2007.

Since the valuation date, the returns on the Scheme's assets have so far been below those assumed at this valuation, and the funding position of the Scheme will have worsened. It is, of course, not known whether the current worsened funding position will persist until the next valuation. The experience so far, and other future experience up to the next valuation date, will be reflected in the next valuation of the Scheme.

Process and timetable under the Regulations

PECRS is not a "balance of cost" scheme where the States of Jersey as employer has responsibility for meeting any deficiency; in this respect it differs from the overwhelming majority of final-salary pension schemes operated by employers in the UK. In PECRS the Principal Employer (the Chief Minister) is required under the Regulations to lay a copy of this report before the States of Jersey. The timetable under the Regulations for dealing with the deficiency is:

- if, within 3 months of the report being laid before the States, the Principal Employer and the Committee of Management (COM) have agreed proposals for dealing with the deficiency, then the Principal Employer will submit the agreed proposals to the States
- if no agreement has been reached on proposals for dealing with the deficiency within 3 months of the report being laid before the States, then the Principal Employer must still submit proposals to the States
- if, within 6 months of the report being laid before the States, the Principal Employer and the COM have agreed proposals for dealing with the deficiency, then the Principal Employer may submit the agreed proposals to the States

- if no agreement has been reached on proposals for dealing with the deficiency within 6 months of the report being laid before the States, then after a further period of 3 months the COM must reduce the level of pension increases granted in the future. Our advice on the reduction required is set out in Section 6 of this report.

Dealing with the deficiency

We understand that agreement on proposals to deal with the deficiency has not yet been reached. Discussions will now need to take place in accordance with the timetable under the Regulations set out above.

JPL sub-fund

The revised certificate in Appendix R sets out the required employer contribution rate for JPL of 15.35% of salaries effective from 1 August 2009. This compares with the rate of 11.38% currently being paid.

The required JPL employer contribution rate of 15.35% of salaries comprises:

- The "standard" contribution rate of 17.30% of salaries which is the rate required to support future service benefits of JPL's current active members over their future working lifetimes in PECRS; less
- An adjustment of 1.95% of salaries to eliminate the past service surplus in the JPL sub-fund over a period of around 14 years.

A revised Actuary's Certificate is included in Appendix R to this paper.

JTL sub-fund

The revised certificate in Appendix S sets out the required employer contribution rate for JTL of 14.12% of salaries effective from 1 August 2009. This compares with the rate of 11.72% currently being paid.

The required JTL employer contribution rate of 14.12% of salaries comprises:

- The "standard" contribution rate of 16.17% of salaries which is the rate required to support future service benefits of JTL's current active members over their future working lifetimes in PECRS; less
- An adjustment of 2.05% of salaries to eliminate the past service surplus in the JTL sub-fund over a period of around 16 years.

A revised Actuary's Certificate is included in Appendix S to this paper.

Next valuation

We recommend that the next valuation should be carried out no later than 31 December 2010.

Signed on behalf of Hewitt Associates Limited

Jonathan F. Teasdale

Jonathan Teasdale FIA

Appendix A—Legal and actuarial framework

Purpose	This appendix sets out some important information about the legal and actuarial framework under which this report is issued.
Scope of advice	This report is prepared under the terms of the Actuary Agreement dated 26 November 2007 between Hewitt Bacon & Woodrow Limited (now Hewitt Associates Limited) and the Committee of Management, on the understanding that it is for the benefit of the addressees. Unless prior written consent has been given by me or Hewitt Associates Limited, this report should not be disclosed to or discussed with anyone else unless they have a statutory right to see it. Notwithstanding such consent, neither I nor Hewitt Associates Limited accepts or assumes any responsibility to anyone other than the addressees of this report.
Compliance review	Actuaries who provide written advice on scheme funding matters are under a professional obligation to ensure that their advice is reviewed by another actuary. This is called a “compliance review”. The reviewing actuary is required to have the necessary experience to have given the original advice. This valuation report has been peer-reviewed by another actuary within Hewitt Associates Limited, before it was issued. The reviewer was Neil Maxwell FIA, who meets the professional requirements.
Professional Guidance	We confirm that this report has been prepared in accordance with version 8.1 of Guidance Note GN9. There are various elements of GN9 that relate to specific provisions of UK legislation which do not apply in Jersey: in particular, the Pensions Act 2004 and related Regulations. These elements of GN9 have been disregarded as they are clearly inapplicable to this Scheme. Our estimate of the solvency liabilities set out in Section 7 is significantly lower than the figures we would have produced if we had adopted the **discount rates** proposed in paragraph 3.5.10 of GN9. However, we consider that the approach we have adopted is a more realistic reflection of buy-out terms available in the market at the time of the valuation.

Appendix B—Assets

Assets

The Scheme's assets are held separately from those of the States of Jersey.

The audited Scheme accounts for the year ended 31 December 2007 show its assets as £1,182.5M. This figure covers the whole of the Scheme's assets, inclusive of those notionally attributable to JTL's and JPL's employees. The assets can be categorised as follows:

Asset type	Market value (£M)	% of Total
Equities	810.4	68.6
Property	14.7	1.2
Cash and net current assets	357.4	30.2
Total	1,182.5	100.0

The value of assets notionally attributed to JTL's and JPL's employees at 31 December 2007 were £46.7M and £31.5M respectively. The Scheme also holds insurance policies worth £0.8M.

After disregarding the assets notionally attributed to JTL's and JPL's employees and adding in the value of the Scheme's insurance policies, the value of Scheme assets taken into account for the purposes of this valuation was £1,105.1M.

Appendix C—Provisions of Scheme

Regulations

The Scheme is governed by Regulations made under the Public Employees (Retirement) (Jersey) Law, 1967 (as amended). At the valuation date, the provisions of the Scheme were specified in the following Regulations, namely:

a) The Public Employees (Contributory Retirement Scheme) (Former Hospital Scheme) (Jersey) Regulations, 1992 (as amended) - known as the FHS Regulations

b) The Public Employees (Contributory Retirement Scheme) (Jersey) Regulations, 1967 (as amended) - known as the 1967 Regulations

c) The Public Employees (Contributory Retirement Scheme) (Existing Members) (Jersey) Regulations, 1989 (as amended) - known as the Existing Members Regulations

d) The Public Employees (Contributory Retirement Scheme) (New Members) (Jersey) Regulations, 1989 (as amended) - known as the New Members Regulations.

In addition, the provisions of the Scheme which are common to each of the above Regulations are specified in the Public Employees (Contributory Retirement Scheme) (General) (Jersey) Regulations, 1989 (as amended) - known as the General Regulations.

History

All members joining the Scheme after 30 August 1989 (1 January 1990 for former members of the Former Hospital Scheme) are subject to the New Members Regulations. However, members joining the Scheme on or before that date were given the following options:

a) Members who joined the Scheme prior to 1 January 1988 (1 January 1990 for former members of the Former Hospital Scheme) were given the option either to elect for benefits under the Existing Members Regulations or the New Members Regulations, or to remain subject to the 1967 Regulations (FHS Regulations for former members of the Former Hospital Scheme).

b) New entrants to the Scheme between 1 January 1988 and 30 August 1989 inclusive had the choice of benefits under the Existing Members Regulations or the New Members Regulations.

c) Special arrangements were made for employees who were not previously eligible for membership of either the Scheme or the Former Hospital Scheme (e.g. part-timers).

Recent changes

The changes made to benefits for new employees after 1 January 2006 are summarised below. These benefits were reflected in changes to the Scheme's Regulations approved by the States of Jersey on 27 September 2005.

Benefits under New Members Regulations for joiners after 1 January 2006

Under the framework agreed for dealing with the deficiency disclosed in the valuation as at 31 December 2001, it was agreed that there should be no impact on the benefits or contributions of the Scheme's present active members, pensioners and deferred pensioners. However, for entrants to the Scheme first entering employment after 1 January 2006, the benefit structure was modified as follows:

continued on next page

a) Pension Ages were introduced which are equal to the member's Normal Retiring Age, i.e.

   55 – Category A members *

   60 – Category B members * *

   65 – Non-uniformed members;

   * Category A member means a front line officer of the uniformed services such as the States of Jersey Police Force, the States of Jersey Fire Service, the States of Jersey Prison Service, the States of Jersey Airport Fire Service and the States of Jersey Ambulance Service.

   * * Category B member means a Chief Officer of the States of Jersey Police Force, the Prison Governor, a Chief Officer of the States of Jersey Prison Service, the Chief Fire Officer, the Chief and Deputy Chief of the Airport Fire Service or the Chief or Assistant Chief Ambulance Officer or an Air Traffic Control Officer.

b) The earliest age at which joiners after 1 January 2006 have the option to retire is the same as for earlier joiners (subject to meeting the service requirements specified in the Regulations), i.e.

   50 – Category A members

   55 – Category B members

   60 – Non-uniformed members.

c) For post-1 January 2006 joiners, on retirement from active service prior to Pension Age, reduced benefits are payable, with a reduction factor set at 2.4% for each year that retirement precedes Pension Age (pro rata for part year effects).

   As an example, for post-1 January 2006 joiners, a Category A member retiring at the age of 50 will receive 88% of accrued benefits, as will a Category B member retiring at 55, and a non-uniformed member retiring at age 60. This differs from the position under the New Members Regulations for pre-1 January 2006 joiners retiring in these circumstances who receive 100% of their accrued benefits.

d) The reduction factors applied on early retirement of post-1 January 2006 joiners, whilst initially set at 2.4% p.a. as noted above, are capable of being adjusted with changing circumstances following future valuations.

e) The position for those post-1 January 2006 joiners who may become entitled to a deferred pension at Pension Age includes an option for a pension to be payable up to five years prior to Pension Age but this will involve the use of reduction factors larger than the 2.4% p.a. noted above. The reduction will be set by the Actuary, at a level which fully recovers the increased cost of paying the pension early and for a longer period.

Insured benefits

The benefits of the Scheme are not insured, with the exception of the insurance policies transferred from the Former Hospital Scheme at the end of 1992.

Main features

The main features of the Scheme in force at the valuation date are summarised on the following pages where the term "uniformed" members includes members of the Police, Fire, Prison, Airport Fire Service, Port Control Unit, Air Traffic Control and Emergency Ambulance Services.

