# Genworth Life Insurance Company <br> Address: 6603 West Broad Street, Richmond, VA 23230 <br> Company NAIC No: 70025 

## Actuarial Memorandum

September 2023

## Policy Form 7035AT

## 1. Scope of this Filing

This filing applies to the referenced policy forms issued in your state. These forms are also referred to by Genworth Life Insurance Company (GLIC) as "Choice I" and are no longer being sold.

For all the policies issued in your state to which the current filing applies, refer to the Supplement for state and nationwide information on issue dates, number of issued and in-force lives, total and average premium, average issue and attained age, distributions and history of prior approved rate increases.

## 2. Purpose of this Filing

This actuarial memorandum has been prepared to request and support the approval of a premium rate increase in your state.

We demonstrate that the requested premium rate increase satisfies the minimum requirements and all applicable regulations in your state. This actuarial memorandum may not be suitable for other purposes.

In order to maintain adequate Cash Flow Testing (CFT) Margin and to strengthen the claim paying ability of the company, GLIC is differentiating its rate increases according to the projected experience and resulting level of risk associated with certain key policy features. The most significant risks are observed with policies with the richest potential benefits, meaning long benefit periods and large compound benefit increase options, and thus higher rate increases are appropriate for those cohorts.

In this filing, GLIC is requesting a premium rate increase according to the table below, applicable to the base rates and associated riders of all in-force policies referenced in Section 1 of this actuarial memorandum. The requested rate increases reflect updated assumptions and experience, and any remainder of the rate increase not approved in prior filings if applicable to your state.

| Benefit Period | Benefit Increase Option (BIO)* | Requested Rate Increase |
| :--- | :--- | :--- |
| Lifetime | Low BIO | $220 \%$ |
| Lifetime | High BIO | $217 \%$ |
| Limited | Low BIO | $134 \%$ |
| Limited | High BIO | $134 \%$ |

*Low BIO includes policies without BIO. High BIO includes all other BIO options.

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However, GLIC does recognize the limitations prescribed in Maryland regulation COMAR 31.14.01.04(5) and is willing to implement a rate increase according to the table below on the above-mentioned policy forms.

| Benefit Period | Benefit Increase Option <br> (BIO)* | Requested Rate <br> Increase | Rate Increase To Be <br> Implemented |
| :--- | :--- | :--- | :--- |
| Lifetime | Low BIO | $220 \%$ | 8 years of $15 \%$ and <br> $4.6 \%$ in last year |
| Lifetime | High BIO | $217 \%$ | 8 years of 15\% and <br> $3.6 \%$ in last year |
| Limited | Low BIO | $134 \%$ | 6 years of 15\% and <br> $1.1 \%$ in last year |
| Limited | High BIO | 6 years of 15\% and <br> $1.1 \%$ in last year |  |

In addition, in 2022, GLIC updated the Multi-Year Rate Action Plan (MYRAP) cumulative target premium rate increases to reflect emerging risks. The initial plan for Choice I pursued the approval of a cumulative premium rate increase of $735 \%$ and $420 \%$ for policies with lifetime and limited benefit periods respectively. The cumulative rate increases for policies with Low BIO have been updated to $754 \%$ and $520 \%$ for lifetime and limited benefit periods respectively and the cumulative rate increases for policies with High BIO have been updated to $873 \%$ and $606 \%$ for lifetime and limited benefit periods respectively. The plan accelerated the 2023 round to 2022 in most states with the rate request in this filing reflecting the remaining amount needed to achieve the cumulative rate increase target level.

## 3. Justification of the Premium Rate Increase

GLIC actively monitors the impact of experience on projections and lifetime loss ratios. GLIC has observed that emerging experience continues to unfold unfavorably, and assumptions have been adjusted to that effect. Actual historical experience combined with revised best estimate assumptions have resulted in Lifetime Loss Ratios (LLR) significantly greater than what was anticipated at pricing. Two key drivers of the increased LLRs have been increased claim costs and lower than expected healthy life terminations. These have impacted both historical experience and assumption development of future expectations. More detailed information is presented in Section 8 of this actuarial memorandum.

## 4. Marketing Method and Underwriting Description

Policies were primarily sold by captive agents that were provided leads from mass mailing responses.
The underwriting process included an assessment of functional and cognitive abilities at issue ages considered by GLIC to be appropriate. Various underwriting tools were used in accordance with our underwriting requirements, including an application, medical records, an attending physician's statement, telephone interview and/or face-to-face assessment.

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## 5. Description of Benefits

This comprehensive long-term care insurance policy:

- Is federally tax qualified and individually underwritten.
- Reimburses incurred home health care and facility expenses subject to the amount of coverage purchased.
- Covers either an individual or a couple - a couple's policy operates like two individual policies but draws from a shared benefit pool.
- Contains benefit eligibility requirements that are tied to Activities of Daily Living (ADL) deficiencies and cognitive impairment.
- The policy's integrated survivorship benefit waives future premium payments upon the first spouse's death if both spouses are insured at that time and have met certain requirements.
- Optional nonforfeiture benefit and restoration of benefit riders may have been selected.

Applicants selected the following at issue:

- Daily Payment Maximum (DPM),
- Benefit Multiplier, sometimes referred to as the benefit period, is the period of time used to calculate the lifetime payment maximum. A policyholder's coverage is based on this lifetime payment maximum, not a certain period of time, and
- Elimination Period.

In addition, the policyholder selected the Benefit Increase Option (BIO) to determine how the DPM should be increased:

- No Increase - the DPM stays level.
- Simple Increase - the DPM increases each year by 5\% of the original DPM, starting in the second policy year and continuing for the life of the policy unless terminated earlier by the insured.
- Compound Increase - the DPM increases each year by $5 \%$ of the prior year DPM, starting in the second policy year and continuing for the life of the policy unless terminated earlier by the insured.

After the elimination period has been satisfied, premium payments are waived during facility stays and home health care (except where home care benefits are received pursuant to a Privileged Care Coordinator's Plan of Care, in which case premium payments are waived immediately upon the receipt of home care benefits).

These are the benefits as initially priced, policyholders may have subsequently changed their benefits based on the alternatives available to them.

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## 6. Alternatives to the Requested Rate Increase

GLIC will offer insureds impacted by rate filings several options for mitigating the impact of the rate increase while still providing meaningful coverage. These options will be provided in the policyholder notification letter. In addition, policyholders will have the ability to call a dedicated team of customer service representatives that can assist with providing customized quotes for any available benefit adjustments.

Reduced Benefit Options. Insureds can change benefit features or coverage limits in order to maintain reasonably equivalent pre- and post-rate increase premium levels or insureds can target a premium level they choose, and the optimal balance of coverage and cost based on their specific needs. The available benefit and rate combinations are consistent with the combinations presented in the rate tables approved as part of the original filing. To balance coverage and cost considerations, GLIC will offer policyholders, subject to rate increases on their long-term care policies, customized options to adjust their benefits, which may include any of the following options (where available):

1. Reduction in Daily/Monthly/Lifetime Maximum amount;
2. Reduction in Benefit Period;
3. Reduction or elimination of the BIO;
4. Increases in Elimination Period; and
5. Elimination of policy riders.

If a policyholder elects to reduce or eliminate the BIO, they have the ability to retain any prior increases to their daily or monthly payment maximums.

Lifetime Stable Premium Option (LSPO). Policyholders will continue to be offered the previously approved LSPO. The option features the following:

1. A lifetime premium rate guarantee,
2. A three-year benefit period (six-year benefit period for Shared policies),
3. Retention of prior benefit increases in the Daily Payment Maximum,
4. 1\% compound benefit increase going forward, and
5. A choice of (1) a longer elimination period (180 day for facility / 90 day for home care) or (2) 10\% coinsurance combined with elimination periods comparable to those of most current policyholders ( 100 day for facility / 0 day for home care).

We are requesting approval of an elimination period of 180 days for facility benefits as part of the choices available under the LSPO. The benefits outlined above that comprise the LSPO alternative option provide a meaningful set of benefits, including a meaningful premium rate guarantee for policyholders.

An industry study performed and published by PwC indicates that the average duration of a long-term care event is about three years and approximately $75 \%-80 \%$ of long-term care events will cost less than \$250,000. ${ }^{1}$

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Under this option, policyholders will have a three-year benefit period (six years for Shared policies), and the estimated median benefit pool, if all policyholders elected this option, would be approximately \$330,000 with continued growth at $1 \%$ compound.

Rate tables for LSPO were filed and approved as part of a prior filing. As such, these rate tables are not included with this filing and will remain in effect for policyholders that previously elected the LSPO, as well as any policyholders that decide to elect the LSPO with this rate increase.

Other Options. GLIC will continue to offer the applicable nonforfeiture option to each policyholder. Policyholders that are eligible for the Contingent Nonforfeiture Option will be presented with that as an option in their notification letter. Policyholders that have a nonforfeiture (NFO) rider with their policy may elect that option. For those policyholders that do not have either the Contingent Nonforfeiture or NFO rider available, GLIC will continue to offer its Optional Limited benefit, which provides a paid-up benefit equal to the total of premium paid, less any claims paid.

## 7. Premiums

a. These policies are guaranteed renewable for life, subject to policy terms and conditions;
b. Geographic area factors are not used in rating these policies;
c. Semi-annual, quarterly and monthly modal factors are applied to the annual premium, with the majority of policyholders selecting annual premium mode;
d. For a history of previous rate revisions refer to the Supplement;
e. The requested rate increase will apply to policies on their billing anniversary date, following a 60 -day policyholder notification period. The rate increases requested in this filing will not be implemented until the implementation of previously approved rate increases (including increases that were approved to be implemented in phases over a multi-year period) has been completed, as well as the expiration of any other time period during which applicable state law or the terms of a prior rate increase approval precluded implementation of a subsequent rate increase;
f. Premium rates are unisex, level (with the exception of approved rate increases) and payable for life (except for in-force policies with limited pay premium). Premiums generally vary by issue age, daily benefit, benefit period, elimination period, BIO, and any applicable riders selected;
g. Certain underwriting discounts may have been applied to the premium rates. A preferred risk discount of $10 \%$ may have been provided to applicants in response to certain health underwriting criteria specified on the application. A spousal discount of $25 \%$ was provided to married individuals when both spouses submitted valid applications; and
h. A description of the calculation of the current and proposed rate tables has been attached separately in the Rate document. A rate schedule by issue age will be submitted after the approval of this filing.

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## 8. Actuarial Assumptions

GLIC actively monitors the impact of experience on projections and lifetime loss ratios. As experience emerges, assumptions have been adjusted. Historical updates have resulted in previous increases in the Disabled Life Reserves (DLR), continued strain to the CFT margin, and the continued need for premium rate adjustments. Genworth reviews experience and assumptions every year in connection with CFT.

Two key drivers for the premium rate adjustments have been increased claim costs and lower than expected healthy life terminations (lapse and healthy life mortality). These have impacted both actual historical experience and assumption development of future expectations. Lower than expected healthy life terminations has meant more policies in force at ages when claims are more likely to occur.

The table below summarizes the most impactful assumption updates made since 2014. Updated claim severity assumptions in 2014, 2016, and 2018 have led to the significant strengthening of GLIC's DLR.

| Year | Update in Assumptions Due To |
| :---: | :---: |
| 2014 | Lower Claim Termination Rates (CTR) in later durations <br> Higher Benefit Utilization Rate (BUR) in later durations |
| 2015 | Lower Lapse <br> Lower Healthy Life Mortality |
| 2016 | Lower CTR <br> BUR methodology enhancement |
| 2017 | Incidence differential for Lifetime and Non-Lifetime benefit periods |
| 2018 | Lower CTR <br> BUR methodology enhancement: increase for Lifetime benefit periods |
| 2019 | New incidence assumption with improved fit by age and duration <br> Lower Healthy Life Mortality |
| 2021 | Lower CTR <br> Higher BUR |
| 2022 | Strengthened BUR Trend, reflecting higher cost of care inflation for |
| LTC services |  |
| Lower Healthy Life Mortality |  |

Beginning with 2016 CFT, GLIC converted from a total life model to a first principles model in which the assumptions are split between healthy lives and disabled lives.

Both healthy life assumptions (lapse, mortality, incidence) and claim severity assumptions (benefit utilization, claim termination, situs mix) are based on Genworth nationwide experience, with differing assumptions by company. The assumptions include adjustments as considered appropriate for future

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projections and based on expected differences in experience due to either policyholder characteristics or underwriting criteria.

The Best Estimate (BE) assumptions described below for lapse, mortality, and morbidity are consistent with those used for GLIC's 2022 Cash Flow Testing (CFT) prior to any provision for contingency, adverse deviation or risk margin. The assumption review for 2022 CFT included data through December 31, 2021, for incurred experience through December 31, 2019. With the exception of benefit utilization rate base assumptions, incurred experience for 2020+ was not used in our 2022 studies in accordance with the companywide decision not to include 2020+ experience in our 2022 studies due to the uncertain future impact of COVID-19 on experience.

The assumptions were developed by Genworth's Long-term Care Experience Studies team in collaboration with other Genworth actuaries. Genworth's Assumption Review Committee approved these assumptions.

## A. Lapse:

Original Filing: The product included in this filing was originally priced in 2000 using termination assumptions developed from experience prior to those dates. Originally filed Choice I lapse rates varied by duration. The original ultimate lapse rate was $2.0 \%$ in year $6+$.

Current Filing: The assumption setting process involves credibility weighting actual historical experience for the product with a long-term baseline assumption. This methodology reduces volatility in the assumption from year-to-year, especially in policy durations with limited experience. The actual historical experience and long-term baseline components of the 2022 CFT lapse assumption were unchanged from 2021 CFT. To help alleviate the pressure on the healthy life lapse assumption, in 2022 an update to the assumption development process was introduced which put more weight on the emerging experience and less weight on the baseline assumption.

The current best estimate assumptions for expected lapse rates for healthy lives vary by product, issue age, policy duration, BIO, marital status, underwriting class, benefit period, company, and issue year bands.

The Actual/Expected ratio of $99.1 \%$ for these policy forms shows a very good fit of the assumption to the historical experience through 2019.

