# REPORT BY THE GOVERNMENT ACTUARY ON THE FINANCIAL CONDITION OF THE SOCIAL SECURITY FUND AS AT 31ST DECEMBER 2000

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**Presented to the States on 11th June 2002**
**by the Employment and Social Security Committee**

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## STATES OF JERSEY

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**SOCIAL SECURITY (JERSEY) LAW 1974**

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To the President and Members of the Social Security Committee 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. My previous review was as at 31st December 1997 and, at the request of the Committee, I have carried out a review as at 31st December 2000. I now submit the following report on the financial condition of the Social Security Fund and on the adequacy of the present contribution rates.

C.D. Daykin
Government Actuary
May 2002

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## SUMMARY OF THE REVIEW

1. This report concerns the financial condition of the Jersey Social Security Fund as at 31st December 2000 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. The main estimates in Section 3 of this report are based on the laws in force at 31st December 2000.

2. The Fund has historically been financed on the pay-as-you-go principle. With this method of financing, expenditure on benefits and administration should be met broadly by the income from contributions and the States supplement in the same year. The rates of contribution required to meet the expenditure are therefore determined by the relative levels of benefits and earnings and by the relative numbers of beneficiaries and contributors. As these latter numbers are very much affected by demographic changes, projections are made for a period of 60 years into the future to illustrate the impact of demographic changes.

3. An 8 per cent contribution rate, 3.5 per cent paid by the employee and 4.5 per cent by the employer, was set in 1975 with the intention that it should provide a small margin over the strict pay-as-you-go rate and so could be maintained for the first 15 years as the scheme matured. In fact the true pay-as-you-go rate has exceeded 8 per cent since 1990-91, but the fund that had been built up, and the income that the fund had generated, allowed the Fund to continue with the 8 per cent contribution rate. The contribution rate was increased to 8.5 per cent in 1998, 9.0 per cent in 1999, 9.5 per cent in 2000, 10.0 per cent in 2001 and 10.5 per cent in 2002, with 5.2 per cent being paid by the employee and 5.3 per cent by the employer.

4. Since the previous report as at 31st December 1997, the market value of the Social Security and Social Security (Reserve) Funds as a multiple of annual expenditure has increased from 2.8 in 1996-97 (adjusting to a 12 month figure) to 3.4 in 2000. The aim is for the increase in contribution rates to 10.5 per cent to enable the Social Security (Reserve) Fund to build up to a level of around 5 years' expenditure, in order to dampen the effect of the worsening demographic position over the next 30 to 40 years.

5. Old age pensions accounted for 67 per cent of the Fund's expenditure in 2000 and the estimates in this report indicate that this is expected to increase steadily in future to around 80 per cent by the 2030s. The projections in this report indicate that the number in the population over the current pension age of 65 will rise from just under 12,500 in 2000 to over 24,500 in 2035, a total rise of approximately 100 per cent. After 2035 the numbers will start to fall, reaching approximately 18,500 by 2060 assuming zero future net migration, and approximately 21,000 assuming future net immigration of 200 a year. The number of people in receipt of a pension will increase by more than this because of the increase in the number of overseas pensioners.

6. 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 categories to the projected numbers in the working age population. These proportions were derived from statistics of the numbers contributing over the last economic cycle, allowing for both the average positions over an economic cycle and the trends with time.

7. The contribution rate which is required to break even on a pay-as-you-go basis is heavily dependent on the relative future numbers in the population at working ages and over pension age. In 2000 there were approximately 4.9 persons of working age for each person aged 65 years and over but this ratio is projected to fall. If there is zero net migration in the future, this ratio is projected to fall to 1.9 in 2035 before rising to 2.2 by 2060. Assuming net future immigration of 200 a year, this ratio is expected to fall to 2.2 in 2035 before rising to 2.6 by 2060. The change in the required contribution rate will not be solely dependent on this ratio, as not all people of working ages contribute, and retirement pensions are paid to people overseas if they have a sufficient contribution record, as well as to residents. In addition, benefits other than retirement pension are paid, mainly to people of working age.

8. A summary of the joint employee and employer contribution rates which would be required to break even on a pay-as-you-go basis (allowing for the States contribution to continue as described in Appendix A, paragraph A.13) is given in Table 1. These rates exclude the contribution to the Health Insurance Fund and also exclude income from investments.

**TABLE 1: Estimated joint rates of contribution as a percentage of earnings[(1)], to break even on a pay-as-you-go basis**

| *Year* | *Zero net migration* | *200 a year net immigration* |
|---|---|---|
| **2000** | 8.4 | 8.4 |

| | | |
|---|---|---|
| **2005** | 9.0 | 8.9 |
| **2010** | 9.8 | 9.4 |
| **2020** | 12.4 | 11.6 |
| **2030** | 16.3 | 14.5 |
| **2040** | 17.8 | 15.0 |
| **2050** | 16.3 | 13.7 |
| **2060** | 16.4 | 14.0 |

(1) Payable on earnings up to the upper limit.

9. It is likely that the planned contribution rate of 10.5 per cent from 2002 can be maintained for many years without any diminution of the Fund as a contingency reserve. With zero future net migration, the combined balance in the Social Security and Social Security (Reserve) Funds would reach a maximum of 5.1 times annual expenditure in the year 2012 before starting to decline, assuming that the planned contribution rate is paid in the future. The Funds would be extinguished in the year 2035. With future net immigration of 200 a year, the combined balance in the Funds is projected to reach a maximum of 5.4 times annual expenditure in the year 2015 before being extinguished in the year 2042. This assumes that the rate of return on the investments of the Funds, net of associated expenses, will be 2 per cent per annum above earnings increases. If the rate of return is one per cent per annum lower, the Funds would be extinguished 2 years earlier with nil net migration and 5 years earlier with 200 a year net immigration. If the rate of return is one per cent per annum higher, the Funds would be extinguished 5 years later with net nil migration and 12 years later with net immigration of 200 a year.

10. It should be emphasised that these estimates are not exact forecasts of the future, but projections of what would happen on the basis of the stated assumptions. The demographic and economic assumptions underlying the estimates are inevitably subject to a considerable degree of uncertainty, particularly for the more distant future. Small changes in the assumptions used can lead to relatively large changes in the projected future financial position of the Fund.

11. The financial outlook for the Fund remains healthy in the short to medium term, largely as a result of the 0.5 per cent increases in the contribution rates each year from 1998 to 2002 and the increases in the upper earnings limit over and above earnings growth. In the longer term, the projections suggest that more action may be necessary to keep income and expenditure in line, but this will be very sensitive to the actual experience.

**SECTION 1: Introduction and Scope of the Review**

1.1 The Jersey Social Security Scheme has historically been financed on the pay-as-you-go principle, with rates of contribution set to produce the income needed to meet current expenditure on benefits and the costs of administration. With this system of finance, the rates of contribution required may alter significantly over the years as a result of the maturing of the benefit rights under the scheme or on account of demographic or other factors leading to changes in the relative numbers of pensioners and contributors. For this reason, the Jersey legislation makes provision for three-yearly reviews by an actuary of the operation of the scheme, including long-term projections of the expenditure and of the corresponding rates of contribution likely to be required over the years.

1.2 The report on the previous review covering the period 1st October 1994 to 31st December 1997 was submitted to the President and members of the Social Security Committee of the States of Jersey in March 2000.

1.3 A summary of the contributions and benefits of the scheme is shown in Appendix A. The main legislative changes which were enacted in the period under review (1st January 1998 to 31st December 2000), and which have affected the entitlement to benefits and the structure of contributions in the Jersey Social Security Fund, are summarized in Appendix B. The projections of benefit expenditure and contribution income in this report take into account these changes. Appendix B also shows the income, expenditure and balances for the Social Security and the Social Security (Reserve) Funds for the three years ending 31st December 2000.

1.4 The object of this review, as stated in Article 32 of the Social Security (Jersey) Law 1974, is to determine the financial condition of the Jersey Social Security Fund and the current and future adequacy of the contributions payable in accordance with the law.

1.5 The Jersey Social Security Scheme has historically followed a pay-as-you-go financing approach. However, the contribution rates have been increased by 0.5 per cent in each year from 1998 to 2002, with the aim of setting contribution rates which are greater than those required in order to meet current benefit expenditure and the costs of administration. The aim of these increases is to build up the Social Security (Reserve) Fund to a level of around 5

times annual expenditure, moving the scheme towards being partially funded in order to dampen the effect of the worsening demographic position over the next 30 to 40 years.

1.6 Two main sets of results are presented in this report. Firstly, the projected future contribution rates which would be required in order for contribution income to equal expenditure on benefits and administration are given, assuming that the States contribution will continue to be calculated as at present (see Appendix A, paragraph A.13). These "break-even contribution rates" are the contribution rates which would be required if the scheme were following the pay-as-you-go financing approach. One of the main factors likely to cause significant changes in these 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, in the rate of unemployment or in the level of migration.

1.7 Secondly, the future combined balance in the Social Security and Social Security (Reserve) Funds, as a multiple of annual expenditure, is projected. For this purpose it is assumed that the current contribution rates continue to apply in all future years, allowing for the increases to contribution rates in 2001 and 2002. 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 Social Security (Reserve) Fund can be used to delay increases to contribution rates which would otherwise be required.

1.8 The projected demographic developments are discussed in Section 2. Very significant changes in the age structure of the population are expected over the next 30 to 40 years. The numbers over state pension age will be increasing steeply at a time when the numbers at working age will be stationary or declining, leading to a marked fall in the ratio of the number of contributors to the number of pensioners.

1.9 Section 3 of this report shows the projected financial situation of the scheme if benefit rates are increased in line with earnings growth, as specified under Article 13(2) of the current legislation. The estimates of income and expenditure are expressed in constant 2000 earnings terms. Since both benefit rates and the earnings of contributors will increase in line with earnings growth, the actual level of increases in earnings will not be relevant to the projected financial position of the scheme, assuming that future rates of investment return change in line with earnings growth.

1.10 The projections in this report have been calculated with reference to a large amount of data which has been received, covering demographic movements, the number of beneficiaries and the amounts of benefit paid, and the number of contributors and their earnings. The investigations carried out suggested that the data is of good quality, and in almost all cases data from different sources reconcile well with each other. 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.

1.11 Long term projections, such as the results contained in this report, are subject to a great deal of uncertainty. The results of the projections depend on a large number of assumptions with regard to the future experience of the scheme. When considering the results of long-term projections, it is vital to consider the potential effects on the results if the assumptions used are not borne out in practice. Section 4 discusses this uncertainty, and illustrates the effects on the results of the review of using alternative assumptions.

1.12 Section 5 of this report compares the results from Sections 2 and 3 with those from the report on the previous review.

**SECTION 2: The demographic assumptions**

2.1 In order to project the future income and expenditure of the Jersey Social Security Fund, it is necessary first to project the future numbers in the population of Jersey subdivided 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. The March 2001 census was used as the starting point for the population projections.

