GOVERNMENT ACTUARY'S DEPARTMENT

Report by the Government Actuary on the financial condition of the Social Security Fund as at 31 December 2006

Date: 25 September 2009

Author: Trevor Llanwarne

SOCIAL SECURITY (JERSEY) LAW 1974

Report by the Government Actuary on the financial condition of the Social Security Fund as at 31 December 2006

To the Minister for Social Security of the States of Jersey

Article 32 of the Social Security (Jersey) Law, 1974 requires the actuary to review the operation of the Law at intervals not exceeding three years. The previous review was as at 31 December 2003 and, at the request of the Minister, I have carried out a review as at 31 December 2006. I now submit the following report on the financial condition of the Social Security Fund and on the adequacy of the present contribution rates.

Trevor Llanwarne
Government Actuary
25 September 2009

Note:

This report has been prepared for the Minister for Social Security, although it is understood that the report will be made publicly available. However, GAD does not accept any liability to third parties in relation to this report.

GAD relies on the accuracy of data and information provided by the Client (in this case the Minister and the Department for Social Security). GAD does not accept responsibility for advice based on wrong or incomplete data or information provided by the Client.

Clarification should be sought if the Client has any doubt about the intention or scope of advice provided by GAD. GAD is not responsible for any decision taken by the Client, except to the extent that the decision has been made in accordance with specific advice provided by GAD.

Advice provided by GAD must be taken in context. Advice is intended to be read and used as a whole and not in parts. GAD does not accept responsibility for advice that is altered or used selectively.

Table of Contents

1 Executive summary

1.1 This report concerns the financial condition of the Jersey Social Security Fund ("the Fund") as at 31 December 2006 and the expected adequacy in future years of the legislated contribution rates, assuming that the States contribution will continue on the same basis as at present.

1.2 The Fund has historically followed a pay-as-you-go financing approach. Under this approach, contribution income in a year is intended to cover expenditure in the year, and no significant fund of assets would be built up out of which to finance future expenditure. However, the pay-as-you-go approach implies increases in contribution rates, often substantial, as the population ages. Therefore, in order to confront the ageing of Jersey's population over the next 30 to 40 years, it was decided to raise contribution rates above the required pay-as-you-go rate[1]. This meant that there should be an excess of income over expenditure, which is transferred each year from the Social Security Fund to the Social Security (Reserve) Fund. The intention was to build up the Reserve Fund to a level of around five times the annual expenditure on benefits and administration from the Social Security Fund.

1.3 In 2007, the current contribution rate of 10.5% was more than sufficient to cover the Fund's expenditure and allowed a substantial transfer of assets into the Reserve Fund. The combined average assets of the Social Security Fund and the Reserve Fund over 2007 represented about 4.2 times total expenditure from the Social Security Fund.

1.4 The calculations for this review involve projecting contribution income, benefit expenditure and administration expenses over the 60 years from 2006 to 2066. Two main sets of results are presented in this report:

- the projected "break-even" contribution rates
- the combined balances in the Social Security and Social Security (Reserve) Funds (together "the Funds"), as a multiple of expenditure, assuming that the current rates of contribution remain unchanged

1.5 The break-even contribution rates are the rates that would be required in order for contribution income to equal expenditure on benefits and administration costs, assuming that the States contribution ("supplementation") will continue to be calculated as at present. These are the contribution rates that would be required if the Fund were following the pay-as-you-go financing approach. One of the main factors likely to cause significant changes in these break-even rates in the future is the change in the relative numbers of contributors and pensioners.

1.6 The results are based on a large number of assumptions about the future experience of the Fund and the results of the review are sensitive to the assumptions adopted.

[1] Contribution rates were increased by 0.5% in each year from 1998 to 2002

1.7 One of the most important assumptions is the assumed development in the Island's population. This assumption was based on the population projections prepared by the States' Statistics Unit. A key factor in the development of the Island's population is the level of future migration. This is particularly difficult to predict and therefore the review shows results on two different migration assumptions, as agreed with the Social Security Department. The two assumptions are:

- zero net migration in each year from 2009
- net inward migration of 150 "heads of household" a year for all years from 2009

A "head of household" (HoH) refers to the head of each family group that enters or leaves Jersey. 150 HoHs corresponds to a total number of migrants (including dependants) of 324 each year. These two assumptions have been chosen to demonstrate the effect migration has on the results and should not be regarded as forecasts of the expected future levels of migration.

1.8 A summary of the projected break-even contribution rates is shown in the following table, for both migration assumptions. These rates exclude the contribution to the Health Insurance Fund.

Table 1.1: Estimates of the break-even contribution rates, assuming that benefit rates and earnings limits increase in line with earnings

	Break-even contribution rates (%)	
Year	Zero net migration	Net immigration of 150 heads of household a year
2006	9.0	9.0
2011	9.8	9.7
2016	11.1	10.7
2026	14.7	13.4
2036	18.9	16.3
2046	20.0	16.3
2056	20.9	16.7
2066	21.3	17.1

1.9 It can be seen that the break-even contribution rate is projected to rise above the current contribution rate of 10.5% within the next few years. This is projected to be in 2014 with zero net migration, and in 2015 with net immigration of 150 HoHs a year.

1.10 A key reason for the projected rise in the break-even contributions rates is the ageing of the Island's population: any increase in the number of pensioners relative to the number of contributors will increase the required contribution rates, other things being equal. This is illustrated by the pensioner support ratio (PSR), which is defined as the number of people of working age per person over retirement age. In 2006 the PSR is estimated to have been about 4.4, but with nil net migration this is projected to have declined to about 1.4 in 2066. With assumed immigration of 150 HoHs each year, the PSR is projected to decline from 4.4 in 2006 to about 1.8 in 2066.

1.11 In practice, however, the current balances in the Funds (and the further build up of those balances while the contribution income exceeds expenditure) can be used in order to reduce the required increase in future contribution rates, and/or push back the date when those increases need to be implemented. The review has considered the projected build up, and decline, in the Funds' assets, on the assumption that the future rate of return on investments, net of associated expenses, will be 2% a year in excess of earnings increases.

1.12 Assuming zero future net migration, if the current contribution rates were to be paid in the future, the projected balance in the Funds as a multiple of annual expenditure would grow to a maximum of 4.7 in 2013. Thereafter, the balance would fall as a multiple of annual expenditure, until the Funds are extinguished in 2034. After this point, it would be necessary to increase contribution rates to at least the break-even rate (which is 18.3% in 2034 and increases further in later years, as indicated in Table 6.1). In practice, part of the Fund balance is not readily convertible into cash (for example, the part relating to fixed assets and debtors) and therefore it would be necessary to increase the contribution rate before the balance is fully extinguished. Indeed, it may be considered prudent to increase contribution rates earlier still in order to maintain a reasonable working cash balance.

1.13 Assuming future net immigration of 150 HoHs a year, the projected balance in the Funds would grow to a maximum of 4.8 times annual expenditure in 2015, if the current contribution rates were to be paid. Thereafter, the balance would fall as a multiple of annual expenditure, until the Funds are extinguished in 2038. After this point, it would be necessary to increase contribution rates to at least the break-even rate (which, in 2038, is 16.5% and increases further in later years).

1.14 The above projections of the Fund balance have used the balance at the end of 2007 as the starting point. Following completion of our calculations for this review, we have received the draft accounts for 2008, which showed that the value of the Funds fell in that year due to poor investment returns. We have therefore made some additional calculations to show how the projection of the Fund balance would change if we allowed for the poor returns in 2008 instead of our long-term assumption of 2% a year in excess of earnings growth. These calculations indicate that the effect of the return in 2008 is to bring forward the year in which the Funds are expected to be extinguished by 2 or 3 years, that is, to 2032 assuming zero future net migration and to 2035 with future net immigration of 150 HoHs a year.

1.15 To the extent that the future experience of the Fund does not follow the assumptions made for the purpose of these projections, the future financial position of the Fund may differ considerably from that described above. In particular, the year at which the Funds are exhausted is sensitive to small changes in the assumptions.

1.16 The financial outlook for the Fund remains healthy in the short term. However, action will need to be taken in order to ensure that the Fund can continue to meet its commitments in the longer term. For example, this might include drawing down assets from the Reserve Fund to meet any shortfall between income and expenditure in the Social Security Fund. However, as described above, this report shows that in the absence of changes to contributions or benefits, the Reserve Fund is expected to be extinguished by sometime in the 2030s (the exact year is very sensitive to the assumptions used). After this time, the contribution rate would need to be raised to at least the break-even rates described above. Changes to benefits such as increasing the pension age would, other things being equal, result in smaller increases in contributions being needed.

2 Introduction and scope of the review

2.1 The financial position of the Jersey Social Security Fund ("the Fund") is, like any social security scheme, subject to a wide range of factors, such as the structure of the population and economic conditions. For this reason, Article 32 of the Social Security (Jersey) Law 1974 ("the Law") makes provision for an actuary to carry out reviews of the operation of the Law. In particular, paragraph (1) of that Article provides that:

> "… as from the end of each period of 3 years, or such shorter period as the Minister may direct, an actuary shall review the operation of this Law"

Paragraph (3) of Article 32 goes on to provide that:

> " … the actuary shall report to the Minister on the financial condition of the Social Security Fund and the adequacy or otherwise of the contributions payable under this Law to support the benefits payable thereunder having regard to the liabilities under this Law."

2.2 This is my report on the latest review of the Fund, which has been carried out as at 31 December 2006. Although the effective date of the review is 31 December 2006, the review takes into account data for 2007. This meant that there was more information available on the impact of the new incapacity benefits which were introduced from October 2004.

2.3 The previous review of the Fund as at 31 December 2003 was also performed by the Government Actuary, who, at that time, was Chris Daykin, my immediate predecessor. The report on that review was submitted to the President and Members of the (then) Social Security Committee of the States of Jersey in April 2005.

2.4 The objectives of this review, as stated in Article 32 of the Law, are to determine the financial condition of the Social Security Fund and to consider the current and future adequacy of the contributions payable in accordance with the Law.

2.5 The Fund has historically followed a pay-as-you-go financing approach. Under this approach, contribution income in a year is intended to cover expenditure in the year, and no significant fund of assets would be built up out of which to finance future expenditure. However, the pay-as-you-go approach implies increases in contribution rates, often substantial, as the population ages: such ageing is expected in all population projections. Therefore, in order to confront Jersey's ageing demographic profile over the next 30 to 40 years, it was decided to raise contribution rates above the required pay-as-you-go rate[2]. This has meant that there should be an excess of income over expenditure, which is transferred each year from the Social Security Fund to the Social Security (Reserve) Fund. The intention was to build up the Reserve Fund to a level of around five times the annual expenditure on benefits and administration from the Social Security Fund.

[2] Contribution rates were increased by 0.5% in each year from 1998 to 2002

2.6 In 2007, the current contribution rate of 10.5% was more than sufficient to cover the Fund's expenditure and allowed a substantial transfer of assets into the Reserve Fund. The combined average assets of the Social Security Fund and the Reserve Fund over 2007 represented about 4.2 times total expenditure from the Social Security Fund.

2.7 The structure of the remaining sections of this report is as follows:

Section 3	Discussion of the projected demographic developments, which, as mentioned above, can have a significant influence on the finances of the Fund.
Section 4	Brief commentary on the data provided for the review
Section 5	Discussion of the method and assumptions used in calculating the results of the review.
Section 6	Key results, based on a projection of income and expenditure over a period of 60 years.
Section 7	How the results would change if alternative assumptions were used.
Section 8	Comparison of the results in section 6 with those from the report on the previous review.

2.8 The appendices give additional background and more detailed results. In particular, a summary of the current provisions of the Law for calculating the contributions to and benefits from the Fund, on which the review is based, is shown in Appendix A. This summary reflects the major changes to the incapacity benefits, which were introduced with effect from 1 October 2004 and which have been allowed for in this review. Appendix B shows the income, expenditure and balances for the Social Security and the Social Security (Reserve) Funds for the four years ending 31 December 2007.

2.9 Under legislation, the next review of the Social Security Fund is due to be carried out as at 31 December 2009, or earlier as the Minister may direct.

2.10 This report complies with the International Actuarial Association's Guidelines of Actuarial Practice for Social Security Programs effective from 1 January 2003. These guidelines set out standards for the information that should be included in actuarial reports on social security schemes.

3 The demographic assumptions

3.1 A key factor in the financial development of social security systems is the structure of the population and how this changes over time. This means that a fundamental starting point in analysing the future finances of the Fund is a projection of the future population of Jersey, broken down by age and sex. It should be emphasised that these are not forecasts of the future population but illustrations of how the population would develop under a set of stylised assumptions, which are nevertheless regarded as reasonable assumptions to make for planning purposes.

3.2 This review of the Fund has been based on the demographic projections prepared by the States' Statistics Unit. Although GAD did not attempt to check the population projection model in detail, we did review for its reasonableness in overall terms. GAD also provided comments on the assumptions on mortality and fertility, and agreed the final assumptions with the Statistics Unit.