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The following table is a sample of the GLIC lapse rate assumptions for cells with a lifetime benefit period, married status, and compound BIO :

| Sample Lapse Rate Assumption |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| UW Discount | Std | Std | Std | Pref | Pref | Pref |
| Issue Age | $\mathbf{4 5}$ | $\mathbf{5 5}$ | $\mathbf{6 2}$ | $\mathbf{4 5}$ | $\mathbf{5 5}$ | $\mathbf{6 2}$ |
| Duration |  |  |  |  |  |  |
| $\mathbf{1}$ | $8.92 \%$ | $5.33 \%$ | $4.86 \%$ | $7.44 \%$ | $4.48 \%$ | $4.12 \%$ |
| $\mathbf{2}$ | $5.25 \%$ | $2.95 \%$ | $2.65 \%$ | $4.36 \%$ | $2.48 \%$ | $2.25 \%$ |
| $\mathbf{3}$ | $3.75 \%$ | $2.08 \%$ | $1.86 \%$ | $3.11 \%$ | $1.74 \%$ | $1.58 \%$ |
| $\mathbf{4}$ | $2.90 \%$ | $1.61 \%$ | $1.45 \%$ | $2.41 \%$ | $1.36 \%$ | $1.23 \%$ |
| $\mathbf{5}$ | $2.36 \%$ | $1.32 \%$ | $1.20 \%$ | $1.96 \%$ | $1.11 \%$ | $1.02 \%$ |
| $\mathbf{6}$ | $1.98 \%$ | $1.12 \%$ | $1.02 \%$ | $1.64 \%$ | $0.94 \%$ | $0.87 \%$ |
| $\mathbf{7}$ | $1.69 \%$ | $0.97 \%$ | $0.88 \%$ | $1.41 \%$ | $0.82 \%$ | $0.76 \%$ |
| $\mathbf{8}$ | $1.47 \%$ | $0.85 \%$ | $0.78 \%$ | $1.22 \%$ | $0.72 \%$ | $0.67 \%$ |
| $\mathbf{9}$ | $1.29 \%$ | $0.75 \%$ | $0.70 \%$ | $1.08 \%$ | $0.64 \%$ | $0.60 \%$ |
| $\mathbf{1 0}$ | $1.14 \%$ | $0.68 \%$ | $0.64 \%$ | $0.96 \%$ | $0.57 \%$ | $0.55 \%$ |
| $\mathbf{1 1}$ | $1.02 \%$ | $0.61 \%$ | $0.59 \%$ | $0.85 \%$ | $0.52 \%$ | $0.51 \%$ |
| $\mathbf{1 2}$ | $0.92 \%$ | $0.55 \%$ | $0.56 \%$ | $0.77 \%$ | $0.47 \%$ | $0.49 \%$ |
| $\mathbf{1 3}$ | $0.82 \%$ | $0.50 \%$ | $0.53 \%$ | $0.69 \%$ | $0.43 \%$ | $0.47 \%$ |
| $\mathbf{1 4}$ | $0.74 \%$ | $0.46 \%$ | $0.52 \%$ | $0.62 \%$ | $0.39 \%$ | $0.46 \%$ |
| $\mathbf{1 5}$ | $0.67 \%$ | $0.43 \%$ | $0.51 \%$ | $0.57 \%$ | $0.37 \%$ | $0.47 \%$ |
| $\mathbf{1 6}$ | $0.61 \%$ | $0.41 \%$ | $0.52 \%$ | $0.52 \%$ | $0.36 \%$ | $0.48 \%$ |
| $\mathbf{1 7}$ | $0.56 \%$ | $0.40 \%$ | $0.53 \%$ | $0.49 \%$ | $0.36 \%$ | $0.50 \%$ |
| $\mathbf{1 8}$ | $0.52 \%$ | $0.40 \%$ | $0.55 \%$ | $0.46 \%$ | $0.36 \%$ | $0.52 \%$ |
| $\mathbf{1 9}$ | $0.50 \%$ | $0.40 \%$ | $0.58 \%$ | $0.44 \%$ | $0.37 \%$ | $0.55 \%$ |
| $\mathbf{2 0}$ | $0.48 \%$ | $0.40 \%$ | $0.61 \%$ | $0.43 \%$ | $0.38 \%$ | $0.59 \%$ |
| $\mathbf{2 1}$ | $0.46 \%$ | $0.42 \%$ | $0.67 \%$ | $0.43 \%$ | $0.39 \%$ | $0.65 \%$ |
| $\mathbf{2 2}$ | $0.46 \%$ | $0.43 \%$ | $0.74 \%$ | $0.43 \%$ | $0.41 \%$ | $0.73 \%$ |
| $\mathbf{2 3}$ | $0.45 \%$ | $0.46 \%$ | $0.83 \%$ | $0.43 \%$ | $0.44 \%$ | $0.82 \%$ |
| $\mathbf{2 4}$ | $0.46 \%$ | $0.49 \%$ | $0.94 \%$ | $0.44 \%$ | $0.48 \%$ | $0.93 \%$ |
| $\mathbf{2 5}$ | $0.47 \%$ | $0.53 \%$ | $1.06 \%$ | $0.45 \%$ | $0.51 \%$ | $1.05 \%$ |

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## B. Mortality:

Original Filing: Original total lives mortality assumptions were based on the 1983 Individual Annuity Mortality (IAM) Table, Age Last Birthday (ALB), without mortality improvement, with selection factors grading from $50 \%$ in year 1 to 100\% in years 8 and later.

Current Filing: No update was made in 2022 to the healthy life mortality assumptions. The current best estimate assumptions for expected mortality rates for healthy lives were derived from actual Genworth nationwide long-term care mortality data as of December 31, 2020, for incurred experience through December 31, 2019 (1-year reporting lag). Healthy life mortality assumptions vary by product, issue age, policy duration, gender, marital status, underwriting class, BIO, and company. The assumption setting process involves credibility weighting actual historical experience for the product with a long-term baseline assumption. This methodology reduces volatility in the assumption from year-to-year, especially in policy durations with limited experience.

The Actual/Expected ratio of $98.2 \%$ for these policy forms shows a very good fit of the assumption to the historical experience through 2019.

The mortality improvement assumption for healthy lives continues to apply to the first 10 projection years at a compound rate of $1 \%$ per year. Remaining projection years use the accumulated improvement of 10 years. This assumption is based on Genworth experience and is supported by the 2022 experience study.

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The following table is a sample of the GLIC healthy life mortality rate assumptions before improvements for policies with married status, standard underwriting class, no BIO and issue age 65:

| Sample Mortality Rate Assumption |  |  |
| :---: | :---: | :---: |
| Gender | $\mathbf{M}$ | $\mathbf{F}$ |
| Duration |  |  |
| $\mathbf{1}$ | $0.29 \%$ | $0.15 \%$ |
| $\mathbf{2}$ | $0.46 \%$ | $0.25 \%$ |
| $\mathbf{3}$ | $0.56 \%$ | $0.30 \%$ |
| $\mathbf{4}$ | $0.63 \%$ | $0.34 \%$ |
| $\mathbf{5}$ | $0.69 \%$ | $0.38 \%$ |
| $\mathbf{6}$ | $0.75 \%$ | $0.41 \%$ |
| $\mathbf{7}$ | $0.90 \%$ | $0.50 \%$ |
| $\mathbf{8}$ | $1.00 \%$ | $0.56 \%$ |
| $\mathbf{9}$ | $1.11 \%$ | $0.62 \%$ |
| $\mathbf{1 0}$ | $1.23 \%$ | $0.70 \%$ |
| $\mathbf{1 1}$ | $1.37 \%$ | $0.78 \%$ |
| $\mathbf{1 2}$ | $1.56 \%$ | $0.85 \%$ |
| $\mathbf{1 3}$ | $1.74 \%$ | $0.96 \%$ |
| $\mathbf{1 4}$ | $1.94 \%$ | $1.08 \%$ |
| $\mathbf{1 5}$ | $2.20 \%$ | $1.24 \%$ |
| $\mathbf{1 6}$ | $2.45 \%$ | $1.40 \%$ |
| $\mathbf{1 7}$ | $2.71 \%$ | $1.58 \%$ |
| $\mathbf{1 8}$ | $3.05 \%$ | $1.81 \%$ |
| $\mathbf{1 9}$ | $3.48 \%$ | $2.12 \%$ |
| $\mathbf{2 0}$ | $4.01 \%$ | $2.49 \%$ |
| $\mathbf{2 1}$ | $4.48 \%$ | $2.88 \%$ |
| $\mathbf{2 2}$ | $4.95 \%$ | $3.33 \%$ |
| $\mathbf{2 3}$ | $5.42 \%$ | $3.84 \%$ |
| $\mathbf{2 4}$ | $5.85 \%$ | $4.36 \%$ |
| $\mathbf{2 5}$ | $6.32 \%$ | $4.90 \%$ |
| $\mathbf{2 6}$ | $6.96 \%$ | $5.57 \%$ |
| $\mathbf{2 7}$ | $7.62 \%$ | $6.32 \%$ |
| $\mathbf{2 8}$ | $8.25 \%$ | $7.11 \%$ |
| $\mathbf{2 9}$ | $8.64 \%$ | $7.71 \%$ |
| $\mathbf{3 0}$ | $8.90 \%$ | $8.19 \%$ |
|  |  |  |
|  |  |  |

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## C. Morbidity:

The morbidity assumption is composed of the following components: incidence, benefit utilization, claim termination (sometimes described as claim continuance), and claim situs mix. Incidence rates measure the likelihood of a policyholder going on claim. Benefit utilization rates measure the proportion of contractually available benefits that a policyholder uses while on claim, once eligibility requirements have been met. Claim termination rates refer to the length of time until a claimant leaves their claim status, once benefit eligibility requirements have been met, and are applied from the loss date of the claim. Claim termination rates consist of two components - disabled life mortality and claim recoveries. Because the benefit utilization and claim termination assumptions vary by original care situs, the morbidity assumption also includes a claim situs mix assumption to split newly incurred claims between Nursing Home (NH), Assisted Living Facility (ALF) and Home Care (HC) settings.

Prior to 2016, these assumptions were combined into total claim costs for use in the total life modeling approach. With the total life approach, an explicit assumption was needed to reflect policy terminations related to benefit exhaustions. Beginning in 2016, all projections were performed from first principles (i.e., incidence, benefit utilization and claim termination rates are individually reflected in the projection model) and benefit exhaustions are implicitly recognized.

Original Filing: Originally filed expected claim cost for home care and community care benefits for Choice I were based on 1982-1984 National Long-Term Care Surveys for the first two years and company experience after. Company experience was used to develop the assumptions for the nursing home benefits.

Current Filing: The main components of morbidity - incidence, benefit utilization, claim termination and claim situs mix - are described below.

## 1. Incidence

The current best estimate assumptions for expected incidence rates are derived from actual Genworth nationwide long-term care claim incidence data as of December 31, 2021, for incurred experience through December 31, 2019 (2-year reporting lag). Using incurred experience through December 31, 2019, is in accordance with the companywide decision not to include 2020+ incurred experience in our 2022 studies due to the uncertain future impact of COVID-19 on experience. The base incidence rates vary by product, issue age, policy duration, gender, benefit period, marital status, underwriting class, company, and NFO/non-NFO status.

A non-forfeiture option (NFO) topside adjustment has been applied in the past to reflect the lower incidence for NFO policies than policies in a non-NFO status. In 2022, we introduced NFO and non-NFO as an explanatory variable to the base incidence rate assumption. This update removed the need for the NFO/non-NFO topside adjustment. In addition to adding the NFO/non-NFO explanatory variable, a topside adjustment was developed to account for observed anti-selection on recent non-NFO incidence experience.

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The assumption setting process for the base incidence rates involves credibility weighting actual historical experience for the product with a long-term baseline assumption. This methodology reduces volatility in the assumption from year-to-year, especially in policy durations with limited experience.

To help alleviate the pressure on the incidence assumption, an update to the assumption development process was introduced which put more weight on the emerging experience and less weight on the baseline assumption.

The Actual/Expected ratio of $98.4 \%$ for these policy forms shows a very good fit of the assumption to the historical experience through 2019.

The morbidity improvement assumption for healthy lives continues to apply to the first 10 projection years at a compound rate of $1.6 \%$ per year. Remaining projection years use the accumulated improvement of 10 years. This assumption is based on Genworth experience and is supported by the 2022 experience study.

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The following table is a sample of the GLIC claim incidence rate assumptions for policies with a married status and a lifetime benefit period, before any adjustment for non-forfeiture status:

|  | Sample Claim Incidence Rate Assumption |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gender | $\mathbf{M}$ | $\mathbf{M}$ | $\mathbf{M}$ | $\mathbf{M}$ | $\mathbf{F}$ | $\mathbf{F}$ | $\mathbf{F}$ | $\mathbf{F}$ |
| UW Discount | $\mathbf{N o}$ | $\mathbf{N o}$ | Yes | Yes | $\mathbf{N o}$ | No | Yes | Yes |
| Issue Age | $\mathbf{5 5}$ | $\mathbf{6 5}$ | $\mathbf{5 5}$ | $\mathbf{6 5}$ | $\mathbf{5 5}$ | $\mathbf{6 5}$ | $\mathbf{5 5}$ | $\mathbf{6 5}$ |
| Duration |  |  |  |  |  |  |  |  |
| $\mathbf{1}$ | $0.07 \%$ | $0.19 \%$ | $0.04 \%$ | $0.12 \%$ | $0.09 \%$ | $0.24 \%$ | $0.05 \%$ | $0.14 \%$ |
| $\mathbf{2}$ | $0.10 \%$ | $0.30 \%$ | $0.06 \%$ | $0.19 \%$ | $0.13 \%$ | $0.37 \%$ | $0.08 \%$ | $0.22 \%$ |
| $\mathbf{3}$ | $0.13 \%$ | $0.41 \%$ | $0.08 \%$ | $0.26 \%$ | $0.17 \%$ | $0.50 \%$ | $0.10 \%$ | $0.30 \%$ |
| $\mathbf{4}$ | $0.16 \%$ | $0.52 \%$ | $0.10 \%$ | $0.33 \%$ | $0.21 \%$ | $0.64 \%$ | $0.12 \%$ | $0.39 \%$ |
| $\mathbf{5}$ | $0.20 \%$ | $0.65 \%$ | $0.12 \%$ | $0.41 \%$ | $0.25 \%$ | $0.80 \%$ | $0.15 \%$ | $0.48 \%$ |
| $\mathbf{6}$ | $0.23 \%$ | $0.80 \%$ | $0.13 \%$ | $0.50 \%$ | $0.29 \%$ | $0.99 \%$ | $0.17 \%$ | $0.60 \%$ |
| $\mathbf{7}$ | $0.27 \%$ | $0.98 \%$ | $0.15 \%$ | $0.61 \%$ | $0.33 \%$ | $1.21 \%$ | $0.19 \%$ | $0.73 \%$ |
| $\mathbf{8}$ | $0.31 \%$ | $1.20 \%$ | $0.17 \%$ | $0.75 \%$ | $0.38 \%$ | $1.47 \%$ | $0.22 \%$ | $0.89 \%$ |
| $\mathbf{9}$ | $0.36 \%$ | $1.47 \%$ | $0.20 \%$ | $0.92 \%$ | $0.44 \%$ | $1.78 \%$ | $0.26 \%$ | $1.08 \%$ |
| $\mathbf{1 0}$ | $0.42 \%$ | $1.79 \%$ | $0.23 \%$ | $1.13 \%$ | $0.51 \%$ | $2.15 \%$ | $0.29 \%$ | $1.31 \%$ |
| $\mathbf{1 1}$ | $0.49 \%$ | $2.20 \%$ | $0.26 \%$ | $1.40 \%$ | $0.59 \%$ | $2.63 \%$ | $0.34 \%$ | $1.60 \%$ |
| $\mathbf{1 2}$ | $0.58 \%$ | $2.69 \%$ | $0.31 \%$ | $1.73 \%$ | $0.69 \%$ | $3.20 \%$ | $0.39 \%$ | $1.96 \%$ |
| $\mathbf{1 3}$ | $0.68 \%$ | $3.28 \%$ | $0.36 \%$ | $2.16 \%$ | $0.80 \%$ | $3.89 \%$ | $0.46 \%$ | $2.41 \%$ |
| $\mathbf{1 4}$ | $0.80 \%$ | $3.95 \%$ | $0.43 \%$ | $2.63 \%$ | $0.94 \%$ | $4.67 \%$ | $0.54 \%$ | $2.92 \%$ |
| $\mathbf{1 5}$ | $0.88 \%$ | $4.43 \%$ | $0.48 \%$ | $3.00 \%$ | $1.04 \%$ | $5.25 \%$ | $0.59 \%$ | $3.32 \%$ |
| $\mathbf{1 6}$ | $1.01 \%$ | $5.06 \%$ | $0.56 \%$ | $3.51 \%$ | $1.20 \%$ | $6.03 \%$ | $0.67 \%$ | $3.88 \%$ |
| $\mathbf{1 7}$ | $1.17 \%$ | $5.67 \%$ | $0.66 \%$ | $4.10 \%$ | $1.39 \%$ | $6.78 \%$ | $0.78 \%$ | $4.57 \%$ |
| $\mathbf{1 8}$ | $1.35 \%$ | $6.34 \%$ | $0.78 \%$ | $4.79 \%$ | $1.62 \%$ | $7.61 \%$ | $0.90 \%$ | $5.39 \%$ |
| $\mathbf{1 9}$ | $1.56 \%$ | $7.08 \%$ | $0.93 \%$ | $5.59 \%$ | $1.89 \%$ | $8.52 \%$ | $1.06 \%$ | $6.31 \%$ |
| $\mathbf{2 0}$ | $1.79 \%$ | $7.88 \%$ | $1.10 \%$ | $6.46 \%$ | $2.19 \%$ | $9.50 \%$ | $1.25 \%$ | $7.34 \%$ |
| $\mathbf{2 1}$ | $2.06 \%$ | $8.73 \%$ | $1.29 \%$ | $7.40 \%$ | $2.54 \%$ | $10.48 \%$ | $1.48 \%$ | $8.42 \%$ |
| $\mathbf{2 2}$ | $2.43 \%$ | $9.74 \%$ | $1.57 \%$ | $8.54 \%$ | $3.00 \%$ | $11.47 \%$ | $1.78 \%$ | $9.73 \%$ |
| $\mathbf{2 3}$ | $2.83 \%$ | $10.82 \%$ | $1.90 \%$ | $9.76 \%$ | $3.52 \%$ | $12.49 \%$ | $2.13 \%$ | $11.13 \%$ |
| $\mathbf{2 4}$ | $3.26 \%$ | $11.92 \%$ | $2.24 \%$ | $10.88 \%$ | $4.07 \%$ | $13.33 \%$ | $2.51 \%$ | $12.31 \%$ |
| $\mathbf{2 5}$ | $3.71 \%$ | $13.15 \%$ | $2.61 \%$ | $12.13 \%$ | $4.66 \%$ | $14.39 \%$ | $2.91 \%$ | $13.61 \%$ |
| $\mathbf{2 6}$ | $4.18 \%$ | $14.32 \%$ | $3.01 \%$ | $13.39 \%$ | $5.30 \%$ | $15.54 \%$ | $3.35 \%$ | $14.92 \%$ |
| $\mathbf{2 7}$ | $4.80 \%$ | $15.34 \%$ | $3.63 \%$ | $14.51 \%$ | $6.04 \%$ | $16.59 \%$ | $4.07 \%$ | $16.10 \%$ |
| $\mathbf{2 8}$ | $5.46 \%$ | $16.34 \%$ | $4.30 \%$ | $15.58 \%$ | $6.85 \%$ | $17.69 \%$ | $4.86 \%$ | $17.30 \%$ |
| $\mathbf{2 9}$ | $6.16 \%$ | $17.17 \%$ | $5.02 \%$ | $16.38 \%$ | $7.72 \%$ | $18.45 \%$ | $5.72 \%$ | $18.13 \%$ |
| $\mathbf{3 0}$ | $6.89 \%$ | $17.91 \%$ | $5.76 \%$ | $17.07 \%$ | $8.67 \%$ | $19.40 \%$ | $6.66 \%$ | $19.14 \%$ |
| $\mathbf{y y}$ |  |  |  |  |  |  |  |  |

