Government of Jersey Long Term Care Fund

Actuarial review as at 31 December 2021

R.95/2023

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QAS Institute and Faculty of Actuaries Quality Assurance Scheme

AON

Executive Summary

This actuarial review has been carried out, as required by Law, to assess the financial condition of the Jersey Long-Term Care Fund and the adequacy or otherwise of the contributions payable to the Fund to support the benefits provided.

Purpose of review

The Long-Term Care (Jersey) Law 2012 introduced the Long-Term Care Fund (LTCF or "Fund") and set out high level principles for the operation of the LTCF. The LTCF provides universal and means-tested benefits to individuals with long term care needs, and is funded through central grants from the Government of Jersey and income-related contributions from income tax payers.

Under this Law, there is a requirement for the Minister for Social Security to appoint an actuary to review the LTCF once every three years and report on:

- The financial condition of the Fund; and
- The adequacy or otherwise of the contributions payable to the Fund to support the benefits payable.

Actuarial reviews of the LTCF are now carried out every four years to fit with the Government's strategic and financial planning cycles, the first of which is the current 31 December 2021 actuarial review. As a result, we expect the Government of Jersey to update the relevant legislation accordingly.

Further details of the long term care scheme (including eligibility, benefits provided and financing of the LTCF) are set out in Appendix A.

Format of results

We have projected the finances of the LTCF for the next 25 years on various different assumptions, and then extracted key data for presentation in this report, including:

1. A comparison of the income and expenditure of the LTCF, for each year in the future, to establish whether the contributions will be adequate to meet the benefits in the longer term.
2. A projection of the balance in the LTCF. If the LTCF accumulates a significant positive balance then the investment return will help to finance the benefits. Conversely, if the LTCF balance is projected to go negative then this indicates that the current contributions are inadequate.
3. The "breakeven" contribution rate; that is, the contribution rate that would be required for each year in the future to exactly meet the benefit payments in that year. This represents the contributions that would be required if the LTCF operated on a "pay as you go" basis.
4. A projection of how the total care costs are expected to be shared between individuals and the LTCF.

5. The number of months' worth of expenditure that would be covered by the LTCF balance at the start of any given year. In our view it would be prudent to ensure that the buffer is at least six months' worth of expenditure.

The methodology used in the review is described in Appendix B.

Results – Central scenario

The central results set out in this paper ("central scenario") in Section 2 are based on a single set of assumptions derived using a range of data sources either publicly available or provided by various Government of Jersey departments. The data sources are listed, and assumptions derivations described, in Appendices C and D.

Key results – Central scenario (all in real terms)

Year	2022	2027	2032	2037	2042	2047
Income	*£69.8m*	*£74.3m*	*£76.1m*	*£78.0m*	*£80.0m*	*£82.3m*
Expenditure	*£61.3m*	*£70.2m*	*£78.6m*	*£88.8m*	*£97.4m*	*£115.2m*
Net Income / (Expenditure)	*£8.5m*	*£4.1m*	*(£2.5m)*	*(£10.8m)*	*(£17.4m)*	*(£32.9m)*
Breakeven contribution rate	*1.2%*	*1.3%*	*1.6%*	*1.9%*	*2.1%*	*2.5%*
Projected LTCF balance at end of year	*£43.6m*	*£76.8m*	*£83.7m*	*£57.7m*	*(£3.6m)*	*(£125.1m)*

Since our previous actuarial review, the Government of Jersey has increased the LTC contribution rate from 1.0% p.a. to 1.5% p.a. This has substantially increased the income flowing into the LTC Fund over the period of projection, which taken together with the central Government grant is projected to exceed the expected expenditure for the next 7 years.

As a result, the Fund balance increases over this period and peaks at a bit over 12 months' Fund expenditure. Thereafter the Fund balance declines, and is estimated to reduce to around:

- 6 months' worth of Fund expenditure by 2038
- 3 months' worth of Fund expenditure by 2040 and
- To nil by 2042.

Comparison with the previous actuarial review

At the time of the previous review the contribution rate was 1%, but we did a sensitivity analysis which looked at how the LTCF would develop if the contribution rate were increased to 1.5% from 2020. That increase was in fact made, so we have compared the results from this Review with the results of that sensitivity analysis. The Table below shows some key comparative statistics:

Comparison

	This Review	Previous Review
Expenditure starts to exceed income	2029	2027
LTCF balance ceases to grow	2030	2028
LTCF balance falls to zero	2042	2038
Average proportion of care costs borne by individuals	27%	26%

Source: Aon

It can be seen that the results of this Review show a modest improvement in the financial outlook for the LTCF compared with the last Review.

Risks and uncertainties

Long term sensitivity to assumptions and changes to scheme parameters

The central scenario results are calculated based on current LTC scheme parameters and a wide range of assumptions. In practice, the longer term financial position of the LTCF could differ from the central scenario projections due to:

- Actual experience over the coming years deviating from the "central scenario" assumptions.
- Future government changes to any of the LTC scheme parameters.

To illustrate how changes to assumptions and future government policy could impact the long term financial position of the LTCF and the adequacy of LTC contribution rates, we have carried out modelling on a range of alternative scenarios (in each case, altering one key assumption or scheme parameter).

The main results under each of these alternative scenarios, and a discussion of the conclusions that can be drawn from these, are set out in Section 4 (with detailed results provided in Appendix E). Key findings include the following:

- If individuals all spend 6 months' longer in long term care than assumed under the central scenario, expenditure would be expected to rise by around 20% at the end of the projection period (increasing the breakeven LTC contribution rate to over 3.4% by 2047).
- If the proportion of individuals receiving care in their own homes (rather than an approved care home) were to increase over time, this would be expected to gradually reduce expenditure (as domiciliary care costs are lower than residential care costs, and there are no co-payment costs for domiciliary care), with total expenditure by 2047 reduced by around 10%.
- If the standard care cost cap were to increase 3% pa faster than average earnings growth, this would be expected to result in a gradual reduction to expenditure as more costs are assumed to be met by individuals (with expenditure levels expected to be c. 10% lower by 2047). The reverse would also be the case.

- A freeze to the asset disregard level would be expected to reduce the proportion of individuals that would receive means tested support, and therefore reduce long term expenditure.
- An increase to the LTC contribution rate from 1.5% to 2.0% from 2024 is estimated to extend the time until the Fund reaches nil beyond 2047, which is beyond the period of our projection of the Fund.

Key conclusions

Financial position – The LTCF balance is around 9 months' worth of expenditure, and is projected to grow till around 2030 and then start to fall but would not fall to an imprudent level until 2038.

Adequacy of LTC contributions – Current LTC contributions are more than sufficient to meet current levels of expenditure, and that is expected to remain the case until 2029. Thereafter the breakeven contribution rate rises to 2.0% by 2041 and up to 2.5% by the end of the projection period (2047).

At some point is likely that the contributions will need to be increased (assuming benefits are not significantly reduced). There is not a financial imperative for that to be done in the immediate future, although equity between generations may suggest an earlier increase than is required by the financial position of the Fund.

Contents

1 Introduction and purpose

Following the introduction of the Long Term Care scheme in 2014, and the initial review in 2017, this is the second actuarial review of the Long Term Care Fund.

Legislative requirements

The Long-Term Care (Jersey) Law 2012 introduced the Long-Term Care Fund (LTCF) and set out high level principles for the operation of the Fund including:

- Eligibility conditions for benefits;
- Setting benefit levels;
- Approval of care homes / packages; and
- Procedures for claiming benefits.

Under this Law, there is a requirement for the Minister for Social Security to appoint an actuary to review the LTCF once every three years and report on:

- The financial condition of the Fund; and
- The adequacy or otherwise of the contributions payable to the Fund to support the benefits payable.

Actuarial reviews of the LTCF are now carried out every four years to fit with the Government's strategic and financial planning cycles, the first of which is the current 31 December 2021 actuarial review.

In each review, the actuary should *"make a report to the Minister on the financial condition of the Fund and the adequacy or otherwise of the contributions payable to the Fund to support the benefits under this Law having regard to its liabilities under this Law."*

Current actuarial review

We have projected the finances of the LTCF for the next 25 years on various different assumptions, and then extracted key data for presentation in this report, as follows:

1. A comparison of the income and expenditure of the LTCF, for each year in the future, to establish whether the contributions will be adequate to meet the benefits in the longer term.
2. A projection of the balance in the LTCF. If the LTCF accumulates a significant positive balance then the investment return will help to finance the benefits. Conversely, if the LTCF balance is projected to go negative then this indicates that the current contributions are inadequate.
3. The "breakeven" contribution rate; that is, the contribution rate that would be required for each year in the future to exactly meet the benefit

payments in that year. This represents the contributions that would be required if the LTCF operated on a "pay as you go" basis.

4. A projection of how the total care costs are expected to be shared between individuals and the LTCF. The total costs of long term care will increase inexorably as a result of the ageing of the population. However, the proportion of those costs that are borne by the Government is determined by the rules of the LTCF.

5. The number of months' worth of expenditure that would be covered by the LTCF balance at the start of any given year. It is essential to have a reasonable buffer within the Fund to withstand fluctuations in demand and any unforeseen circumstances. We think a reasonable buffer would be six months expenditure and a minimum buffer should be at least three months' worth of expenditure.

This report is prepared as part of the actuarial review of the LTCF as at 31 December 2021 and includes the following sections:

Section	Description
Executive Summary	A high level summary of the key findings of the actuarial review.
Results of analysis for central scenario	Results of actuarial modelling of the LTCF's income and expenditure, using a base set of parameters and assumptions (the "central scenario"). Including, as required by the Law, specific comments on the financial condition of the Fund and the adequacy or otherwise of Long-Term Care contributions.
Comparison with the previous actuarial review	A discussion of the key changes from the previous actuarial review and their individual impact on the LTCF.
Risks and uncertainties	Results of actuarial modelling of the LTCF's income and expenditure on a range of alternative assumptions / scheme parameters, to illustrate the sensitivity to certain factors.
External developments	A brief consideration of developments in Long Term Care provision elsewhere in the developed world.
Appendix A: Description of the Long-Term Care Fund	An overview of the benefits provided by the LTC scheme, and how the LTCF is financed.
Appendix B: Calculation methodology	Details of the actuarial methodology applied for this review.
Appendix C: Data	A list of key data sources used within the review, either directly or to set assumptions required for modelling.
Appendix D: Modelling assumptions	Details of how assumptions underlying the "central scenario" have been derived, using the data sources referenced in Appendix C.

Appendix E: Detailed results	Tables showing results of the central scenario modelling, and all sensitivity runs, in more detail.
Appendix F: Glossary	Descriptions of certain terminology used within the report.

Next actuarial review

In future, we understand it is envisaged that actuarial reviews of the LTCF will be carried out every four years to fit with the Government's strategic and financial planning cycles. As such, the next review of the LTCF is due to be carried out as at 31 December 2025.

2 Results of analysis for central scenario

Below we set out the key results of our actuarial modelling of the LTCF on a base set of parameters and assumptions (the "central scenario").

Modelling approach

A detailed explanation of the calculation methodology used for this actuarial review of the LTCF is set out in Appendix B.

The central scenario

As for any actuarial analysis, the results of this review are highly sensitive to the data and assumptions used to model income and expenditure. The results shown in this section of the report are based on our "central scenario" assumptions - a central set of assumptions derived using a range of data sources either publicly available or provided by various Government of Jersey departments.

Further, as the LTCF is still relatively immature, there remains a relative sparsity of directly relevant data available in order to set assumptions credibly. We expect this to improve as the Fund matures.

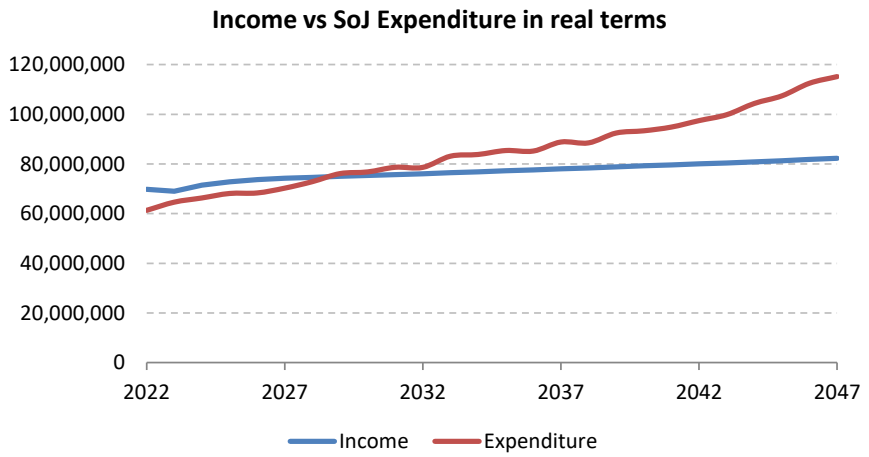
Details of the central scenario assumptions are set out in Appendix D and the data sources used to derive these assumptions are listed in Appendix C.

All results are shown in real terms i.e. future nominal levels of income / expenditure have been expressed in "today's money" terms, by discounting back in line with the long-term inflation assumption of 2.4% p.a. as set out in the Fiscal Policy Panel Annual Report – November 2022, Figure 1.28.

Results – Projected income and expenditure

Chart 2.1 below shows estimated income (from LTC contributions and Government grants) and estimated expenditure (covering universal benefits, means-tested support and administrative costs) over the next 25 years.

Chart 2.1: Projection of LTCF income and expenditure – Central Scenario

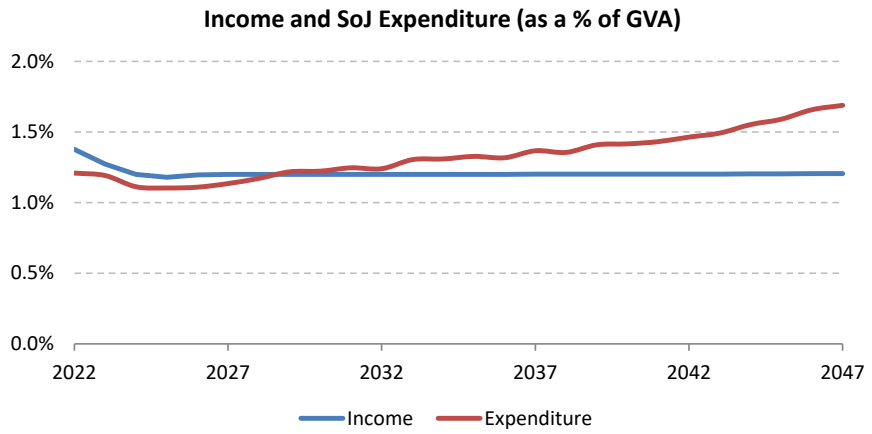


It can be observed that Fund expenditure is currently lower than Fund income, but that reverses from around 2029 onwards. Beyond 2029, Fund expenditure is estimated to exceed Fund income and to grow at a faster rate than Fund income. This is primarily a result of Jersey's ageing population:

- The population aged over 65 is expected to increase from around 19,000 individuals at the start of 2022 to 30,100 individuals in 2047 (an increase of around 58%).
- In particular, the population aged over 80 is expected to increase from around 5,400 individuals at the start of 2022 to 10,300 individuals in 2047 (an increase of around 90%).
  - This is expected to result in rapid growth in the number of individuals requiring long term care, and hence rapid growth in LTCF expenditure.
  - The growth in the over 80 population shows a particularly noticeable increase from 2038 onwards.
- By contrast, the working age population (ages 16 to 65) is assumed to rise steadily (in the base +700 annual net inward migration scenario), from around 85,000 individuals at the start of 2022 to around 87,100 individuals in 2047 (a rise of around 2%).
  - As it is this latter group that contributes the majority of LTC contributions (supplementing central Government grants to the Fund which are assumed to rise in line with RPI), over the projection period the growth in income is expected to be much slower than the corresponding more rapid increase in LTCF expenditure.

To provide an indication of the level of LTCF income/expenditure relative to Jersey's economic output, chart 2.2 below sets out projected income/expenditure as a proportion of Jersey Gross Value Added (GVA). A similar pattern to chart 2.1 can be observed.

Chart 2.2: Projection of LTCF income and expenditure (as a proportion of GVA) – Central Scenario

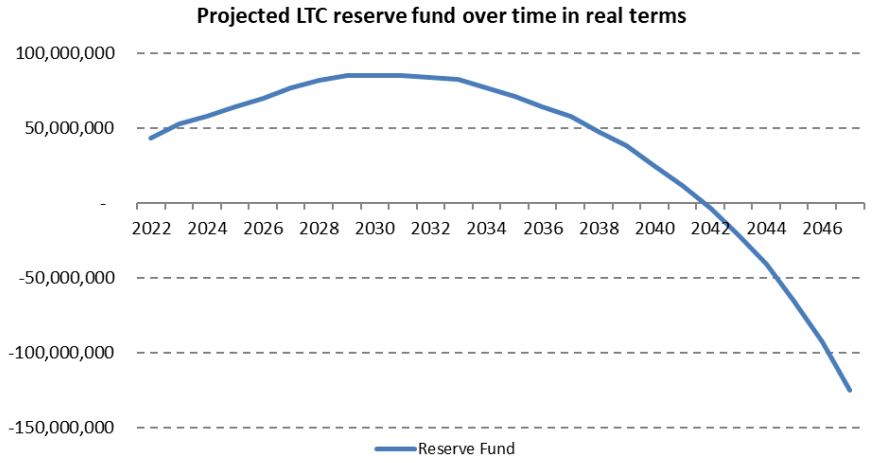


It is noted that the increase in GVA over the next three years is materially higher than inflation, as set out in the Fiscal Policy Panel Annual Report – November 2022, which explains the income and expenditure falling as a proportion of GVA initially.

Results – Projected LTCF balance over time

The balance in the LTCF was around £44M at 31 December 2021. Allowing for assumed gross investment returns of 4% p.a. and the projected income and expenditure over the next 25 years, it can be seen (in chart 2.3 below) that the Fund is projected to continue increasing till around 2030 and then start to fall until it is estimated to become negative in 2042 .

