



Government  
Actuary's  
Department

# Report by the Government Actuary on the Jersey Social Security Fund as at 31 December 2021

R.96/2023

May 2023

Martin Clarke

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To:

Deputy Elaine Millar, Minister for Social Security of the Government of Jersey

I am pleased to present my report on the financial condition of the Social Security Fund of the Government of Jersey and the adequacy or otherwise of the contributions payable.

Article 32 of the Social Security (Jersey) Law, 1974 requires an actuary to review the operation of the Law in advance of the commencement of each medium term financial plan, or more frequently as the Minister shall direct. The previous review was as at 31 December 2017 and, at the request of the Minister, I have carried out a review as at 31 December 2021. I now submit the following report on the financial condition of the Social Security Fund and on the adequacy of the present contribution rates.

A handwritten signature in black ink, appearing to read 'Martin Clarke', is centered on a white rectangular background.

Martin Clarke FIA

Government Actuary (United Kingdom)

May 2023

# Contents

<b>1</b>	<b>Executive summary .....</b>	<b>4</b>
<b>2</b>	<b>Principal projections .....</b>	<b>7</b>
<b>3</b>	<b>Evolution since 2017 review .....</b>	<b>15</b>
<b>4</b>	<b>Sensitivity of results to variations in key assumptions .....</b>	<b>17</b>
	<b>Appendix A: Methodology and technical assumptions .....</b>	<b>23</b>
	<b>Appendix B: Fund accounts since 1 January 2018 .....</b>	<b>41</b>
	<b>Appendix C: Summary of contributions and benefits .....</b>	<b>43</b>
	<b>Appendix D: Population projections of the Government of Jersey .....</b>	<b>50</b>
	<b>Appendix E: Limitations .....</b>	<b>61</b>
	<b>Appendix F: Summary of projections.....</b>	<b>63</b>

# 1 Executive summary

- 1.1 As required by Article 32 of the Social Security (Jersey) Law 1974, this report is the latest review of the Social Security Fund and the Social Security Reserve Fund (together “the Fund” or the “SSF”), which has been carried out as at 31st December 2021 by the Government Actuary’s Department (“GAD” or “we”) on the instruction of the Government of Jersey (“Jersey” or “the client”), and includes projections over the period from 2021 to 2081.
- 1.2 This report sets out GAD’s opinion of:
- the financial condition of the SSF taking into account changes in legislation and experience since the previous review
  - possible future levels of expenditure from the SSF and the contribution rates required to finance this expenditure
  - the adequacy or otherwise of contributions payable to the Fund to support benefits payable from the Fund
  - the future balance in the SSF, which is available to meet its expenditure and help smooth any increase in the required rate of contributions.
- 1.3 The structure of the report is as follows:
- Principal projections of the SSF using principal assumptions
  - Change in the Fund since the 31 December 2017 review
  - Sensitivity of the principal projections to changes in key assumptions
  - Appendices covering underlying data and assumptions, and calculation methodology

## Overall conclusions

- 1.4 The Fund remains in good health and is expected to be able to pay benefits out for several decades under a range of scenarios considered. The Fund has not been overly affected by the fluctuations during the Covid-19 pandemic, which resulted in lower income from contributors and from the Government, whilst over the period as a whole, investment performance has been better than projected in our last review at 31 December 2017.
- 1.5 The combined balance of the Funds at 31 December 2021 is £2.33bn. This is projected to decrease over the projection period, reaching £0.2bn in 2081 (in 2021 earnings terms and under the 325 net annual in-migration scenario). The Fund balance is projected to be stable relative to annual expenditure in the short term, and decrease gradually in the medium to longer term if there are no shocks to migration trends (see 1.8 below).
- 1.6 Under higher in-migration assumptions, the Fund is expected to continue to grow beyond the length of the projection period. If there were nil net migration, the Fund balance would reach zero around 2066.
- 1.7 Fund expenditure is generally projected to exceed contribution income. However, investment income supplements contribution income meaning that the projected Fund is

generally in surplus over each calendar year in the short term, but in deficit over the medium to long term.

- 1.8 We have considered four future migration scenarios as requested by the Government of Jersey. This is one of the key assumptions in assessing the long term sustainability of the Fund. Recent trends have been close to net in-migration of 325 individuals a year; however, future trends may not follow past patterns. Under these projections net in-migration of around 700 people per year is required for the Fund to be sustainable over the whole projection period. Net nil migration leads to fund exhaustion around 2066.
- 1.9 Unless in-migration is high, it is expected that towards the end of the projection period the sustainability of the Fund will decline owing to the growth in pensioner numbers relative to the working age population.
- 1.10 The future investment returns on Fund assets are important to help meet benefit costs. If Government policy changed to hold a smaller reserve fund balance, then it is likely that additional cash would be required to make up for foregone investment returns.

## Intervaluation experience

- 1.11 2017 to 2021 was an unusual period for the Fund as it encompassed the Covid-19 pandemic and Government response to it. The Government enforced “lockdowns” of the pandemic reduced the contribution revenues from the active workforce, and the Government also introduced temporary relief on social security contribution rates. There was a suspension of the States Grant to the Fund, which will not be reinstated until 2024. The net result is that income to the Fund over the period is lower than otherwise would have been expected.
- 1.12 Investment returns were volatile year to year, but over the period were estimated to be 7.6% p.a. which is higher than included in projections from the 2017 review.
- 1.13 Outgoing expenditure was broadly in line with previous experience. This was largely made up of Old Age Pension (OAP) payments.

## Post review events

- 1.14 In preparing this review, we have allowed for events and relevant information which would be materially relevant to the results of our projections, and which could be included in a timely way.
- 1.15 Following the review date, inflation increased significantly in Jersey. Expectation that this continues in the short term flows through to expectations of inflation and earnings in the next few years. Our assumptions factor this in, by setting assumptions up to 2026 in line with forecasts from the Jersey Fiscal Policy Panel.
- 1.16 We note the following development in the last few months has not been captured within our calculations. Jersey Fiscal Policy Panel released its March 2023 report, with updated economic assumptions. If we were to use the updated assumptions, we do not expect our key conclusions of the review would be materially different.

## Sensitivity of results to key assumptions

- 1.17 Section 4 illustrates the sensitivity of the projection to key assumptions, to show alternative plausible outcomes if the principal assumptions made are not borne out in practice. The most sensitive assumptions are demographic assumptions, in particular migration patterns, and the number of future pensioners and their potential life expectancy. Compared with demographic assumptions, economic and labour market assumptions have more short-term impacts on cashflow.
- 1.18 In addition to the four migration scenarios, we have also made projections on other variant assumptions to show how this would affect the projected financial development of the Fund. These include:
- The effect of individuals living one year longer, or shorter, than our principal assumptions
  - The effect of future investment returns being 3% a year higher or lower than our principal assumptions
  - Expenditure on old age pensions to be 10% higher or lower. This variant helps illustrate a number of circumstances which might lead to changes in the trajectory of pension amounts e.g. changes to eligibility criteria, changes in pension increase rules, or impacts of sustained high inflation relative to earnings.

## Professional standards and limitations

- 1.19 This work has been carried out in accordance with the relevant actuarial professional standards TAS 100 issued by the Financial Reporting Council (FRC) and APS X4 issued by the Institute and Faculty of Actuaries.
- 1.20 This report has been prepared in accordance with the Social Security (Jersey) Law 1974, which requires an actuary to report on the financial condition of the Social Security Fund and the adequacy or otherwise of the contributions payable to support the benefits payable having regard to its liabilities. It is not appropriate for any other purpose. No other person or third party is entitled to place any reliance on the contents of this report and GAD has no liability to any other person or third party for any act or omission taken, either in whole or in part, on the basis of this report.
- 1.21 More detailed limitations are set out in Appendix E.

## 2 Principal projections

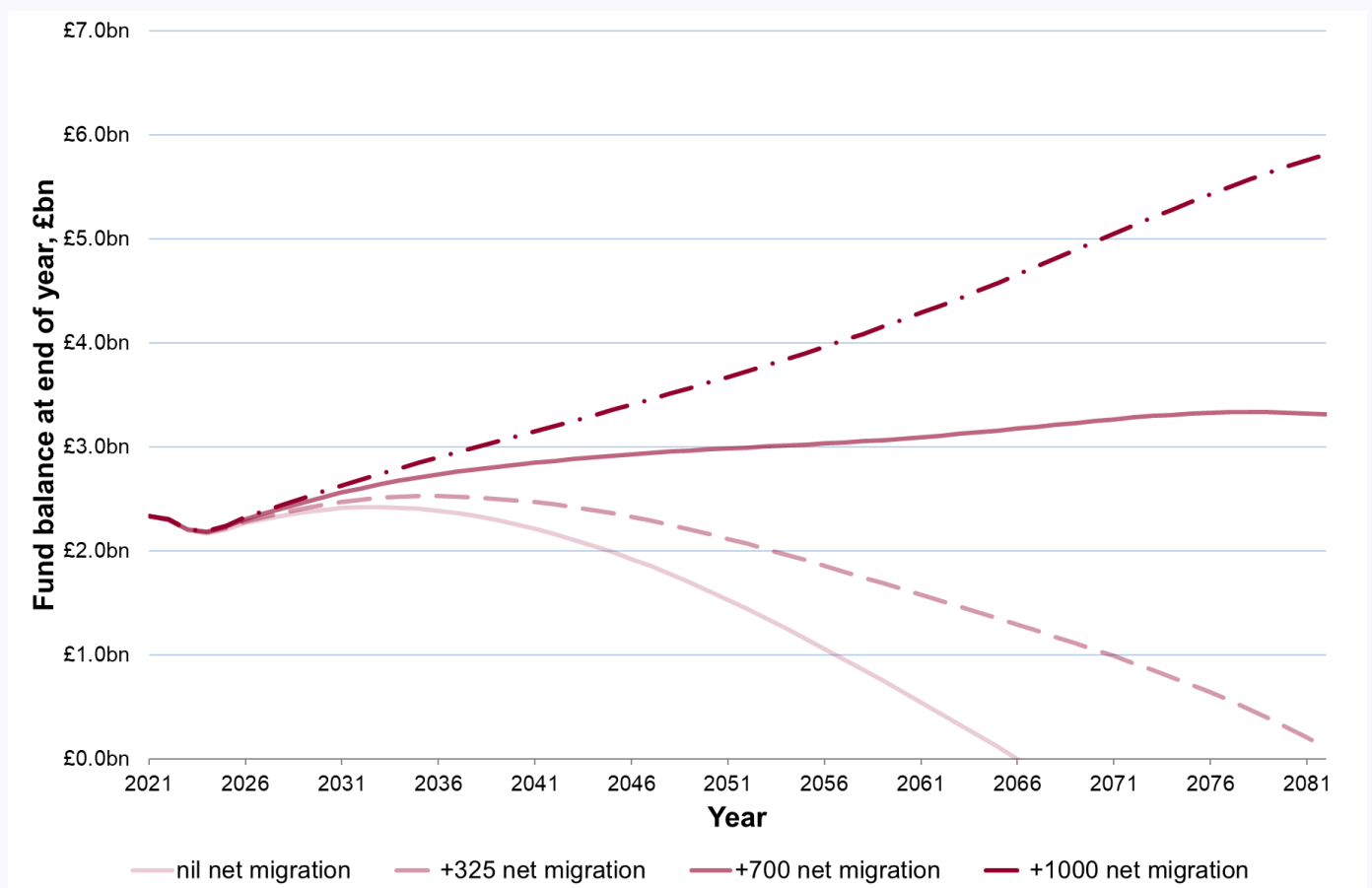
2.1 This section sets out the principal projection of the Fund balance and the underlying projections of income and expenditure, together with details of the key factors influencing the projection. This section also provides projections of breakeven contribution rates.

### Principal projection results

2.2 Chart 2.1 shows the projected Fund balance to 2081 based on the assumptions and methodology set out in Appendix A, and under 4 migration scenarios.

2.3 This demonstrates the sensitivity of the projection to the assumed level of migration. With the highest level of migration the Fund balance nearly triples in size, whereas with no net migration, the Fund is exhausted in 2066.

**Chart 2.1: Projected Fund balance to 2081 – in real earnings terms**



## Real earnings terms



The cashflow projection figures in this report are presented in ‘real earnings’ terms, meaning that the effect of earnings inflation has been removed from the projection of nominal amounts.

For example £100 in 15 year’s time is the equivalent of £62 in 2021 once the effect of earnings inflation over the period after 2021 has been removed.

This approach has been adopted to facilitate more meaningful comparisons between different projections, which can become difficult in nominal terms over a long projection period.

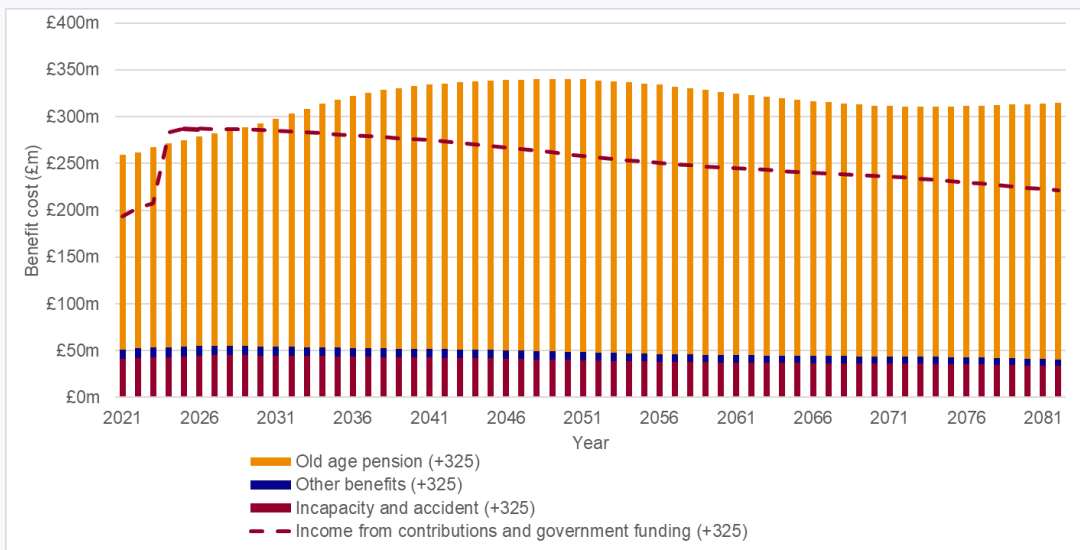
In the 2017 review, earnings and inflation were assumed to be the same for the review period, whereas in the 2021 review, we expect earnings to increase at a higher rate, so fund income would increase by more than rises in inflation-linked costs.

### Demographic changes

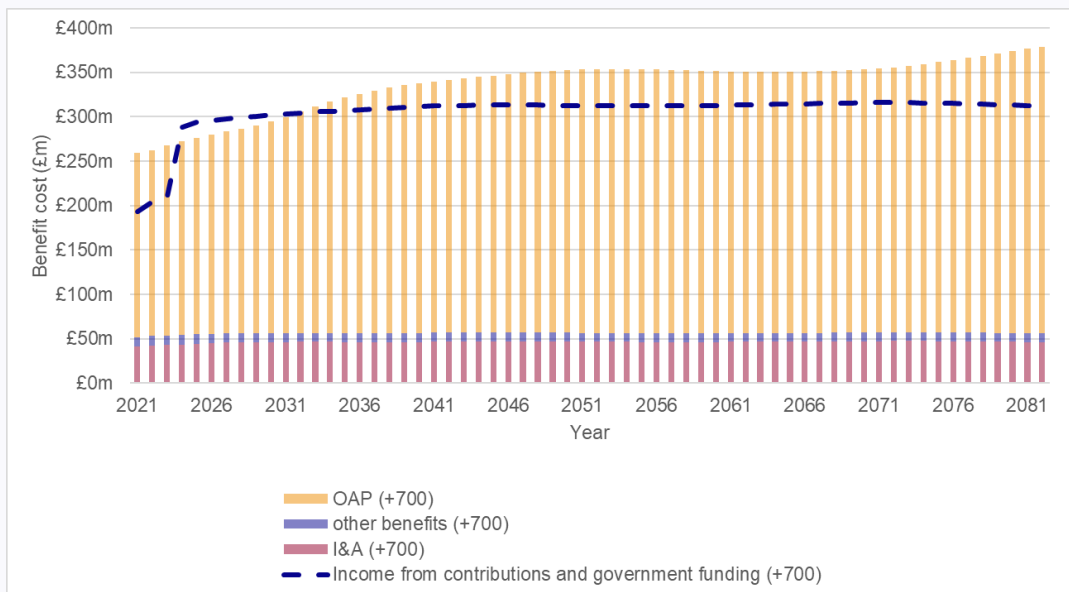
- 2.4 Where income exceeds expenditure (and expenses) the Fund balance will increase, Chart 2.2 (a) and (b) shows the projected Fund income from contributions and expenditure in real earnings terms for two migration scenarios, +325 per year and +700 per year. In addition to individual contributions and Government funding (i.e. the States Grant), the Fund expects to receive income from investment returns on the Fund balance, which is not included in Chart 2.2.
- 2.5 Chart 2.2 (a) and (b) shows that Fund contribution income remains relatively steady (under a +700 annual in-migration scenario) or in slight decline (under a +325 annual in-migration scenario), in real earnings terms, over the projection period, reflecting patterns in the size of the working age population. There is an initial increase in contribution income in the short term, as the States Grant is reintroduced in 2024.
- 2.6 Increases in benefit expenditure are driven by growth in expenditure on Old Age Pension. Expenditure on incapacity benefits and parental benefits remain close to their initial levels.
- 2.7 The growth of Old Age Pension is driven by the number of recipients, pension amount and their expected mortality. The rate of Old Age Pension is expected to increase in line with earnings over the long term, which results in a level of correlation between contribution income and expenditure on this benefit. The main driver for the increasing cost of OAP over the length of the projection period, especially in the higher migration scenarios, is the growth of the pensioner population.



**Chart 2.2 (a): Fund income and main benefit expenditure – in real earnings  
+325 net migrants per year**



**Chart 2.2 (b): Fund income and main benefit expenditure – in real earnings  
+700 net migrants per year**



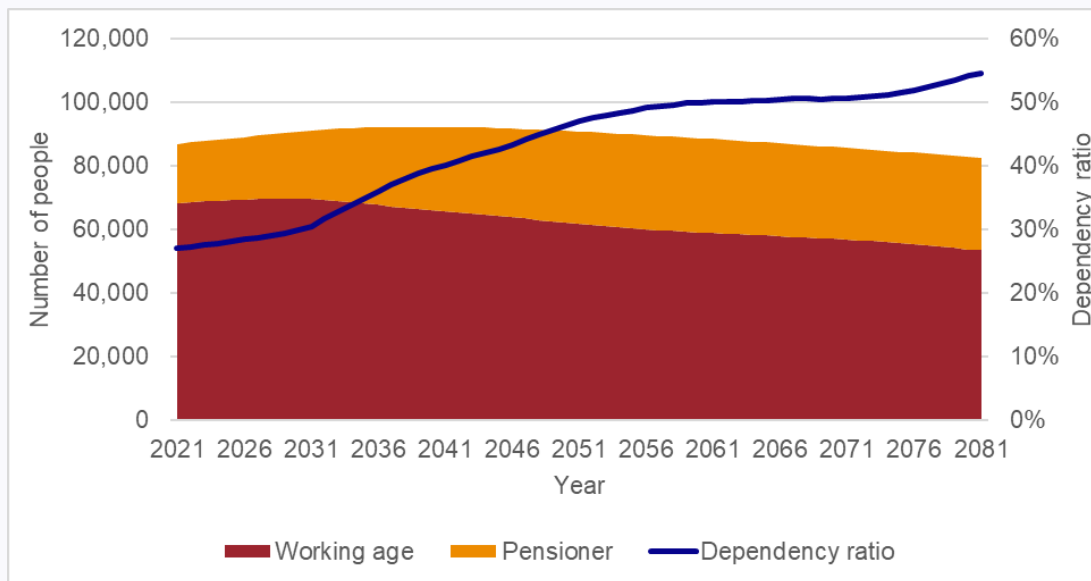
- 2.8 Demographic changes are the most significant reason for benefit expenditure being projected to increase by more than contribution income. Increases in life expectancy mean the age distribution of the population of Jersey is expected to change such that the pensioner population will increase in size relative to the working-age population.
- 2.9 Compared to the 2017 review results, the life expectancy assumptions used in 2021 are lower. This is because while life expectancy is expected to continue increasing, the rate of increase is expected to be slower compared to the previous review.
- 2.10 In 2021, 80% of the Fund’s benefit expenditure related to Old Age Pension, payable to those over State Pension age, whereas contribution income is derived from the working-age population. Therefore, as the relative sizes of each of these population groups change, so does the relationship between contribution income and benefit expenditure.