	1967 or FHS Regulations	Existing Members or New Members Regulations
Normal Retiring Age		
"Uniformed" Members	55 or 60 as appropriate	55 or 60 as appropriate
"Non-uniformed" Members	65 (males) 60 (females)	65 (males and females)
Average Salary	Average salary received during the 3 years prior to retirement	Salary received in best successive 365 days during the 3 years prior to retirement
Normal Retirement Pension		
"Uniformed" Members	1/45th of average salary for each year of reckonable service Note: "Uniformed" members cannot be subject to the FHS Regulations	Existing Members Regulations 1/45th of average salary for each year of pensionable service New Members Regulations 1/60th of average salary for each year of pensionable service
"Non-uniformed" Members	FHS Regulations (females) 1/80th of average salary for each year of reckonable service 1967 & FHS Regulations (males) 1/60th of average salary for each year of reckonable service	Existing Members Regulations 1/60th of average salary for each year of pensionable service New Members Regulations 1/80th of average salary for each year of pensionable service
Cash at retirement	FHS Regulations (females) A tax free cash sum of 3/80ths of average salary for each year of reckonable service 1967 & FHS Regulations (males) Not available	Option to exchange up to 25% of commencing pension for a tax free cash sum of £13.50 for each £1 of pension given up
Optional Retirement	Any time up to 5 years before normal retiring age subject to 10 years' reckonable service Note: Under the FHS Regulations, the prior approval of the employer is required	Generally any time up to 5 years before normal retiring age subject to 10 years' pensionable service, but in certain circumstances special provisions apply Note: Non-uniformed members can retire after age 60 if they have completed 2 years' qualifying service For post-1 January 2006 joiners, pensions paid before normal retiring age are subject to reduction for early retirement
Ill-Health Retirement	Subject to 10 years' reckonable service, immediate benefits on grounds of serious ill health or incapacity. Benefits based on reckonable service up to date of retirement only	Subject to 2 years' qualifying service, immediate benefits on grounds of serious ill health or incapacity. Benefits based on enhanced pensionable service in most cases

Death in Service	1. Cash sum - paid to spouse, child, dependant or estate according to circumstances:	1. Cash sum - paid to spouse, child, dependant or estate according to circumstances:
	a) Less than 5 years' reckonable service: a refund of contributions with 3% p.a. interest**	a) Less than 5 years' qualifying service: a cash sum of 2/5ths of current salary for each year of service
	b) At least 5 years' reckonable service: one year's current salary or a refund of contributions with 3% p.a. interest, whichever gives the greater amount**	b) At least 5 years' qualifying service: a cash sum of twice current salary
	2. Widow's Pension	2. Spouse's Pension (widow/widower)
	Subject to 10 years' reckonable service: 50% of member's pension, based on salary at death and reckonable service to normal retiring age	Subject to 2 years' qualifying service: 50% of member's pension, based on salary at death and pensionable service to normal retiring age
	3. Dependant's Pension	3. Dependant's Pension
	None	Subject to 2 years' qualifying service: an amount equal to a spouse's pension may be paid to an adult dependant (male or female) - except that no dependant's pension can be awarded where a spouse's pension is payable
	4. Children's Pension	4. Children's Pension
	Subject to 10 years' reckonable service: a flat rate allowance of £100 p.a. (1967 Regulations) or £80 p.a. (FHS Regulations) per child, if there is a widow. If the spouse is also deceased, or on the subsequent death of the spouse, the allowance is £150 p.a. (1967 Regulations) or £110 p.a. (FHS Regulations) per child	Subject to 2 years' qualifying service: a pension is payable to each eligible child. The total payable is restricted to the equivalent of the spouse's pension, but no one child may receive more than half of that sum. The children's pension is doubled if a spouse's or dependant's pension is not payable
	** less 10%, being the tax levied by the Comptroller of Income Tax in regard to tax relief which may have been enjoyed when the contributions were paid.	

Death after Retirement	1. Widow's Pension From date of death, 50% of member's pension	1. Spouse's Pension (widow/widower) From date of death, 50% of member's pension, ignoring any reduction for cash sum taken at retirement
	2. Dependant's Pension None	2. Dependant's Pension An amount equal to a spouse's pension may be paid to an adult dependant (male and female) - except that no dependant's pension can be awarded where a spouse's pension is payable
	3. Children's Pension Provided retirement is due to ill health: a flat rate allowance of £100 p.a. (1967 Regulations) or £80 p.a. (FHS Regulations) per child, if there is a widow. If the spouse is also deceased, or on the subsequent death of the spouse, the allowance is £150 p.a. (1967 Regulations) or £110 p.a. (FHS Regulations) per child	3. Children's Pension A pension is payable to each eligible child. The total payable is restricted to the equivalent of the spouse's pension, but no one child may receive more than half that sum. The children's pension is doubled if a spouse's or dependant's pension is not payable
Leaving Service	Refund of contributions with 3% p.a. interest** or subject to 10 years' reckonable service and over age 50 (45 in the case of women and "uniformed" members) a deferred pension (and, for women under FHS Regulations, a deferred cash sum) payable at normal retiring age or a transfer value payable to a new employer's pension scheme or to a personal pension scheme	Refund of contributions with 3% p.a. interest** (not available if joined after 1 August 2000 and left with 2 or more years' qualifying service) or subject to 2 years' qualifying service at any age: a deferred pension payable at age 60 or normal retiring age, if earlier or a transfer value payable to a new employer's pension scheme or to a personal pension scheme
	** less 10%, being the tax levied by the Comptroller of Income Tax in regard to tax relief which may have been enjoyed when the contributions were paid.	
Voluntary Early Retirement	Subject to being over age 55 (or 50 in special circumstances) and not being entitled to an immediate pension from the Scheme: the employer may offer a supplementary pension, equal to the member's deferred pension entitlement (which may be enhanced), payable until the date the deferred pension is due, provided that:	As described for the 1967/FHS Regulations

	a) the member has volunteered to retire in consequence of abolition of office, or to make possible the continued employment of another member of staff, or in the interests of efficiency; and b) the employer pays the capital cost of the supplementary pension to the Scheme	
Additional Voluntary Contributions	Not available (except under the FHS Regulations by certain special arrangements made prior to 1 January 1990)	May be paid to purchase extra years of pensionable service
Increases to Pensions	Annual increases in line with the Jersey Cost of Living Index guaranteed by the States. The first increase will be proportionate to the period of retirement in the first year	Annual increases in line with the Jersey Cost of Living Index, but not guaranteed where actuarial review has disclosed the financial condition of the Scheme is no longer satisfactory. The first increase will be proportionate to the period of retirement in the first year
Contributions		
by members	6% of salary less a fixed sum of 61 pence per week (women 58 pence per week)	<u>Existing Members Regulations</u> 6.25% of salary <u>New Members Regulations</u> 5% of salary
by Employers	13.6% of member's salary***	13.6% of member's salary***

*** Except for Admitted Bodies, where the contributions payable are those certified by the Actuary and may differ. Additional contributions are payable to cover the cost of Emergency Ambulance Service benefit improvements, as certified by the Actuary.

The Employer contribution rate of 13.6% of member's salary, together with "pre-1987 debt contributions" required in accordance with the changes to the Scheme's Regulations approved by the States of Jersey on 27 September 2005, is payable until 31 December 2083. After that date, the Employer contribution rate will increase to 15.16% of member's salary.

Appendix D—Membership Data

Active members at 1 January 2008 *(1 January 2005)*

1967 Regulations		Number	Average age	Total salaries (£000pa)	Average salaries (£pa)	Average service (years)
Men	**2008**	**119**	**54.1**	**3,805**	**31,976**	**27.0**
	2005	*191*	*52.6*	*5,064*	*26,515*	*24.4*
Women	**2008**	**22**	**54.5**	**851**	**38,685**	**27.3**
	2005	*39*	*52.1*	*1,198*	*30,725*	*24.6*
Total	**2008**	**141**	**54.2**	**4,656**	**33,023**	**27.1**
	2005	*230*	*52.6*	*6,262*	*27,229*	*24.4*

Notes: 1) The 1967 Regulations do not have provisions for pensionable allowances giving rise to added years.

2) All the remaining active members under the 1967 Regulations are non-uniformed, except for 3 men who are entitled to Category A benefits.

3) JTL members are not included in the 2005 or 2008 summaries. JPL members are not included in the 2008 summaries but are included in the 2005 summaries.

4) Average service includes service credits from transfers-in.

FHS Regulations		Number	Average age	Total salaries (£000pa) (see note 2)	Average salaries (£pa) (see note 2)	Average service (years)
Men	**2008**	**2**	**54.0**	**184**	**91,931**	**27.3**
	2005	*3*	*51.5*	*162*	*54,111*	*22.1*
Women	**2008**	**18**	**50.5**	**571**	**31,751**	**25.9**
	2005	*21*	*49.2*	*525*	*24,997*	*23.2*
Total	**2008**	**20**	**50.9**	**755**	**37,769**	**26.1**
	2005	*24*	*49.5*	*687*	*28,636*	*23.1*

Notes: 1) All members of the Former Hospital Scheme Regulations are non-uniformed.

2) Additional data relating to the pensionable allowances which give rise to added years of pensionable service is not included in the salaries shown in this table.

3) JTL members are not included in the 2005 or 2008 summaries. JPL members are not included in the 2008 summaries but are included in the 2005 summaries.

4) Average service includes service credits from transfers-in.

Active members at 1 January 2008 *(1 January 2005) (continued)*

Existing Members Regulations		Number	Average age	Total salaries (£000pa) (see note 1)	Average salaries (£pa) (see note 1)	Average service (years)
Category A						
- Men	**2008**	87	47.2	4,416	50,757	23.1
- Women	**2008**	9	44.6	422	46,940	21.3
- Total	**2008**	**96**	**47.0**	**4,838**	**50,399**	**23.0**
Category B						
- Men	**2008**	15	49.3	1,052	70,142	25.9
- Women	**2008**	-	-	-	-	-
- Total	**2008**	**15**	**49.3**	**1,052**	**70,142**	**25.9**
Non-uniformed						
- Men	**2008**	453	52.7	21,028	46,419	24.5
- Women	**2008**	384	52.7	11,952	31,123	20.9
- Total	**2008**	**837**	**52.7**	**32,980**	**39,401**	**22.9**
Overall						
- Men	**2008**	**555**	**51.7**	**26,496**	**47,740**	**24.2**
	2005	*768*	*50.0*	*31,314*	*40,772*	*23.2*
- Women	**2008**	**393**	**52.5**	**12,374**	**31,485**	**20.9**
	2005	*472*	*50.6*	*12,881*	*27,291*	*19.0*
- Total	**2008**	**948**	**52.0**	**38,870**	**41,001**	**22.9**
	2005	*1,240*	*50.2*	*44,195*	*35,641*	*21.6*

Notes:

1) Additional data relating to the pensionable allowances which give rise to added years of pensionable service is not included in the salaries shown in this table.

2) JTL members are not included in the 2005 or 2008 summaries. JPL members are not included in the 2008 summaries but are included in the 2005 summaries.

3) Average service includes service credits from transfers-in.

Active members at 1 January 2008 *(1 January 2005) (continued)*

New Members Regulations (Pre-2006 joiners)		Number	Average age	Total salaries (£000pa) (see note 1)	Average salaries (£pa) (see note 1)	Average service (years)
Category A						
- Men	**2008**	240	38.8	10,264	42,765	10.1
- Women	**2008**	69	36.1	2,811	40,732	7.2
- Total	**2008**	**309**	**38.2**	**13,075**	**42,311**	**9.5**
Category B						
- Men	**2008**	6	38.5	456	76,053	9.2
- Women	**2008**	3	36.7	209	69,720	10.5
- Total	**2008**	**9**	**37.9**	**665**	**73,942**	**9.6**
Non-uniformed						
- Men	**2008**	1,407	44.9	51,624	36,691	9.7
- Women	**2008**	2,896	44.8	70,673	24,404	6.7
- Total	**2008**	**4,303**	**44.9**	**122,297**	**28,421**	**7.7**
Overall						
- Men	**2008**	**1,653**	**44.0**	**62,344**	**37,716**	**9.7**
	2005	*1,817*	*42.0*	*56,600*	*31,150*	*7.3*
- Women	**2008**	**2,968**	**44.6**	**73,693**	**24,829**	**6.7**
	2005	*2,889*	*43.0*	*61,932*	*21,437*	*5.3*
- Total	**2008**	**4,621**	**44.4**	**136,037**	**29,439**	**7.8**
	2005	*4,706*	*42.6*	*118,532*	*25,187*	*6.1*

Notes:

1) Additional data relating to the pensionable allowances which give rise to added years of pensionable service is not included in the salaries shown in this table.

