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Policy Form 7030R, 7032R

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 "PCS II" 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	155%
Lifetime	High BIO	269%
Limited	Low BIO	28.8%
Limited	High BIO	131%

^{*}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 (BIO)*	Requested Rate Increase	Rate Increase To Be Implemented
Lifetime	Low BIO	155%	6 years of 15% and 10.2% in last year
Limited	Low BIO	269%	9 years of 15% and 4.8% in last year
Lifetime	High BIO	28.8%	1 year of 15% and 12% in second year
Limited	High BIO	131%	5 years of 15% and 14.8% 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 PCS II pursued the approval of a cumulative premium rate increase of 515% and 320% for policies with lifetime and limited benefit periods respectively. The cumulative rate increases for policies with Low BIO have been updated to 730% and 320% for lifetime and limited benefit periods respectively and the cumulative rate increases for policies with High BIO have been updated to 1099% and 656% 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

These comprehensive long-term care insurance policy forms:

- Are federally tax qualified, individually underwritten policies.
- Reimburse expenses incurred by the insured(s) subject to the amount of coverage purchased. Home health care expenses may be subject to the prevailing expense limit.
- Allow for premium payments to be waived during facility stays, after the elimination period has been satisfied. For form 7030, this benefit could apply to home care benefits as well if certain requirements have been met.
- May include a survivorship benefit which waives future premium payments upon the death of one spouse if both spouses are insured, have the survivorship benefit, and have met certain requirements.
- Optional nonforfeiture benefit and restoration of benefit riders may have been offered.
- Form 7030 can cover either one individual or two married people. The joint policy, covering two
 married people, operates like two individual policies except that the two insureds draw from one
 shared benefit period under the policy.
- These forms have benefit eligibility requirements which involve ADL (Activities of Daily Living) deficiencies or cognitive impairment.

Applicants selected the following at issue:

- Daily Payment Maximum (DPM);
- Benefit Period: 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; or
- 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.

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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 for policy forms 7030, et al. 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 \$300,000 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.

¹The 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.

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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 Higher Benefit Utilization Rate (BUR) in later durations
2015	Lower Lapse Lower Healthy Life Mortality
2016	Lower CTR BUR methodology enhancement
2017	Incidence differential for Lifetime and Non-Lifetime benefit periods
2018	Lower CTR BUR methodology enhancement: increase for Lifetime benefit periods
2019	New incidence assumption with improved fit by age and duration Lower Healthy Life Mortality
2020	Lower CTR Higher BUR
2021	Strengthened BUR Trend, reflecting higher cost of care inflation for LTC services Lower Healthy Life Mortality
2022	Smaller, more routine updates

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 lapse rates vary by durations 1 to 4, with an ultimate lapse rate of 3.5%.

<u>Current Filing</u>: 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 98.7% 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	45	55	62	45	55	62		
Duration								
1	10.45%	6.04%	5.54%	9.59%	5.67%	5.33%		
2	5.45%	2.91%	2.61%	5.00%	2.74%	2.52%		
3	3.73%	1.96%	1.76%	3.42%	1.85%	1.71%		
4	2.85%	1.52%	1.38%	2.62%	1.44%	1.34%		
5	2.32%	1.26%	1.16%	2.13%	1.20%	1.13%		
6	1.95%	1.09%	1.02%	1.80%	1.04%	1.00%		
7	1.68%	0.97%	0.92%	1.56%	0.93%	0.91%		
8	1.48%	0.88%	0.85%	1.37%	0.84%	0.84%		
9	1.31%	0.80%	0.79%	1.22%	0.77%	0.78%		
10	1.17%	0.74%	0.74%	1.09%	0.72%	0.74%		
11	1.05%	0.68%	0.70%	0.98%	0.66%	0.70%		
12	0.94%	0.63%	0.66%	0.88%	0.62%	0.66%		
13	0.84%	0.59%	0.62%	0.79%	0.57%	0.63%		
14	0.75%	0.54%	0.59%	0.71%	0.53%	0.60%		
15	0.67%	0.50%	0.56%	0.64%	0.49%	0.57%		
16	0.61%	0.47%	0.54%	0.58%	0.47%	0.55%		
17	0.55%	0.44%	0.52%	0.53%	0.44%	0.54%		
18	0.51%	0.43%	0.51%	0.49%	0.43%	0.53%		
19	0.47%	0.41%	0.51%	0.46%	0.42%	0.53%		
20	0.44%	0.41%	0.52%	0.43%	0.41%	0.54%		
21	0.42%	0.41%	0.54%	0.42%	0.41%	0.56%		
22	0.41%	0.41%	0.57%	0.41%	0.41%	0.59%		
23	0.40%	0.43%	0.62%	0.40%	0.43%	0.63%		
24	0.40%	0.45%	0.68%	0.40%	0.45%	0.69%		
25	0.41%	0.48%	0.74%	0.40%	0.48%	0.76%		

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B. Mortality:

Original Filing: 1983 Individual Annuitant Mortality Table.