2.11 The relative size of these two population groups can be measured in terms of the 'dependency ratio' - the number of pensioners per 100 working-age people. As this ratio increases, Fund expenditure would generally be expected to rise relative to contribution income.

2.12 Charts 2.3 (a) and (b) shows how the dependency ratio is projected to increase between 2021 and 2081 for the +325 per year in-migration and +700 per year in-migration scenarios, with an increasing number of pensioners dependent on the working-age population. For the +325 chart, the dependency ratio increases from around 27% in 2021 to around 55% in 2081.

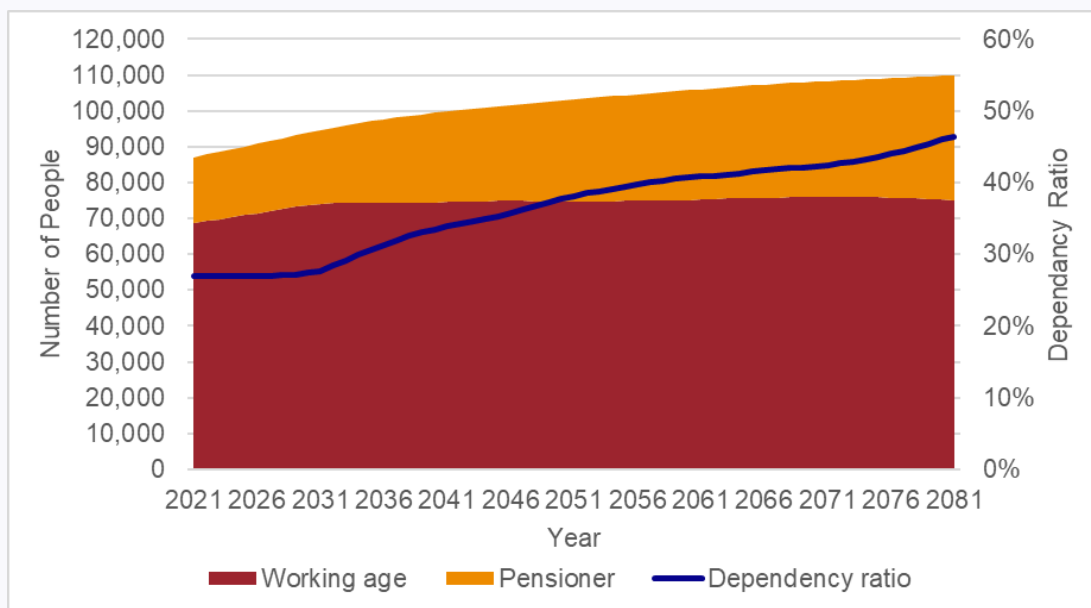
**Chart 2.3 (a): Projected population of Jersey and dependency ratio**

+325 net migrants per year



**Chart 2.3 (b): Projected population of Jersey and dependency ratio**

+700 net migrants per year



# Covid-19 pandemic



The Covid-19 pandemic had widespread impacts including on morbidity, mortality and on the labour market and the economy. These all affect the Fund projections, although the most significant long term effect is the change on future population projections.

The level of excess deaths in Jersey in 2020 was not as significant as English experience (which is our comparator for mortality tables). However, in 2021 and beyond we would expect Covid-19 to continue to affect mortality experience. The population projections (see appendix D) use the ONS 2020 projection tables, based on England demographics, but weighted to adjust for differences between England and Jersey between 2012 and 2019. The tables forecast a short term period of higher mortality than the 2014 tables, which is in part why future expenditure from the Fund is lower than 2017 projections.

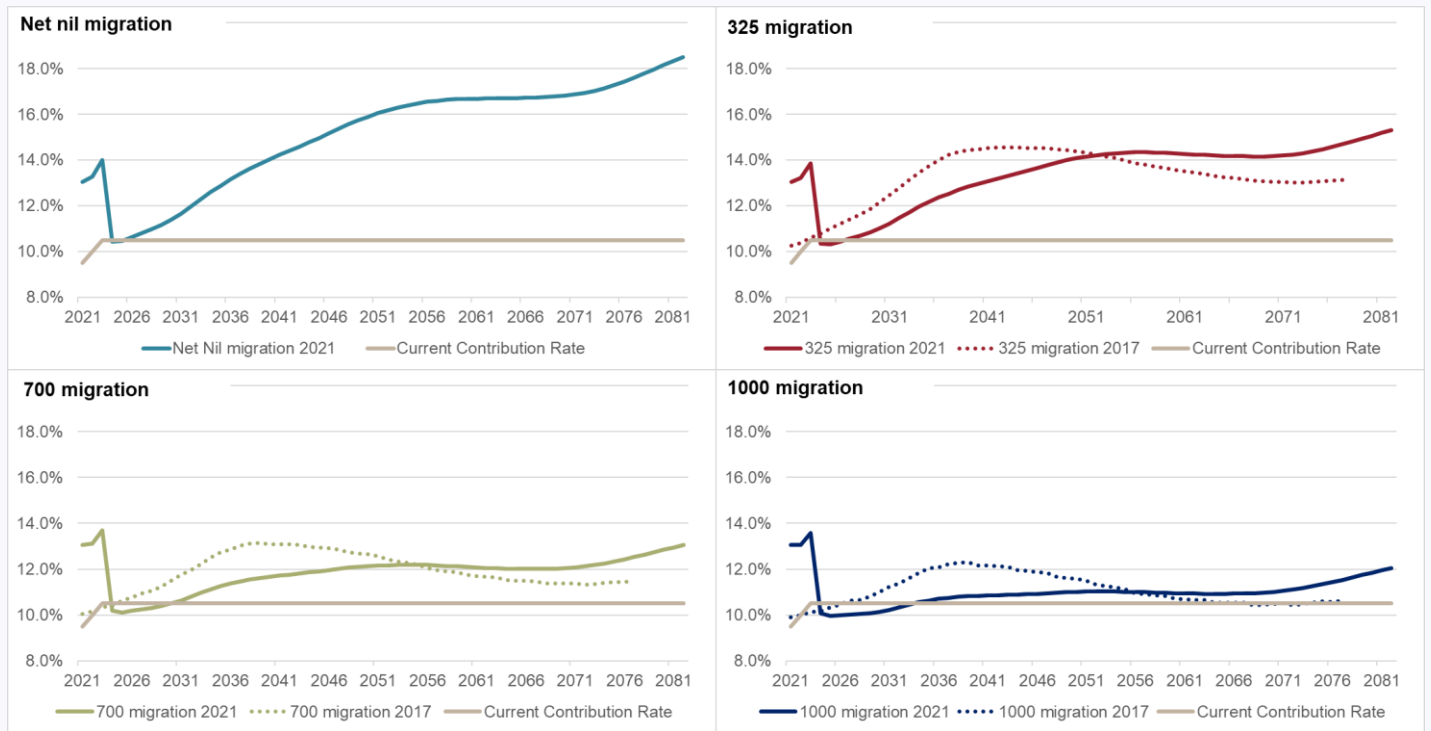
The economic shutdown from Covid-19, in the absence of other factors, will have reduced the projected Fund level. This is due to a reduction in the active workforce, Government policies such as temporary reductions in contribution rates and postponement of the State Grant, as well as other factors.

## Contribution rates

- 2.13 Chart 2.4 shows the projected breakeven contribution rate, that is, the contribution rate required to cover benefit expenditure (and expenses) in that year, ignoring investment returns on the Fund balance. This is shown against the current combined (employee plus employer) Class 1 contribution rate of 10.5%. This gives an indication of whether or not, and by how much, current contribution rates are sufficient to meet benefit expenditure.
- 2.14 We illustrate four different migration scenarios, and show alongside the results of the 2017 review where relevant (note that in 2017, there was no projection carried out on a "net nil" migration basis).
- 2.15 In general, expected costs are lower than estimated in the 2017 review up until the 2050s, and higher thereafter.
- 2.16 In the longer term, the current contribution rate is projected to be insufficient for the Fund to meet projected benefit expenditure under all migration scenarios. However, the Fund would also expect to receive income from investment returns, meaning contributions can be sustained at a somewhat lower level than the breakeven rate. This is the reason why Chart 2.1 shows a relatively consistent Fund balance under the 700 per year migration scenario.
- 2.17 The breakeven contribution rate at the end of the projection period is projected to be between 12% and 18%, depending on migration scenario, which compares to the current contribution rate of 10.5%. The projection does not include any allowance for any additional financing.

- 2.18 The trend in the projected breakeven contribution rate follows that for the dependency ratio (shown in Chart 2.3), again highlighting the fundamental influence of the age structure of the population on the finances of the Fund.
- 2.19 In this chart, the States Grant is included in contribution income. We have modelled a States Grant in 2024 and subsequent years, but not before. This is the reason for the step change in breakeven contribution rate in 2024.

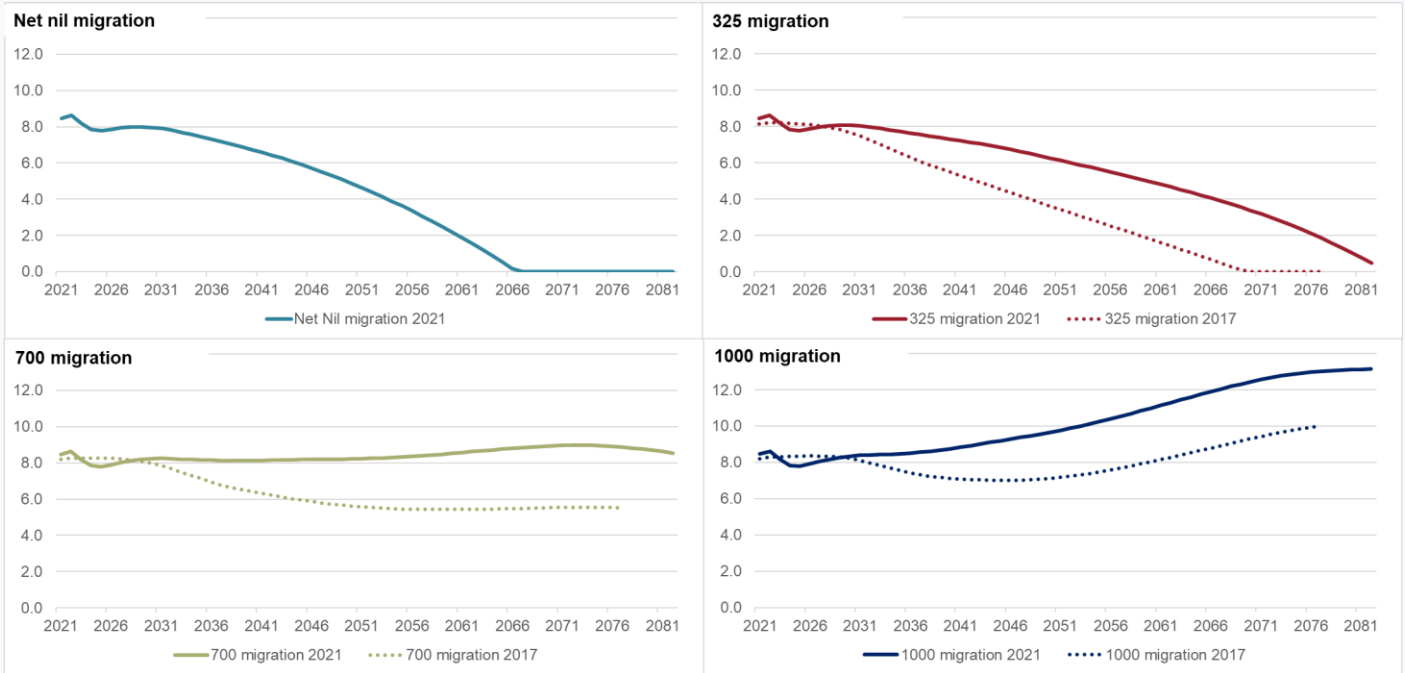
**Chart 2.4: Projected breakeven contribution rate required for contribution income to equal expenditure, for different migration scenarios**



## Fund balance

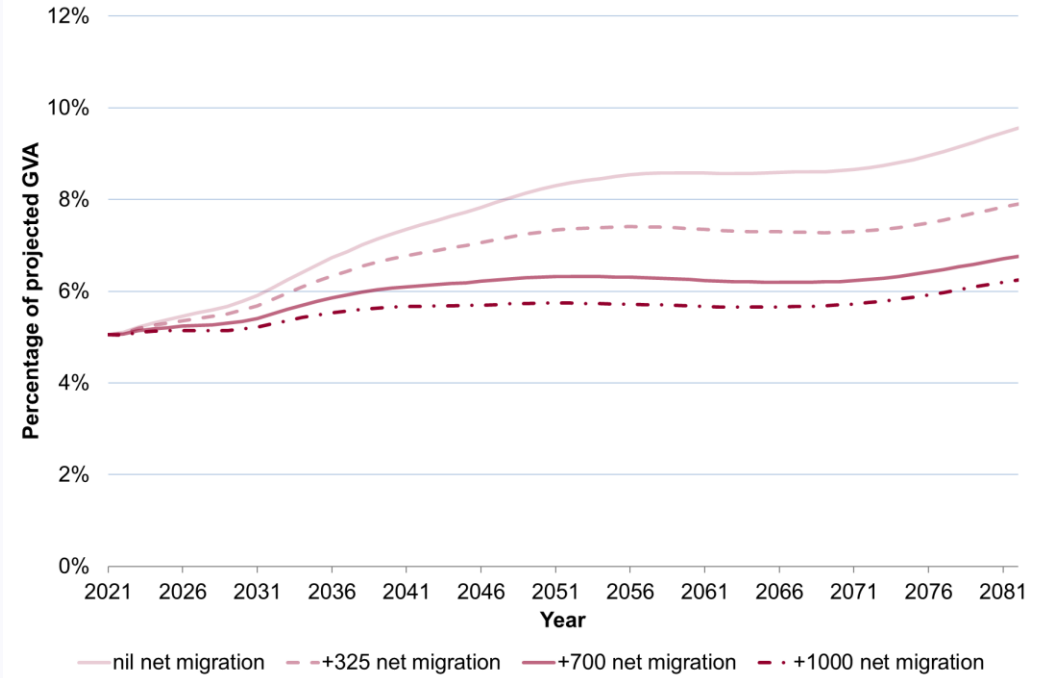
- 2.20 The Fund balance, expressed as a multiple of annual expenditure, is shown in Chart 2.5, below. We show the projected fund balance for alternative migration scenarios, and alongside 2017 results where relevant. The vertical axis gives an indication of how long (in years) the Fund could continue to operate if contributions ceased.
- 2.21 In-migration of close to 700 individuals a year would be required to maintain the fund at its current level (all else being equal).

**Chart 2.5: Projected Fund balance expressed as a multiple of annual expenditure, for different migration scenarios**



2.22 In considering the sustainability of the Fund, it is also useful to consider how expenditure relates to the size of the economy as a whole. We have therefore expressed projected benefit expenditure as a percentage of projected Gross Value Added (GVA), which is the measure of economic output generally used in Jersey. This is illustrated in the Chart 2.6 below.

**Chart 2.6: Projected benefit expenditure as a percentage of projected GVA**



- 2.23 The pattern is broadly similar to the pattern of break-even contribution rates shown in Chart 2.4. This is expected because it is assumed that GVA will in future grow in line with the size of the working age population, which is also a key driver of contribution income to the Fund.

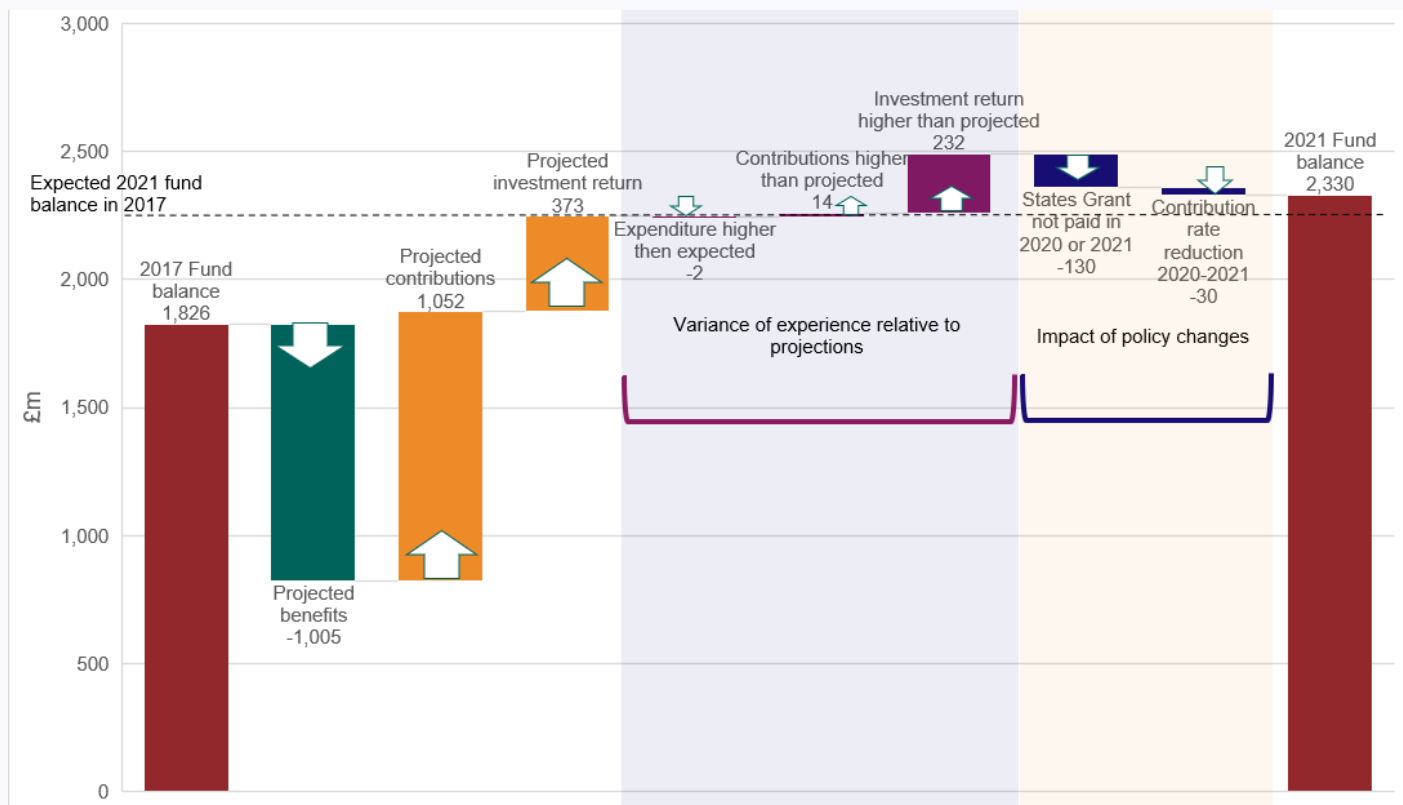
### 3 Evolution since 2017 review

#### Comparison of results between 2017 and 2021

3.1 We review the experience of the Fund in the inter-review period to understand the reasons for the change in the Fund position at the valuation date and to inform our future assumptions.