3.3 The starting point for the projection of the population is the March 2001 census, which is then adjusted in line with the recorded births, deaths and migration up to the end of 2007. There are three main assumptions that are needed for the future:

> rates of mortality
> fertility rates
> migration

Rates of mortality

3.4 The assumed rate of mortality in Jersey was based on the projected mortality rates for England in the 2006 population projections for the United Kingdom, published by the Office for National Statistics. These projections make a significant allowance for future improvements in life expectancy. These English mortality rates were however adjusted in order to reflect better the specific experience in Jersey. The adjustment factors applied are shown in the following table.

Table 3.1: Ratio of the assumed mortality rates for Jersey to the corresponding rates for England (based on the 2006 UK population projections)

Age group	Men	Women
0 to 14	100%	100%
15 to 59	110%	90%
60 to 74	95%	90%
75 and over	95%	95%

3.5 Rates below 100% in this table indicate that individuals in these age groups in Jersey are assumed to experience lower rates of mortality than their counterparts in England. Therefore, for example, someone in Jersey aged 60 is assumed to have a longer life expectancy than someone aged 60 in England.

3.6 The life expectancies at age 65 based on these assumptions are shown in Table 3.2, according to the year in which the person attains age 65. The life expectancy at age 65 is generally more important for social security schemes than the life expectancy at birth because such schemes are primarily concerned with the payment of pensions to those over retirement age.

Table 3.2: Approximate life expectancy at age 65[3]

Year in which attain age 65	**2010**	**2030**	**2050**
Life expectancy at age 65			
Men	22 years	23 years	25 years
Women	24 years	26 years	27 years

3.7 Overall, the mortality assumptions used for this actuarial review incorporate a greater allowance for future improvement than at the previous review, and therefore result in increased life expectancies. For example, the life expectancy for those reaching age 65 in 2030 was about 21 years for men and 24 years for women, based on the assumptions for the previous review.

Fertility rates

3.8 The fertility rate relates to the number of children born to each woman. In order to reproduce itself, a population needs a total fertility rate of about 2.1, that is, 2.1 children per woman. This is greater than 2 because of the need to offset the effect of women who die before reaching child-bearing age.

3.9 Based on data on the numbers of births in Jersey from 2001 to 2007, it was assumed for the population projections that the total fertility rate would be 1.57 in all future years (compared with 1.6 assumed at the previous review). This is significantly lower than the rate in rest of the UK: for example, the projections for England and Wales assume that the total fertility rate in the long-term would average 1.85.

Migration

3.10 Migration to and from Jersey is particularly difficult to predict and it is for this reason that we have prepared results for the review of the Fund on two different migration assumptions, as agreed with the Social Security Department. The two assumptions are:

- zero net migration in each year from 2009
- net inward migration of 150 "heads of household" a year for all years from 2009

[3] These are "cohort" life expectancy figures, which means that they allow for the projected rate of mortality in future years; for example, the life expectancy for someone who reaches age 65 in 2010 reflects the mortality rate at age 65 in 2010, at age 66 in 2011, at age 67 in 2012 etc.

A "head of household" (HoH) refers to the head of each family group that enters or leaves Jersey. 150 HoHs corresponds to a total number of migrants (including dependants) of 324 each year. These two assumptions have been chosen to demonstrate the effect migration has on the results and should not be regarded as forecasts of the expected future levels of migration.

3.11 An established feature of the economy of the island is the substantial number of seasonal workers, including workers from outside the island who remain resident in Jersey for only a few months of the year, particularly over the summer months. The population projections prepared by the Statistics Unit showed the population at the end of December each year and therefore did not include much allowance for seasonal migrants. Therefore, in carrying out this review, we made an adjustment to reflect the average number of seasonal migrants who come to the Island each year, work and contribute to the Fund.

Projected population

3.12 The projected future numbers in the population, by age and sex, are shown in Appendix C. A summary of the projections is given in Table 3.3 assuming zero net migration in the future and in Table 3.4 assuming net inward migration of 150 HoHs a year. In addition to the population numbers, the tables also show the "pensioner support ratio" (PSR), which is defined as the number of people of working age per person over retirement age. The projected future numbers in the population are illustrated in Figures 3.1 and 3.2.

Table 3.3: Projected population of Jersey assuming no net migration from 2009[4]

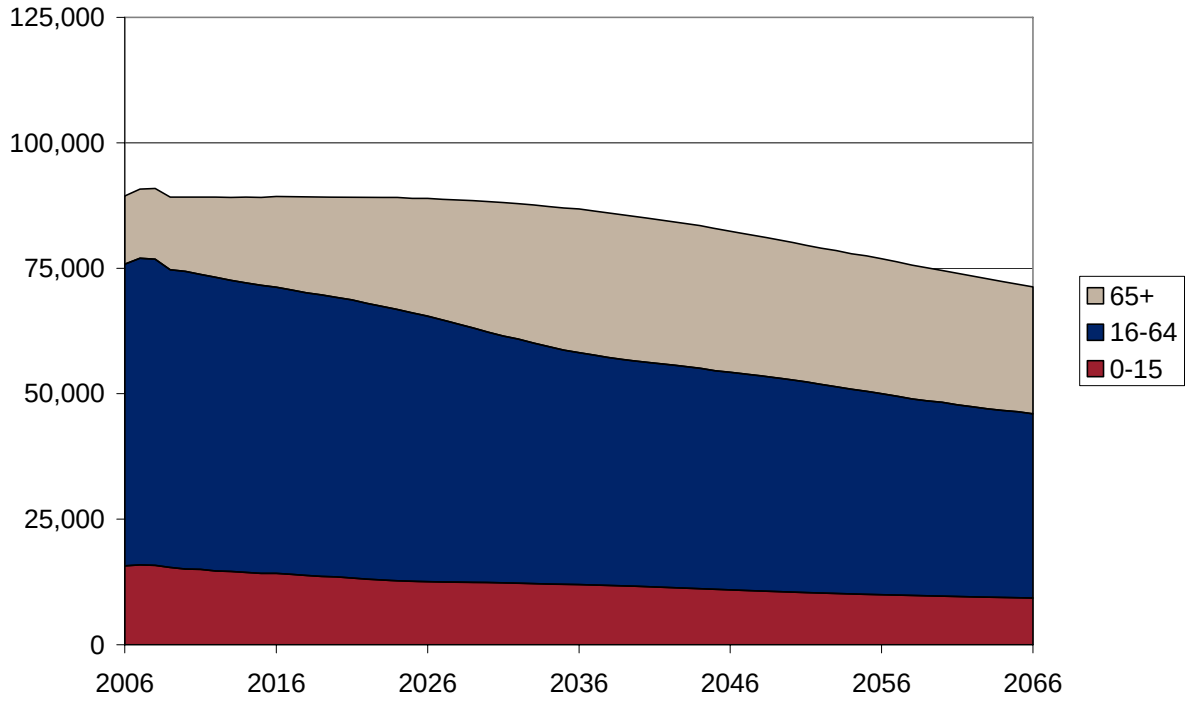
	2006	2011	2016	2026	2046	2066
Age group:						
0-15	15,700	15,000	14,200	12,600	10,900	9,300
16-64 (W)	60,100	58,800	57,000	52,900	43,400	36,700
65 and over (P)	13,600	15,400	18,100	23,400	28,100	25,300
Total	89,400	89,200	89,200	88,900	82,400	71,300
PSR (= W / P)	4.4	3.8	3.1	2.3	1.5	1.4

[4] Numbers may not sum due to rounding.

Table 3.4: Projected population of Jersey assuming net immigration of 150 a year from 2009

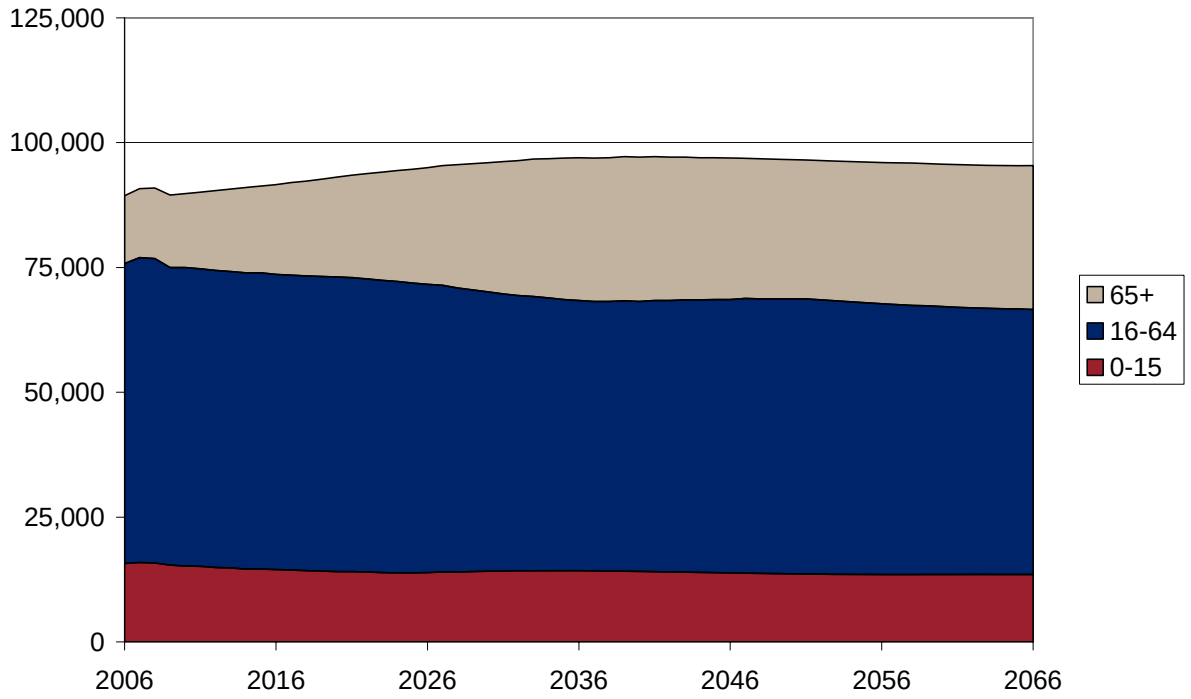
	2006	2011	2016	2026	2046	2066
Age group:						
0-15	15,700	15,100	14,500	13,900	13,800	13,500
16-64 (W)	60,100	59,600	59,100	57,700	54,800	53,100
65 and over (P)	13,600	15,400	18,000	23,400	28,300	28,800
Total	89,400	90,100	91,700	95,000	96,900	95,400
PSR (= W / P)	4.4	3.9	3.3	2.5	1.9	1.8

Figure 3.1: Projected population of Jersey assuming nil net migration[5]



[5] It can be seen that there is a small discontinuity in the population numbers between 2008 and 2009. This arises because up to 2008 we have used data on the actual population, but from 2009 the numbers are generated from the States' long-term population model which uses the 2006 population as the baseline. Our projections therefore incorporate the approximation that additional population growth from 2006 to 2008 unwinds over a short period.

Figure 3.2: Projected population of Jersey assuming net inward migration of 150 heads of household each year



3.13 It can be seen that the total population assuming zero net migration is projected to remain around its current level up to about 2020, after which it will gradually decline so that by 2066 the population will only be approximately 71,000, that is about 20% lower than the current population. In contrast, assuming net immigration of 150 HoHs each year, the population is expected to increase steadily up to about 97,000 in 2040 before falling back slightly to stand at just over 95,000 in 2066.

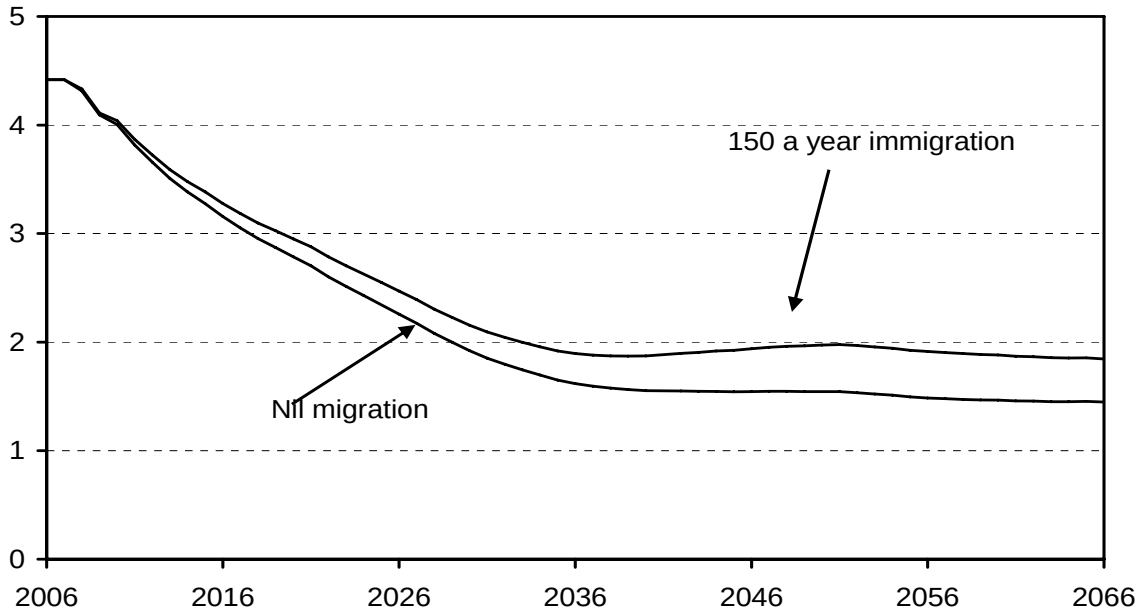
3.14 Although the total population is relevant for many purposes, for the Social Security Fund it is necessary to consider how the population is distributed across the age groups. It can be seen from the above charts that there is a substantial shift towards older age groups over the period of the projections.