<u>Current Filing:</u> 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 99.0% 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	M	F			
Duration					
1	0.37%	0.20%			
2	0.61%	0.33%			
3	0.76%	0.41%			
4	0.88%	0.48%			
5	1.01%	0.55%			
6	1.14%	0.63%			
7	1.28%	0.71%			
8	1.47%	0.82%			
9	1.62%	0.90%			
10	1.79%	1.00%			
11	1.97%	1.11%			
12	2.18%	1.24%			
13	2.41%	1.38%			
14	2.68%	1.54%			
15	2.75%	1.59%			
16	3.12%	1.73%			
17	3.45%	1.93%			
18	3.87%	2.18%			
19	4.30%	2.46%			
20	4.79%	2.77%			
21	5.25%	3.11%			
22	5.72%	3.50%			
23	6.18%	3.94%			
24	6.58%	4.36%			
25	6.96%	4.78%			
26	7.30%	5.37%			
27	7.79%	6.02%			
28	8.19%	6.65%			
29	8.39%	7.00%			
30	8.51%	7.28%			

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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: Used experience of the Nursing Home business sold and statistics from 1985 National Nursing Home Survey published by the National Center for Health Statistics to develop Nursing Home benefits. Similarly, home care and community care benefits used company experience and results from 1982-1984 National Long-Term Care Surveys for the first two years. For periods after two years, additional data from 1985 National Nursing Home Survey was incorporated.

<u>Current Filing</u>: 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, 2021Q4 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 98.5% 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, a lifetime benefit period, before any adjustment for non-forfeiture status:

	Sample Claim Incidence Rate Assumption								
Gender	M	M	M	M	F	F	F	F	
UW Discount	Std	Std	Pref	Pref	Std	Std	Pref	Pref	
Issue Age	55	65	55	65	55	65	55	65	
Duration									
1	0.10%	0.23%	0.06%	0.15%	0.14%	0.31%	0.08%	0.20%	
2	0.13%	0.32%	0.07%	0.21%	0.18%	0.44%	0.11%	0.28%	
3	0.15%	0.42%	0.09%	0.27%	0.22%	0.56%	0.12%	0.36%	
4	0.18%	0.52%	0.10%	0.33%	0.25%	0.69%	0.14%	0.45%	
5	0.21%	0.65%	0.12%	0.41%	0.29%	0.85%	0.16%	0.54%	
6	0.24%	0.79%	0.13%	0.50%	0.33%	1.02%	0.18%	0.66%	
7	0.27%	0.97%	0.15%	0.61%	0.37%	1.24%	0.20%	0.80%	
8	0.31%	1.18%	0.17%	0.74%	0.43%	1.50%	0.23%	0.96%	
9	0.36%	1.45%	0.19%	0.91%	0.49%	1.81%	0.26%	1.17%	
10	0.42%	1.77%	0.22%	1.11%	0.56%	2.19%	0.30%	1.42%	
11	0.49%	2.17%	0.26%	1.36%	0.65%	2.65%	0.34%	1.73%	
12	0.58%	2.66%	0.30%	1.68%	0.75%	3.21%	0.40%	2.10%	
13	0.69%	3.26%	0.35%	2.06%	0.88%	3.88%	0.46%	2.56%	
14	0.82%	3.99%	0.42%	2.54%	1.04%	4.69%	0.54%	3.12%	
15	0.98%	4.88%	0.50%	3.13%	1.23%	5.66%	0.65%	3.80%	
16	1.13%	5.58%	0.59%	3.68%	1.43%	6.47%	0.76%	4.45%	
17	1.30%	6.22%	0.70%	4.31%	1.66%	7.23%	0.89%	5.20%	
18	1.50%	6.92%	0.83%	5.04%	1.93%	8.06%	1.06%	6.06%	
19	1.75%	7.68%	0.98%	5.85%	2.24%	8.97%	1.26%	7.00%	
20	2.01%	8.49%	1.15%	6.74%	2.59%	9.95%	1.48%	8.04%	
21	2.30%	9.35%	1.35%	7.68%	2.97%	11.00%	1.73%	9.11%	
22	2.68%	10.32%	1.62%	8.77%	3.48%	12.07%	2.08%	10.34%	
23	3.11%	11.34%	1.94%	9.92%	4.04%	13.18%	2.46%	11.63%	
24	3.57%	12.39%	2.31%	11.16%	4.65%	14.35%	2.89%	13.00%	
25	4.06%	13.52%	2.70%	12.42%	5.31%	15.59%	3.36%	14.44%	
26	4.57%	14.71%	3.12%	13.71%	6.02%	16.93%	3.86%	15.90%	
27	5.22%	15.87%	3.76%	14.93%	6.85%	18.33%	4.63%	17.34%	
28	5.92%	17.06%	4.45%	16.14%	7.75%	19.87%	5.47%	18.89%	
29	6.66%	18.27%	5.19%	17.43%	8.72%	21.68%	6.39%	20.70%	
30	7.44%	19.28%	5.96%	18.38%	9.78%	23.56%	7.38%	22.55%	