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## 2. Benefit Utilization

The current best estimate assumptions for benefit utilization rates (BUR) were updated from the prior year's assumption to use the 3-year period that includes 2018, 2019, and 2021. 2020 was excluded due to perceived abnormally low BURs from the COVID-19 pandemic.

The BUR for CFT purposes is consistent with our Disabled Life Reserving (DLR) BUR assumption. The CFT BUR assumption variables are product, benefit period, company, BIO, claim age, claim duration and original claim situs. The DLR BUR assumptions also vary by diagnosis and daily maximum benefit amount. The less-granular CFT BUR assumptions are due to modeling constraints within AXIS.

The assumption is derived from actual Genworth nationwide long-term care paid claim experience. Genworth considers experience combined from all relevant product types when setting the BUR assumption with potential product-specific adjustments.

A utilization trend is used for reimbursement products. Long-term trending is accomplished by inflating each of the assumed starting BURs by the applicable inflation assumption and deflating it by the contractual BIO into the future. In 2021, the BUR trend assumption was strengthened, reflecting higher cost of care inflation for LTC services. Recent experience suggests higher increases in the cost of longterm care, especially for policies with Simple and Compound BIO. There was no update to the BUR trend assumption in 2022. The best estimate cost of long-term care inflation rates ranges from $0 \%$ for no BIO to $3.1 \%$ for policies with compound BIO, varying by original claim situs and benefit period.

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The following table is a sample of the GLIC base benefit utilization rate assumptions (i.e. before the application of the utilization trend) for a reimbursement policy with a limited benefit period ( $4+$ years), and compound BIO:

| Sample Benefit Utilization Rate Assumption |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Claim Age | $\mathbf{8 1}$ | $\mathbf{8 1}$ | $\mathbf{8 1}$ | $\mathbf{8 6}$ | $\mathbf{8 6}$ | $\mathbf{8 6}$ |
| Claim Situs | ALF | HC | $\mathbf{N H}$ | ALF | HC | $\mathbf{N H}$ |
| Claim Duration |  |  |  |  |  |  |
| Month 1-6 | $61.67 \%$ | $34.28 \%$ | $74.79 \%$ | $61.79 \%$ | $35.99 \%$ | $76.81 \%$ |
| Month 7-12 | $62.88 \%$ | $41.64 \%$ | $74.17 \%$ | $62.77 \%$ | $43.56 \%$ | $75.89 \%$ |
| Year 2 | $65.83 \%$ | $49.10 \%$ | $74.52 \%$ | $65.31 \%$ | $51.07 \%$ | $75.79 \%$ |
| Year 3 | $68.96 \%$ | $55.30 \%$ | $76.01 \%$ | $68.10 \%$ | $57.24 \%$ | $76.93 \%$ |
| Year 4 | $68.10 \%$ | $58.47 \%$ | $73.35 \%$ | $67.05 \%$ | $60.34 \%$ | $74.02 \%$ |
| Year 5 | $65.35 \%$ | $58.45 \%$ | $69.32 \%$ | $64.22 \%$ | $60.21 \%$ | $69.83 \%$ |
| Year 6 | $61.65 \%$ | $55.90 \%$ | $64.92 \%$ | $60.57 \%$ | $57.55 \%$ | $65.37 \%$ |
| Year 7+ | $57.86 \%$ | $51.72 \%$ | $60.93 \%$ | $56.89 \%$ | $53.32 \%$ | $61.42 \%$ |

## 3. Claim Termination

The current best estimate assumptions for claim termination rates (CTR) are derived from actual Genworth nationwide long-term care data from inception through December 31, 2021, for incurred experience through June 30, 2019 (2.5-year reporting lag). This is in accordance with the companywide decision not to include 2020+ incurred experience in our 2022 studies due to the uncertain future impact of COVID-19 on experience. The CTR assumption variables are product group, gender, benefit period, claim age, claim duration, company and original claim situs. Our experience suggests high terminations in early claim durations are the result of acute disabilities terminating due to death or recovery. The remaining lives are permanent, long-term disabilities where recovery is less likely. Claim terminations in later claim durations are driven by disabled life mortality rates.

In 2022, we introduced policy duration at date of loss modifiers for recovery rates and then refreshed the recovery top-side adjustments. This update not only improved the fit for the CFT assumption but also led to better alignment between DLR and CFT CTR assumptions.

The Actual/Expected ratio of $99.1 \%$ for these policy forms shows a very good fit of the assumption to the historical experience through 2019.

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The following table is a sample of the GLIC monthly disabled life mortality assumptions for ALF, female, limited benefit period, claim age 82, for the first 324 monthly claim durations:

| Sample Monthly Disabled Life Mortality Assumption |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | Rate | Duration | Rate | Duration | Rate | Duration | Rate |
| $\mathbf{1}$ | $0.12 \%$ | $\mathbf{1 6}$ | $1.25 \%$ | $\mathbf{3 1}$ | $1.57 \%$ | $\mathbf{1 4 5 - 1 5 6}$ | $2.44 \%$ |
| $\mathbf{2}$ | $0.16 \%$ | $\mathbf{1 7}$ | $1.26 \%$ | $\mathbf{3 2}$ | $1.59 \%$ | $\mathbf{1 5 7 - 1 6 8}$ | $2.62 \%$ |
| $\mathbf{3}$ | $0.29 \%$ | $\mathbf{1 8}$ | $1.27 \%$ | $\mathbf{3 3}$ | $1.61 \%$ | $\mathbf{1 6 9 - 1 8 0}$ | $2.82 \%$ |
| $\mathbf{4}$ | $0.78 \%$ | $\mathbf{1 9}$ | $1.28 \%$ | $\mathbf{3 4}$ | $1.63 \%$ | $\mathbf{1 8 1 - 1 9 2}$ | $3.00 \%$ |
| $\mathbf{5}$ | $1.28 \%$ | $\mathbf{2 0}$ | $1.29 \%$ | $\mathbf{3 5}$ | $1.65 \%$ | $\mathbf{1 9 3 - 2 0 4}$ | $3.16 \%$ |
| $\mathbf{6}$ | $1.29 \%$ | $\mathbf{2 1}$ | $1.30 \%$ | $\mathbf{3 6}$ | $1.67 \%$ | $\mathbf{2 0 5 - 2 1 6}$ | $3.32 \%$ |
| $\mathbf{7}$ | $1.29 \%$ | $\mathbf{2 2}$ | $1.31 \%$ | $\mathbf{3 7 - 4 8}$ | $1.70 \%$ | $\mathbf{2 1 7 - 2 2 8}$ | $3.49 \%$ |
| $\mathbf{8}$ | $1.29 \%$ | $\mathbf{2 3}$ | $1.33 \%$ | $\mathbf{4 9 - 6 0}$ | $1.98 \%$ | $\mathbf{2 2 9 - 2 4 0}$ | $3.67 \%$ |
| $\mathbf{9}$ | $1.29 \%$ | $\mathbf{2 4}$ | $1.34 \%$ | $\mathbf{6 1 - 7 2}$ | $2.14 \%$ | $\mathbf{2 4 1 - 2 5 2}$ | $3.84 \%$ |
| $\mathbf{1 0}$ | $1.30 \%$ | $\mathbf{2 5}$ | $1.47 \%$ | $\mathbf{7 3 - 8 4}$ | $2.29 \%$ | $\mathbf{2 5 3 - 2 6 4}$ | $3.99 \%$ |
| $\mathbf{1 1}$ | $1.30 \%$ | $\mathbf{2 6}$ | $1.49 \%$ | $\mathbf{8 5 - 9 6}$ | $2.26 \%$ | $\mathbf{2 6 5 - 2 7 6}$ | $4.12 \%$ |
| $\mathbf{1 2}$ | $1.31 \%$ | $\mathbf{2 7}$ | $1.50 \%$ | $\mathbf{9 7 - 1 0 8}$ | $2.14 \%$ | $\mathbf{2 7 7 - 2 8 8}$ | $4.23 \%$ |
| $\mathbf{1 3}$ | $1.23 \%$ | $\mathbf{2 8}$ | $1.52 \%$ | $\mathbf{1 0 9 - 1 2 0}$ | $1.90 \%$ | $\mathbf{2 8 9 - 3 0 0}$ | $4.30 \%$ |
| $\mathbf{1 4}$ | $1.23 \%$ | $\mathbf{2 9}$ | $1.54 \%$ | $\mathbf{1 2 1 - 1 3 2}$ | $2.08 \%$ | $\mathbf{3 0 1 - 3 1 2}$ | $4.31 \%$ |
| $\mathbf{1 5}$ | $1.24 \%$ | $\mathbf{3 0}$ | $1.56 \%$ | $\mathbf{1 3 3 - 1 4 4}$ | $2.26 \%$ | $\mathbf{3 1 3 - 3 2 4}$ | $4.31 \%$ |

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The following table is a sample of the GLIC monthly recovery rate assumptions for ALF, female, limited benefit period, claim age 82, for the first 324 monthly claim durations:

| Sample Monthly Recovery Rate Assumption |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | Rate | Duration | Rate | Duration | Rate | Duration | Rate |
| $\mathbf{1}$ | $0.09 \%$ | $\mathbf{1 6}$ | $0.16 \%$ | $\mathbf{3 1}$ | $0.09 \%$ | $\mathbf{1 4 5 - 1 5 6}$ | $0.00 \%$ |
| $\mathbf{2}$ | $0.21 \%$ | $\mathbf{1 7}$ | $0.15 \%$ | $\mathbf{3 2}$ | $0.09 \%$ | $\mathbf{1 5 7 - 1 6 8}$ | $0.00 \%$ |
| $\mathbf{3}$ | $0.26 \%$ | $\mathbf{1 8}$ | $0.14 \%$ | $\mathbf{3 3}$ | $0.09 \%$ | $\mathbf{1 6 9 - 1 8 0}$ | $0.00 \%$ |
| $\mathbf{4}$ | $0.39 \%$ | $\mathbf{1 9}$ | $0.13 \%$ | $\mathbf{3 4}$ | $0.09 \%$ | $\mathbf{1 8 1 - 1 9 2}$ | $0.00 \%$ |
| $\mathbf{5}$ | $0.51 \%$ | $\mathbf{2 0}$ | $0.13 \%$ | $\mathbf{3 5}$ | $0.09 \%$ | $\mathbf{1 9 3 - 2 0 4}$ | $0.00 \%$ |
| $\mathbf{6}$ | $0.45 \%$ | $\mathbf{2 1}$ | $0.12 \%$ | $\mathbf{3 6}$ | $0.09 \%$ | $\mathbf{2 0 5 - 2 1 6}$ | $0.00 \%$ |
| $\mathbf{7}$ | $0.40 \%$ | $\mathbf{2 2}$ | $0.12 \%$ | $\mathbf{3 7 - 4 8}$ | $0.09 \%$ | $\mathbf{2 1 7 - 2 2 8}$ | $0.00 \%$ |
| $\mathbf{8}$ | $0.36 \%$ | $\mathbf{2 3}$ | $0.11 \%$ | $\mathbf{4 9 - 6 0}$ | $0.10 \%$ | $\mathbf{2 2 9 - 2 4 0}$ | $0.00 \%$ |
| $\mathbf{9}$ | $0.33 \%$ | $\mathbf{2 4}$ | $0.11 \%$ | $\mathbf{6 1 - 7 2}$ | $0.11 \%$ | $\mathbf{2 4 1 - 2 5 2}$ | $0.00 \%$ |
| $\mathbf{1 0}$ | $0.30 \%$ | $\mathbf{2 5}$ | $0.10 \%$ | $\mathbf{7 3 - 8 4}$ | $0.13 \%$ | $\mathbf{2 5 3 - 2 6 4}$ | $0.00 \%$ |
| $\mathbf{1 1}$ | $0.27 \%$ | $\mathbf{2 6}$ | $0.10 \%$ | $\mathbf{8 5 - 9 6}$ | $0.11 \%$ | $\mathbf{2 6 5 - 2 7 6}$ | $0.00 \%$ |
| $\mathbf{1 2}$ | $0.25 \%$ | $\mathbf{2 7}$ | $0.10 \%$ | $\mathbf{9 7 - 1 0 8}$ | $0.06 \%$ | $\mathbf{2 7 7 - 2 8 8}$ | $0.00 \%$ |
| $\mathbf{1 3}$ | $0.20 \%$ | $\mathbf{2 8}$ | $0.10 \%$ | $\mathbf{1 0 9 - 1 2 0}$ | $0.00 \%$ | $\mathbf{2 8 9 - 3 0 0}$ | $0.00 \%$ |
| $\mathbf{1 4}$ | $0.18 \%$ | $\mathbf{2 9}$ | $0.09 \%$ | $\mathbf{1 2 1 - 1 3 2}$ | $0.00 \%$ | $\mathbf{3 0 1 - 3 1 2}$ | $0.00 \%$ |
| $\mathbf{1 5}$ | $0.17 \%$ | $\mathbf{3 0}$ | $0.09 \%$ | $\mathbf{1 3 3 - 1 4 4}$ | $0.00 \%$ | $\mathbf{3 1 3 - 3 2 4}$ | $0.00 \%$ |

## 4. Claim Situs Mix

A claim situs mix assumption is used to split the incidence rates among the original care situses: NH , ALF and HC. The Situs Mix assumption variables are product, gender, benefit period, marital status, underwriting class, claim age and company.