2.2 Projections of the population many years ahead are inevitably subject to a considerable margin of uncertainty. Migration to and from Jersey is particularly difficult to predict, and it is for this reason that we have based our projections on two different migration assumptions. These are -

(i) Zero net migration

(ii) Net inward migration of 200 a year at young working ages for all future years

These assumptions refer to migration in respect of permanent residents only. In addition, there will be migration in respect of short-term residents, as discussed below. 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.

2.3 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. The resident population revealed by the census includes such seasonal workers as were present in the Island at the time that the census was taken. In addition to these seasonal workers, a persistent feature of the population has been an excess of people, mainly in their 20s, who work in Jersey for a few years before returning to their country of origin ('transient workers'). The numbers of seasonal and transient workers assumed at this review are shown in Appendix C, Table C3. The number of transient workers assumed is the same as that assumed at the last review since there has been no further information on the subject. In making these projections we have assumed that the number and ages of these short-term workers remain the same in the future.

2.4 Although the number of transient workers is assumed to remain constant in future, the movement of transient workers to and from the Island is assumed to result in a certain degree of net emigration. This is because female transient workers may give birth while they are resident in Jersey, taking the children with them when they leave the Island. Therefore, in any year, the number of transient workers entering the Island is smaller than the number of transient workers plus their children leaving the Island, resulting in net emigration equal to the number of children born to female transient workers. This feature is allowed for in the population projections, being in addition to the assumed migration in respect of permanent Jersey residents detailed in paragraph 2.2 above.

2.5 Those persons who will be over the pension age of 65 years and receiving pensions during the 60-year projection period are already living. Apart from the effects of the different assumptions for migration, the projected numbers of pensioners will be very largely determined by the assumption about future mortality. The mortality rates used have been based on the experience in recent years, with an allowance made for continuing improvement in mortality in the future, assuming that mortality rates change in line with the rates projected for England and Wales (mid-1998 based population projection). Assumed improvements in mortality over the next 60 years would result in increases in life expectancy at birth of approximately 5 per cent, and increases in life expectancy at age 65 of approximately 20 per cent for males and 15 per cent for females.

2.6 Mortality is of much less significance in determining the future numbers at working ages, but after about 20 years the numbers at these ages will depend to an increasing extent on the future numbers of births. Over the past 15 years, fertility rates for women have changed broadly in line with England and Wales fertility rates, although with fertility in Jersey being lower at younger ages and higher at the older ages than in England and Wales. We have assumed that fertility rates continue to change in line with the rates projected for England and Wales (mid-1998 based population projection). This results in an increase in fertility rates of around 5 per cent over the next 10 years, with rates remaining broadly constant thereafter. The assumed number of children per women, excluding seasonal workers who are assumed not to give birth while they are on the Island, is ultimately 1.6, around 25 per cent below the rate of 2.1 which is necessary for a generation exactly to reproduce itself.

2.7 The projected future numbers in the population, by age and sex, are shown in Appendix C. A summary of the future numbers in the age bands most relevant for this review is given in Table 2 assuming zero net migration in the future and in Table 3 assuming net inward migration of 200 a year. The projected future numbers in the population are illustrated in Figures 1 and 2. It can be seen that the total population assuming zero net migration is expected to remain around its current level until the year 2020, after which it will decline so that by 2060 the population will only be approximately 80 per cent of current levels. Assuming net immigration of 200 a year, the population is expected to increase by about 7 per cent by the year 2030 before falling to 2 per cent above its current level by 2060

**TABLE 2: Projected population of Jersey assuming no net migration after March 2001**(1)

| | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 |
|---|---|---|---|---|---|---|---|---|
| **Males** | | | | | | | | |
| 0-15 | 8,022 | 7,935 | 7,307 | 6,215 | 6,128 | 5,686 | 4,971 | 4,705 |
| 16-64 (W) | 29,553 | 29,607 | 29,710 | 28,249 | 25,247 | 23,274 | 23,021 | 21,134 |
| 65 and over (P) | 5,195 | 5,796 | 6,430 | 8,577 | 10,586 | 10,788 | 8,819 | 8,399 |
| **Total** | **42,770** | **43,338** | **43,447** | **43,040** | **41,960** | **39,747** | **36,810** | **34,238** |
| W/P | 5.7 | 5.1 | 4.6 | 3.3 | 2.4 | 2.2 | 2.6 | 2.5 |
| **Females** | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0-15 | 7,544 | 7,497 | 6,856 | 5,795 | 5,722 | 5,305 | 4,628 | 4,376 |
| 16-64 (W) | 30,432 | 30,461 | 30,462 | 28,753 | 25,295 | 22,583 | 21,849 | 20,052 |
| 65 and over (P) | 7,089 | 7,417 | 7,894 | 10,042 | 12,539 | 13,345 | 11,448 | 10,224 |
| **Total** | **45,064** | **45,374** | **45,211** | **44,590** | **43,556** | **41,234** | **37,926** | **34,651** |
| W/P | 4.3 | 4.1 | 3.9 | 2.9 | 2.0 | 1.7 | 1.9 | 2.0 |
| **Persons** | | | | | | | | |
| 0-15 | 15,566 | 15,432 | 14,163 | 12,010 | 11,850 | 10,991 | 9,599 | 9,081 |
| 16-64 (W) | 59,985 | 60,068 | 60,172 | 57,001 | 50,542 | 45,857 | 44,870 | 41,186 |
| 65 and over (P) | 12,283 | 13,213 | 14,323 | 18,619 | 23,124 | 24,133 | 20,267 | 18,622 |
| **Total** | **87,834** | **88,712** | **88,658** | **87,630** | **85,516** | **80,981** | **74,735** | **68,889** |
| W/P | 4.9 | 4.5 | 4.2 | 3.1 | 2.2 | 1.9 | 2.2 | 2.2 |

(1) The numbers shown are the average population during the calendar year including seasonal and transient workers.

**TABLE 3: Projected population of Jersey assuming net immigration of 200 a year after March 2001**[1]

| | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 |
|---|---|---|---|---|---|---|---|---|
| **Males** | | | | | | | | |
| 0-15 | 8,022 | 7,954 | 7,426 | 6,888 | 7,300 | 7,063 | 6,682 | 6,778 |
| 16-64 (W) | 29,553 | 30,032 | 30,631 | 30,111 | 28,323 | 27,982 | 29,048 | 28,177 |
| 65 and over (P) | 5,195 | 5,796 | 6,430 | 8,577 | 10,586 | 10,788 | 9,216 | 9,495 |
| **Total** | **42,770** | **43,782** | **44,486** | **45,575** | **46,209** | **45,832** | **44,945** | **44,450** |
| W/P | 5.7 | 5.2 | 4.8 | 3.5 | 2.7 | 2.6 | 3.2 | 3.0 |
| **Females** | | | | | | | | |
| 0-15 | 7,544 | 7,515 | 6,970 | 6,411 | 6,799 | 6,591 | 6,236 | 6,322 |
| 16-64 (W) | 30,432 | 30,886 | 31,387 | 30,688 | 28,466 | 27,356 | 27,872 | 26,984 |
| 65 and over (P) | 7,089 | 7,417 | 7,894 | 10,042 | 12,539 | 13,345 | 11,881 | 11,475 |
| **Total** | **45,064** | **45,818** | **46,250** | **47,140** | **47,804** | **47,293** | **45,988** | **44,782** |
| W/P | 4.3 | 4.2 | 4.0 | 3.1 | 2.3 | 2.0 | 2.3 | 2.4 |
| **Persons** | | | | | | | | |
| 0-15 | 15,566 | 15,469 | 14,395 | 13,298 | 14,099 | 13,655 | 12,918 | 13,100 |
| 16-64 (W) | 59,985 | 60,918 | 62,018 | 60,799 | 56,790 | 55,338 | 56,920 | 55,161 |
| 65 and over (P) | 12,283 | 13,213 | 14,323 | 18,619 | 23,124 | 24,133 | 21,096 | 20,970 |
| **Total** | **87,834** | **89,600** | **90,736** | **92,716** | **94,013** | **93,125** | **90,933** | **89,231** |
| W/P | 4.9 | 4.6 | 4.3 | 3.3 | 2.5 | 2.3 | 2.7 | 2.6 |

[1] The numbers shown are the average population during the calendar year including seasonal and transient workers.

**Figure 1 - Projected population of Jersey assuming zero net migration**

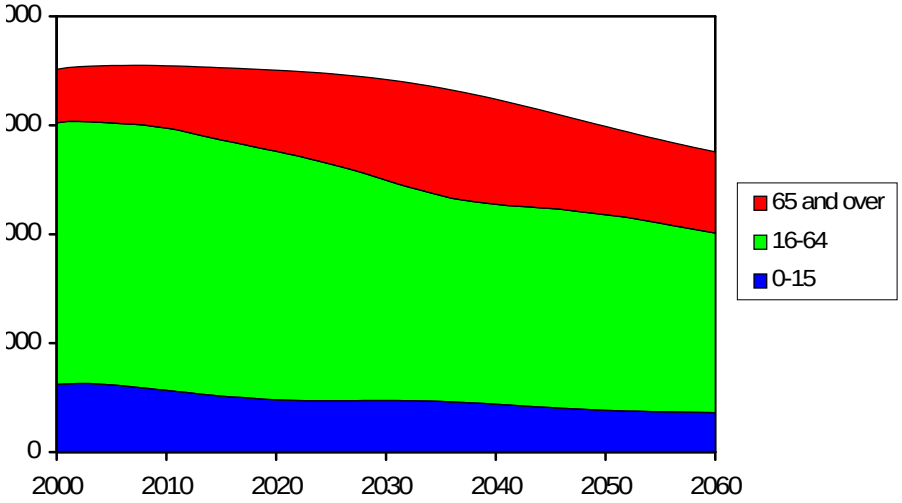
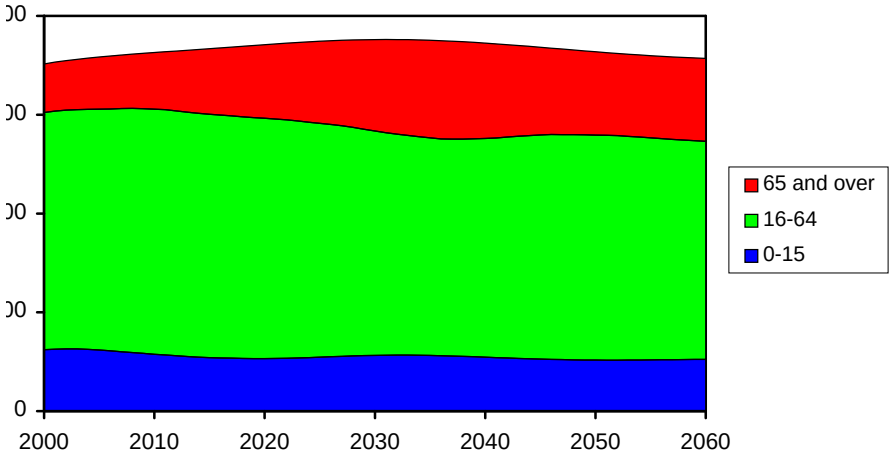