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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 long-term 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 range 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	81	81	81	86	86	86	
Claim Situs	ALF	НС	NH	ALF	НС	NH	
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 with 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 100.5% 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
1	0.12%	16	1.25%	31	1.57%	145-156	2.44%
2	0.16%	17	1.26%	32	1.59%	157-168	2.62%
3	0.29%	18	1.27%	33	1.61%	169-180	2.82%
4	0.78%	19	1.28%	34	1.63%	181-192	3.00%
5	1.28%	20	1.29%	35	1.65%	193-204	3.16%
6	1.29%	21	1.30%	36	1.67%	205-216	3.32%
7	1.29%	22	1.31%	37-48	1.70%	217-228	3.49%
8	1.29%	23	1.33%	49-60	1.98%	229-240	3.67%
9	1.29%	24	1.34%	61-72	2.14%	241-252	3.84%
10	1.30%	25	1.47%	73-84	2.29%	253-264	3.99%
11	1.30%	26	1.49%	85-96	2.26%	265-276	4.12%
12	1.31%	27	1.50%	97-108	2.14%	277-288	4.23%
13	1.23%	28	1.52%	109-120	1.90%	289-300	4.30%
14	1.23%	29	1.54%	121-132	2.08%	301-312	4.31%
15	1.24%	30	1.56%	133-144	2.26%	313-324	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
1	0.09%	16	0.16%	31	0.09%	145-156	0.00%
2	0.20%	17	0.15%	32	0.09%	157-168	0.00%
3	0.25%	18	0.14%	33	0.09%	169-180	0.00%
4	0.37%	19	0.13%	34	0.09%	181-192	0.00%
5	0.48%	20	0.13%	35	0.09%	193-204	0.00%
6	0.43%	21	0.12%	36	0.09%	205-216	0.00%
7	0.38%	22	0.12%	37-48	0.09%	217-228	0.00%
8	0.35%	23	0.11%	49-60	0.10%	229-240	0.00%
9	0.31%	24	0.11%	61-72	0.11%	241-252	0.00%
10	0.28%	25	0.10%	73-84	0.13%	253-264	0.00%
11	0.26%	26	0.10%	85-96	0.11%	265-276	0.00%
12	0.24%	27	0.10%	97-108	0.06%	277-288	0.00%
13	0.20%	28	0.10%	109-120	0.00%	289-300	0.00%
14	0.18%	29	0.09%	121-132	0.00%	301-312	0.00%
15	0.17%	30	0.09%	133-144	0.00%	313-324	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 100.1% 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	НС	NH		
	60	6.0%	86.8%	7.2%		
	65	8.7%	84.4%	7.0%		
	70	12.0%	81.0%	7.0%		
Married	75	15.9%	76.7%	7.4%		
	80	20.2%	71.7%	8.1%		
	85	24.6%	66.3%	9.1%		
	90	28.7%	60.5%	10.8%		
	60	12.5%	79.7%	7.8%		
	65	16.2%	76.2%	7.6%		
	70	20.1%	72.3%	7.6%		
Single	75	24.1%	67.9%	8.0%		
	80	27.8%	63.4%	8.8%		
	85	30.9%	58.9%	10.2%		
	90	33.2%	54.5%	12.3%		

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 61.5% 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.