Chart 2.3: Projection of LTCF balance – Central Scenario



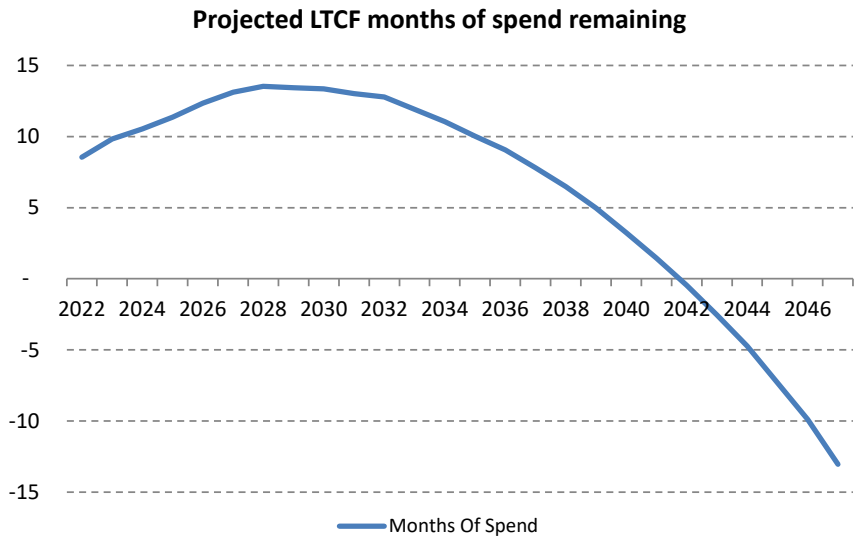
In practice, there is no facility for the Fund to go negative (as this would imply that there are insufficient monies available to pay for the immediate

care costs payable). It is therefore important for the Government to ensure that the LTCF balance is sufficiently large to avoid the risk of going negative in the short-term. We observe the following:

- The Fund balance is currently equal to around 9 months' worth of expenditure.
- The Fund balance is expected to fall below 6 months' worth of expenditure in 2038.
- The Fund balance is expected to fall below 3 months' worth of expenditure in 2040.

The chart below (chart 2.4) shows the number of months of expenditure that can be covered by the Fund balance over the projection period.

Chart 2.4: Projection of LTCF months of spend remaining – Central Scenario



For each year, the number of months of expenditure is estimated by calculating how many months of expenditure for the year can be covered by the Fund balance at the start of the year.

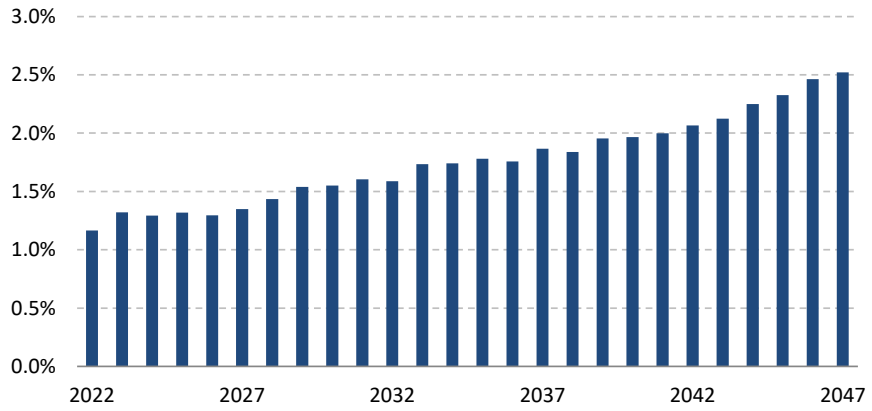
If the Fund follows our central projection then changes to either benefits or contributions will be needed before 2038 to avoid the Fund falling to an imprudently low level.

Results – Break-even contribution rates

As highlighted in the previous charts in this section, the rise in expenditure compared to income from 2029 onwards is expected to place an increasing strain on the LTCF, meaning that – in the absence of a change to the benefits provided - the current level of LTC contributions is expected to be inadequate to support the benefits provided from around 2029 onwards.

To provide an indication of the extent of the inadequacy of future LTC contributions, the following chart (chart 2.5) shows the "breakeven" level of LTC contribution rates (i.e. the level of contribution rates that would be required in each future year for total income to equal total expenditure).

Chart 2.5: "Breakeven" LTCF contribution rate – Central Scenario



This shows:

1. The current LTC contribution rate (of 1.5%) is sufficient – together with the central Government grant - to more than cover existing expenditure in the period to 2029.
2. By 2029, the breakeven LTC contribution rate rises to around 1.5%.
3. By 2041, the breakeven LTC contribution rate rises to around 2.0%.

In a later section of this report (Risks and uncertainties), we illustrate how a change to the LTC contribution rate would change the balance between LTCF income and expenditure and would change the expected profile of the LTCF balance over time.

Results – Share of care costs between the Government and Individuals

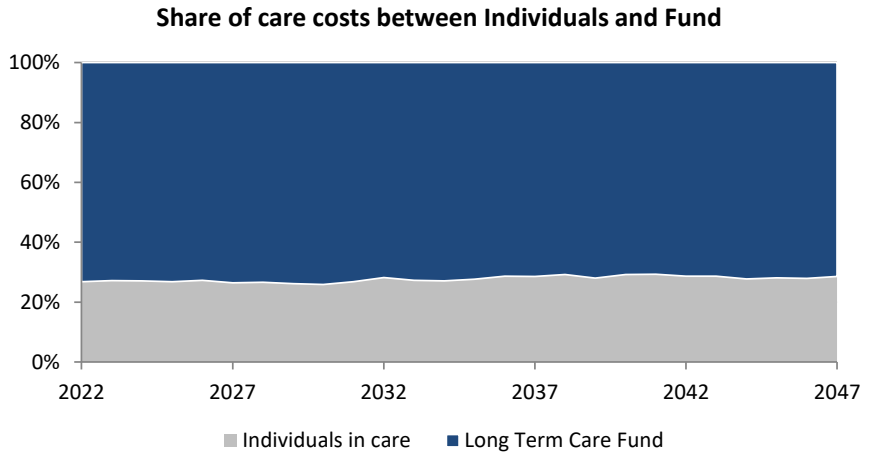
Costs associated with the LTC scheme are shared between individuals receiving care and the Government. In particular:

- Ignoring means-testing, standard care costs (for individuals who have yet to reach the standard care costs cap) and standard co-payments are met by individuals.
- For individuals whose assets and income meet certain criteria, some of these costs are met by the Government.
- In addition, the Government meets all standard care costs for individuals who have reached the standard care costs cap.
- Finally, the Government meets the cost of all administration requirements of the Scheme.

The chart below (chart 2.6) shows the proportion of gross expenditure met, respectively, by the Government (blue) and individuals receiving care (grey). It can be seen that, on average, around 27% of total expenditure is met by individuals and this stays broadly constant over the projection period. This is not uniform, and ratios for different individuals will significantly differ, for example:

- Some individuals (by virtue of means-tested support) will have all costs paid for by the Government.
- Some individuals with significant assets / income (and who have yet to reach the standard care costs cap) will meet 100% of expenditure relating to them.

Chart 2.6: Projection of LTCF income and expenditure – Central Scenario



Comparison with the previous actuarial review

At the time of the previous review the contribution rate was 1%, but we did a sensitivity analysis which looked at how the LTCF would develop if the contribution rate were increased to 1.5% from 2020. That increase was in fact made, so we have compared the results from this Review with the results of that sensitivity analysis. The Table below shows some key comparative statistics:

Comparison

	This Review	Previous Review
Expenditure starts to exceed income	2029	2027
LTCF balance ceases to grow	2030	2028
LTCF balance falls to zero	2041	2038
Average proportion of care costs borne by individuals	27%	26%

Source: Aon

It can be seen that the results of this Review show a modest improvement in the financial outlook for the LTCF compared with the last Review.

Key conclusions

Financial position – The LTCF balance is around 9 months' worth of expenditure, and is projected to grow till around 2030 and then start to fall but would not fall to an imprudent level until 2038.

Adequacy of LTC contributions – Current LTC contributions are more than sufficient to meet current levels of expenditure, and that is expected to remain the case until 2029. Thereafter the breakeven contribution rate rises to 2.0% by 2041 and up to 2.5% by the end of the projection period (2047).

3 Changes since the previous actuarial review

The previous actuarial review was carried out as at 31 December 2017. The LTC scheme has continued to evolve since this date, and this section discusses some of the key changes since then and the implications for the results of this actuarial review.

Key changes

We note that the following data into our actuarial review has changed since our previous review:

- The LTC contribution rate has increased from 1.0% p.a. to 1.5% p.a.
- The projected population projections have changed materially since our previous actuarial review.
- The proportion of the population in care requiring higher care levels has increased.
- The assumed level of illiquid assets has increased substantially, largely driven by the significant increase in average house prices since our previous actuarial review.

The impact of the above key changes are discussed in more detail below.

Increase in the LTC contribution rate

Following our previous actuarial review, the LTC contribution rate was increased from 1.0% p.a. to 1.5% p.a. from 1 January 2020.

This addressed the fund inadequacy that was identified at the previous review.

Changes to the future projected population

For this actuarial review, we have been provided with a new set of projected population data for the Government of Jersey by the UK Government Actuary's Department as at 1 January 2021, which was based on the 2021 Census. At our previous review we used projected population data that was produced by Statistics Jersey.

Compared to our previous actuarial review, we have been provided with new population projections that show the following for the +700 annual net migration scenario:

- The overall population of Jersey is expected to grow at a slower rate.
- The working age population is expected to grow at a slower rate.
- The population of 65-80 year olds initially grows at a slower rate, but is higher from circa 2040 onwards.
- The population of over 80s is expected to grow at a slower rate.

In the graphs below the blue line shows this time's projections; the red line is the projections used in the previous review.

Chart 3.1: Changes to the future projected population

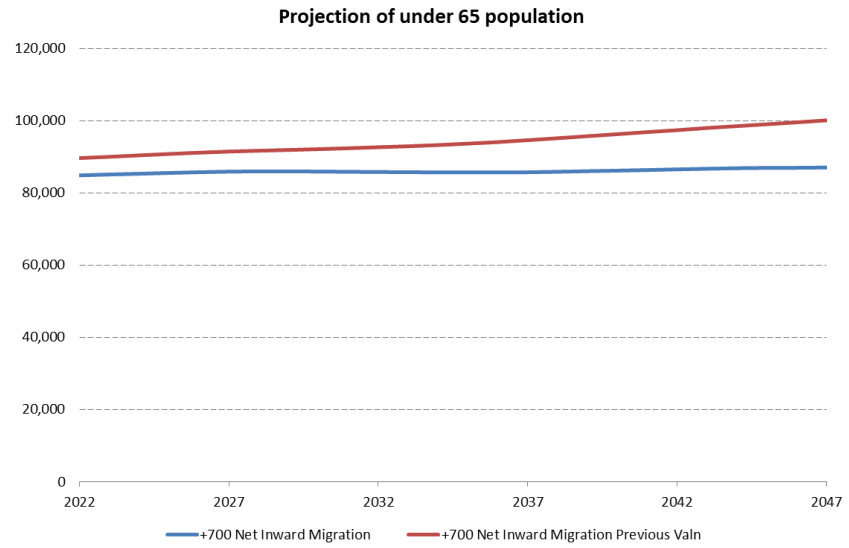


Chart 3.2: Changes to the future projected population

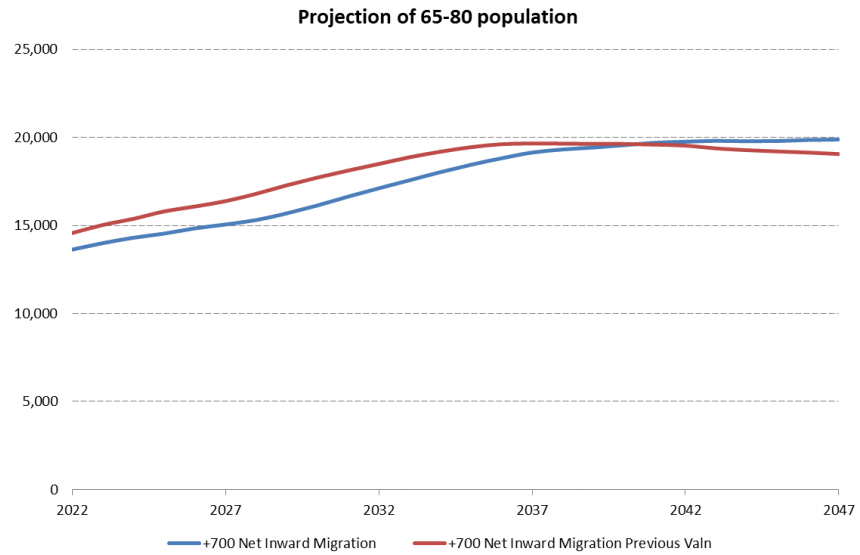


Chart 3.3: Changes to the future projected population

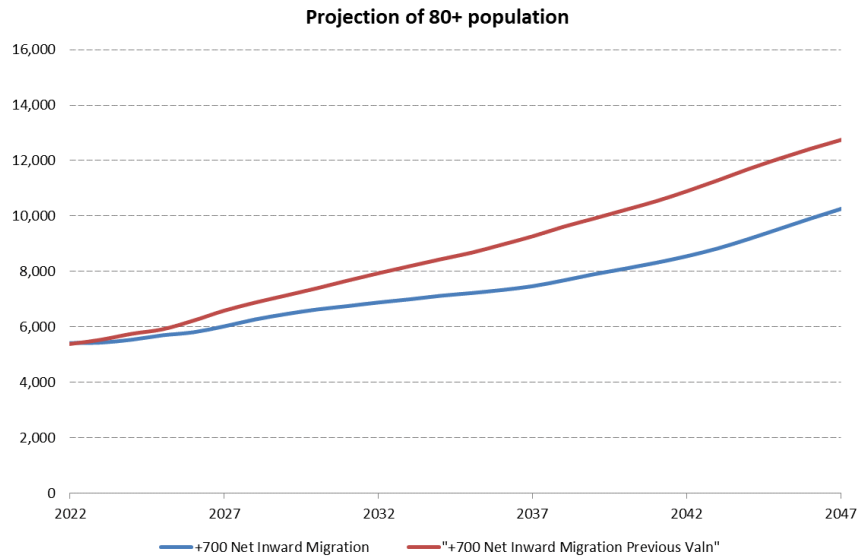
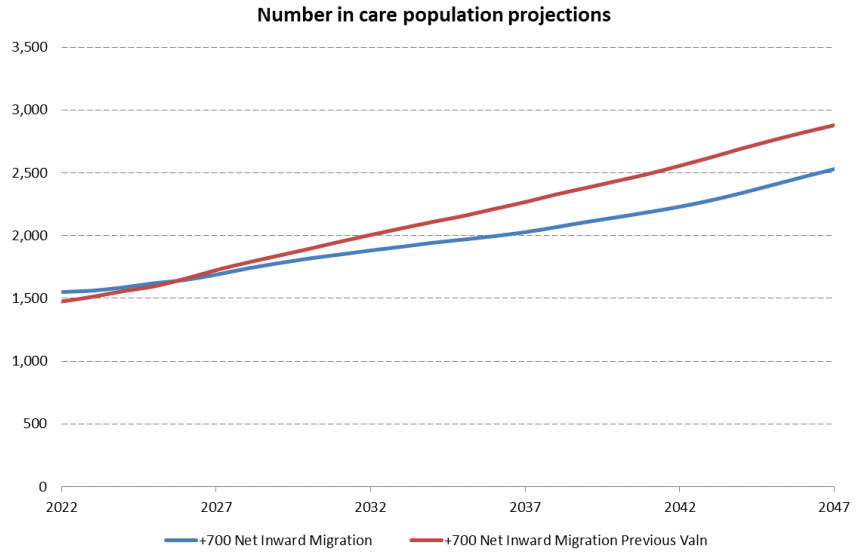


Chart 3.4: Changes to the future projected population



The current numbers in care are slightly higher than we would have expected based on the population projections used for the 2017 review, based on the expected increase in the population as can be observed from the chart above.

This is a short-term observation, as the slower rate of population increase from the new population projections results in a “cross-over” of expected numbers in care around 2027.

This has the following impact on the results:

- Income – this reduces slightly as the population numbers expected to pay LTC contributions from their income have reduced compared to the previous review. The impact is muted somewhat as the Government grant makes up a material proportion of the overall income into the Fund.
- Expenditure – this is initially higher due to current higher numbers of people in care than was previously expected, but reduces from 2027 as the projected population numbers have reduced compared to the previous review. The reduction is particularly significant for the population aged over 80, which makes up the majority of the individuals in care. As a result, we expect the increase in the future care population to be significantly lower, which results in lower projected care costs.

In the graphs below the solid lines are this review; the dotted lines show what the figures would have been had we used the previous set of population projections.