2) JTL members are not included in the 2005 or 2008 summaries. JPL members are not included in the 2008 summaries but are included in the 2005 summaries.

3) Average service includes service credits from transfers-in.

Active members at 1 January 2008 *(1 January 2005) (continued)*

New Members Regulations (Post-2006 joiners)		Number	Average age	Total salaries (£000pa) (see note 1)	Average salaries (£pa) (see note 1)	Average service (years)
Category A and B						
- Men	**2008**	41	30.6	1,324	32,294	1.2
- Women	**2008**	12	32.2	375	31,222	1.7
- Total	**2008**	**53**	**30.9**	**1,699**	**32,051**	**1.3**
Non-uniformed						
- Men	**2008**	261	38.0	8,509	32,600	1.4
- Women	**2008**	501	37.8	11,667	23,287	1.4
- Total	**2008**	**762**	**37.9**	**20,176**	**26,477**	**1.4**
Overall						
- Men	**2008**	**302**	**37.0**	**9,833**	**32,559**	**1.4**
	2005	n/a	*n/a*	*n/a*	*n/a*	*n/a*
- Women	**2008**	**513**	**37.7**	**12,042**	**23,473**	**1.4**
	2005	n/a	*n/a*	*n/a*	*n/a*	*n/a*
- Total	**2008**	815	**37.5**	**21,875**	**26,840**	**1.4**
	2005	n/a	*n/a*	*n/a*	*n/a*	*n/a*

Notes:

1) Additional data relating to the pensionable allowances which give rise to added years of pensionable service is not included in the salaries shown in this table.

2) The "Category A and B" figures include 1 male Category B member. All other members are Category A.

3) JTL members are not included in the 2005 or 2008 summaries. JPL members are not included in the 2008 summaries but are included in the 2005 summaries.

4) Average service includes service credits from transfers-in.

Active members at 1 January 2008 *(1 January 2005) (continued)*

Summary for the whole scheme		Number	Average age	Total salaries (£000pa) (see note 1)	Average salaries (£pa) (see note 1)	Average service (years)
Men	**2008**	**2,631**	**45.3**	**102,662**	**39,020**	**12.7**
	2005	*2,779*	*44.9*	*93,140*	*33,515*	*12.9*
Women	**2008**	**3,914**	**44.6**	**99,531**	**25,429**	**7.7**
	2005	*3,421*	*44.2*	*76,536*	*22,373*	*7.5*
Total	**2008**	**6,545**	**44.9**	**202,193**	**30,893**	**9.7**
	2005	*6,200*	*44.5*	*169,676*	*27,367*	*9.9*

Notes:
1) Additional data relating to the pensionable allowances which give rise to added years of pensionable service is not included in the salaries shown in this table.
2) JTL members are not included in the 2005 or 2008 summaries. JPL members are not included in the 2008 summaries but are included in the 2005 summaries.
3) Average service includes service credits from transfers-in.

Deferred pensioners at 1 January 2008 *(1 January 2005)*

		Number	Average age	Total pensions (£000pa)	Average pension (£pa)
Men	**2008**	**457**	**45.1**	**3,318**	**7,261**
	2005	*326*	*45.6*	*2,689*	*8,249*
Women	**2008**	**957**	**44.4**	**3,298**	**3,446**
	2005	*620*	*44.0*	*2,357*	*3,802*
Total	**2008**	**1,414**	**44.6**	**6,616**	**4,679**
	2005	*946*	*44.5*	*5,046*	*5,334*

Note: The pension amounts quoted above at 1.1.2008 and 1.1.2005 include pension increases up to and including those dates.

Pensioners at 1 January 2008 *(1 January 2005)*

		Number	Average age	Total pensions (£000pa)	Average pension (£pa)
Men	**2008**	**1,568**	**69.5**	**26,716**	**17,038**
	2005	*1,406*	*69.1*	*20,893*	*14,860*
Women	**2008**	**997**	**68.6**	**6,676**	**6,696**
	2005	*799*	*67.9*	*4,849*	*6,069*
Dependants	**2008**	**539**	**69.3**	**4,066**	**7,543**
	2005	*508*	*69.7*	*3,283*	*6,462*
Total	**2008**	**3,104**	**69.2**	**37,458**	**12,068**
	2005	*2,713*	*68.9*	*29,025*	*10,698*

Note: “Dependants” consists of spouses, children and adult dependants in receipt of a pension.

Appendix E—Rationale for Best-Estimate Assumptions

Best-estimate assumptions

Following advice from ourselves, the Committee of Management has confirmed that the assumptions adopted to determine the **funding target** should be best-estimate assumptions. The rationale for using best-estimate assumptions is discussed below.

Range of assumptions

The results of a valuation are sensitive to the assumptions made and therefore the choice of appropriate assumptions is important.

There is a wide range of assumptions that could be used ranging from optimistic, through best estimate to cautious:

- Under optimistic assumptions the future outcome is more likely to be worse than assumed
- Under cautious assumptions the future outcome is more likely to be better than assumed
- Under best-estimate assumptions the future outcome is just as likely to be better or worse than assumed.

The Committee of Management has a duty to protect members' benefits. Therefore it would not be appropriate to use extremely optimistic assumptions when determining the adequacy or otherwise of the contributions to support the benefits payable under the Scheme.

This leaves a choice of assumptions in the range from best-estimate to cautious. The more cautious the valuation assumptions, the greater the valuation liabilities will be and consequently the greater the possibility of members' benefits or future pension increases having to be cut back (or member or employer contributions having to be increased) if there is a deficiency.

Advantages of using best-estimate assumptions (and disadvantages of using more cautious assumptions)

The advantage of using best-estimate assumptions is that it complies with the principle of only cutting back on the members' pensions where this appears genuinely necessary.

Using more cautious assumptions would lead to a larger deficiency, which may potentially trigger reductions to benefits or future pension increases (or increases to member or employer contributions). In the long term, given the extra returns targeted under the Scheme's investment strategy, there would be quite a high probability that experience would prove more favourable than assumed, leading to surpluses at later valuations. Therefore, using more cautious assumptions may result in cutting back benefits (or increasing contributions) in a way that with hindsight was unnecessary.

Disadvantages of using best-estimate assumptions (and advantages of using more cautious assumptions)

The disadvantage of using best-estimate assumptions is that it leads to a larger chance of actual scheme experience being worse than assumed than if more cautious assumptions are used. This increases the likelihood of deficiencies arising at later valuations which have to be dealt with through future reductions in benefits, or by increasing member or employer contributions. If experience is adverse, the reductions in benefits (or increases in contribution) eventually required may need to be bigger at that time than if they had been made earlier (and therefore impacting disproportionately on a later "generation" of members). Although there is no provision in the Regulations for the Scheme to be discontinued, this could be particularly problematic if the Scheme were discontinued. It could be equally problematic if the financial strength of the States of Jersey were to become poor. Significant benefit reductions may be required in such situations.

A further potential disadvantage of using best-estimate assumptions is that it involves anticipating a degree of outperformance from "return-seeking" assets, which may limit the Committee of Management's scope to reduce the Scheme's investment allocation to return-seeking assets in future.

Recommendation

Following advice from ourselves, the Committee of Management has confirmed that the assumptions used to determine the **funding target** should be best-estimate because:

- It complies with the principle of only cutting back on members' pensions where this appears genuinely necessary, and
- The Committee of Management does not currently consider the financial strength of the States of Jersey to be poor.

Appendix F—Valuation Method

Valuation method

The valuation method adopted for the main valuation calculations is known as the “aggregate funding” method. This differs from the "indefinite aggregate funding" method adopted at the last valuation in that no allowance is made for the continued future admission of new entrants to the Scheme over the indefinite future. Instead, the financing of future new entrants' benefits is considered in isolation as a separate item.

Method adopted for the current valuation

To establish whether the **funding target** (see Section 4) is met, we have compared the value of the benefits payable in respect of all current members (including pensioners and deferred pensioners) with the sum of the following:

- the value of the Scheme’s existing assets
- the value of the future pre-1987 debt repayment supplements anticipated from the employers over the period up to 31 December 2083
- the value of future contributions due from and in respect of current active members.

This “aggregate funding” approach involves consideration of the values of benefits in respect of service completed after the valuation date and future contributions in respect of current active members, as well as the values of benefits in respect of service completed before the valuation date and the Scheme’s existing assets. It also involves taking credit for the future pre-1987 debt repayment supplements anticipated over the period up to 2083.

Value of liabilities and future contributions

To calculate “the value” of the benefits payable we use our assumptions to estimate the payments which will be made from the Scheme throughout the future lifetimes of current members, pensioners, deferred pensioners and their dependants. We then calculate the amount of money which, if invested now, would be sufficient to make these payments in future, using our assumptions about investment returns. The same technique is adopted to value future contributions to the Scheme.

Value of assets

We have taken the assets into account at their market value.

Value of insurance policies

The insurance policies that were transferred from the Former Hospital Scheme at the end of 1992 have been valued in the same way as the corresponding liabilities, by calculating the discounted value of the anticipated payments. The value of insurance policies valued in this way amounts to £0.8M.

JPL / JTL valuation method

The funding objective used for the valuation of the JPL and JTL sub-funds is the objective set out within the Terms of Admission Document for JPL and the Terms of Participation Document for JTL. Because of the requirements of these documents, the funding objective is different to that used for the main valuation of PECRS as at 31 December 2007.

The funding objective prescribed within the Terms of Admission and Participation Documents is that the assets held in the relevant sub-fund should be sufficient to meet the "Employer’s funding target". The

"Employer's funding target" is the liabilities attributable to the sub-fund's current active members based on pensionable service up to the valuation date calculated on the actuarial assumptions adopted for the main valuation of the PECRS. The funding target includes full allowance for projected future salary and pension increases in accordance with the actuarial assumptions.

We have determined the employer's contributions as:

- A standard contribution rate sufficient to support future service benefits for the current active members, measured over their future working lifetimes in the Scheme (the technical term for the derivation of this standard contribution rate is the Attained Age Method); plus
- An allowance to cover the sub-fund's share of the future administration expenses incurred by the Scheme; plus
- An adjustment to reflect any excess or shortfall in the sub-fund relative to the funding target. The objective of this adjustment is to bring the assets of the sub-fund into line with the funding target over the average expected future working lifetime of the sub-fund's current active members.