Elizabeth A. Foreman, FSA, MAA

Consulting Actuary

Genworth Life Insurance Company

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Supplement for Lifetime Low BIO Policies

	Data as of 12		
Section 1	In-force policies counts and distribution*	State	Nationwide
	First issued date	July 1998	February 1997
	Last issued date	October 2002	December 2003
	Issued Lives	358	11,424
	(1) In-force Lives	109	3,875
	(2) Total In-force Annualized Premium	476,692	\$11,949,023
	(3) Average Premium Before the Requested RI(2)/(1)	\$4,373	\$3,084
	Average Premium After the Requested RI (3) x (1 + Requested Rate Increase)	\$11,152	N/A
	Average Issue Age	58	59
	Average Attained Age	80	82
	Issue Age		
	<55		15.6%
	55-59		26.0%
	60-64		29.4%
	65-69		19.6%
	70-74		7.9%
	75-79		1.4%
	80+		0.0%
	Benefit Increase		
	None		100.0%
	Simple		0.0%
	Compound		0.0%
Section 7	Date of Approval	Approved Rate Increase**	
	10/20/2008	11%	
	4/4/2011	15%	
	11/14/2013	15%	
	2/12/2015	15%	
	4/12/2016	15%	
	9/26/2018	28.8%	
	1/5/2021	29.4%***	
	Cumulative RI	224%	

^{*}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 all policies that are Issue Age 75+ or 2 year Benefit Period.

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Supplement for Lifetime High BIO Policies

	Data as of 12		
Section 1	In-force policies counts and distribution*	State	Nationwide
	First issued date	September 1998	February 1997
	Last issued date	December 2003	February 2004
	Issued Lives	2,838	60,753
	(1) In-force Lives	1,399	29,044
	(2) Total In-force Annualized Premium	7,731,982	\$114,441,584
	(3) Average Premium Before the Requested RI (2)/(1)	\$5,527	\$3,940
	Average Premium After the Requested RI	¢20.204	NI/A
	(3) x (1 + Requested Rate Increase)	\$20,394	N/A
	Average Issue Age	58	59
	Average Attained Age	80	82
	Issue Age		
	<55		34.8%
	55-59		33.2%
	60-64		22.6%
	65-69		8.4%
	70-74		1.0%
	75-79		0.0%
	80+		0.0%
	Benefit Increase		
	None		0.0%
	Simple		33.1%
	Compound		66.9%
Section 7	Date of Approval	Approved Rate Increase**	
	10/20/2008	11%	
	4/4/2011	15%	
	11/14/2013	15%	
	2/12/2015	15%	
	4/12/2016	15%	
	9/26/2018	28.8%	
	1/5/2021	29.4%***	
	Cumulative RI	224%	

^{*}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 all policies that are Issue Age 75+ or 2 year Benefit Period.

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Supplement for Limited Low BIO Policies

Continu 4	Data as of 12/		Nationwide
Section 1	In-force policies counts and distribution* First issued date	State August 1998	Nationwide February 1997
	Last issued date	November 2004	November 200
	Issued Lives	1,868	76,068
	(1) In-force Lives	364	15,536
	(2) Total In-force Annualized Premium	\$1,030,741	\$26,999,020
	(3) Average Premium Before the Requested RI (2)/(1)	\$2,832	\$1,738
	Average Premium After the Requested RI (3) x (1 + Requested Rate Increase)	\$3,647	N/A
	Average Issue Age	58	59
	Average Attained Age	80	82
	Issue Age		
	<55		9.0%
	55-59		21.0%
	60-64		30.2%
	65-69		24.1%
	70-74		12.6%
	75-79		2.9%
	80+		0.2%
	Benefit Period in Years		0.00
	1		0.0%
	2		16.1%
	3		29.0%
	4		28.4%
	5		0.0%
	6		17.2%
	7		0.0% 8.5%
	8 10		0.0%
	12		0.8%
	16		0.0%
	20		0.0%
	Benefit Increase		
	None		95.5%
	Simple		0.0%
	Compound		4.5%
Section 7	Date of Approval	Approved Rate Increase**	
	10/20/2008	11%	
	4/4/2011	15%	
	11/14/2013	15%	
	2/12/2015	15%	
	4/12/2016	15%	
	9/26/2018	28.8%	
	1/5/2021	29.4%***	
	Cumulative RI	224%	

^{*}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 all policies that are Issue Age 75+ or 2 year Benefit Period.