Chart 3.5: Previous population projection

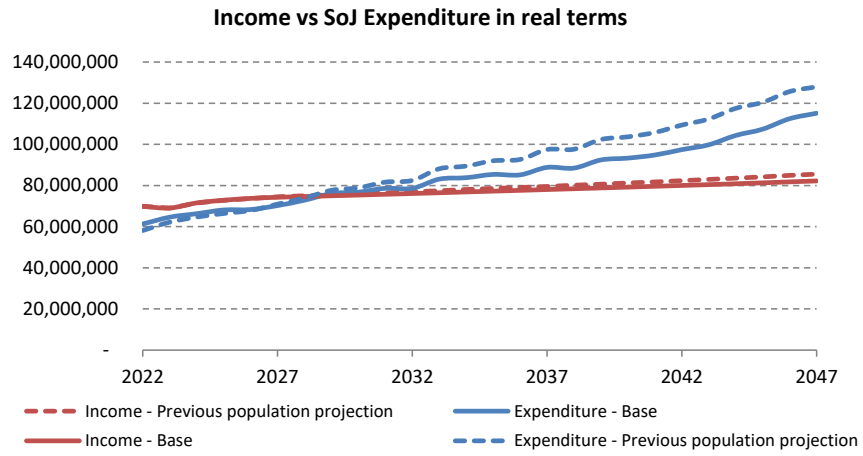
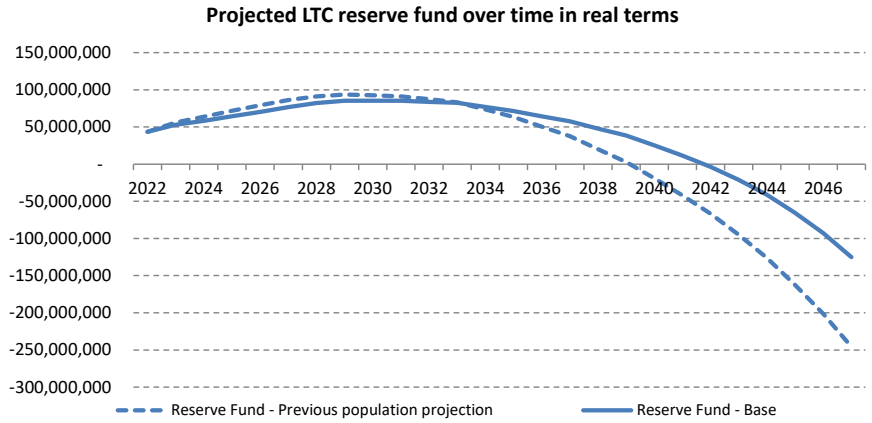


Chart 3.6: Previous population projection



Increased care at the higher care levels

We observe from the data provided on the individuals in care, there has been a recent shift towards the higher care levels. This implies that the care population now requires greater level of care than at the previous actuarial review, which all else being equal would increase the overall cost of care each year.

We cannot say with any certainty whether this trend is likely to continue. We have set out below the impact that this recent trend has had on the LTCF when compared to the expected levels of care from our previous 2017 review. This illustrates the increased expenditure arising from the recent shift towards the higher care levels and the impact that this has on the Fund reserve.

Chart 3.7: Reversion to 2017 care levels

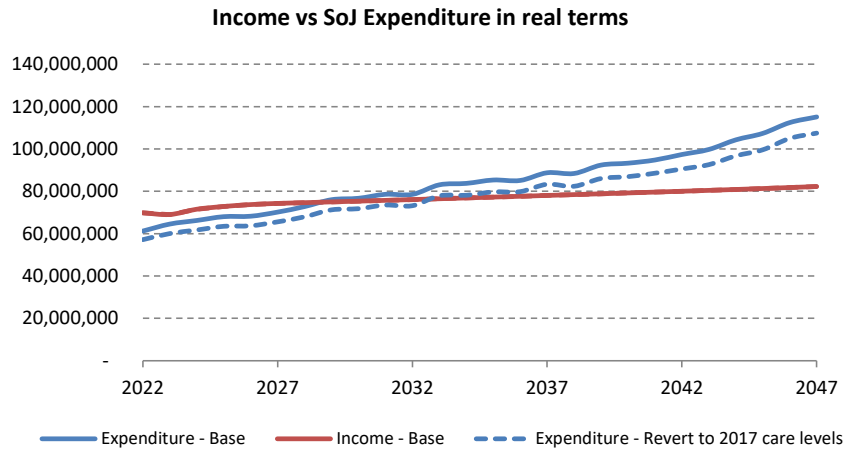
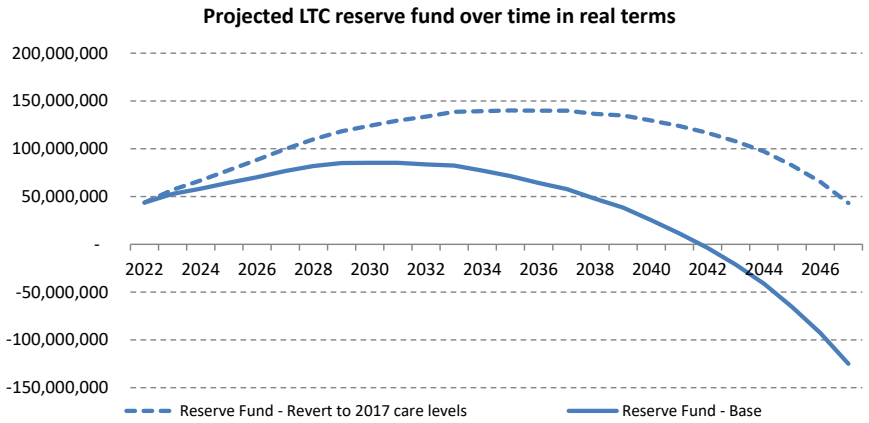


Chart 3.8: Reversion to 2017 care levels



Increase in the level of illiquid assets

Our assumption for deriving the level of illiquid assets at the point of entering care is based on the assumed value of an individual's property assets (see Appendix D for further detail on this assumption).

Based on owner-occupier information available in the Income Distribution Survey 2019/20 and preliminary Income Distribution Survey 2021/22, and Jersey House Price Index (HPI), we observe that there has been a significant increase in house prices since our previous actuarial review, but no material change in the percentage of home owner occupiers. The increase is higher than the assumed increases at our previous actuarial review. We therefore assume that individuals entering care now have a higher level of illiquid assets, and are therefore more likely to have assets above the asset disregard. This increases the proportion of individuals that would need to pay for their own care as fewer individuals would be eligible to receive means-tested support from the Government.

The chart below illustrates the very minor impact on total expenditure of allowing for actual house price increases compared to increases previously assumed.

Chart 3.9: Increase in the level of illiquid assets

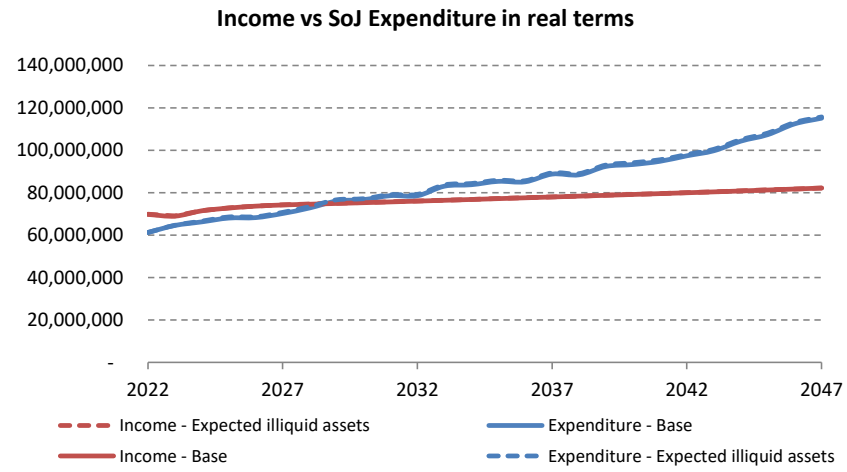
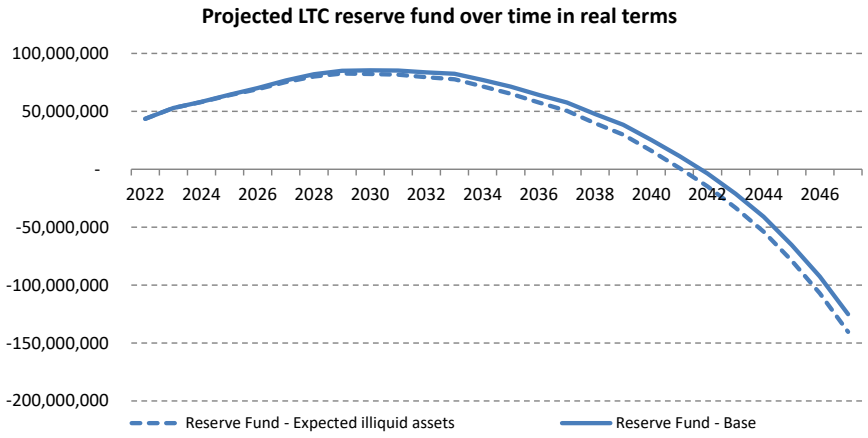


Chart 3.10: Increase in the level of illiquid assets



We observe that the overall expenditure is relatively insensitive to the change in the level of illiquid assets since our previous review. The reasons for this are as follows:

- Of the individuals that own property assets, the vast majority of them own property with two or more bedrooms. From this review and the previous review, the average house price for a two-bed house at 31 December 2021 would have been substantially in excess of the asset disregard threshold of £419,000 (£652,000 and £494,000 respectively).
- For the individuals with no property assets, or the small proportion owning a one-bed property, the value of their illiquid assets was assumed to be substantially below the asset disregard threshold at the previous review, and this remains the case for this review.

Therefore, in spite of the material increase in house prices, the expected number of individuals whose illiquid assets have now moved across the asset disregard over the review period is very small and so the impact on expenditure is minimal.

4 Risks and uncertainties

The results of the actuarial review are sensitive to the choice of assumptions used for modelling purposes and the parameters of the LTC scheme. Both are explored below.

Sensitivity to modelling assumptions

As stated, the results in the previous section were calculated based on a wide range of assumptions, such as:

- Length of time individuals spend in long term care.
- Jersey population projections.
- Proportion of the population requiring long term care.
- Level of care required for individuals in long term care.
- Proportion of individuals receiving residential and domiciliary care.
- Levels of income and assets (liquid and illiquid) for individuals in long term care.

In practice, actual experience over the coming years could deviate in any of these areas from the "central scenario" assumptions used in our modelling. To illustrate how such deviations could impact the "central scenario" results, and hence impact the conclusions reached regarding the financial position of the LTCF and the adequacy of LTC contribution rates, we have carried out modelling on a range of alternative scenarios (in each case, altering one key assumption).

The main alternative scenarios modelled, for which results are set out in this section, are as follows:

1. **Longer average length of stay in care** – Re-modelled expenditure assuming individuals spend an additional 6 months in long term care (relative to the central scenario).
2. **Increase to the proportion of individuals receiving domiciliary care** – Re-modelled expenditure assuming that the number of residential beds remains static (and therefore the proportion of individuals receiving domiciliary care increases over the projection period).

In addition, Appendix E (Detailed results) also sets out results based on some further alternative scenarios:

- **Alternative population projections** – Income and expenditure projections based on the UK Government Actuary's Department +1,000 annual net inward migration and +325 annual net inward migration population projections.
- **Change to care cost increases relative to average earnings growth** – Re-modelled expenditure assuming that standard care costs (which largely reflect carer earnings levels) increase at a rate that is 0.5% p.a. higher or lower than general Jersey average earning growth.

Credibility of current modelling assumptions

Whilst we have been able to collect more relevant and specific data than for the 2017 review, the risk of actual experience deviating from the initial central scenario assumptions remains materially higher for this actuarial review of the LTCF than might be the case for a more well-established scheme.

Given the LTCF has only been operating in its current format since 2014, there remains a relative sparsity of directly relevant data from which to derive credible modelling assumptions. As a result, a number of assumptions have been derived from alternative sources, for example:

- The distribution for an individual's length of stay in care has been derived from the Personal Social Security Research Unit's (PSSRU) 2011 analysis of BUPA UK data.
- The majority of data used to derive income and asset distributions for individuals in care (relevant for estimating the level of means-tested support) has been taken from the Income Distribution Surveys and 2021 Census which apply to the full population (not just those who have been in long term care).

Over time, as the LTCF matures a large quantity of data will be collected that relates specifically to individuals in care. This should allow modelling assumptions to be refined over time, to more closely reflect observed characteristic of Jersey residents that have received long term care, and provide greater credibility of the results of the actuarial review.

Sensitivity 1: Longer average length of stay in care

The central scenario includes an assumption as to the length of time individuals will stay in care. Precisely, this is defined as an exponential probability distribution, with rapidly decreasing likelihood of an individual remaining in care over time. The average time spent in care is assumed to be around 2.5 years for over 65 year olds and around 4.8 years for under 65 year olds. This assumption is unchanged from the previous actuarial review. Combining the assumptions for under and over 65s, this results in an average time spent in care of circa 2.8 years for the population assumed to be in care. As discussed in Appendix D we think the experience data for the LTCF, while limited, suggests that this is reasonably appropriate to the LTCF.

In order to better understand the sensitivity of the financing of the LTCF to the average period of time individuals might actually spent in long term care, we have run the same actuarial models assuming that each individual spends a further 6 months in long term care than in the central scenario.

Chart 4.1 shows that this change significantly increases projected expenditure (by c.20%). Given that 6 months is a significant portion of the average length of time individuals are assumed to remain in care for the central scenario, it is unsurprising that an extension of this order has such a material impact on projected expenditure.

This increase to projected expenditure would lead to a higher cost LTC scheme – if Government grants are assumed to remain in line with the central scenario, the breakeven LTC contribution rate rises to 2.0% by 2028 and to 3.0% by 2044 (see Chart 4.2).

Chart 4.1: Projection of LTCF income and expenditure – 6 months longer stay in care

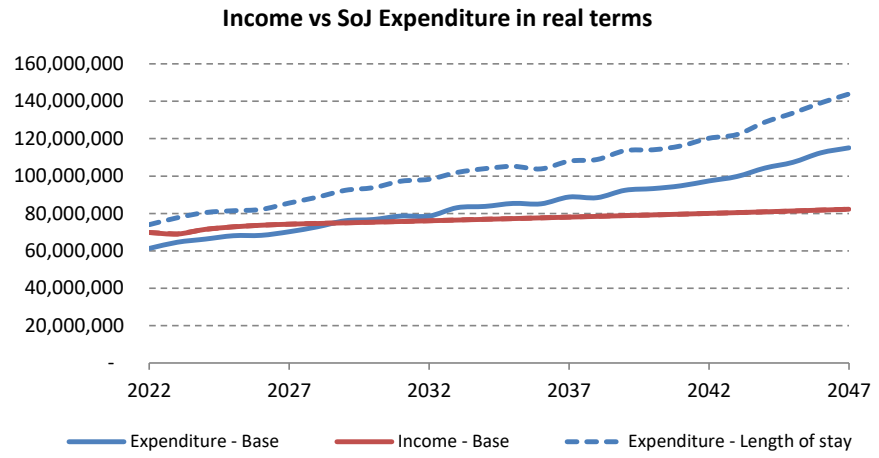
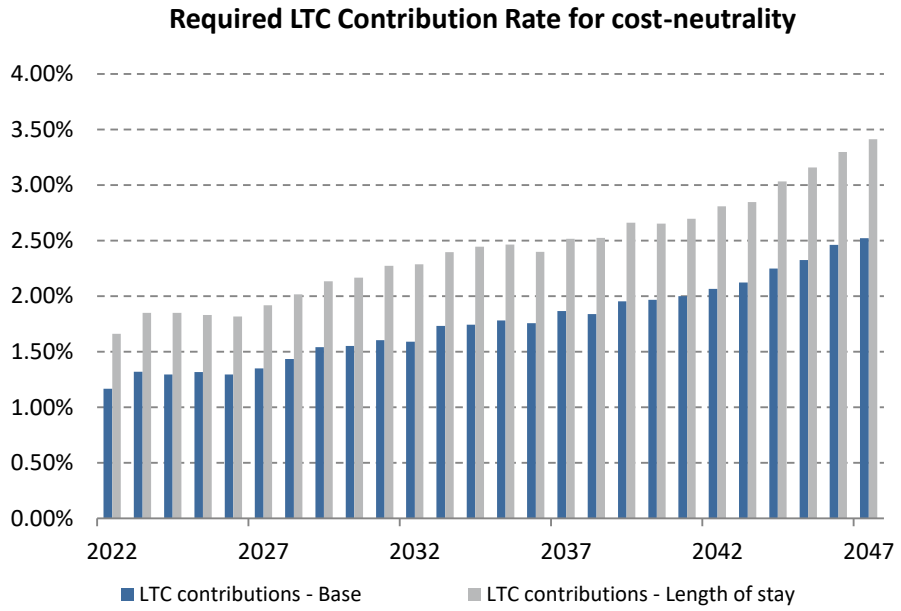
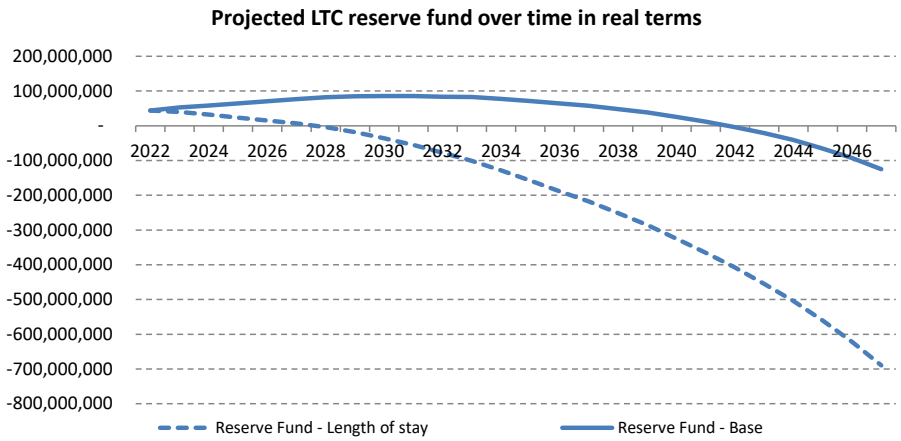


Chart 4.2: "Breakeven" LTCF contribution rate – 6 months longer stay in care



In the absence of additional LTC contributions to fund the higher expenditure, this would result in a relatively rapid fall in the LTCF balance (see Chart 4.3).