**Figure 2 - Projected population of Jersey assuming net immigration of 200 a year**

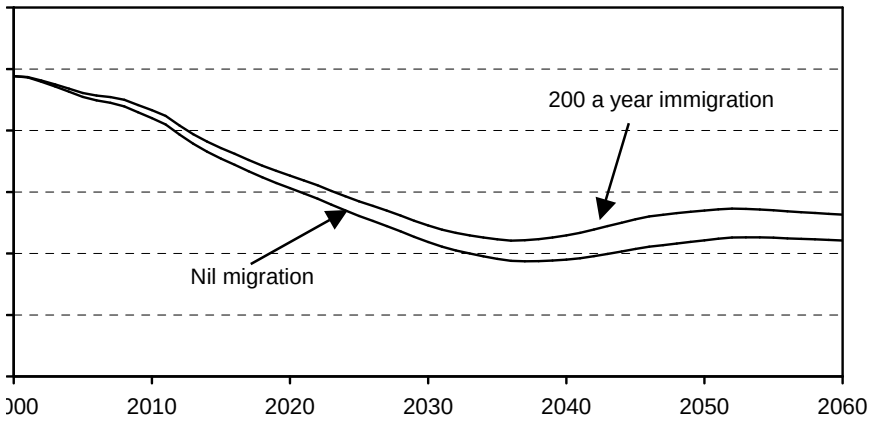



2.8 On the basis of the projections, the numbers resident in Jersey over the current pension age of 65 will rise slowly from just under 12,500 in 2000 to over 24,500 in 2035, a total rise of approximately 100 per cent. The numbers are very similar on both projections since future migrants would not have reached age 65 in any number by 2035. After 2035 the numbers will start to fall, reaching approximately 18,500 by 2060 assuming zero net migration and approximately 21,000 assuming net immigration of 200 a year.

2.9 By contrast, the expected numbers at working ages, assuming zero net migration in the future, will fall from just under 60,000 in 2000 to around 57,000 by 2020 and then to under 41,200 by 2060, a total fall of 31 per cent Assuming net inward migration of 200 a year, the expected numbers at working age will rise from just under 60,000 in 2000 to just over 62,000 in 2010 before falling to approximately 55,200 by 2060, a fall over the whole period of 8 per cent. The fall in the numbers at working ages when there is no migration to boost them is due mainly to the level of fertility rates being below the level required to replace the population.

2.10 The number of persons of working age per person over pension age, the main demographic determinant of the contribution rate required, falls from 4.9 in 2000 to 1.9 in 2035 before rising to 2.2 by 2060 assuming zero net migration. Assuming net immigration of 200 a year, this ratio is expected to fall from 4.9 in 2000 to 2.2 in 2035 before rising to 2.6 by 2060. This ratio is illustrated in Figure 3.

**Figure 3 - Projected number of people of working age per person over pension age**



**SECTION 3: The estimated outgo, rates of contribution required and balance in the funds in future years**

3.1 Estimates have been made of the future income, benefit expenditure and administration expenditure of the scheme, in the manner and on the assumptions described in the preceding sections of the report and in detail in Appendix D.

3.2 Estimates of the expenditure on the various types of benefit are given in Appendix E, assuming that benefit rates are increased annually in line with earnings growth as required by current legislation. Estimates of future contribution income from the different classes of contribution, including estimates of the States contribution, are given in Appendix F. The estimated contribution income is calculated assuming that currently planned contribution rates apply in all future years, allowing for the increases to contribution rates in 2001 and 2002. Earnings limits for contributions are assumed to increase in line with earnings growth, after allowing for the increase in the upper limit of £50 above earnings growth in 2001.

3.3 Table 4 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 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 4.

3.4 The results in Table 4 and Figure 4 -

(i) exclude the contributions paid to the Health Insurance Scheme,

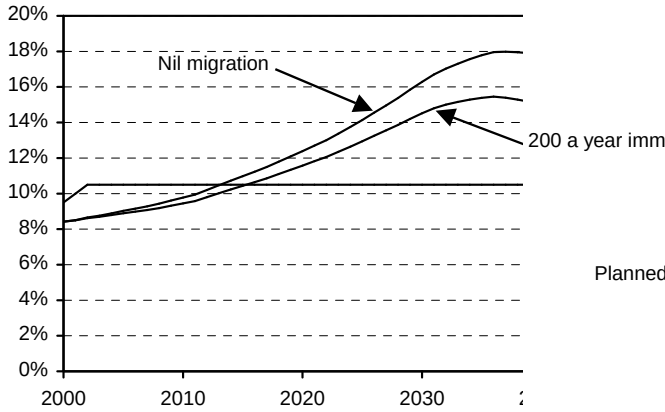
(ii) assume the States contribution will continue to be calculated as at present (see Appendix A, paragraph A.13), and

(iii) assume that the current assets of the Fund and the income generated from the assets are not drawn upon to meet expenditure of the scheme.

**TABLE 4: Estimates of future expenditure from the Social Security Fund in 2000 earnings terms and the contribution rates required in order to break even, assuming that benefit rates and earnings limits increase in line with earnings**

| Year | Expenditure (£m) | | Contribution rates (%) | |
|---|---|---|---|---|
| | Zero net migration | Net immigration of 200 a year | Zero net migration | Net immigration of 200 a year |
| **2000** | 104 | 104 | 8.4 | 8.4 |
| **2005** | 111 | 111 | 9.0 | 8.9 |
| **2010** | 119 | 119 | 9.8 | 9.4 |
| **2020** | 146 | 147 | 12.4 | 11.6 |
| **2030** | 174 | 176 | 16.3 | 14.5 |
| **2040** | 178 | 182 | 17.8 | 15.0 |
| **2050** | 156 | 168 | 16.3 | 13.7 |
| **2060** | 145 | 167 | 16.4 | 14.0 |

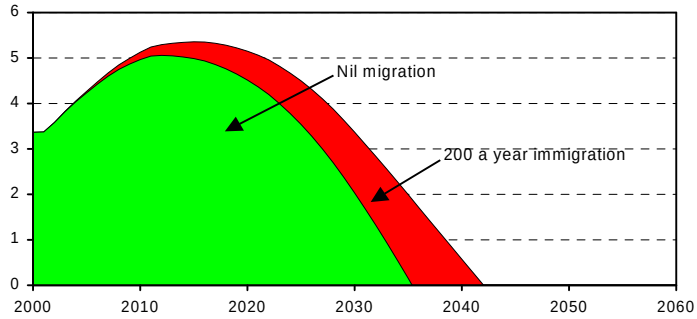
**Figure 4 - Projected break-even cont**




3.5 Table 4 shows that the break-even contribution rate is projected to remain below the planned rate of 10.5 per cent for at least the next ten years. The contribution rate is expected to rise rapidly after that to reach a peak of 18 per cent by 2037 assuming zero future net migration and 15.5 per cent by 2036 assuming future net immigration of 200 a year. Following these peaks, the break-even contribution rate will reduce to 16.4 per cent by 2060 assuming no future net migration and 14 per cent assuming net immigration of 200 a year.

3.6 If the contribution rates shown in Table 4 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 the combined balance in the Social Security and Social Security (Reserve) Funds would grow in relation to benefit expenditure. This is mainly because we expect the rate of return on investments to be greater than the rate of increase in earnings.

**Figure 5 - Projected balance as multiple of expenditure**




3.7 Alternatively, the current balances in the Social Security Funds, and the fact that the planned rates of contribution are greater than those currently needed to break even on a pay-as-you-go basis, can be used in order to lessen the need to increase contribution rates in the future in response to changing demographics. Figure 5 shows the projected combined balance in the Social Security and Social Security (Reserve) Funds, as a multiple of total expenditure including expenditure on administration, assuming that the current contribution rates apply for all future years, although with allowance for the increases in contribution rates in 2001 and 2002. The projected balance is shown for both migration assumptions.

3.8 The calculations underlying Figure 5 assume that the future rate of return on investments, net of associated

expenses, will be 2 per cent per annum in excess of earnings increases. The projected fund as a multiple of expenditure for 2000 and 2001 is lower than it would otherwise have been as a consequence of the negative investment return achieved during 2000.

3.9 Assuming zero future net migration, if the planned 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 5.1 in 2012. Thereafter, the balance would fall as a multiple of annual expenditure, until the Funds are extinguished in 2035. After this point, it would be necessary to increase contribution rates to at least the break-even rate of 17.8 per cent. In practice, it may be considered necessary to increase contribution rates before the Funds were extinguished.

3.10 Assuming future net immigration of 200 a year, the projected balance in the Funds would grow to a maximum of 5.4 times annual expenditure in 2015, if the planned contribution rates were to be paid. Thereafter, the balance would fall as a multiple of annual expenditure, until the Funds are extinguished in 2042. After this point, it would be necessary to increase contribution rates to at least the break-even rate of 14.6 per cent.

3.11 To the extent that the future experience of the scheme may not follow the assumptions made for the purpose of these projections, the future financial position of the scheme may differ considerably from that described above. Section 4 contains discussion of the uncertainty inherent in long term projections such as these, and shows the effects on the principal results of this review of varying the assumptions used.

**SECTION 4: Illustrative effects on the principal results of variations in the assumptions used**

4.1 The results described in Section 3 are dependent on a number of assumptions which have been made with regard to the future experience of the Social Security Scheme. These assumptions include -

(i) demographic assumptions, such as future fertility and mortality rates, future levels of migration in respect of permanent residents, and the effects of short term migrants;

(ii) economic assumptions, such as the future rate of return on the investments of the Social Security and Social Security (Reserve) Funds, and the levels of employment and unemployment;

(iii) scheme assumptions, such as the effects of the legislative changes which have been made to the scheme benefits.

4.2 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 scheme 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 scheme. 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.

**Demographic assumptions**

4.3 The results in Sections 2 and 3 are shown on the basis of two alternative assumptions regarding the future level of net migration of the permanent population of 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 more any necessary increases to contribution rates could be deferred. Conversely, net outward migration would require contribution rates to be increased sooner.

4.4 Attention should be given to the possible effects on the results of the projections 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 valuation will not reach pension age during the period of the review. However, the level of contribution income would be affected, after an initial period of around 20 years. An increase in the assumed fertility rates would therefore improve the future financial position of the scheme, 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 scheme.

4.5 Any changes in the assumed rates of mortality would have little effect on contribution income. However, if lighter rates of mortality were to be assumed in the future, this would increase the projected expenditure on old age

pensions, and consequently increase the required break-even contribution rates. Conversely, heavier assumed rates of mortality would improve the future financial position of the scheme.