The current best estimate assumptions for claim situs mix are derived from actual Genworth nationwide long-term care experience, using data as of December 31, 2021, for incurred experience from 2011 through 2019 (2-year reporting lag). Using incurred experience through 2019 is in accordance with the companywide decision not to include 2020+ incurred experience in our 2022 studies due to the uncertain future impact of COVID-19 on experience.

At the younger attained ages, the original situs is more likely to be in home health care. At the higher attained ages, the original situs is more evenly distributed between home care and facility.

The Actual/Expected ratio is $100.0 \%$ for ALF, $100.0 \%$ for HC, and $100.0 \%$ for NH. This is a very good fit to the experience used to set the assumption.

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The following table is the GLIC situs mix assumption for female, limited benefit period, and standard underwriting class for selected ages:

| Sample Claim Situs Mix Rate Assumption |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Marital Status | Claim Age | ALF | HC | NH |
| Married | 60 | 3.2\% | 94.2\% | 2.6\% |
|  | 65 | 5.9\% | 90.5\% | 3.6\% |
|  | 70 | 9.5\% | 85.8\% | 4.7\% |
|  | 75 | 13.7\% | 80.7\% | 5.6\% |
|  | 80 | 17.7\% | 76.1\% | 6.2\% |
|  | 85 | 20.8\% | 72.6\% | 6.6\% |
|  | 90 | 22.4\% | 70.9\% | 6.7\% |
| Single | 60 | 6.3\% | 90.7\% | 3.0\% |
|  | 65 | 10.3\% | 85.5\% | 4.1\% |
|  | 70 | 15.0\% | 79.8\% | 5.3\% |
|  | 75 | 19.4\% | 74.3\% | 6.3\% |
|  | 80 | 22.8\% | 70.1\% | 7.1\% |
|  | 85 | 24.7\% | 67.7\% | 7.6\% |
|  | 90 | 24.7\% | 67.4\% | 7.9\% |

## D. Expenses:

Expenses do not affect the Lifetime Loss Ratio projections or the rate increase requested in this memorandum. Expenses have not been explicitly projected.
E. Interest:

A 4\% interest rate assumption is used to calculate historical, future and lifetime loss ratios. Note that the Loss Ratio regulation does not specify a discount rate.

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## 9. Development of the Requested Rate Increase

In developing the requested premium rate increase, the following has been considered:
a. In order to ensure maximum credibility, exhibits are based on GLIC nationwide experience through December 31, 2022, for all the forms affected by this filing. Projected earned premiums and incurred claims are based on the assumptions described in Section 8 of this actuarial memorandum;
b. Although this block was priced under the Loss Ratio regulation, GLIC is not attempting to achieve a $60 \%$ loss ratio over the life of the block; in fact, the lifetime loss ratio after approval and implementation of this rate action and after full execution of the MYRAP will be substantially higher. This self-limited lifetime loss ratio allows GLIC to prevent recoupment of past losses while still allowing companies to be able to pay future anticipated claims, however it does not imply that it represents either acceptable measures of profitability or minimum thresholds for future rate increase filings;
c. The nationwide premium has been restated at your state level, only reflecting your state's approved rate increases, in order to avoid subsidization among states;
d. For the projections the rate increase planned for this filing has been assumed to be implemented on August 31, 2024, however GLIC plans to implement the rate increase as soon as possible after the filing is dispositioned, recognizing completion of any prior approved actions, system constraints, etc.;
e. Lifetime projections of earned premiums and incurred claims reflecting all the prior approved rate increases in your state are set forth in Exhibit I. Lifetime projections of earned premiums and incurred claims reflecting all the prior approved rate increases in your state and the requested rate increase are set forth in Exhibit II;
f. For the sake of modeling simplicity, approved rate increases were applied to all policies in Exhibits I and II;
g. Historical and projected earned premiums and incurred claims include provisions for waiver of premium; and
h. Please note that prior filings included the projection experience for Stable Premium Option (SPO) policies which have now been excluded due to known limitations in the data used to model SPO policies. The removal of these policies mostly impacts the Limited Low BIO cohort, where the Lifetime Loss Ratio has been materially impacted; other modeled cohorts are immaterially impacted following this change.

## 10. Active Life Reserves and Claim Liability Reserves

Active life reserves have not been used in this rate increase analysis. Claim reserves as of December 31,2022 , have been discounted to the date of incurral of each respective claim and included in historical incurred claims. Incurred but not reported reserve balances as of December 31, 2022, have been allocated to a calendar year of incurral and included in historic incurred claims. Discounting occurs at $4 \%$.

## 11. Trend Assumptions

As this is not medical insurance, we have not included any explicit medical cost trends in the projections.

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## 12. Future Rate Increases

Policies to which this premium rate increase filing applies may also be subject to future additional rate increases if the full amount of the rate increases requested in this filing are not approved or if the underlying assumptions are not realized. GLIC does not anticipate future rate increases once MYRAP target premium rate level is achieved.

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## 13. Actuarial Certification

I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries, and I meet the American Academy of Actuaries' qualification standards for rendering this opinion and am familiar with the requirements for filing for increases in long-term care insurance premiums.

This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 18, 23, 25, 41 and 56. Policy design, underwriting, and claims adjudication practices have been considered.

I have relied on historical cash flows and projections completed by GLIC's modeling team, which is part of IFA Execution \& Strategic Messaging team. All future projections included in this memorandum, while based on GLIC's best estimates, are uncertain and may not emerge as expected.

I have relied on GLIC's modeling team, which is part of IFA Execution \& Strategic Messaging team for exhibit generators, which develop the various exhibits submitted in the filing.

I have relied on the GLIC'S Strategic Pricing team, which is part of IFA Execution \& Strategic Messaging team for the pricing, methodology and design of the alternative options presented in Section 6 of this actuarial memorandum.

I have relied on statutory valuations as of December 31, 2022, for Claim Reserves (i.e., Disabled Life Reserves, Pending Claims reserves, Incurred But Not Reported reserves, and Dead But Not Reported reserves) provided by GLIC's Long-Term Care Reporting \& Analysis team, which is part of Actuarial team.

I have also relied on assumptions developed by GLIC's Long-Term Care Assumptions team, which is part of Actuarial team in collaboration with other GLIC actuaries, which assumptions were approved by Genworth's Assumption Review Committee. The assumptions present the actuaries' best judgement and are consistent with GLIC's business plan at the time of the filing. I have been unable to judge the reasonableness of assumptions and methods without performing substantial additional work and disclaim responsibility for material assumptions and methods selected by the issuer.

I hereby certify that, to the best of my knowledge and judgment, this rate submission is in compliance with the applicable laws of your state, in particular the Premium Rate Schedule Increases section of your long-term care insurance regulations.

Consulting Actuary
Genworth Life Insurance Company
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Supplement for Lifetime Low BIO Policies

*State specific inforce lives and premium reflect policies eligible for the rate increase, which are excluding SPO and paid up policies, where applicable. Nationwide inforce lives, premiums, and distributions are excluding SPO policies only, where applicable.
${ }^{* *}$ Approved Rate Increases may vary by Benefit Inflation Option, Benefit Period, Issue Age, etc.
*** Excludes policies with No BIO and Issue Age 70+.
**** Excludes policies with No BIO and Issue Age 70+.

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Supplement for Lifetime High BIO Policies

| Data as of 12/31/2022 |  |  |  |
| :---: | :---: | :---: | :---: |
| Section 1 | In-force policies counts and distribution* | State | Nationwide |
|  | First issued date | June 2002 | January 2001 |
|  | Last issued date | October 2005 | April 2007 |
|  | Issued Lives | 2,584 | 80,256 |
|  | (1) In-force Lives | 1,356 | 49,016 |
|  | (2) Total In-force Annualized Premium | \$6,114,963 | \$158,278,051 |
|  | (3) Average Premium Before the Requested RI $(2) /(1)$ | \$4,510 | \$3,229 |
|  | Average Premium After the Requested RI <br> (3) $x$ (1 + Requested Rate Increase) | \$14,295 | N/A |
|  | Average Issue Age | 56 | 57 |
|  | Average Attained Age | 75 | 76 |
|  | Issue Age |  |  |
|  | <55 |  | 50.9\% |
|  | 55-59 |  | 29.0\% |
|  | 60-64 |  | 14.9\% |
|  | 65-69 |  | 4.4\% |
|  | 70-74 |  | 0.7\% |
|  | 75-79 |  | 0.1\% |
|  | 80+ |  | 0.0\% |
|  | Benefit Increase |  |  |
|  | None |  | 0.0\% |
|  | Simple |  | 18.6\% |
|  | Compound |  | 81.4\% |


| Section 7 | Date of Approval | Approved Rate Increase |
| :--- | :--- | :---: |
| $11 / 15 / 2013$ | $15 \%$ |  |
|  | $2 / 12 / 2015$ | $15 \%$ |
|  | $4 / 12 / 2016$ | $15 \%$ |
|  | $9 / 26 / 2018$ | $15 \%$ |
|  | $9 / 8 / 2020$ | $15 \% \%^{* * *}$ |
|  | $9 / 2 / 2021$ | $52.1 \%^{* * * *}$ |
|  | Cumulative RI | $206 \%$ |

*State specific inforce lives and premium reflect policies eligible for the rate increase, which are excluding SPO and paid up policies, where applicable. Nationwide inforce lives, premiums, and distributions are excluding SPO policies only, where applicable.
**Approved Rate Increases may vary by Benefit Inflation Option, Benefit Period, Issue Age, etc.
*** Excludes policies with No BIO and Issue Age 70+.
**** Excludes policies with No BIO and Issue Age 70+.

Genworth Life Insurance Company
Address: 6603 West Broad Street, Richmond, VA 23230
Company NAIC No: 70025
Actuarial Memorandum
September 2023
Supplement for Limited Low BIO Policies

*State specific inforce lives and premium reflect policies eligible for the rate increase, which are excluding SPO and paid up policies, where applicable. Nationwide inforce lives, premiums, and distributions are excluding SPO policies only, where applicable.
${ }^{* *}$ Approved Rate Increases may vary by Benefit Inflation Option, Benefit Period, Issue Age, etc.
*** Excludes policies with No BIO and Issue Age 70+.
**** Excludes policies with No BIO and Issue Age 70+.

Genworth Life Insurance Company
Address: 6603 West Broad Street, Richmond, VA 23230
Company NAIC No: 70025
Actuarial Memorandum
September 2023
Supplement for Limited High BIO Policies

*State specific inforce lives and premium reflect policies eligible for the rate increase, which are excluding SPO and paid up policies,
where applicable. Nationwide inforce lives, premiums, and distributions are excluding SPO policies only, where applicable.
${ }^{* *}$ Approved Rate Increases may vary by Benefit Inflation Option, Benefit Period, Issue Age, etc.
*** Excludes policies with No BIO and Issue Age 70+.
**** Excludes policies with No BIO and Issue Age 70+.

Genworth Life Insurance Company
Address: 6603 West Broad Street, Richmond, VA 23230 Company NAIC No: 70025
uarial Memorandum
September 2023
Exhibit la: Choice I Policy Forms - Nationwide Experience
Lifetime Low BIO - With Maryland Approved Rate Increase*