3.2 Chart 3.1 below shows the evolution of the Fund balance over the review period. Figures are in actual cash terms. Balances in this section are for the valuation of the combined Social Security Fund and the Social Security (Reserve) Fund.

**Chart 3.1: Comparison of projected Funds’ balance with actual Funds’ balance (end of year)**



3.3 The most significant factor in the improvement of the Fund was investment returns. These were much higher than expected in general (except for one year of lower growth in 2018).

3.4 The combined balance at 31 December 2021 of the Funds of £2.33bn is 15% higher than where it was projected (under the 325 per year in-migration scenario) to be in the 2017 review (£2.03bn).

- Investment returns were around £230m higher than projected over the period.

- Fund income being around £145m lower than projected over the period. This is primarily due to no States Grant being paid in 2020 or 2021 and accounts for around £130m of the difference.
- For the years 2020 and 2021, contributions were slightly lower than projected due to the contribution rate reduction between 1 October 2020 and 30 June 2021. However, ignoring the temporary rate reduction, contributions would have been £14m higher than projected.
- Benefit expenditure was close to projected levels throughout the period.



## 4 Sensitivity of results to variations in key assumptions

- 4.1 This actuarial report is based on a projection of the Fund's revenues and expenditures over a long period of time, using "best estimate" assumptions. Given the length of the projection period and the number of assumptions required, it is unlikely that actual future experience will develop precisely in accordance with the best-estimate projections.
- 4.2 The Fund's finances will depend greatly on changes to Jersey's population in different economic groups (i.e. demographic changes), the investment performance of the Fund's assets, and other economic and policy changes, amongst other factors.
- 4.3 In Section 2 we provided results under a range of future migration scenarios. This section looks at how sensitive the results are to other key assumptions, if future experience is different to the core assumptions.
- 4.4 We do not consider every possible outcome, but look at a range of plausible alternative assumptions which illustrate a range of reasonably conceivable outcomes.

### Variant scenarios

- 4.5 In this section, we have shown the effect of varying assumptions relative to the Principal Projections. For ease of reading some of the charts, we have shown the sensitivities in this section relative to principal results under a +325 migration scenario. The effects would be broadly equal if a different migration assumption were used.
- 4.6 The factors most likely to result in the experience of the Fund deviating from the projection provided are changes in:
- Demographic experience, in particular the number of working age people paying contributions, and retirement age people in receipt of a pension. We consider the effect of life expectancy being one year longer than our main projections;
  - Economic experience, in particular investment growth, and the relationship between inflation and earnings growth. We consider the impact of an annual rate of return 3% higher or lower than our main projections; and
  - Changes in Government policy, such as a significant change to pension system. We illustrate this by considering if the costs of old age pensions were to be 10% higher or lower than those assumed for the main projections.
- 4.7 The effect of multiple variant assumptions can broadly be estimated by combining the effects of the relevant scenarios.

### Variant demographic assumptions

- 4.8 Variation in life expectancy is expected to have a greater effect on the Fund than fertility or migration by the end of the projection period. This is a reflection of the greater uncertainty

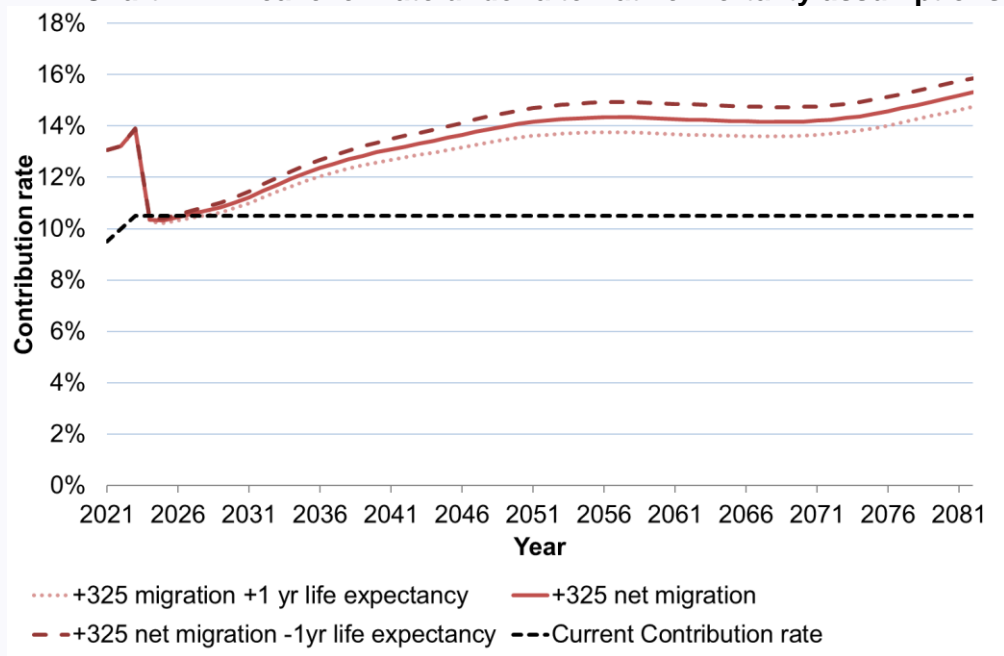
around future life expectancy, relative to some of the other assumptions, and the fact that longer life expectancy affects Old Age Pension (OAP) costs more than any other cashflow to or from the Fund. There is less of an effect on the contributions as the change in mortality assumption does not really affect the size of the working age population.

4.9 We have modelled the future breakeven rate and balance of the Fund, if life expectancy was around one year longer or shorter than the central assumptions. We do this by looking at what would happen if each individual had the life expectancy of someone currently one year older, or one year younger, than their current age.

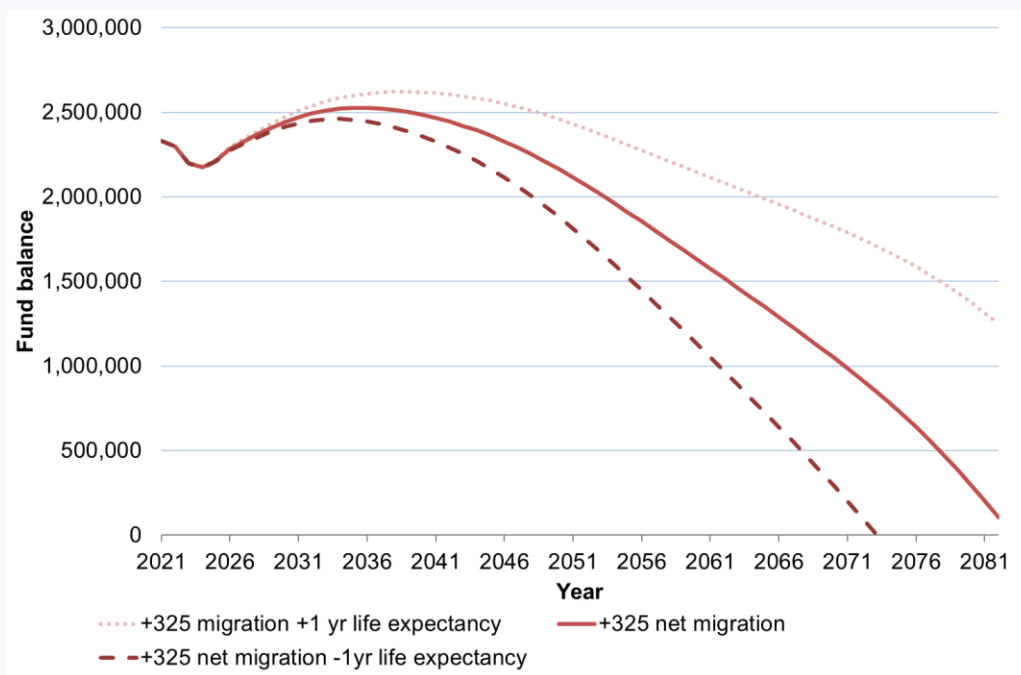
Life expectancy

4.10 If life expectancy were to increase, Chart 4.1 shows long term costs may be 0.5% higher and Chart 4.2 shows the fund exhaustion date being around 8 years sooner.

**Chart 4.1: Breakeven rate under alternative mortality assumptions, +325 annual in-migration**



**Chart 4.2: Fund balance under alternative mortality assumptions, +325 annual in-migration**



Migration

4.11 The level of migration has an immediate impact on contribution income and a longer term impact on the level of benefit expenditure. Therefore, migration can have a noticeable impact on the Fund balance in the short term. The migration variants shown in earlier sections (e.g. Charts 2.4 and 2.5) are based on a fixed change to the long-term assumed level of migration. However, if migration rates in the period to the next review of the Fund are much higher or lower than expected, this could potentially have a larger impact on the Fund balance in the short term than indicated.

Fertility

4.12 Fertility rates do not affect pension benefit expenditure within the projection period but would lead to changes in the working population and hence in contribution income in later years of the projection period.

**Variant economic assumptions**

4.13 For the purposes of projecting the balance in the Fund, it has been necessary to make an assumption regarding the future rate of return on the Fund’s investments. It has been assumed for the principal results that the future rate of return, net of associated expenses, is 2% per annum in excess of long term earnings increases, at a consistent rate in all years after the review date. This is explained in the section beginning at A.97.

4.14 The effects on the projected Fund balance of assuming future investment return 3% a year higher or lower than the assumption for the principal results is shown in Table 4.1. For

comparison, we have estimated that the Fund achieved investment returns of 7.6% a year over the four years 2018 to 2021.

- 4.15 The results above indicate how sensitive the projected development of the Fund is to the investment return assumption. Assuming investment returns of 5% per annum in excess of earnings increases leads to a sustained and ultimately improving Fund as a multiple of expenditure in the long term, for all of the migration scenarios.
- 4.16 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 Fund balance.

**Table 4.1: Effect of assuming future investment returns of 1% a year below, and 2% or 5% a year above, earnings increases on the projected Fund balance expressed as a multiple of annual expenditure**

Year Investment return (above earnings)	Net immigration of nil people a year			Net immigration of 325 people a year		
	(1%)	2%	5%	(1%)	2%	5%
2021	8.5	8.5	8.5	8.5	8.5	8.5
2026	6.8	7.8	9.0	6.9	7.9	9.0
2031	5.9	7.9	10.5	6.0	8.1	10.7
2041	3.0	6.6	13.0	3.5	7.2	13.8
2051	-	4.6	17.3	0.9	6.1	19.1
2061	-	1.9	25.3	-	4.8	29.1
2071	-	-	39.8	-	3.2	46.0
2081	-	-	62.0	-	0.8	70.7
Year Fund extinguished	2050	2066	after 2081	2055	after 2081	after 2081

Year Investment return (above earnings)	Net immigration of 700 people a year			Net immigration of 1,000 people a year		
	(1%)	2%	5%	(1%)	2%	5%
2021	8.5	8.5	8.5	8.5	8.5	8.5
2026	6.9	7.9	9.0	6.9	7.9	9.0
2031	6.2	8.2	10.9	6.3	8.4	11.0
2041	4.3	8.1	14.8	4.9	8.8	15.6
2051	2.6	8.2	21.7	3.8	9.8	23.6
2061	1.1	8.6	33.8	3.0	11.1	37.0
2071	-	9.0	52.9	2.2	12.6	57.2
2081	-	8.6	79.2	1.0	13.1	84.1
Year Fund extinguished	2069	after 2081	after 2081	after 2081	after 2081	after 2081

4.17 All our results are presented in constant earnings terms, as benefit rates and contribution limits are generally assumed to be increased in line with earnings growth in the future. Therefore, any future changes to earnings growth would impact income and outgo in a similar way (see paragraph A.81).

4.18 In years before 2025, price inflation is higher than earnings inflation, and in years after 2025, earnings inflation is expected to rise above price inflation again. We have not modelled differences in price inflation as this is generally not expected to impact on the results of the review. The exception is for the old age pension (OAP), which tracks the earnings index in the long run, but in the short run has an “underpin” if the increase in prices is higher than the increase in earnings. This is discussed more in paragraph A.85. An indication of the impact of higher or lower OAP expenditure is given in Table 4.2 below.

## Variant policy assumptions

4.19 The OAP is the most significant item of Fund expenditure. While the assumptions adopted in projecting this expenditure are considered reasonable, there remains some uncertainty over the future level of expenditure. For example, the proportion of non-residents who claim the pension they have previously built up in Jersey may change over time, reflecting different migration patterns. Similarly, the proportion of people who build up sufficient contributions in order to qualify for a pension could vary, again depending on future migration patterns and also changes in reciprocal social security agreements. It is also

possible that, in future, the rate of pension might be increased or reduced relative to its current value indexed in line with earnings.

4.20 In order to provide an indication of the variability of the results of the review, Table 4.2 indicates the projected break-even contribution rates and the year in which the Fund balance is extinguished (assuming that the current contribution rates continue) if the future costs of old age pensions were to be 10% higher or lower than those assumed for the main projections. This is assumed to build up uniformly between 2021 and 2051 and remain 10% higher thereafter. The 10% variation 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 4.2: Effect of assuming OAP gradually increases up to 10% vs reduces up to 10% after 30 years vs principal assumption, projected break-even contribution rates and the year fund extinguished**

Year	Net immigration of nil people a year			Net immigration of 325 people a year			Net immigration of 700 people a year			Net immigration of 1,000 people a year		
	Main results	OAP 10% higher	OAP 10% lower	Main results	OAP 10% higher	OAP 10% lower	Main results	OAP 10% higher	OAP 10% lower	Main results	OAP 10% higher	OAP 10% lower
2021	13.1%	13.1%	13.1%	13.1%	13.1%	13.1%	13.1%	13.1%	13.1%	13.1%	13.1%	13.1%
2026	10.6%	10.8%	10.5%	10.4%	10.6%	10.3%	10.2%	10.3%	10.1%	10.0%	10.1%	9.9%
2031	11.7%	12.0%	11.4%	11.2%	11.5%	10.9%	10.6%	10.9%	10.4%	10.2%	10.5%	10.0%
2041	14.2%	15.0%	13.4%	13.1%	13.8%	12.4%	11.7%	12.4%	11.1%	10.8%	11.4%	10.3%
2051	16.1%	17.4%	14.7%	14.2%	15.3%	13.0%	12.2%	13.2%	11.2%	11.0%	11.9%	10.1%
2061	16.7%	18.1%	15.3%	14.3%	15.5%	13.1%	12.1%	13.1%	11.1%	10.9%	11.8%	10.1%
2071	16.9%	18.3%	15.4%	14.2%	15.4%	13.0%	12.1%	13.1%	11.1%	11.1%	11.9%	10.2%
2081	18.3%	19.9%	16.7%	15.2%	16.5%	13.9%	12.9%	14.0%	11.9%	11.9%	12.9%	11.0%
Year Fund exhausted	2066	2059	2082	after 2081	2067	after 2081	after 2081	after 2081	after 2081	after 2081	after 2081	after 2081

# Appendix A: Methodology and technical assumptions

## General

- A.1 The “principal assumptions” adopted for this review (as opposed to the variant assumptions considered in Section 3) have been set in order to represent best estimates of the future experience of the Fund (i.e. there is no explicit margins for prudence or optimism in the assumptions). The migration scenarios underlying the population projections were specified by the Government of Jersey.
- A.2 The population assumptions used in this report are taken from analysis undertaken by GAD and provided to Jersey in February 2023, and summarised in appendix D of this report.
- A.3 The economic and benefit assumptions used in this report were proposed by GAD and previously discussed with Jersey to agree they are appropriate for use. They are set in line with the Central Economic Assumptions from the 2022 Annual Report of the Jersey Fiscal Policy Panel published in November 2022. Since producing this report, Jersey Fiscal Policy Panel have published their March 2023 report including updated assumptions. We would not expect to update work for changing market conditions after analysis is completed, but we note that the differences in assumptions relative to the November 2022 report are not likely to be material to the results.
- A.4 Projections of future contributions and benefits rely on historic data, which has been supplied by Jersey. GAD have checked this data for completeness and reasonableness. As part of our checks we picked up on an inconsistency in some of the individual contributions data, and we have agreed with Jersey to adjust this data to more accurately reflect future expectations.
- A.5 In our view, these data and assumptions are reasonable for the purposes of estimating the financial position of the Fund over the period considered in this report.
- A.6 My previous report was published in March 2019. The estimates in that report were based on population projections provided by Statistics Jersey and economic assumptions prepared by GAD (reflecting views of the Jersey Fiscal Policy Panel) and agreed with the Government of Jersey.

## Methodology

- A.7 The calculations for this review involve projecting contribution income, benefit expenditure and administration expenses over the 60 years from 2021 to 2081. Two main sets of results are presented in this report:
- The projected “break-even” contribution rates

- The combined balances in the Social Security and Social Security (Reserve) Funds (“the Funds”), as a multiple of expenditure, assuming that the current rates of contribution remain unchanged
- A.8 The break-even contribution rates are the rates that would be required in order for contribution income to equal expenditure on benefits and administration costs. For this purpose it is assumed that supplementation continues to be calculated as at present. In addition, the States grant will recommence in 2024 (see C.31).
- A.9 The break-even contribution rates are the contribution rates that would be required if the Fund were following the pay-as-you-go financing approach. One of the main factors likely to cause significant changes in these break-even rates in the future is the change in the relative numbers of contributors and pensioners. These factors are mainly demographic but also include social and economic factors such as changes in the proportion of women working and the rate of unemployment.
- A.10 In projecting the future combined balance in the Funds, as a multiple of annual expenditure, it is assumed that the current contribution rates continue to apply in all future years. While projections of fund balances are subject to a great deal of uncertainty, these results give an indication as to the extent to which the build-up of assets in the Reserve Fund can be used to delay increases to contribution rates which would otherwise be required. If no fund of assets had been built up, the contribution rate would need to follow the break-even rates.
- A.11 Where results are given as monetary values, they are shown in constant 2021 earnings terms. This is a convenient approach because it is assumed that all benefit rates and contribution limits increase in the long term in line with earnings (see A.81 below).

## Assumptions

- A.12 In order to make projections of future income and expenditure, it is necessary to make a large number of assumptions about likely future experience. Some of the key assumptions relate to future changes in the population, which are discussed in Appendix D. The other assumptions mainly relate to the numbers of beneficiaries and contributors, the average level of benefits payable and the average earnings of contributors.
- A.13 A summary of the principal assumptions adopted for this review, together with a brief explanation of how they were determined is given below. In general we have referred to these assumptions collectively as the “principal assumptions” (as opposed to the variant assumptions considered in the main report). We have set the principal assumptions in order to represent a best estimate of the future experience of the Fund, and therefore they do not incorporate any margins for optimism or pessimism, except where stated otherwise. Our principal assumptions are not intended to be an indication of future policy decisions of the Government of Jersey.



- A.14 The main exception to having a single assumption is where we have provided outputs under four alternative population projection scenarios, as requested by the Government of Jersey. In some places we have used a single migration scenario as a reference point to illustrate sensitivity of results to key assumptions, as a simple and pragmatic approach. This is also not intended to be a best estimate approach or indication of the Government of Jersey's policy direction.
- A.15 The assumptions that have the most impact on the results of the review are those relating to population projections, contributor numbers and old age pension, and, in the case of the projection of the Fund balance, the rate of investment return.
- A.16 The results of the review are sensitive to the assumptions adopted. Although the principal assumptions as a whole are considered to form a reasonable basis for the review, in practice, it is not possible to predict the future with certainty and therefore the Fund's future experience may differ from that assumed. It is therefore important to consider how the results of the review would change if experience followed a different set of assumptions.

## Population projections

- A.17 The population projections adopted for this review have been prepared by GAD and are summarised in Appendix D. The population projections have been shared with Statistics Jersey, who we understand are expected to produce a separate set of projections later in 2023. Future expenditure has been calculated on the basis of four different population projections with differing migration assumptions:
- net migration of zero people a year for all years from 01/01/2022 (allowing for inflows and outflows at different ages)
  - net inward migration of 325 people a year for all years from 01/01/2022
  - net inward migration of 700 people a year for all years from 01/01/2022
  - net inward migration of 1,000 people a year for all years from 01/01/2022
- A.18 The 2021 census data<sup>1</sup> indicates that immigration has averaged around 335 people, a year over the inter-censal years 2011 to 2021. There are a few reasons that this may not be a reliable estimate of future trends, including the migration impacts from the UK's departure from the EU and the long term effect of changing working patterns during and after the Covid pandemic.