3.15 A convenient way of considering this is to look at the PSR, the number of people of working age per person over pension age. This ratio is particularly relevant to social security systems that are financed on a pay-as-you-go basis. This is because, under this financing system, income from current contributors is expected to cover the current benefit and administration expenditure. Therefore, the greater the number of people of working age for each person who has reached retirement age, the lower the required contribution rate (other things being equal).

3.16 With no allowance for future net migration, the PSR is projected to fall from the current level of over 4 to around 1.5 in 2046, at which level it will broadly stabilise. Other things being equal, this would suggest that the pay-as-you-go contribution rate (in respect of retirement pensions) would have to more than double by 2046. With allowance for migration of 150 HoHs each year the fall in the PSR is slightly less dramatic, falling to about 1.9 in 2036 and remaining at around that level up to 2066, but this still implies a very substantial increase in the pay-as-you-go contribution rate.

3.17 The projected change in the PSR is illustrated in Figure 3.3.

Figure 3.3: Pensioner support ratio (that is, the number of people of working age for each person over pension age)



3.18 It is interesting to compare the population projection used for this review with that used for the previous review as at 31 December 2003. Comparing with the projections based on nil net migration, this time's population projection shows a population that is about 2,500 higher in 2008, rising to about 6,000 higher by 2066, than the equivalent figures at the previous review. This difference largely relates to the higher starting population in 2008 and the higher assumed life expectancy at the current review, both of which are slightly offset by a lower assumed fertility rate.

3.19 The impact of assuming higher life expectancy and lower fertility is shown clearly in the development of the PSR. At the previous review, the PSR (based on nil net migration) was projected to fall from 4.3 in 2006 before levelling off at around 1.8, compared to a long-term level of about 1.4 for the current review.

4 Data

4.1 The accuracy of the numerical results of the review is dependent on the data on which they are based. If the data contain material inaccuracies or omissions it could have a significant effect on the results of the review. Data are used in three main areas:

- as the starting point of the projections
- to assess appropriate assumptions about the future, although it will also be necessary to take account of expected future trends
- as a validation of the projection methodology

4.2 The main source of data was the contribution and benefits data provided by the Social Security Department, and we are very grateful for their assistance with the review. Changes to the computer systems of the Social Security Department meant that the data for this review (covering the period since 2004) were prepared in a different way from that used for previous reviews. As a result, the post-2004 data may sometimes have been prepared on a slightly different basis from the pre-2004 data and in some cases this has made it more difficult to analyse long-term trends.

4.3 The data provided covered numbers of beneficiaries and the amounts of benefit paid, and the number of contributors and their earnings. Where possible, we have made some simple checks on the data. The data appear to be of generally good quality, and are adequate for the purposes of the review. Nevertheless, it should be noted that if any of the data used for the calculations are materially incorrect or incomplete, it could have a significant effect on the results.

4.4 A summary of the data is set out in Appendix D.

4.5 As mentioned in paragraph 2.2, although the effective date of the review is 31 December 2006, data were also provided for 2007. In particular, this meant that there was more information available on the impact of the new incapacity benefits.

4.6 The projections of the balance in the Funds have been based on the market value of the assets as at 31 December 2007 as shown in the 2007 accounts. The results for the projection of the fund balance should be seen in the context of the general volatility of market values of some classes of investment.

5 Method and assumptions

Method

5.1 The calculations for this review involve projecting contribution income, benefit expenditure and administration expenses over the 60 years from 2006 to 2066. Two main sets of results are presented in this report:

> The projected "break-even" contribution rates
> The combined balances in the Social Security and Social Security (Reserve) Funds ("the Funds"), as a multiple of expenditure, assuming that the current rates of contribution remain unchanged

5.2 The break-even contribution rates are the rates that would be required in order for contribution income to equal expenditure on benefits and administration costs, assuming that the States contribution ("supplementation") will continue to be calculated as at present (see Appendix A, paragraph 9.19). These are the contribution rates that would be required if the Fund were following the pay-as-you-go financing approach. One of the main factors likely to cause significant changes in these break-even rates in the future is the change in the relative numbers of contributors and pensioners. These factors are mainly demographic but include also social and economic factors such as changes in the proportion of women working and the rate of unemployment.

5.3 In projecting the future combined balance in the Funds, as a multiple of annual expenditure, it is assumed that the current contribution rates continue to apply in all future years. While projections of fund balances are subject to a great deal of uncertainty, these results give an indication as to the extent to which the build-up of funds in the Reserve Fund can be used to delay increases to contribution rates which would otherwise be required. If no fund of assets had been built up, the contribution rate would need to follow the break-even rates.

5.4 Where results are given as monetary values, they are shown in constant 2007 earnings terms. This is a convenient approach because it is assumed that all benefit rates and contribution limits increase in the future in line with earnings.

Assumptions

5.5 In order to make projections of future income and expenditure, it is necessary to make a large number of assumptions about likely future experience. One of the key assumptions relates to future changes in the population, which was discussed in section 3 of this report. The other assumptions mainly relate to the numbers of beneficiaries and contributors, the average level of benefits payable and the average earnings of contributors. An explanation of how the principal assumptions were determined is given in Appendix E.

5.6 The results of the review are sensitive to the assumptions adopted. Although the assumptions are considered to form a reasonable basis for the review, in practice, it is not possible to predict the future with any certainty and therefore the Fund's future experience will differ from that assumed. It is therefore important to consider how the results of the review would change if experience followed a different set of assumptions. This is discussed in section 7.

6 The estimated expenditure, rates of contribution required and balance in the Funds in future years

6.1 Estimates have been made of the future income, benefit expenditure and administration expenditure of the Fund, using the method and assumptions described in the preceding sections of the report and in Appendix E.

6.2 Details of the projections in selected years are given in Appendix F. For these projections, the estimated contribution income is calculated assuming that the current contribution rates apply in all future years. Earnings limits for contributions and benefit rates are assumed to increase in line with general earnings growth.

6.3 Table 6.1 sets out estimates of the future expenditure from the Social Security Fund, including expenditure on administration, and of the contribution rates required in order to meet this expenditure, for both sets of migration assumptions. These are the "break-even" contribution rates which would be required if the pay-as-you-go approach to financing were being followed. The contribution rates are a percentage of earnings up to the upper limit, and are illustrated in Figure 6.1.

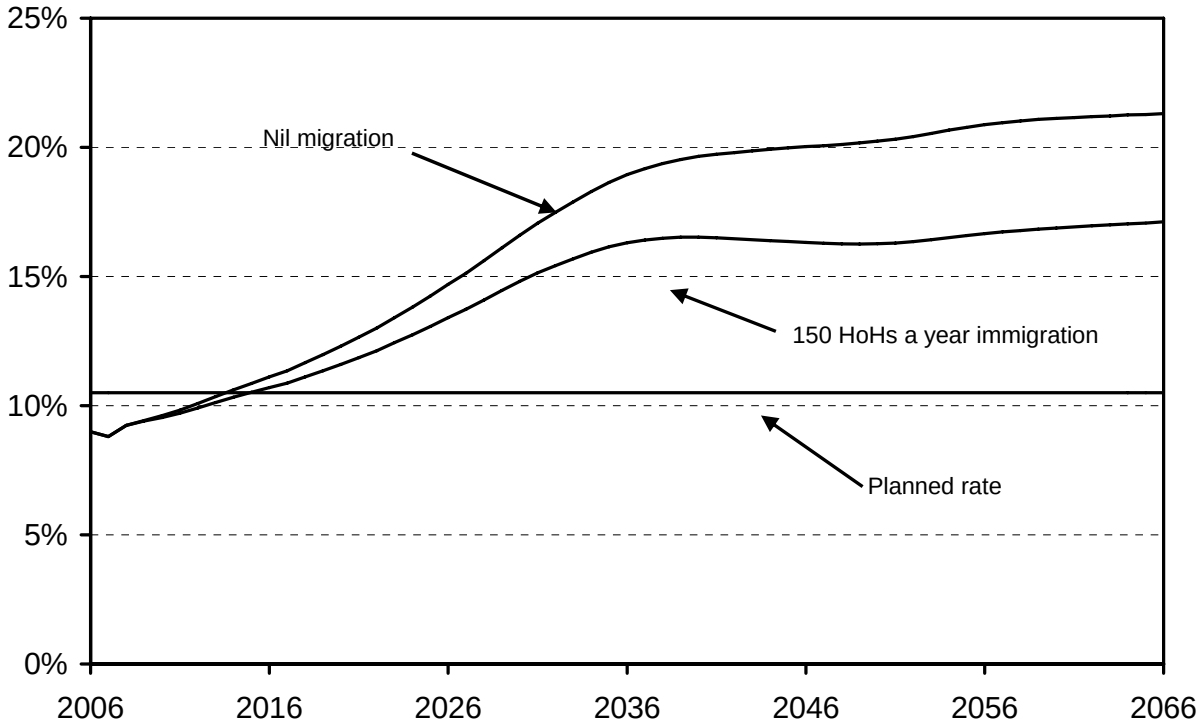
6.4 The results in Table 6.1 and Figure 6.1:

- exclude the contributions paid to the Health Insurance Fund
- assume the States supplementation contribution will continue to be calculated as at present (see Appendix A, paragraph 9.19) based on the calculated required contribution rate, and
- assume that the current assets of the Funds and the income generated from the assets are not drawn upon to meet expenditure of the Fund.

Table 6.1: Estimates of future expenditure from the Social Security Fund in 2007 earnings terms, and the break-even contribution rates, assuming that benefit rates and earnings limits increase in line with earnings

	Expenditure (£m)		Contribution rates (%)	
Year	Zero net migration	Net immigration of 150 heads of household a year	Zero net migration	Net immigration of 150 heads of household a year
2006	155	155	9.0	9.0
2011	174	174	9.8	9.7
2016	193	193	11.1	10.7
2026	237	239	14.7	13.4
2036	277	282	18.9	16.3
2046	274	284	20.0	16.3
2056	263	286	20.9	16.7
2066	247	288	21.3	17.1

Figure 6.1: Projected break-even contribution rates



6.5 On the assumption of net nil future migration, Table 6.1 shows that the break-even contribution rate is projected to remain below the planned rate of 10.5% up to 2013. Thereafter, the projected contribution rate initially rises rapidly, reaching 18.9% in 2036, but after that, the contribution rate broadly levels off at around 20% to 21%.

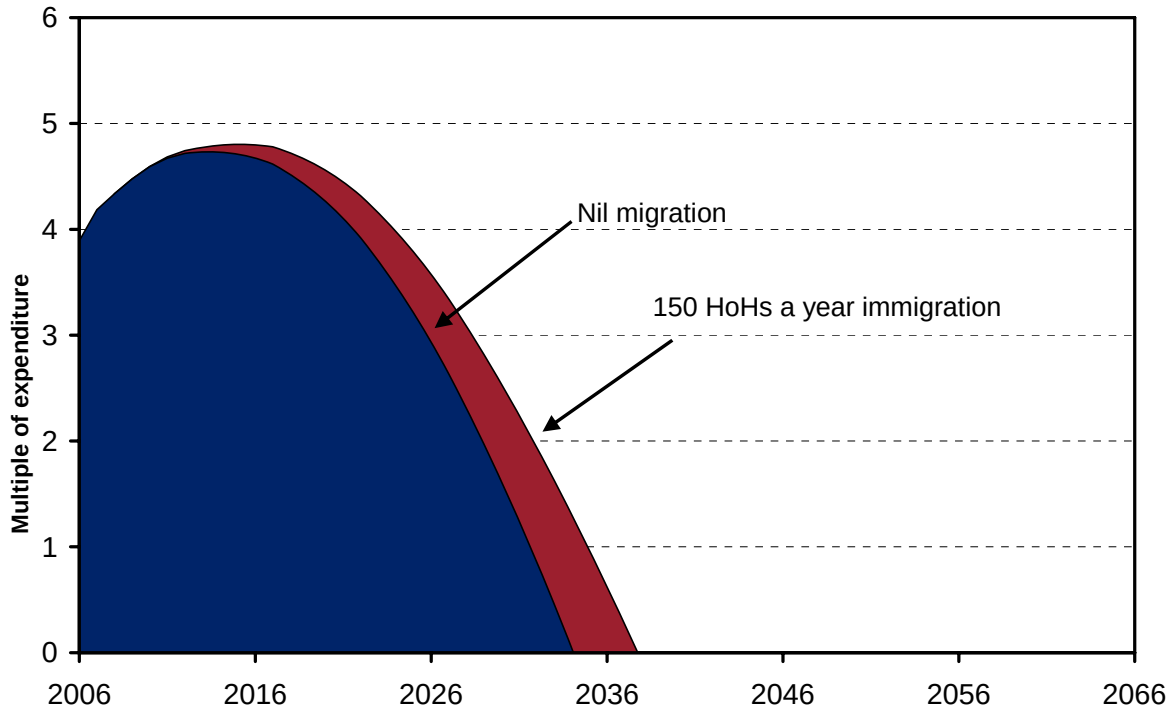
6.6 There is a similar pattern with assumed immigration of 150 HoHs a year, but the increase in the contribution rate is less dramatic. The projected break-even contribution is projected to stay below 10.5% until 2014 and it then rises to 16.3% in 2036, before broadly levelling off at about 16% to 17%.