| Calendar Year | Earned Premium | Incurred Claims | Loss Ratio | Discount Factor | Lives |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2001 | 942,436 | 137,798 | 14.6\% | 2.3239 | 1,531 |
| 2002 | 5,888,041 | 852,886 | 14.5\% | 2.2345 | 3,729 |
| 2003 | 10,574,102 | 1,585,795 | 15.0\% | 2.1486 | 5,536 |
| 2004 | 12,448,950 | 3,793,664 | 30.5\% | 2.0659 | 5,746 |
| 2005 | 12,729,417 | 4,482,965 | 35.2\% | 1.9865 | 5,790 |
| 2006 | 12,866,017 | 5,399,430 | 42.0\% | 1.9101 | 5,861 |
| 2007 | 12,830,195 | 5,971,024 | 46.5\% | 1.8366 | 5,798 |
| 2008 | 12,616,453 | 4,539,945 | 36.0\% | 1.7660 | 5,715 |
| 2009 | 12,345,770 | 6,725,631 | 54.5\% | 1.6980 | 5,593 |
| 2010 | 12,059,949 | 10,945,635 | 90.8\% | 1.6327 | 5,501 |
| 2011 | 11,792,077 | 7,827,864 | 66.4\% | 1.5699 | 5,421 |
| 2012 | 11,476,608 | 10,760,551 | 93.8\% | 1.5096 | 5,325 |
| 2013 | 11,062,397 | 10,359,993 | 93.7\% | 1.4515 | 5,221 |
| 2014 | 11,012,462 | 13,164,151 | 119.5\% | 1.3957 | 5,101 |
| 2015 | 11,449,128 | 14,981,524 | 130.9\% | 1.3420 | 4,995 |
| 2016 | 12,296,976 | 12,470,289 | 101.4\% | 1.2904 | 4,890 |
| 2017 | 13,243,112 | 12,252,378 | 92.5\% | 1.2407 | 4,747 |
| 2018 | 12,468,207 | 13,918,956 | 111.6\% | 1.1930 | 4,617 |
| 2019 | 11,184,817 | 17,894,402 | 160.0\% | 1.1471 | 4,461 |
| 2020 | 10,660,438 | 11,165,321 | 104.7\% | 1.1030 | 4,288 |
| 2021 | 8,791,224 | 18,900,444 | 215.0\% | 1.0606 | 4,123 |
| 2022 | 6,756,652 | 15,459,697 | 228.8\% | 1.0198 | 3,973 |
| 2023 | 6,948,073 | 19,024,037 | 273.8\% | 0.9806 | 3,783 |
| 2024 | 6,336,397 | 18,846,116 | 297.4\% | 0.9429 | 3,594 |
| 2025 | 5,783,814 | 18,723,386 | 323.7\% | 0.9066 | 3,401 |
| 2026 | 5,280,205 | 18,492,254 | 350.2\% | 0.8717 | 3,204 |
| 2027 | 4,817,140 | 18,174,743 | 377.3\% | 0.8382 | 3,008 |
| 2028 | 4,388,637 | 17,820,189 | 406.1\% | 0.8060 | 2,811 |
| 2029 | 3,989,870 | 17,382,731 | 435.7\% | 0.7750 | 2,615 |
| 2030 | 3,619,538 | 16,806,151 | 464.3\% | 0.7452 | 2,422 |
| 2031 | 3,275,967 | 16,114,204 | 491.9\% | 0.7165 | 2,233 |
| 2032 | 2,957,624 | 15,362,607 | 519.4\% | 0.6889 | 2,049 |
| 2033 | 2,662,502 | 14,739,379 | 553.6\% | 0.6624 | 1,871 |
| 2034 | 2,387,325 | 14,170,681 | 593.6\% | 0.6370 | 1,698 |
| 2035 | 2,130,386 | 13,427,514 | 630.3\% | 0.6125 | 1,532 |
| 2036 | 1,891,238 | 12,626,260 | 667.6\% | 0.5889 | 1,375 |
| 2037 | 1,670,311 | 11,827,994 | 708.1\% | 0.5663 | 1,227 |
| 2038 | 1,467,064 | 10,957,328 | 746.9\% | 0.5445 | 1,087 |
| 2039 | 1,280,553 | 9,978,803 | 779.3\% | 0.5235 | 958 |
| 2040 | 1,110,321 | 8,939,215 | 805.1\% | 0.5034 | 838 |
| 2041 | 956,194 | 7,913,136 | 827.6\% | 0.4840 | 728 |
| 2042 | 817,888 | 6,952,627 | 850.1\% | 0.4654 | 628 |
| 2043 | 694,638 | 6,058,993 | 872.3\% | 0.4475 | 539 |
| 2044 | 585,443 | 5,224,366 | 892.4\% | 0.4303 | 458 |
| 2045 | 489,316 | 4,448,278 | 909.1\% | 0.4138 | 387 |
| 2046 | 405,842 | 3,739,671 | 921.5\% | 0.3978 | 325 |
| 2047 | 334,322 | 3,082,187 | 921.9\% | 0.3825 | 271 |
| 2048 | 273,327 | 2,495,096 | 912.9\% | 0.3678 | 224 |
| 2049 | 221,875 | 2,014,959 | 908.2\% | 0.3537 | 185 |
| 2050 | 178,898 | 1,625,738 | 908.7\% | 0.3401 | 151 |
| 2051 | 143,236 | 1,308,504 | 913.5\% | 0.3270 | 123 |
| 2052 | 113,929 | 1,047,353 | 919.3\% | 0.3144 | 100 |
| 2053 | 90,055 | 835,655 | 927.9\% | 0.3023 | 80 |
| 2054 | 70,793 | 664,888 | 939.2\% | 0.2907 | 65 |
| 2055 | 55,400 | 527,694 | 952.5\% | 0.2795 | 52 |
| 2056 | 43,186 | 416,572 | 964.6\% | 0.2688 | 41 |
| 2057 | 33,549 | 328,301 | 978.6\% | 0.2584 | 33 |
| 2058 | 25,978 | 256,749 | 988.3\% | 0.2485 | 26 |
| 2059 | 20,057 | 201,823 | 1006.2\% | 0.2389 | 21 |
| 2060 | 15,446 | 158,023 | 1023.1\% | 0.2297 | 17 |
| 2061 | 11,850 | 122,094 | 1030.3\% | 0.2209 | 13 |
| 2062 | 9,049 | 94,192 | 1040.9\% | 0.2124 | 10 |
| 2063 | 6,883 | 72,330 | 1050.8\% | 0.2042 | 8 |
| 2064 | 5,221 | 54,885 | 1051.2\% | 0.1964 | 7 |
| 2065 | 3,946 | 40,728 | 1032.1\% | 0.1888 | 5 |
| 2066 | 2,963 | 29,476 | 994.9\% | 0.1816 | 4 |
| 2067 | 2,208 | 21,043 | 952.9\% | 0.1746 | 3 |
| 2068 | 1,632 | 14,770 | 905.1\% | 0.1679 | 2 |
| 2069 | 1,202 | 10,321 | 858.9\% | 0.1614 | 2 |
| 2070 | 878 | 7,187 | 819.0\% | 0.1552 | 2 |
| 2071 | 637 | 5,007 | 785.5\% | 0.1492 | 1 |
| 2072 | 459 | 3,481 | 759.0\% | 0.1435 | 1 |
| 2073 | 328 | 2,414 | 736.6\% | 0.1380 | 1 |
| 2074 | 233 | 1,654 | 710.1\% | 0.1327 | 1 |
| 2075 | 165 | 1,135 | 688.1\% | 0.1276 | 0 |
| 2076 | 116 | 776 | 670.2\% | 0.1227 | 0 |
| 2077 | 81 | 527 | 648.5\% | 0.1179 | 0 |
| 2078 | 56 | 360 | 644.7\% | 0.1134 | 0 |
| 2079 | 38 | 239 | 625.3\% | 0.1090 | 0 |
| 2080 | 25 | 157 | 618.9\% | 0.1049 | 0 |
| 2081 | 17 | 102 | 612.8\% | 0.1008 | 0 |
| 2082 | 11 | 67 | 627.3\% | 0.0969 | 0 |
| Accumulated and Present Values as of 12/31/2022 |  |  |  |  |  |
| Past: | 370,752,125 | 279,567,096 | 75.4\% |  |  |
| Future: | 51,388,411 | 224,586,836 | 437.0\% |  |  |
| Lifetime: | 422,140,537 | 504,153,932 | 119.4\% |  |  |

Genworth Life Insurance Company
Address: 6603 West Broad Street, Richmond, VA 23230 Company NAIC No: 70025
arial Memorandum
September 2023
Exhibit lb: Choice I Policy Forms - Nationwide Experience
Lifetime High BIO - With Maryland Approved Rate Increase*

| Calendar Year | Earned Premium | Incurred Claims | Loss Ratio | Discount Factor | Lives |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2001 | 7,329,739 | 337,478 | 4.6\% | 2.3239 | 13,478 |
| 2002 | 48,524,614 | 7,594,786 | 15.7\% | 2.2345 | 37,165 |
| 2003 | 98,177,896 | 9,226,363 | 9.4\% | 2.1486 | 59,235 |
| 2004 | 123,568,753 | 12,206,402 | 9.9\% | 2.0659 | 64,106 |
| 2005 | 131,717,517 | 27,103,647 | 20.6\% | 1.9865 | 65,722 |
| 2006 | 138,425,550 | 20,050,931 | 14.5\% | 1.9101 | 68,334 |
| 2007 | 140,152,206 | 26,111,543 | 18.6\% | 1.8366 | 66,922 |
| 2008 | 136,757,695 | 48,120,086 | 35.2\% | 1.7660 | 65,241 |
| 2009 | 132,400,677 | 53,691,149 | 40.6\% | 1.6980 | 63,336 |
| 2010 | 128,778,679 | 64,919,792 | 50.4\% | 1.6327 | 61,975 |
| 2011 | 125,846,048 | 66,448,686 | 52.8\% | 1.5699 | 60,797 |
| 2012 | 123,126,238 | 72,187,327 | 58.6\% | 1.5096 | 59,757 |
| 2013 | 119,362,401 | 92,469,471 | 77.5\% | 1.4515 | 58,725 |
| 2014 | 120,379,721 | 122,637,596 | 101.9\% | 1.3957 | 57,675 |
| 2015 | 127,095,407 | 120,613,419 | 94.9\% | 1.3420 | 56,690 |
| 2016 | 139,178,243 | 186,940,818 | 134.3\% | 1.2904 | 55,703 |
| 2017 | 151,938,496 | 181,169,493 | 119.2\% | 1.2407 | 54,561 |
| 2018 | 145,386,283 | 206,604,762 | 142.1\% | 1.1930 | 53,457 |
| 2019 | 136,681,303 | 246,803,832 | 180.6\% | 1.1471 | 52,389 |
| 2020 | 143,647,646 | 199,992,278 | 139.2\% | 1.1030 | 51,222 |
| 2021 | 138,838,994 | 258,015,782 | 185.8\% | 1.0606 | 50,102 |
| 2022 | 136,645,150 | 304,712,329 | 223.0\% | 1.0198 | 49,169 |
| 2023 | 153,184,890 | 239,240,213 | 156.2\% | 0.9806 | 47,580 |
| 2024 | 166,627,618 | 255,160,617 | 153.1\% | 0.9429 | 46,095 |
| 2025 | 169,302,264 | 271,216,116 | 160.2\% | 0.9066 | 44,533 |
| 2026 | 162,037,804 | 284,789,162 | 175.8\% | 0.8717 | 42,892 |
| 2027 | 154,596,927 | 297,042,718 | 192.1\% | 0.8382 | 41,175 |
| 2028 | 146,990,878 | 308,646,854 | 210.0\% | 0.8060 | 39,383 |
| 2029 | 139,232,881 | 319,587,923 | 229.5\% | 0.7750 | 37,522 |
| 2030 | 131,348,403 | 328,267,621 | 249.9\% | 0.7452 | 35,603 |
| 2031 | 123,384,676 | 334,213,046 | 270.9\% | 0.7165 | 33,641 |
| 2032 | 115,395,788 | 337,176,450 | 292.2\% | 0.6889 | 31,649 |
| 2033 | 107,431,036 | 341,511,401 | 317.9\% | 0.6624 | 29,631 |
| 2034 | 99,505,654 | 347,432,134 | 349.2\% | 0.6370 | 27,591 |
| 2035 | 91,644,020 | 349,132,653 | 381.0\% | 0.6125 | 25,547 |
| 2036 | 83,905,734 | 348,020,143 | 414.8\% | 0.5889 | 23,524 |
| 2037 | 76,373,225 | 344,896,042 | 451.6\% | 0.5663 | 21,540 |
| 2038 | 69,099,913 | 337,564,677 | 488.5\% | 0.5445 | 19,608 |
| 2039 | 62,127,002 | 325,107,972 | 523.3\% | 0.5235 | 17,737 |
| 2040 | 55,498,593 | 308,586,049 | 556.0\% | 0.5034 | 15,945 |
| 2041 | 49,256,438 | 289,987,741 | 588.7\% | 0.4840 | 14,248 |
| 2042 | 43,429,222 | 271,292,695 | 624.7\% | 0.4654 | 12,652 |
| 2043 | 38,032,165 | 252,440,294 | 663.8\% | 0.4475 | 11,159 |
| 2044 | 33,069,827 | 232,879,091 | 704.2\% | 0.4303 | 9,774 |
| 2045 | 28,547,906 | 213,069,862 | 746.4\% | 0.4138 | 8,502 |
| 2046 | 24,464,180 | 192,870,354 | 788.4\% | 0.3978 | 7,347 |
| 2047 | 20,818,723 | 171,538,954 | 824.0\% | 0.3825 | 6,310 |
| 2048 | 17,594,080 | 150,080,251 | 853.0\% | 0.3678 | 5,386 |
| 2049 | 14,765,180 | 130,566,907 | 884.3\% | 0.3537 | 4,569 |
| 2050 | 12,309,296 | 113,542,716 | 922.4\% | 0.3401 | 3,852 |
| 2051 | 10,191,424 | 98,479,118 | 966.3\% | 0.3270 | 3,227 |
| 2052 | 8,380,698 | 85,260,725 | 1017.3\% | 0.3144 | 2,687 |
| 2053 | 6,847,964 | 73,714,321 | 1076.4\% | 0.3023 | 2,225 |
| 2054 | 5,561,728 | 63,377,677 | 1139.5\% | 0.2907 | 1,834 |
| 2055 | 4,492,026 | 54,254,378 | 1207.8\% | 0.2795 | 1,505 |
| 2056 | 3,609,005 | 46,306,817 | 1283.1\% | 0.2688 | 1,229 |
| 2057 | 2,885,035 | 39,191,475 | 1358.4\% | 0.2584 | 1,000 |
| 2058 | 2,294,920 | 32,857,007 | 1431.7\% | 0.2485 | 810 |
| 2059 | 1,816,596 | 27,328,291 | 1504.4\% | 0.2389 | 654 |
| 2060 | 1,430,581 | 22,585,564 | 1578.8\% | 0.2297 | 525 |
| 2061 | 1,120,266 | 18,491,960 | 1650.7\% | 0.2209 | 418 |
| 2062 | 871,837 | 15,024,023 | 1723.3\% | 0.2124 | 332 |
| 2063 | 674,395 | 12,183,313 | 1806.6\% | 0.2042 | 262 |
| 2064 | 518,647 | 9,766,522 | 1883.1\% | 0.1964 | 207 |
| 2065 | 396,404 | 7,705,642 | 1943.9\% | 0.1888 | 161 |
| 2066 | 300,825 | 6,005,552 | 1996.4\% | 0.1816 | 125 |
| 2067 | 226,541 | 4,593,041 | 2027.5\% | 0.1746 | 96 |
| 2068 | 169,424 | 3,458,170 | 2041.1\% | 0.1679 | 73 |
| 2069 | 125,754 | 2,566,794 | 2041.1\% | 0.1614 | 56 |
| 2070 | 92,576 | 1,869,135 | 2019.0\% | 0.1552 | 42 |
| 2071 | 67,664 | 1,340,097 | 1980.5\% | 0.1492 | 32 |
| 2072 | 49,098 | 955,716 | 1946.5\% | 0.1435 | 24 |
| 2073 | 35,367 | 679,488 | 1921.3\% | 0.1380 | 18 |
| 2074 | 25,249 | 479,083 | 1897.4\% | 0.1327 | 13 |
| 2075 | 17,922 | 334,113 | 1864.3\% | 0.1276 | 10 |
| 2076 | 12,659 | 232,216 | 1834.4\% | 0.1227 | 7 |
| 2077 | 8,875 | 158,795 | 1789.3\% | 0.1179 | 5 |
| 2078 | 6,186 | 108,250 | 1750.0\% | 0.1134 | 4 |
| 2079 | 4,274 | 72,451 | 1695.1\% | 0.1090 | 3 |
| 2080 | 2,926 | 47,509 | 1623.7\% | 0.1049 | 2 |
| 2081 | 1,984 | 30,814 | 1552.8\% | 0.1008 | 1 |
| 2082 | 1,333 | 19,664 | 1474.8\% | 0.0969 | 1 |

Accumulated and Present Values as of 12/31/2022

| Accumulated and Present Values as of | $/ 31 / 2022$ |  |  |
| :--- | :---: | ---: | ---: |
| Past: | $4,090,411,309$ | $2,966,179,445$ | $72.5 \%$ |
| Future: | $1,740,814,058$ | $5,026,677,289$ | $288.8 \%$ |
| Lifetime: | $5,831,225,367$ | $7,992,856,734$ | $137.1 \%$ |