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Supplement for Limited High BIO Policies

Coot! 4	Data as of 12/3		Na4i a saccelata
Section 1	In-force policies counts and distribution* First issued date	State Index 1009	Nationwide
	Last issued date	July 1998 March 2005	February 199 March 200
	Issued Lives	4,363	143,809
	(1) In-force Lives	1,811	57,592
	(2) Total In-force Annualized Premium	\$7,113,635	\$132,254,37
	(3) Average Premium Before the Requested RI (2)/(1)	\$3,928	\$2,290
	Average Premium After the Requested RI (3) x (1 + Requested Rate Increase)	\$9,074	N/A
	Average Issue Age	58	59
	Average Attained Age	80	82
	Issue Age		
	<55		18.5%
	55-59		32.2%
	60-64		30.9%
	65-69		14.8%
	70-74		3.4%
	75-79		0.3%
	80+		0.0%
	Benefit Period in Years 1		0.1%
	2		9.3%
	3		20.49
	4		36.19
	5		0.0%
	6		19.8%
	7		0.0%
	8		13.0%
	10		0.0%
	12		1.3%
	16		0.0%
	20		0.0%
	Benefit Increase		
	None		0.0%
	Simple		38.1%
	Compound		61.9%
Section 7	Date of Approval 10/20/2008	Approved Rate Increase** 11%	
	4/4/2011	15%	
	4/4/2011 11/14/2013	15%	
	2/12/2015	15%	
	4/12/2016	15%	
	9/26/2018	28.8%	
	1/5/2021	20.0% 29.4%***	
	1/ U/ E V E I	29.4%	

^{*}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 all policies that are Issue Age 75+ or 2 year Benefit Period.

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Exhibit Ia: PCS II Policy Forms - Nationwide Experience Lifetime Low BIO - With Maryland Approved Rate Increase*