**Economic assumptions**

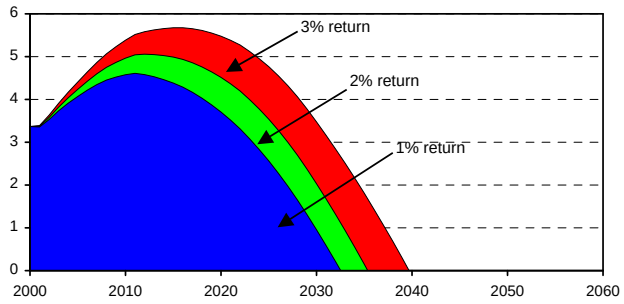
4.6 It has not been necessary to make assumptions regarding the future levels of price inflation or earnings growth for this review. All results are presented in constant earnings terms, and benefit rates are assumed to be increased in line with earnings growth in the future. Therefore the absolute levels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

4.7 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 cent per annum in excess of earnings growth. This is lower than the average annual rate of return which has been experienced for most years in the recent past. The effects on the results from Section 3 of varying the future rate of investment return by one per cent per annum are shown in Figure 6 and Figure 7.

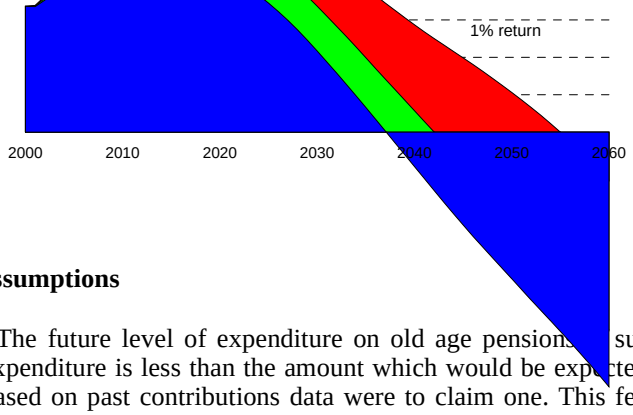
4.8 Assuming zero future net migration and a rate of return one per cent per annum higher from 2001 compared with the principal results, the projected balance in the Funds as a multiple of annual expenditure would reach a maximum of 5.7 in 2016, if the planned contribution rates were to be paid. Thereafter the balance would fall as a multiple of annual expenditure, until the Funds are extinguished in 2040. If the rate of return were one per cent 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 4.6 in 2011, after which it would fall until the funds are extinguished in 2033.

4.9 Assuming future net immigration of 200 a year and a rate of return one per cent per annum higher from 2001 compared with the principal results, the projected balance in the Funds as a multiple of annual expenditure would reach a maximum of 6.2 in 2018, if the planned contribution rates were to be paid. Thereafter the balance would fall as a multiple of annual expenditure, until the Funds are extinguished in 2054. If the rate of return were one per cent 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 4.8 in 2012, after which it would fall until the funds are extinguished in 2037.

**Figure 6 - Projected balance as multiple of expenditure for different investment returns with nil migration**




4.10 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.




**Scheme assumptions**

4.11 The future level of expenditure on old age 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 State pension age, will be less likely to claim a pension than residents.

4.12 The principal projections shown in this report assume that between 2005 and 2030 there is a gradual increase each year in the likelihood of claims of old age pensions from non-residents. Data on old age pension claims and expenditure indicates that such an increase has not occurred in the recent past. 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 old age pensions in the longer term may be approximately 10 per cent lower than that included in the principal projections.

4.13 Conversely, it may be the case that the various legislative changes which have been made since the last review 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 old age pensions from non-residents increases by a greater amount in the future than that allowed for in the principal results.

4.14 In order to provide an indication of the variability of the results of the review, Table 5 indicates the projected break-even contribution rates and the year in which the Funds are extinguished (assuming that the planned contribution rates are paid in the future) if the future costs of old age pension were to be 10 per cent higher or lower than those assumed for the main projections. This is assumed to apply from 2030 onwards, building up to this level uniformly from 2001. The 10 per cent difference may be as a result of mortality experience differing from the assumptions used, or because of the future level of claims differing from the assumed level, or because of the effects of the legislative changes to old age pension differing from those assumed. It should not be considered to be an upper or lower bound for future old age 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 5: Illustrative effects of expenditure on old age pensions being either 10 per cent higher or 10 per cent lowe from 2030 compared with the principal results, with this difference phased in uniformly from 2001**

| Year | Zero net migration | | | Net immigration of 200 a year | | |
|---|---|---|---|---|---|---|
| | Main results (1) | OAP 10% higher | OAP 10% lower | Main results (1) | OAP 10% higher | OAP 10% lower |
| **Break-even contribution rate (%)** | | | | | | |
| **2020** | 12.4 | 13.0 | 11.8 | 11.6 | 12.1 | 11.0 |
| **2040** | 17.8 | 19.3 | 16.3 | 15.0 | 16.2 | 13.8 |
| **2060** | 16.4 | 17.7 | 15.0 | 14.0 | 15.1 | 12.9 |
| **Year in which Funds are extinguished** (2) | 2035 | 2032 | 2041 | 2042 | 2036 | -(3) |

(1) Break-even contribution rates are as shown in Table 4 in Section 3.

(2) Assuming that the planned contribution rates are paid in the future.

(3) Using this scenario there is still a small balance in the fund in 2060, the final year of the review.

4.15 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.

**SECTION 5: Comparison of results in this report with those from the report on the previous Actuarial Review**

**Population projections**

5.1 Table 6 compares the results of the population projections described in Section 2 of this report with the populatio projections from the report on the previous actuarial review of the Social Security Scheme. Numbers are shown for the years for which results were given in the report on the previous review.

**TABLE 6: Comparison of results in this report with those from the report on the previous actuarial review – population projections**

| | 2002 | 2007 | 2017 | 2027 | 2037 | 2047 | 2057 |
|---|---|---|---|---|---|---|---|
| **Net nil migration - population numbers** | | | | | | | |
| **Last review** | **87,014** | **86,811** | **85,415** | **83,223** | **79,078** | **73,234** | **67,576** |
| Change | +1,424 | +1,944 | +2,581 | +3,142 | +3,523 | +3,415 | +2,945 |
| **This review** | **88,438** | **88,755** | **87,996** | **86,365** | **82,601** | **76,649** | **70,521** |
| **Net immigration of 200 a year - population numbers** | | | | | | | |
| **Last review** | **88,279** | **89,304** | **90,957** | **92,100** | **91,456** | **89,358** | **87,394** |
| Changes | +411 | +790 | +1,141 | +1,728 | +2,151 | +2,250 | +2,234 |
| **This review** | **88,690** | **90,094** | **92,098** | **93,828** | **93,607** | **91,608** | **89,628** |
| **Net nil migration - numbers at working age per person over pension age** | | | | | | | |
| Last review | 4.6 | 4.3 | 3.3 | 2.5 | 2.0 | 2.3 | 2.4 |
| This review | 4.8 | 4.5 | 3.3 | 2.4 | 1.9 | 2.1 | 2.2 |
| **Net immigration of 200 a year - numbers at working age per person over pension age** | | | | | | | |
| Last review | 4.7 | 4.5 | 3.5 | 2.8 | 2.4 | 2.8 | 2.8 |
| This review | 4.8 | 4.5 | 3.5 | 2.7 | 2.2 | 2.6 | 2.7 |

5.2 The projected population for this review is higher than that from the previous actuarial review, on both migration bases. The population projections from the previous actuarial review assumed either nil net migration or net immigration of 200 a year from March 1996 onwards. The population projections for this review were based on the March 2001 census, which reflected the actual migration between March 1996 and March 2001, which was approximately 1,000. This would, by itself, result in an increased population of approximately 1,000 when comparing the nil migration projections, and nil when comparing the net immigration of 200 a year projections, in March 2001. The differences shown in Table 6 are slightly larger than these figures, as a result of other differences.

5.3 For the previous review, it was assumed that future fertility rates would remain constant. As set out in Section 2, it has now been assumed that fertility rates will increase by around 5 per cent between 2000 and 2010, in line with changes projected for England and Wales. Fertility rates are then assumed to remain broadly constant from 2010 onwards. This accounts for the major part of the balance of the increase in the population projections, after migration has been allowed for.

5.4 In addition to these effects, there are other smaller effects, including the effect of assuming a faster rate of mortality improvement than was assumed for the previous review, and other changes made to the assumptions underlying the population projections.

5.5 The fact that the number of people of working age per person over pension age is now projected to decrease more than at the time of the previous actuarial review suggests that the required break-even contribution rates will be higher than those calculated at the time of the previous actuarial review. Table 7 compares the projected break-even contribution rates from this report with those shown in the report on the previous actuarial review. Results are shown for the years for which results were given in the report on the previous review.

**TABLE 7: Comparison of results in this report with those from the report on the previous actuarial review - break-even contribution rates (%)**

| | 2002 | 2007 | 2017 | 2027 | 2037 | 2047 | 2057 |
|---|---|---|---|---|---|---|---|
| **Net nil migration** | | | | | | | |
| **Last review** | **8.7** | **9.4** | **11.7** | **14.5** | **17.0** | **15.6** | **15.4** |
| Actual 2000 position | -0.3 | -0.3 | -0.4 | -0.5 | -0.6 | -0.5 | -0.5 |
| Population projection | -0.1 | -0.1 | 0.1 | 0.4 | 1.0 | 1.2 | 1.1 |
| Other changes | 0.3 | 0.3 | 0.2 | 0.5 | 0.5 | 0.3 | 0.2 |
| **This review** | **8.7** | **9.3** | **11.5** | **15.0** | **18.0** | **16.6** | **16.2** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Net immigration of 200 a year** | | | | | | | |
| **Last review** | **8.6** | **9.1** | **10.8** | **12.7** | **14.4** | **13.2** | **13.3** |
| Actual 2000 position | -0.3 | -0.3 | -0.3 | -0.4 | -0.4 | -0.4 | -0.4 |
| Population projection | -0.1 | -0.1 | 0.1 | 0.5 | 1.1 | 0.6 | 0.4 |
| Other changes | 0.3 | 0.4 | 0.3 | 0.7 | 0.3 | 0.4 | 0.5 |
| **This review** | **8.6** | **9.1** | **10.9** | **13.6** | **15.4** | **13.9** | **13.9** |

(1) Figures may not sum to totals shown due to rounding.

5.6 In Table 7, the changes between 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. The required contribution rates decrease by around 0.3 per cent initially, as the experience of the scheme over the review period has been 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 1.1 per cent to the required contribution rate by 2057 assuming zero future net migration, and of around 0.4 per cent assuming immigration of 200 a year. Various other changes which have been made to the methods and assumptions underlying the projections result in an increase of around 0.2 per cent to the required contribution rate by 2057 assuming zero future net migration, and of around 0.5 per cent assuming immigration of 200 a year.