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<https://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/R%20CensusFinalReport%2020221213%20SJ.pdf>

## Contribution income

- A.19 The projected numbers of contributors in future years have been obtained by applying assumed proportions of men and women contributing at each age in the different contribution classes to the projected numbers in the population. These proportions were derived from statistics on the number of contributors in past years. The analysis was made on the basis of the average position throughout the year, and thus allows for the average number of seasonal workers who contribute.
- A.20 Consistent with the approach at the previous review, the assumed short-term proportion of the population that contributes has generally been based on the average proportions (for each age and gender group) experienced in the ten years 2012 to 2021. We have also assumed the proportion of the population contributing in 2021 is consistent with the data provided to us for 2021.
- A.21 At this review pension age is mid-transition from age 65 to 67 and is not at an integer age. As a result, the proportion of the population contributing during 2021 is unlikely to be reflective of the proportion contributing for all future years. We have allowed for this transition to a higher pension age by assuming that the long-term behaviour is reflective of that for previous integer pension ages, i.e. we have assumed that the long-term behaviour for people contributing at age 67 is similar to the proportion of the population contributing at 65 based on the contribution data at the last point 65 was pension age. This is a slightly different approach to last time where we assumed that behaviour would be in line with 2017 experience.
- A.22 As part of this transition to a pension age of 67 by 2031 we have also made the following assumptions about members' contribution behaviour:
- participation rates are unchanged for ages up to 62
  - rates at the two ages immediately below the new pension age are equal to the initial rates at ages 63 and 64
  - rates at ages between 62 and two years below the new pension age are equal to the initial rate at age 62
- A.23 It is possible that the proportions contributing will vary in response to changing economic and labour conditions. For example, there could be a further increase in the proportions contributing at older ages. However, given the very significant uncertainties inherent in how the labour market might develop, we have generally assumed that the age and gender specific proportions will not vary in future years.
- A.24 As part of the 2017 review we made allowance for two transitional effects for women. These are:
- the increase in pension age from 60 for women who were first insured before 1 January 1975 to 65 for later members; this is in addition to allowing for the subsequent increase to age 67 mentioned in C.2
  - the gradual run-off of the group of women who were married before 1 April 2001 and who have elected not to pay contributions; as these women leave the labour force, they are assumed to be replaced by women who pay the full rate contributions

We have made consistent allowances where necessary in 2021 but the majority of these effects have now been realised.

A.25 A summary of the proportions of the population that are assumed to contribute in 2022 is given in the following table (excluding those for whom employer contributions only are paid). For comparison, the corresponding proportions assumed for the 2017 review are shown in brackets.

**Table A.1 - Summary of the proportion of the male and female populations assumed to be paying Class 1 or Class 2 contributions in 2021, with the equivalent figures from the 2017 review in brackets**

Age group	Men	Men	Women	Women
	Class 1	Class 2	Class 1	Class 2
15 to 29	66% (64%)	1% (1%)	62% (61%)	1% (1%)
30 to 39	87% (86%)	6% (6%)	78% (77%)	3% (2%)
40 to 49	77% (75%)	12% (13%)	75% (72%)	4% (3%)
50 to 59	68% (67%)	16% (19%)	62% (57%)	5% (4%)
60 to 69	27% (21%)	9% (8%)	16% (12%)	1% (1%)

A.26 In general, the proportions are broadly similar to those applied at the 2017 review. The most significant changes are an increase in the proportion of population paying Class 1 contributions in the 50 to 59 and 60 to 69 age groups. The changes are a consequence of the latest data received on contributor numbers. In particular, the data indicated that the proportion of older people of both genders, who pay Class 1 contributions, has been increasing over recent years.

A.27 These proportions will vary in future years. In particular, the proportions will increase further for the 60 to 69 age group as a result of the increases to state pension age. Also, the proportions of women at age 44 and above who pay Class 1 contributions will increase. This reflects the run-off of the group of women who were married before 1 April 2001 who have elected to pay no contributions and their replacement by women paying full Class 1 contributions<sup>2</sup>.

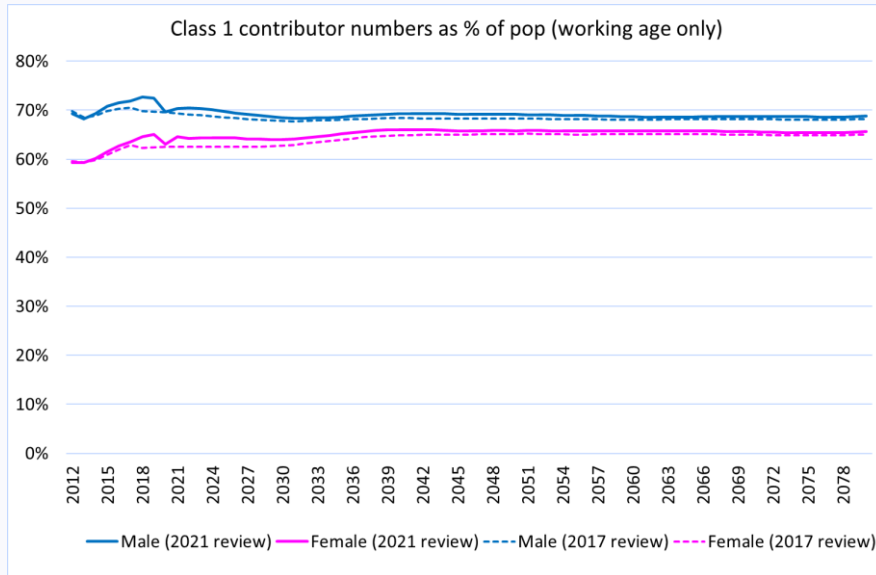
A.28 The following two charts show the proportion of the working age population<sup>3</sup> that is assumed to pay Class 1 and Class 2 contributions, by gender, over the projection period, based on the +325 net annual in-migration scenario. For comparison, the equivalent figures are shown for the 2017 review, also based on +325 net annual in-migration considered at that review. The proportions will vary slightly under the different migration scenarios since it will change the age and gender profile of the population.

<sup>2</sup> In contrast, women under age 44 in 2021 generally already pay full Class 1 contributions because they were married after April 2001.

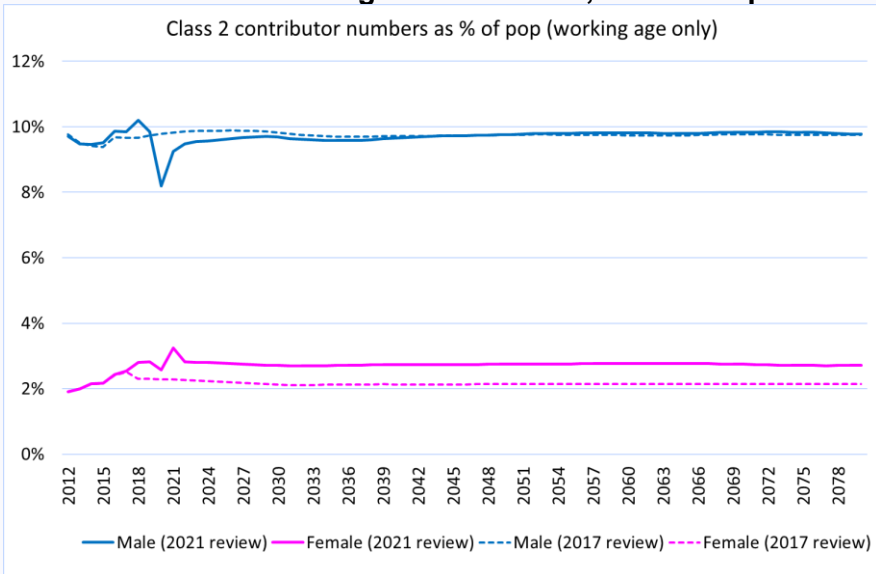
<sup>3</sup> For this purpose, the working age population is defined as being from age 15 to 64 in 2019 and before, and rising to 66 in 2031 and later.

A.29 There is a visible kink in the lines around 2021 which is due to temporary changes to the contribution requirements during the Covid pandemic, in particular the temporary drop in number of people paying class 2 contributions, and deferral of some class 2 contributions.

**Chart A.1: Proportion of the working age population assumed to pay Class 1 contributions, based on the +325 net migration scenario, with the equivalent figures from the 2017 review**



**Chart A.2: Proportion of the working age population assumed to pay Class 2 contributions, based on the +325 net migration scenario, with the equivalent figures from the 2017 review**



A.30 The proportion of the workforce projected to be contributing for the 2021 review is therefore similar to that projected for the 2017 review. There is a small increase in the proportion of men and women assumed to pay Class 1 contributions across all ages, and more so at older ages. There is also a slight increase in the proportion of Class 2 contributors.

- A.31 Future contribution income was projected by combining the future numbers of contributors, estimated in line with the approach described above, with distributions of earnings levels by age and sex, based on data for 2021. Allowance was made for the effect of the contribution limits. The emerging contribution cash-flow was aligned with 2021 contribution information provided by the Government of Jersey.

## Old age pension (OAP)

- A.32 Old age pension currently represents about 80% of the benefit expenditure from the Fund and therefore the assumptions for projecting OAP expenditure have much greater impact on the projections than those adopted for other benefits.
- A.33 The projected expenditure on 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 and to the standard rate of pension. These factors represent the proportion of the resident population that qualifies for a pension multiplied by the average pension as a proportion of the standard pension rate<sup>4</sup>.
- A.34 The factors include allowance for both the number of residents and non-residents over pension age who will be entitled to, and who will claim, an old age pension. The factors are applied to the numbers of the resident population only and therefore it is possible for the average factors to be in excess of one (100%).
- A.35 In the case of women, separate factors are applied in respect of women claiming a pension on the basis of their husband's contribution record, women claiming a pension on the basis of their own contribution record, and widows claiming a pension on the basis of their deceased husband's contribution record.
- A.36 In order to derive the required factors, we have adopted the same approach as used at the 2017 review.
- A.37 In broad terms the approach is to combine the data provided on the contribution records, up to the end of 2021, with a projection of expected future contribution records based on projected contributor numbers. This has been done for each population projection variant. This has then been used to derive the expected pension that will be awarded at pension age as a proportion of the standard rate of pension and the resident population at that age.
- A.38 We make a further adjustment to allow for pensions expected to be paid to individuals who have emigrated from Jersey and retain a right to a pension.

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<sup>4</sup> For example, if the proportion of the population that qualifies for a pension is 90% and the average pension they receive is 80% of the standard rate, the factor would be  $0.9 \times 0.8 = 72\%$ .

## Men

- A.39 The data on pensions in payment in 2021 for male pensioners aged 66 in 2021 corresponded to a factor (as defined in A.33) of 86%, i.e. 150% of locally resident males aged 66 received a pension and the average pension was 57% of the standard pension rate,  $150\% \times 57\% = 86\%$ . The actual average pension for male pensioners aged 66 over the ten years 2012 to 2021 was 85%, which compares with a projected figure of around 100% for the early years of the projection based on the method outlined above in paragraph A.37. The same effect, whereby actual experience indicated lower amounts of pension came into payment than expected, was noted at both the 2015 and 2017 reviews. This might suggest that our method is tending to slightly overstate the pension factor (and therefore to overstate the projected cost of old age pensions).
- A.40 One explanation of this discrepancy is that our model assumes that all pension contributions will in due course generate a pension benefit (but allowing for deaths before pension age). In practice, this may not be true: for example, contributions may not be converted to pension if the individual has not met the minimum contribution requirement (having regard to any reciprocal social security arrangements) or if they do not claim their pension entitlement from Jersey. The data on past contribution records at the end of 2021 may also include individuals who died before the review date, particularly for those who have left the island. We do not have sufficient data to analyse these possible effects.
- A.41 Given the discrepancy between our modelled factors and emerging experience has persisted, we consider that it is appropriate to make an adjustment to allow for not all contributions being converted to pension. For this purpose, we have multiplied our modelled factors by 95%, which accounts for about half of the difference between the unadjusted modelled factors and the factors implied by recent data. In order to illustrate the broad impact of adopting different old age pension factors, we have also produced projections assuming that expenditure on old age pension is 10% higher or lower than under the assumptions described above.
- A.42 Based on the above approach, the long-term modelled factors for men are as in the following table. Allowance is made for early retirements, assuming that 35% of pensions are drawn two years before pension age (45% in 2017) and a further 10% is drawn one year before pension age (10% in 2017). The decrease in assumed retirements taken two years early reflects 50% of the experience observed from 2018 – 2021, and 50% of the assumption used at the last review. This approach is intended to smooth any short term fluctuations in the data due to Covid and other factors.

**Table A.2A: Long-term old age pension factors at pension age for men, 2021 review, 2017 review and 2015 review**

	2021 review	2017 review	2015 review
Nil migration	84%	N/A	N/A
+325 migration	79%	82%	85%
+700 migration	75%	80%	83%
+1,000 migration	73%	78%	81%



- A.43 The factors are lower than assumed for the 2017 review due to:
- a. Contributions paid over the years since the 2017 review were lower than were predicted in the 2017 review, and future contributions are also predicted to be lower, which implies individuals are less likely to have an entitlement to the full amount of OAP
  - b. This was offset slightly by fewer people taking early retirement, and so the factors above are not reduced as much for early retirement deductions
- A.44 It can be noted that the long-term factors are lower than the initial factor at pension age (86%, as noted in A.39). While we do not have sufficiently detailed data to analyse the reasons for this, this effect is likely to reflect that future assumed net inward migration is greater than historic net inward migration, which changes the balance between the non-resident population and the resident population. This is significant because the factors are expressed as a proportion of the resident population only. Furthermore, migrants are likely to have a shorter contribution record and therefore a higher level of immigration would be expected to lead to a lower factor.
- A.45 Table A.2A also indicates that the average factors reduce with increasing assumed levels of future migration. This is for the same reasons as described in paragraph A.44A.43.
- A.46 Finally, an allowance is made for a proportion of male recipients to qualify for a supplement in respect of their wife, principally at ages up to 70. This is based on the proportion of men who qualify for such a supplement in 2021, as shown in the data. However, these increases are only paid in respect of pre-April 2001 marriages and therefore an adjustment is made to allow this proportion to gradually reduce over time, so that by 2050 no new OAP awards qualify for this supplement.

## Women

- A.47 The derivation of the required factors is more complicated for women. This is largely because women currently have greater scope for qualifying for pension than men do: women can be entitled to an OAP from their own, or from their husband's or deceased husband's contribution records. Therefore, we calculate separate factors (as defined in paragraph A.33) in respect of each group (in each case expressed as a percentage of the resident female population). The ability to draw a pension on the husband's or deceased husband's contributions is gradually being withdrawn in most circumstances and therefore in the long-term women are assumed only to receive OAP awards based on their own contribution history.
- A.48 The factors used to assess the cost of pensions for women who qualify on the basis of their husband's or deceased husband's contributions were calculated using the same approach as for the 2017 review. This involved taking a percentage of the factors assumed for men, with the percentage being derived using actual data for 2021, the latest available year.

- A.49 However, the provisions allowing a woman to draw an old age pension based on their husband's or deceased husband's contributions are being phased out. It is important to take this into account in the projections, although due to the complexity of the arrangements it has been necessary to take a simplified approach. In particular:
- We allowed for the gradual run off of cases where a married woman receives a pension based on their husband's contributions, since this only applies if they were married before April 2001; this means that from around 2050, there are no further awards of pension based on the husband's contributions
  - Similarly, the number of recipients of a widow's OAP based on their deceased husband's insurance was assumed to run off gradually since such pensions are generally only available in respect of pre-2001 marriages.
- A.50 This approach mirrors that adopted for the 2017 review.
- A.51 It is then necessary to make assumptions for pensions for women based on their own contribution record. This was done using the same approach as for men, including applying the 95% adjustment described in paragraph A.41. It was assumed that 55% of individuals choose to draw their pension up to two years before pension age.
- A.52 However, it is recognised that this modelling will include some own contribution record cases, who will in practice qualify for a pension on the basis of their husband's or deceased husband's contributions.
- A.53 Therefore, a percentage reduction has been applied to awards of pensions derived from women's own contributions, in order to reflect those women who will actually draw a pension based on their husband's or deceased husband's contribution record. The initial percentage has been set by comparing recent data on the amounts of pension coming into payment based on the woman's own record and the theoretical amounts based on the method in paragraph A.37. The percentage reduction was assumed to run off to zero steadily over time, so that by about 2050 all OAP awards to women were based on their own contribution records.
- A.54 Based on this approach, the long-term factors for women are as in the following table.

**Table A.2B: Long-term old age pension factors at pension age for women, 2017 review and 2015 review**

	2021 review	2017 review	2015 review
Nil migration	77%	N/A	N/A
+325 migration	71%	74%	78%
+700 migration	67%	72%	75%
+1,000 migration	65%	71%	74%



- A.55 As with the male factors, the female factors are lower than assumed for the 2017 review. This is due to the same reasons – i.e. lower contributions between 2017 and 2021, and predicted contributions over future years. Again this is slightly offset by less people taking early retirement.
- A.56 Having obtained the projected expenditure for men and women, we have aligned the emerging initial cash-flow with recent expenditure.

## Survivor's benefit

- A.57 Survivor's benefit is a relatively small part of the Fund's expenditure, around 2% in recent years, and we have therefore adopted a simplified approach to project expenditure. Under this approach, the expenditure is assumed to equal the expenditure in 2021 (£3,654,000) varied in line with the projected numbers of deaths in the population at working ages.
- A.58 In addition, an adjustment has been applied to expenditure on survivor's pension to allow for pension only being available to those with eligible children. As for the 2017 review, it has been assumed that this will lead to a two-thirds reduction in expenditure. This reduction is assumed to be phased in over the period up to 2032 (as a proxy for new pension awards being reduced by two-thirds from 2022).
- A.59 This is the same approach as was adopted for the 2017 review and implicitly allows for the benefit rate to be increased in line with earnings. We made a comparison of the projections made at the 2017 actuarial review with actual expenditure on survivor's benefit from 2018 to 2021. This shows that the projected expenditure over the period was very close to actual expenditure.

## Incapacity benefits

- A.60 Expenditure on short-term incapacity allowance (STIA) has been projected by taking the projected number of contributors and multiplying by the age and sex specific assumed numbers of days of benefit paid per contributor. This was then multiplied by the full benefit rate and by a factor reflecting the average proportion of the full benefit rate which is paid, including an allowance for dependants' increases.
- A.61 The assumptions about the number of days of benefit paid, the proportion of the full rate that is paid and the allowance for dependants were derived by analysing experience over the six years 2016 to 2021. The data indicated that the number of days of benefit paid per contributor has been falling over the period 2016 to 2021, although with some variability from year to year. Therefore, by basing the assumption on the average over this period, we have only made partial allowance for the recent falls in the number of days paid. However, given, over the long-term, the take up of incapacity benefits is potentially subject to considerable uncertainty reflecting, for example, the wider economic and policy context, we consider this is a reasonable approach. A summary of the main assumptions is given in Table A.3 below.