6.7 If the contribution rates shown in Table 6.1 were to be applied in practice and if the assumptions underlying the estimates exactly fitted the experience in future years, then the entire investment income would be available for reinvestment and therefore the combined balance in the Funds would grow in line with the investment returns achieved.

6.8 Alternatively, the current balances in the Funds (and the further build up of those balances while the contribution income exceeds expenditure) can be used in order to reduce the required increase in future contribution rates, and/or push back the date when those increases need to be implemented. Figure 6.2 shows the projected combined balance in the Funds, as a multiple of total expenditure (including administration expenses), assuming that the current contribution rates apply for all future years. The projected balance is shown for both migration assumptions.

6.9 The calculations underlying Figure 6.2 assume that the future rate of return on investments, net of associated expenses, will be 2% a year in excess of earnings increases.

Figure 6.2: Projected balance as a multiple of expenditure, assuming the current rates of contribution are maintained



6.10 Assuming zero future net migration, if the current contribution rates were to be paid in the future, the projected balance in the Funds as a multiple of annual expenditure would grow to a maximum of 4.7 in 2013. Thereafter, the balance would fall as a multiple of annual expenditure, until the Funds are extinguished in 2034. After this point, it would be necessary to increase contribution rates to at least the break-even rate (which is 18.3% in 2034 and increases further in later years, as indicated in Table 6.1). In practice, part of the Fund balance is not readily convertible into cash (for example, the part relating to fixed assets and debtors) and therefore it would be necessary to increase the contribution rate before the balance is fully extinguished. Indeed, it may be considered prudent to increase contribution rates earlier still in order to maintain a reasonable working cash balance.

6.11 Assuming future net immigration of 150 HoHs a year, the projected balance in the Funds would grow to a maximum of 4.8 times annual expenditure in 2015, if the current contribution rates were to be paid. Thereafter, the balance would fall as a multiple of annual expenditure, until the Funds are extinguished in 2038. After this point, it would be necessary to increase contribution rates to at least the break-even rate (which, in 2038, is 16.5% and increases further in later years).

6.12 The above projections of the Fund balance have used the balance at the end of 2007 as the starting point. Following completion of our calculations for this review, we have received the draft accounts for 2008, which showed that the value of the Funds fell in that year due to poor investment returns. We have therefore made some additional calculations to show how the projection of the Fund balance would change if we allowed for the poor returns in 2008 instead of our long-term assumption of 2% a year in excess of earnings growth. These calculations indicate that the effect of the return in 2008 is to bring forward the year in which the Funds are expected to be extinguished by 2 or 3 years, ie to 2032 assuming zero future net migration and to 2035 with future net immigration of 150 HoHs a year.

6.13 To the extent that the future experience of the Fund does not follow the assumptions made for the purpose of these projections, the future financial position of the Fund may differ considerably from that described above. In particular, the year at which the fund is exhausted is sensitive to small changes in the assumptions. The following section of this report includes some illustrations of potential variability of future experience.

7 Illustrative effects on the principal results of variations in the assumptions

7.1 The results described in section 6 are dependent on a number of assumptions which have been made with regard to the future experience of the Fund. These assumptions include:

- demographic assumptions, such as future fertility and mortality rates, and future levels of migration.
- economic assumptions, such as the future rate of return on the investments of the Funds, and the levels of employment.
- fund assumptions, such as the effects of legislative changes which have been made to the fund benefits.

7.2 When considering the results contained in this report, attention should be given to the fact that, if the assumptions used are not borne out in practice, the future financial position of the Fund could be significantly different from that shown in the projections. The results in this report should not be considered to be a certain prediction of the future financial position of the Fund. Instead, they should be regarded as an indication of the likely future position, if experience were to follow the assumptions made. It is therefore vital, when considering the results of long term projections, to consider the potential effects on the results of the projections if different assumptions were to be used.

7.3 The results in this section do not make any allowance for the estimated actual return in 2008 (see paragraph 6.12).

Demographic assumptions

7.4 The results in section 6 are shown on the basis of two alternative assumptions regarding the future level of net migration to Jersey. It should be noted these two alternative scenarios are illustrative and should not be taken as setting bounds to the range of possibilities. The higher the level of future net immigration, the longer any necessary increases to contribution rates could be deferred (other things being equal). Conversely, net outward migration would require contribution rates to be increased sooner.

7.5 Attention should also be given to the possible effects on the results if the experience with regard to future fertility and mortality rates were to differ from the assumptions made. Any changes in future rates of fertility would have little effect on the projected benefit expenditure over the period of the review, since people who are born after the date of the review will not reach pension age during the period of the review. However, the level of contribution income would be affected, other things being equal (that is assuming that extra births do not simply reduce future migration), after an initial period of around 20 years. An increase in the assumed fertility rates would therefore improve the future financial position of the Fund, reducing the required break-even contribution rates after 20 years, and delaying the point at which contribution rates would need to be increased. Conversely, a decrease in the assumed fertility rates would worsen the future position of the Fund.

7.6 Any changes in the assumed rates of mortality would have little effect on contribution income. However, if it were assumed that rates of mortality would improve (that is, reduce) more quickly in the future, this would increase the projected expenditure on retirement pensions, and consequently increase the required break-even contribution rates. Conversely, slower improvements in the assumed rates of mortality would improve the future financial position of the Fund.

Economic assumptions

7.7 It has not been necessary to make assumptions regarding the future levels of price inflation or earnings growth for this review. All results are presented in constant earnings terms, and benefit rates and contribution limits are assumed to be increased in line with earnings growth in the future. Therefore the absolute levels of price inflation or earnings growth do not affect the results in this report.

7.8 For the purposes of projecting the future combined balance in the Funds, it has been necessary to make an assumption regarding the future rate of return of the investments. It has been assumed for the principal results that the future rate of return, net of associated expenses, is 2% per annum in excess of earnings growth. This is discussed further in Appendix E commencing at paragraph 13.29. The effects on the results from section 6 of assuming future rate of investment return 2% a year higher or lower than the assumption for the principal results are shown in Figures 7.1 and 7.2.

7.9 Assuming zero future net migration and a rate of return 2% per annum higher from 2008 compared with the principal results, the projected balance in the Funds as a multiple of annual expenditure would reach a maximum of 5.6 in 2018, if the current contribution rates were to be paid. Thereafter the balance would fall as a multiple of annual expenditure, until the Funds are extinguished in 2040. If the rate of return were 2% per annum lower compared with the principal results, the projected balance in the Funds as a multiple of annual expenditure would reach a maximum of 4.4 in 2010, after which it would fall until the funds are extinguished in 2031.

7.10 Assuming future net immigration of 150 HoHs a year and a rate of return 2% per annum higher from 2008 compared with the principal results, the projected balance in the Funds as a multiple of annual expenditure would reach a maximum of 5.8 in 2021, if the current contribution rates were to be paid. Thereafter the balance would fall as a multiple of annual expenditure, until the Funds are extinguished in 2048. If the rate of return were 2% per annum lower compared with the principal results, the projected balance in the Funds as a multiple of annual expenditure would reach a maximum of 4.4 in 2011, after which it would fall until the funds are extinguished in 2033.

7.11 The assumed rate of investment return does not affect the required break-even contribution rates, since these are the rates which are sufficient for contribution income in a particular year to meet benefit expenditure and expenditure on administration in that same year, without reference to investment income or the combined balance in the Funds.

Figure 7.1: Projected balance in the Funds as a multiple of expenditure for different investment return assumptions and nil net migration

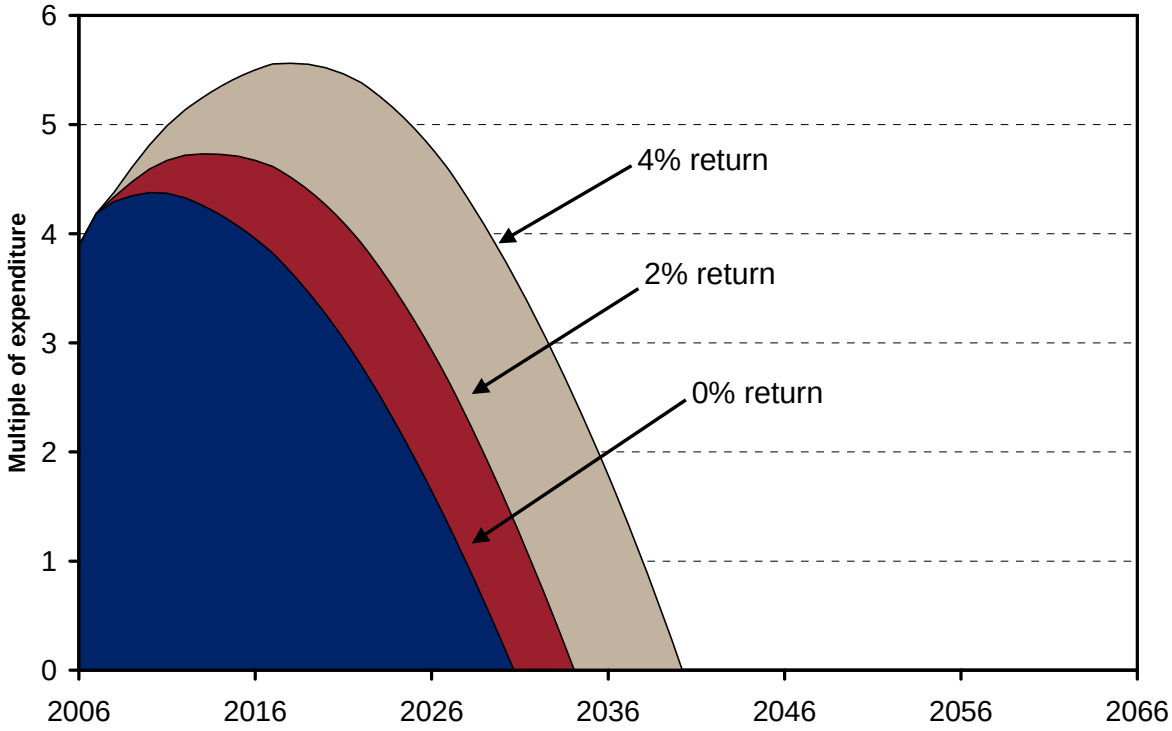
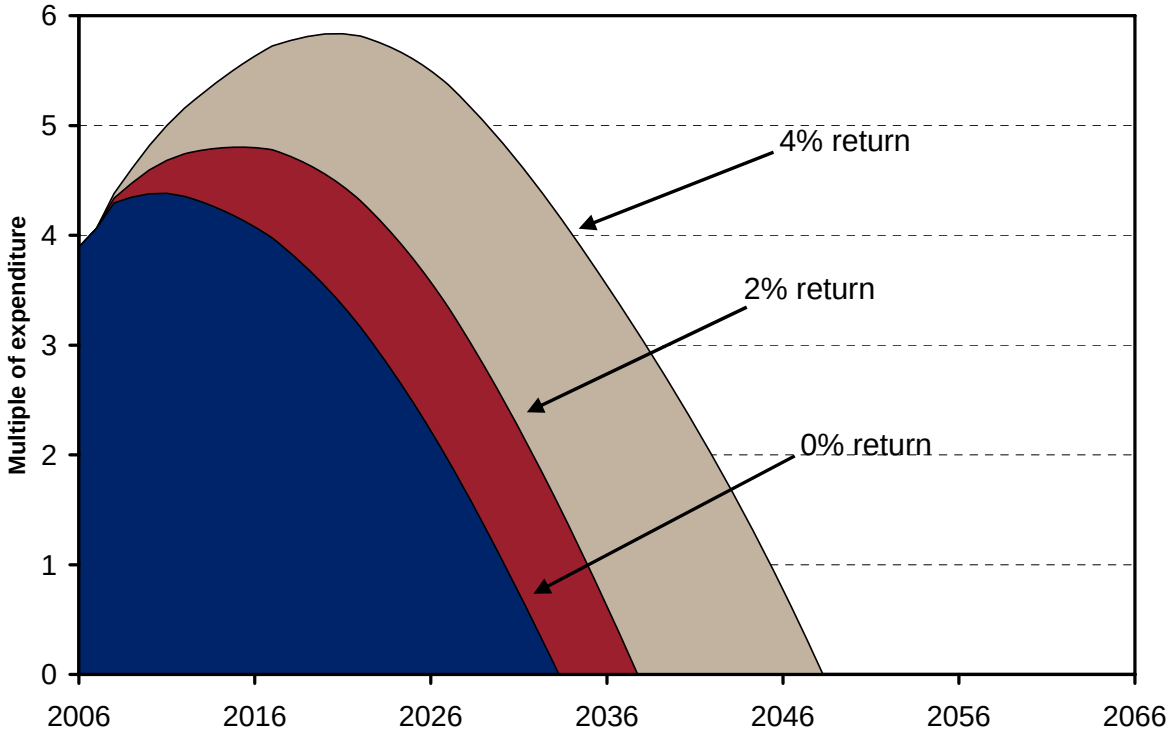


Figure 7.2: Projected balance in the Funds as a multiple of expenditure for different investment return assumptions and net immigration of 150 HoHs a year



Fund assumptions

7.12 The future level of expenditure on retirement pensions is subject to a degree of uncertainty. The current level of expenditure is less than the amount which would be expected if everybody who appears to be entitled to a pension based on past contributions data were to claim one. This feature may be expected because people who have paid contributions in Jersey in the past, but who are no longer resident in Jersey when they attain pension age, will be less likely to claim a pension than residents, particularly where they have contributed for only a short period in Jersey.