Chart 4.3: Projected LTCF balance – 6 months longer stay in care



Sensitivity 2: Increase to the proportion of individuals receiving domiciliary care

We understand that various Government policies might be expected to lead to an increase in the proportion of individuals receiving long term care in their own homes, rather than approved care homes. Given the costs associated with means-tested support for residential care co-payments, this shift would be expected to reduce the long term expenditure of the LTCF relative to the central scenario.

This is evidenced in Chart 4.4, where a sensitivity has been modelled assuming that the number of individuals receiving care in approved care homes remains static (with any growth in the number of individuals in long term care resulting in more individuals receiving care in their own homes).

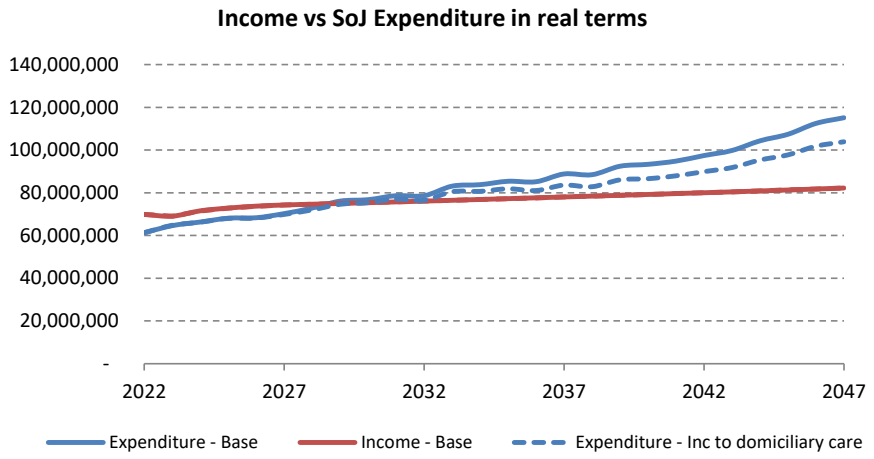
Assumed proportion of individuals receiving residential care through time in this sensitivity scenario

Year	2022	2027	2032	2037	2042	2047
Under 65s	39%	39%	39%	39%	39%	39%
Over 65s	68%	62%	56%	51%	45%	39%

Note: the remaining proportion of people are assumed to receive long term care in their own homes.

As means-tested support for residential care co-payments is only part of the costs (and the change to the residential / domiciliary balance is gradual), the reduction to projected expenditure is relatively modest (when compared to the impact of other sensitivities observed in this section of the report), however it is still estimated to reduce Fund expenditure by just over 10% (or £11M) by 2047.

Chart 4.4: Projection of LTCF income and expenditure – Increase to the proportion of individuals receiving domiciliary care



Sensitivity to parameters of the LTC scheme

Aside from the subjective assumptions derived for the purpose of our actuarial modelling (and discussed above), the analysis is also based on a range of LTC scheme parameters, such as:

- The level of standard care costs (the cost of long term care for individuals) and standard co-payments (the residential cost for individuals in approved care homes);
- The level of the standard care costs cap (the maximum level of standard care costs to be borne by individuals before the Government meets all such costs);
- The level of asset disregard (i.e. the asset value threshold above which means-tested support would not be available); and
- The LTC contribution rate payable by all income tax payers in Jersey to partially finance the LTCF.

For the central scenario, it has been assumed that the current scheme parameters would remain in place, and increase in line with expected levels of inflationary indexation (e.g. standard care costs generally assumed to increase in line with average earnings growth).

Future government changes to any of the LTC scheme parameters could impact the financial position of the LTCF and the adequacy of LTC contribution rates. We have therefore carried out modelling on a further range of alternative scenarios (in each case, altering one key scheme parameter). These are:

3. **Change to the level of the care costs cap** – Expenditure projections based on different growth rates for the care cost cap (which, for the central scenario is assumed to grow in line with average earnings growth), either:
    a. Care cost cap frozen throughout the projection period; or
    b. Care cost cap rises over the projection period at a rate 3% pa above average earnings growth.

4. **Change to the level of the asset disregard** – Expenditure projections based on the current level of the disregard frozen throughout the projection period; or
5. **Increase to the LTC contribution rate** – Income is projected assuming that the LTC contribution rate rises from 1.5% to 2.0% from 2024.

Sensitivity 3: Changes to the care cost cap

For the central scenario, the standard care cost cap (the maximum level of standard care costs to be borne by individuals before the Government meets all such costs) is assumed to rise in line with growth in underlying standard care costs (both assumed to rise in line with average earnings growth). As a result, the length of time an individual would be expected to remain in care prior to the Government meeting all future care costs regardless of an individual's circumstances (i.e. universal benefit) is assumed to remain static over time.

As the level of the standard care cost cap is set by the Minister for Social Security, it is possible that this might not necessarily rise in line with standard care costs. To illustrate the impact that slower or faster increases in the standard care cost cap might have on the LTCF, we have modelled the cap either:

- Being frozen throughout the projection period; or
- Rising over the projection period at a rate 3% pa above average earnings growth.

It can be seen from the charts below that freezing the care cost cap (charts 4.5, 4.6 and 4.7) would be expected to lead to:

a. A gradual rise to projected expenditure, as universal benefit from the Government is gradually triggered earlier during an individual's time in care;
b. A faster deterioration of the LTCF balance (as a result of the increased expenditure); and
c. A gradual increase to the breakeven LTC contribution rates (rising to 2.9% by 2047 as opposed to 2.5% on the central scenario).

Chart 4.5: Projection of LTCF income and expenditure – Care cost cap frozen throughout the projection period

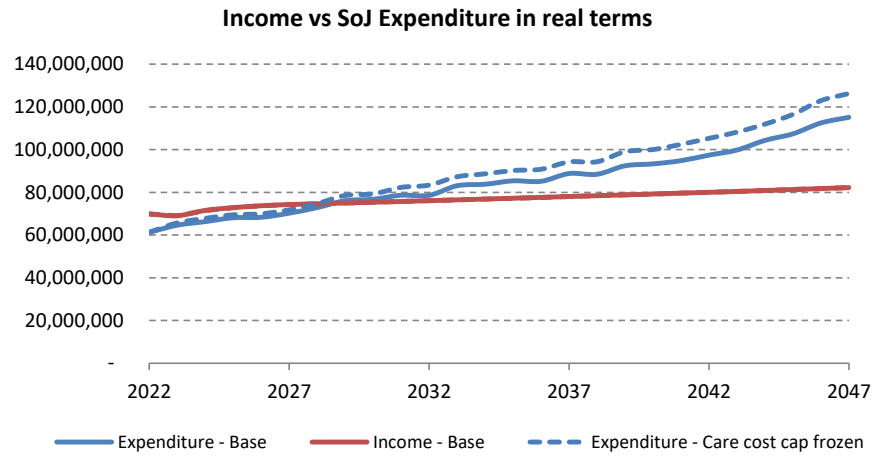


Chart 4.6: Projected LTCF balance – Care cost cap frozen throughout the projection period

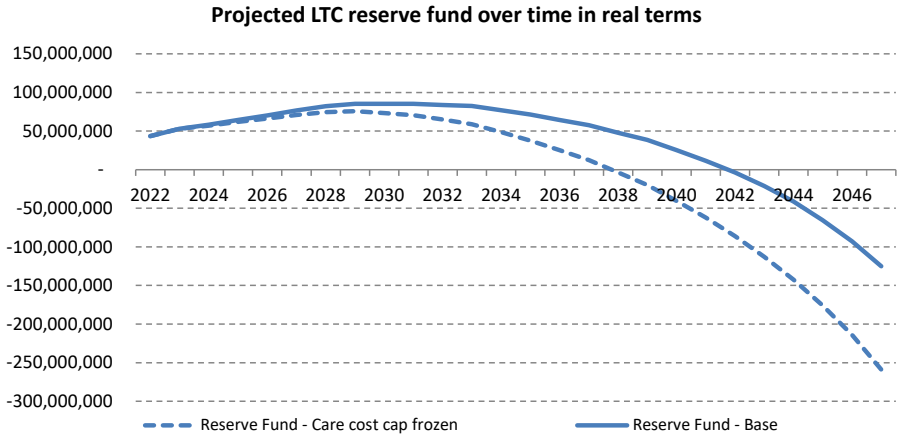
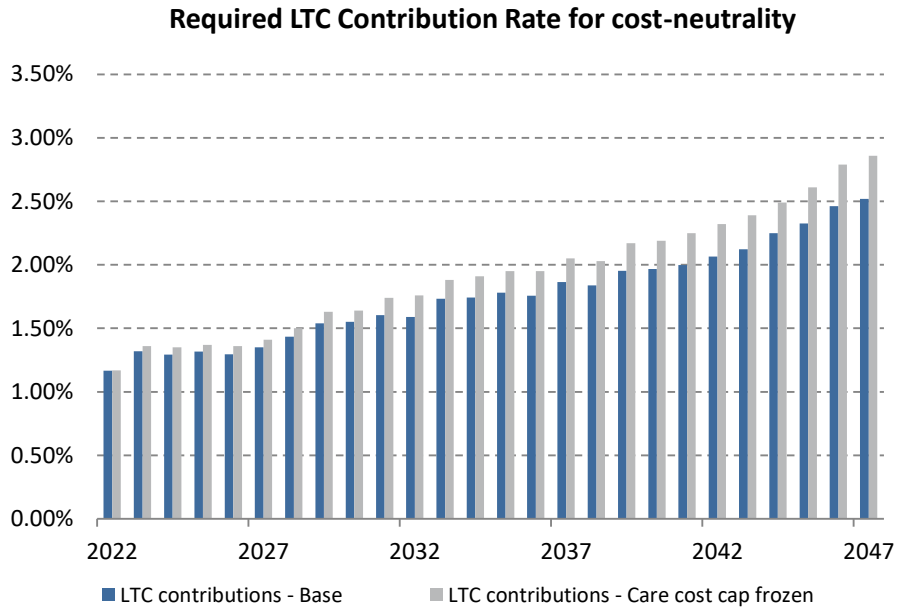


Chart 4.7: "Breakeven" LTCF contribution rate – Care cost cap frozen throughout the projection period



Conversely, if the standard care cost cap were to increase at a rate 3% pa above average earnings growth it can be seen (in charts 4.8, 4.9 and 4.10 below) that this would be expected to lead to:

a. A gradual reduction to projected expenditure, as universal benefit from the Government is gradually triggered later during an individual's time in care;

b. A slower deterioration of the LTCF balance (as a result of the reduced expenditure); and

c. A slower increase to the breakeven LTC contribution rates (with these rising to 2.2% by 2047 as opposed to 2.5% on the central scenario).

Chart 4.8: Projection of LTCF income and expenditure – Care cost cap rises by 3% p.a. above average earnings growth

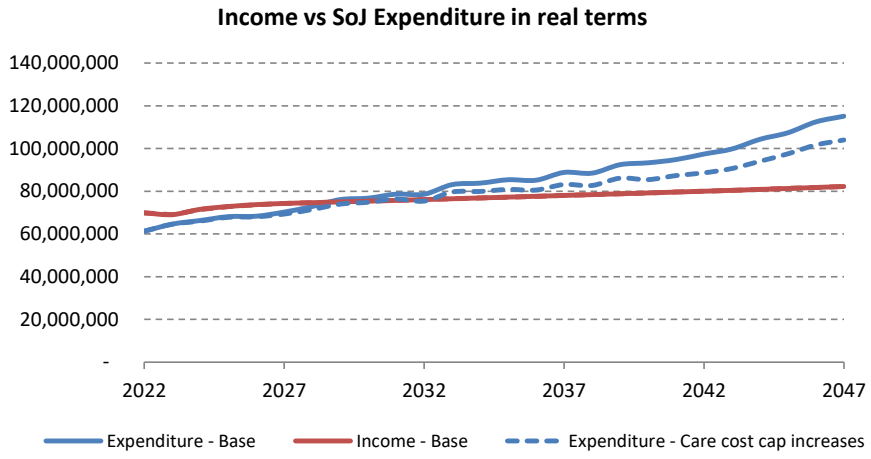


Chart 4.9: Projected LTCF balance – Care cost cap rises by 3% p.a. above average earnings growth

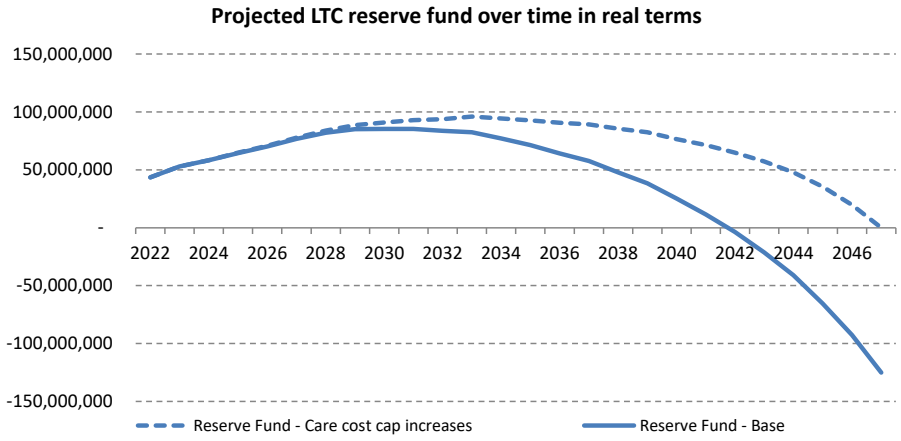
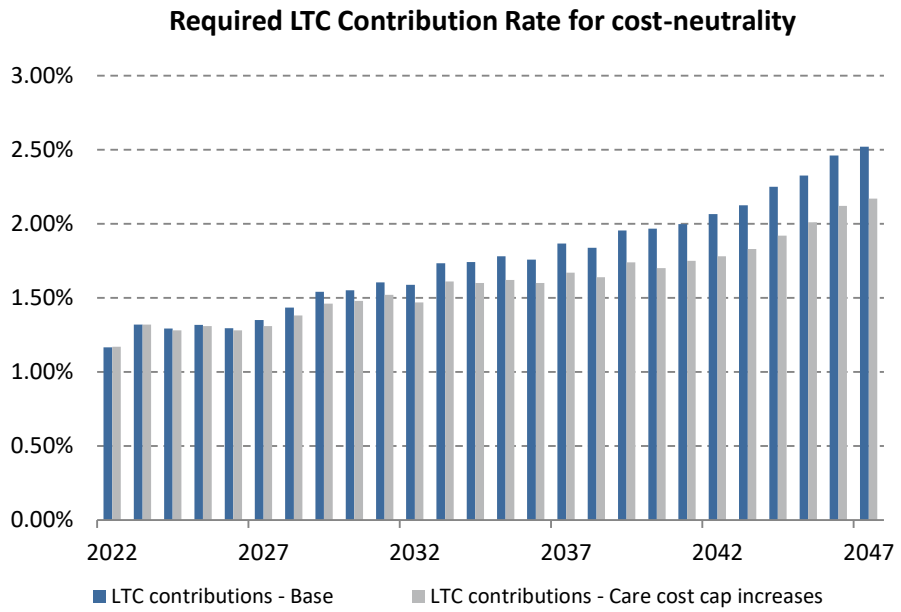


Chart 4.10: "Breakeven" LTCF contribution rate – Care cost cap rises by 3% pa above average earnings growth



Sensitivity 4: Changes to the level of asset disregard

Under the LTC scheme rules, means-tested support from the Government is only available to individuals with assets less than the "asset disregard" level (currently £419K).

For the central scenario, this asset disregard level is assumed to rise in line with average earnings growth (in itself, a proxy for long term property value growth, given that properties are expected to make up the majority of individuals' assets). As the central scenario also assumes that income and asset levels will rise in line with average earnings growth, the asset disregard level is, in relative terms, assumed to remain relatively static.

By its nature, the asset disregard level has a large impact on the respective shares of expenditure met by the Government and by individuals (in particular, for those individuals with assets close to the asset disregard level).

As the level of the asset disregard is set by the Minister for Social Security, it is possible that this might not necessarily rise in line with average earnings growth. For example, we observe that since our previous actuarial review as at 31 December 2017, the level of the asset disregard has remained fixed at £419,000. To illustrate the impact that fixing the asset disregard level over the whole period of projection might have on the LTCF, we have modelled the asset disregard remaining frozen at £419,000 (the current level of the disregard) throughout the projection period; and

It can be seen from the charts below that freezing the asset disregard level (charts 4.11, 4.12, 4.13 and 4.14) would be expected to lead to:

a. A gradual reduction to projected expenditure, as gradually a smaller proportion of individuals are eligible for means-tested support;

b. A slower deterioration of the LTCF balance (as a result of the reduced expenditure); and

c. A slower increase to the breakeven LTC contribution rates (with these rising to 2.3% by 2047 as opposed to 2.5% on the central scenario).

d. A gradually increasing proportion of expenditure met by individuals over time (from 27% in 2022 up to 33% by 2047).