- A.62 Age specific future awards of long-term incapacity allowance (LTIA), excluding lump sum awards, were projected by applying an assumed award rate per contributor to the projected number of contributors. The number of recipients in future years was obtained by taking the number of beneficiaries in 2021, adding in estimated future awards, and deducting the number of claims that are assumed to terminate. The projected benefit costs 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, with an allowance for dependants' increases. Again, the assumptions on the award and termination rates, proportion of the full benefit payable and dependants were derived from experience in the period 2016 to 2021.
- A.63 There is some evidence that rate of award of LTIA has been falling in recent years for men, but rising for women. However, as with the STIA, we consider it is reasonable to set the assumed rate of awards by reference to the average rate of awards over the six years from 2016 to 2021. Again, a summary of the main assumptions is given in Table A.3 below.
- A.64 The cost of LTIA where the degree of disability is less than 20% (which is paid as a lump sum) was projected separately by applying a loading to the projection of LTIA.
- A.65 It has been noted at previous reviews that the number of awards of incapacity pension had been very low and the Government of Jersey indicated that they expected this to continue. The data provided for the 2017 review confirmed that the small numbers of incapacity pension awards had been maintained and we have assumed that the ratio from 2017 continues to apply. Therefore, as for the 2017 review, we have adopted a simplified approach in modelling this benefit, on grounds of materiality: projecting the 2021 actual expenditure in line with the development of expenditure on LTIA.
- A.66 Invalidity benefit and disablement benefit have ceased to be awarded since October 2004, but previous awards continue in payment. The costs of these benefits were run-off allowing for a proportion of them to terminate each year. In the case of invalidity benefit, it was assumed, having regard to experience over the period 2018 to 2021, that the average rate of termination of these benefits would be 3.25% a year at ages up to pension age, with all awards assumed to cease at that age. For disablement benefit, it was assumed that awards would run-off in line with the assumed rates of mortality for the Jersey population.
- A.67 A summary of some of the key assumptions for incapacity benefits is shown in the following table.

**Table A.3: Summary of key assumptions for incapacity benefits – the equivalent assumption for contributors as a whole calculated by applying the age and sex specific assumptions to the contributor numbers in 2021, with the corresponding figures from the 2017 review shown in brackets**

	Men	Women
<b>Short-term incapacity benefit:</b>		
Average number of days of benefit paid in year per contributor	9.7 (10.2)	11.5 (11.2)
Average proportion of full rate of benefit	0.98 (0.97)	0.96 (0.96)

**Long-term incapacity allowance (excluding lump sum awards):**

Average number of awards in year per 1,000 contributors	6.0 (6.5)	7.8 (7.1)
Average proportion of full rate of benefit	0.47 (0.47)	0.48 (0.47)

- A.68 Having obtained the projected expenditure for men and women, we have aligned the emerging initial cash-flow with recent expenditure.
- A.69 The remaining benefits (maternity/parental allowance and grant, death grant, insolvency benefit and home carer’s allowance) each form only a relatively small proportion of total Fund expenditure. Therefore, it is appropriate to adopt a simplified modelling approach for these benefits, and this will not have a material impact on the overall projections.

**Parental allowance and parental grant**

- A.70 Parental allowance replaced maternity allowance from 1 January 2021. Projected expenditure on parental allowance was calculated by taking the average cost per birth, as a multiple of the full benefit rate, over 2021 and multiplying by the full benefit rate and the projected number of births from the population projection. This approach implicitly allows for the benefit rate to be increased in line with earnings. We note that this approach is similar to that previously used to project expenditure on maternity allowance. Since we can only base our modelling on one year of data, there is a large degree of uncertainty in the results. This modelling may need to be refined in future when more data is available.
- A.71 A similar approach was used for parental grants, assuming that the proportion of births qualifying for a grant was the same as the average over the five years 2017 to 2021 (96%). Adoption grant has been included with parental grant, for the purposes of this review.

**Death Grant**

- A.72 The future expenditure on death grants was calculated by increasing the expenditure in 2021 (£697,000) in line with the annual change in the projected number of deaths from the population projection, implicitly allowing for the benefit rate to be increased in line with earnings.

**Insolvency benefits**

- A.73 Insolvency benefits were introduced on 1 December 2012, and total amounts paid have been very variable in each year: from close to zero up to about £1 million. For the 2017 review, based on guidance from the Social Security Department, we assumed that expenditure would average £100,000 a year (in 2017 earnings terms) adjusted in line with changes in the size of the working age population.

A.74 In the last few years expenditure has been around £200,000, but varied, and could be higher than normal due to the economic effects of the Covid pandemic. Jersey's Government Plan forecasts assume expenditure on this benefit will be £250,000 a year, and so this is what we have assumed (in constant 2021 earnings terms), again varying in line with changes in the size of the working age population.

## Home carer's allowance

A.75 Since its introduction in 2013, expenditure on Home Carer's Allowance has remained fairly stable at just under £2 million in each year 2013 to 2021. We have modelled future expenditure by projecting the 2021 expenditure (£2,132,000) in line with changes in the size of the working age population.

## Administration expenses

A.76 The administration expenses relate to the collection of contribution income, the payment of benefit claims and general management costs. These expenses exclude costs generated within the Common Investment Fund (CIF) which are reflected in a deduction from the investment return achieved by the CIF.

A.77 For the purpose of our review, administrative expenses are expressed as a proportion of benefit expenditure. This proportion has shown considerable variability in recent years, although overall the proportion has fallen significantly, as shown in the following table:

**Table A.4: Expenditure on expenses as a percentage of benefit expenditure**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Expenses as % of benefits	3.0%	3.4%	3.2%	2.6%	2.9%	2.2%	2.8%	2.6%	2.8%	2.3%

A.78 There is a wide range of factors that will influence how administrative expenses will develop as a percentage of benefit expenditure, for example:

- growth in benefit expenditure (in constant earnings terms) will allow fixed costs to be spread over a greater volume of benefit payments, meaning administrative expenses will fall relative to benefit expenditure (other things being equal)
- one-off costs on implementing revised contribution or benefit rules
- the replacement of a computer system and how this cost is depreciated
- changes in how costs are shared with the Health Insurance Fund and the Long Term Care Fund.

A.79 The table above shows that expenses have generally been falling as a percentage of benefit expenditure over the past ten years. The Customer and Local Services Department have also indicated no material fluctuations in expenses are expected over the next few years.

A.80 Given the uncertainties, we have assumed that throughout the projection period the level of expenses will average 2.5% of benefit expenditure. This is the same as the assumption of 2.5% made at the 2017 review.

## Indexation assumptions

A.81 In making the projections in this report, it is assumed that all benefit rates (subject to the adjustment below for the OAP), the earnings ceiling and the threshold for supplementation will be increased in future in line with average earnings. The results, where shown in monetary terms, have therefore been shown in constant 2021 earnings terms. This means that assumptions for price inflation and real earnings increases are not generally required for the review.

A.82 Assumptions related to short and medium term growth of prices and earnings have been set in line with the Jersey Fiscal Policy Panel's annual report published in November 2022. The main assumptions are as follows:

**Table A.5: future projected increases in Jersey price and earnings indices - Fiscal Policy Panel**

% p.a.	2021	2022	2023	2024	2025	2026+
RPI	2.7	9.1	9.7	3.1	1.7	2.4
RPI Y	2.7	7.1	6.6	2.6	1.7	2.4
Earnings growth	3.3	6.2	6.2	3.1	1.8	2.8

**Source:**

[www.gov.je/SiteCollectionDocuments/Government%20and%20administration/FPP%202022%20Annual%20Report.pdf](http://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/FPP%202022%20Annual%20Report.pdf)

A.83 It is implicitly assumed that earnings across the whole of the earnings profile (from low to high earners) increase in line with average earnings. However, differential rates of earnings growth across different earnings levels may affect the projection of contributions, as not all earnings are subject to contributions at the same rate. No allowance has been made for such differential growth to occur in the future, but it should be noted that this represents a further area of uncertainty in the projections.

A.84 The States grant was fixed in cash terms in the period 2015 to 2019, and paused from 2020 - 2023. It is expected to be reinstated in 2024 in line with its formula rate.

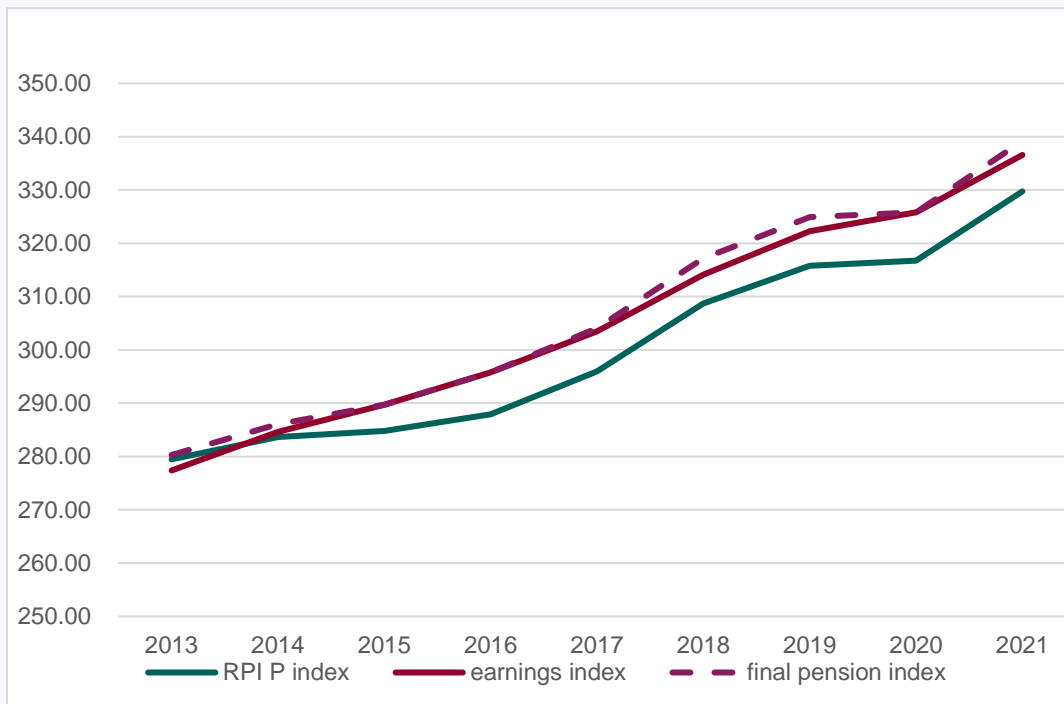
A.85 The mechanism for increasing the OAP is based on price inflation (as measured by the RPI (pensioner) index) and earnings increases. Over the long term the OAP will track earnings, but each year the increase will be no lower than price inflation. Therefore, where price inflation exceeds the increase in average earnings, pensions will be increased in line with price inflation. Where increases in average earnings exceeds price inflation, the increase will be the arithmetic mean of the increase in price inflation and earnings inflation, or an increase such that the pensions index equals the earnings index, if higher. Therefore, the OAP tracks earnings increases in the long term.

- A.86 We note that the OAP was increased in line with RPI (pensioner) in both 2021 and 2022, as this exceeded earnings growth in both years<sup>5</sup>. In projecting the cost of the OAP, we have included allowance for the actual rate of the OAP in 2022.
- A.87 Furthermore, the November 2022 report from the Fiscal Policy Panel indicated that the Panel expects no growth in earnings relative to prices until around 2025. Therefore, for this review, we have made the implicit assumption of zero real earnings growth until 2025, but with a return to positive real earnings growth thereafter.
- A.88 In circumstances where there is little or no growth in earnings relative to prices, the price inflation underpin on increases to the OAP is likely to have a significant impact.
- A.89 Consistent with the approach taken in 2017, we have set the rate for OAP increases relative to earnings, dependant on the expected difference between earnings and RPI P over future years. As RPI P is not published in Fiscal Policy Panel report, we have used RPI as a proxy.
- A.90 High inflation in early years means that OAP increases faster than earnings up until 2024, which is then expected to be readjusted very gradually such that by 2037 it reverts to the earnings index.
- A.91 Using RPI and earnings projections from the Jersey Fiscal Policy Panel from November 2022, and modelling evolution of the OAP, this results in the following assumptions, used in our calculations
- a. In 2022, OAP increased by 1.5% higher than earnings
  - b. In 2023, OAP will increase by 0.4% higher than earnings
  - c. In 2024, OAP will increase by 0.25% lower than earnings
  - d. In 2025, OAP will increase by 0.05% lower than earnings
  - e. From 2025 to 2036, OAP will increase by 0.2% lower than earnings
  - f. Thereafter, the increase is expected to be in line with the earnings index
- A.92 In 2025, the rate of OAP would be about 2.3% higher than it would have been had it only increased in line with earnings. After 2024, it is assumed that there would be a return to positive real earnings growth and therefore that it will be possible gradually to claw back the excess pension increases. We have therefore assumed that the 2.3% loading on the OAP rate would fall to zero by 2037.
- A.93 Chart A.3A shows the increase to OAP in recent years relative to RPI P and Jersey average earnings increases. Chart A.3B shows how we expect these increases to evolve over future years.

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<sup>5</sup> For 2021 and 2022 respectively, the increase in the June RPI (pensioner) index was 4.1% and 7.7% respectively, compared with a increases of 3.5% or 6.2% in average earnings.

**Chart A.3A: Historical Earnings, RPI P and OAP indices**



**Chart A.3B: Future projected OAP increases as percentage rates p.a.**



## Fund projections

A.94 In order to project the Fund balance we need to make an assumption about investment returns net of earnings increases.



A.95 The document “States of Jersey Investment Strategies (September 2022)”<sup>6</sup> outlines the investment strategies adopted for various State sponsored investment funds. The strategy for the Social Security (Reserve) Fund is summarised in the following table:

**Table A.6: Investment strategy for the Social Security (Reserve) Fund**

	Strategic aim	Range
Equities	53%	43% to 63%
Bonds	5%	0% to 10%
Alternatives	40%	30% to 50%
Cash	2%	0% to 4%
	100%	

- A.96 We understand that the strategy is to hold a high proportion of the assets in return-seeking investments, and this is likely to have contributed to the favourable investment performance in recent years. However, high returning assets are also likely to carry a greater level of risk. In the longer-term, the investment strategy could change, for example if it became necessary to start drawing down the assets in order to meet expenditure.
- A.97 At the 2017 review, we assumed future investment returns of 2% a year above earnings growth, as a prudent long term estimate of future returns. We have retained the assumption adopted at the 2017 review so future investment returns are assumed to average 2% a year above earnings growth (net of expenses levied within the CIF). We have discussed and agreed this approach with Treasury team in Jersey and Aon, their investment advisers.
- A.98 This investment return assumption is intended to be indicative of the long term return that might be expected from a generic strategy as set out in Table A.6. To help highlight the significance of the actual investment returns achieved, we have also shown the impact of assuming that investment returns are 3% a year higher or lower than the assumption for the main results.

## GVA projections

A.99 In order to show how expenditure on Fund benefits compares with the size of the economy as a whole, we have expressed our expenditure projections as a percentage of Gross Value Added (GVA). It is therefore necessary to make a projection of GVA on a consistent basis with our expenditure projections. In order to do this, we have taken the latest available figure for GVA (£5.13 bn in 2021) and for future years allowed this to vary in line with the size of the working age population and the growth in average earnings.

<sup>6</sup> <https://statesassembly.gov.je/assemblyreports/2022/r.131-2022.pdf>



# Appendix B: Fund accounts since 1 January 2018

B.1 A summary of the transactions of the Social Security and Social Security (Reserve) Funds in the period 1 January 2018 to 31 December 2021 are summarised in Table B.1, whilst a breakdown of expenditure by benefit is shown in Table B.2. These figures are taken from the Fund's audited accounts and Minister's report.

**Table B.1: Summary of income and expenditure and balances of the Jersey Social Security and Social Security (Reserve) Funds in the period 1 January 2018 to 31 December 2021; fund balances are shown at market values, as stated in the accounts**

£ thousand	2018	2019	2020	2021
<b>Social Security Fund</b>				
Income				
Contribution income	190,387	196,519	191,796	196,542
States Grant	65,300	65,300	-	-
Investment return	290	474	182	(2)
Investment income transferred from Reserve Fund	-	-	-	-
Other income	32	4	1	(1)
<b>Total income</b>	<b>256,009</b>	<b>262,297</b>	<b>191,979</b>	<b>196,539</b>
Expenditure				
Benefit expenditure	236,053	249,094	256,521	260,913
Administration expenditure	6,611	6,391	7,060	6,094
<b>Total expenditure</b>	<b>242,664</b>	<b>255,485</b>	<b>263,581</b>	<b>267,007</b>
Balance at start of year	72,056	85,401	92,213	76,245
Excess of income over expenditure	13,345	6,812	(71,602)	(70,468)
Transfer from Reserve Fund	-	-	55,634	60,475
Balance at end of year	85,401	92,213	76,245	66,252
<b>Social Security (Reserve) Fund</b>				
Balance at start of year	1,779,592	1,717,466	1,983,258	2,092,889
Expenses	0	0	0	1
Transfer to Social Security Fund /miscellaneous	0	0	(55,000)	(59,701)
Investment return	(62,126)	266,630	164,631	230,471
Balance at end of year	1,717,466	1,983,258	2,092,889	2,263,660
<b>Combined Funds</b>				
Combined balance at end of year	1,802,867	2,075,471	2,169,134	2,329,912
Mean of funds at start and end of year	1,827,258	1,939,169	2,122,303	2,249,523
Mean of funds as multiple of total expenditure	7.5	7.6	8.1	8.4
Estimated rate of investment return	-3.3%	14.8%	8.1%	10.8%

- B.2 Contribution income (including that from the Government of Jersey) exceeded expenditure in 2018 and 2019 but was lower in 2020 and 2021. Over the four year period, the average annual rate of investment return is estimated to have been around 7.6% a year (but varied between around -3% and +15% in individual years). The average combined Fund balance as a multiple of annual expenditure increased from 7.5 during 2018 to 8.4 during 2021.
- B.3 Whilst completing our review, there was an error identified in the distribution of contribution income between the HIF and the SSF. The impact on the SSF is minor, and we have been instructed that this will be rectified as an adjustment to the 2023 accounts. We have allowed for this adjustment as part of our projections in 2023.

**Table B.2: Expenditure on social insurance benefits in the period 1 January 2018 to 31 December 2021**

£ thousand	2018	2019	2020	2021
Pensions	188,462	199,226	205,502	208,463
Short term incapacity allowance	14,209	14,983	15,290	14,619
Long term incapacity allowance	17,742	19,895	20,649	22,030
Invalidity benefit	5,690	5,164	4,882	4,520
Survivor's benefits	4,186	3,861	3,734	3,654
Maternity allowance	2,563	2,757	2,638	418
Maternity/Parental and adoption grant	572	568	491	667
Parental allowance			12	3,792
Home carer's allowance	1,736	1,945	2,050	2,132
Insolvency benefit	257	91	578	- 79
Death grant	635	607	693	697
<b>Total benefit expenditure</b>	<b>236,053</b>	<b>249,094</b>	<b>256,521</b>	<b>260,913</b>

# Appendix C: Summary of contributions and benefits

C.1 This appendix summarises our understanding of the central provisions regarding the contributions and benefits set out in the Social Security (Jersey) Law 1974 as at 31 December 2021, on which the estimates in this review have been based. GAD is not aware of any other material changes to the Law. This summary concentrates on those aspects of contribution and benefit rules that are significant in financial terms.

## Old Age Pensions

C.2 The pension age is currently transitioning from 65 to 67, reaching 67 in 2031.

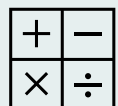
**Table C.1: Planned progression of State Pension Age**

SPA change	Period of change
65 to 66	2020-2025
66 to 67	2026-2031

C.3 Women who registered with social security before 1 January 1975 retain the right to claim a pension from age 60. It is also possible to claim a pension up to 2 years before SPA, at the option of the pensioner, if the necessary qualifying conditions are met. In such cases, the amount of old age pension is reduced by 0.58% for each month between the age at which the pensioner starts to receive their pension and the month in which they attain pension age. The pension continues to be paid at this reduced level for life.

C.4 Under the current rules, the pensioner must have paid contributions for at least six months and, to receive the full rate of old age pension (see Table C.3), must have a LACF (see below) of 1.00.

## LACF - Life average contribution factor



The ratio of the contributions paid or credited to the contributor (based on earnings at the standard earnings limit) that could have been made over a 45 year period between school leaving age and pension age (increasing to 47 in line with increases in State Pension Age). In calculating the LACF, allowance is made for any supplementation contributions (as described in paragraph C.30-31) provided in respect of the pensioner.