7.13 The principal projections shown in this report assume that over the period up to the 2030s there is a gradual increase each year in the likelihood and size of claims of retirement pensions. This may be regarded as anticipating that some non-residents will become more likely to claim their pensions, although it is not clear that this has happened in recent years. If it were to be the case that there is no such future increase in the likelihood of claims from non-residents, then expenditure on retirement pensions in the longer term may be of the order of 10% lower than that included in the principal projections.

7.14 Conversely, it may be the case that the changes which have been made over recent years to the calculation of retirement pensions will increase future benefit expenditure to a greater extent than that which has been allowed for in the principal results, or that the likelihood of claims of retirement pensions from non-residents increases by a greater amount in the future than that allowed for in the principal results.

7.15 In order to provide an indication of the variability of the results of the review, Table 7.1 indicates the projected break-even contribution rates and the year in which the Funds are extinguished (assuming that the current contribution rates are paid in the future) if the future costs of retirement pension were to be 10% higher or lower than those assumed for the main projections. This is assumed to apply from 2036 onwards, building up to this level uniformly from 2007. The 10% variation should not be considered to be an upper or lower bound for future retirement pension expenditure. Instead, these results should be regarded as an example of the potential effects on the projections if experience were to differ from the assumptions made for the review.

Table 7.1: Illustrative effects of expenditure on retirement pensions being either 10% higher or 10% lower from 2036 compared with the principal results, with this difference phased in uniformly from 2007

	Zero net migration			Net immigration of 150 HoHs a year		
Year	Main results	Pensions 10% higher	Pensions 10% lower	Main results	Pensions 10% higher	Pensions 10% lower
	Break-even contribution rate (%)					
2016	11.1	11.4	10.8	10.7	11.0	10.4
2026	14.7	15.5	13.9	13.4	14.1	12.7
2046	20.0	21.7	18.4	16.3	17.6	15.0
2066	21.3	23.1	19.5	17.1	18.5	15.7
	Year in which the Funds are extinguished[6]					
	2034	2032	2037	2038	2035	2043

7.16 The illustrative effects of varying certain assumptions shown in this section have considered the effects of varying these assumptions in isolation. The potential effects on the results of varying a combination of different assumptions should also be considered. In practice, the impact of the changes to the assumptions is likely to be correlated, but as a first approximation, the overall effect of two changes might be estimated by adding the effects of the two individual changes in isolation.

7.17 For example, with nil migration, if investment return is 2% a year lower than our principal assumption and retirement pension expenditure is 10% higher, then the year in which the Funds would be extinguished might be estimated very approximately as 2029. This is calculated as the year the in which the Funds are extinguished in the main results (2034 – see Table 7.1 above), less the impact of 2% lower return (3 years, which equals 2034 minus 2031 – see paragraph 7.9) less the impact of the 10% higher retirement pension spending (2 years, which equals 2034 minus 2032 – see Table 7.1).

[6] This assumes that the current contributions are maintained.

8 Comparison of results in this report with those from the report on the previous actuarial review

8.1 Table 8.1 compares the results of the population projections described in Section 3 of this report with the population projections from the report on the previous actuarial review of the Fund as at 31 December 2003.

Table 8.1: Comparison of results in this report with those from the report on the previous actuarial review – population projections

	2006	2016	2026	2036	2046	2056	2066
				Population numbers			
Net nil migration							
Last review	86,683	86,376	85,230	82,174	76,888	70,863	65,613
Change	2,717	2,829	3,670	4,545	5,503	5,951	5,701
This review	89,400[7]	89,204	88,900	86,719	82,391	76,814	71,314
Net immigration of 200 (last review)/150 HoHs (this review) a year							
Last review	87,462	89,658	91,798	92,262	90,739	88,851	87,779
Change	1,938	2,035	3,223	4,666	6,185	7,167	7,598
This review	89,400	91,693	95,021	96,928	96,924	96,018	95,377
				Pensioner support ratio (PSR)[8]			
Net nil migration							
Last review	4.3	3.2	2.3	1.7	1.8	1.9	1.8
This review	4.4	3.2	2.3	1.6	1.5	1.5	1.4
Net immigration of 200 (last review)/150 HoHs (this review) a year							
Last review	4.4	3.3	2.5	2.0	2.3	2.3	2.2
This review	4.4	3.3	2.5	1.9	1.9	1.9	1.8

8.2 The projected population for this review is higher than that for the previous actuarial review for all years, on both migration bases. The actual population in 2006 is higher than that projected at the previous review even with allowance for 200 a year inward migration. Part of the reason for this is that over the years 2004 to 2006, average immigration was higher than assumed, at over 300 people a year. Immigration continued to be strong in 2007 when there were about 1,100 net migrants to the Island.

[7] This is the actual estimated population in 2006.
[8] The pensioner support ratio is the number of people of working age per person over pension age.

8.3 With net nil migration, the projected population at this review steadily increases as a proportion of the population projected for the 2003 review. This reflects the different starting position in 2006 and also the assumption of lower mortality rates at this review, which is only partly offset by assuming slightly lower fertility rates for the current review. The adoption of lower mortality rates means that a significant part of the difference in the two population numbers will be accounted for by pensioners. This is illustrated by the PSR, which shows the number of people of working age for each person over pension age. The PSR shows a greater decline in the projections for this review (reaching 1.4 by 2066) compared with the previous review (reaching 1.8 in 2066)

8.4 There are similar effects for the comparison of the projections with allowance for future migration. However, in this case, the differences between the projected populations at this review and at the last review are much bigger. This is largely because this time's projections build in a greater allowance for migration: for this review, there is an allowance for net migration of 150 heads of households each year, which is equivalent to 324 individual migrants, compared with 200 individual migrants for the previous review. The allowance for greater migration to some extent masks the impact of lower assumed mortality rates.

8.5 The fact that the PSR is projected to be lower at this review suggests that the required break-even contribution rates will be higher than those calculated at the time of the previous actuarial review. Table 8.2 compares the projected break-even contribution rates from this report with those shown in the report on the previous actuarial review.

Table 8.2: Comparison of results in this report with those from the report on the previous actuarial review – break-even contribution rates (%)

	2006	2016	2026	2036	2046	2056	2066
Net nil migration							
Last review	**9.1**	**11.1**	**14.6**	**18.6**	**17.8**	**17.3**	**17.6**
Actual 2006 position	-0.1	-0.2	-0.2	-0.3	-0.2	-0.2	-0.2
Population projection	0.0	0.3	0.5	1.1	3.4	4.7	4.4
Other changes	0.0	-0.1	-0.2	-0.5	-1.0	-0.9	-0.5
This review	**9.0**	**11.1**	**14.7**	**18.9**	**20.0**	**20.9**	**21.3**
Net immigration of 200 (last review)/150 HoHs (this review) a year							
Last review	**9.0**	**10.5**	**13.4**	**16.1**	**14.7**	**14.5**	**14.8**
Actual 2006 position	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Population projection	0.0	0.3	0.3	0.8	2.4	2.8	2.8
Other changes	0.0	-0.1	-0.3	-0.6	-0.8	-0.6	-0.5
This review	**9.0**	**10.7**	**13.4**	**16.3**	**16.3**	**16.7**	**17.1**

8.6 In Table 8.2, the changes in the required break-even contribution rates projected at the time of the last review and those in this report have been separated into different components. For the net nil migration scenario, the required contribution rate decreases by a small amount initially, since the experience of the Fund since the previous review up to 2007 has been a little more favourable than that projected at the time of the last actuarial review. The effects of revising the population projections, as discussed above, lead to an increase of around 4% to the required contribution rate by 2066 assuming net nil migration, and of nearly 3% assuming immigration of 150 HoHs a year.

8.7 Various other changes that have been made to the methods and assumptions underlying the projections result in a decrease of up to about 1% in the required contribution rate. In particular, the assumed cost of retirement pensions per person over pension age has been reduced slightly for this review and we have made significant changes to the assumptions regarding incapacity benefits, based on the experience of the new benefit scale since October 2004.

8.8 In the report on the previous review, it was estimated that the combined balance in the Social Security and Social Security (Reserve) Funds would be extinguished by 2033 assuming net nil future migration, and by 2037 assuming future net immigration of 200 a year. The corresponding figures in this report are 2034 and 2038 respectively. These differences are the net effect of the changes to the break-even contribution rates (as summarised in Table 8.2) and the fact that the value of the Funds in 2007 (as a proportion expenditure in that year) was greater than projected at the 2003 review.

9 Appendix A: Summary of contributions and benefits

9.1 This appendix summarises the principal provisions regarding the contributions and benefits set out in the Social Security (Jersey) Law 1974 as at 31 December 2006 on which the estimates in this review have been based. We are not aware of any material changes to the Law since that date. This summary concentrates on those aspects of contribution liability and benefit entitlement that are significant in financial terms.

Retirement pensions

9.2 The current rules on the receipt of retirement pensions were introduced for those who retire on or after 1 April 2001[9]. Slightly different rules applied for retirements before this date.

9.3 Under the current rules, the pensioner must have paid contributions for at least six months and, to receive the full rate of retirement pension, must have a life average contribution factor (LACF) of 1.00. The LACF is calculated as the ratio of the contributions paid or credited to the contributions (based on earnings at the upper limit – see paragraph 9.19) which could have been made over a 45 year period between school leaving age and pension age. In calculating the LACF, allowance is made for any supplementation contributions (as described in paragraph 9.19) paid by the States in respect of the pensioner.

9.4 For those with an LACF less than 1.00, the benefit is reduced pro rata, but no pension is awarded if the LACF is under 0.10. Women married before April 2001 can claim a pension of 66% of that payable to their husbands if this is more than the pension they have earned on their own contributions, and all widows over pension age can claim a pension of the same amount as that payable to their late husbands.

9.5 Pension age is 65. However, women who entered the Fund before 1 January 1975 retain the right to claim a pension from age 60. It is also possible to retire between the ages of 63 and 65, at the option of the pensioner, if the necessary qualifying conditions are met. In such cases, the amount of old age pension is reduced by 0.58% for each month between the age at which the pensioner starts to receive their pension and the month in which they attain pension age. The pension is paid at this reduced level throughout retirement.

9.6 In the past the Fund has also paid "social assurance pensions" (which related to entitlements under a previous scheme) and "non-contributory pensions" (in respect of those born before 10 September 1896). As at 31 December 2007 there were no longer any recipients of these pensions.

[9] These rules introduced by the Social Security (Amendment No. 14) (Jersey) Law 2000.

Benefits for surviving widows and widowers

9.7 There are two benefits paid to people widowed in April 2001 or later. Survivor's allowance of 1.2 times the standard benefit rate is generally paid when a man or woman is widowed and at least one of the spouses was under pension age at the date of death. This allowance is paid for the first 12 months of widowhood, and after that a survivor's pension (based on the standard rate of benefit) is paid up to pension age. The contribution conditions for receiving these benefits are similar to those for retirement pension, based on the contribution record of the deceased spouse. The standard rate is adjusted according to the LACF, with the LACF calculated using the date of death instead of the pension age.

9.8 For people widowed prior to April 2001, there were three benefits, widow's allowance, widow's pension and widowed father's allowance. The first two of these benefits correspond to survivor's allowance and survivor's pension as described above, but were paid to widows only. Widowed father's allowance was paid to widowers with children under the age of 16. Any of these benefits that were in payment at 1 April 2001 have continued to be paid subject to the same terms.