Chart 4.11: Projection of LTCF income and expenditure – Asset disregard frozen at £419,000 throughout projection period

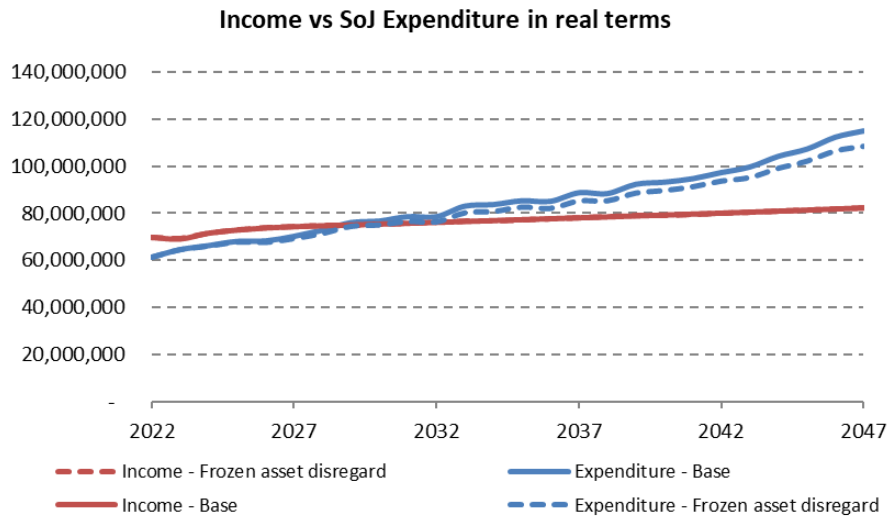


Chart 4.12: Projected LTCF balance – Asset disregard frozen at £419,000 throughout projection period

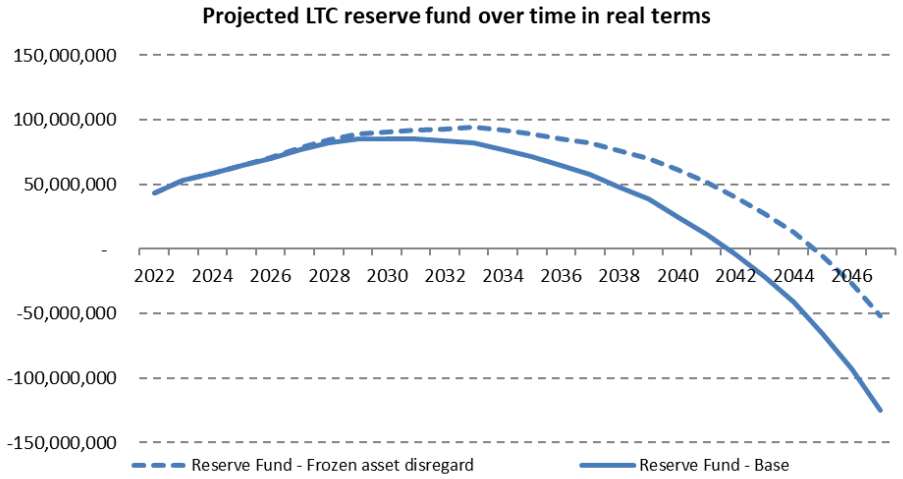


Chart 4.13: "Breakeven" LTCF contribution rate – Asset disregard frozen at £419,000 throughout projection period

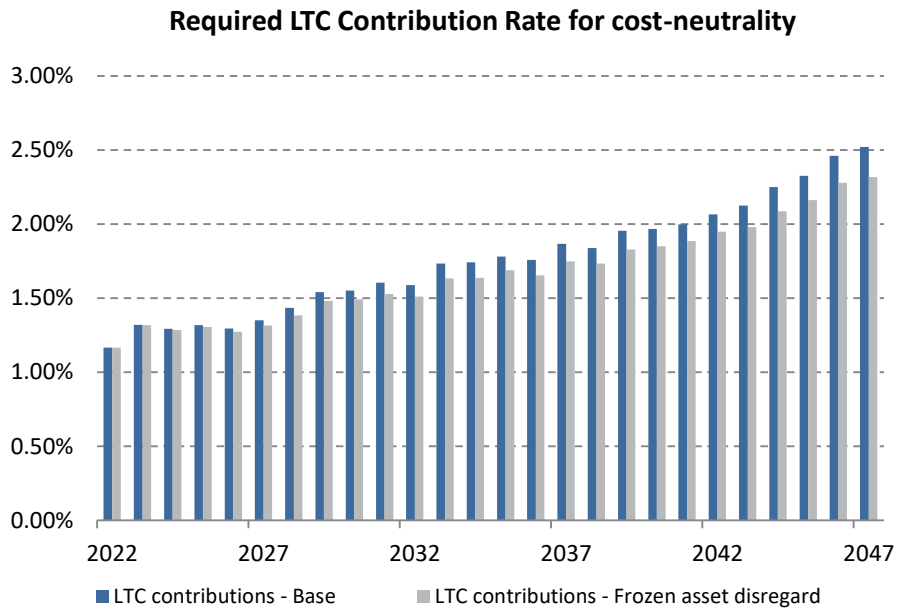
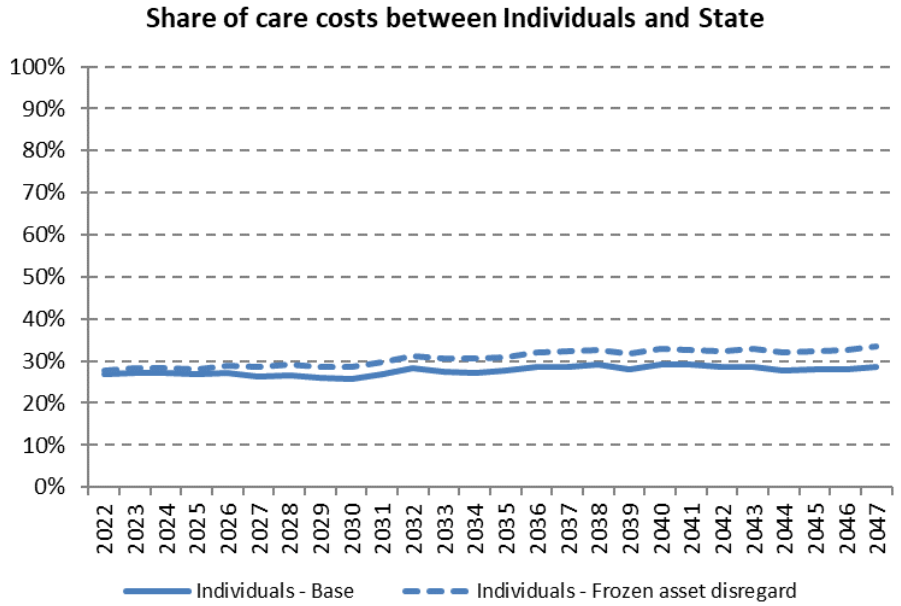


Chart 4.14: Share of care costs – Asset disregard frozen at £419,000 throughout projection period



Sensitivity 5: Increases to LTC contribution rate

Following the 2017 actuarial review of the Fund, the LTC contribution rate of 1.0% was increased to 1.5% from 1 January 2020. We expect that this change will allow an asset reserve to be built up within the LTCF in the short-term under the central scenario. However, over time, we project that the reserve will be exhausted and the LTCF is expected to run out of assets by 2042.

We have therefore provided a sensitivity that models the expected change in the financial position of the LTCF of increasing the LTC contribution rate to 2.0% from 2024. As shown in charts 4.19 and 4.20:

- Projected income rises by approximately 18% from 2024 onwards;
- This results in income to the LTCF exceeding expenditure for a substantial period with expenditure not exceeding income until 2041;
- As a result of the greater income, and investment returns on a larger LTCF balance, the LTCF balance is expected to grow until 2044, before reducing (as expenditure overtakes income), extending the time until the Fund is exhausted well beyond our projection period of 2047.

Chart 4.19: Projection of LTCF income and expenditure – LTC contribution rate of 2% from 2024

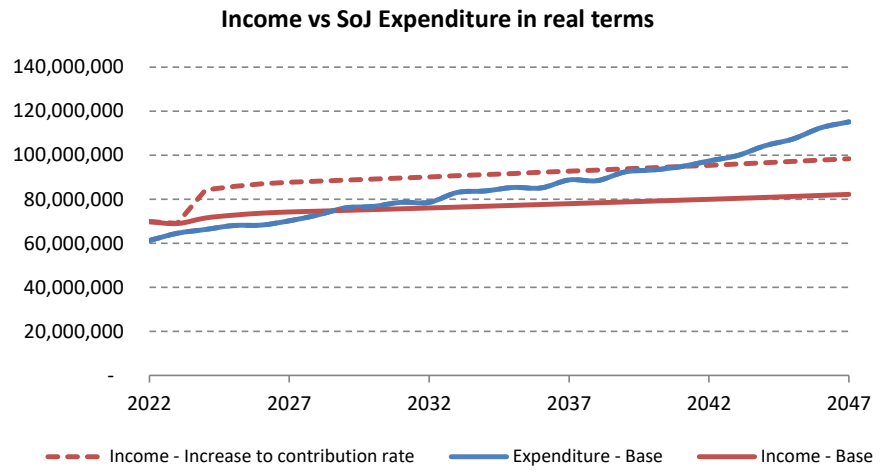
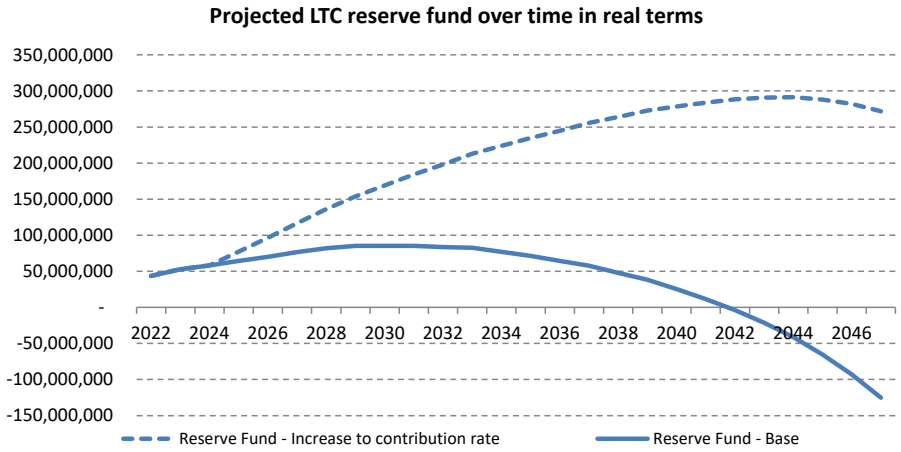


Chart 4.20: Projected LTCF balance – LTC contribution rate of 2% from 2024



Future changes to the LTC contribution rate or scheme parameters

When considering a change to the LTC contribution rate or any of the LTC scheme parameters, the following might be considered:

Buffers for caution – As noted throughout this paper, there is a significant degree of uncertainty relating to projected levels of LTCF expenditure (both in the long-term and short-term). As it is not feasible for the Fund to become negative, there is a material risk to the Fund's viability if the Fund balance is allowed to reduce too much before action is taken. As a result, it may be prudent to:

a. Ensure changes required for long term Fund sustainability are made earlier;

b. Consider the appropriate level for a 'minimum' LTCF balance, to provide a suitable buffer against adverse short term experience.

Intergenerational fairness - Where modelling indicates a strong likelihood of the LTCF being unsustainable in the long-term, structural changes earlier would spread the burden across generations, whereas delaying action until 'crisis points' in time could disadvantage the current younger populations to the benefit of older age groups.

Short-term volatility in LTCF expenditure

Our models assume that the proportion of individuals requiring care at each care level remains in line with current observed patterns. However, in the short-term, one specific cohort of individuals in care might experience, on average, materially higher care needs than the last (purely due to random fluctuation rather than any long-term systematic trend). As an example of the short-term impact of such additional volatility, we can model the change in estimated expenditure from 2022 onwards if the cohort of individuals in care in that year experience higher care needs than assumed in the central scenario runs.

The following chart illustrates the impact on expenditure were the care population to immediately exhibit these materially higher care needs than our central scenario over the period of projection. This is done by assuming a 10% shift from care levels 1 and 2, into care level 4.

Chart 4.21: Simulated care population exhibits a higher level of care needs

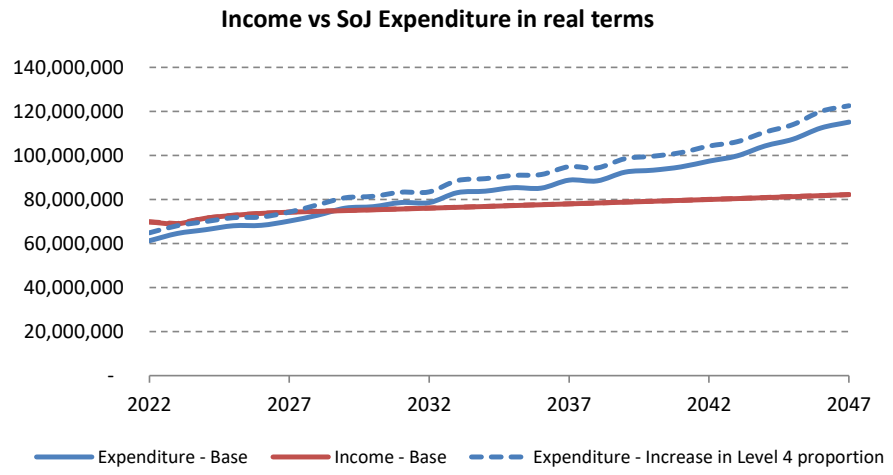
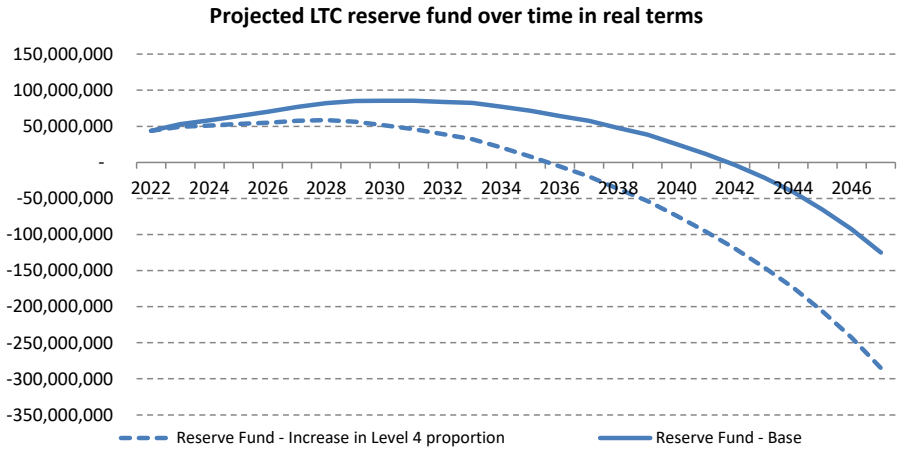


Chart 4.22: Simulated care population exhibits a higher level of care needs



Short-term volatility in LTCF expenditure

The sensitivities above illustrate the long-term variability of results to changes in Fund parameters or assumptions made.

It should also be noted that there will be additional volatility in annual expenditure from the LTCF because the population in care will substantially change each year (the average length of stay in care is circa 2.8 years).

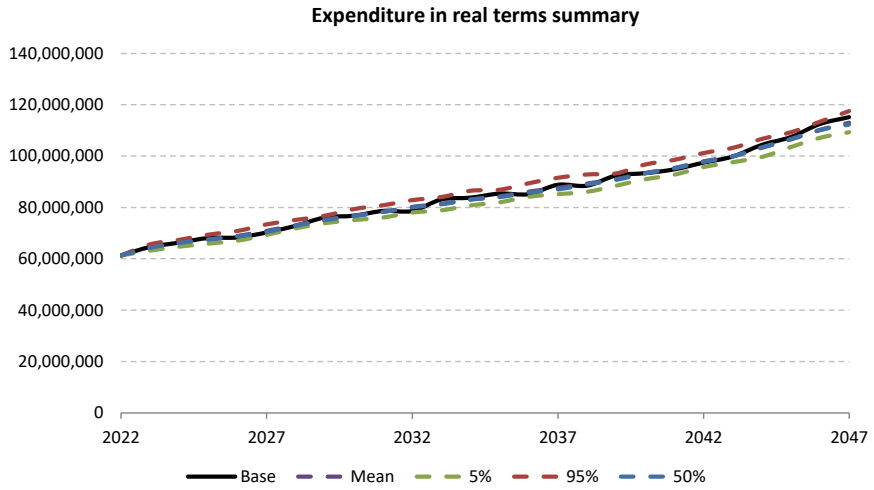
The new cohort of individuals in care (which make up a fairly small proportion of the overall population of Jersey) could, as a group, exhibit particular characteristics that happen to lead to significantly higher or lower expenditure from the Fund.

To illustrate this short-term volatility, we have run our central scenario analysis many times, each time generating new simulated care populations (see Appendix B for further details of the methodology applied for the actuarial modelling) so that in any given year the populations in care might exhibit very different:

- Income levels
- Levels of liquid and illiquid assets
- Length of stay in care

Random variation

Chart 4.23: Volatility over the next 25 years arising from generating different simulated care populations (expenditure in real terms - central scenario shown in black)



It can be observed from chart 4.23 that, whilst the general pattern of LTCF expenditure growth is broadly similar, there is a reasonable degree of volatility around that expenditure in any given year.

For example, over the first five years the gap between the largest and smallest modelled levels of real expenditure is around £4 million a year (approximately 5% of total expenditure), indicating that expenditure swings of this level could be experienced purely as a result of the change in care population and their associated characteristics (ignoring all other longer-term assumptions).

Further, our models assume that the proportion of individuals requiring care at each care level remains in line with current observed patterns. However, in the short-term, one specific cohort of individuals in care might experience, on average, materially higher care needs than the last (purely due to random fluctuation rather than any long-term systematic trend).

Summary

It is important to note that the results of the actuarial analysis are highly sensitive to a large number of parameters and assumptions. Further, as the LTCF is still relatively new, there remains a relative sparsity of directly relevant data available in order to set assumptions credibly.

Of all the sensitivities we have considered, the one with the most material financial impact is an increase of 6 months in the average length of time spent in care.