- C.5 For those with an LACF less than 1.00, the benefit is reduced pro rata, but no pension is awarded if the LACF is under 0.10. (This 0.10 can be achieved by combining contributions across reciprocal agreement countries.) Women married prior to April 2001 can claim a pension based on their husband’s contribution record to the value of 66% of that payable to their husbands. In the event such a woman is widowed, on reaching pensionable age she may claim 100% of the pension payable to her husband. Women married after 2001 are expected to draw a pension based on their own record. Women born after 1957, reaching pensionable age after 2022, when transitional arrangements regarding survivor’s benefits have exhausted (see C.11) will be able in the event of their husband’s death to substitute their own record with that of their husbands in respect of marriages before April 2001 for the duration of the marriage.
- C.6 From 2013, a new method has been introduced for increasing the rate of old age pension. In broad terms, under this method, pensions will be increased in line with earnings. However, if in any year the increase in the RPI (pensioner) index exceeds the increase in the earnings index, then pensions will be increased in line with the RPI (pensioner) index, but then future increases will be “clawed back” in order to target earnings indexation over the long term.
- C.7 In recent years, RPI (pensioner) has increased by more than the earnings index – as shown below.

**Table C.2: Historical increases in RPI (pensioner) and Average earnings Index**

Measurement date	RPI (pensioner) (% increase)	Earnings index (% increase)
June 2017	2.8	2.6
June 2018	4.3	3.5
June 2019	2.3	2.6
June 2020	0.3	1.1
June 2021	4.1	3.3
June 2022	7.7	6.2

- C.8 The actual increase to pensions that is applied is a more complex formula, and an appropriate long term assumption is explained in A.89.
- C.9 Only the old age pension is subject to the above method of calculating the annual increase. Other benefits are increased each year in line with the increase in the earnings index.

## Benefits for surviving widows and widowers

- C.10 There are two benefits paid to people widowed in April 2001 or later. A survivor's allowance of 1.2 times the standard benefit rate (see Table C.3) is generally paid when a man or woman is widowed and at least one of the spouses or civil partners was under pension age at the date of death. This allowance is paid for the first 12 months of survivorhood, and after that a survivor's pension (based on the standard rate of benefit) may be paid up to pension age. The contribution conditions for receiving these benefits are similar to those for the old age pension, based on the contribution record of the deceased spouse/civil partner. The standard rate is adjusted according to the LACF, with the LACF calculated using the date of death instead of the pension age.
- C.11 The qualifying conditions for survivor's pension have been amended so that, subject to a transitional arrangement for existing cases and future potential cases with dates of birth on or before 31 December 1957, from 2013 only those survivors with at least one dependent child will be awarded survivor's pension.
- C.12 For people widowed prior to April 2001, there were two benefits, widow's allowance and widow's pension. These benefits correspond to survivor's allowance and survivor's pension as described above, but were paid to widows only.

## Benefits on incapacity

- C.13 If the contribution conditions are met, an incapacity benefit is paid when an insured person is sick or injured. The rules for incapacity benefits have changed for claims on or after 1 October 2004. From this date, the benefits available are short term incapacity allowance, long term incapacity allowance and incapacity pension.
- C.14 Short term incapacity allowance is payable for up to one year, provided the individual has paid at least three months' contributions at any time before the start of the calendar quarter immediately prior to that in which the claim is made. The benefit rate is dependent on the worker's contribution record (allowing for credits) in the calendar quarter ended three months before the start of the quarter in which the claim is made.
- C.15 An individual with a health condition that will last for a minimum of 6 months may be eligible for long-term incapacity allowance or incapacity pension, subject to meeting the contribution conditions. The amount of long-term incapacity allowance depends on the extent of the loss of faculty. The recipient of the allowance is permitted to work. Where disablement is assessed at less than 20%, this allowance is paid in lump sum form. Incapacity pension is paid where the individual is unlikely to be able to work again. The amount of the incapacity pension is dependent on the person's contribution record. The standard rate is adjusted according to the LACF in the same way as for old age pension, with contributions deemed to have been paid from the start of the claim up to pension age.
- C.16 For claims prior to October 2004, different benefits were available, i.e. disablement benefit and invalidity benefit (similar to long-term incapacity allowance and incapacity pension, respectively). If these benefits were already in payment at 1 October 2004 they have continued to be paid subject to the same terms.

## Family benefits

- C.17 A parental grant (formerly maternity grant / adoptive parent grant) is paid for each birth in Jersey where either the mother or father has paid contributions for at least three months at any time before the start of the calendar quarter immediately prior to that in which the birth is expected. This is also paid on the adoption of a child. Either parent is also entitled to a parental allowance, for a maximum of 32 weeks, shared between up to two parents. These contribution conditions are similar to those for short-term incapacity allowance except that they refer to a contribution period before the beginning of the pregnancy.

## Bereavement benefits

- C.18 A death grant is paid for all deaths in Jersey where the deceased, the surviving spouse or civil partner 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.

## Home Carer's Allowance (HCA)

- C.19 With effect from 1 January 2013, the tax-funded Invalid Care Allowance (ICA) was replaced with a contributory (i.e. Social Security Fund) Home Carer's Allowance (HCA), with all existing claimants being transferred automatically to the new benefit but with certain amendments being introduced for future cases.

## Insolvency benefit

- C.20 This benefit came into force on 1 December 2012. It provides a benefit to an employee who has lost their job through the insolvency of their employer, and has not been paid all the money owing to them. The benefit covers four components - wages, holiday pay, redundancy payment, and payment in lieu of notice. A maximum of £10,000 can be claimed.

## Benefit rates

- C.21 Table C.3 shows the weekly rates of benefit in force from 2018 to 2021.

**Table C.3: Weekly benefit rates from 1 October (£ per week)**

Year from 1 October	OAP rate <sup>7</sup> - no dependant	OAP rate - with dependant	Standard rate – no dependant	Standard rate - with dependant	Married woman's old age pension	Survivor's allowance
2018	218.96	363.51	216.86	360.01	144.55	260.26
2019	224.35	372.47	222.53	369.46	148.12	267.05
2020	225.96	375.13	224.98	373.52	149.17	269.99
2021	235.27	390.60	232.47	385.91	155.33	279.02
2022	253.40	420.70	246.89	409.85	167.30	296.31

## Contributions

- C.22 Class 1 contributions are required from everyone in the Island between school leaving age and pension age who works for an employer for more than eight hours a week, with some exceptions. On 1 January 2022, a minimum earnings threshold replaced the eight hours a week rule. Employees and employers both pay Class 1 contributions, based on the employee's earnings. Those who do not pay Class 1 contributions pay Class 2 contributions, unless they are exempt.
- C.23 There are some exceptions from the requirement to contribute. In particular, contributions are not required from individuals who have reached pension age and women who were married before 1 April 2001 can "opt out" of paying contributions. In each case, any employer's contributions remain payable.
- C.24 Subject to certain rules, contribution credits are provided for students, the unemployed, the sick, survivors (i.e. people whose spouses or civil partners have died) or those staying at home to care for a child.
- C.25 Contributions payable by employee and employer (payable on earnings up to SEL)<sup>8</sup>.

<sup>7</sup> The OAP rate is the maximum rate paid to those who have paid sufficient contributions. Similarly, for those with sufficient contributions, the standard rate is paid for survivor's pension, short-term incapacity allowance, incapacity pension and maternity/parental allowance. For long-term incapacity allowance, a proportion of the standard rate is payable depending on the extent of the loss of faculty.

<sup>8</sup> This excludes the 2% contribution payable to the Health Insurance Fund (0.8% employee and 1.2% employer).



**Table C.4: Social security contribution rates**

	January 2018 to September 2020	October 2020 to June 2021	July 2021 to September 2022	October 2022 to December 2022
<b>Class 1</b>				
<b>Employee (up to SEL)</b>	5.2%	3.2%	5.2%	3.2%
<b>Employer</b>				
- <b>below SEL</b>	5.3%	5.3%	5.3%	5.3%
- <b>between SEL and UEL</b>	2.0% (pre 1/1/20) 2.5% (post 1/1/20)	2.5%	2.5%	2.5%
<b>Class 2*</b>				
- <b>below SEL</b>	10.5%	8.5%	10.5%	8.5%
- <b>between SEL and UEL</b>	2.0% (pre 1/1/20) 2.5% (post 1/1/20)	2.5%	2.5%	2.5%

C.26 There were temporary periods (where noted) when contribution rates up to the SEL were lower, to assist with Covid recovery and cost of living pressures.

C.27 From 1 January 2022, a minimum earnings threshold of £101 per week replaced the 8 hours rule for employers to start paying and collecting social security contributions. We have assumed this will not have a material impact on contribution income to the Fund, because a very small proportion (less than 4%) of employees have been affected and pay a broadly similar amount in contributions.

C.28 Table C.5 shows the earnings limits which applied between 2018 and 2023.

**Table C.5: Earnings limits**

Year	Monthly Lower Earnings Limit (LEL) (£)	Monthly Standard Earnings Limit (SEL) (£)	Monthly Upper Earnings Limit (UEL) (£)
2018	908	4,290	14,188
2019	940	4,442	14,686
2020	968	4,558	20,800
2021	980	4,610	21,030
2022	1,016	4,764	21,724
2023	1,080	5,060	23,072



- C.29 If earnings are above the Lower Earnings Limit (LEL) and below the SEL, the difference between contributions based on actual earnings and contributions based on the SEL is made up through supplementation. The cost of supplementation is met by a States grant and, an additional contribution of 2.5% of earnings between the SEL and the Upper Earnings Limit (UEL) payable by employers and those individuals paying Class 2 contributions.
- C.30 Prior to 2012, the States grant represented each year's exact cost of supplementation. Now, it is set by a formula where the States grant equals the cost of supplementation net of 2% of the additional 2.5% contributions between the SEL and UEL two years previous, increased by two years' worth of earnings increases. The remaining 0.5% contribution between the SEL and UEL pays for the parental benefit costs.
- C.31 As part of its Covid recovery plan, the States Assembly agreed various measures including:
- a. No States grant from 2020-2023. It is expected to be reinstated as originally set out in the law in 2024.
  - b. A 9 month 2% point temporary contributions reduction up to the SEL for employees and class 2 contributors, 1 October 2020 to 30 June 2021
  - c. 2 year deferred contributions for certain employers and class 2 contributors in Quarter D 2020, QA 2021, QD 2021 and QA 2022.
- C.32 As part of its "mini-budget" to help with the sudden increase in the cost of living, the States Assembly also agreed a 3 month 2% point temporary contributions reduction up to the SEL for employees and class 2 contributors, from 1 October 2022 to 31 December 2022.

# Appendix D: Population projections of the Government of Jersey

- D.1 A key driver of the results of the social security reviews of the Social Security Fund (SSF) and the Health Insurance Fund (HIF) is the assumed size and profile of the Jersey population over the projection period.
- D.2 There are no recent official population estimates or long-term population projections for the Island of Jersey at the time of our review. As a result, GAD have been asked to produce both historic population estimates for the years between the 2011 and 2021 censuses and population projections which cover the review periods. The HIF and the SSF have different review periods but we believe it is appropriate to use the same projections for both reviews. The population projections have been shared and discussed with Statistics Jersey, who we understand are expected to produce a separate set of projections later in 2023
- D.3 The future population projections use the Jersey population estimates at the 2021 census date rolled back to 1 January 2021 as the starting population.
- D.4 These estimates have been projected forward, using mortality and fertility rates from the national 2020-based population projections for England (published by the Office for National Statistics), adjusted to reflect differences between England experience and the derived Jersey experience, for the period 2011-21. The profile of migrants by age and sex were derived from the Jersey experience for the years between the 2011 and 2021 censuses by considering a roll-forward between the intercensal populations assuming no migration and comparing the resulting population with that at the census date.
- D.5 The projections include an allowance for the emergence of the COVID-19 pandemic. In particular, this is one of the factors resulting in projected mortality rates that are generally higher at most ages than the corresponding mortality rates in the projections used for the 2017 review.
- D.6 The following paragraphs provide more detail on the assumptions.

## Mortality

- D.7 The actual number of deaths by 5-year age group for Jersey for the period 2011-20 has been compared to the expected number had mortality rates in Jersey been the same as those experienced in England over these years.
- D.8 Table D.1 shows the mortality adjustment factors used for these projections compared to those used in the 2017 projections. Note that in those projections the adjustment factors were set by Statistics Jersey.

**Table D.1: Adjustment factors for the Jersey mortality projections**

Age group	Male factor		Female factor	
	2021 review	2017 review	2021 review	2017 review

0-15	1.00	1.00	1.00	1.00
16-29	1.00	1.00	1.00	0.90
30-54	0.90	1.00	0.85	0.90
55-59	0.95	1.00	0.85	0.90
60-64	0.95	0.95	0.85	0.90
65-74	0.95	0.95	0.90	0.90
75 and over	0.95	0.95	0.90	0.95

D.9 Table D.2 shows the projected cohort expectations of life in Jersey at age 67 for the 2021 assumptions and those used in the previous review. Cohort life expectancy allows for future changes in mortality as a person ages through time and hence is the length of time someone would be expected to live, on average, if future age specific mortality rates are as projected.

D.10 Projected life expectancies have reduced since 2017 due to changes in the projected mortality rates for England used as the comparators for this review and the projections used in the previous review. This reflects both the lower improvements in mortality in recent years compared to those projected for those years and also changes in the factors applied to estimate Jersey mortality rates.

**Table D.2: Cohort expectation of life at age 67**

Sex	Year age 67 attained	2021 review	2017 review
Male	2021	18.7	20.9
	2041	20.4	23.0
	2061	22.1	25.1
Female	2021	21.3	23.2
	2041	22.9	25.1
	2061	24.5	27.1

## Fertility

D.11 For fertility we have compared Jersey experience to that of England & Wales over the period 2011 to 2021. Historical fertility rates for England & Wales have been used as a proxy for those for England as the latter were not available – it is assumed the adjustment factors derived from this comparison would be very similar to those from a comparison against England only. Table D.3 shows the resulting adjustment factors applied to the projected fertility rates in the ONS 2020-based interim principal population projections for England to derive projected fertility rates for Jersey.

**Table D.3: Adjustment factors for Jersey fertility projections**

Age of mother	Factor 2021 review
15-19	0.60

20-24	0.60
25-29	0.75
30-34	0.95
35-39	0.95
40-44	0.80
45+	0.15

D.12 The assumed total fertility rates for 2022 and 2052 are shown in Table D.4 together with those assumed for the previous review. The table also shows the comparative figure from the national projections for England used as the base for the 2021 review.

**Table D.4: Projected total fertility rates**

	2021 review		2017 review	
	Jersey	England	Jersey	England
2022	1.28	1.55	1.55	1.85
2052	1.37	1.62	1.55	1.85

D.13 The 2020-based projections for England assume that the total number of births in a year is divided between the sexes in the ratio of 105 males to 100 females, in line with recent experience. The experience for Jersey over the period 2011 to 2021 was very similar so this ratio has been assumed for these projections.

## Migration

D.14 The total number of migrants between the 2011 and 2021 census dates has been estimated by rolling forward the 2011 census resident population estimate to the 2021 census date using estimated total births and deaths over that period and comparing to the 2021 census resident population estimate. The difference provides an estimate of the number of migrants over the intercensal period.

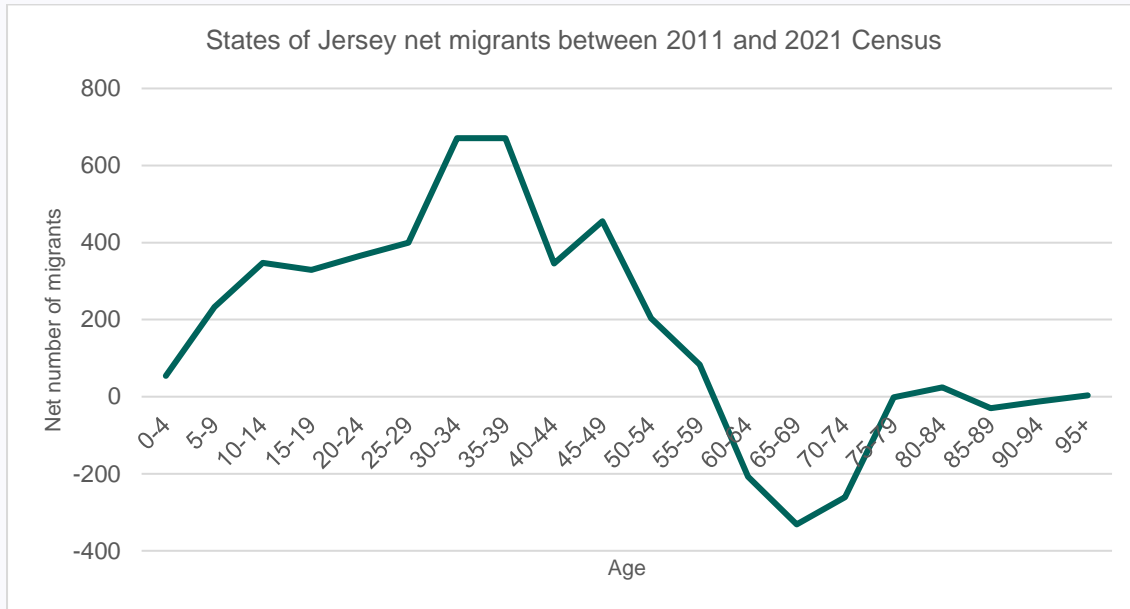
D.15 This calculation suggests that there was a net inward migration of around 3,340 people over the intercensal period. Overall, these figures suggest that there has been an annualised net inward migration of around 335 people a year over the latest intercensal period.

D.16 For comparison, at the last review, according to Statistics Jersey's 2017 estimate of the resident population, net inward migration averaged 1,080 a year over the five years 2013 to 2017, and 880 a year over the ten years 2008 to 2017.

D.17 As part of this review, we have been asked to produce figures on net nil migration, 325, 700 and 1,000 net inward migrants per year. All of these (except for the net nil migration which is a new addition) are the same migration assumptions as for the 2017 review.

D.18 We have analysed the Jersey population data for the period 2011 to 2021 to derive an assumed age and sex distribution of migrants. Chart D.1 shows the age distribution of the net migrants over the intercensal period who were in Jersey at the 2021 census (note that the age distribution of migrants assumed is consistent with 2021 Census report).

**Chart D.1: Number of migrants between 2011 and 2021 census dates in Jersey at the 2021 census date by age at the 2021 census date**



D.19 We have set out the assumed age distribution of migrants in Table D.5. As Statistics Jersey produced the last set of population projections we have not been able to provide last time’s distribution for comparison.

**Table D.5: Age distribution of migrants assumed for the 2021 review**

Age range	325 net inward migration		700 net inward migration		1,000 net inward migration	
	Males	Females	Males	Females	Males	Females
0 – 4	5	2	12	3	16	6
5 – 9	9	13	20	29	29	42
10 – 14	19	17	40	34	55	50
15 – 19	19	13	42	30	59	42
20 – 24	21	14	46	31	64	43
25 – 29	14	24	32	52	45	73
30 – 34	33	35	68	77	102	106
35 – 39	33	31	67	68	97	95
40 – 44	12	20	25	45	35	64
45 – 49	22	22	47	48	69	69
50 – 54	12	7	26	16	38	23
55 – 59	6	1	14	1	18	4
60 – 64	-8	-14	-17	-30	-25	-40
65 – 69	-17	-15	-35	-35	-50	-50
70 – 74	-16	-7	-36	-17	-50	-24

Age range	325 net inward migration		700 net inward migration		1,000 net inward migration	
	Males	Females	Males	Females	Males	Females
75 – 79	-1	-1	-1	-2	-2	-3
80 – 84	0	0	0	0	0	0
85 +	0	0	0	0	0	0

## Net nil migration

D.20 The annual nil migration scenario is more subjective. We have assumed the same outflows as in the annual 325 in-migration assumption. The outflows at younger ages were then reduced to give an annual net nil migration population projection. Table D.6 shows the assumed net migration numbers by age group for this scenario. The total net-migration over all ages is zero for both males and females.