Benefits on incapacity

9.9 If the contribution conditions are met, an incapacity benefit is paid when an insured person is sick or injured. The rules for incapacity benefits have changed for claims on or after 1 October 2004. From this date, the benefits available are short term incapacity allowance, long term incapacity allowance and incapacity pension.

9.10 Short term incapacity allowance is payable for up to one year, provided the individual has paid at least three months' contributions at any time before the start of the calendar quarter immediately prior to that in which the claim is made. The benefit rate is dependent on the worker's contribution record (allowing for credits) in the calendar quarter ended three months before the start of the quarter in which the claim is made.

9.11 Once short-term incapacity allowance has ceased, the individual may be eligible for long-term incapacity allowance or incapacity pension, subject to meeting the contribution conditions. The amount of long-term incapacity allowance depends on the degree of disablement, and the recipient is permitted to work. Where disablement is assessed at less than 20%, this allowance is paid in lump sum form. Incapacity pension is paid where the individual is unlikely to be able to work again. The amount of the incapacity pension is dependent on the person's contribution record. The standard rate is adjusted according to the LACF in the same way as for old age pension, with contributions deemed to have been paid from the start of the claim up to pension age.

9.12 For claims prior to October 2004, a different range of benefits was available: sickness and injury benefit (similar to short-term incapacity allowance), disablement benefit and invalidity pension (similar to long-term incapacity allowance and incapacity pension, respectively). Any of these benefits that were already in payment at 1 October 2004, continued to be paid subject to the same terms.

Family benefits

9.13 A maternity grant is paid for each birth in Jersey where either the mother or her husband has paid contributions for at least three months at any time before the start of the calendar quarter immediately prior to that in which the birth is expected. This is also paid on the adoption of a child. The mother is also entitled to a maternity allowance, for a maximum of 18 weeks, if she satisfies the contribution conditions. These contribution conditions are similar to those for short-term incapacity allowance.

Bereavement benefits

9.14 A death grant is paid for all deaths in Jersey where the deceased, the surviving spouse or (in the case of a child) a parent has met the contribution conditions. The conditions are that either a contribution was due in the month of death or that the equivalent of one year's contributions has been paid in the past.

Benefit rates

9.15 Table A.1 shows the weekly rates of benefit in force between 2003 and 2008. During this period, benefit rates have been increased annually in line with earnings growth.

Table A.1: Weekly benefit rates from 1 October (£ per week)

Year from 1 October	Standard rate[10] - no dependants	Standard rate - with dependants	Married woman's old age pension	Survivor's allowance
2003	140.84	233.80	92.96	169.05
2004	145.53	241.57	96.04	174.65
2005	153.23	254.38	101.15	183.89
2006	158.27	262.78	104.51	189.98
2007	165.76	275.17	109.41	198.87
2008	172.83	286.93	114.10	207.41

Contributions

9.16 Class 1 contributions are required from everyone in the island between the ages of 16 and 65 who works more than eight hours a week, with some exceptions. Employees and employers both pay Class 1 contributions, based on the employee's earnings. Those who do not pay Class1 contributions pay Class 2 contributions, unless they are exempt. Class 2 contributions are paid at a flat rate (equal to the sum of the employee and employer Class 1 contribution rates multiplied by the earnings ceiling) unless the individual has elected (and is permitted) to pay earnings-related Class 2 contributions.

[10] For those with sufficient contributions, the standard rate is paid for retirement pension, survivor's pension, short-term incapacity allowance, incapacity pension and maternity allowance. For long-term incapacity allowance, a proportion of the standard rate is payable depending on the degree of disablement.

9.17 There are some exceptions from the requirement to contribute. In particular, contributions are not required from individuals who have reached pension age and women who were married before 1 April 2001 can "opt out" of paying contributions. In each case, any employer's contributions remain payable.

9.18 Subject to certain rules, contribution credits are provided for students, the unemployed, the sick, widows or those staying at home to care for a child.

9.19 Table A.2 shows the earnings limits which applied between 2003 and 2008. Throughout this period the total rate of Class 1 contributions payable has been 10.5%[11], of which 5.2% is paid by the employee and 5.3% by the employer. Contributions are payable on all earnings up to the upper limit. If earnings are above the threshold and below the upper limit, the States contributes the difference between contributions based on actual earnings and contributions based on the upper limit; this is known as supplementation. If earnings are above the upper limit, the employee' and employer's contributions are based on the amount of the upper limit only.

Table A.2: Earnings limits

Year	Monthly threshold (£)	Monthly upper limit (£)
2003	582	2,754
2004	609	2,884
2005	630	2,980
2006	663	3,138
2007	685	3,242
2008	717	3,394

[11] This excludes the 2% contribution payable to the Health Insurance Fund.

10 Appendix B: Fund accounts since 1 January 2004

10.1 The transactions of the Social Security and Social Security (Reserve) Funds in the period 1 January 2004 to 31 December 2007 are summarised in Table B.1, whilst a breakdown of expenditure by benefit is shown in Table B.2.

Table B.1: Summary of income and expenditure and balances of the Jersey Social Security and Social Security (Reserve) Funds in the period 1 January 2004 to 31 December 2007[12]; fund balances are shown at market values, as stated in the accounts

£ thousand	2004	2005	2006	2007
		Social Security Fund		
Income				
Contribution income	110,319	117,136	123,954	133,913
States supplementation contributions	50,800	50,776	56,567	58,627
Investment return	510	1301	1666	1612
Investment income transferred from Reserve Fund	2,953	4,212	7,593	5,983
Other income	35	0	6	6
Total income	**164,617**	**173,425**	**189,786**	**200,141**
Expenditure				
Benefit expenditure	136,188	140,209	148,225	155,428
Administration expenditure	6,320	6,044	6,303	6,115
Total expenditure	**142,508**	**146,253**	**154,528**	**161,543**
Balance at start of year	25,851	45,007	62,367	58,332
Excess of income over expenditure	22,109	27,172	35,258	38,598
Transfer to Reserve Fund	(2,953)	(9,812)	(39,293)	(27,583)
Balance at end of year	45,007	62,367	58,332	69,347
		Social Security (Reserve) Fund		
Balance at start of year[13]	373,220	407,226	498,878	583,096
Investment income net of expenses	2,953	4,212	7,593	5,983
Transfer to Social Security Fund	(2,953)	(4,212)	(7,593)	(5,983)
Realised and unrealised gains	31,053	81,586	45,177	31,005
Transfer from Social Security Fund	2,953	9,812	39,293	27,583
Balance at end of year	407,226	498,624	583,348	641,684

[12] Figures may not sum to totals due to rounding.
[13] The opening balance in 2006 and 2007 did not equal the closing balance in the previous year's account due to a prior year adjustment.

Table B.1 continued

£ thousand	2004	2005	2006	2007
		Combined Funds		
Combined balance at end of year	452,233	560,991	641,680	711,031
Mean of funds at start and end of year	425,652	506,612	601,463	676,230
Mean of funds as multiple of total expenditure	3.0	3.5	3.9	4.2
Estimated rate of investment return	8.5%	18.8%	9.5%	5.9%

10.2 Contribution income (including that from the States) exceeded expenditure in each of the years from 2004 to 2007. Investment income has also been strongly positive over this period, although this follows three years, 2000 to 2002, when investment returns were negative. Over the four years 2004 to 2007, the average annual rate of investment return is estimated to have been just over 10% a year, and the average combined Funds increased from 3.0 times annual expenditure in 2004 to 4.2 times annual expenditure in 2007.

Table B.2: Expenditure on social insurance benefits in the period 1 January 2004 to 31 December 2007

£ thousand	2004	2005	2006	2007
Retirement pensions and survivors' benefits	97,846	103,187	109,958	116,506
Incapacity allowance (short and long-term)	4,102	16,561	18,566	20,330
Sickness benefit	8,520	0	0	0
Invalidity benefit	18,868	18,131	17,129	15,914
Injury benefit	1,648	4	0	0
Disablement benefit	2,748	0	0	0
Maternity allowance	1,672	1,540	1,737	1,830
Maternity grant	413	422	434	482
Death grant	371	364	401	366
Total benefit expenditure[14]	**136,188**	**140,209**	**148,225**	**155,428**

[14] As shown in Table B.1.

10.3 A summary of the assets held of the Social Security Fund and the Social Security (Reserve) Fund as at 31 December 2007 is given in Table B.3.

Table B.3: Summary of the market value of the assets of the Social Security Fund and Social Security (Reserve) Funds as at 31 December 2007

	Social Security Fund		Social Security (Reserve) Fund	
	£million	%	£million	%
Unit trusts:				
UK equities	-	-	255.1	40
North America equities	-	-	127.9	20
European equities	-	-	92.3	14
Japanese equities	-	-	23.8	4
Asia-Pacific (ex Japan) equities	-	-	12.7	2
Money market	-	-	61.4	10
Overseas bonds	-	-	34.0	5
Gilts	-	-	34.2	5
Cash	33.4	48	0.5	-
Net debtors	23.7	34	(0.2)	-
Fixed assets	12.3	18	-	-
Total	**69.3**	**100**	**641.7**	**100**

11 Appendix C: Population projections

Table C.1: The projected population of Jersey at the year end from 2006 to 2066 assuming net zero future migration and the fertility and mortality assumptions described in Section 3

Age group	2006	2011	2016	2026	2036	2046	2056	2066
Males								
0-9	4,856	4,645	4,229	3,905	3,643	3,321	3,036	2,843
10-19	5,291	4,985	4,731	4,212	3,901	3,640	3,319	3,034
20-29	4,903	5,189	5,380	4,705	4,193	3,888	3,631	3,311
30-39	6,589	5,185	4,982	5,444	4,699	4,176	3,872	3,616
40-49	7,585	7,396	6,129	4,878	5,372	4,646	4,133	3,836
50-59	6,028	6,335	7,059	5,855	4,717	5,219	4,529	4,037
60-69	4,394	5,115	5,438	6,530	5,472	4,452	4,951	4,319
70-79	2,729	3,189	3,663	4,672	5,714	4,823	3,991	4,476
80 and over	1,300	1,549	1,981	3,124	4,388	5,762	5,815	5,268
Total	**43,675**	**43,588**	**43,592**	**43,325**	**42,098**	**39,928**	**37,276**	**34,742**
Females								
0-9	4,753	4,631	4,223	3,909	3,646	3,323	3,038	2,845
10-19	4,994	4,667	4,640	4,204	3,905	3,643	3,321	3,036
20-29	5,067	5,002	5,153	4,632	4,193	3,898	3,639	3,318
30-39	6,929	5,670	5,050	5,225	4,639	4,188	3,892	3,632
40-49	7,689	7,651	6,508	4,971	5,189	4,615	4,168	3,875
50-59	6,188	6,631	7,320	6,315	4,875	5,110	4,555	4,118
60-69	4,607	5,349	5,845	7,006	6,077	4,714	4,958	4,434
70-79	3,223	3,560	4,099	5,303	6,434	5,608	4,389	4,647
80 and over	2,267	2,444	2,774	4,011	5,662	7,364	7,578	6,666
Total	**45,718**	**45,604**	**45,613**	**45,575**	**44,620**	**42,464**	**39,538**	**36,573**
Persons								
0-15	15,717	14,957	14,163	12,596	11,951	10,937	9,967	9,288
16-64 (W)	60,079	58,824	56,991	52,886	46,203	43,366	39,959	36,688
65 and over (P)	13,597	15,412	18,050	23,418	28,565	28,088	26,888	25,339
Total	**89,393**	**89,193**	**89,204**	**88,900**	**86,719**	**82,391**	**76,814**	**71,314**
PSR (= W/P)	4.4	3.8	3.2	2.3	1.6	1.5	1.5	1.4

Table C.2: The projected population of Jersey at the year end from 2006 to 2066 assuming net future immigration of 150 heads of household each year and the fertility and mortality assumptions described in Section 3

Age group	2006	2011	2016	2026	2036	2046	2056	2066
Males								
0-9	4,856	4,684	4,355	4,411	4,409	4,237	4,186	4,204
10-19	5,291	5,039	4,854	4,444	4,508	4,506	4,335	4,284
20-29	4,903	5,390	5,864	5,429	5,029	5,098	5,099	4,929
30-39	6,589	5,297	5,385	6,584	6,104	5,697	5,766	5,769
40-49	7,585	7,455	6,254	5,340	6,549	6,084	5,688	5,762
50-59	6,028	6,354	7,118	6,002	5,179	6,373	5,939	5,565
60-69	4,394	5,112	5,425	6,536	5,549	4,826	5,983	5,600
70-79	2,729	3,188	3,658	4,649	5,707	4,878	4,317	5,399
80 and over	1,300	1,549	1,981	3,120	4,369	5,750	5,854	5,551
Total	**43,675**	**44,069**	**44,895**	**46,517**	**47,402**	**47,449**	**47,167**	**47,062**
Females								
0-9	4,753	4,669	4,346	4,414	4,411	4,238	4,187	4,204
10-19	4,994	4,719	4,762	4,429	4,505	4,503	4,331	4,280
20-29	5,067	5,211	5,678	5,416	5,086	5,167	5,166	4,995
30-39	6,929	5,760	5,365	6,270	5,962	5,624	5,703	5,703
40-49	7,689	7,688	6,587	5,295	6,223	5,924	5,590	5,672
50-59	6,188	6,641	7,345	6,366	5,151	6,083	5,799	5,476
60-69	4,607	5,350	5,846	7,012	6,103	4,957	5,878	5,620
70-79	3,223	3,560	4,096	5,296	6,430	5,623	4,608	5,504
80 and over	2,267	2,444	2,773	4,008	5,655	7,357	7,588	6,861
Total	**45,718**	**46,041**	**46,798**	**48,504**	**49,526**	**49,476**	**48,851**	**48,315**
Persons								
0-15	15,717	15,096	14,545	13,902	14,264	13,802	13,486	13,528
16-64 (W)	60,079	59,606	59,112	57,747	54,101	54,844	54,202	53,072
65 and over (P)	13,597	15,409	18,036	23,373	28,563	28,278	28,330	28,776
Total	**89,393**	**90,110**	**91,693**	**95,021**	**96,928**	**96,924**	**96,018**	**95,377**
PSR (= W/P)	4.4	3.9	3.3	2.5	1.9	1.9	1.9	1.8

12 Appendix D: Summary of data

Table D.1: Summary of the average number of contributors for the years 2005 to 2007

Contribution class[15]	2005	2006	2007
Men – Class 1	23,364	23,699	24,122
Men – Secondary only	355	375	395
Men – Class 2	3,622	3,665	3,703
Women – Class 1	18,172	18,645	19,298
Women – Secondary only	4,020	3,912	3,811
Women – Class 2	401	441	483

[15] The Class 1 and Class 2 numbers include those who are recorded as paying Class 1 or 2 and receiving contribution credits.