5 Global trends in long-term care

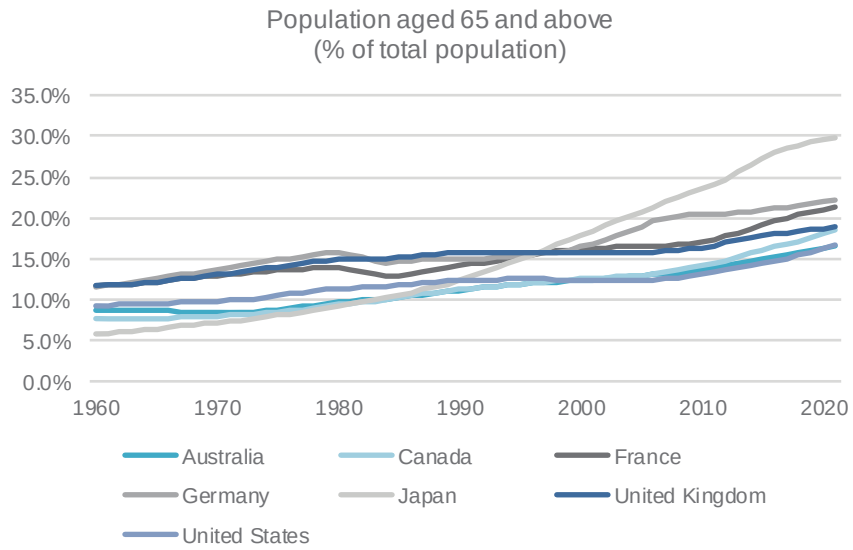
Globally, long term care support continues to come from three main sources:

- Informal care or family support,
- Public or government support, and
- Long term care insurance.

Historically, the significant majority of long-term care has come from informal or family support. While this remains the case, largely driven by shifts in demographics and changes in legislation, public or government long term care support now plays more of a role. This is particularly relevant across the EU, where all countries now have some form of minimal public and non-profit long term care provision.

Consistent with the Jersey LTCF, the majority of long-term care schemes around the world require member co-payments to contribute towards a portion of the care costs in residential or nursing care home settings. The level of co-payment and whether individuals are eligible for means-tested support towards these co-payments varies by country. Long term care insurance remains the least prevalent source globally.

Globally, statistics show that the population aged 65 and over is growing at a faster rate than any other age group. The chart below shows that for the countries shown, in 1960 on average around 9% of the population was aged 65 for older. Moving forward to 2021 and this had more than doubled to around 21% of the population.



Source: World Bank

This significant demographic shift brings with it a number of challenges for Governments and policymakers alike, including related to the provision of long-term care. For example, and consistent with our modelling assumptions (set out in Appendix D) the likelihood that an individual will develop a serious health condition which will require long-term care increases with age.

Against this backdrop, government spend globally on long-term care provision as a proportion of Gross Domestic Product (GDP) has continued to increase in recent years. The OECD reported that that on average, in 2018, 1.5% of GDP was spent on long term care services. To put this into context, our modelling suggests that current expenditure on long term care in Jersey is broadly consistent with 1.5% of Gross Value Added (GVA = GDP + subsidies – taxes) and is projected to remain around this level until 2032, at which point it will increase above 1.5%.

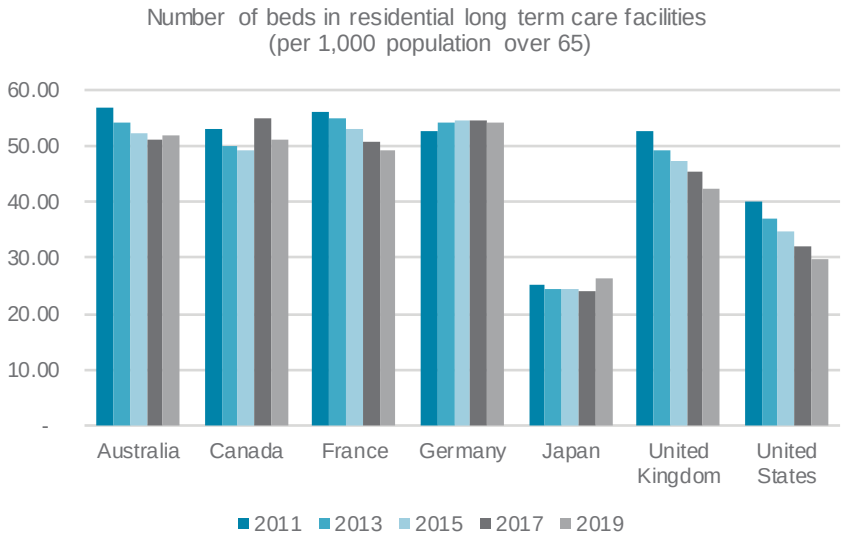
All else being equal, if this trend continues, the costs of providing long term care provision will increase significantly in the future. However, there are number of interlinked and offsetting factors which will also be important. For example:

- Advancements in medical care and improvements in living standards could mean that the general health of the population will continue to improve over time (e.g., if current trends continue, a 65-year-old in 2043 would be expected to have a higher level of general health than a 65-year-old in 2023). This should have a positive impact on long-term care costs.
- Productivity improvements in the provision of long-term care should have a positive impact on costs.
- New technologies (e.g. care automation) could play an important role in making the provision of long term care more efficient in the future.

In addition, while it is too early to say what long term impact Covid-19 will have on care requirements globally, it did highlight the importance of monitoring long term care funds to ensure they remain fit-for-purpose and sustainable in the long term.

Against a backdrop of aging populations and a move towards more government support as a proportion of GDP, we might expect that that the number of beds in residential care homes as a proportion of population should be increasing over time.

However in many countries the number of residential care beds is not keeping pace with the growth in the population over age 65. This is shown in the chart below, which compares the number of beds in residential long term care facilities per 1,000 of population over 65.



Source: OECD Stat

Japan is an obvious outlier with much fewer beds than other countries, albeit the provision in Japan has risen slightly over the period. Japan has also experienced much the most rapid ageing of its population (as shown in the first chart in this section) largely because it has very low inward migration.

In particular, in Japan technology and artificial intelligence is seen as key part of the long term care solution. The Japanese government have made a significant investment in care robots over the last 10 years. These are primarily aimed at residential care facilities and intended to replace care workers in a number of physical tasks. Robots aimed at meeting social and emotional needs have also been developed. However, their use in care homes is still very low, so it is unclear whether they will in fact provide a substantial saving in labour and in cost.

Summary

There are financial pressures facing Long Term care schemes across the developed world, driven largely by the ageing of the population. The LTCF is similar to others in this respect.

Further information

Appendix A: Description of the Long Term Care Fund

An overview of the benefits provided by the Long Term Care scheme, and how the Long Term Care Fund is financed.

Introduction

The Long Term Care (LTC) scheme was set up to provide means-tested financial support to people with long term care needs and to support individuals once their standard care costs reach a capped amount.

It also provides secured loans to homeowners that might otherwise be required to sell their homes to pay for their care costs.

Financing the Long Term Care Fund

The ring-fenced Long Term Care Fund (LTCF) was set up at the end of 2013 to allow long term care benefits to be paid from July 2014. The LTCF is designed to collect LTC contributions from tax payers and makes benefit payments to eligible individuals.

In 2014, all the funding for the LTCF was provided by the Government directly, however, since 2015 contributions have also been collected from Jersey residents. The Government will continue to pay money into the fund every year.

From January 2015, the LTC contribution rate of 0.5% was collected from Jersey residents who had an income high enough to pay income tax.

From January 2016, the contribution rate for individuals was set at 1% with the intention of holding that rate for at least the following three years.

From 1 January 2020, the LTC contribution rate was increased to 1.5%.

Eligibility

The LTC scheme typically provides long term care benefits for adults over the age of 18 who have lived in Jersey for a continuous period of 10 years.

To qualify for the LTC scheme each individual must be assessed by a Health and Community Services healthcare professional that will carry out an assessment in line with the following care levels.

Table A1: Care levels

Care Level	Description	Qualifies for Long-Term Care
	Needs a minimal level of support	No
	Needs a low level of support	No
Level 1	Needs a moderate level of support	Yes
Level 2	Needs a high level of support	Yes
Level 3	Needs a very high level of support	Yes
Level 4	Needs an extremely high level of support	Yes

If an individual is assessed as having a Level 1 care need or higher then they will qualify for the LTC scheme.

The LTC scheme covers costs associated with long term care whether provided in a care home (Residential Care) or in an individual's own home (Domiciliary Care). A care home must be registered under the Regulation of Care (Jersey) Law 2014 and be approved under the LTC Law. Similarly, any care package provided to an individual at home must be done so by a care provider approved by Health and Social Services.

Costs covered by the LTC scheme

The costs covered by the LTC scheme are broken down as follows:

- Standard care costs.
- Standard co-payment.
- Additional costs.

Standard care costs

Standard care costs represent the notional cost of an individual's care (residential or domiciliary), the rate at which an individual's costs build up to the standard care costs cap (after which the Government funds care for individuals at the same rates). This amount differs by care level, and the costs set for 2022 are as follows:

Table A2: Standard care costs by level for 2022

	Standard care costs (per week)	Number of weeks to reach standard care costs cap
Care level 1	£407.82	148 weeks
Care level 2	£622.16	97 weeks
Care level 3	£899.36	67 weeks
Care level 4	£1,130.64	53 weeks

Source: LTC scheme general information leaflet for 2022 (on Government website)

Actual care costs

Whilst actual care costs for individuals in residential care are typically in line with the standard care costs, those for individuals in domiciliary care

tend to be lower than standard care costs. For expenditure projections, actual domiciliary care costs have been assumed to be 70% of the level of residential care costs for over 65s and 80% of the level of residential care costs for under 65s.

Assumed future increases

Our modelling has allowed for these rates in 2022, followed by the actual 12% increase in these costs that has applied since 1 January 2023. Thereafter, we assume increases in line with the Trend 2026+ assumption for general earnings increases (2.8% p.a.) detailed in Jersey's Fiscal Policy Panel Annual Report – November 2022 Figure 1.28.

Standard care costs cap

The level of the standard care costs cap (the point after which the Government funds care for individuals, irrespective of their income and assets) is £60,160 for 2022.

As noted in the 'Modelling assumptions - simulated population assumptions' section of this paper, although there is a reduced care cost cap for couples both in care (£90,240 rather than £60,160 each), given the small proportion of individuals with a partner in care, we have ignored the additional complexity of partners in care for our modelling.

As for the standard care costs, our modelling has allowed for these rates in 2022, followed by a 12% increase in these costs that has applied since 1 January 2023. Thereafter, we assume increases in line with the Trend 2026+ assumption for general earnings increases (2.8% p.a.) detailed in Jersey's Fiscal Policy Panel Annual Report – November 2022 Figure 1.28.

Standard co-payment

Where individuals receive residential care, standard co-payments represent the cost to an individual of accommodation within a care home.

The 2022 standard co-payment is £361.20 per week (for all care levels), and increased by 10.4% on 1 January 2023 to £398.79 per week. Thereafter, we assume increases in line with the Trend 2026+ assumption for general earnings increases (2.8% pa.) detailed in Jersey's Fiscal Policy Panel Annual Report – November 2022 Figure 1.28.

Asset disregards

For the purpose of support from the Government towards long-term care costs, the asset disregard level is currently set at £419,000 (i.e. individuals with assets less than £419,000 are eligible to receive support from the Government towards their long term care costs). This remains fixed for 2023.

We assume future increases in line with the Trend 2026+ assumption for general earnings increases (2.8% p.a.) detailed in Jersey's Fiscal Policy Panel Annual Report – November 2022 Figure 1.28.

Principal property and other assets disregards

Where an individual's assets exceed the asset disregard level (£419,000 for 2022 and 2023), there are protections in place to protect a minimum value of an individual's principal residence and other assets.

The principal property exemption is designed to protect the first £394,000 (2022 and 2023) in respect of the individual's home (meaning this would not need to be drawn upon to fund standard care costs or standard co-payments). The principal property exemption has been assumed to increase at 2.8% pa (the assumption for average earnings increases) thereafter.

The other assets exemption is designed to protect the first £25,000 (2022 and 2023) of the individual's other assets. Again, this exemption level is assumed to rise by 2.8% p.a. thereafter.

Property bonds

The Long Term Care Policy Trends data set shows that, out that of 1,525 claimants as at 31 December 2021, only 18 claims used a Property Bond to meet costs of care.

As this only equates to around 1% of the total claimant population, and is therefore unlikely to have a material impact on the results of the actuarial review, property bonds have been excluded from our modelling.

Expenses that can be set against income for financial assessment

Where individuals have total assets less than the Asset Disregard level (£419,000 for 2022), they may be eligible for LTC support, based on their level of income.

In assessing how much of an individual's income might be required to pay for their care (after the deduction of certain allowable expenses), the following assumptions have been made for certain categories of allowable expenses.

We note that the allowance for living expenses has not changed since our previous actuarial review in 2017. We have therefore assumed the allowable expenses used in our previous review remain unchanged this time (with the exception of the personal allowance).

We will assume future increases in line with the Trend 2026+ assumption for RPI of 2.4% per annum.

Table A3: Allowable expenses at 1 January 2022

	Amount per week
Living expenses	£382.41
Personal allowance*	£39.55

Sources: LTC scheme general information for 2022 and our previous 2017 actuarial review report.

*The personal allowance increased by 10.4% to £43.68 per week on 1 January 2023.

In addition to the allowable expenses above, there are certain other expenses that may be allowable, such as for rental or mortgage expenses. We have made some additional assumptions regarding these, though they are not material to the actuarial review.

Other expenditure

The Proposed Government Plan 2023-2026 projected the other expenditure from running the Long Term Care scheme as set out below. This includes administration costs and the management recharge from Customer and Local Services (CLS).

Table A4: Other expenditure in Proposed Government Plan 2023-26

	Other expenditure
2023	£2,148,000
2024	£2,187,000
2025	£2,217,000
2026	£2,245,000

Source: Proposed Government Plan 2023-2026, Table 44

Appendix B: Calculation methodology

The approach used to model LTCF income and expenditure sources is set out below.

Overview

For the purpose of this actuarial review, the underlying methodology for projecting core expenditure from the long term care scheme (excluding administrative costs) consists of three parts:

1. **Simulation of an artificial population.**
2. **Projection of long term care costs for the artificial population.**
3. **Scaling cost projections to full Jersey population projections.**

Separately, the LTC model will project scheme administration costs for future years, and the various sources of income (long term care contributions and central Government grants).

Calculation methodology

The calculation methodology used in our modelling is based on a constructed artificial population requiring long-term care that reflects the characteristics of the population of Jersey over time, in order to estimate the future long-term care needs and financial position of the population. This can be used to inform the long-term care costs over time, and the contributions required from individuals and the Government of Jersey.

We have used this approach because there are a very large number of variables which affect the cost of the benefit, and the simulated population allows us to make random selections for these variables from appropriate probability distributions, and also allows us to vary those selections to understand the potential effect of random variation.

Based on the artificial population, we calculate the care costs that would be borne by the individuals in the population and by the Government of Jersey, and then scale these care costs to the projected actual long-term care population.

Individuals are allowed to enter and leave the LTCF each quarter over a given year, and are assumed to either be in domiciliary or residential care.

This methodology focuses on the assumptions around how the characteristics of the population may change over time. This increases the appropriateness of long-term projections of the costs in respect of the LTCF, but at the expense of accuracy of modelling the actual population care costs in the very short term.

The calculation methodology adopted is consistent with the approach taken in costing exercises prior to the commencement of the Scheme which were

conducted by Oxera Consulting and Professor John Forder and Jose-Luis Fernandez. We believe this approach to still be reasonable, and ensures that the results are broadly comparable to those previous exercises.

Simulation of an artificial population

An artificial population is determined by considering the characteristics of the individuals that are likely to enter the LTCF. Assumptions are made regarding an individual's:

- Length of stay.
- Care level upon entry.
- Level of income.
- Level of liquid assets.
- Level of illiquid assets.

These assumptions are based on a variety of data sources provided to us by the Government of Jersey departments.

This allows us to construct an artificial population comprising 24,000 members entering care over a 35 year period from 2012 to 2047.

See Appendix D for details on the assumptions used to determine the characteristics of individuals within the artificial population.

There may be differing views on how these assumptions should be set now and in the future. By simulating an artificial population, we can more easily run simulations that adjust the population to fit different views on how the assumptions may change.

Projection of long-term care costs for the artificial population

To project the long-term care costs for the artificial population, we consider each individual in the population in turn. The overall care costs for each individual are projected based on their time of entry into care, length of stay, care level upon entry and details on their income and assets upon entry.

The care costs are then split into those paid from the individual's income, liquid assets and illiquid assets. They also include care costs paid by the Government of Jersey, split by means-tested payments and universal benefits.

Scaling cost projections to full Jersey population projections

Population projections for Jersey have been provided based on a number of different scenarios for future inward net migration:

- **Central Scenario:** Annual net inward migration of 700 individuals.
- **Sensitivity 1:** Annual net inward migration of 1,000 individuals.
- **Sensitivity 2:** Annual net inward migration of 325 individuals.

Based on the projected population numbers under the different scenarios, the number of individuals in care in each future year has been estimated – assuming the proportions of under 65s, 65-80 year olds and over 80s requiring long term care remain static - which we then compare to the number of individuals in care within our simulated population.

We have then scaled the care costs inferred from our simulated population to estimate the care costs for the projection populations in care (based on Jersey population projections) in each future year.

LTCF income projections

The income received by the LTCF comes from a long-term care contribution rate paid by income tax payers and forecast grants made by the Government of Jersey. The long-term care contribution rate is 1.5% and the current forecast grant paid by the Government of Jersey is £31.802M over 2022. Assumptions are made around how this income may increase over time based on future growth rates, population projections and grants that have been budgeted for.

The methodology adopted will allow us to consider any changes to the income received by the LTCF so the costs of the LTCF may be met.

Alternative methodologies considered for the actuarial review

We considered using the approach of estimating:

1. the population in care, by applying an age dependent probability of being in care to the projected population; and
2. the average payment payable to a person in care, from the history of payments since the scheme started.

The estimated cost would then just be the product of these two numbers.

The main problem with such an approach is that, as the average payment to a person in care is a result of the complex interaction of a number of variables, this would not give any indication of the sensitivity of the results to changes in those variables.