  The adjustment will be either to reduce the employer's contributions if there is an excess in the sub-fund relative to the funding target or to increase the employer's contributions if there is a shortfall in the sub-fund relative to the funding target.

This method for determining the employer's contribution rate is consistent with the requirements of the Terms of Admission and Participation Documents.

The employer's contribution rate for JPL and JTL will remain stable if the funding objective and assumptions remain unchanged, there are no new entrants to the sub-fund and all assumptions made are borne out in practice. In practice, to the extent that experience is not in line with the assumptions, the contribution rate is likely to change.

If there are new entrants to the sub-funds then we would expect the profile of the membership to change, with a higher proportion of the members being subject to the New Members Regulations, resulting in a decrease in the contribution rate over time.

Appendix G—Financial Assumptions

Introduction

In this appendix we describe the financial assumptions. The financial assumptions that have been chosen are consistent with the **funding target** set out in section 4 of this report and each assumption is intended to represent a reasonable best estimate of the future.

When assessing a set of financial assumptions, greater importance should be attached to the relative differences between the assumptions, rather than to the individual assumptions in isolation. This is because the differences have a greater effect on the results of the valuation than the absolute values of each assumption.

Discount rate (investment return)

The most important individual assumption in terms of its impact on the overall valuation results is the choice of **discount rate**, i.e. assumed future investment returns.

For valuing the liabilities, an assumption which could be described as “low risk” would be to discount future benefit payments at the market yields available on index-linked gilts at the valuation date. This approach recognises that a good matching asset for the Scheme’s cash flows is obtained by investing in index-linked gilts of appropriate term. The yields available on such index-linked gilts at the valuation date were of the order 1.1% p.a. real (i.e. net of UK price inflation).

It is common for UK occupational schemes to adopt a **funding target** which incorporates a higher discount rate than the returns available on index-linked gilts. The consequence of using a higher discount rate is that a lower **funding target** is adopted. This does not mean that the actual cost of providing the benefits is reduced, but it does result in an increase in disclosed surpluses or decrease in disclosed deficiencies.

The **funding target** adopted requires that the assumptions chosen should be reasonable best estimates. For the purposes of assessing suitable assumptions, the Committee of Management has agreed that the Actuary should make allowance for continued future investment in return-seeking assets, such as equities, by assuming that pre-retirement liabilities are backed ⅔ by return-enhancing assets and ⅓ risk-reducing assets and that post-retirement liabilities are backed ⅓ by return-enhancing assets and ⅔ by risk-reducing assets.

For valuing the liabilities, we have used discount rates for this valuation at the following levels:

- 2.4% p.a. more than the yields on index-linked gilts for the period prior to members’ retirement (i.e. 3.5% p.a. above UK inflation)
- 1.4% p.a. more than the yields on index-linked gilts for the period after members’ retirement (i.e. 2.5% p.a. above UK inflation)

For valuing future contributions, we have used a discount rate of 2.4% p.a. more than the yields on index-linked gilts, i.e. 3.5% p.a. above UK inflation. This is consistent with the discount rate used for valuing the liabilities over the period prior to members’ retirement.

For valuing pre-1987 debt repayment supplements, we have used a discount rate of 1.85% p.a. more than the yields on index-linked gilts, i.e. 2.95% p.a. above UK inflation. This is the discount rate that would give the same total service liabilities as the above pre-retirement/ post-retirement discount rate approach. We have also assumed that the debt repayments increase in line with general salary increases plus allowance for promotional increases. This differs from the approach adopted at the 2004 valuation, when no allowance for promotional increases was made. The rationale for the change is that allowing for promotional increases is more consistent with the principle of adopting a best-estimate for each assumption.

Increases to pensions in payment and deferred pensions

The Scheme provides for annual increases to pensions in payment and deferred pensions in line with the Jersey Cost of Living Index. In deciding on an appropriate assumption for these increases, it is therefore necessary to take a view on the likely relationship between Jersey inflation and UK inflation.

Over the period since 1990, Jersey inflation has often been considerably in excess of UK inflation – sometimes by over 2% p.a.

The gap experienced over the long-term past has however been smaller. For example, over the period between 1949 and 1989 the average inflation rates of Jersey and the UK were almost identical. The rates experienced over the period of two to three years prior to the valuation date were also very close. (There has been a sharp increase in Jersey inflation during 2008 following the introduction of a Goods and Services Tax in Jersey but we would expect this uplift to inflation to be a one-off feature.)

Given that the two economies have a tied currency and the same interest rates, our view is that over the medium to long term, Jersey inflation can be expected to be fairly close to UK inflation. In fact, for the 2004 valuation we assumed that Jersey inflation would be equal to UK inflation. However, bearing in mind the longer term past experience, if anything it seems more likely that Jersey inflation will on average exceed, rather than lag, UK inflation. Given the objective that the assumptions should be best-estimate, and after taking account of the views of the Committee of Management, we have assumed for the 2007 valuation that Jersey price inflation will on average be equal to UK price inflation plus 0.25% p.a.

General salary increases

Pay awards in the last several years have, on average, been close to Jersey price inflation. However, when setting the assumption for general salary increases we should consider the States' current pay policy and long term expectations. In particular, it may be realistic to anticipate that pay awards are, over the longer term, likely to revert to higher levels.

After taking account of the views of the Committee of Management, we have allowed for general salary increases to be on average 1.25% p.a. above Jersey price inflation. This is the same as the assumption adopted (relative to Jersey price inflation) at the 2004 valuation.

Promotional salary increases

In addition to the allowance for general salary increases, an explicit age-related promotional scale was adopted at the 2004 valuation (the same scale for males as for females).

We have compared this scale with the pattern of salary increases experienced over the period 2005-2007. Allowing for other information supplied to us about general States pay awards over the period, this suggests promotional increases have been considerably in excess of our assumptions. By contrast, the 2002-2004 experience was broadly in line with our assumptions.

The 2005-2007 experience is quite unlike other past experience and we suspect it represents an unusual event arising, for example, from general staff re-grading in a number of areas of the Jersey public sector workforce over the period. In view of this, we have not changed the assumed promotional scale for the 2007 valuation. We will however review this assumption critically at the next valuation in light of future experience.

The allowance included for promotional salary increases (in addition to general salary increases) at specimen ages is:

Age	Promotional salary increases
20	7.1% p.a.
25	5.3% p.a.
30	4.2% p.a.
35	1.8% p.a.
40	0.0% p.a.

Expenses

Excluding investment-related expenses (which are taken into account in the net investment return assumption), we have analysed the expenses of administering the Scheme during 2005-2007 and compared this with the assumption of 0.7% of salaries adopted at the 2004 valuation. The actual average annual expenses as a percentage of salaries during 2005-2007 was 0.55% of salaries. In light of the recent lower level of expenses, we have reduced our allowance for the future expenses of administering the Scheme from 0.7% to 0.6% of salaries.

Appendix H—Demographic Assumptions

Introduction

In this appendix the demographic assumptions are described and we comment on how they compare with actual experience over the period 2005-2007. The demographic assumptions that have been have chosen are consistent with the **funding target** set out in Section 4 of this report and each assumption is intended to represent a reasonable best estimate of the future.

Mortality rates before retirement

For mortality before retirement we have compared the mortality experience of the Scheme over the period 2005-2007 against expected rates of mortality based on the AM92 table for males and the AF92 table for females. Those tables were used for the 2004 valuation.

The analysis of deaths before retirement over the last three years was based on a relatively small number of deaths. However, experience over the last six years suggests that we should reduce the assumed pre-retirement mortality rates. We have therefore reduced the assumed rates by 25% compared with the assumptions adopted at the 2004 valuation.

Mortality rates after retirement – current mortality rates

For mortality in retirement the approach we have used to set the assumption for the 2007 valuation is as follows:

- We have compared the full PECRS 2005-2007 experience with standard tables
- We have determined appropriate adjustments to apply to these standard tables to get a fit close to 100% for the 2005-2007 period
- We have considered an appropriate allowance to make for future improvements in mortality.

For the 2004 valuation we made allowance for current pensioner mortality by using standard UK base tables that are based on insurance company data over the period 1990-94 (the “92 series”), with an age rating of +3 years to reflect PECRS experience. Since 2004 newer UK base tables which are based on insurance company data over the period 1998-2002 data (the “00 series”) have been published. We have used these tables as the starting point for the 2007 valuation.

The experience over the period 2005-2007 shows the deaths in retirement to be lower than expected under the 2004 valuation assumptions:

- 16% lower for males
- 7% lower for females.

We have also considered the previous PECRS experience analyses and we do not believe that the 2005-2007 experience appears unusual.

Looking at this experience in isolation would suggest that the 2004 valuation tables may understate life expectancies for PECRS. The reasons for this apparent improvement in life expectancies are:

- Consistent with research in the UK, life expectancies have continued to improve, and at a faster pace than previously expected
- A change in our approach to the experience analysis (allowing for the impact of the size of members’ pensions), which gives bigger weight to members on higher pensions. It appears that in PECRS those with higher pensions exhibit higher life expectancy.

We have allowed for differences in life expectancy by multiplying the chance of dying at each age by a percentage known as the "scaling factor". For example if a scaling factor of 90% is used this means that in every year the member has a 10% less chance of dying than is assumed in the standard mortality tables. So scaling factors of less than 100% mean that people are assumed to live longer and scaling factors of above 100% mean that they assumed to be less long-lived.

Our analysis of the PECRS experience suggests that it would be appropriate to use a scaling factor of 115%. This provides the most satisfactory fit to the data.

Mortality rates after retirement – allowance for future improvements

It is not straightforward to make an assumption about future rates of mortality improvement. In forming a best-estimate assumption, we believe it is appropriate to have regard to:

- Current trends
- Long-term trends
- Observed generational differences, which suggest faster improvements within certain generations of pensioner (known as the cohort effect)
- The outlook for future medical advances

However, the allowance made must inevitably be subjective.

We would expect that many of the factors which cause improvements in future mortality within the UK will also apply in Jersey (including the cohort effect). Information provided by the Government Actuary's Department in relation to the mortality experience in the Jersey population over the period 1982-2003 suggests the trends in mortality rates within the two populations have tended to be similar. Therefore, we have based the allowance for future improvements on trends identified by research in the UK.

The actuarial profession have prepared three sets of tables which allow for the cohort effect – the "Short Cohort", the "Medium Cohort" and the "Long Cohort" tables. For the 2004 valuation we assumed future improvements in line with the Short Cohort factors. However, recent experience has not been consistent with the tailing-off of improvements that the Short Cohort improvement factors would imply. Indeed, the actual evidence to date (both in terms of trends in life expectancies and underlying trends in yearly mortality rates), shows no signs of a slowing of improvements. Therefore for the 2007 valuation we have allowed for future improvements which are in line with the standard "92 series" improvement factors but which:

- In the short term, are at least as great as the Medium Cohort improvement factors - these factors assume that the increased rate of improvements caused by the cohort effect will tail off by 2020
- In the longer term, assume an annual rate of reduction in mortality rates of no less than 1.0% for both men and women.