Table D.2: Summary of the number of beneficiaries for the years 2005 to 2007

	2005	2006	2007
Retirement pensions[16]:			
Men	9,507	9,792	10,033
Women – pension based on husband's contributions	4,073	4,282	4,483
Women – pension based on own contributions	4,661	4,937	5,316
Widows – pension based on deceased husband's contributions	4,603	4,464	4,319
Incapacity benefits[17]:			
Short-term incapacity allowance – men	928	862	851
Short-term incapacity allowance – women	589	617	556
Long-term incapacity allowance (LTIA) – men	359	585	730
LTIA – women	222	399	523
Lump sum awards of LTIA – men	53	36	44
Lump sum awards of LTIA – women	19	14	19
Incapacity pension – men	4	6	6
Incapacity pension – women	1	1	1
Disablement pension – men	649	636	621
Disablement pension – women	162	161	164[18]
Invalidity pension – men	1,027	916	812
Invalidity pension – women	953	876	795
Survivor benefits[19]:			
Survivor's allowance and pension – men	75	92	93
Survivor's allowance and pension – women[20]	902	899	879
Widowed father's allowance	4	3	3

[16] These are numbers in receipt of pension in June.
[17] These are numbers in receipt of the benefit at the year end, except in the case of lump sum awards of long-term incapacity allowance, which are the number of awards in the year.
[18] There have been no new awards of disablement pension since October 2004 and therefore it would be expected that the numbers would be steadily declining. It is not clear why there is a slight increase in the number of women receiving this benefit in 2007, although the impact on the review is very small.
[19] These are numbers in receipt of the benefit at the year end.
[20] This includes widow's allowance and pension.

13 Appendix E: The technical assumptions made for the purposes of the financial estimates

Population projections

13.1 Future expenditure has been calculated on the basis of two different population projections with differing migration assumptions (using the 2001 Jersey census and recorded births, deaths and migration up to and including 2007 as the starting point).

- Net migration of zero for all future years from 2009
- Net immigration of 150 heads of household a year for all future years from 2009

Section 3 contains further details on this, and on the method and assumptions used in the population projections.

Contribution income

13.2 The projected numbers of contributors in future years have been obtained by applying assumed proportions of men and women contributing at each age in the different contribution classes to the projected numbers in the population. These proportions were derived from statistics of the numbers contributing in the past. The analysis was made on the basis of the average position throughout the year, and thus allows for the average number of seasonal workers.

13.3 The data provided for this review covered the years 2004 to 2007. The computer programs used by Jersey in extracting this data were different from those used at previous reviews, which that the data before and after 2004 may not always have been entirely consistent. As a result, it was more difficult to analyse trends.

13.4 The data showed that over the period since 1993 there has been a gradual increase in the proportion of males in the population paying Class 1 contributions, for most age groups. We have used the average proportions over the period from 2004 to 2007 as the basis for the future proportions of the population paying Class 1 contributions. This assumes that the gradual increase seen in recent years will not be reversed, but also that it will not continue in future years. The proportion of males paying Class 2 contributions has been decreasing gradually since 1993, although the fall has levelled off in recent years. It has been assumed that the proportions will stabilise at the levels seen since 2004 and therefore the future proportions of the population paying Class 2 contributions were again based on the average proportions over the period from 2004 to 2007.

13.5 The proportion of females in the population paying Class 1 contributions plus those who are exempt from these contributions has been generally been increasing over the last twenty years, but has been more stable in recent years in some age groups. Consistent with the approach for males, we have used the average proportions over the years 2004 to 2007 as the basis for the future proportions of the population either paying Class 1 contributions or exempt. An adjustment has been made to allow for some increase in the participation of women at the oldest ages, as a result of the increase in pension age from 60 to 65.

13.6 The proportion of the female population who are married women and have opted to be exempt from Class 1 contributions has been falling, and the option has been removed for women who married after 1 April 2001. For existing optants we have assumed that the proportions will remain the same as each cohort ages up to age 55. After that we have assumed that the proportion for each cohort will decline, based on the decline seen in the recent past, reflecting their gradual withdrawal from the labour market. It has been assumed that the proportion of other women who are exempt from Class 1 contributions will be stable at the average level for the years 2004 to 2007. The proportion of women who pay Class 1 contributions has been derived by subtracting the proportions that are exempt from the total proportion who are either Class 1 contributors or who are exempt (as described in paragraph 13.5).

13.7 For women paying Class 2 contributions there is insufficient data to observe any clear trends. Thus we have assumed that the age-specific proportions of self-employed females contributing would remain constant at their average levels over the period 2004 to 2007.

13.8 A summary of the proportions of the population that are assumed to contribute is given in the two tables below.

Table E.1: Summary of the proportion of the male and female populations assumed to be paying Class 1 or Class 2 contributions for men, or Class 2 contributions for women; these proportions are the same for all years

Age group	Men – Class 1	Men – Class 2	Women – Class 2
14 to 29	0.843	0.010	0.002
30 to 39	0.970	0.081	0.010
40 to 49	0.781	0.166	0.014
50 to 59	0.627	0.229	0.021
60 to 64	0.201	0.083	0.006

Table E.2: Summary of the proportion of the female population assumed to be paying Class 1 contributions for sample years

Age group	2006	2026	2046	2066
14 to 29	0.606	0.796	0.799	0.806
30 to 39	0.581	0.831	0.831	0.833
40 to 49	0.430	0.744	0.748	0.748
50 to 59	0.298	0.548	0.605	0.605
60 to 64	0.024	0.102	0.130	0.138

13.9 Future contribution income was projected by combining the future numbers of contributors, estimated in line with the methods described above, with distributions of earnings levels by age and sex, based on data for 2007. Allowance was made for the effect of the contribution limits.

Retirement pension

13.10 The projected cost of retirement pensions was obtained by applying factors to the age and sex specific projected numbers in the population over pension age in future years. These factors represent both the number of residents and non-residents over pension age who will be entitled to, and who will claim, a retirement pension, and also the average proportion of the standard rate of benefit that will be paid. Since non-residents are included, it is possible for the factors to be in excess of one. In the case of women, separate factors are applied in respect of females claiming a pension on the basis of their husband's contribution record, women claiming a pension on the basis of their own contribution record, and widows claiming a pension on the basis of their deceased husband's contribution record.

13.11 Over the three years from 2005 to 2007, the data showed that the factor[21] applicable to men aged 65 and over was around 90%. A lower percentage, of about 30%, applied at ages 63 and 64, which reflects that only some individuals will choose to retire early. However, based on an analysis of the data on the actual past contribution records of members together with an allowance for projected future contributions, a factor higher than 90% would theoretically be expected, assuming everyone claims their pension.

13.12 For this review, it has been assumed that the factors will gradually rise from current levels up to 100% for those reaching age 65 in 2033 and later (compared with 105% assumed for the review as at 31 December 2003). The factors at ages 63 and 64 are assumed to be constant at their 2007 levels. The assumptions therefore make allowance for an increase in the level of retirement pension claims as a proportion of the population, although it will remain less than the theoretical level. Such an increase might, for example, reflect an increased probability that non-residents will claim their pensions.

[21] These are factors described in paragraph 13.10 which reflect the proportion of the population that claim a pension and the rate of the pension as a percentage of the standard rate.

13.13 An allowance has been made for a proportion of recipients to qualify for a benefit increase in respect of dependants, principally at ages up to 70, based on data for 2007. However, these increases are only paid in respect of pre-April 2001 marriages so the proportion eligible to receive it is run off in the future.

13.14 Women have greater scope for qualifying for pension than men do: women can be entitled to a retirement pension from their own, or from their husband's or deceased husband's, contribution records.

13.15 The factor[22] used to assess the costs of pensions for women who qualify on the basis of their husband's or deceased husbands contributions were calculated by taking a proportion of the factor assumed for men. The proportion was derived using actual data for 2005 to 2007. These long-term factors apply from 2021; prior to this, the factors were chosen as a blend of the long-term assumption and the factor indicated by data for 2007. The factors below age 63 were assumed to run off to zero by 2017, reflecting the shift to pension age 65 for all women. Furthermore, it is only possible for women who were married before April 2001 to rely on their living husband's contribution record. Therefore, the factors for this group are assumed to decline steadily from 2021.

13.16 The factor applied to women who qualify for pension based on their own contributions was calculated by making an assumption about the factors for women as a whole and then deducting the factors for women who qualify on the basis of their husband's contributions (as described in paragraph 13.15). It was assumed that, in the long-term, the overall factor for all women would be 102% at age 70 and over, that is, slightly above that for males (100%), reflecting the fact that women have more methods of being entitled to pension. A lower factor applied at younger ages because they are less likely to be widows at those ages. These long-term rates were blended into the actual factors for 2007 over the period up to 2030, while the factors under age 63 were again run off to zero by 2021. Finally, an adjustment was applied to allow for the fact that women who were married in April 2001 or later will have to claim a pension on their own contribution record and this may tend to result in a less generous pension than if they were able to rely on their husband's contributions.

Survivor's benefit

13.17 Age specific future awards of survivor's benefit were projected by multiplying the projected number of deaths of married people from the population projection by the assumed numbers of awards per death of a married person (which was based on experience over recent years). The proportion of the population who are married was assumed to vary in line with changes projected for England and Wales. The number of beneficiaries in future years was obtained by projecting forward the current beneficiaries along with the estimated future awards, using rates of termination of benefit derived having regard to recent data.

[22] These are factors described in paragraph 13.10 which reflect the proportion of the population that claim a pension and the rate of the pension as a percentage of the standard rate.

13.18 The projected costs of survivor's benefit (including any remaining widow's benefit and widowed father's allowance) were obtained by multiplying the projected number of beneficiaries by the full benefit rate, and by a factor reflecting the average proportion of the full benefit rate which is paid. This factor was based on the average proportion of benefit paid from recent data. Allowance was made for survivor's allowance being paid at a higher rate than survivor's pension.

Incapacity benefits

13.19 A new range of incapacity benefits was introduced from October 2004. Although this was allowed for in the previous actuarial review as at 31 December 2003, at that time there was no data available on how the new system might operate. For the current review, there were three years of data on the experience of the new benefits.

13.20 Expenditure on short-term incapacity allowance was projected by considering age and sex specific numbers of days of benefit paid per contributor since 2005. The number of days of benefit paid in future years was obtained by multiplying these factors by the projected number of contributors.

13.21 The projected future number of days of benefit paid, calculated as described above, was multiplied by the full benefit rate and by a factor reflecting the average proportion of the full benefit rate which is paid, in order to give the projected cost on these benefits. Allowance was made for dependants' increases, based on the average proportions of beneficiaries entitled to such increases from recent data.

13.22 Age specific future awards of long-term incapacity allowance were projected by applying the award rate experienced over the period from 2005 to 2007 to the projected number of contributors. The number of recipients in future years was obtained by projecting forward the current beneficiaries with the estimated future awards, using rates of termination of benefit derived having regard to recent data. The projected costs of long-term incapacity allowance were obtained by multiplying the projected number of beneficiaries by the full benefit rate, and by a factor reflecting the average proportion of the full benefit rate which is paid. This factor was based on the average proportion of benefit paid in recent data and allowance was made for dependants' increases. The cost of long-term incapacity allowance where the degree of disability is less than 20% (which is paid as a lump sum) was projected separately.