Genworth Life Insurance Company
Address: 6603 West Broad Street, Richmond, VA 23230
Company NAIC No: 70025
September 2023

Exhibit Ic: Choice I Policy Forms - Nationwide Experience
Limited Low BIO - With Maryland Approved Rate Increase*

| Calendar Year | Earned Premium | Incurred Claims | Loss Ratio | Discount Factor | Lives |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2001 | 5,393,573 | 137,830 | 2.6\% | 2.3239 | 9,255 |
| 2002 | 33,839,421 | 3,113,954 | 9.2\% | 2.2345 | 24,298 |
| 2003 | 60,933,156 | 6,312,988 | 10.4\% | 2.1486 | 35,115 |
| 2004 | 69,643,850 | 9,531,488 | 13.7\% | 2.0659 | 35,961 |
| 2005 | 69,804,120 | 12,735,031 | 18.2\% | 1.9865 | 35,694 |
| 2006 | 69,012,078 | 17,223,290 | 25.0\% | 1.9101 | 35,474 |
| 2007 | 67,676,323 | 21,505,065 | 31.8\% | 1.8366 | 34,804 |
| 2008 | 65,665,744 | 23,197,509 | 35.3\% | 1.7660 | 34,026 |
| 2009 | 63,389,102 | 28,991,200 | 45.7\% | 1.6980 | 33,165 |
| 2010 | 61,200,510 | 30,098,522 | 49.2\% | 1.6327 | 32,403 |
| 2011 | 58,969,926 | 31,948,073 | 54.2\% | 1.5699 | 31,605 |
| 2012 | 56,552,725 | 37,356,824 | 66.1\% | 1.5096 | 30,746 |
| 2013 | 53,329,786 | 37,465,068 | 70.3\% | 1.4515 | 29,736 |
| 2014 | 51,701,190 | 37,672,438 | 72.9\% | 1.3957 | 28,772 |
| 2015 | 52,643,705 | 40,075,915 | 76.1\% | 1.3420 | 27,812 |
| 2016 | 54,887,932 | 41,886,261 | 76.3\% | 1.2904 | 26,806 |
| 2017 | 56,965,005 | 40,386,352 | 70.9\% | 1.2407 | 25,781 |
| 2018 | 51,929,633 | 39,945,010 | 76.9\% | 1.1930 | 24,756 |
| 2019 | 44,658,838 | 41,530,988 | 93.0\% | 1.1471 | 23,641 |
| 2020 | 41,317,850 | 39,333,640 | 95.2\% | 1.1030 | 22,585 |
| 2021 | 31,687,576 | 47,604,030 | 150.2\% | 1.0606 | 21,502 |
| 2022 | 21,114,494 | 49,428,738 | 234.1\% | 1.0198 | 20,484 |
| 2023 | 20,723,608 | 55,737,477 | 269.0\% | 0.9806 | 19,235 |
| 2024 | 18,514,694 | 55,077,751 | 297.5\% | 0.9429 | 18,030 |
| 2025 | 16,694,807 | 54,491,786 | 326.4\% | 0.9066 | 16,841 |
| 2026 | 15,115,211 | 53,653,737 | 355.0\% | 0.8717 | 15,675 |
| 2027 | 13,719,008 | 52,603,701 | 383.4\% | 0.8382 | 14,519 |
| 2028 | 12,456,328 | 51,442,790 | 413.0\% | 0.8060 | 13,395 |
| 2029 | 11,296,135 | 50,056,019 | 443.1\% | 0.7750 | 12,299 |
| 2030 | 10,215,593 | 48,164,654 | 471.5\% | 0.7452 | 11,238 |
| 2031 | 9,202,462 | 45,897,594 | 498.8\% | 0.7165 | 10,224 |
| 2032 | 8,265,164 | 43,479,834 | 526.1\% | 0.6889 | 9,261 |
| 2033 | 7,389,193 | 41,424,026 | 560.6\% | 0.6624 | 8,343 |
| 2034 | 6,567,700 | 39,532,306 | 601.9\% | 0.6370 | 7,469 |
| 2035 | 5,801,610 | 37,119,470 | 639.8\% | 0.6125 | 6,645 |
| 2036 | 5,092,209 | 34,537,727 | 678.2\% | 0.5889 | 5,877 |
| 2037 | 4,443,404 | 32,112,404 | 722.7\% | 0.5663 | 5,167 |
| 2038 | 3,852,811 | 29,620,274 | 768.8\% | 0.5445 | 4,512 |
| 2039 | 3,316,729 | 26,908,433 | 811.3\% | 0.5235 | 3,911 |
| 2040 | 2,832,471 | 24,046,975 | 849.0\% | 0.5034 | 3,365 |
| 2041 | 2,400,311 | 21,189,730 | 882.8\% | 0.4840 | 2,875 |
| 2042 | 2,019,205 | 18,556,783 | 919.0\% | 0.4654 | 2,439 |
| 2043 | 1,685,489 | 16,136,831 | 957.4\% | 0.4475 | 2,053 |
| 2044 | 1,395,180 | 13,882,845 | 995.1\% | 0.4303 | 1,715 |
| 2045 | 1,145,048 | 11,816,025 | 1031.9\% | 0.4138 | 1,421 |
| 2046 | 931,785 | 9,928,450 | 1065.5\% | 0.3978 | 1,169 |
| 2047 | 752,301 | 8,197,263 | 1089.6\% | 0.3825 | 956 |
| 2048 | 602,712 | 6,657,143 | 1104.5\% | 0.3678 | 776 |
| 2049 | 479,390 | 5,377,349 | 1121.7\% | 0.3537 | 627 |
| 2050 | 378,477 | 4,332,393 | 1144.7\% | 0.3401 | 502 |
| 2051 | 296,563 | 3,467,562 | 1169.2\% | 0.3270 | 400 |
| 2052 | 230,671 | 2,755,905 | 1194.7\% | 0.3144 | 317 |
| 2053 | 178,227 | 2,173,173 | 1219.3\% | 0.3023 | 250 |
| 2054 | 136,915 | 1,698,954 | 1240.9\% | 0.2907 | 196 |
| 2055 | 104,657 | 1,319,784 | 1261.1\% | 0.2795 | 153 |
| 2056 | 79,593 | 1,020,027 | 1281.6\% | 0.2688 | 119 |
| 2057 | 60,172 | 784,636 | 1304.0\% | 0.2584 | 92 |
| 2058 | 45,293 | 598,534 | 1321.5\% | 0.2485 | 71 |
| 2059 | 33,930 | 453,987 | 1338.0\% | 0.2389 | 55 |
| 2060 | 25,268 | 340,734 | 1348.5\% | 0.2297 | 42 |
| 2061 | 18,660 | 251,642 | 1348.5\% | 0.2209 | 31 |
| 2062 | 13,638 | 184,334 | 1351.6\% | 0.2124 | 24 |
| 2063 | 9,898 | 134,981 | 1363.6\% | 0.2042 | 18 |
| 2064 | 7,146 | 98,343 | 1376.3\% | 0.1964 | 13 |
| 2065 | 5,128 | 71,092 | 1386.4\% | 0.1888 | 10 |
| 2066 | 3,631 | 51,051 | 1406.0\% | 0.1816 | 7 |
| 2067 | 2,533 | 36,100 | 1425.3\% | 0.1746 | 5 |
| 2068 | 1,756 | 25,070 | 1427.7\% | 0.1679 | 4 |
| 2069 | 1,210 | 17,167 | 1418.3\% | 0.1614 | 3 |
| 2070 | 826 | 11,686 | 1414.3\% | 0.1552 | 2 |
| 2071 | 559 | 7,826 | 1399.9\% | 0.1492 | 1 |
| 2072 | 376 | 5,219 | 1387.2\% | 0.1435 | 1 |
| 2073 | 249 | 3,431 | 1376.3\% | 0.1380 | 1 |
| 2074 | 161 | 2,216 | 1376.0\% | 0.1327 | 0 |
| 2075 | 103 | 1,429 | 1383.8\% | 0.1276 | 0 |
| 2076 | 66 | 902 | 1361.6\% | 0.1227 | 0 |
| 2077 | 42 | 554 | 1306.9\% | 0.1179 | 0 |
| 2078 | 26 | 338 | 1280.1\% | 0.1134 | 0 |
| 2079 | 16 | 201 | 1261.1\% | 0.1090 | 0 |
| 2080 | 10 | 117 | 1231.7\% | 0.1049 | 0 |
| 2081 | 6 | 68 | 1187.8\% | 0.1008 | 0 |
| 2082 | 3 | 41 | 1274.6\% | 0.0969 | 0 |

Accumulated and Present Values as of 12/31/2022

| Accumulated and Present | Values as of |  |  |
| :--- | ---: | ---: | ---: |
| Past: | $1,834,817,159$ | $888,590,535$ | $48.4 \%$ |
| Future: | $145,166,089$ | $636,440,690$ | $438.4 \%$ |
|  | $1,97,983$ | $1,525,031,225$ |  |


| Future: | $145,166,089$ | $636,440,690$ | $438.4 \%$ |
| :--- | ---: | ---: | ---: |
| Lifetime: | $1,979,983,248$ | $1,525,031,225$ | $77.0 \%$ |

Genworth Life Insurance Company
Address: 6603 West Broad Street, Richmond, VA 23230 Company NAIC No: 70025
arial Memorandum
September 2023
Exhibit Id: Choice I Policy Forms - Nationwide Experience
Limited High BIO - With Maryland Approved Rate Increase*

| Calendar Year | Earned Premium | Incurred Claims | Loss Ratio | Discount Factor | Lives |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2001 | 13,283,317 | 177,250 | 1.3\% | 2.3239 | 29,783 |
| 2002 | 95,104,327 | 2,320,283 | 2.4\% | 2.2345 | 89,349 |
| 2003 | 196,380,141 | 7,526,070 | 3.8\% | 2.1486 | 141,826 |
| 2004 | 244,495,779 | 10,668,994 | 4.4\% | 2.0659 | 153,182 |
| 2005 | 258,891,268 | 14,482,247 | 5.6\% | 1.9865 | 156,633 |
| 2006 | 269,893,438 | 22,670,398 | 8.4\% | 1.9101 | 162,053 |
| 2007 | 272,341,978 | 29,969,243 | 11.0\% | 1.8366 | 159,094 |
| 2008 | 266,675,819 | 35,068,139 | 13.2\% | 1.7660 | 155,815 |
| 2009 | 259,544,040 | 54,629,231 | 21.0\% | 1.6980 | 152,118 |
| 2010 | 253,365,417 | 72,770,455 | 28.7\% | 1.6327 | 149,262 |
| 2011 | 247,968,201 | 75,232,649 | 30.3\% | 1.5699 | 146,649 |
| 2012 | 242,689,312 | 99,442,027 | 41.0\% | 1.5096 | 144,247 |
| 2013 | 235,635,535 | 120,912,891 | 51.3\% | 1.4515 | 141,653 |
| 2014 | 237,801,339 | 136,627,234 | 57.5\% | 1.3957 | 139,131 |
| 2015 | 250,683,116 | 159,294,843 | 63.5\% | 1.3420 | 136,396 |
| 2016 | 272,576,346 | 186,284,909 | 68.3\% | 1.2904 | 133,672 |
| 2017 | 295,951,691 | 211,330,370 | 71.4\% | 1.2407 | 130,759 |
| 2018 | 281,800,871 | 247,137,245 | 87.7\% | 1.1930 | 127,756 |
| 2019 | 261,370,574 | 270,157,719 | 103.4\% | 1.1471 | 124,677 |
| 2020 | 270,554,340 | 238,709,305 | 88.2\% | 1.1030 | 121,370 |
| 2021 | 245,112,812 | 302,132,543 | 123.3\% | 1.0606 | 118,028 |
| 2022 | 214,986,579 | 347,053,105 | 161.4\% | 1.0198 | 114,567 |
| 2023 | 237,803,700 | 350,845,981 | 147.5\% | 0.9806 | 110,138 |
| 2024 | 257,095,697 | 376,586,105 | 146.5\% | 0.9429 | 105,719 |
| 2025 | 259,150,945 | 401,932,856 | 155.1\% | 0.9066 | 101,096 |
| 2026 | 245,487,042 | 422,869,451 | 172.3\% | 0.8717 | 96,318 |
| 2027 | 231,733,371 | 441,239,177 | 190.4\% | 0.8382 | 91,425 |
| 2028 | 217,887,207 | 457,508,949 | 210.0\% | 0.8060 | 86,420 |
| 2029 | 203,975,779 | 471,032,788 | 230.9\% | 0.7750 | 81,307 |
| 2030 | 190,046,822 | 479,305,591 | 252.2\% | 0.7452 | 76,147 |
| 2031 | 176,208,300 | 482,029,177 | 273.6\% | 0.7165 | 70,983 |
| 2032 | 162,604,256 | 480,213,035 | 295.3\% | 0.6889 | 65,853 |
| 2033 | 149,299,027 | 479,597,894 | 321.2\% | 0.6624 | 60,765 |
| 2034 | 136,303,231 | 479,259,362 | 351.6\% | 0.6370 | 55,723 |
| 2035 | 123,631,767 | 471,365,616 | 381.3\% | 0.6125 | 50,774 |
| 2036 | 111,394,652 | 458,525,348 | 411.6\% | 0.5889 | 45,980 |
| 2037 | 99,717,530 | 443,665,634 | 444.9\% | 0.5663 | 41,385 |
| 2038 | 88,684,426 | 424,920,861 | 479.1\% | 0.5445 | 37,002 |
| 2039 | 78,322,780 | 400,796,637 | 511.7\% | 0.5235 | 32,849 |
| 2040 | 68,669,285 | 372,593,576 | 542.6\% | 0.5034 | 28,956 |
| 2041 | 59,764,706 | 342,220,053 | 572.6\% | 0.4840 | 25,352 |
| 2042 | 51,642,589 | 312,135,770 | 604.4\% | 0.4654 | 22,045 |
| 2043 | 44,298,030 | 282,866,498 | 638.6\% | 0.4475 | 19,026 |
| 2044 | 37,694,612 | 254,487,003 | 675.1\% | 0.4303 | 16,293 |
| 2045 | 31,817,722 | 227,447,910 | 714.8\% | 0.4138 | 13,845 |
| 2046 | 26,640,705 | 201,612,143 | 756.8\% | 0.3978 | 11,678 |
| 2047 | 22,130,086 | 176,001,108 | 795.3\% | 0.3825 | 9,780 |
| 2048 | 18,239,278 | 151,120,449 | 828.5\% | 0.3678 | 8,135 |
| 2049 | 14,918,366 | 128,789,348 | 863.3\% | 0.3537 | 6,719 |
| 2050 | 12,108,709 | 109,305,963 | 902.7\% | 0.3401 | 5,510 |
| 2051 | 9,753,354 | 92,164,407 | 945.0\% | 0.3270 | 4,486 |
| 2052 | 7,796,623 | 77,274,965 | 991.1\% | 0.3144 | 3,628 |
| 2053 | 6,186,934 | 64,517,796 | 1042.8\% | 0.3023 | 2,917 |
| 2054 | 4,876,626 | 53,442,546 | 1095.9\% | 0.2907 | 2,332 |
| 2055 | 3,819,406 | 44,030,753 | 1152.8\% | 0.2795 | 1,853 |
| 2056 | 2,973,310 | 36,137,053 | 1215.4\% | 0.2688 | 1,465 |
| 2057 | 2,301,461 | 29,480,253 | 1280.9\% | 0.2584 | 1,154 |
| 2058 | 1,771,639 | 23,845,653 | 1346.0\% | 0.2485 | 905 |
| 2059 | 1,356,783 | 19,195,335 | 1414.8\% | 0.2389 | 707 |
| 2060 | 1,033,530 | 15,340,117 | 1484.2\% | 0.2297 | 547 |
| 2061 | 782,294 | 12,137,755 | 1551.6\% | 0.2209 | 420 |
| 2062 | 587,734 | 9,554,057 | 1625.6\% | 0.2124 | 321 |
| 2063 | 438,918 | 7,520,743 | 1713.5\% | 0.2042 | 245 |
| 2064 | 326,356 | 5,873,506 | 1799.7\% | 0.1964 | 186 |
| 2065 | 241,354 | 4,550,703 | 1885.5\% | 0.1888 | 140 |
| 2066 | 177,377 | 3,504,275 | 1975.6\% | 0.1816 | 103 |
| 2067 | 129,289 | 2,668,021 | 2063.6\% | 0.1746 | 76 |
| 2068 | 93,733 | 2,008,544 | 2142.8\% | 0.1679 | 56 |
| 2069 | 67,537 | 1,485,321 | 2199.3\% | 0.1614 | 41 |
| 2070 | 48,269 | 1,088,021 | 2254.1\% | 0.1552 | 30 |
| 2071 | 34,323 | 785,734 | 2289.2\% | 0.1492 | 22 |
| 2072 | 24,265 | 556,909 | 2295.1\% | 0.1435 | 16 |
| 2073 | 17,033 | 391,800 | 2300.2\% | 0.1380 | 11 |
| 2074 | 11,802 | 273,941 | 2321.1\% | 0.1327 | 8 |
| 2075 | 8,132 | 191,250 | 2351.9\% | 0.1276 | 5 |
| 2076 | 5,561 | 132,259 | 2378.3\% | 0.1227 | 4 |
| 2077 | 3,753 | 90,342 | 2407.4\% | 0.1179 | 3 |
| 2078 | 2,520 | 60,834 | 2414.2\% | 0.1134 | 2 |
| 2079 | 1,678 | 40,954 | 2440.3\% | 0.1090 | 1 |
| 2080 | 1,102 | 27,018 | 2451.9\% | 0.1049 | 1 |
| 2081 | 719 | 17,454 | 2427.4\% | 0.1008 | 1 |
| 2082 | 466 | 11,131 | 2389.0\% | 0.0969 | 0 |