Mortality rates after retirement

In summary, the assumed mortality rates are:

- The “00 series” base tables with a scaling factor of 115%
- Allowing for future improvements which are in line with the standard "92 series" improvement factors but which in the short term are at least as great as the Medium Cohort improvement factors and in the longer term assume an annual rate of reduction in mortality rates of no less than 1.0% for both men and women.

Retirement in normal health

We have assumed that members will retire at the ages set out in the following table:

Normal Health retirement ages

Membership category	Normal retiring age	Assumed age at retirement
Category A members (male & female)	55	53
Category B members (male & female)	60	58
Non-uniformed male members	65	63
Non-uniformed female members:		
- Existing and New Member regulations	65	63
- 1967 and Former Hospital Scheme regulations	60	59

The analysis of the retirement experience over the period 2005-2007 for the uniformed membership categories was based on a relatively small number of retirements and so is not necessarily conclusive. However, it shows the average retirement age over the period 2005-2007 for Category A and B members to be in line with the expectations shown above.

For non-uniformed members (excluding females who fall under the 1967 and Former Hospital Scheme Regulations) experience over the last 9 years suggests that the average retirement age has been marginally lower than assumed at the 2004 valuation. However, the evidence for a change is not compelling and it is possible that demographic trends will lead to a longer-term trend towards later retirement. We have therefore retained the assumption used for the 2004 valuation.

The experience for non-uniformed females who fall under the 1967 and Former Hospital Scheme Regulations shows the average retirement age over the period 2005-2007 to be in line with the assumed retirement age of 59.

Retirements in ill-health

An explicit allowance has been made for retirements in ill-health.

Using the ill-health retirement rates adopted in the previous valuation we have calculated the expected numbers of ill-health retirements during 2005-2007 and compared this with the actual number.

Over the period 2005-2007, the overall levels of ill-health retirement across the non-uniformed membership have been considerably lower than those implied by the assumptions. We have therefore reduced the assumed number of ill health retirements for non-uniformed members by 50% compared with the assumptions adopted for the 2004 valuation.

The analysis for the uniformed membership categories was based on a relatively small number of retirements and so is not necessarily conclusive. However, it would suggest that the assumptions adopted for the 2004 valuation may have been under-estimating the number of uniformed female ill-health retirements. We have therefore increased the allowance so that the assumed rates for uniformed female members equal those used for uniformed male members. The assumed rates for uniformed male members appear to remain appropriate.

Specimen rates of retirement due to ill-health assumed at this valuation are set out below:

Age	Number leaving service each year per thousand members at age last birthday as shown	
	Category A or B	Non-Uniformed
30	2.60	0.65
35	2.96	0.74
40	4.60	1.15
45	8.28	2.07
50	15.12	3.78
55	27.00	6.75

Withdrawal rates

We have calculated the expected number of withdrawals from service during 2005-2007 by using the assumed rates of withdrawal adopted for the previous valuation. Comparing this with the actual number of withdrawals we have found that the actual number of withdrawals across the non-uniformed membership was more than allowed for in the previous valuation.

However, these include a large number of withdrawals of members who are between ages 50 and 60. Overall we expect withdrawals over age 50 to be broadly cost neutral to the Scheme and therefore we have not allowed for them in considering the rates to adopt for the 2007 valuation.

The actual number of withdrawals for male members under age 50 was close to 140% of the assumed rates whilst the actual number of withdrawals for female members under age 50 was around 88% of assumed rates.

As in previous valuations, we believe it is appropriate to set the withdrawal rate assumption at a level lower than that likely to be experienced, in order that implicit allowance is made for the costs that are incurred:

a) where additional service is credited for transfers received under the Public Sector Transfer Club; and

b) where leavers are subsequently re-admitted to the Scheme and are re-credited with their original pensionable service

Therefore, the experience suggests that we should adjust the assumed pattern of withdrawals for female members, so that the assumption “under-allows” for withdrawals in order to cover the costs identified in a) and b) above. In order to achieve this, we have reduced the assumed rates for non-uniformed female members by 40%.

We have carried out a similar analysis of the rates of withdrawal for uniformed members. Although it is difficult to draw any conclusions from the small amount of data available in relation to these members, this and the experience at previous valuations would suggest that the 2004 valuation assumptions are under-estimating the number of male uniformed withdrawals. We have therefore increased the assumed rates for male members by 50%. The assumed rates of withdrawal for uniformed female members appear to remain appropriate.

Specimen rates of withdrawal assumed at this valuation are as follows:

Age	Number leaving service each year per hundred members at age last birthday as shown			
	Category A or B		Non-Uniformed	
	Men	Women	Men	Women
30	3.29	3.75	6.57	9.00
35	2.13	2.81	4.26	6.75
40	1.23	1.88	2.46	4.50
45	0.52	0.94	1.04	2.25
50	0.00	0.00	0.00	0.00

Family assumptions

Family assumptions cover the proportions of deaths of members and pensioners, which give rise to a spouse's/dependant's pension, and the age difference between husbands and wives at date of death.

We have adopted the same family assumptions as in previous valuations. In particular we have assumed that husbands are aged 3 years older than their wives on average. Also we have assumed that 90% of the deaths before retirement of male members would give rise to a dependant's pension. The corresponding proportion for females is 70% under the Existing/New Members Regulations, and 0% under the 1967/Former Hospital Scheme Regulations (where widowers' and dependants' pensions are not provided). An appropriate additional allowance is made for children's pensions.

The same proportions are used for pensioners although these are the proportions at normal retiring age. Due to the fact that post-retirement marriages are not included for spouses' pensions, the assumptions take into account the probability of the spouse pre-deceasing the pensioner, which means that the assumed proportions on death of a pensioner decline with age.

The experience for 2005-2007 suggests experience broadly in line with expectations.

Allowance for commutation

The 2004 valuation made allowance for members covered by the Existing Members and the New Members Regulations to commute 17.5% of their pension. The previous three valuations made allowance for the proportion of pension commuted as follows:

Existing Members : 20%

New Members : 10%

The argument for a lower proportion commuted under the New Members Regulations was that the pension accrual rate is lower and so there may be a tendency to commute a smaller amount of pension in order to ensure a sufficient income in retirement. However, experience over 1996-2004 indicated that there was no empirical evidence to suggest that Existing Members actually do commute a significantly different proportion of pension from New Members.

The 2005-2007 experience continues to support the conclusion that Existing Members and New Members commute a similar proportion of pension. Taking the experience over this period, there is an argument for reducing the assumed proportion commuted from 17.5% to 15%. However, given the higher amounts of pension commuted over 2002-2004 the analysis is not conclusive. We have therefore retained the assumption used for the 2004 valuation, subject to review at the next valuation in light of experience during 2008-2010.

Appendix I—Summary of Assumptions

Financial assumptions

Discount rate	6.9% p.a. (i.e. 3.5% p.a. above UK inflation) for valuing liabilities over the period prior to retirement and for valuing future service contributions 5.9% p.a. (i.e. 2.5% p.a. above UK inflation) for valuing liabilities over the period after retirement 6.35% p.a. (i.e. 2.95% p.a. above UK inflation) for valuing pre-1987 debt repayment supplements
UK inflation	3.4% p.a.
Rate of pension and deferred pension increases	3.65% p.a. (i.e. Jersey inflation equal to UK inflation plus 0.25% p.a.)
Rate of salary increases	4.9% p.a. (i.e. 1.25% p.a. above Jersey inflation) plus an allowance for promotional increases
Management expenses (other than investment related expenses)	0.6% of members' salaries

Demographic assumptions

Mortality before retirement	Men: Standard table AM92 Ultimate, 75% scaling Women: Standard table AF92 Ultimate, 75% scaling
Mortality in retirement	The "00 series" base table with a scaling factor of 115%, allowing for year of birth. Future improvements in line with "92 Series" Medium Cohort improvement factors with an underpin to improvements of 1.0% p.a. for both males and females.
Retirements	Allowance has been made for retirements before Normal Retiring Age
Withdrawals	Allowance has been made for withdrawals from service
Family Details	Husbands 3 years older than their wives. 90% of male members and 70% of female members married at retirement or earlier death.
Commutation	17.5% of pension under Existing Members Regulations and New Members Regulations

Appendix J—New Entrant Rates

The new entrant rate for a category of member is the overall (i.e. employers' plus members') contribution rate required on the valuation assumptions to finance the benefits for future new entrants in that category who are subject to the New Members Regulations. Contributions at this rate should finance the benefits for future new entrants provided the profile of new entrants, for example with regard to age, sex and normal retiring age, remains stable over time and provided the valuation assumptions are borne out in practice.

The new entrant rates for each category of member are set out below. The overall new entrant rate is an average of the individual rates, weighted by the proportion of members' salaries in each category.

Membership Category	Proportion of members' salaries (including all pensionable allowances) %	New entrant contribution rate as percentage of salaries %
Category A uniformed members (normal retiring age 55)		
Males	7.94	32.49
Females	1.78	31.63
Category B uniformed members (normal retiring age 60)		
Males	0.79	30.02
Females	0.10	28.98
Non-uniformed members (normal retiring age 65)		
Males	42.05	19.66
Females	47.34	18.67
Overall	100.00	20.51

The global employers' share of the new entrant rate is obtained by subtracting members' contributions at 5% of salaries, leading to an employers' new entrant rate of 15.51% of salaries.

In calculating the above contribution rates we have adopted the assumptions set out elsewhere in this report and have assumed the following ages at entry:

- Uniformed members – age 30
- Non-uniformed members – age 37

These assumed entry ages are consistent with recent Scheme experience.

The employers' new entrant rate of 15.51% of salaries exceeds the employers' contribution rate of 13.6% of salaries provided for in the Regulations. This means that on the assumptions adopted, the continued admission of new entrants can be expected to result in a strain on the finances of the Scheme.

To illustrate this point, we have considered what might happen if all active members leaving service over the three-year period until the next valuation date were replaced by new entrants, with the new entrants following the assumed membership profile set out above. We estimate on this scenario, that the valuation deficiency might be around £15M higher at the end of the three-year period than if there were no new entrants. However the actual impact could vary significantly depending on the actual profile of the new entrants (category of member, sex, age, etc.).

Appendix K—Analysis of change in deficiency

Development of the Scheme's financial position

We set out below how the Scheme's financial position has developed since the previous valuation. We have separately identified how each factor affects the past service position and future service position.

We start with the result quoted in the formal report on the previous valuation, which showed a deficiency of £17.4M. This comprised a past service shortfall of £39.8M and a future service surplus of £22.4M.

Positive and negative effects

In the context of a deficiency, positive (+) and negative (-) effects shown in the following analysis of the development of the Scheme's financial position since the previous valuation are interpreted as follows:

- a positive effect has increases the extent of the deficiency
- a negative effect has reduces the extent of the deficiency.

Change in methodology

As noted in section 4, there has been a change in the funding objective being adopted for this valuation. If this change had been made at the previous valuation, the deficiency would have increased by £45.8M to £63.2M. This change relates to the future service position.