5.7 In particular, the assumptions underlying the projected expenditure on old age pensions have been reviewed since the report on the previous actuarial review. For males, the ultimate pension cost per person in the population assumed for this review, before allowing for the effects of the introduction of the early retirement option, is the same as that assumed for the previous review. This is a result of two different changes working in opposite directions. As set out in paragraph 4.12, it has been assumed that the pension cost per person in the population increases in the future, because of an assumed increase in the likelihood of claims of old age pensions from non-residents. The extent to which this occurs has been reduced since the last review, following analysis of data on the level of claims of old age pensions in the recent past. This assumption will continue to be reviewed in the future, taking into account future data on claims. Secondly, the legislative changes to contribution conditions and increased provision for contribution credits result in an increase in the pension cost per person in the population. The assumed pension cost per person in the population for females has been reviewed in a similar way to that for males.

5.8 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 2035 assuming zero future net migration, and by 2047 assuming future net immigration of 200 a year. The corresponding figures in this report are 2035 and 2042 respectively. The reasons for the change in the estimated time before the Funds are extinguished are similar to the reasons for the increases in the projected break-even contribution rates discussed above. In addition, the investment performance of the Funds over the review period, and hence the combined balance in the Funds at the valuation date, also affects the estimated time at which the Funds are extinguished.

**APPENDIX A**

## SUMMARY OF CONTRIBUTIONS AND BENEFITS

A.1 This Appendix summarises the principal provisions regarding the contributions and benefits in the Social Security (Jersey) Law 1974 ("the 1974 Law") on which the estimates for future years in this review are based. It concentrates on those aspects of contribution liability and benefit entitlement that are significant in financial terms, and on changes which have been introduced since the last review.

A.2 For people retiring before April 2001, in order to receive an old age pension at the full rate, the pensioner must have a life average contribution factor (LACF) of a required level. For those already insured before the 1974 Law came into effect, this level is 0.94. For those entering the scheme after this, the level is 0.96. For those with a lower LACF, the benefit is reduced pro rata, subject to a minimum LACF of 0.10 in order to be entitled to an old age pension. The LACF is calculated as the ratio of the number of contributions paid or credited to the number which could have been made between school leaving age and pension age. Pension age for all men is 65. For women it is 65 for those entering the scheme after the 1974 Law came into force, but those entering before that date retain the right to claim a pension from age 60. Married women can claim a pension of 66 per cent of that payable to their husbands if this is more than the pension they have earned on their own contributions, and widows over pension age can claim a pension of the same amount as that payable to their late husbands.

A.3 For people retiring from April 2001 onwards, the qualifying conditions for an old age pension have changed, with the LACF being calculated as the ratio of the number of contributions paid or credited to the number which could have been made over a 45 year period between school leaving age and pension age. An LACF of 1.00 is required for a full pension. For those with a lower LACF, the benefit is reduced pro rata, again subject to a minimum LACF of 0.10. From April 2001, 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 per cent 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.

A.4 There were three benefits paid to people widowed prior to April 2001. Widow's allowance of 1.2 times the standard rate is paid for the first 12 months after a woman has been widowed. After that a widow's pension is paid, the amount being dependent on the contribution record of the deceased husband. The standard rate is adjusted according to the LACF in the same way as for old age pension, with the LACF calculated using the date of death instead of the pension age. Widowed father's allowance is paid to widowers with children under the age of 16. The amount of this benefit is dependent on the contribution record of the deceased wife. For people widowed in April 2001 or afterwards, there are two benefits, survivor's allowance and survivor's pension. These benefits correspond to widow's allowance and widow's pension as described above, but are paid to both widows and widowers. These benefits are only paid until the beneficiary reaches pension age.

A.5 There are two groups of pensions which are paid from the Fund but which are not included in paragraph A.2. Social assurance pensions are the remaining pensions paid under a previous scheme. Non-contributory pensions are pensions paid to those born before 10th September 1896 and to their wives and widows. These people would have been too old to contribute under the Social Security Scheme.

A.6 If the contribution conditions are met, an incapacity benefit is paid when an insured person is sick. Sickness benefit is paid for up to one year. If the person is still unfit for work, they can then claim invalidity benefit until they are fit to return to work or until they reach pension age. The contribution conditions are that the person must have paid at least 13 weeks' contributions for sickness benefit and 26 weeks' contributions for invalidity benefit and that they must have paid or been credited with contributions throughout the calendar quarter six months before the date of claim in order to receive the standard rate of benefit.

A.7 Accident benefit is paid to an insured person on incapacity following an accident. There are two types of accident benefit -

(i) injury benefit, which is similar to sickness benefit;

(ii) disablement benefit, which is payable after injury benefit ceases in cases of continuing disablement. The benefit is payable even if the insured person can return to work and the amount depends on the degree of disablement. Where the degree of disablement is 15 per cent or lower, the benefit is paid in a lump sum, rather than as regular benefit payments.

The contribution conditions are similar to those for sickness and invalidity benefits, but in addition a person can qualify if a contribution was due in the month of the accident.

A.8 Legislation to reform incapacity benefit and accident benefit, creating a revised incapacity benefit, has been passed by the States. Under these reforms, the benefits payable are short-term incapacity allowance, long-term incapacity allowance and incapacity pension. Broadly, short-term incapacity allowance corresponds to current sickness benefit and injury benefit. Long-term incapacity allowance corresponds to current disablement benefit, except that where the degree of disablement is 15 per cent or lower, the benefit will be paid as regular benefit payments rather than as a lump sum. Cases which would currently be awarded invalidity benefit will also be awarded long-term incapacity allowance, and will receive a benefit payment which depends on the degree of disablement, unless they are likely to be permanently incapable of work, in which case they will receive incapacity pension. For this report, it has been assumed that these reforms will apply for awards of benefit from October 2002 onwards.

A.9 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 prior to that in which the birth is expected. 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 sickness benefit.

A.10 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.

A.11 Table A1 shows the weekly rates of benefit in force between 1998 and 2000. During this period, benefit rates have been increased annually in line with earnings growth.

**TABLE A1: Weekly benefit rates from 1 October (£ per week)**

| Year from 1st October | Standard rate - no dependants[1] | Standard rate - with dependants[1] | Married woman's old age pension | Widow's allowance |
|---|---|---|---|---|
| 1997 | 98.91 | 164.22 | 65.31 | 118.65 |
| 1998 | 105.21 | 174.65 | 69.44 | 126.28 |
| 1999 | 114.17 | 189.56 | 75.39 | 136.99 |
| 2000 | 119.49 | 198.38 | 78.89 | 143.36 |

[1] The standard rate is paid for old age pension, widow's pension, widowed father's allowance, sickness benefit, invalidity benefit, injury benefit and maternity allowance. For disablement benefit, a proportion of the standard rate is payable depending on the degree of disability.

A.12 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. Some married women can "opt out" of paying full contributions, but this option is only available to women who were married before 1st April 2001. Employees and employers pay Class 1 contributions, and the self-employed and non-employed people pay Class 2 contributions. The rate of Class 1 contributions is the sum of the employee and employer Class 1 contribution rates.

A.13 Table A2 shows the earnings limits and contribution rates which applied between 1998 and 2000. 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. If earnings are above the upper limit, contributions are based on the amount of the upper limit only.

A.14 During the period from 1998 to 2000, the total contribution rate increased each year by 0.5 per cent. The contribution rate was increased by a further 0.5 per cent in January 2001 and by 0.5 per cent in January 2002, after which it will remain constant. During the period from 1998 to 2000, the lower threshold was increased in line with earnings. The upper limit was increased each year by £50 per month in addition to increases in line with earnings, and this continued in 2001. From 2002, the upper limit will be increased in line with earnings.

**TABLE A2: Earnings limits and contribution rates[1]**

| Year | Monthly threshold (£) | Monthly upper limit (£) | Employee rate (%) | Employer rate (%) | Total rate [2] (%) |
|---|---|---|---|---|---|
| 1998 | 428 | 1892 | 3.85 | 4.65 | 8.50 |
| 1999 | 455 | 2064 | 4.20 | 4.80 | 9.00 |
| 2000 | 494 | 2272 | 4.55 | 4.95 | 9.50 |

[1] The contribution rates exclude contributions in respect of the Health Scheme.
[2] The Class 2 contribution rate is the same as the total employee and employer rate.

**APPENDIX B:**

## FUND LEGISLATION AND ACCOUNTS SINCE 1 JANUARY 1998

B.1 The Social Security (Amendment No. 14) (Jersey) Law 2000 made a number of significant changes to the Social Security Scheme, principally -

(i) Provision for early retirement, with the option to claim an old age pension between the ages of 63 and 65, if the relevant qualifying conditions are satisfied, subject to the amount of old age pension being reduced by 0.58 per cent for each month between the month of claiming the old age pension and the month of reaching age 65.

(ii) The replacement of sickness benefit, invalidity benefit, injury benefit and disablement benefit by a reformed incapacity benefit, which consists of short-term incapacity allowance, long-term incapacity allowance and incapacity pension.

(iii) The replacement of widow's benefit and widowed father's allowance by survivor's benefit, consisting of survivor's allowance and survivor's pension. Widowers and widows are entitled to the same benefits.

(iv) The abolition of the option for married women to be exempt from paying full contributions.

(v) Revisions to the qualifying conditions for old age pension, with a reduction in the number of years of contributions required to become entitled to a full pension to 45.

Further details of these changes are included in Appendix A. The Social Security (Amendment No. 14) (Jersey) Law 2000 (Appointed Day) Act 2001 specified that these changes would come into force from 1st April 2001, except for the reform of accident and incapacity benefits (labelled (ii) above). For the purposes of this review, it has been assumed that the reform of accident and incapacity benefits will come into force from 1st October 2002.

B.2 The Social Security (Contributions) (Amendment No. 6) (Jersey) Order 2001 increased the provision of credits for students and for parents who are not working as they are caring for a young child. These arrangements came into force on 1st April 2001. Although this Order was made after the effective period of this review, the effects of these changes have been taken into account in the projections.

B.3 The changes to contribution rates which were specified in the Social Security (No. 3) (Jersey) Regulations 1997 continued to be applied throughout the period since the last review. Further details of these changes are given in Appendix A.

B.4 The transactions of the Social Security and Social Security (Reserve) Funds in the period 1st January 1998 to 31st December 2000 are summarised in Table B1, whilst a breakdown of expenditure by benefit is shown in Table B2.

**TABLE B1: Summary of income and expenditure and balances of the Jersey Social Security and Social Security (Reserve) Funds in the period 1st January 1998 to 31st December 2000**

| *£ thousand* | 1998 | 1999 | 2000 |
|---|---|---|---|
| **Income** | | | |
| Contribution income | 63,013 | 73,119 | 81,124 |
| States contribution | 25,126 | 30,092 | 36,161 |
| Investment return(1) | 31,810 | 60,752 | -7,376 |
| Other income | 58 | 45 | 40 |
| **Total income** | **120,006** | **164,009** | **109,949** |
| **Expenditure** | | | |
| Benefit expenditure | 84,062 | 91,427 | 100,631 |
| Administration expenditure | 2,671 | 3,001 | 3,282 |
| **Total expenditure** | **86,734** | **94,428** | **103,913** |
| **Combined Funds**(2) | | | |
| Balance at start of year(3) | 243,838 | 277,110 | 346,692 |
| Excess of income over expenditure | 33,272 | 69,581 | 6,036 |
| **Balance at end of year** | **277,110** | **346,691** | **352,728** |
| Of which: | | | |
| Social Security Fund | 19,272 | 15,808 | 16,530 |
| Social Security (Reserve) Fund | 257,838 | 330,884 | 336,198 |
| Mean of Funds at beginning and end of year | 260,474 | 311,901 | 349,710 |
| **Mean of Funds as multiple of total expenditure** | **3.0** | **3.3** | **3.4** |
| **Rate of investment return** | **13%** | **22%** | **-2%** |

(1) Net of associated expenses.