**Table D.6: Age distribution of migrants assumed for the 2021 review in the net nil migration scenario**

Age range	Net nil migration	
	Males	Females
0 – 4	0	0
5 – 9	0	0
10 – 14	0	0
15 – 19	1	1
20 – 24	5	3
25 – 29	1	4
30 – 34	16	17
35 – 39	12	10
40 – 44	4	2
45 – 49	4	4
50 – 54	0	0
55 – 59	0	-4
60 – 64	-9	-14
65 – 69	-17	-15
70 – 74	-16	-7
75 – 79	-1	-1
80 – 84	0	0
85 +	0	0

## Population projections

- D.21 The population of Jersey has been projected to 2082 on four migration bases: nil net migration per year, 325 net inward migration per year, 700 net inward migration per year and 1,000 net inward migration per year.
- D.22 Tables D.7 to D.10 provides details of the projected future population of Jersey by age and sex.

**Table D.7: Projected population at 1 January, assuming nil net in migration per year**

<b>Year</b>	<b>2022</b>	<b>2032</b>	<b>2042</b>	<b>2052</b>	<b>2062</b>	<b>2072</b>	<b>2082</b>
<b>Male</b>							
0-9	5,078	3,928	3,702	3,568	2,938	2,618	2,490
10-19	5,317	5,076	3,925	3,700	3,568	2,937	2,618
20-29	5,845	5,350	5,112	3,968	3,743	3,611	2,985
30-39	6,871	5,981	5,493	5,259	4,122	3,898	3,769
40-49	7,472	6,958	6,086	5,614	5,384	4,262	4,044
50-59	8,339	7,305	6,817	5,985	5,537	5,324	4,232
60-69	5,967	7,702	6,782	6,359	5,607	5,209	5,026
70-79	3,916	4,814	6,363	5,667	5,372	4,773	4,476
80-89	1,898	2,428	3,128	4,273	3,973	3,885	3,580
90-99	308	484	685	999	1,457	1,508	1,583
100+	9	10	17	31	54	88	108
<b>Total male</b>	<b>51,020</b>	<b>50,036</b>	<b>48,110</b>	<b>45,423</b>	<b>41,755</b>	<b>38,113</b>	<b>34,911</b>
<b>Female</b>							
0-9	4,817	3,748	3,527	3,397	2,799	2,497	2,378
10-19	5,268	4,815	3,745	3,527	3,397	2,798	2,494
20-29	5,511	5,300	4,847	3,779	3,563	3,435	2,838
30-39	6,878	5,687	5,478	5,030	3,965	3,749	3,621
40-49	7,538	6,973	5,794	5,590	5,144	4,088	3,877
50-59	8,351	7,448	6,898	5,745	5,554	5,121	4,081
60-69	6,266	7,861	7,023	6,515	5,417	5,252	4,837
70-79	4,409	5,446	6,938	6,243	5,827	4,855	4,745
80-89	2,508	3,165	4,023	5,253	4,871	4,650	3,968
90-99	663	839	1,153	1,604	2,223	2,247	2,264
100+	28	36	50	79	131	201	238
<b>Total female</b>	<b>52,237</b>	<b>51,318</b>	<b>49,476</b>	<b>46,762</b>	<b>42,891</b>	<b>38,893</b>	<b>35,341</b>
<b>Total population</b>	<b>103,257</b>	<b>101,354</b>	<b>97,586</b>	<b>92,185</b>	<b>84,646</b>	<b>77,006</b>	<b>70,252</b>



**Table D.8: Projected population as at 1 January, assuming 325 net in migration per year**

<b>Year</b>	<b>2022</b>	<b>2032</b>	<b>2042</b>	<b>2052</b>	<b>2062</b>	<b>2072</b>	<b>2082</b>
<b>Male</b>							
0-9	5,092	4,120	4,090	4,129	3,634	3,443	3,452
10-19	5,352	5,368	4,395	4,368	4,408	3,913	3,722
20-29	5,874	5,717	5,735	4,768	4,741	4,780	4,290
30-39	6,908	6,323	6,171	6,194	5,232	5,205	5,250
40-49	7,496	7,301	6,728	6,590	6,614	5,670	5,648
50-59	8,361	7,598	7,421	6,881	6,763	6,801	5,885
60-69	5,968	7,793	7,129	7,001	6,532	6,457	6,519
70-79	3,916	4,815	6,441	5,972	5,942	5,610	5,614
80-89	1,898	2,428	3,129	4,329	4,193	4,313	4,218
90-99	308	484	685	999	1,479	1,596	1,767
100+	9	10	17	31	54	89	116
<b>Total male</b>	<b>51,182</b>	<b>51,957</b>	<b>51,941</b>	<b>51,262</b>	<b>49,592</b>	<b>47,877</b>	<b>46,481</b>
<b>Female</b>							
0-9	4,831	3,924	3,892	3,932	3,456	3,272	3,281
10-19	5,297	5,089	4,182	4,151	4,192	3,718	3,535
20-29	5,542	5,586	5,382	4,476	4,446	4,487	4,014
30-39	6,917	6,082	6,130	5,924	5,024	4,995	5,035
40-49	7,575	7,394	6,570	6,621	6,422	5,527	5,503
50-59	8,366	7,735	7,566	6,765	6,826	6,636	5,759
60-69	6,266	7,923	7,346	7,210	6,455	6,539	6,368
70-79	4,409	5,446	6,993	6,543	6,474	5,825	5,958
80-89	2,508	3,165	4,023	5,297	5,113	5,174	4,770
90-99	663	839	1,153	1,604	2,247	2,368	2,535
100+	28	36	50	79	131	204	251
<b>Total female</b>	<b>52,402</b>	<b>53,219</b>	<b>53,287</b>	<b>52,602</b>	<b>50,786</b>	<b>48,745</b>	<b>47,009</b>
<b>Total population</b>	<b>103,584</b>	<b>105,176</b>	<b>105,228</b>	<b>103,864</b>	<b>100,378</b>	<b>96,622</b>	<b>93,490</b>

**Table D.9: Projected population as at 1 January, assuming 700 net in migration per year**

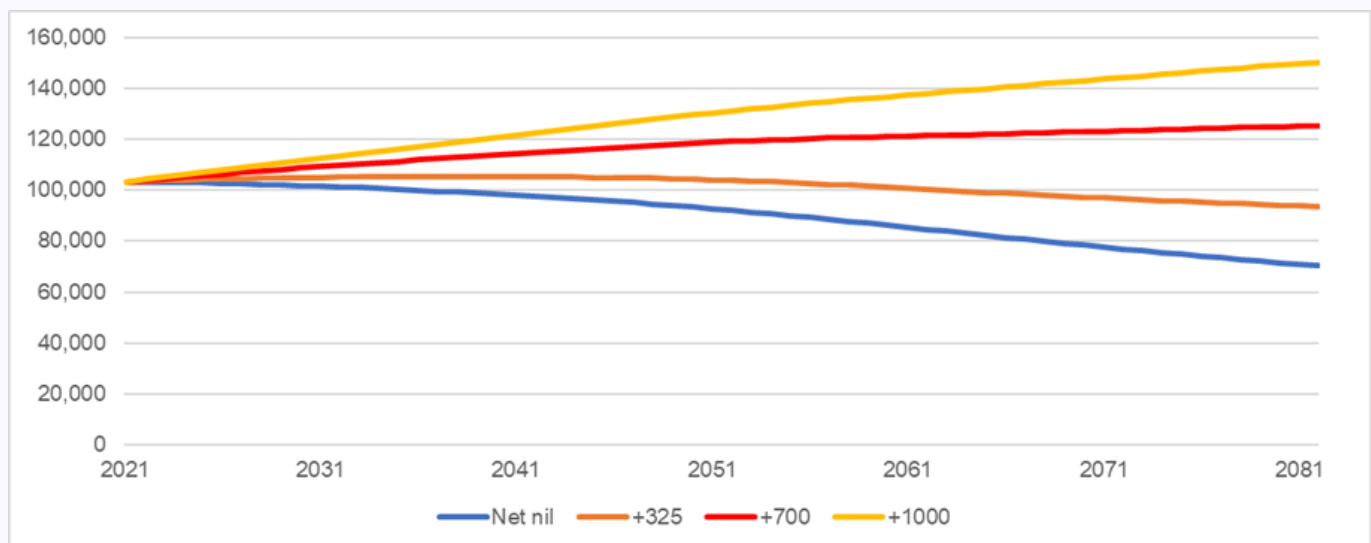
<b>Year</b>	<b>2022</b>	<b>2032</b>	<b>2042</b>	<b>2052</b>	<b>2062</b>	<b>2072</b>	<b>2082</b>
<b>Male</b>							
0-9	5,108	4,432	4,695	4,973	4,645	4,657	4,818
10-19	5,395	5,702	5,026	5,290	5,571	5,243	5,255
20-29	5,918	6,222	6,532	5,859	6,124	6,403	6,076
30-39	6,977	6,902	7,210	7,521	6,856	7,122	7,402
40-49	7,536	7,877	7,811	8,126	8,441	7,790	8,060
50-59	8,385	7,978	8,325	8,282	8,613	8,940	8,317
60-69	5,943	7,791	7,465	7,842	7,848	8,210	8,558
70-79	3,894	4,506	6,155	5,979	6,398	6,497	6,913
80-89	1,898	2,380	2,896	4,108	4,172	4,626	4,868
90-99	308	484	667	923	1,412	1,594	1,913
100+	9	10	17	28	49	84	116
<b>Total male</b>	<b>51,371</b>	<b>54,284</b>	<b>56,799</b>	<b>58,931</b>	<b>60,129</b>	<b>61,166</b>	<b>62,296</b>
<b>Female</b>							
0-9	4,847	4,194	4,443	4,706	4,396	4,412	4,559
10-19	5,330	5,399	4,747	4,996	5,258	4,947	4,964
20-29	5,585	5,981	6,051	5,399	5,650	5,915	5,604
30-39	6,996	6,793	7,190	7,260	6,614	6,865	7,130
40-49	7,629	8,106	7,909	8,309	8,383	7,745	7,999
50-59	8,378	8,116	8,596	8,416	8,827	8,909	8,286
60-69	6,230	7,789	7,569	8,064	7,917	8,345	8,445
70-79	4,397	5,153	6,611	6,484	7,002	6,925	7,387
80-89	2,508	3,132	3,781	4,988	5,057	5,593	5,659
90-99	663	839	1,139	1,501	2,122	2,355	2,765
100+	28	36	50	79	123	193	253
<b>Total female</b>	<b>52,591</b>	<b>55,538</b>	<b>58,086</b>	<b>60,202</b>	<b>61,349</b>	<b>62,204</b>	<b>63,051</b>
<b>Total population</b>	<b>103,962</b>	<b>109,822</b>	<b>114,885</b>	<b>119,133</b>	<b>121,478</b>	<b>123,370</b>	<b>125,347</b>

**Table D.10: Projected population as at 1 January, assuming 1,000 net in migration per year**

Year	2022	2032	2042	2052	2062	2072	2082
<b>Male</b>							
0-9	5,119	4,647	5,134	5,600	5,415	5,567	5,866
10-19	5,425	5,953	5,483	5,970	6,436	6,249	6,402
20-29	5,950	6,592	7,120	6,651	7,140	7,608	7,425
30-39	7,040	7,396	8,043	8,572	8,109	8,600	9,068
40-49	7,567	8,382	8,742	9,391	9,922	9,477	9,971
50-59	8,402	8,299	9,107	9,482	10,144	10,688	10,270
60-69	5,920	7,768	7,727	8,543	8,953	9,641	10,203
70-79	3,879	4,263	5,912	5,981	6,799	7,261	7,983
80-89	1,898	2,341	2,708	3,921	4,153	4,903	5,422
90-99	308	484	654	861	1,350	1,593	2,043
100+	9	10	17	28	47	81	117
<b>Total male</b>	<b>51,517</b>	<b>56,135</b>	<b>60,647</b>	<b>65,000</b>	<b>68,468</b>	<b>71,668</b>	<b>74,770</b>
<b>Female</b>							
0-9	4,862	4,406	4,870	5,314	5,137	5,286	5,572
10-19	5,360	5,672	5,218	5,682	6,126	5,949	6,097
20-29	5,617	6,275	6,589	6,137	6,601	7,045	6,869
30-39	7,049	7,296	7,954	8,268	7,819	8,284	8,730
40-49	7,669	8,633	8,879	9,539	9,857	9,415	9,885
50-59	8,393	8,430	9,392	9,649	10,316	10,644	10,220
60-69	6,206	7,726	7,797	8,760	9,040	9,725	10,068
70-79	4,387	4,941	6,368	6,507	7,461	7,785	8,497
80-89	2,508	3,109	3,604	4,790	5,064	5,954	6,355
90-99	663	839	1,128	1,425	2,041	2,369	2,959
100+	28	36	50	78	116	185	257
<b>Total female</b>	<b>52,742</b>	<b>57,363</b>	<b>61,849</b>	<b>66,149</b>	<b>69,578</b>	<b>72,641</b>	<b>75,509</b>
<b>Total population</b>	<b>104,259</b>	<b>113,498</b>	<b>122,496</b>	<b>131,149</b>	<b>138,046</b>	<b>144,309</b>	<b>150,279</b>

D.23 Chart D.2 shows the projected total population under the different migration scenarios.

**Chart D.2: Projected Jersey population on different annual net in-migration assumptions**



## Population over State Pension age

D.24 Table D.11 shows the numbers of people over pension age in different future years in our principal projection (+325 migration) and compares these to the equivalent numbers from our previous review.

**Table D.11 – Numbers over SPa at the start of the financial year**

<b>Year</b>	<b>2017 review</b>	<b>2021 review</b>	<b>Change</b>
	<b>(000s)</b>	<b>(000s)</b>	<b>(000s)</b>
2021	18.8	18.5	(0.3)
2030	22.6	21.6	(1.0)
2040	27.1	26.6	(0.5)
2050	28.8	29.1	0.3
2060	29.6	29.5	(0.1)
2070	30.5	28.8	(1.7)
2080	N/A	29.2	N/A

# Appendix E: Limitations

## Using this report

- E.1 This work has been carried out in accordance with the relevant actuarial professional standards TAS 100 issued by the Financial Reporting Council (FRC) and APS X4 issued by the Institute and Faculty of Actuaries.
- E.2 This report has been prepared in accordance with the Social Security (Jersey) Law 1974, which requires an actuary to report on the financial condition of the Social Security Fund and the adequacy or otherwise of the contributions payable to support the benefits payable having regard to its liabilities. It is not appropriate for any other purpose.
- E.3 This report has been prepared for the Minister for Social Security (“the Client”), although it is understood that the report will be made publicly available.
- E.4 No person or third party is entitled to place any reliance on the contents of this report, except to any extent explicitly stated herein, and GAD has no liability to any person or third party for any act or omission taken, either in whole or part, on the basis of this report.
- E.5 It is anticipated that the results in this report will be used by the Client for information purposes and for considering possible changes to contributions or benefits payable. However, before deciding on any potential changes, further actuarial advice should be sought in order to confirm the potential impact on the finances of the Fund.
- E.6 GAD are not legal or investment advisers and our advice does not constitute legal or investment advice. Advice in these areas should be sought from appropriately qualified persons or sources.
- E.7 This report has been prepared for use by persons technically competent in the areas covered. This report must be considered in its entirety, as individual sections, if considered in isolation, may be misleading, and conclusions reached by review of some sections on their own may be incorrect.
- E.8 We understand that, in some circumstances, our report may be translated into other languages. In this case, GAD will not be held responsible for any action taken on the basis of the translated report rather than the English version. Any translation of the report must make it clear that only the original English language version is definitive.

## Reliance on data and assumptions

- E.9 In preparing this report, GAD has relied on data and other information supplied by the Client, as described in the report. Any checks that GAD has made on this information are limited to those described in the report, including any checks on the overall reasonableness and consistency of the data. These checks do not represent a full independent audit of the data supplied. In particular, GAD has relied on the general completeness and accuracy of the information supplied without independent verification.

- E.10 We have discussed with the client our approach to using anomalous data. In particular, we have agreed an appropriate approach to contribution data which was found to have errors in the source data.
- E.11 The projections shown in this report depend on the assumptions adopted. While the assumptions adopted form a reasonable basis for the review, in practice the Fund's experience, and hence its financial progress, will be different.
- E.12 The projections only consider income to and expenditure from the Fund and, in particular, make no allowance for any impact these might have on means-tested benefit payments or tax receipts.
- E.13 A significant proportion of old age pensions are paid to individuals who live outside Jersey. The modelling does not attempt to breakdown expenditure between those receiving their pension in Jersey and those residing elsewhere. It is also implicitly assumed that, for each cohort reaching pension age, the split between those on and off the island will remain stable over their remaining lifetimes.
- E.14 The modelling approach means that the projection of contribution income should be consistent with projected expenditure on old age pension. A broad adjustment has been made for some contributions not to generate an entitlement to old age pension. However, given there was little data on which to base this adjustment, it should be regarded as illustrative and should be reconsidered at future actuarial reviews.

## Appendix F: Summary of projections

**Table F.1: Summary of income and expenditure and the projected combined balance in the Social Security and Social Security (Reserve) Funds in 2021 earnings terms and assuming net future immigration of 325 people a year<sup>9</sup>**

£ thousand	2021	2026	2031	2041	2051	2061	2071	2081
<b>Opening fund balance</b>	2,169,134	2,216,283	2,441,143	2,485,267	2,162,601	1,632,093	1,050,186	298,244
<b>Contribution income</b>	193,204	287,086	285,215	274,847	258,298	244,881	235,877	222,668
Benefit expenditure	259,466	278,712	297,383	334,225	339,766	324,752	311,247	314,138
Admin expenditure	6,094	6,968	7,435	8,356	8,494	8,119	7,781	7,853
<b>Total expenditure</b>	<b>265,560</b>	<b>285,679</b>	<b>304,817</b>	<b>342,580</b>	<b>348,260</b>	<b>332,870</b>	<b>319,028</b>	<b>321,991</b>
Excess of contribution income over expenditure	-72,356	1,407	-19,602	-67,733	-89,962	-87,989	-83,151	-99,323
Investment return	230,468	66,509	48,628	49,031	42,357	31,766	20,176	4,977
<b>Closing fund balance</b>	<b>2,329,912</b>	<b>2,284,199</b>	<b>2,470,168</b>	<b>2,466,565</b>	<b>2,114,995</b>	<b>1,575,870</b>	<b>987,212</b>	<b>203,898</b>

<sup>9</sup> Figures may not sum to totals shown due to rounding.