13.23 The number of awards of incapacity pension has been very low, averaging around 4 cases per year. As people become more familiar with the new incapacity benefits, it is possible that there will be an increase in the numbers of awards of incapacity pension, particularly given that it tends to be a more generous benefit than long-term incapacity allowance. We have therefore made allowance in this review for an increase in the award rate to about six times the average level from October 2004 to December 2007 (although this still only equates to 24 awards in 2008). The projected cost of these pensions has then been estimated in a similar way as for long-term incapacity allowance.

13.24 Invalidity pension and disablement pension have ceased to be awarded since October 2004, but previous awards continued in payment. The costs of these pensions were run-off allowing for a proportion of the pensions to terminate each year, having regard to data over the period 2005 to 2007.

Maternity benefits

13.25 The cost of maternity allowance per birth, as a multiple of the benefit rate, has fluctuated in a fairly narrow range in recent years. The projected cost of maternity allowance was therefore calculated by multiplying the average cost per birth, as a multiple of the benefit rate, over the ten years to 2007 by the full benefit rate and by the projected number of births from the population projection. A similar approach was used for maternity grants, assuming that the proportion of births qualifying for a grant was the same as the average over the ten years ended 2007.

Death Grant

13.26 The cost of death grants per death, as a proportion of the full benefit rate, has fallen in the last five years. The future expenditure on death grants was calculated by multiplying the average cost per death, as a proportion of the full benefit rate, since 2003 by the full benefit rate and by the projected number of deaths from the population projection. This approach assumes that the recent fall in the benefit per death is sustained, but there is no further fall in future years.

Administration and general expenses

13.27 Costs of administration appear to be related to the level of benefit expenditure. Recent years have seen an increase in the level of administration expenditure as a proportion of benefit expenditure, although the level had returned closer to the long-term average in 2007. As agreed, it has been assumed that administration costs in future years will be the same proportion of total benefit expenditure as in 2007 (when it was 3.9% of benefit expenditure).

Economic assumptions and fund projections

13.28 In making the projections in this report, it is assumed that all benefit rates, the earnings ceiling and the threshold for supplementation will be increased in future in line with earnings. The results, where shown in monetary terms, have therefore been shown in constant 2007 earnings terms. This means that assumptions for inflation and real earnings growth are not required for the review.

13.29 The total return on the fund, net of associated expenses, is assumed to be 2% above earnings increases. The investment returns achieved by the Social Security and Social Security (Reserve) Funds, net of earnings inflation, have been volatile. For example, the return net of earnings inflation over the ten years from 1998 to 2007 is estimated to have averaged a little under 1% a year, whereas the equivalent return over the period from 1992 to 2007 has averaged about 3.5% a year.

13.30 Currently, real yields on long-dated UK Government index-linked gilts, which may be considered as the lowest risk asset for the Fund, stand at just over 1% a year. Assuming real earnings growth of 1% a year means that these assets would not generate any positive return relative to earnings rises. Yields on index-linked gilts are, however, at historically very low levels, and therefore in the longer-term it might be expected that their yields would provide some return over and above earnings growth.

13.31 In practice, most of the assets of the Funds are held in equities, which, although they carry more risk, should also, over the long-term, generate higher returns relative to "risk-free" investments (this is known as the "equity risk premium"). However, estimates of the size of the equity risk premium vary widely.

13.32 There is clearly a great deal of uncertainty over the likely level of future investment returns. For the purpose of illustrating the build up of the funds in this report, the main results in Section 6 have been based on the assumption that investment returns would average 2% a year relative to earnings increases. However, to help indicate the uncertainty, Section 7 shows the impact of assuming that investment returns are 2% a year higher or lower than the assumption for the main results.

14 Appendix F: Summary of projections

Table F.1: Summary of income and expenditure and the projected combined balance in the Social Security and Social Security (Reserve) Funds in 2007 earnings terms and assuming net nil future migration[23]

£ thousand	2006[24]	2011	2016	2026	2036	2046	2056	2066
Opening fund balance	**561,245**	**798,180**	**896,353**	**722,838**	**-**[25]	**-**	**-**	**-**
Contribution income	180,521	185,660	181,984	169,624	153,405	143,617	132,496	121,859
Investment return	54,442	16,081	17,821	13,783	-	-	-	-
Total income	**234,963**	**201,741**	**199,805**	**183,408**	**153,405**	**143,617**	**132,496**	**121,859**
Benefit expenditure	148,225	167,238	185,342	228,330	266,300	263,600	253,486	237,966
Admin expenditure	6,303	6,580	7,292	8,983	10,477	10,371	9,973	9,362
Total expenditure	**154,528**	**173,818**	**192,634**	**237,313**	**276,777**	**273,971**	**263,459**	**247,329**
Excess of income over expenditure	80,435	27,923	7,171	-53,905	-123,372	-130,354	-130,963	-125,470
Closing fund balance	**641,680**	**826,103**	**903,524**	**668,933**	**-**	**-**	**-**	**-**

[23] Figures may not sum to totals shown due to rounding.
[24] The figures for 2006 are the actual figures (not in 2007 earnings terms) taken from the accounts. In particular, this gives a much larger figure for investment income since it is not net of earnings increases.
[25] The fund is extinguished in 2034.

Table F.2: Summary of income and expenditure and the projected combined balance in the Social Security and Social Security (Reserve) Funds in 2007 earnings terms and assuming net future immigration of 150 HoHs a year[26]

£ thousand	2006[27]	2011	2016	2026	2036	2046	2056	2066
Opening fund balance	**561,245**	**799,982**	**920,033**	**872,906**	**223,483**	**-**[28]	**-**	**-**
Contribution income	180,521	188,142	189,676	187,530	181,229	182,443	180,032	176,377
Investment return	54,442	16,140	18,364	16,942	3,471	-	-	-
Total income	**234,963**	**204,282**	**208,041**	**204,472**	**184,700**	**182,443**	**180,032**	**176,377**
Benefit expenditure	148,225	167,437	185,997	230,350	270,917	272,846	274,872	276,710
Admin expenditure	6,303	6,587	7,318	9,063	10,659	10,735	10,814	10,887
Total expenditure	**154,528**	**174,024**	**193,315**	**239,413**	**281,576**	**283,581**	**285,686**	**287,596**
Excess of income over expenditure	80,435	30,258	14,726	-34,941	-96,876	-101,138	-105,654	-111,219
Closing fund balance	**641,680**	**830,240**	**934,759**	**837,965**	**126,607**	**-**	**-**	**-**

[26] Figures may not sum to totals shown due to rounding.
[27] The figures for 2006 are the actual figures (not in 2007 earnings terms) taken from the accounts. In particular, this gives a much larger figure for investment income since it is not net of earnings increases.
[28] The fund is extinguished in 2038.

Table F.3: Summary of benefit expenditure in 2007 earnings terms and assuming net nil future migration[29]

£ thousand	2006[30]	2011	2016	2026	2036	2046	2056	2066
Retirement pension	**109,958**	**122,515**	**140,704**	**184,746**	**228,861**	**228,278**	**220,880**	**208,340**
Survivor's benefit[31]		4,573	4,119	3,350	2,174	1,896	1,615	1,322
Invalidity benefit	17,129	10,420	5,567	1,593	238	16	0	0
Short-term incapacity allowance	11,101	11,646	11,566	11,238	10,023	9,527	8,800	8,102
Long-term incapacity allowance	7,465	14,892	19,571	23,010	20,856	19,919	18,419	16,741
Incapacity pension[32]	0	858	1,585	2,181	1,991	1,904	1,787	1,638
Total incapacity	**35,695**	**37,816**	**38,290**	**38,022**	**33,108**	**31,366**	**29,006**	**26,481**
Maternity allowance	1,737	1,485	1,424	1,377	1,263	1,134	1,065	984
Maternity grant	434	395	379	366	336	302	283	262
Total maternity	**2,171**	**1,880**	**1,802**	**1,744**	**1,599**	**1,436**	**1,348**	**1,246**
Death grant	401	454	427	468	558	625	636	579
Total expenditure	**148,225**	**167,238**	**185,342**	**228,330**	**266,300**	**263,600**	**253,486**	**237,966**

[29] Figures may not sum to totals shown due to rounding.
[30] The figures for 2006 are the actual figures (not in 2007 earnings terms) taken from the accounts.
[31] Including widows' benefit and widowed father's allowance; the 2006 figure is included in the retirement pension amount since it was not split in the accounts.
[32] The 2006 amount was included in the retirement pension amount since it was not split in the accounts.

Table F.4: Summary of benefit expenditure in 2007 earnings terms and assuming net future immigration of 150 HoHs a year[33]

£ thousand	2006[34]	2011	2016	2026	2036	2046	2056	2066
Retirement pension	**109,958**	**122,497**	**140,588**	**184,386**	**228,893**	**229,912**	**232,332**	**235,681**
Survivor's benefit[35]		4,575	4,134	3,424	2,350	2,254	2,078	1,800
Invalidity benefit	17,129	10,420	5,567	1,593	238	16	0	0
Short-term incapacity allowance	11,101	11,763	11,933	12,168	11,597	11,896	11,778	11,522
Long-term incapacity allowance	7,465	14,921	19,768	23,934	23,051	23,910	23,754	22,914
Incapacity pension	0	861	1,606	2,273	2,194	2,275	2,297	2,229
Total incapacity	**35,695**	**37,965**	**38,874**	**39,968**	**37,080**	**38,096**	**37,829**	**36,665**
Maternity allowance	1,737	1,521	1,532	1,630	1,575	1,510	1,532	1,511
Maternity grant	434	404	408	434	419	402	408	402
Total maternity	**2,171**	**1,925**	**1,940**	**2,064**	**1,994**	**1,912**	**1,940**	**1,913**
Death grant	401	476	461	508	601	672	692	651
Total expenditure	**148,225**	**167,437**	**185,997**	**230,350**	**270,917**	**272,846**	**274,872**	**276,710**

[33] Figures may not sum to totals shown due to rounding.
[34] The figures for 2006 are the actual figures (not in 2007 earnings terms) taken from the accounts.
[35] Including widows' benefit and widowed father's allowance.

Table F.5: The estimated future contribution income in 2007 earnings terms based on current contribution rates and assuming zero net future migration[36]

£ thousand	2006[37]	2011	2016	2026	2036	2046	2056	2066
Class 1								
Primary		55,528	54,602	51,291	46,760	43,594	40,233	37,040
Secondary		60,567	58,826	54,194	48,867	45,296	41,949	38,573
States supplement		52,892	52,265	49,298	44,950	42,163	38,909	35,836
Total		**168,988**	**165,694**	**154,783**	**140,577**	**131,053**	**121,091**	**111,449**
Class 2								
Primary		12,489	12,192	11,111	9,599	9,403	8,535	7,789
States supplement		4,184	4,099	3,731	3,229	3,161	2,870	2,621
Total		**16,672**	**16,290**	**14,842**	**12,828**	**12,564**	**11,405**	**10,410**
All classes								
Primary	123,954	68,017	66,794	62,402	56,358	52,996	48,768	44,829
Secondary		60,567	58,826	54,194	48,867	45,296	41,949	38,573
States supplement	56,567	57,076	56,364	53,029	48,180	45,324	41,779	38,456
Total	**180,521**	**185,660**	**181,984**	**169,624**	**153,405**	**143,617**	**132,496**	**121,859**

[36] Figures may not sum to totals shown due to rounding.

[37] The figures for 2006 are the actual figures (not in 2007 earnings terms) taken from the accounts. A detailed breakdown between classes was not available.

Table F.6: The estimated future contribution income in 2007 earnings terms based on current contribution rates and assuming net future immigration of 150 HoHs a year[38]

£ thousand	2006[39]	2011	2016	2026	2036	2046	2056	2066
Class 1								
Primary		56,305	57,033	56,984	55,482	55,562	54,854	53,812
Secondary		61,369	61,318	60,002	57,772	57,548	57,028	55,900
States supplement		53,701	54,741	54,785	53,256	53,721	52,978	51,924
Total		**171,375**	**173,092**	**171,771**	**166,511**	**166,831**	**164,860**	**161,635**
Class 2								
Primary		12,560	12,410	11,788	11,004	11,674	11,344	11,021
States supplement		4,207	4,175	3,971	3,715	3,937	3,828	3,721
Total		**16,767**	**16,585**	**15,759**	**14,718**	**15,611**	**15,172**	**14,742**
All classes								
Primary	123,954	68,865	69,443	68,772	66,486	67,236	66,198	64,833
Secondary	0	61,369	61,318	60,002	57,772	57,548	57,028	55,900
States supplement	56,567	57,908	58,916	58,757	56,971	57,658	56,806	55,644
Total	**180,521**	**188,142**	**189,676**	**187,530**	**181,229**	**182,443**	**180,032**	**176,377**

[38] Figures may not sum to totals shown due to rounding.

[39] The figures for 2006 are the actual figures (not in 2007 earnings terms) taken from the accounts. A detailed breakdown between classes was not available.