Scheme experience

We have calculated that over the 3 years since the previous valuation, Scheme experience has been favourable, creating a reduction in the deficiency of £163.3M. We have broken down the overall experience effect into the following broad constituents:

	Effect on deficiency £M		
	Past service	**Future service**	**Total service**
a) investment returns having been higher than assumed	-171.5	-	-171.5
b) effect of difference between actual and expected salary increases (including promotional increases) on liabilities	+19.3	+1.1	+20.4
c) effect of difference between actual and expected pension increases	+11.4	-	+11.4
d) effect of difference between actual and expected salary increases on future pre-1987 debt repayments	-9.0	-	-9.0
e) effect of difference between actual and expected ill-health retirement experience	-6.0	-2.6	-8.6
f) effect of approximations in this analysis, and other experience items	-7.2	+1.2	-6.0
Total impact of the Scheme experience	**-163.0**	**-0.3**	**-163.3**

Changes in assumptions

Since the previous valuation there have been a number of changes to the assumptions, which have an overall effect of increasing the deficiency by £150.7M. We have broken this effect down into the following items:

	Effect on deficiency £M		
	Past service	**Future service**	**Total service**
a) change in financial assumptions on liability valuation	+85.5	+36.6	+122.1
b) change in financial assumptions for valuing pre-1987 debt contributions	-89.1	-	-89.1
c) change in allowance for withdrawals	+2.2	-0.2	+2.0
d) change in allowance for ill-health retirements	-24.8	-9.2	-34.0
e) change in assumed mortality rates after retirement	+111.0	+41.0	+152.0
f) reduction in allowance for expenses	-	-2.3	-2.3
Total impact of the Scheme experience	**+84.8**	**+65.9**	**+150.7**

Further details of the changes to the assumptions are shown in Appendices G, H and I.

Overall summary

In summary, the change in the deficiency is analysed as follows:

	Effect on deficiency £M		
	Past service	**Future service**	**Total service**
Valuation deficiency at 31 December 2004	39.8	-22.4	17.4
Adjustment for change in methodology	-	+45.8	+45.8
Interest on adjusted valuation deficiency	+7.7	+4.9	+12.6
Scheme experience	-163.0	-0.3	-163.3
Changes in assumptions	+84.8	+65.9	+150.7
Valuation deficiency at 31 December 2007	**-30.7**	**93.9**	**63.2**

Appendix L—Assumptions for Accrued Benefits Test

Derivation of assumptions

In setting the assumptions for the accrued benefits test we have taken into account actual buy-out terms available in the market at the valuation date. However, we have not carried out a detailed analysis of the cost of risks that might apply specifically to the Scheme and so our estimate is only a guide. Market changes to both interest rates, and demand and supply for this type of business, mean that no reliable estimate can be made, and that ultimately the actual true position can only be established by completing a buy-out.

We have set the **discount rate** for this estimate equal to:

- Current pensioners: the yield on fixed interest gilts of appropriate term at the valuation date plus 0.5% per annum
- Future pensioners: the yield on gilts of appropriate term at the valuation date (this applies over the period before and after retirement).

The allowance we have made for expenses is separate.

We have made an allowance for increases to pensions before and during payment in line with the UK Retail Prices Index. This differs from the provisions under the Regulations governing the Scheme, which provide for annual increases in line with the Jersey Cost of Living Index (although those are not guaranteed where an actuarial review has disclosed that the financial condition of the Scheme is no longer satisfactory).

The reason we have not made allowance for increases in line with the Jersey Cost of Living Index is that, based on the principles an insurer might use, these would be, at best, extremely expensive, and at worst, impossible to reserve for, as there are no available assets which match the increases in the Jersey Cost of Living Index. Therefore, it is unlikely to be possible to purchase annuities based on such increases in the market.

Summary of assumptions

Here is a summary of the main assumptions underlying the Accrued Benefits Test, where these are different to the main valuation basis:

Assumption	What is used for Accrued Benefits Test
Discount rate	
- future pensioners	4.5% p.a.
- current pensioners	5.0% p.a.
Rate of pension and deferred pension increases	3.4% p.a.
Withdrawals	All members assumed to immediately withdraw from service with entitlement to deferred pension
Commutation	No allowance
Expenses of winding up	Allowance made (see below)

Expenses

The reserve for expenses allows for deductions to allow for the cost of forced sales of equity and property holdings, an allowance for the management expenses associated with winding up, and an estimate of the per member charges expected to be levied by an insurance company on buy-out.

For the purposes of disclosure in the valuation, assets are taken at their audited market value. The above allowances for expenses are therefore all presented as additions to the liabilities.

Appendix M—Agreed arrangements for dealing with the Pre-1987 Debt

The framework agreed between the Policy and Resources Committee and the Committee of Management for dealing with the pre-1987 debt was documented in a ten-point agreement approved by Act of the Policy and Resources Committee dated 20 November 2003. The provisions of the agreement, which have subsequently been reflected in Regulations approved by the States of Jersey on 27 September 2005, enable us to treat the pre-1987 debt as an asset of the Scheme for valuation purposes. The text of the agreement is reproduced below.

"1. The States confirms responsibility for the Pre-1987 Debt of £192.1 million as at 31 December 2001 and for its servicing and repayment with effect from that date on the basis that neither the existence of any part of the outstanding Debt nor the agreed method of servicing and repayment shall adversely affect the benefits or contribution rates of any person who has at any time become a member of the Scheme.

2. At the start of the servicing and repayment period, calculated to be 82 years with effect from 1 January 2002, the Employers' Contribution rate will be increased by 0.44% to the equivalent of 15.6%. These contributions will be split into 2 parts, namely a contribution rate of 13.6% of annual pensionable salary and an annual debt repayment. The Employer's Contribution rate will revert to 15.16% after repayment in full of the Debt.

3. During the repayment period the annual Debt repayment will comprise a sum initially equivalent to 2% of the Employers' total pensionable payroll, re-expressed as a cash amount and increasing each year in line with the average pay increase of Scheme members.

4. A statement of the outstanding debt as certified by the Actuary to the Scheme is to be included each year as a note in the States Accounts.

5. In the event of any proposed discontinuance of the Scheme, repayment and servicing of the outstanding Debt shall first be rescheduled by the parties on the advice of the Actuary to ensure that paragraph (1) above ("Point 1") continues to be fulfilled.

6. For each valuation the States Auditor shall confirm the ability of the States to pay off the Debt outstanding at that date.

7. If any decision or event causes the Actuary at the time of a valuation to be unable to continue acceptance of such servicing and repayment of the Debt as an asset of the Scheme, there shall be renegotiation in order to restore such acceptability.

8. In the event of a surplus being revealed by an Actuarial Valuation, negotiations for its disposal shall include consideration of using the employers' share to reduce or pay off the Debt.

9. As and when the financial position of the States improves there shall be consideration of accelerating or completing repayment of the Debt.

10. The recent capital payment by JTL of £14.3m (plus interest) reduced the £192.1m total referred to in (1) by £14.3m and if any other capital payments are similarly made by other Admitted Bodies these shall similarly be taken into account."

Appendix N—JPL membership data

1967 Regulations		Number	Average age	Total salaries (£000pa)	Average salaries (£pa)	Average service (years)
Total	**2008**	**32**	**53.5**	**879**	**27,467**	**27.1**
	2005	*39*	*51.3*	*901*	*23,107*	*24.6*

Note: In 2008 there was one female member and in 2005 there were two female members

Existing Members Regulations		Number	Average age	Total salaries (£000pa)	Average salaries (£pa)	Average service (years)
Total	**2008**	**57**	**49.8**	**1,779**	**31,213**	**24.5**
	2005	*70*	*48.0*	*1,882*	*26,885*	*22.1*

Note: In 2008 there was one female member and in 2005 there were two female members

New Members Regulations (Pre-2006 joiners)		Number	Average age	Total salaries (£000pa)	Average salaries (£pa)	Average service (years)
Men	**2008**	**182**	**43.2**	**5,246**	**28,828**	**9.0**
	2005	*195*	*40.6*	*4,843*	*24,836*	*6.3*
Women	**2008**	**59**	**41.4**	**1,526**	**25,862**	**6.2**
	2005	*74*	*39.4*	*1,723*	*23,279*	*3.6*
Total	**2008**	**241**	**42.7**	**6,772**	**28,102**	**8.3**
	2005	*269*	*40.4*	*6,566*	*24,407*	*5.6*

New Members Regulations (Post-2006 joiners)		Number	Average age	Total salaries (£000pa)	Average salaries (£pa)	Average service (years)
Men	**2008**	**26**	**35.4**	**613**	**23,575**	**0.9**
Women	**2008**	**12**	**36.1**	**327**	**27,213**	**0.9**
Total	**2008**	**38**	**35.6**	**940**	**24,724**	**0.9**

Summary for all JPL members		Number	Total salaries (£000pa)
Men	**2008**	**295**	**8,424**
	2005	*300*	*7,516*
Women	**2008**	**73**	**1,946**
	2005	*78*	*1,832*
Total	**2008**	**368**	**10,370**
	2005	*378*	*9,348*

Note:

1) The 2008 figures are data at 1 January 2008. The 2005 figures are data at 1 January 2005.
2) The JPL members are all non-uniformed.
3) Additional data relating to the pensionable allowances which gives rise to added years of pensionable service is not included in the salaries shown in the table.
4) Average service includes service credits from transfers-in.

Appendix O—JTL membership data

1967 Regulations		Number	Average age	Total salaries (£000pa)	Average salaries (£pa)	Average service (years)
Total	**2008**	**7**	**46.3**	**311**	**44,370**	**24.4**
	2005	*8*	*44.8*	*280*	*34,995*	*23.0*

Note: In 2008 there was one female member and in 2005 there were two female members

Existing Members Regulations		Number	Average age	Total salaries (£000pa)	Average salaries (£pa)	Average service (years)
Men	**2008**	**71**	**49.5**	**3,375**	**47,530**	**26.0**
	2005	*91*	*48.3*	*3,731*	*41,003*	*24.2*
Women	**2008**	**10**	**51.1**	**357**	**35,751**	**22.9**
	2005	*11*	*48.6*	*362*	*32,950*	*20.4*
Total	**2008**	**81**	**49.7**	**3,732**	**46,075**	**25.6**
	2005	*102*	*48.3*	*4,093*	*40,135*	*23.8*

New Members Regulations (Pre-2006 joiners)		Number	Average age	Total salaries (£000pa)	Average salaries (£pa)	Average service (years)
Men	**2008**	**190**	**37.1**	**7,262**	**38,223**	**8.4**
	2005	*207*	*34.6*	*6,562*	*31,701*	*5.9*
Women	**2008**	**98**	**39.8**	**3,273**	**33,400**	**7.3**
	2005	*108*	*37.9*	*3,066*	*28,389*	*5.1*
Total	**2008**	**288**	**38.0**	**10,535**	**36,582**	**8.0**
	2005	*315*	*35.8*	*9,628*	*30,565*	*5.6*

New Members Regulations (Post-2006 joiners)		Number	Average age	Total salaries (£000pa)	Average salaries (£pa)	Average service (years)
Men	**2008**	**33**	**31.1**	**1,074**	**32,539**	**1.0**
Women	**2008**	**15**	**29.1**	**409**	**27,296**	**1.0**
Total	**2008**	**48**	**30.4**	**1,483**	**30,900**	**1.0**

Summary for all JTL members		Number	Total salaries (£000pa)
Men	**2008**	**300**	**11,990**
	2005	*304*	*10,524*
Women	**2008**	**124**	**4,071**
	2005	*121*	*3,477*
Total	**2008**	**424**	**16,061**
	2005	*425*	*14,001*

Note:
1) The 2008 figures are data at 1 January 2008. The 2005 figures are data at 1 January 2005.
2) The JTL members are all non-uniformed.
3) Additional data relating to the pensionable allowances which gives rise to added years of pensionable service is not included in the salaries shown in the table.
4) Average service includes service credits from transfers-in.