(2) Investments valued at market value.

(3) The balance of the Funds at 1st January 1998 allows for the prior year adjustment reflecting the change in accounting policy with regard to dividends.

(4) Figures may not sum to totals shown due to rounding.

B.5 Contribution income (including the States supplement) has exceeded expenditure in all years since the last review, largely because of the increases to contribution rates and to the upper earnings limit. In 1998 and 1999, there was also a significant level of investment return. In 2000, the rate of investment return was negative, reflecting poor returns from investment markets generally. Despite this, the average annual rate of investment return over the three year period since the last review was over 10 per cent, and the combined Funds grew from 2.78 times annual expenditure in 1996-97 to 3.37 times annual expenditure in 2000, considering the mean balance during the year in each case (the 1996-97 figure having been adjusted to reflect the 15 month accounting period).

**TABLE B2: Expenditure on social insurance benefits in the period 1 January 1998 to 31 December 2000**

| *£ thousand* | 1998 | 1999 | 2000 |
|---|---|---|---|
| Old age pensions | 58,350 | 64,038 | 69,923 |
| Widows' benefits | 2,577 | 2,844 | 3,106 |
| Social assurance pensions | 27 | 25 | 22 |
| Non-contributory pensions | 32 | 26 | 22 |
| Sickness benefit | 7,452 | 7,832 | 9,043 |
| Invalidity benefit | 10,161 | 10,884 | 12,172 |
| Injury benefit | 1,377 | 1,351 | 1,495 |
| Disablement benefit | 2,168 | 2,473 | 2,917 |

| | | | |
|---|---|---|---|
| Maternity allowance | 1,293 | 1,317 | 1,279 |
| Maternity grant | 344 | 345 | 324 |
| Death grant | 282 | 291 | 328 |
| **Total benefit expenditure**[1] | **84,062** | **91,427** | **100,631** |

[1] As shown in Table B1.

**APPENDIX C**

## POPULATION PROJECTIONS

**TABLE C1: The projected population of Jersey from 2000 to 2060 assuming net zero future migration and the fertility and mortality assumptions described in Section 2**

| | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 |
|---|---|---|---|---|---|---|---|---|
| **Males** | | | | | | | | |
| 0-9 | 5,022 | 4,755 | 4,271 | 3,732 | 3,829 | 3,365 | 2,978 | 2,891 |
| 10-19 | 4,970 | 5,414 | 5,397 | 4,566 | 4,027 | 4,124 | 3,660 | 3,273 |
| 20-29 | 5,797 | 5,561 | 6,270 | 6,758 | 5,931 | 5,392 | 5,489 | 5,025 |
| 30-39 | 7,710 | 6,523 | 4,830 | 5,156 | 5,628 | 4,831 | 4,292 | 4,389 |
| 40-49 | 6,569 | 7,088 | 7,228 | 4,371 | 4,694 | 5,168 | 4,381 | 3,847 |
| 50-59 | 5,382 | 6,028 | 6,186 | 6,874 | 4,111 | 4,451 | 4,910 | 4,137 |
| 60-69 | 3,893 | 4,184 | 4,868 | 5,659 | 6,330 | 3,769 | 4,114 | 4,542 |
| 70-79 | 2,393 | 2,622 | 3,055 | 3,961 | 4,657 | 5,246 | 3,102 | 3,451 |
| 80 and over | 1,035 | 1,163 | 1,342 | 1,964 | 2,755 | 3,403 | 3,885 | 2,683 |
| **Total** | **42,770** | **43,338** | **43,447** | **43,040** | **41,960** | **39,747** | **36,810** | **34,238** |
| **Females** | | | | | | | | |
| 0-9 | 4,712 | 4,471 | 4,012 | 3,482 | 3,573 | 3,137 | 2,768 | 2,688 |
| 10-19 | 4,874 | 5,161 | 5,154 | 4,382 | 3,852 | 3,943 | 3,507 | 3,138 |
| 20-29 | 6,372 | 5,887 | 6,179 | 6,494 | 5,722 | 5,192 | 5,283 | 4,847 |
| 30-39 | 7,841 | 6,882 | 5,263 | 4,954 | 5,269 | 4,497 | 3,967 | 4,058 |
| 40-49 | 6,661 | 7,258 | 7,463 | 4,867 | 4,570 | 4,878 | 4,125 | 3,611 |
| 50-59 | 5,369 | 6,046 | 6,356 | 7,166 | 4,623 | 4,341 | 4,646 | 3,909 |
| 60-69 | 3,972 | 4,308 | 5,051 | 5,999 | 6,789 | 4,375 | 4,122 | 4,414 |
| 70-79 | 3,023 | 3,091 | 3,406 | 4,424 | 5,296 | 6,016 | 3,864 | 3,679 |
| 80 and over | 2,240 | 2,271 | 2,327 | 2,822 | 3,861 | 4,856 | 5,645 | 4,308 |
| **Total** | **45,064** | **45,374** | **45,211** | **44,590** | **43,556** | **41,234** | **37,926** | **34,651** |
| **Persons** | | | | | | | | |
| 0-9 | 9,734 | 9,226 | 8,283 | 7,214 | 7,401 | 6,502 | 5,746 | 5,579 |
| 10-19 | 9,843 | 10,576 | 10,551 | 8,948 | 7,879 | 8,066 | 7,167 | 6,411 |
| 20-29 | 12,169 | 11,448 | 12,449 | 13,252 | 11,653 | 10,584 | 10,771 | 9,872 |
| 30-39 | 15,551 | 13,405 | 10,093 | 10,111 | 10,898 | 9,328 | 8,259 | 8,446 |
| 40-49 | 13,230 | 14,346 | 14,691 | 9,238 | 9,264 | 10,046 | 8,506 | 7,458 |
| 50-59 | 10,751 | 12,074 | 12,542 | 14,040 | 8,734 | 8,792 | 9,557 | 8,046 |
| 60-69 | 7,865 | 8,492 | 9,919 | 11,658 | 13,119 | 8,144 | 8,236 | 8,957 |
| 70-79 | 5,416 | 5,712 | 6,461 | 8,385 | 9,953 | 11,262 | 6,966 | 7,130 |
| 80 and over | 3,275 | 3,434 | 3,669 | 4,786 | 6,616 | 8,259 | 9,530 | 6,991 |
| **Total** | **87,834** | **88,712** | **88,658** | **87,630** | **85,516** | **80,981** | **74,735** | **68,889** |

**TABLE C1** ***cont'd.***

| | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 |
|---|---|---|---|---|---|---|---|---|
| **Persons** | | | | | | | | |
| 0-15 | 15,566 | 15,432 | 14,163 | 12,010 | 11,850 | 10,991 | 9,599 | 9,081 |
| 16-64 (W) | 59,985 | 60,068 | 60,172 | 57,001 | 50,542 | 45,857 | 44,870 | 41,186 |
| 65 and over (P) | 12,283 | 13,213 | 14,323 | 18,619 | 23,124 | 24,133 | 20,267 | 18,622 |
| **Total** | **87,834** | **88,712** | **88,658** | **87,630** | **85,516** | **80,981** | **74,735** | **68,889** |
| W/P | 4.9 | 4.5 | 4.2 | 3.1 | 2.2 | 1.9 | 2.2 | 2.2 |

(1) The numbers shown are the average population during the calendar year including seasonal and transient workers.

**TABLE C2: The projected population of Jersey from 2000 to 2060 assuming net future immigration of 200 a year and the fertility and mortality assumptions described in Section 2**

| | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 |
|---|---|---|---|---|---|---|---|---|
| **ales** | | | | | | | | |
| ·9 | 5,022 | 4,774 | 4,390 | 4,296 | 4,611 | 4,262 | 4,129 | 4,243 |
| )-19 | 4,970 | 5,484 | 5,467 | 4,755 | 4,661 | 4,976 | 4,627 | 4,494 |
| )-29 | 5,797 | 5,916 | 7,038 | 7,621 | 6,924 | 6,836 | 7,150 | 6,802 |
| )-39 | 7,710 | 6,523 | 4,913 | 5,994 | 6,566 | 5,915 | 5,847 | 6,135 |
| )-49 | 6,569 | 7,088 | 7,228 | 4,454 | 5,513 | 6,090 | 5,454 | 5,383 |
| )-59 | 5,382 | 6,028 | 6,186 | 6,874 | 4,193 | 5,256 | 5,817 | 5,194 |
| )-69 | 3,893 | 4,184 | 4,868 | 5,659 | 6,330 | 3,850 | 4,865 | 5,382 |
| )-79 | 2,393 | 2,622 | 3,055 | 3,961 | 4,657 | 5,246 | 3,173 | 4,086 |
| ) and over | 1,035 | 1,163 | 1,342 | 1,964 | 2,755 | 3,403 | 3,885 | 2,733 |
| **otal** | **42,770** | **43,782** | **44,486** | **45,575** | **46,209** | **45,832** | **44,945** | **44,450** |
| **males** | | | | | | | | |
| ·9 | 4,712 | 4,490 | 4,126 | 3,994 | 4,295 | 3,977 | 3,849 | 3,956 |
| )-19 | 4,874 | 5,231 | 5,224 | 4,566 | 4,434 | 4,735 | 4,417 | 4,289 |
| )-29 | 6,372 | 6,242 | 6,952 | 7,374 | 6,716 | 6,584 | 6,885 | 6,567 |
| )-39 | 7,841 | 6,882 | 5,346 | 5,847 | 6,268 | 5,611 | 5,479 | 5,780 |
| )-49 | 6,661 | 7,258 | 7,463 | 4,949 | 5,442 | 5,859 | 5,215 | 5,090 |
| )-59 | 5,369 | 6,046 | 6,356 | 7,166 | 4,703 | 5,205 | 5,613 | 4,979 |
| )-69 | 3,972 | 4,308 | 5,051 | 5,999 | 6,789 | 4,452 | 4,951 | 5,337 |
| )-79 | 3,023 | 3,091 | 3,406 | 4,424 | 5,296 | 6,016 | 3,935 | 4,418 |
| ) and over | 2,240 | 2,271 | 2,327 | 2,822 | 3,861 | 4,856 | 5,645 | 4,367 |
| **otal** | **45,064** | **45,818** | **46,250** | **47,140** | **47,804** | **47,293** | **45,988** | **44,782** |
| **rsons** | | | | | | | | |
| ·9 | 9,734 | 9,263 | 8,515 | 8,290 | 8,906 | 8,238 | 7,978 | 8,199 |
| )-19 | 9,843 | 10,716 | 10,691 | 9,320 | 9,095 | 9,711 | 9,043 | 8,783 |
| )-29 | 12,169 | 12,158 | 13,990 | 14,995 | 13,640 | 13,420 | 14,035 | 13,368 |
| )-39 | 15,551 | 13,405 | 10,258 | 11,841 | 12,833 | 11,526 | 11,326 | 11,915 |
| )-49 | 13,230 | 14,346 | 14,691 | 9,403 | 10,955 | 11,948 | 10,669 | 10,472 |
| )-59 | 10,751 | 12,074 | 12,542 | 14,040 | 8,896 | 10,460 | 11,430 | 10,173 |
| )-69 | 7,865 | 8,492 | 9,919 | 11,658 | 13,119 | 8,301 | 9,816 | 10,719 |
| )-79 | 5,416 | 5,712 | 6,461 | 8,385 | 9,953 | 11,262 | 7,108 | 8,504 |
| ) and over | 3,275 | 3,434 | 3,669 | 4,786 | 6,616 | 8,259 | 9,530 | 7,100 |
| **otal** | **87,834** | **89,600** | **90,736** | **92,716** | **94,013** | **93,125** | **90,933** | **89,231** |
| **rsons** | | | | | | | | |
| ·15 | 15,566 | 15,469 | 14,395 | 13,298 | 14,099 | 13,655 | 12,918 | 13,100 |
| 5-64 (W) | 59,985 | 60,918 | 62,018 | 60,799 | 56,790 | 55,338 | 56,920 | 55,161 |
| 5 and over (P) | 12,283 | 13,213 | 14,323 | 18,619 | 23,124 | 24,133 | 21,096 | 20,970 |
| **otal** | **87,834** | **89,600** | **90,736** | **92,716** | **94,013** | **93,125** | **90,933** | **89,231** |
| 7/P | 4.9 | 4.6 | 4.3 | 3.3 | 2.5 | 2.3 | 2.7 | 2.6 |