Accumulated and Present Values as of $12 / 31 / 2022$

| Accumulated and | Present |  |  |
| :--- | ---: | ---: | ---: |
| Past: | $7,924,324,371$ | $3,337,620,500$ | $42.1 \%$ |
| Future: | $2,490,063,959$ | $6,701,413,311$ | $269.1 \%$ |
| lifetime: | $10,414,388,330$ | $10,039,033,811$ |  |

Genworth Life Insurance Company
Address: 6603 West Broad Street, Richmond, VA 23230 Company NAIC No: 70025
uarial Memorandu
September 2023
Exhibit lla: Choice I Policy Forms - Nationwide Experience
Lifetime Low BIO - With 220\% Requested Rate Increase*


Genworth Life Insurance Company
Address: 6603 West Broad Street, Richmond, VA 23230 Company NAIC No: 70025
arial Memorandum
September 2023
Exhibit llb: Choice I Policy Forms - Nationwide Experience
Lifetime High BIO - With 217\% Requested Rate Increase*

| Calendar Year | Earned Premium | Incurred Claims | Loss Ratio | Discount Factor | Lives |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2001 | 7,329,739 | 337,478 | 4.6\% | 2.3239 | 13,478 |
| 2002 | 48,524,614 | 7,594,786 | 15.7\% | 2.2345 | 37,165 |
| 2003 | 98,177,896 | 9,226,363 | 9.4\% | 2.1486 | 59,235 |
| 2004 | 123,568,753 | 12,206,402 | 9.9\% | 2.0659 | 64,106 |
| 2005 | 131,717,517 | 27,103,647 | 20.6\% | 1.9865 | 65,722 |
| 2006 | 138,425,550 | 20,050,931 | 14.5\% | 1.9101 | 68,334 |
| 2007 | 140,152,206 | 26,111,543 | 18.6\% | 1.8366 | 66,922 |
| 2008 | 136,757,695 | 48,120,086 | 35.2\% | 1.7660 | 65,241 |
| 2009 | 132,400,677 | 53,691,149 | 40.6\% | 1.6980 | 63,336 |
| 2010 | 128,778,679 | 64,919,792 | 50.4\% | 1.6327 | 61,975 |
| 2011 | 125,846,048 | 66,448,686 | 52.8\% | 1.5699 | 60,797 |
| 2012 | 123,126,238 | 72,187,327 | 58.6\% | 1.5096 | 59,757 |
| 2013 | 119,362,401 | 92,469,471 | 77.5\% | 1.4515 | 58,725 |
| 2014 | 120,379,721 | 122,637,596 | 101.9\% | 1.3957 | 57,675 |
| 2015 | 127,095,407 | 120,613,419 | 94.9\% | 1.3420 | 56,690 |
| 2016 | 139,178,243 | 186,940,818 | 134.3\% | 1.2904 | 55,703 |
| 2017 | 151,938,496 | 181,169,493 | 119.2\% | 1.2407 | 54,561 |
| 2018 | 145,386,283 | 206,604,762 | 142.1\% | 1.1930 | 53,457 |
| 2019 | 136,681,303 | 246,803,832 | 180.6\% | 1.1471 | 52,389 |
| 2020 | 143,647,646 | 199,992,278 | 139.2\% | 1.1030 | 51,222 |
| 2021 | 138,838,994 | 258,015,782 | 185.8\% | 1.0606 | 50,102 |
| 2022 | 136,645,150 | 304,712,329 | 223.0\% | 1.0198 | 49,169 |
| 2023 | 153,184,890 | 239,240,213 | 156.2\% | 0.9806 | 47,580 |
| 2024 | 276,138,977 | 275,005,823 | 99.6\% | 0.9429 | 46,095 |
| 2025 | 509,415,768 | 332,037,679 | 65.2\% | 0.9066 | 44,533 |
| 2026 | 491,293,103 | 344,621,378 | 70.1\% | 0.8717 | 42,892 |
| 2027 | 471,845,864 | 356,298,905 | 75.5\% | 0.8382 | 41,175 |
| 2028 | 451,198,082 | 367,589,585 | 81.5\% | 0.8060 | 39,383 |
| 2029 | 429,470,503 | 378,246,640 | 88.1\% | 0.7750 | 37,522 |
| 2030 | 406,830,564 | 386,337,125 | 95.0\% | 0.7452 | 35,603 |
| 2031 | 383,502,160 | 391,257,644 | 102.0\% | 0.7165 | 33,641 |
| 2032 | 359,728,358 | 392,704,981 | 109.2\% | 0.6889 | 31,649 |
| 2033 | 335,724,527 | 395,763,868 | 117.9\% | 0.6624 | 29,631 |
| 2034 | 311,581,026 | 400,591,574 | 128.6\% | 0.6370 | 27,591 |
| 2035 | 287,440,110 | 400,501,868 | 139.3\% | 0.6125 | 25,547 |
| 2036 | 263,541,737 | 397,134,450 | 150.7\% | 0.5889 | 23,524 |
| 2037 | 240,164,679 | 391,439,925 | 163.0\% | 0.5663 | 21,540 |
| 2038 | 217,527,264 | 381,018,122 | 175.2\% | 0.5445 | 19,608 |
| 2039 | 195,767,102 | 364,978,589 | 186.4\% | 0.5235 | 17,737 |
| 2040 | 175,025,961 | 344,658,002 | 196.9\% | 0.5034 | 15,945 |
| 2041 | 155,451,888 | 322,336,364 | 207.4\% | 0.4840 | 14,248 |
| 2042 | 137,151,171 | 300,161,564 | 218.9\% | 0.4654 | 12,652 |
| 2043 | 120,181,013 | 278,023,271 | 231.3\% | 0.4475 | 11,159 |
| 2044 | 104,557,734 | 255,329,483 | 244.2\% | 0.4303 | 9,774 |
| 2045 | 90,302,322 | 232,583,708 | 257.6\% | 0.4138 | 8,502 |
| 2046 | 77,421,110 | 209,548,548 | 270.7\% | 0.3978 | 7,347 |
| 2047 | 65,908,254 | 185,467,923 | 281.4\% | 0.3825 | 6,310 |
| 2048 | 55,717,279 | 161,527,135 | 289.9\% | 0.3678 | 5,386 |
| 2049 | 46,775,203 | 139,927,305 | 299.1\% | 0.3537 | 4,569 |
| 2050 | 39,003,298 | 121,201,701 | 310.7\% | 0.3401 | 3,852 |
| 2051 | 32,299,555 | 104,732,614 | 324.3\% | 0.3270 | 3,227 |
| 2052 | 26,566,085 | 90,357,675 | 340.1\% | 0.3144 | 2,687 |
| 2053 | 21,708,045 | 77,859,860 | 358.7\% | 0.3023 | 2,225 |
| 2054 | 17,630,678 | 66,726,528 | 378.5\% | 0.2907 | 1,834 |
| 2055 | 14,239,721 | 56,943,646 | 399.9\% | 0.2795 | 1,505 |
| 2056 | 11,440,547 | 48,452,740 | 423.5\% | 0.2688 | 1,229 |
| 2057 | 9,145,561 | 40,885,591 | 447.1\% | 0.2584 | 1,000 |
| 2058 | 7,274,897 | 34,180,854 | 469.8\% | 0.2485 | 810 |
| 2059 | 5,758,611 | 28,354,363 | 492.4\% | 0.2389 | 654 |
| 2060 | 4,534,942 | 23,376,068 | 515.5\% | 0.2297 | 525 |
| 2061 | 3,551,244 | 19,095,340 | 537.7\% | 0.2209 | 418 |
| 2062 | 2,763,724 | 15,481,526 | 560.2\% | 0.2124 | 332 |
| 2063 | 2,137,831 | 12,529,815 | 586.1\% | 0.2042 | 262 |
| 2064 | 1,644,111 | 10,026,098 | 609.8\% | 0.1964 | 207 |
| 2065 | 1,256,600 | 7,897,190 | 628.5\% | 0.1888 | 161 |
| 2066 | 953,616 | 6,145,404 | 644.4\% | 0.1816 | 125 |
| 2067 | 718,136 | 4,693,378 | 653.6\% | 0.1746 | 96 |
| 2068 | 537,074 | 3,529,154 | 657.1\% | 0.1679 | 73 |
| 2069 | 398,639 | 2,616,370 | 656.3\% | 0.1614 | 56 |
| 2070 | 293,465 | 1,903,124 | 648.5\% | 0.1552 | 42 |
| 2071 | 214,496 | 1,363,040 | 635.5\% | 0.1492 | 32 |
| 2072 | 155,641 | 971,128 | 624.0\% | 0.1435 | 24 |
| 2073 | 112,112 | 689,817 | 615.3\% | 0.1380 | 18 |
| 2074 | 80,040 | 485,943 | 607.1\% | 0.1327 | 13 |
| 2075 | 56,812 | 338,617 | 596.0\% | 0.1276 | 10 |
| 2076 | 40,128 | 235,162 | 586.0\% | 0.1227 | 7 |
| 2077 | 28,133 | 160,688 | 571.2\% | 0.1179 | 5 |
| 2078 | 19,609 | 109,467 | 558.3\% | 0.1134 | 4 |
| 2079 | 13,549 | 73,219 | 540.4\% | 0.1090 | 3 |
| 2080 | 9,275 | 47,986 | 517.3\% | 0.1049 | 2 |
| 2081 | 6,291 | 31,106 | 494.5\% | 0.1008 | 1 |
| 2082 | 4,227 | 19,839 | 469.4\% | 0.0969 | 1 |
| Accumulated and Present Values as of 12/31/2022 |  |  |  |  |  |
| Past: | 4,090,411,309 | 2,966,179,445 | 72.5\% |  |  |
| Future: | 4,844,335,761 | 5,726,184,522 | 118.2\% |  |  |
| Lifetime: | 8,934,747,070 | 8,692,363,967 | 97.3\% |  |  |

Genworth Life Insurance Company
Address: 6603 West Broad Street, Richmond, VA 23230 Company NAIC No: 70025

Actuarial Memorandum September 2023

Exhibit Ilc: Choice I Policy Forms - Nationwide Experience
Limited Low BIO - With 134\% Requested Rate Increase