Appendix P—Valuation of JPL sub-fund

Introduction

Jersey Post Limited (JPL) has participated in the Public Employees Contributory Retirement Scheme (PECRS) as an Admitted Body with effect from 1 July 2006, subject to special arrangements including a notional ringfencing of the assets and liabilities attributable to its employees.

A Terms of Admission Document, dated 10 May 2007, describes how the contributions to and assets of JPL's notional sub-fund are to be determined under this ringfencing approach.

Under the Terms of Admission Document the employer's contributions payable by JPL must be redetermined following the completion of each PECRS valuation. The results of the formal valuation of PECRS as at 31 December 2007 are set out in the main body of this report.

In this Appendix we set out the results of the valuation of the JPL sub-fund. A revised Actuary's Certificate prepared in accordance with Regulation 9(1)(c)(ii) of the Public Employees (Contributory Retirement Scheme)(General)(Jersey) Regulations 1989 (the "General Regulations") is set out in Appendix R.

Purpose

The purpose of the JPL sub-fund valuation is to review the financial position of the JPL sub-fund and the JPL employer contribution rate. The valuation identifies:

- The past service funding position of the JPL sub-fund as at 31 December 2007 i.e. the comparison of the value of the past service liabilities in respect of JPL's active members and the assets attributable to the JPL sub-fund as at 31 December 2007.
- The future contribution rate required from JPL to be included in the Actuary's Certificate.

Contributions since the previous valuation

The employer's initial contribution rate of 16.52% of salaries was paid from JPL's initial participation in PECRS as at 1 July 2006, until 31 December 2006. With effect from 1 January 2007, the employer's contribution rate was reduced to 11.38% of salaries in accordance with our Actuary's Certificate.

Assumptions

In accordance with the Terms of Admission Document we have used the same actuarial assumptions to carry out the JPL sub-fund valuation as those used for the main valuation of PECRS as at 31 December 2007. A summary of the assumptions is given in Appendix I.

Assets

The assets attributable to the JPL sub-fund as at 31 December 2007 were £31.5M. This value was determined in accordance with the principles set out in the Terms of Admission Document. Details of the calculation of the sub-fund as at 31 December 2007 are set out in our paper "Ongoing tracking of the Jersey Post Limited Sub-Fund" dated 12 September 2008, prepared for the Committee of Management. We understand that the data used for the sub-fund calculation has been audited.

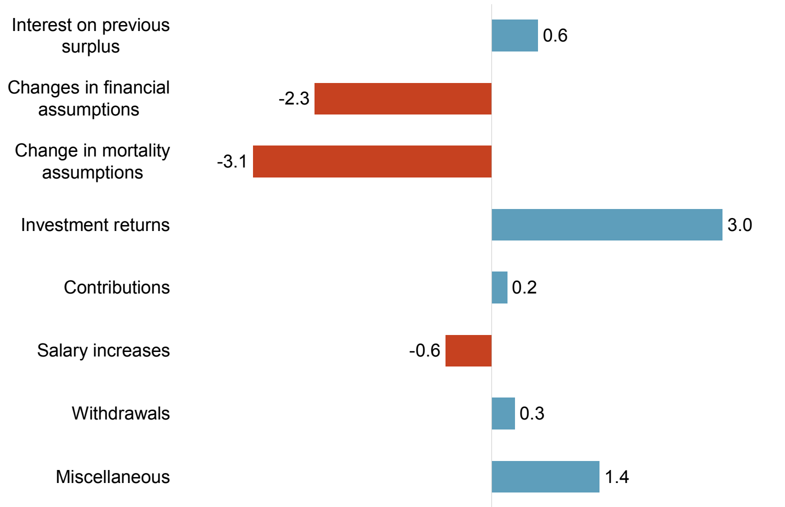
Past service funding position

The past service position for the JPL sub-fund as at 31 December 2007 is as follows:

	£M
Value of assets (the JPL sub-fund)	31.5
Less: value of past service benefits for JPL's current active members	28.9
Past service surplus	2.6
Past service funding ratio (assets divided by liabilities)	109%

As at 31 December 2004 the sub-fund had a past service surplus of £3.1M. The past service surplus has therefore reduced by £0.5M over the three years since 31 December 2004. We have analysed the reasons for the change indicating the impact of each factor on the valuation result this time.

Sources of change in past service position:



The funding position has therefore deteriorated due to the change in financial assumptions and the change in assumed mortality rates after retirement. However, the effect of these changes has been largely offset by the higher than expected investment returns.

Actuarial certificate and contribution rate

The Terms of Admission Document describes how, for the purpose of preparing the Actuary's certificates in accordance with Regulation 9(1)(c), the future contribution rate required by JPL should be determined. We have prepared a revised Actuary's certificate on that basis. The revised Certificate is included in Appendix R.

JPL's contribution rate has been calculated as 15.35% of salaries.

The rate of 15.35% of salaries comprises a "standard" contribution rate of 17.30% of salaries less an adjustment of 1.95% of salaries.

The standard contribution rate of 17.30% of salaries is the rate which is sufficient to support future service benefits for JPL's current active members measured over their future working lifetimes in PECRS. This compares with the corresponding standard contribution rate of 14.16% of salaries previously determined as at 31 December 2004. The main reason for the increase is the changes in the assumptions used.

The adjustment of 1.95% of salaries meets the objective of bringing JPL's share of the assets into line with JPL's funding target over the future average expected working lifetime of JPL's active members (around 14 years at 31 December 2007).

Allowance for expenses

The standard contribution rate includes allowance for the future expenses of administering the Scheme as a whole, which we assumed in the main PECRS valuation would amount to 0.6% of members' salaries, plus the estimated additional costs of administering JPL's sub-fund including the initial costs incurred when the sub-fund was established, which we have previously assumed would amount to 0.5% of members' salaries.

In setting the assumption for the additional costs of administering JPL's sub-fund we have analysed the actual initial legal and actuarial fees incurred in setting up the sub-fund as well as the ongoing actuarial and audit fees incurred since the sub-fund was established. Our analysis shows that the additional contributions of 0.5% of salaries paid since 1 July 2006 have been more than sufficient to cover the annual ongoing costs of administering the sub-fund but have not yet been sufficient to cover the initial set-up costs as well. Therefore it would remain appropriate to continue to make an allowance for these expenses of 0.5% of salaries. We will review this again at the next valuation of the sub-fund.

Therefore, included in the standard contribution rate are allowances of:

a) 0.60% of salaries, to reflect JPL's share of the ongoing PECRS administrative expenses, plus

b) 0.50% of salaries, to reflect the whole of the estimated additional costs of administering JPL's sub-fund.

Accrued benefits test

We are required by Guidance Note GN9 issued by the Board for Actuarial Standards to comment on the financial position of the Scheme in the hypothetical scenario that the Scheme had been discontinued at the valuation date. The Regulations do not envisage this possibility but we have assumed that the assets of the JPL sub-fund would be amalgamated with the rest of the Scheme assets in this hypothetical situation. The results of our accrued benefits test for the Scheme as a whole are set out in section 7 of this report.

Risks and sensitivity analysis

We have commented in section 8 of this report on some of the factors that could lead to deterioration to the Scheme's finances in various hypothetical downside scenarios. The key factors that could lead to deterioration in the JPL sub-fund's finances are the same.

In section 8 we have estimated the possible percentage change in the Scheme's overall funding ratio if certain adverse scenarios did arise. In proportionate terms, the percentage change in the JPL sub-fund's past service funding ratio in such scenarios would be quite similar.

Recommended contributions

The revised certificate included in Appendix R sets out the required new employer contribution rate of 15.35% of salaries effective from 1 August 2009.

The Terms of Admission Document does not contain provisions to back-date a change of contributions to the effective date of the valuation. To the extent that the actual contributions paid by JPL since 1 January 2008 have been lower than the new rate, this will be reflected in the determination of the assets attributable to the JPL sub-fund and then consequently in the determination of the employer's contribution rate at the next valuation of the sub-fund.

Contribution rate subject to review

The Terms of Admission provide for JPL's contribution rate to be re-determined following the completion of each PECRS actuarial valuation. The next such valuation is scheduled to be as at 31 December 2010.

Appendix Q—Valuation of JTL sub-fund

Introduction

Jersey Telecom Limited (JTL) has participated in the Public Employees Contributory Retirement Scheme (PECRS) as an Admitted Body with effect from 1 January 2003, subject to special arrangements including a notional ringfencing of the assets and liabilities attributable to its employees.

A Terms of Participation Document, dated 10 May 2007, describes how the contributions to and assets of JTL's notional sub-fund are to be determined under this ringfencing approach.

Under the Terms of Participation Document the employer's contributions payable by JTL must be redetermined following the completion of each PECRS valuation. The results of the formal valuation of PECRS as at 31 December 2007 are set out in the main body of this report.

In this Appendix we set out the results of the valuation of the JTL sub-fund. A revised Actuary's Certificate prepared in accordance with Regulation 9(1)(c)(ii) of the Public Employees (Contributory Retirement Scheme)(General)(Jersey) Regulations 1989 (the "General Regulations") is set out in Appendix S.

Purpose

The purpose of the JTL sub-fund valuation is to review the financial position of the JTL sub-fund and the JTL employer contribution rate. The valuation identifies:

- The past service funding position of the JTL sub-fund as at 31 December 2007 i.e. the comparison of the value of the past service liabilities in respect of JTL's active members and the assets attributable to the JTL sub-fund as at 31 December 2007.
- The future contribution rate required from JTL to be included in the Actuary's Certificate.

Contributions since the previous valuation

The employer's initial contribution rate of 16.43% of salaries was paid from JTL's initial participation in PECRS as at 1 January 2003, until 31 July 2006. With effect from 1 August 2006, the employer's contribution rate was reduced to 11.72% of salaries in accordance with our Actuary's Certificate. Further, the employer's contribution rate was temporarily reduced to nil in April and part of May 2006 to allow for the overpayment of contributions by the employer in 2002.

Assumptions

In accordance with the Terms of Participation Document we have used the same actuarial assumptions to carry out the JTL sub-fund valuation as those used for the main valuation of PECRS as at 31 December 2007. A summary of the assumptions is given in Appendix I.

Assets

The assets attributable to the JTL sub-fund as at 31 December 2007 were £46.7M. This value was determined in accordance with the principles set out in the Terms of Participation Document. Details of the calculation of the sub-fund as at 31 December 2007 are set out in our paper "Ongoing tracking of the Jersey Telecom Limited Sub-Fund" dated 12 September 2008, prepared for the Committee of Management. We understand that the data used for the sub-fund calculation has been audited.