(1) The numbers shown are the average population during the calendar year including seasonal and transient workers.

**TABLE C3: Short term migrants included in the Jersey population**

| Age | Number of short term migrants at March 2001 | | Average yearly number of short term migrants in the population | |
|---|---|---|---|---|
| | Male | Female | Male | Female |
| Under 15 | 50 | 50 | 50 | 50 |
| 15-19 | 165 | 140 | 275 | 350 |
| 20-24 | 760 | 775 | 950 | 1,000 |
| 25-29 | 700 | 650 | 725 | 725 |
| 30-34 | 335 | 300 | 375 | 325 |
| 35-39 | 175 | 160 | 200 | 175 |
| 40-44 | 110 | 115 | 125 | 125 |
| 45-49 | 5 | 25 | 50 | 25 |
| 50-54 | 5 | 15 | 25 | 15 |
| 55-59 | 5 | 0 | 25 | 10 |
| **Total** | **2,310** | **2,230** | **2,800** | **2,800** |

**APPENDIX D**

## THE TECHNICAL ASSUMPTIONS MADE FOR THE PURPOSES OF THE FINANCIAL ESTIMATES

### Population projections

D.1 Future expenditure has been calculated on the basis of two different population projections with differing migration assumptions (using the 2001 census as the starting point).

(i) Net migration of zero for all future years after March 2001.

(ii) Net immigration of 200 a year at young working ages for all future years after March 2001.

These migration assumptions refer to net migration of permanent residents only. In addition to such migration of permanent residents, it is assumed that female short-term migrants may give birth while they are resident in Jersey, with the children leaving Jersey along with the parents. Section 2 contains further details on this, and on the method and assumptions used in the population projections.

### Contribution income

D.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 categories 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.

D.3 The analysis showed that since 1993 there has been a gradual increase in the proportion of males in the population paying Class 1 contributions, for most age groups. In the latest year, 2000, there is some evidence that the proportions have levelled out, with the proportions starting to decrease for some age groups. We have therefore assumed that the gradual increase observed since 1993 is at least partly related to short-term economic conditions, rather than being evidence of a structural shift in the workforce. We have used the average proportions over the period from 1991 to 2000 as the basis for the future proportions of the population paying Class 1 contributions. The proportion of males paying Class 2 contributions has been decreasing gradually since 1993. This may be a consequence of the observed increase in the proportion paying Class 1 contributions. As a result, for consistency with the basis used for Class 1, the future proportions of the population paying Class 2 contributions were also based on the average proportions over the period from 1991 to 2000.

D.4 The proportion of females in the population paying Class 1 contributions has been increasing in the recent past. The increase observed over the past three years is in line with that projected at the last review. The assumption at the last review was that the proportions paying Class 1 contributions would remain constant from 2001. To be consistent with that assumption, and to reflect the fact that the increase observed in the recent past may partly be a result of short-term economic conditions, we have used the average proportions over the last three years as the basis for the future proportions of the population paying Class 1 contributions.

D.5 The proportion of the female population who are married women optants has been falling in the recent past, and legislation to abolish the option for women who marry after 1st April 2001 has been passed by the States. For existing optants we have assumed that the proportions will remain the same as each cohort ages up to age 50-54. After that we have assumed that the proportion for each cohort will decline at the same rate as in recent years. The number of optants has been subtracted from the total number of female Class 1 contributors less the assumed proportion of single female exempt contributors to obtain the number of full contributors.

D.6 For self-employed females there is insufficient data to observe any trends. Thus we have assumed that the age-specific proportions of self-employed females contributing would remain constant at their average levels over the past ten years.

D.7 Future contribution income was projected by combining the future numbers of contributors, estimated in line with the methods described above, with age and contribution class specific earnings distributions from recent contributions data. Allowance was made for the effects of contribution limits, and for the increases to contribution rates in 2001 and 2002.

### Old Age Pension

D.8 The projected cost of old age 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, an old age pension, and also the average proportion of the standard rate of benefit which will be paid. For females, separate factors are applied in respect of females claiming an old age pension on the basis of their husband's contribution record, females claiming an old age pension on the basis of their own contribution record, and widows claiming an old age pension on the basis of their deceased husband's contribution record.

D.9 For males, we have assumed that the pension cost will rise to the equivalent of 105 per cent of the cost of paying pensions at the full rate to Jersey residents alone. This assumption is higher than the current figure of around 90 per cent. The current level of expenditure is less than the amount that may be expected if everyone who is entitled to a pension were to claim one. It has therefore been assumed that between 2005 and 2030 there is a gradual increase each year in the likelihood of claims of old age pensions from non-residents. This increase, together with the estimated effects of the legislative changes to contribution conditions and increased provision for contribution credits, results in an increase in the pension cost per person in the population to 105 per cent. Additional allowance is made for benefit increases in respect of dependants, principally at ages 65-69. A further adjustment was made to the costs in order to reflect the introduction of provision for early retirement between the ages of 63 and 65. The introduction of this option increases pension costs in the shorter term, before the effects of the option stabilise.

D.10 For females, we have assumed that the ultimate pension cost per person in the population, as a proportion of the standard rate of benefit, will be slightly above that for males, reflecting the fact that females can be entitled to an old age pension from their own, or from their husband's or deceased husband's, contribution records. The effects of the abolition of the married women's option had been allowed for in the last review. The projected future costs were allocated between females who receive pensions based on their own contribution record, those who receive pensions based on their husband's contribution record and those who receive pensions based on their deceased husband's contribution record. This was done on the basis of the current position, while also taking into account expected future changes that may result, for example, from the abolition of the married women's option. The appropriate standard rates of benefit were then applied in each case. As with males, the effects of the introduction of provision for early retirement were allowed for.

**Survivor's Benefit**

D.11 Age-specific future awards of widow's benefit, widowed father's allowance and survivor's benefit were projected by adjusting the average number of awards over the past 5 years in line with changes in the projected number of deaths of married people (considering deaths of males for benefits to widows and vice versa) from the population projection. 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 from recent data. Allowance was made for the cessation of widowed father's allowance and the extension of benefits to widowers for awards after April 2001. For future awards of survivor's benefit to widowers, award and termination rates were estimated with reference to current parameters for widowed father's allowance and widow's benefit, making suitable adjustments where necessary.

D.12 The projected costs of widow's benefit, widowed father's allowance and survivor's benefit 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 widow's allowance and survivor's allowance being paid at a higher rate than widow's pension and survivor's pension.

**Accident and incapacity benefits**

D.13 Expenditure on sickness benefit and injury benefit were projected by considering age and sex specific numbers of days of benefit paid per contributor since 1994. For sickness benefit, the number of days of benefit paid per contributor has been reasonably stable, and it was assumed that the future level will be equal to the average since 1994. For injury benefit, the number of days of benefit per contributor has been declining since 1994, although there is some evidence that this trend is levelling off, or is possibly starting to reverse, in the latest year. As a result, the future number of days of benefit paid per contributor was also assumed to be equal to the average since 1994. The number of days of benefit paid in future years was obtained by multiplying these factors by the projected number of contributors.

D.14 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. Awards from October 2002 onwards were assumed to receive short-term incapacity allowance, with no changes to the numbers of days of benefit paid or the average amounts paid.

D.15 Age and sex specific future awards of invalidity benefit and disablement benefit were projected by adjusting the average number of awards in the recent past in line with changes in the future number of contributors. 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 from recent data.

D.16 The projected costs of invalidity benefit and disablement benefit 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. Allowance was made for dependants' increases, based on the average proportions of beneficiaries entitled to such increases from recent data. For disablement benefit, the cost of benefits paid in a lump sum form, where the degree of disability is 15 per cent or below, was projected separately.

D.17 Awards of invalidity benefit and disablement benefit from October 2002 were assumed to receive long-term incapacity allowance or incapacity pension. All awards that would currently be entitled to disablement benefit were assumed to be awarded long-term incapacity allowance after October 2002. Allowance was made for cases where the degree of disability is 15 per cent or below to receive regular benefit payments rather than a single lump sum. 70 per cent of awards that would currently be entitled to invalidity benefit were assumed to be entitled to long-term incapacity allowance, with the remainder being entitled to incapacity pension. For the cases which will receive long-term incapacity allowance, the average rate of benefit was reduced by 25 per cent to reflect the fact that the benefit paid for long-term incapacity allowance will reflect the degree of disability. These assumptions should be reviewed following receipt of data on these benefits.

**Maternity benefits**

D.18 The cost of maternity allowance per birth, as a multiple of the benefit rate, has been reasonably constant since 1996-97, although the experience in earlier years was more erratic. The projected cost of maternity allowance was therefore calculated by multiplying the average cost per birth, as a multiple of the benefit rate, since 1996-97 by the full benefit rate and by the projected number of births from the population projection. For maternity grants, the average size of grant and the ratio of grants to births have been reasonably constant since 1996-97, except for a small reduction in the ratio of grants to births in the latest year. The basis used for future years for each of these factors was the average of the experience since 1996-97.