| Calendar Year | Earned Premium | Incurred Claims | Loss Ratio | Discount Factor | Lives |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2001 | 5,393,573 | 137,830 | 2.6\% | 2.3239 | 9,255 |
| 2002 | 33,839,421 | 3,113,954 | 9.2\% | 2.2345 | 24,298 |
| 2003 | 60,933,156 | 6,312,988 | 10.4\% | 2.1486 | 35,115 |
| 2004 | 69,643,850 | 9,531,488 | 13.7\% | 2.0659 | 35,961 |
| 2005 | 69,804,120 | 12,735,031 | 18.2\% | 1.9865 | 35,694 |
| 2006 | 69,012,078 | 17,223,290 | 25.0\% | 1.9101 | 35,474 |
| 2007 | 67,676,323 | 21,505,065 | 31.8\% | 1.8366 | 34,804 |
| 2008 | 65,665,744 | 23,197,509 | 35.3\% | 1.7660 | 34,026 |
| 2009 | 63,389,102 | 28,991,200 | 45.7\% | 1.6980 | 33,165 |
| 2010 | 61,200,510 | 30,098,522 | 49.2\% | 1.6327 | 32,403 |
| 2011 | 58,969,926 | 31,948,073 | 54.2\% | 1.5699 | 31,605 |
| 2012 | 56,552,725 | 37,356,824 | 66.1\% | 1.5096 | 30,746 |
| 2013 | 53,329,786 | 37,465,068 | 70.3\% | 1.4515 | 29,736 |
| 2014 | 51,701,190 | 37,672,438 | 72.9\% | 1.3957 | 28,772 |
| 2015 | 52,643,705 | 40,075,915 | 76.1\% | 1.3420 | 27,812 |
| 2016 | 54,887,932 | 41,886,261 | 76.3\% | 1.2904 | 26,806 |
| 2017 | 56,965,005 | 40,386,352 | 70.9\% | 1.2407 | 25,781 |
| 2018 | 51,929,633 | 39,945,010 | 76.9\% | 1.1930 | 24,756 |
| 2019 | 44,658,838 | 41,530,988 | 93.0\% | 1.1471 | 23,641 |
| 2020 | 41,317,850 | 39,333,640 | 95.2\% | 1.1030 | 22,585 |
| 2021 | 31,687,576 | 47,604,030 | 150.2\% | 1.0606 | 21,502 |
| 2022 | 21,114,494 | 49,428,738 | 234.1\% | 1.0198 | 20,484 |
| 2023 | 20,723,608 | 55,737,477 | 269.0\% | 0.9806 | 19,235 |
| 2024 | 25,464,712 | 56,578,248 | 222.2\% | 0.9429 | 18,030 |
| 2025 | 36,494,785 | 58,646,236 | 160.7\% | 0.9066 | 16,841 |
| 2026 | 33,763,656 | 57,611,335 | 170.6\% | 0.8717 | 15,675 |
| 2027 | 31,137,030 | 56,429,608 | 181.2\% | 0.8382 | 14,519 |
| 2028 | 28,581,687 | 55,172,842 | 193.0\% | 0.8060 | 13,395 |
| 2029 | 26,105,894 | 53,689,115 | 205.7\% | 0.7750 | 12,299 |
| 2030 | 23,710,935 | 51,662,112 | 217.9\% | 0.7452 | 11,238 |
| 2031 | 21,419,376 | 49,225,306 | 229.8\% | 0.7165 | 10,224 |
| 2032 | 19,267,605 | 46,620,681 | 242.0\% | 0.6889 | 9,261 |
| 2033 | 17,245,223 | 44,396,344 | 257.4\% | 0.6624 | 8,343 |
| 2034 | 15,341,040 | 42,339,074 | 276.0\% | 0.6370 | 7,469 |
| 2035 | 13,557,296 | 39,719,202 | 293.0\% | 0.6125 | 6,645 |
| 2036 | 11,904,103 | 36,915,032 | 310.1\% | 0.5889 | 5,877 |
| 2037 | 10,389,282 | 34,277,267 | 329.9\% | 0.5663 | 5,167 |
| 2038 | 9,009,699 | 31,567,639 | 350.4\% | 0.5445 | 4,512 |
| 2039 | 7,756,642 | 28,627,753 | 369.1\% | 0.5235 | 3,911 |
| 2040 | 6,625,401 | 25,540,130 | 385.5\% | 0.5034 | 3,365 |
| 2041 | 5,615,780 | 22,469,533 | 400.1\% | 0.4840 | 2,875 |
| 2042 | 4,724,468 | 19,648,437 | 415.9\% | 0.4654 | 2,439 |
| 2043 | 3,944,020 | 17,060,508 | 432.6\% | 0.4475 | 2,053 |
| 2044 | 3,264,713 | 14,654,953 | 448.9\% | 0.4303 | 1,715 |
| 2045 | 2,679,411 | 12,453,618 | 464.8\% | 0.4138 | 1,421 |
| 2046 | 2,180,375 | 10,448,254 | 479.2\% | 0.3978 | 1,169 |
| 2047 | 1,760,385 | 8,614,108 | 489.3\% | 0.3825 | 956 |
| 2048 | 1,410,346 | 6,986,010 | 495.3\% | 0.3678 | 776 |
| 2049 | 1,121,773 | 5,636,327 | 502.4\% | 0.3537 | 627 |
| 2050 | 885,636 | 4,536,375 | 512.2\% | 0.3401 | 502 |
| 2051 | 693,958 | 3,627,294 | 522.7\% | 0.3270 | 400 |
| 2052 | 539,770 | 2,879,993 | 533.6\% | 0.3144 | 317 |
| 2053 | 417,051 | 2,268,794 | 544.0\% | 0.3023 | 250 |
| 2054 | 320,382 | 1,771,984 | 553.1\% | 0.2907 | 196 |
| 2055 | 244,897 | 1,375,133 | 561.5\% | 0.2795 | 153 |
| 2056 | 186,248 | 1,061,761 | 570.1\% | 0.2688 | 119 |
| 2057 | 140,803 | 815,951 | 579.5\% | 0.2584 | 92 |
| 2058 | 105,986 | 621,797 | 586.7\% | 0.2485 | 71 |
| 2059 | 79,397 | 471,171 | 593.4\% | 0.2389 | 55 |
| 2060 | 59,128 | 353,285 | 597.5\% | 0.2297 | 42 |
| 2061 | 43,666 | 260,657 | 596.9\% | 0.2209 | 31 |
| 2062 | 31,914 | 190,769 | 597.8\% | 0.2124 | 24 |
| 2063 | 23,162 | 139,586 | 602.6\% | 0.2042 | 18 |
| 2064 | 16,721 | 101,621 | 607.8\% | 0.1964 | 13 |
| 2065 | 11,999 | 73,405 | 611.8\% | 0.1888 | 10 |
| 2066 | 8,496 | 52,663 | 619.8\% | 0.1816 | 7 |
| 2067 | 5,927 | 37,204 | 627.7\% | 0.1746 | 5 |
| 2068 | 4,109 | 25,816 | 628.3\% | 0.1679 | 4 |
| 2069 | 2,832 | 17,665 | 623.7\% | 0.1614 | 3 |
| 2070 | 1,933 | 12,017 | 621.5\% | 0.1552 | 2 |
| 2071 | 1,308 | 8,042 | 614.7\% | 0.1492 | 1 |
| 2072 | 880 | 5,360 | 608.8\% | 0.1435 | 1 |
| 2073 | 583 | 3,521 | 603.6\% | 0.1380 | 1 |
| 2074 | 377 | 2,273 | 603.1\% | 0.1327 | 0 |
| 2075 | 242 | 1,465 | 606.2\% | 0.1276 | 0 |
| 2076 | 155 | 924 | 596.3\% | 0.1227 | 0 |
| 2077 | 99 | 567 | 572.0\% | 0.1179 | 0 |
| 2078 | 62 | 346 | 559.8\% | 0.1134 | 0 |
| 2079 | 37 | 205 | 551.3\% | 0.1090 | 0 |
| 2080 | 22 | 120 | 538.6\% | 0.1049 | 0 |
| 2081 | 13 | 70 | 519.7\% | 0.1008 | 0 |
| 2082 | 8 | 42 | 558.1\% | 0.0969 | 0 |

Accumulated and Present Values as of 12/31/2022

| Accum | $1,834,817,159$ | $888,590,535$ | $48.4 \%$ |
| :--- | ---: | ---: | ---: |
| Past: | $290,014,753$ | $674,922,311$ | $232.7 \%$ |
| Future: | $2,124,031,912$ | $1,563,512,845$ | $73.6 \%$ |

Genworth Life Insurance Company
Address: 6603 West Broad Street, Richmond, VA 23230 Company NAIC No: 70025

Suarial Memorandu
September 2023
Exhibit Ild: Choice I Policy Forms - Nationwide Experience
Limited High BIO - With 134\% Requested Rate Increase*

| Calendar Year | Earned Premium | Incurred Claims | Loss Ratio | Discount Factor | Lives |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2001 | 13,283,317 | 177,250 | 1.3\% | 2.3239 | 29,783 |
| 2002 | 95,104,327 | 2,320,283 | 2.4\% | 2.2345 | 89,349 |
| 2003 | 196,380,141 | 7,526,070 | 3.8\% | 2.1486 | 141,826 |
| 2004 | 244,495,779 | 10,668,994 | 4.4\% | 2.0659 | 153,182 |
| 2005 | 258,891,268 | 14,482,247 | 5.6\% | 1.9865 | 156,633 |
| 2006 | 269,893,438 | 22,670,398 | 8.4\% | 1.9101 | 162,053 |
| 2007 | 272,341,978 | 29,969,243 | 11.0\% | 1.8366 | 159,094 |
| 2008 | 266,675,819 | 35,068,139 | 13.2\% | 1.7660 | 155,815 |
| 2009 | 259,544,040 | 54,629,231 | 21.0\% | 1.6980 | 152,118 |
| 2010 | 253,365,417 | 72,770,455 | 28.7\% | 1.6327 | 149,262 |
| 2011 | 247,968,201 | 75,232,649 | 30.3\% | 1.5699 | 146,649 |
| 2012 | 242,689,312 | 99,442,027 | 41.0\% | 1.5096 | 144,247 |
| 2013 | 235,635,535 | 120,912,891 | 51.3\% | 1.4515 | 141,653 |
| 2014 | 237,801,339 | 136,627,234 | 57.5\% | 1.3957 | 139,131 |
| 2015 | 250,683,116 | 159,294,843 | 63.5\% | 1.3420 | 136,396 |
| 2016 | 272,576,346 | 186,284,909 | 68.3\% | 1.2904 | 133,672 |
| 2017 | 295,951,691 | 211,330,370 | 71.4\% | 1.2407 | 130,759 |
| 2018 | 281,800,871 | 247,137,245 | 87.7\% | 1.1930 | 127,756 |
| 2019 | 261,370,574 | 270,157,719 | 103.4\% | 1.1471 | 124,677 |
| 2020 | 270,554,340 | 238,709,305 | 88.2\% | 1.1030 | 121,370 |
| 2021 | 245,112,812 | 302,132,543 | 123.3\% | 1.0606 | 118,028 |
| 2022 | 214,986,579 | 347,053,105 | 161.4\% | 1.0198 | 114,567 |
| 2023 | 237,803,700 | 350,845,981 | 147.5\% | 0.9806 | 110,138 |
| 2024 | 364,804,555 | 394,792,675 | 108.2\% | 0.9429 | 105,719 |
| 2025 | 590,769,126 | 458,586,507 | 77.6\% | 0.9066 | 101,096 |
| 2026 | 563,266,768 | 479,563,716 | 85.1\% | 0.8717 | 96,318 |
| 2027 | 534,396,165 | 498,500,625 | 93.3\% | 0.8382 | 91,425 |
| 2028 | 504,368,575 | 515,557,905 | 102.2\% | 0.8060 | 86,420 |
| 2029 | 473,510,346 | 529,706,813 | 111.9\% | 0.7750 | 81,307 |
| 2030 | 442,089,077 | 537,882,429 | 121.7\% | 0.7452 | 76,147 |
| 2031 | 410,531,940 | 539,630,451 | 131.4\% | 0.7165 | 70,983 |
| 2032 | 379,256,279 | 536,138,695 | 141.4\% | 0.6889 | 65,853 |
| 2033 | 348,498,766 | 533,896,117 | 153.2\% | 0.6624 | 60,765 |
| 2034 | 318,332,262 | 531,840,968 | 167.1\% | 0.6370 | 55,723 |
| 2035 | 288,853,050 | 521,328,455 | 180.5\% | 0.6125 | 50,774 |
| 2036 | 260,338,059 | 505,345,953 | 194.1\% | 0.5889 | 45,980 |
| 2037 | 233,102,273 | 487,163,063 | 209.0\% | 0.5663 | 41,385 |
| 2038 | 207,347,938 | 464,782,852 | 224.2\% | 0.5445 | 37,002 |
| 2039 | 183,146,974 | 436,702,664 | 238.4\% | 0.5235 | 32,849 |
| 2040 | 160,593,372 | 404,462,128 | 251.9\% | 0.5034 | 28,956 |
| 2041 | 139,783,517 | 370,200,738 | 264.8\% | 0.4840 | 25,352 |
| 2042 | 120,795,777 | 336,563,592 | 278.6\% | 0.4654 | 22,045 |
| 2043 | 103,622,463 | 304,043,165 | 293.4\% | 0.4475 | 19,026 |
| 2044 | 88,181,398 | 272,690,570 | 309.2\% | 0.4303 | 16,293 |
| 2045 | 74,436,776 | 242,959,004 | 326.4\% | 0.4138 | 13,845 |
| 2046 | 62,328,922 | 214,625,370 | 344.3\% | 0.3978 | 11,678 |
| 2047 | 51,778,082 | 186,677,739 | 360.5\% | 0.3825 | 9,780 |
| 2048 | 42,675,981 | 159,736,551 | 374.3\% | 0.3678 | 8,135 |
| 2049 | 34,906,793 | 135,706,374 | 388.8\% | 0.3537 | 6,719 |
| 2050 | 28,333,168 | 114,849,005 | 405.4\% | 0.3401 | 5,510 |
| 2051 | 22,822,362 | 96,581,004 | 423.2\% | 0.3270 | 4,486 |
| 2052 | 18,244,022 | 80,771,091 | 442.7\% | 0.3144 | 3,628 |
| 2053 | 14,477,426 | 67,270,354 | 464.7\% | 0.3023 | 2,917 |
| 2054 | 11,411,304 | 55,589,965 | 487.1\% | 0.2907 | 2,332 |
| 2055 | 8,937,409 | 45,695,574 | 511.3\% | 0.2795 | 1,853 |
| 2056 | 6,957,546 | 37,418,434 | 537.8\% | 0.2688 | 1,465 |
| 2057 | 5,385,418 | 30,456,876 | 565.5\% | 0.2584 | 1,154 |
| 2058 | 4,145,635 | 24,582,922 | 593.0\% | 0.2485 | 905 |
| 2059 | 3,174,872 | 19,749,842 | 622.1\% | 0.2389 | 707 |
| 2060 | 2,418,461 | 15,754,109 | 651.4\% | 0.2297 | 547 |
| 2061 | 1,830,569 | 12,443,599 | 679.8\% | 0.2209 | 420 |
| 2062 | 1,375,298 | 9,778,825 | 711.0\% | 0.2124 | 321 |
| 2063 | 1,027,067 | 7,686,106 | 748.4\% | 0.2042 | 245 |
| 2064 | 763,674 | 5,994,443 | 784.9\% | 0.1964 | 186 |
| 2065 | 564,768 | 4,638,291 | 821.3\% | 0.1888 | 140 |
| 2066 | 415,062 | 3,567,189 | 859.4\% | 0.1816 | 103 |
| 2067 | 302,536 | 2,712,665 | 896.6\% | 0.1746 | 76 |
| 2068 | 219,336 | 2,039,884 | 930.0\% | 0.1679 | 56 |
| 2069 | 158,036 | 1,506,965 | 953.6\% | 0.1614 | 41 |
| 2070 | 112,950 | 1,102,855 | 976.4\% | 0.1552 | 30 |
| 2071 | 80,317 | 795,809 | 990.8\% | 0.1492 | 22 |
| 2072 | 56,780 | 563,662 | 992.7\% | 0.1435 | 16 |
| 2073 | 39,857 | 396,283 | 994.3\% | 0.1380 | 11 |
| 2074 | 27,617 | 276,876 | 1002.6\% | 0.1327 | 8 |
| 2075 | 19,029 | 193,174 | 1015.2\% | 0.1276 | 5 |
| 2076 | 13,013 | 133,512 | 1026.0\% | 0.1227 | 4 |
| 2077 | 8,781 | 91,149 | 1038.0\% | 0.1179 | 3 |
| 2078 | 5,896 | 61,348 | 1040.4\% | 0.1134 | 2 |
| 2079 | 3,927 | 41,280 | 1051.2\% | 0.1090 | 1 |
| 2080 | 2,578 | 27,223 | 1055.8\% | 0.1049 | 1 |
| 2081 | 1,682 | 17,579 | 1044.8\% | 0.1008 | 1 |
| 2082 | 1,090 | 11,207 | 1027.9\% | 0.0969 | 0 |
| Accumulated and Present Values as of 12/31/2022 |  |  |  |  |  |
| Past: | 7,924,324,371 | 3,337,620,500 | 42.1\% |  |  |
| Future: | 5,247,178,987 | 7,362,979,567 | 140.3\% |  |  |
| Lifetime: | 13,171,503,357 | 10,700,600,067 | 81.2\% |  |  |


[^0]:    ${ }^{1}$ The formal cost of long-term care services: How can society meet a growing need? was initially made available in 2016. The portion of the study relating to the cost of long-term care events was updated in 2021.