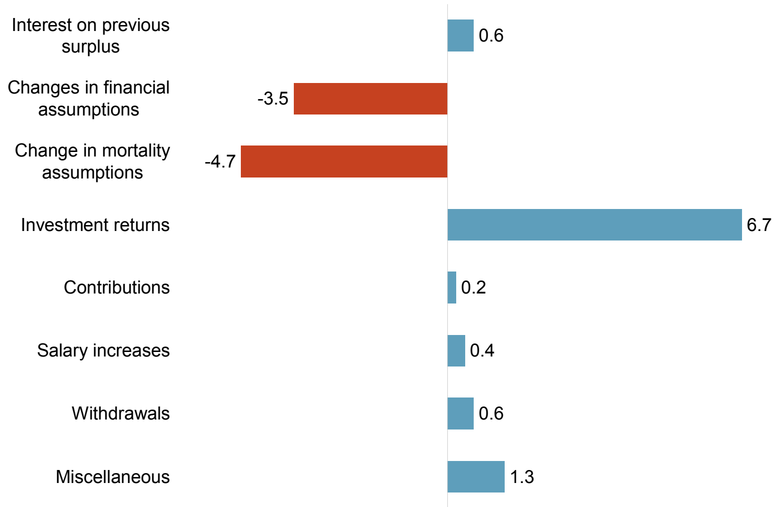
Past service funding position

The past service position for the JTL sub-fund as at 31 December 2007 is as follows:

	£M
Value of assets (the JTL sub-fund)	46.7
Less: value of past service benefits for JTL's current active members	42.1
Past service surplus	4.6
Past service funding ratio (assets divided by liabilities)	111%

As at 31 December 2004 the sub-fund had a past service surplus of £3.0M. The past service surplus has therefore increased by £1.6M over the three years since 31 December 2004. We have analysed the reasons for the change indicating the impact of each factor on the valuation result this time.

Sources of change in past service position:



The funding position has therefore improved largely due to the higher than expected investment returns. However, this has been offset by the change in financial assumptions and the change in assumed mortality rates after retirement.

Actuarial certificate and contribution rate

The Terms of Participation Document describes how, for the purpose of preparing the Actuary's certificates in accordance with Regulation 9(1)(c), the future contribution rate required by JTL should be determined. We have prepared a revised Actuary's certificate on that basis. The revised Certificate is included in Appendix S.

JTL's contribution rate has been calculated as 14.12% of salaries.

The rate of 14.12% of salaries comprises a "standard" contribution rate of 16.17% of salaries less an adjustment of 2.05% of salaries.

The standard contribution rate of 16.17% of salaries is the rate which is sufficient to support future service benefits for JTL's current active members measured over their future working lifetimes in PECRS. This compares with the corresponding standard contribution rate of 13.38% of salaries previously determined as at 31 December 2004. The main reason for the increase is the changes in the assumptions used.

The adjustment of 2.05% of salaries meets the objective of bringing JTL's share of the assets into line with JTL's funding target over the future average expected working lifetime of JTL's active members (around 16 years at 31 December 2007).

Allowance for expenses

The standard contribution rate includes allowance for the future expenses of administering the Scheme as a whole, which we assumed in the main PECRS valuation would amount to 0.6% of members' salaries, plus the estimated additional costs of administering JTL's sub-fund including the initial costs incurred when the sub-fund was established, which we have previously assumed would amount to 0.5% of members' salaries.

In setting the assumption for the additional costs of administering JTL's sub-fund we have analysed the actual initial legal and actuarial fees incurred in setting up the sub-fund as well as the ongoing actuarial and audit fees incurred since the sub-fund was established. Our analysis shows that the additional contributions of 0.5% of salaries paid since 1 January 2003 have been more than sufficient to cover the annual ongoing costs of administering the sub-fund and have now covered the initial set-up costs as well. Therefore it is now appropriate to reduce this allowance to cover just the annual ongoing costs. Based on past experience, an appropriate allowance for these expenses is 0.15% of salaries. We will review this again at the next valuation of the sub-fund.

Therefore, included in the standard contribution rate are allowances of:

a) 0.60% of salaries, to reflect JTL's share of the ongoing PECRS administrative expenses, plus

b) 0.15% of salaries, to reflect the whole of the estimated additional costs of administering JTL's sub-fund.

Accrued benefits test

We are required by Guidance Note GN9 issued by the Board for Actuarial Standards to comment on the financial position of the Scheme in the hypothetical scenario that the Scheme had been discontinued at the valuation date. The Regulations do not envisage this possibility but we have assumed that the assets of the JTL sub-fund would be amalgamated with the rest of the Scheme assets in this hypothetical situation. The results of our accrued benefits test for the Scheme as a whole are set out in section 7 of this report.

Risks and sensitivity analysis

We have commented in section 8 of this report on some of the factors that could lead to deterioration to the Scheme's finances in various hypothetical downside scenarios. The key factors that could lead to deterioration in the JTL sub-fund's finances are the same.

In section 8 we have estimated the possible percentage change in the Scheme's overall funding ratio if certain adverse scenarios did arise. In proportionate terms, the percentage change in the JTL sub-fund's past service funding ratio in such scenarios would be quite similar.

Recommended contributions

The revised certificate included in Appendix S sets out the required new employer contribution rate of 14.12% of salaries effective from 1 August 2009.

The Terms of Participation Document does not contain provisions to back-date a change of contributions to the effective date of the valuation. To the extent that the actual contributions paid by JTL since 1 January 2008 have been lower than the new rate, this will be reflected in the determination of the assets attributable to the JTL sub-fund and then consequently in the determination of the employer's contribution rate at the next valuation of the sub-fund.

Contribution rate subject to review

The Terms of Participation provide for JTL's contribution rate to be re-determined following the completion of each PECRS actuarial valuation. The next such valuation is scheduled to be as at 31 December 2010.

Appendix R—Actuary's Certificate for JPL

<u>Participation of Jersey Post Limited in the Public Employees Contributory Retirement Scheme (PECRS) – Regulation 9(1)(c) certificate</u>

In accordance with Regulation 9(1)(c)(ii) of the General Regulations, we have reviewed the certificate as to the amount to be contributed to the Public Employees Contributory Retirement Scheme (“the Scheme”) by Jersey Post Limited (“the Employer”) issued in accordance with Regulation 9(1)(c)(ii) of the General Regulations on 23 November 2006. This certificate is the new certificate issued in accordance with Regulation 9(1)(c)(ii).

We hereby certify that the Employer shall pay to the Scheme, at such regular intervals as the Chief Minister shall specify:

1. with effect from 1 August 2009, contributions at the rate of 15.35% of the salary of each of its employees who is a member
2. the contributions payable to the Scheme by each of its employees who is a member
3. such contributions as may be required under Regulations 7, 17 or 18 of the 1989 New Members Regulations or the 1989 Existing Members Regulations
4. such contributions as may be required under Regulation 16 of the 1967 Regulations.

The contributions in 1 above shall, where appropriate, be subject to the provisions of Regulations 2(13) and 3(4) of the 1989 New Members Regulations and Regulations 2(11) and 3(4) of the 1989 Existing Members Regulations.

Where the above contributions or repayments are paid after the specified dates, they shall be subject to the addition of interest at the rate of 6.9% per annum compound or such other basis as shall be notified from time to time.

In this certificate:

“General Regulations” means the Public Employees (Contributory Retirement Scheme) (General) (Jersey) Regulations, 1989, as amended;

“1967 Regulations” means the Public Employees (Contributory Retirement Scheme) (Jersey) Regulations, 1967, as amended;

“1989 Existing Members Regulations” means the Public Employees (Contributory Retirement Scheme) (Existing Members)(Jersey) Regulations, 1989, as amended;

“1989 New Members Regulations” means the Public Employees (Contributory Retirement Scheme) (New Members) (Jersey) Regulations, 1989, as amended;

the terms “employee”, “member”, and “salary” have the meaning given in Regulation 1 of the 1989 New Members Regulations, the 1989 Existing Members Regulations or the 1967 Regulations, as appropriate.

For Hewitt Associates Limited

Jonathan F. Teasdale

J F Teasdale FIA

2 July 2009

Appendix S—Actuary's Certificate for JTL

<u>Participation of Jersey Telecom Limited in the Public Employees Contributory Retirement Scheme (PECRS) – Regulation 9(1)(c) certificate</u>

In accordance with Regulation 9(1)(c)(ii) of the General Regulations, we have reviewed the certificate as to the amount to be contributed to the Public Employees Contributory Retirement Scheme ("the Scheme") by Jersey Telecom Limited ("the Employer") issued in accordance with Regulation 9(1)(c)(ii) of the General Regulations on 7 July 2006. This certificate is the new certificate issued in accordance with Regulation 9(1)(c)(ii).

We hereby certify that the Employer shall pay to the Scheme, at such regular intervals as the Chief Minister shall specify:

1. with effect from 1 August 2009, contributions at the rate of 14.12% of the salary of each of its employees who is a member
2. the contributions payable to the Scheme by each of its employees who is a member
3. such contributions as may be required under Regulations 7, 17 or 18 of the 1989 New Members Regulations or the 1989 Existing Members Regulations
4. such contributions as may be required under Regulation 16 of the 1967 Regulations.

The contributions in 1 above shall, where appropriate, be subject to the provisions of Regulations 2(13) and 3(4) of the 1989 New Members Regulations and Regulations 2(11) and 3(4) of the 1989 Existing Members Regulations.

Where the above contributions or repayments are paid after the specified dates, they shall be subject to the addition of interest at the rate of 6.9% per annum compound or such other basis as shall be notified from time to time.

In this certificate:

"General Regulations" means the Public Employees (Contributory Retirement Scheme) (General) (Jersey) Regulations, 1989, as amended;

"1967 Regulations" means the Public Employees (Contributory Retirement Scheme) (Jersey) Regulations, 1967, as amended;

"1989 Existing Members Regulations" means the Public Employees (Contributory Retirement Scheme) (Existing Members)(Jersey) Regulations, 1989, as amended;

"1989 New Members Regulations" means the Public Employees (Contributory Retirement Scheme) (New Members) (Jersey) Regulations, 1989, as amended;

the terms "employee", "member", and "salary" have the meaning given in Regulation 1 of the 1989 New Members Regulations, the 1989 Existing Members Regulations or the 1967 Regulations, as appropriate.

For Hewitt Associates Limited

Jonathan F. Teasdale

J F Teasdale FIA

2 July 2009

Glossary

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 UK 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 resources of the Scheme (its assets, plus the value of the future pre-1987 debt repayment supplements) to the resources that would be required to meet the **funding target**.
Funding target	This is that, based on best-estimate assumptions, the assets and future contributions should be sufficient over the long term to support the benefits payable from the Scheme in respect of the current members of the Scheme. The resources of the Scheme required to meet the **funding target** are determined by assessing the **present value** of the benefits that will be paid from the Scheme in the future, based on pensionable service prior to the valuation date, plus the extent to which the **present value** of future service benefits for current members exceeds the **present value** of anticipated future service contributions for such members.
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.