**Death Grant**

D.19 The cost of death grants per death, as a proportion of the full benefit rate, has fluctuated around a constant rate since 1996-97. Thus, the future expenditure on death grants was calculated by multiplying the average cost per death, as a proportion of the full benefit rate, since 1996-97 by the full benefit rate and by the projected number of deaths from the population projection.

**Social Assurance Pensions and Non-Contributory Pensions**

D.20 Those receiving Social Assurance Pensions are a closed group, and the level of expenditure on these pensions is relatively low compared with other expenditure. Therefore, the future costs were projected by simply running off the current expenditure, at a similar rate to that assumed at the last review.

D.21 Non-contributory pensions to those persons born before 10th September 1896, or their wives or widows, were paid from the fund for the first time in 1993-94. Again, the level of expenditure on these pensions is relatively low, and the future costs were projected by simply running off the current expenditure, at a similar rate to that assumed at the last review.

**Administration and general expenses**

D.22 Costs of administration were found to be strongly correlated to the level of benefit expenditure over the period from 1983 to 2000. We have assumed that administration costs will increase in future in line with total benefit expenditure.

**APPENDIX E**

## ESTIMATED EXPENDITURE

### TABLE E1: The estimated future expenditure on benefits and administration assuming net zero future migration

| *housand* | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 |
|---|---|---|---|---|---|---|---|---|
| *00 earnings terms* | | | | | | | | |
| **d age** | | | | | | | | |
| **nsion** | **69,923** | **75,883** | **83,176** | **108,953** | **139,177** | **147,194** | **125,777** | **116,767** |
| idow's | | | | | | | | |
| nefit | 3,055 | 1,669 | 872 | 179 | 23 | 0 | 0 | 0 |
| idowed | | | | | | | | |
| her's | | | | | | | | |
| owance | 51 | 26 | 10 | 1 | 0 | 0 | 0 | 0 |
| rvivor's | | | | | | | | |
| nefit | 0 | 1,503 | 2,432 | 2,590 | 1,981 | 1,292 | 1,361 | 1,211 |
| **tal** | | | | | | | | |
| **rvivors** | **3,106** | **3,198** | **3,314** | **2,770** | **2,004** | **1,292** | **1,361** | **1,211** |
| kness | | | | | | | | |
| nefit | 9,043 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| alidity | | | | | | | | |
| nefit | 12,172 | 7,111 | 2,473 | 225 | 12 | 0 | 0 | 0 |
| ury benefit | 1,495 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| sablement | | | | | | | | |
| nefit | 2,917 | 1,784 | 1,216 | 566 | 218 | 61 | 10 | 1 |
| ort term | | | | | | | | |
| apacity | | | | | | | | |
| owance | 0 | 11,050 | 11,146 | 11,264 | 10,417 | 9,386 | 9,179 | 8,592 |
| ng term | | | | | | | | |
| apacity | | | | | | | | |
| owance | 0 | 4,308 | 8,417 | 11,129 | 10,561 | 8,935 | 9,240 | 8,649 |
| apacity | | | | | | | | |
| nsion | 0 | 1,901 | 3,615 | 4,663 | 4,390 | 3,614 | 3,779 | 3,552 |
| **tal** | | | | | | | | |
| **apacity** | **25,627** | **26,153** | **26,866** | **27,847** | **25,598** | **21,996** | **22,207** | **20,794** |
| ternity | | | | | | | | |
| owance | 1,279 | 1,204 | 1,072 | 1,094 | 1,045 | 900 | 863 | 826 |
| ternity | | | | | | | | |
| nt | 324 | 320 | 285 | 290 | 277 | 239 | 229 | 219 |
| **tal** | | | | | | | | |
| **ternity** | **1,603** | **1,524** | **1,356** | **1,384** | **1,322** | **1,138** | **1,092** | **1,045** |
| ath grant | 328 | 318 | 322 | 356 | 419 | 476 | 487 | 429 |
| n- | | | | | | | | |
| ntributory | | | | | | | | |
| nsion | 22 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| cial | | | | | | | | |
| urance | | | | | | | | |
| nsion | 22 | 9 | 2 | 0 | 0 | 0 | 0 | 0 |
| lmin- | | | | | | | | |
| ration | 3,282 | 3,493 | 3,752 | 4,609 | 5,496 | 5,613 | 4,922 | 4,574 |
| **tal** | | | | | | | | |
| **penditure** | **103,913** | **110,586** | **118,788** | **145,919** | **174,016** | **177,709** | **155,846** | **144,820** |

(1) Figures may not sum to totals shown due to rounding.

**TABLE E2: The estimated future expenditure on benefits and administration assuming net future immigration of 200 a year**

| | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 |
|---|---|---|---|---|---|---|---|---|
| ***ıgs terms*** | | | | | | | | |
| | **69,923** | **75,883** | **83,176** | **108,953** | **139,177** | **147,248** | **131,241** | **131,495** |
| | 3,055 | 1,669 | 872 | 179 | 23 | 0 | 0 | 0 |
| | 51 | 26 | 10 | 1 | 0 | 0 | 0 | 0 |
| | 0 | 1,503 | 2,433 | 2,644 | 2,145 | 1,551 | 1,717 | 1,604 |
| | **3,106** | **3,198** | **3,315** | **2,824** | **2,168** | **1,552** | **1,717** | **1,604** |
| | 9,043 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 12,172 | 7,111 | 2,473 | 225 | 12 | 0 | 0 | 0 |
| fit | 1,495 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| t | 2,917 | 1,784 | 1,216 | 566 | 218 | 61 | 10 | 1 |
| | 0 | 11,138 | 11,384 | 11,865 | 11,468 | 11,091 | 11,495 | 11,313 |
| | 0 | 4,322 | 8,478 | 11,388 | 11,172 | 10,249 | 11,242 | 10,983 |
| | 0 | 1,906 | 3,636 | 4,747 | 4,601 | 4,122 | 4,586 | 4,485 |
| | **25,627** | **26,261** | **27,186** | **28,790** | **27,471** | **25,524** | **27,332** | **26,781** |
| | 1,279 | 1,231 | 1,154 | 1,277 | 1,251 | 1,156 | 1,181 | 1,182 |
| | 324 | 327 | 306 | 339 | 332 | 307 | 313 | 314 |
| | **1,603** | **1,558** | **1,460** | **1,616** | **1,583** | **1,463** | **1,494** | **1,496** |
| | 328 | 318 | 323 | 359 | 423 | 481 | 501 | 457 |
| / | 22 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 22 | 9 | 2 | 0 | 0 | 0 | 0 | 0 |
| | 3,282 | 3,497 | 3,766 | 4,649 | 5,571 | 5,749 | 5,293 | 5,278 |
| **e** | **103,913** | **110,733** | **119,228** | **147,191** | **176,392** | **182,016** | **167,579** | **167,112** |

(1) Figures may not sum to totals shown due to rounding.

**APPENDIX F**

## ESTIMATED CONTRIBUTION INCOME

**TABLE F1: The estimated future contribution income on planned contribution rates assuming zero net future migration**(1)

| *£ thousand* | **2000** | **2005** | **2010** | **2020** | **2030** | **2040** | **2050** | **2060** |
|---|---|---|---|---|---|---|---|---|
| ***2000 earnings terms*** | | | | | | | | |
| **Class 1** | | | | | | | | |
| Primary | 33,633 | 37,206 | 37,007 | 36,208 | 33,171 | 30,994 | 29,600 | 27,395 |
| Secondary | 40,119 | 41,091 | 40,280 | 38,338 | 34,621 | 32,061 | 30,641 | 28,406 |
| States supplement | 33,185 | 37,486 | 37,561 | 37,106 | 34,038 | 32,108 | 30,745 | 28,358 |
| **Total** | **106,937** | **115,783** | **114,847** | **111,652** | **101,829** | **95,162** | **90,986** | **84,159** |
| **Class 2** | | | | | | | | |
| Primary | 7,372 | 9,125 | 9,084 | 8,525 | 7,293 | 6,868 | 6,750 | 6,179 |
| States supplement | 2,976 | 3,737 | 3,699 | 3,497 | 3,058 | 2,826 | 2,775 | 2,567 |
| **Total** | **10,348** | **12,863** | **12,783** | **12,022** | **10,351** | **9,694** | **9,524** | **8,745** |
| **All classes** | | | | | | | | |
| Primary | 41,005 | 46,331 | 46,091 | 44,733 | 40,464 | 37,862 | 36,349 | 33,574 |
| Secondary | 40,119 | 41,091 | 40,280 | 38,338 | 34,621 | 32,061 | 30,641 | 28,406 |
| States supplement | 36,161 | 41,223 | 41,260 | 40,603 | 37,096 | 34,934 | 33,519 | 30,924 |
| **Total** | **117,285** | **128,645** | **127,630** | **123,674** | **112,180** | **104,857** | **100,510** | **92,905** |

(1) Allows for the increases to contribution rates in January 2001 and January 2002.
(2) Figures may not sum to totals shown due to rounding.

**TABLE F2: The estimated future contribution income on planned contribution rates assuming net future immigration of 200 a year**[1]

| *and rnings terms* | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 |
|---|---|---|---|---|---|---|---|---|
| y | 33,633 | 37,852 | 38,558 | 39,314 | 37,907 | 37,757 | 37,976 | 37,117 |
| lary | 40,119 | 41,758 | 41,869 | 41,507 | 39,458 | 38,986 | 39,273 | 38,422 |
| nent | 33,185 | 38,230 | 39,225 | 40,294 | 38,925 | 39,159 | 39,401 | 38,400 |
| | **106,937** | **117,841** | **119,651** | **121,116** | **116,290** | **115,903** | **116,650** | **113,939** |
| y | 7,372 | 9,148 | 9,147 | 8,794 | 7,952 | 8,053 | 8,316 | 8,088 |
| nent | 2,976 | 3,741 | 3,724 | 3,621 | 3,336 | 3,310 | 3,430 | 3,362 |
| | **10,348** | **12,889** | **12,871** | **12,415** | **11,287** | **11,363** | **11,746** | **11,450** |
| **ses** | | | | | | | | |
| y | 41,005 | 47,000 | 47,705 | 48,109 | 45,859 | 45,809 | 46,291 | 45,205 |
| lary | 40,119 | 41,758 | 41,869 | 41,507 | 39,458 | 38,986 | 39,273 | 38,422 |
| nent | 36,161 | 41,971 | 42,949 | 43,915 | 42,260 | 42,470 | 42,831 | 41,762 |
| | **117,285** | **130,730** | **132,522** | **133,530** | **127,577** | **127,266** | **128,396** | **125,390** |

(1) Allows for the increases to contribution rates in January 2001 and January 2002.
(2) Figures may not sum to totals shown due to rounding.