**Table F.2: Summary of income and expenditure and the projected combined balance in the Social Security and Social Security (Reserve) Funds in 2021 earnings terms and assuming net future immigration of 700 people a year**

£ thousand	2021	2026	2031	2041	2051	2061	2071	2081
<b>Opening fund balance</b>	2,169,134	2,230,077	2,512,203	2,825,642	2,973,812	3,078,578	3,247,047	3,328,117
<b>Contribution income</b>	193,204	295,751	303,424	312,182	312,530	313,041	316,002	312,922
Benefit expenditure	259,472	280,016	299,867	340,035	353,233	351,183	354,518	376,470
Admin expenditure	6,094	7,000	7,497	8,501	8,831	8,780	8,863	9,412
<b>Total expenditure</b>	<b>265,566</b>	<b>287,016</b>	<b>307,364</b>	<b>348,536</b>	<b>362,064</b>	<b>359,963</b>	<b>363,381</b>	<b>385,882</b>
Excess of contribution income over expenditure	-72,362	8,735	-3,940	-36,354	-49,534	-46,922	-47,379	-72,960
Investment return	230,468	67,032	50,205	56,151	58,983	61,105	64,470	65,836
<b>Closing fund balance</b>	<b>2,329,912</b>	<b>2,305,845</b>	<b>2,558,468</b>	<b>2,845,440</b>	<b>2,983,262</b>	<b>3,092,761</b>	<b>3,264,138</b>	<b>3,320,993</b>

**Table F.3: Summary of income and expenditure and the projected combined balance in the Social Security and Social Security (Reserve) Funds in 2021 earnings terms and assuming net future immigration of 1,000 people a year**

£ thousand	2021	2026	2031	2041	2051	2061	2071	2081
<b>Opening fund balance</b>	2,169,134	2,241,070	2,568,340	3,094,485	3,616,874	4,218,450	4,967,332	5,694,557
<b>Contribution income</b>	193,204	302,636	317,824	341,602	355,024	366,086	378,243	383,125
Benefit expenditure	259,476	281,043	301,922	344,378	363,613	372,246	388,614	425,215
Admin expenditure	6,094	7,026	7,548	8,609	9,090	9,306	9,715	10,630
<b>Total expenditure</b>	<b>265,570</b>	<b>288,069</b>	<b>309,470</b>	<b>352,988</b>	<b>372,703</b>	<b>381,552</b>	<b>398,329</b>	<b>435,845</b>
Excess of contribution income over expenditure	-72,366	14,567	8,354	-11,386	-17,680	-15,466	-20,087	-52,720
Investment return	230,468	67,449	51,450	61,776	72,162	84,215	99,147	113,367
<b>Closing fund balance</b>	<b>2,329,912</b>	<b>2,323,085</b>	<b>2,628,143</b>	<b>3,144,876</b>	<b>3,671,356</b>	<b>4,287,199</b>	<b>5,046,392</b>	<b>5,755,204</b>



**Table F.4: Summary of income and expenditure and the projected combined balance in the Social Security and Social Security (Reserve) Funds in 2021 earnings terms and assuming nil net future immigration**

£ thousand	2021	2026	2031	2041	2051	2061	2071	2081
<b>Opening fund balance</b>	2,169,134	2,206,493	2,391,858	2,254,782	1,613,957	647,116	-	-
<b>Contribution income</b>	193,204	281,385	273,225	250,032	222,175	198,911	181,208	160,738
Benefit expenditure	259,462	278,138	296,108	330,557	331,358	308,352	284,002	273,717
Admin expenditure	6,094	6,953	7,403	8,264	8,284	7,709	7,100	6,843
<b>Total expenditure</b>	<b>265,556</b>	<b>285,091</b>	<b>303,510</b>	<b>338,821</b>	<b>339,642</b>	<b>316,061</b>	<b>291,102</b>	<b>280,560</b>
Excess of contribution income over expenditure	-72,352	-3,706	-30,285	-88,789	-117,467	117,149	109,894	119,822
Investment return	230,468	66,140	47,536	44,212	31,110	11,777	-	-
<b>Closing fund balance</b>	<b>2,329,912</b>	<b>2,268,926</b>	<b>2,409,109</b>	<b>2,210,206</b>	<b>1,527,600</b>	<b>541,744</b>	-	-

**Table F.5: Summary of benefit expenditure in 2021 earnings terms and assuming net future immigration of 325 people a year<sup>10</sup>**

£ thousand	2021	2026	2031	2041	2051	2061	2071	2081
Old age pension	208,314	223,920	243,010	282,474	291,470	279,622	267,402	273,202
Survivor's benefit	4,240	3,076	2,383	1,859	1,575	1,323	1,157	967
Invalidity benefit <sup>11</sup>	7,327	5,287	3,409	1,282	469	126	16	1
Short-term incapacity allowance	14,619	15,756	15,941	15,442	14,544	13,806	13,444	12,562
Long-term incapacity allowance	19,223	23,325	25,296	25,654	24,496	23,172	22,643	21,074
Incapacity pension	149	181	197	199	190	180	176	164
<b>Total incapacity</b>	<b>41,318</b>	<b>44,550</b>	<b>44,842</b>	<b>42,578</b>	<b>39,700</b>	<b>37,284</b>	<b>36,279</b>	<b>33,800</b>
Parental allowance	2,384	3,349	3,269	3,416	3,181	2,795	2,799	2,741
Parental/adoption grant	530	590	576	602	560	492	493	483
<b>Total maternity</b>	<b>2,914</b>	<b>3,939</b>	<b>3,845</b>	<b>4,018</b>	<b>3,742</b>	<b>3,288</b>	<b>3,293</b>	<b>3,223</b>
Death grant	586	812	873	1,004	1,128	1,184	1,136	1,085
Insolvency Benefit	101	253	255	241	226	215	208	195
Home carer's allowance	1,993	2,160	2,174	2,051	1,925	1,836	1,772	1,665
<b>Total expenditure</b>	<b>259,466</b>	<b>278,712</b>	<b>297,383</b>	<b>334,225</b>	<b>339,766</b>	<b>324,752</b>	<b>311,247</b>	<b>314,138</b>

<sup>10</sup> Figures may not sum to totals shown due to rounding.

<sup>11</sup> This includes both invalidity pension and disablement pension.

**Table F.6: Summary of benefit expenditure in 2021 earnings terms and assuming net future immigration of 700 people a year**

<b>£ thousand</b>	<b>2021</b>	<b>2026</b>	<b>2031</b>	<b>2041</b>	<b>2051</b>	<b>2061</b>	<b>2071</b>	<b>2081</b>
Old age pension	<b>208,314</b>	<b>224,353</b>	<b>243,531</b>	<b>283,338</b>	<b>296,697</b>	<b>295,072</b>	<b>297,469</b>	<b>320,496</b>
Survivor's benefit	<b>4,240</b>	<b>3,110</b>	<b>2,449</b>	<b>2,029</b>	<b>1,848</b>	<b>1,653</b>	<b>1,513</b>	<b>1,325</b>
Invalidity benefit <sup>12</sup>	7,327	5,287	3,409	1,282	469	126	16	1
Short-term incapacity	14,619	16,193	16,855	17,418	17,553	17,619	17,940	17,614
Long-term incapacity	19,223	23,443	25,780	27,536	28,206	28,388	29,057	28,455
Incapacity pension	149	182	200	214	219	221	226	221
<b>Total incapacity</b>	<b>41,318</b>	<b>45,105</b>	<b>46,244</b>	<b>46,451</b>	<b>46,448</b>	<b>46,355</b>	<b>47,239</b>	<b>46,292</b>
Parental allowance	2,384	3,534	3,576	3,954	3,870	3,664	3,794	3,853
Parental/adoption grant	530	623	630	696	682	645	668	679
<b>Total maternity</b>	<b>2,914</b>	<b>4,156</b>	<b>4,206</b>	<b>4,650</b>	<b>4,551</b>	<b>4,309</b>	<b>4,462</b>	<b>4,532</b>
Death grant	<b>586</b>	<b>808</b>	<b>864</b>	<b>978</b>	<b>1,095</b>	<b>1,181</b>	<b>1,194</b>	<b>1,219</b>
Insolvency Benefit	<b>101</b>	<b>261</b>	<b>270</b>	<b>272</b>	<b>272</b>	<b>274</b>	<b>277</b>	<b>274</b>
Home carer's allowance	<b>1,998</b>	<b>2,222</b>	<b>2,303</b>	<b>2,318</b>	<b>2,322</b>	<b>2,339</b>	<b>2,363</b>	<b>2,333</b>
<b>Total expenditure</b>	<b>259,472</b>	<b>280,016</b>	<b>299,867</b>	<b>340,035</b>	<b>353,233</b>	<b>351,183</b>	<b>354,518</b>	<b>376,470</b>

<sup>12</sup> This includes both invalidity pension and disablement pension.

**Table F.7: Summary of benefit expenditure in 2021 earnings terms and assuming net future immigration of 1,000 people a year**

£ thousand	2021	2026	2031	2041	2051	2061	2071	2081
Old age pension	208,314	224,694	244,042	283,806	300,618	307,631	321,318	357,541
Survivor's benefit	4,240	3,139	2,504	2,169	2,069	1,917	1,794	1,608
Invalidity benefit <sup>13</sup>	7,327	5,287	3,409	1,282	469	126	16	1
Short-term incapacity	14,619	16,540	17,579	18,978	19,919	20,592	21,440	21,552
Long-term incapacity	19,223	23,539	26,165	29,022	31,111	32,432	34,022	34,180
Incapacity pension	149	183	203	226	242	252	265	266
<b>Total incapacity</b>	<b>41,318</b>	<b>45,549</b>	<b>47,356</b>	<b>49,508</b>	<b>51,742</b>	<b>53,402</b>	<b>55,743</b>	<b>55,999</b>
Parental allowance	2,384	3,672	3,807	4,348	4,398	4,306	4,558	4,722
Parental/adoption grant	530	647	671	766	775	759	803	832
<b>Total maternity</b>	<b>2,914</b>	<b>4,319</b>	<b>4,477</b>	<b>5,114</b>	<b>5,173</b>	<b>5,065</b>	<b>5,361</b>	<b>5,553</b>
Death grant	586	805	856	958	1,072	1,183	1,246	1,330
Insolvency Benefit	102	266	282	296	308	320	331	334
Home carer's allowance	2,002	2,270	2,405	2,526	2,631	2,728	2,821	2,849
<b>Total expenditure</b>	<b>259,476</b>	<b>281,043</b>	<b>301,922</b>	<b>344,378</b>	<b>363,613</b>	<b>372,246</b>	<b>388,614</b>	<b>425,215</b>

<sup>13</sup> This includes both invalidity pension and disablement pension.

**Table F.8: Summary of benefit expenditure in 2021 earnings terms and assuming nil net future immigration**

<b>£ thousand</b>	<b>2021</b>	<b>2026</b>	<b>2031</b>	<b>2041</b>	<b>2051</b>	<b>2061</b>	<b>2071</b>	<b>2081</b>
Old age pension	<b>208,314</b>	<b>223,920</b>	<b>243,010</b>	<b>282,474</b>	<b>291,470</b>	<b>279,622</b>	<b>267,402</b>	<b>273,202</b>
Survivor's benefit	<b>4,240</b>	<b>3,041</b>	<b>2,324</b>	<b>1,732</b>	<b>1,390</b>	<b>1,100</b>	<b>913</b>	<b>718</b>
Invalidity benefit <sup>14</sup>	7,327	5,287	3,409	1,282	469	126	16	1
Short-term incapacity	14,619	15,456	15,317	14,114	12,558	11,259	10,386	9,102
Long-term incapacity	19,223	23,237	24,959	24,410	22,140	19,802	18,360	16,069
Incapacity pension	149	181	194	190	172	154	143	125
<b>Total incapacity</b>	<b>41,318</b>	<b>44,161</b>	<b>43,879</b>	<b>39,996</b>	<b>35,340</b>	<b>31,341</b>	<b>28,905</b>	<b>25,297</b>
Parental allowance	2,384	3,248	3,068	3,068	2,711	2,241	2,094	1,952
Parental/adoption grant	530	572	540	540	478	395	369	344
<b>Total maternity</b>	<b>2,914</b>	<b>3,821</b>	<b>3,608</b>	<b>3,608</b>	<b>3,189</b>	<b>2,636</b>	<b>2,463</b>	<b>2,295</b>
Death grant	<b>586</b>	<b>810</b>	<b>870</b>	<b>993</b>	<b>1,103</b>	<b>1,132</b>	<b>1,043</b>	<b>946</b>
Insolvency Benefit	<b>101</b>	<b>248</b>	<b>244</b>	<b>219</b>	<b>194</b>	<b>175</b>	<b>160</b>	<b>141</b>
Home carer's allowance	<b>1,989</b>	<b>2,118</b>	<b>2,085</b>	<b>1,869</b>	<b>1,657</b>	<b>1,493</b>	<b>1,363</b>	<b>1,203</b>
<b>Total expenditure</b>	<b>259,462</b>	<b>278,138</b>	<b>296,108</b>	<b>330,557</b>	<b>331,358</b>	<b>308,352</b>	<b>284,002</b>	<b>273,717</b>

<sup>14</sup> This includes both invalidity pension and disablement pension.

**Table F.9: The estimated future contribution income in 2021 earnings terms based on current contribution rates and assuming net future immigration of 325 people a year<sup>15</sup>**

£ thousand	2021	2026	2031	2041	2051	2061	2071	2081
<b>Class 1</b>								
Primary	72,425	89,891	89,064	85,883	80,839	76,685	73,617	69,545
Secondary to SEL	92,047	91,461	90,105	86,303	81,277	77,037	73,965	70,001
SEL to UEL (secondary)	9,992	9,903	9,721	9,188	8,833	8,472	7,968	7,567
States Grant	-	70,400	70,888	69,307	64,350	60,605	59,084	55,628
<b>Combined value of States grant and contributions</b>	<b>174,464</b>	<b>261,655</b>	<b>259,778</b>	<b>250,680</b>	<b>235,299</b>	<b>222,798</b>	<b>214,634</b>	<b>202,742</b>
<b>Class 2</b>								
Primary to SEL	15,033	16,914	16,952	16,049	15,277	14,719	14,144	13,249
SEL to UEL (primary)	3,707	3,898	3,963	3,736	3,548	3,452	3,318	3,091
States Grant	-	4,619	4,523	4,382	4,173	3,912	3,781	3,587
<b>Combined value of States grant and contributions</b>	<b>18,740</b>	<b>25,431</b>	<b>25,437</b>	<b>24,167</b>	<b>22,999</b>	<b>22,083</b>	<b>21,243</b>	<b>19,927</b>
All classes								
Primary to SEL	87,458	106,805	106,015	101,932	96,117	91,404	87,761	82,794
Secondary to SEL	92,047	91,461	90,105	86,303	81,277	77,037	73,965	70,001
SEL to UEL (Total)	13,699	13,801	13,684	12,923	12,382	11,924	11,286	10,658
States Grant	-	75,019	75,411	73,689	68,523	64,517	62,865	59,216
<b>Combined value of States grant and contributions</b>	<b>193,204</b>	<b>287,086</b>	<b>285,215</b>	<b>274,847</b>	<b>258,298</b>	<b>244,881</b>	<b>235,877</b>	<b>222,668</b>

<sup>15</sup> Figures may not sum to totals shown due to rounding.

**Table F.10: The estimated future contribution income in 2021 earnings terms based on current contribution rates and assuming net future immigration of 700 people a year**

£ thousand	2021	2026	2031	2041	2051	2061	2071	2081
Class 1								
Primary	72,425	93,023	95,273	98,153	98,333	98,444	99,071	98,173
Secondary to SEL	92,047	94,522	96,211	98,458	98,687	98,783	99,436	98,673
SEL to UEL (secondary)	9,992	10,209	10,352	10,500	10,736	10,836	10,727	10,690
States Grant	-	71,992	74,849	77,923	77,163	77,000	78,534	77,546
<b>Combined value of States grant and contributions</b>	<b>174,464</b>	<b>269,746</b>	<b>276,685</b>	<b>285,033</b>	<b>284,919</b>	<b>285,063</b>	<b>287,767</b>	<b>285,082</b>
Class 2								
Primary to SEL	15,033	17,325	17,841	18,049	18,368	18,661	18,814	18,532
SEL to UEL (primary)	3,707	3,980	4,148	4,178	4,250	4,359	4,394	4,311
States Grant	-	4,701	4,750	4,922	4,993	4,958	5,027	4,996
<b>Combined value of States grant and contributions</b>	<b>18,740</b>	<b>26,006</b>	<b>26,739</b>	<b>27,149</b>	<b>27,612</b>	<b>27,978</b>	<b>28,235</b>	<b>27,839</b>
All classes								
Primary to SEL	87,458	110,348	113,114	116,202	116,701	117,106	117,885	116,706
Secondary to SEL	92,047	94,522	96,211	98,458	98,687	98,783	99,436	98,673
SEL to UEL (Total)	13,699	14,189	14,500	14,678	14,986	15,194	15,121	15,001
States Grant	-	76,693	79,599	82,845	82,156	81,958	83,561	82,542
<b>Combined value of States grant and contributions</b>	<b>193,204</b>	<b>295,751</b>	<b>303,424</b>	<b>312,182</b>	<b>312,530</b>	<b>313,041</b>	<b>316,002</b>	<b>312,922</b>

**Table F.11: The estimated future contribution income in 2021 earnings terms based on current contribution rates and assuming net future immigration of 1,000 people a year**

£ thousand	2021	2026	2031	2041	2051	2061	2071	2081
Class 1								
Primary	72,425	95,510	100,185	107,813	112,024	115,361	118,831	120,423
Secondary to SEL	92,047	96,956	101,047	108,031	112,318	115,696	119,212	120,962
SEL to UEL (secondary)	9,992	10,459	10,868	11,562	12,259	12,709	12,898	13,137
States Grant	-	73,231	77,915	84,600	87,044	89,612	93,512	94,515
<b>Combined value of States grant and contributions</b>	<b>174,464</b>	<b>276,156</b>	<b>290,015</b>	<b>312,006</b>	<b>323,645</b>	<b>333,377</b>	<b>344,453</b>	<b>349,036</b>
Class 2								
Primary to SEL	15,033	17,662	18,573	19,697	20,900	21,833	22,532	22,710
SEL to UEL (primary)	3,707	4,047	4,301	4,547	4,831	5,094	5,256	5,280
States Grant	-	4,770	4,935	5,353	5,647	5,781	6,002	6,098
<b>Combined value of States grant and contributions</b>	<b>18,740</b>	<b>26,480</b>	<b>27,809</b>	<b>29,596</b>	<b>31,378</b>	<b>32,708</b>	<b>33,790</b>	<b>34,088</b>
All classes								
Primary to SEL	87,458	113,172	118,758	127,509	132,925	137,194	141,363	143,133
Secondary to SEL	92,047	96,956	101,047	108,031	112,318	115,696	119,212	120,962
SEL to UEL (Total)	13,699	14,507	15,169	16,109	17,091	17,803	18,154	18,417
States Grant	-	78,001	82,850	89,953	92,691	95,393	99,514	100,613
<b>Combined value of States grant and contributions</b>	<b>193,204</b>	<b>302,636</b>	<b>317,824</b>	<b>341,602</b>	<b>355,024</b>	<b>366,086</b>	<b>378,243</b>	<b>383,125</b>



**Table F.12: The estimated future contribution income in 2021 earnings terms based on current contribution rates and assuming nil net future immigration**

£ thousand	2021	2026	2031	2041	2051	2061	2071	2081
Class 1								
Primary	72,425	87,859	85,026	77,810	69,231	62,033	56,288	49,965
Secondary to SEL	92,047	89,443	86,098	78,270	69,691	62,377	56,609	50,365
SEL to UEL (secondary)	9,992	9,700	9,314	8,357	7,603	6,898	6,108	5,461
States Grant	-	69,354	68,237	63,384	55,652	49,445	45,708	40,407
<b>Combined value of States grant and contributions</b>	<b>174,464</b>	<b>256,357</b>	<b>248,675</b>	<b>227,820</b>	<b>202,178</b>	<b>180,752</b>	<b>164,713</b>	<b>146,198</b>
Class 2								
Primary to SEL	15,033	16,624	16,342	14,737	13,268	12,094	10,972	9,653
SEL to UEL (primary)	3,707	3,837	3,831	3,443	3,094	2,849	2,585	2,259
States Grant	-	4,567	4,377	4,032	3,636	3,216	2,939	2,628
<b>Combined value of States grant and contributions</b>	<b>18,740</b>	<b>25,028</b>	<b>24,550</b>	<b>22,212</b>	<b>19,997</b>	<b>18,159</b>	<b>16,496</b>	<b>14,540</b>
All classes								
Primary to SEL	87,458	104,484	101,368	92,547	82,499	74,126	67,259	59,618
Secondary to SEL	92,047	89,443	86,098	78,270	69,691	62,377	56,609	50,365
SEL to UEL (Total)	13,699	13,538	13,144	11,800	10,697	9,747	8,694	7,720
States Grant	-	73,920	72,614	67,416	59,288	52,661	48,647	43,035
<b>Combined value of States grant and contributions</b>	<b>193,204</b>	<b>281,385</b>	<b>273,225</b>	<b>250,032</b>	<b>222,175</b>	<b>198,911</b>	<b>181,208</b>	<b>160,738</b>



**Government Actuary's Department**

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