Appendix C: Data

Below we summarise the various data sources used to set assumptions for modelling of LTCF expenditure and income

Data sources

In order to set the various assumptions required for modelling the expenditure and income for the LTCF, we analysed a range of sources of data. This included the following data sources:

- Projected population of the Government of Jersey for the 2021 review, produced by the UK Government Actuary's Department.
- Long term care policy trends data set (produced by the Customer and Local Services team)
- 2012 Care home census
- Personal Social Security Research Unit's (PSSRU) analysis of BUPA UK data in January 2011
- Income Distribution Survey 2014/15, Income Distribution Survey 2019/20 and preliminary Income Distribution Survey 2021/22
- Census 2021
- Jersey house price index (HPI)
- Jersey's Fiscal Policy Panel Annual Report – November 2022
- GoJ 2022 Budget
- Statistics Jersey's Index of Average Earnings report for June 2022
- LTC scheme general information for 2022 as available on Government website
- LTC scheme parameters spreadsheet (provided by Strategic Policy, Planning and Performance department)
- Current demographic data for individuals in long-term care (provided by Strategic Policy, Planning and Performance department)
- Income tax per capita data (provided by Treasury and Resources department)
- Emails provided by Strategic Policy, Planning and Performance department and the Treasury & Exchequer department providing further information, including Government grant forecasts, expected Long Term Care charge and expenditure set out in the Proposed Government Plan 2023-2026.

Availability of data specific to the Government of Jersey LTCF

Given the LTCF has only been operating in its current format since 2014, there is a sparsity of directly relevant data from which to derive credible modelling assumptions. As a result, a number of assumptions have been derived from alternative sources.

Over time, as the LTCF matures a large quantity of data will be collected that relates specifically to individuals in care. This should allow modelling assumptions to be refined over time, to more closely reflect observed characteristics of Jersey residents that have received long term care, and provide greater credibility of the results of the actuarial review.

If possible, we would like to obtain additional data relating to the incomes and illiquid assets of people entering the LTCF, along with analysis on how care cost increases may compare to increases in average earnings.

Data for future reviews

We will work closely with the Government of Jersey to ensure that appropriate data in relation to the operation of the Long Term Care scheme is collected and maintained over future years. This will enable assumptions set for future actuarial reviews of the LTCF to be based on more up to date data sources that are specific to both Jersey's population and the Long Term Care scheme itself.

Appendix D: Modelling assumptions

This section sets out how assumptions underlying our "central scenario" for modelling have been derived, using the data sources referred to in the previous section

Population projections

Full Jersey population projections

We have been provided with statistics from the 2021 Jersey population projections produced by the UK Government Actuary's Department, based on the 2021 Census.

This provides various projections of the population, by age and gender, under certain scenarios.

Following discussion with the Government, it has been agreed that the central scenario for the actuarial review of the LTCF will be modelled assuming that Jersey's future population is in line with the +700 annual net inward migration scenario set out within the 2021 projections.

Table D1: Population projections for +700 annual net inward migration scenario

Year	Under 65	Aged 65 to 79	Aged 80+	Total
2021	84,523	13,344	5,320	103,187
2025	85,584	14,534	5,697	105,815
2030	85,976	16,130	6,627	108,733
2035	85,735	18,439	7,218	111,392
2040	86,235	19,554	8,101	113,890
2045	86,998	19,791	9,535	116,324
2050	87,265	20,020	11,166	118,451
2055	87,441	20,570	12,002	120,013
2060	87,493	21,046	12,560	121,099
2065	87,549	21,054	13,424	122,027
2070	87,773	21,048	14,153	122,974
2075	87,635	21,527	14,818	123,980

Sensitivity analysis

Sensitivity analysis has been carried out based on the +325 annual net inward migration and +1,000 annual net inward migration scenarios.

Table D2: Population projections for +325 annual net inward migration scenario

Year	Under 65	Aged 65 to 79	Aged 80+	Total
2021	84,523	13,344	5,320	103,187
2025	83,700	14,850	5,697	104,247
2030	81,512	16,829	6,661	105,002
2035	78,612	19,295	7,401	105,308
2040	76,507	20,275	8,518	105,300
2045	74,764	20,106	10,157	105,027
2050	72,652	19,782	11,880	104,314
2055	70,772	19,581	12,635	102,988
2060	69,001	19,209	12,971	101,181
2065	67,307	18,395	13,488	99,190
2070	65,905	17,715	13,696	97,316
2075	64,277	17,620	13,733	95,630

Table D3: Population projections for +1,000 annual net inward migration scenario

Year	Under 65	Aged 65 to 79	Aged 80+	Total
2021	84,523	13,344	5,320	103,187
2025	87,083	14,290	5,697	107,070
2030	89,491	15,603	6,596	111,690
2035	91,317	17,792	7,074	116,183
2040	93,844	19,046	7,785	120,675
2045	96,542	19,617	9,057	125,216
2050	98,636	20,288	10,630	129,554
2055	100,416	21,444	11,541	133,401
2060	101,871	22,600	12,300	136,771
2065	103,237	23,251	13,445	139,933
2070	104,715	23,748	14,593	143,056
2075	105,763	24,647	15,755	146,165

Populations in long term care

For previous analyses of the LTCF, projections for the population in long term care had been derived from the 2016 population projections carried out by Statistics Jersey.

Given that no specific projections are produced for the future population in long term care, it was agreed that the proportion of the population in care would be set based on current observed levels, and assumed to remain static. Implicitly, this ignores any impact of potential cohort effects or (for population projections based on higher levels of net inward migration) of periods of ineligibility for long term care.

The long-term care LTC Policy Trends Datasets spreadsheet provided set out demographic information for 1,525 current claimants as at 31 December 2021:

Table D4: Age distribution of claimants

Age band	Number of claimants
18-19	5
20-29	63
30-39	49
40-49	48
50-59	88
60-69	123
70-79	229
80-89	541
90-99	358
100+	21
Total	**1,525**

We have assumed that the proportions of the following projected populations remains in line with those observed at December 2021:

- Projected population aged between 18 and 65;
- Projected population aged between 65 and 80; and
- Projected population aged over 80.

In addition, the demographic data for individuals in long-term care split out the proportion of claimants in domiciliary or residential care as follows:

Table D5: Number of individuals receiving residential and domiciliary care at 30 November 2022

	Domiciliary	Residential	**Total**
Aged over 65	352	755	1,107
Aged under 65	194	125	319
Total	**546**	**880**	**1,426**

Source: All Claimants Dataset provided by Government of Jersey

As a result, we have assumed that:

- 39% of long term claimants aged under 65 would receive care in an approved care home (with 61% receiving domiciliary care); and
- 68% of long term claimants aged over 65 would receive care in an approved care home (with 32% receiving domiciliary care).

Simulated population assumptions

Income distribution

In order to model the distribution of income on entering care, we build up an income distribution as follows:

Estimating the proportion of pensioners in certain income quintiles

We have been provided with data by Statistics Jersey that is consistent with the 2019/20 Jersey Income Distribution Survey. However, this survey was disrupted by the coronavirus pandemic, and thus the sample size collected by Statistics Jersey was much smaller than intended. As a result, the sample size was too small to be able to produce quintile breakdowns similar to the 2014/15 Income Distribution Survey that we used for our previous actuarial review.

In order to model the distribution of income, we have therefore assumed that the proportion of pensioners within each income quintile remains consistent with the 2014/15 Income Distribution Survey, but allow the level of income within each income quintile to increase in line with historic increases to the old age pension. These increases aim to reflect increases in average earnings and inflation (Retail Price Index).

This data showed the proportion of individuals in each income quintile that corresponded to pensioner households were as follows:

Table D6: proportion of individuals in each income quintile that corresponded to pensioner households

Income quintile (in 2014/15 terms)	Proportion of pensioner households in each quintile
£0 - £23,000	31.6%
£23,000 - £30,900	22.2%
£30,900 - £41,000	16.4%
£41,000 - £57,700	15.5%
£57,700+	14.3%

Source: Income Distribution Survey 2014/15

These income figures are equivalised (adjusted for household makeup/size) and are before housing costs are considered. We make an adjustment to incomes for housing costs separately.

Estimating the level of income within each income quintile

We have assumed that incomes are uniformly distributed within each income quintile, other than the top income quintile which does not have an upper bound.

We have adjusted the range of each income quintile to reflect historic increases to the old age pension. For the period from 2015 to 2021, the old age pension has increased by circa 18%, and we have increased the income quintile thresholds to account for this.

Table D7: Adjusted income quintile

Income quintile (in 31 December 2021 terms)
£0 - £27,140
£27,140 - £36,460
£36,460 - £48,380
£48,380 - £68,090
£68,090+

For individuals in the top income quintile with no upper bound, we have assumed a half-normal distribution (upper 50% of a Normal distribution) centred at £68,090 with a large standard deviation (£60,000) to allow for very high income earners, but with a cap on income of £150,000. This approximation at high income levels is not material for the modelling as the relevant information for this group is that means testing will not apply (which would remain correct at all earnings levels over £68,090).

Experience adjustment

The above analysis would implicitly assume that individuals in long term care would represent a cross-section of the general population by age. In practice, the proportion of individuals at older ages in long term care is significantly higher than the proportion of individuals at such ages in the general population (so the long term care population is skewed towards older ages).

As income levels after age 65 tend to reduce with age, one would expect the actual income levels of individuals in care to be lower than implied by the distribution on the previous page.

Our modelling also uses income figures that are representative of individuals in the population, rather than income figures equivalised for households. Equivalisation adjusts the income figures to reflect that a single person living on their own may be considered to have a higher income than a couple with the same total income. Since most pensioner households would be comprised of a single adult or two adults, equivalisation has the effect of increasing the income figures for individuals.

Based on the data provided in the Long Term Care Policy Trends data set (produced by the Customer and Local Services team), we have adjusted the income distribution for the care population. Based on the observed levels of Government expenditure for current individuals in long term care (which are in part driven by income levels for individuals in care), we will apply a scaling factor to the income distribution on the previous page for

the over 65 care population consistent with the approach adopted for our previous actuarial review.

Liquid asset distribution

There is relatively little recent data available in order to derive a reliable assumption for the link between an individual's income and the level of liquid assets held.

For our previous 2017 review of the LTCF, we assumed a normal distribution for liquid assets with the mean related to income based on a linear regression model as follows:

Mean liquid assets = £5,270 + Income * 0.77; Standard deviation = £9,400

In order to provide an up to date assumption we have increased the figure of £5,270 to allow for average earnings increases between 2017 and 2021 of around 11%; the assumption used is therefore;

Mean liquid assets = £5,845 + Income * 0.77; Standard deviation = £10,400

Source: Statistics Jersey's Index of Average Earnings report for June 2022

Illiquid asset distribution

For the purpose of this review, we have assumed that non-liquid assets at the point of entering care are made up entirely of property assets, which is consistent with our previous Actuarial Review and modelling carried out by Oxera at the time of establishing the Fund.

Based on information available in the Income Distribution Survey 2019/20 and preliminary Income Distribution Survey 2021/22, and Jersey House Price Index (HPI), we have determined a property value distribution as follows:

3. Estimating the proportion of over 65s that own property

Data provided to us by Statistics Jersey used for the 2014/15 Income Distribution Survey stated that, for pensioner households, 68% are owner-occupied.

Based on this data, we initially assumed that 68% of individuals aged over 65 and entering long term care own their own home, and modelled this for the simulated population using a uniform distribution.

The 2021 Census provides some up-to-date information on the levels of owner-occupied pensioner households in Bulletin 2.

Household type	Owner occupied	Social Rental	Qualified rental	Staff or service accom.	Registered lodging house	Private lodging	Other non-qualified accom.	All
Single adult	2,780	1,120	3,070	440	330	330	530	**8,600**
Couple (adult)	3,710	230	2,070	210	140	180	340	**6,880**
Single parent (with dependent children)	380	700	490	10	20	30	60	**1,700**
Single parent (all children 16 years or above)	930	580	390	20	10	10	40	**1,980**
Couple with dependent children	4,580	690	1,920	160	100	140	290	**7,890**
Couple with children (all children 16 years or above)	2,530	410	550	60	10	30	30	**3,610**
Couple (one pensioner)	980	120	200	10	~	~	10	**1,330**
Single pensioner	3,090	1,440	820	30	20	30	30	**5,460**
Two or more pensioners	3,430	330	330	10	~	10	30	**4,140**
Two or more unrelated persons	280	20	320	80	20	30	40	**790**
Other	1,170	190	580	70	30	60	100	**2,190**
All	23,870	5,830	10,740	1,100	700	860	1,500	**44,580**

Source: Statistics Jersey Census 2021 – Bulletin 2: Households and housing, page 15

Based on this information, we observe that for pensioner households, 68% are owner-occupied. This is consistent with the data used for our previous actuarial review.

4. Estimating the type of property owned

Data provided to us by Statistics Jersey also sets out the number of households with 1, 2, 3, and 4+ bedrooms

Table 4.6: Number of bedrooms in occupied private dwellings by tenure, percent*

Tenure	One	Two	Three	Four	Five or more	Total
Owner occupied	9	22	39	21	8	**100**
Qualified rent	40	35	18	6	2	**100**
Social housing rent[27]	44	34	20	3	0	**100**
Non-qualified accommodation	66	22	9	2	1	**100**
All households	**26**	**27**	**29**	**13**	**5**	**100**

**Percentages may not sum to 100 due to rounding*

Source: Statistics Jersey Census 2021, page 37

5. Model house prices for each type of property

The latest Jersey House Price Index (HPI) has mean property prices for 1-bed flats and 2/3/4-bedroom houses – we have applied this to estimate house prices for all individuals assumed to own a particular type of property.

For each property type, we have assumed different normal distributions, whose mean price and 95% confidence interval are derived from information contained in the HPI data.

Table D8: House prices for each type of property

Number of bedrooms	Mean Property Price (£)	95% confidence interval (£)
1 (flats)	339,000	10,000
2	652,000	51,000
3	861,000	49,000
4	1,339,000	219,000

Source: Statistics Jersey's House Price Index – Fourth Quarter - 2021

6. Experience adjustment

The above analysis implicitly assumes that individuals in long term care have similar home ownership statistics to the general population by age. In practice, this may not be the case.

LTCF Policy Trends dataset provides some data on illiquid assets but this is very limited and is only in respect of circa 10% of overall claimants. The dataset also includes current individuals in long term care that receive means-tested LTC support (which is only available for individuals with assets valued below the asset disregard level). This suggests that individuals currently in care have lower illiquid assets than would be implied by the distribution described above. We have therefore adjusted the proportion of over 65s assumed to own their own home to be 45% to be consistent with the approach taken for the previous actuarial review.

To the extent that home ownership levels exceed this assumption (and assuming all else unchanged) Fund expenditure would be lower than estimated in the central scenario.

Length of stay in care

In line with the Personal Social Security Research Unit's (PSSRU) 2011 analysis of BUPA UK data, the length of time in care appears to follow an exponential distribution.

For the 31 December 2017 actuarial review of the LTCF, based on the average period of time in care (residential or domiciliary) of 2.5 years for the over 65s, we modelled the length of stay in care for this group as an exponential distribution with a lambda value of 0.4 (i.e. 1/2.5). The average period of time in care (residential or domiciliary) for the under 65s was around 4.8 years, and we modelled the length of stay in care for this group using a lambda value of 0.21.

This assumed that length of stay in care is independent of income and assets – a simplification aimed at minimising complexity in the modelling, and reflecting the lack of credible data to determine the interdependency of these factors.

These has been no update to the BUPA UK data since the previous actuarial review.

It was noted that this assumption relied on data for UK individuals receiving private long term care in the UK, so whilst informative may not be directly applicable to Jersey's population and long term care system. As the LTC scheme matured, it was expected that credible data on the length of time individuals spend in long term care would accumulate.

LTCF experience

We have been provided with a dataset containing actual claim durations for the LTCF, since 1 January 2013 to 31 December 2022. This data is a snapshot based on the monthly financial reconciliation process and so it is an approximation of claim duration.

This is a different metric to the length of stay in care, as it only measures the length of time that claims were paid for. It will therefore underestimate the overall length of stay in care for individuals that need to wait until the care costs cap is reached before receiving any financial support from the LTCF.

Analysing the data reveals that the average length of time that claims are paid for is around 3 years. It is difficult to convert this into an average length of stay in care, as the additional time to be added depends on whether they receive means-tested support and the care level that an individual claimant requires.

However, it does provide a level of comfort that our approach to setting the length of stay in care using the BUPA UK data remains reasonable, and consistent to what can be observed from the LTCF claims data.

Level of care needs

The data provided (in the All Claim Rating Dataset analysis) on long-term care needs provides a breakdown of individuals in care between care levels 1, 2, 3 and 4.

Table D9: Care needs for individuals in care as at 30 November 2022

	Care level 1	Care level 2	Care level 3	Care level 4	**Total**
Aged over 65	133	320	270	384	**1,107**
Aged under 65	46	50	54	169	**319**
Total	**179**	**370**	**324**	**553**	**1,426**

Source: Current Claim Rating Dataset provided by Government of Jersey

For the purpose of this review, we have assumed that the proportion of individuals in each care level will remain static relative to those as at 30 November 2022, as follows:

Table D10: Assumed proportions of individuals in care at each care level as at 30 November 2022

	Care level 1	Care level 2	Care level 3	Care level 4
Aged over 65	12%	29%	24%	35%
Aged under 65	14%	16%	17%	53%

Source: Current Claim Rating Dataset provided by Government of Jersey

Individuals with partners also in care

In the LTC Policy Trends Dataset analysis, it is estimated that 73 of the 1426 current individuals in long term care (as at 30 November 2022) also have a partner in long term care.

Although there is a reduced care cost cap for couples, given the small proportion of individuals with a partner in care, we have ignored the additional complexity of partners in care for our modelling. We will keep this under review at future actuarial reviews.

Modelling assumptions – sources of income

Below we summarise the various data sources used to set assumptions for modelling of LTCF expenditure and income.

Income tax contributions

Payments to the LTCF from income tax contributions are currently in line with 1.5% of taxable earnings up to the Upper Earning Limit (UEL - £260,688 for 2022).

Table 44 of the Proposed Government Plan 2023-26 sets out estimated LTC contributions based on personal income tax projections for 2023-2026, assuming that the LTC contribution rate remained static. The actual 2022 figure has also been set out below, which we note is higher than the current 2023-26 projections.

Table D11: Forecast LTC charges in Proposed Government Plan 2023-26

	Forecast LTC charges
2022 (actual)	£38,854,000
2023	£38,397,000
2024	£40,554,000
2025	£42,403,000
2026	£44,314,000

Source: Proposed Government Plan 2023-2026, Table 44

For the purpose of the base case in this review, it has been assumed that the LTC contribution rate will remain at 1.5%. Beyond 2026, we have increased income tax contributions in line with:

- Assumed Trend 2026+ assumption for general earnings increases of 2.8% p.a.; and
- Changes to the under 65 and over 65 populations in line with the base population projections (applying weightings based on over 65s contributing 75p of income tax per capita for each £1 per capita of income tax paid by under 65s).

Government grants

Table 44 of the Proposed Government Plan 2023-26 also sets out forecasts of Government grants to the LTCF for the next four years, as follows. The actual 2022 figure has also been set out below.

Table D12: Forecast Government grants to LTCF in Proposed Government Plan 2023-26

	Forecast grant
2022 (actual)	£31,802,000
2023	£33,119,000
2024	£35,338,000
2025	£36,716,000
2026	£37,707,000

Source: Proposed Government Plan 2023-2026, Table 44

We have assumed that grants are in line with the forecast amounts. Beyond 2026, we assume that grants increase by 2.4% p.a. (i.e. in line with the assumed Trend 2026+ assumption for RPI).

Contributions from underspends

For the last actuarial review of the LTCF, it was assumed there would be no further contributions to the Fund as a result of underspends elsewhere. We understand from Treasury & Exchequer that it is reasonable to continue this approach for the latest actuarial review. As a result, **we have continued to assume no further contributions from underspends in future.**

Investment returns on LTCF balance

As at 31 December 2021, there was a balance of £43.6M in the LTCF.

The current strategic asset allocation for the LTCF is 50% Cash and 50% Absolute Return Bonds. This is a reasonable allocation when the Fund represents only c.9 months payments, and it is therefore operating as just a little more than a cash float. At present cash rates, the expected return on this fund is a little under 4.5%, but this may vary in future so we have taken a slightly prudent assumption of an average return of 4% p.a. over the next 25 years.

If the Fund were more of a long-term investment fund, then a less conservative investment strategy would be possible, enabling a higher investment return to be targeted.

Appendix E: Detailed results

Detailed results of all modelling runs discussed in this report.

Central scenario

Table E1: Detailed results – Central scenario

Year	2022	2027	2032	2037	2042	2047
Income (£)	*£69.8m*	*£74.3m*	*£76.1m*	*£78.0m*	*£80.0m*	*£82.3m*
Expenditure (£)	*£61.3m*	*£70.2m*	*£78.6m*	*£88.8m*	*£97.4m*	*£115.2m*
Net Income / (Expenditure) (£)	*£8.5m*	*£4.1m*	*(£2.5m)*	*(£10.8m)*	*(£17.4m)*	*(£32.9m)*
Breakeven contribution rate	*1.2%*	*1.3%*	*1.6%*	*1.9%*	*2.1%*	*2.5%*
Projected LTCF balance at end of year (£)	*£43.6m*	*£76.8m*	*£83.7m*	*£57.7m*	*(£3.6m)*	*(£125.1m)*

Sensitivity 1: Longer average length of stay in care

This sensitivity assumes that all individuals spend an additional 6 months in long term care (relative to the central scenario).

Table E2: Longer average length of stay in care

Year	2022	2027	2032	2037	2042	2047
Income (£)	*£69.8m*	*£74.3m*	*£76.1m*	*£78.0m*	*£80.0m*	*£82.3m*
Expenditure (£)	*£73.9m*	*£85.5m*	*£98.3m*	*£108.0m*	*£120.2m*	*£143.9m*
Net Income / (Expenditure) (£)	*(£4.1m)*	*(£11.2m)*	*(£22.2m)*	*(£29.9m)*	*(£40.2m)*	*(£61.7m)*
Breakeven contribution rate	*1.7%*	*1.9%*	*2.3%*	*2.5%*	*2.8%*	*3.4%*
Projected LTCF balance at end of year (£)	*£43.6m*	*£7.1m*	*(£77.7m)*	*(£217.7m)*	*(£408.1m)*	*(£689.6m)*

Sensitivity 2: Increase to the proportion of individuals receiving domiciliary care

This sensitivity assumes that the number of residential beds remains static (and therefore the proportion of individuals receiving domiciliary care increases over the projection period).

Table E3: Increase to the proportion of individuals receiving domiciliary care

Year	2022	2027	2032	2037	2042	2047
Income (£)	£69.8m	£74.3m	£76.1m	£78.0m	£80.0m	£82.3m
Expenditure (£)	£61.3m	£69.8m	£76.4m	£83.6m	£89.9m	£103.9m
Net Income / (Expenditure) (£)	£8.6m	£4.4m	(£0.3m)	(£5.5m)	(£9.8m)	(£21.6m)
Breakeven contribution rate	1.2%	1.3%	1.5%	1.7%	1.8%	2.2%
Projected LTCF balance at end of year (£)	£43.6m	£76.9m	£89.9m	£80.5m	£53.2m	(£16.9m)

Sensitivity 3: Changes to the care cost cap

These sensitivities assume different rates of growth in the care cost cap (which, for the central scenario is assumed to grow in line with average earnings growth), either:

- Care cost cap frozen throughout the projection period; or
- Care cost cap rises over the projection period at a rate 3% pa above average earnings growth.

Table E4: Care cost cap frozen throughout the projection period

Year	2022	2027	2032	2037	2042	2047
Income (£)	£69.8m	£74.3m	£76.1m	£78.0m	£80.0m	£82.3m
Expenditure (£)	£61.3m	£71.7m	£83.3m	£94.2m	£105.3m	£126.3m
Net Income / (Expenditure) (£)	£8.6m	£2.5m	(£7.3m)	(£16.2m)	(£25.2m)	(£44.0m)
Breakeven contribution rate	1.2%	1.4%	1.8%	2.1%	2.3%	2.9%
Projected LTCF balance at end of year (£)	£43.6m	£71.0m	£65.1m	£12.4m	(£86.0m)	(£258.9m)

Table E5: Care cost cap rises by 3% pa above average earnings growth

Year	2022	2027	2032	2037	2042	2047
Income (£)	£69.8m	£74.3m	£76.1m	£78.0m	£80.0m	£82.3m
Expenditure (£)	£61.3m	£69.3m	£75.3m	£83.1m	£88.6m	£104.0m
Net Income / (Expenditure) (£)	£8.6m	£5.0m	£0.8m	(£5.1m)	(£8.5m)	(£21.7m)
Breakeven contribution rate	1.2%	1.3%	1.5%	1.7%	1.8%	2.2%
Projected LTCF balance at end of year (£)	£43.6m	£77.7m	£93.8m	£89.2m	£64.8m	(£0.0m)

Sensitivity 4: Changes to the level of asset disregard

This sensitivity assumes that the asset disregard is frozen at £419,000 throughout the projection period.

Table E6: Asset disregard frozen at £419,000 throughout projection period

Year	2022	2027	2032	2037	2042	2047
Income (£)	*£69.8m*	*£74.3m*	*£76.1m*	*£78.0m*	*£80.0m*	*£82.3m*
Expenditure (£)	*£61.3m*	*£69.3m*	*£76.4m*	*£85.3m*	*£93.8m*	*£108.6m*
Net Income / (Expenditure) (£)	*£8.6m*	*£5.0m*	*(£0.3m)*	*(£7.3m)*	*(£13.8m)*	*(£26.4m)*
Breakeven contribution rate	*1.2%*	*1.3%*	*1.5%*	*1.7%*	*1.9%*	*2.3%*
Projected LTCF balance at end of year (£)	*£43.6m*	*£78.0m*	*£93.0m*	*£82.1m*	*£40.7m*	*(£52.1m)*

Sensitivity 5: Increases to LTC contribution rate

This sensitivity assumes that the LTC contribution rate rises from 1.5% to 2.0% from 2024.

Table E7: LTC contribution rate of 2% from 2024

Year	2022	2027	2032	2037	2042	2047
Income (£)	*£69.8m*	*£87.7m*	*£90.2m*	*£92.8m*	*£95.4m*	*£98.4m*
Expenditure (£)	*£61.3m*	*£70.2m*	*£78.6m*	*£88.8m*	*£97.4m*	*£115.2m*
Net Income / (Expenditure) (£)	*£8.6m*	*£17.5m*	*£11.6m*	*£4.0m*	*(£2.0m)*	*(£16.8m)*
Breakeven contribution rate	*1.2%*	*1.0%*	*1.2%*	*1.4%*	*1.5%*	*1.9%*
Projected LTCF balance at end of year (£)	*£43.6m*	*£116.7m*	*£198.1m*	*£255.8m*	*£288.3m*	*£271.8m*

Additional sensitivity: Alternative population projections

These sensitivities project income and expenditure based on Statistics Jersey's +1,000 annual net inward migration and +325 annual net inward migration population projections.

Table E8: Annual net inward migration of 1,000 individuals

Year	2022	2027	2032	2037	2042	2047
Income (£)	£69.8m	£74.5m	£76.9m	£79.4m	£82.1m	£84.9m
Expenditure (£)	£61.3m	£70.2m	£78.3m	£87.7m	£95.5m	£112.9m
Net Income / (Expenditure) (£)	£8.6m	£4.3m	(£1.4m)	(£8.3m)	(£13.5m)	(£28.0m)
Breakeven contribution rate	1.2%	1.3%	1.5%	1.8%	1.9%	2.3%
Projected LTCF balance at end of year (£)	£43.6m	£76.7m	£86.5m	£68.9m	£24.0m	(£72.5m)

Table E9: Annual net inward migration of 325 individuals

Year	2022	2027	2032	2037	2042	2047
Income (£)	£69.8m	£74.0m	£75.1m	£76.5m	£77.8m	£79.4m
Expenditure (£)	£61.3m	£70.2m	£79.0m	£90.3m	£100.0m	£118.3m
Net Income / (Expenditure) (£)	£8.6m	£3.8m	(£3.8m)	(£13.8m)	(£22.2m)	(£38.9m)
Breakeven contribution rate	1.2%	1.4%	1.6%	2.0%	2.3%	2.8%
Projected LTCF balance at end of year (£)	£43.6m	£76.8m	£80.4m	£44.1m	(£37.3m)	(£189.3m)

Additional sensitivity: Changes to care cost increases relative to average earnings growth

These sensitivities assume that standard care costs (which largely reflect carer earnings levels) increase at a rate that is 0.5% pa higher or lower than general Jersey average earning growth.

Table E10: Standard care costs increase 0.5% pa quicker than Jersey average earning growth

Year	2022	2027	2032	2037	2042	2047
Income (£)	£69.8m	£74.3m	£76.1m	£78.0m	£80.0m	£82.3m
Expenditure (£)	£61.3m	£71.9m	£84.2m	£97.0m	£109.4m	£131.5m
Net Income / (Expenditure) (£)	£8.6m	£2.4m	(£8.1m)	(£18.9m)	(£29.3m)	(£49.2m)
Breakeven contribution rate	1.2%	1.4%	1.8%	2.1%	2.5%	3.0%
Projected LTCF balance at end of year (£)	£43.6m	£73.3m	£64.2m	£3.4m	(£112.7m)	(£313.6m)

Table E11: Standard care costs increase 0.5% pa quicker than Jersey average earning growth

Year	2022	2027	2032	2037	2042	2047
Income (£)	*£69.8m*	*£74.3m*	*£76.1m*	*£78.0m*	*£80.0m*	*£82.3m*
Expenditure (£)	*£61.3m*	*£71.9m*	*£84.2m*	*£97.0m*	*£109.4m*	*£131.5m*
Net Income / (Expenditure) (£)	*£8.6m*	*£2.4m*	*(£8.1m)*	*(£18.9m)*	*(£29.3m)*	*(£49.2m)*
Breakeven contribution rate	*1.2%*	*1.4%*	*1.8%*	*2.1%*	*2.5%*	*3.0%*
Projected LTCF balance at end of year (£)	*£43.6m*	*£73.3m*	*£64.2m*	*£3.4m*	*(£112.7m)*	*(£313.6m)*

Table E12: Simulated care population exhibits a higher level of care needs

Year	2022	2027	2032	2037	2042	2047
Income (£)	*£69.8m*	*£74.3m*	*£76.1m*	*£78.0m*	*£80.0m*	*£82.3m*
Expenditure (£)	*£64.9m*	*£74.3m*	*£83.5m*	*£94.9m*	*£104.3m*	*£122.6m*
Net Income / (Expenditure) (£)	*£4.9m*	*(£0.0m)*	*(£7.4m)*	*(£16.9m)*	*(£24.2m)*	*(£40.3m)*
Breakeven contribution rate	*1.3%*	*1.5%*	*1.8%*	*2.1%*	*2.3%*	*2.8%*
Projected LTCF balance at end of year (£)	*£43.6m*	*£57.6m*	*£39.1m*	*(£19.4m)*	*(£119.2m)*	*(£285.0m)*

Further information is included within the commentary relating to chart 4.21 and 4.22.

Appendix F: Glossary

This section provides a fuller description of certain terminology used within the report.

Terminology	Description
Additional costs	If you are in a care home, additional costs are those that are over and above the standard co-payment of £331.94 a week. If you are receiving care at home, additional costs are any care costs that are over and above the level of the standard care cost appropriate to your assessed care level.
Care costs cap	The lifetime cap relating to the standard care costs that an individual has to accumulate before they become eligible to receive the long-term care benefit.
Care level	The level of care required as assessed by a Health and Social Services healthcare professional.
Co-payment	The living costs of being in a care home. Under the LTC scheme, gross care home fees are made up of the standard care cost plus the co-payment. The co-payment can include additional costs as well as the standard co-payment.
Gross fees	The total of an individual's LTC costs, including standard care costs, the standard co-payment and any additional costs.
LTC benefit	The long-term care benefit available to anyone whose standard care costs have reached the care costs cap. This universal benefit is paid regardless of an individual's financial situation. The LTC benefit is set at the same rate as the standard care cost for each assessed care level.
LTC property loan	A loan to assist with any form of LTC cost if the income and assets of an individual and their partner are insufficient to cover these costs. The debt builds up as care costs accumulate and is formally registered against Jersey property using a Social Security hypothec. The loan is normally repaid when the property next changes hands. Interest is charged on the loan at the prevailing Bank of England base rate plus 0.5%.
LTC support	Means-tested financial help that is available if the income and assets of an individual and their partner

	are insufficient to cover their standard care costs and/or standard co-payment.
Other assets exemption	The other assets exemption is designed to protect a minimum value of "cash" assets in addition to the value of the family home. The exemption protects the claimant from needing to use any of the exempted assets to meet their standard care costs and, if in a care home, their standard co-payment.
Principal property exemption	The principal property exemption is designed to protect the value of the family home. The exemption protects the property owner from needing to use any of the exempted value of the family home to meet their standard care costs and standard co-payment. However, if a claimant chooses a care home with a higher co-payment or a care package at home that is above the standard care cost for their care level then this can be met through a property loan, which can draw on assets below the principal property exemption.
Social Security hypothec	The means by which a charge is placed on any Jersey freehold property held by the claimant and/or their partner to secure a loan from Social Security to pay their standard care costs, standard co-payment or additional costs.
Standard care cost(s)	A weekly standard care cost is set for each care level. Every week someone is in care, they build up their standard care costs at the rate applicable to their assessed level of care. These standard care costs count towards the care costs cap.
Standard co-payment	The standard co-payment is £331.94 a week. Co-payments do not count towards the care costs cap and are not covered by the LTC benefit. LTC support and LTC property loans can assist with the standard co-payment.

Appendix G: Limitations

Please see below for details of certain conditions under which our advice is provided.

- This report and any enclosures or attachments are prepared on the understanding that it is solely for the benefit of the addressee(s).
- Whilst we understand that this report may be made publicly available, in providing this report, we do not accept or assume any responsibility for any other purpose or to anyone other than the addressee(s) of this report.
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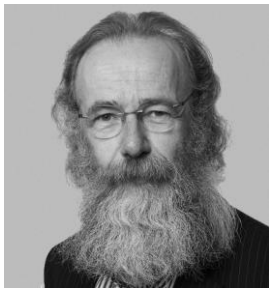
- We neither warrant nor represent (either expressly or by implication) to any third party who receives this report that the information in the report is fair, accurate or complete, whether at the date of its preparation or at any other time.
- This report has been prepared based on our understanding of the addressee's requirements as set out in the “Quote for 31 December 2021 Actuarial review of the Long Term Care fund”, dated 19 October 2022, and under our existing contract put in place at the time of the 2017 review of the Fund. Further advice should be sought where this analysis is intended to be used for any other purpose.
- With respect to data on which we have relied in producing our report, whilst we have taken certain limited steps to satisfy ourselves that the data provided to us by the addressee(s) is of a quality sufficient for the purposes of our investigation, including carrying out certain basic tests for the purpose of detecting manifest inconsistencies, it is not possible for us to confirm the accuracy or completeness of the detailed information provided.
- This report was based on data available to us as at the effective date of the report and takes no account of developments after that date except where explicitly stated otherwise.
- This report constitutes actuarial advice and should be read by suitably qualified persons in the detail covered. The report should be read in full to ensure conclusions are not reached based on individual sections alone.
- Our report does not represent legal or investment advice. Specialist advice in these areas should be sought where required.



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