				4%	
Calendar Year	Earned Premium	Incurred Claims	Loss Ratio	Discount Factor	Lives
1997	49,727	-	0.0%	2.7186	64
1998	1,096,573	8,296	0.8%	2.6141	1,744
1999	6,448,944	1,516,002	23.5%	2.5135	5,002
2000	13,337,526	3,084,042	23.1%	2.4169	8,274
2001	19,260,302	6,997,613	36.3%	2.3239	9,964
2002	20,419,964	9,562,845	46.8%	2.2345	9,981
2003	20,176,555	12,407,788	61.5%	2.1486	9,801
2004	19,626,268	14,932,261	76.1%	2.0659	9,557
2005	19,084,561	12,952,558	67.9%	1.9865	9,334
2006	18,483,441	14,348,564	77.6%	1.9101	9,104
2007	17,868,871	16,567,166	92.7%	1.8366	8,882
2008	17,474,251	19,641,873	112.4%	1.7660	8,595
2009	17,670,255	19,394,604	109.8%	1.6980	8,257
2010	17,126,768	23,557,164	137.5%	1.6327	7,946
2011	16,538,506	22,162,398	134.0%	1.5699	7,615
2012	16,638,708	26,155,661	157.2%	1.5096	7,289
2013	16,065,623	22,317,233	138.9%	1.4515	6,930
2014	15,309,092	24,961,078	163.0%	1.3957	6,569
2015	15,069,010	31,206,402	207.1%	1.3420	6,228
2016	15,443,154	32,596,404	211.1%	1.2904	5,864
2017	15,703,437	28,196,678	179.6%	1.2407	5,521
2018	14,029,511	29,620,197	211.1%	1.1930	5,200
2019	11,997,081	27,247,268	227.1%	1.1471	4,835
2020	11,106,604	23,371,944	210.4%	1.1030	4,475
2021	10,344,881	25,480,627	246.3%	1.0606	4,162
2022	9,843,881	22,505,353	228.6%	1.0198	3,877
2023	10,017,084	25,607,494	255.6%	0.9806	3,558
2024	8,789,242	24,183,763	275.2%	0.9429	3,265
2025	7,708,311	22,934,614	297.5%	0.9066	2,983
2026	6,749,257	21,690,278	321.4%	0.8717	2,712
2027	5,895,850	20,461,017	347.0%	0.8382	2,452
2028	5,134,995				
	, ,	19,202,962	374.0%	0.8060	2,206
2029	4,459,527	17,876,371	400.9%	0.7750	1,974
2030	3,860,271	16,511,479	427.7%	0.7452	1,757
2031	3,328,072	15,140,203	454.9%	0.7165	1,556
2032	2,857,531	13,778,679	482.2%	0.6889	1,370
2033	2,445,976	12,539,455	512.7%	0.6624	1,200
2034	2,083,299	11,399,409	547.2%	0.6370	1,045
2035	1,765,762	10,227,951	579.2%	0.6125	905
2036	1,488,751	9,053,603	608.1%	0.5889	778
2037	1,246,915	7,889,577	632.7%	0.5663	664
2038	1,037,047	6,779,807	653.8%	0.5445	563
2039	855,875	5,766,899	673.8%	0.5235	474
2040	700,614	4,830,187	689.4%	0.5034	395
2041	568,879	3,992,069	701.7%	0.4840	328
2042	457,872	3,259,342	711.8%	0.4654	270
2043	365,380	2,622,889	717.9%	0.4475	220
2044	289,062	2,081,431	720.1%	0.4303	179
2045	226,598	1,627,159	718.1%	0.4138	144
2046	176,157	1,260,611	715.6%	0.3978	115
2047	135,941	973,553	716.2%	0.3825	92
2048	104,105	752,221	722.6%	0.3678	73
2049	79,116	580,610	733.9%	0.3537	57
2050	59,737	444,558	744.2%	0.3401	45
2051	44,798	335,941	744.2 %	0.3270	35
2052			749.9%	0.3144	27
	33,428	249,532			
2053	24,795	182,790	737.2%	0.3023	21
2054	18,276	133,124	728.4%	0.2907	16
2055	13,386	95,911	716.5%	0.2795	12
2056	9,741	68,962	707.9%	0.2688	10
2057	7,026	49,439	703.6%	0.2584	/
2058	5,027	35,531	706.8%	0.2485	5
2059	3,570	25,400	711.6%	0.2389	4
2060	2,508	18,203	725.7%	0.2297	3
2061	1,758	13,047	742.0%	0.2209	2
2062	1,223	9,244	755.6%	0.2124	2
2063	845	6,492	768.2%	0.2042	1
2064	579	4,437	766.9%	0.1964	1
2065	394	3,087	784.3%	0.1888	1
2066	267	2,156	806.2%	0.1816	0
2067	182	1,463	804.4%	0.1746	0
2068	123	968	784.9%	0.1679	0
2069	82	633	769.1%	0.1614	0
2070	53	410	770.2%	0.1552	0
2071	33	268	801.7%	0.1492	0
2072	21	176	854.8%	0.1435	0
2073	13	118	914.7%	0.1380	0
2074	8	74	970.6%	0.1327	0
2074 2075		74 49	1089.2%		
	4			0.1276	0
2076	3	32	1228.3%	0.1227	0
2077	2	20	1227.2%	0.1179	0
2078	1	7	674.0%	0.1134	0
2079	1	3	507.4%	0.1090	0
2080	0	2	467.6%	0.1049	0
2081	0	1	419.0%	0.1008	0
2082	0	0	354.5%	0.0969	0

Accumulated and Present Values as of 12/31/2022

 Past:
 639,755,195
 698,853,875
 109.2%

 Future:
 58,853,673
 215,579,383
 366.3%

 Lifetime:
 698,608,868
 914,433,258
 130.9%

*Includes all rate increases approved in your state applied to all policies nationwide, but prior to the rate increase requested in this filing

Actuarial Memorandum September 2023

Exhibit Ib: PCS II Policy Forms - Nationwide Experience Lifetime High BIO - With Maryland Approved Rate Increase*

1	0/_

Calendar Year	Earned Premium	Incurred Claims	Loss Ratio	4% Discount Factor	Lives
1997	198,168	-	0.0%	2.7186	248
1998	3,311,636	19,246	0.6%	2.6141	5,668
1999	20,922,907	2,161,161	10.3%	2.5135	19,479
2000	51,577,077	9,678,574	18.8%	2.4169	39,947
2001	87,214,329	13,737,510	15.8%	2.3239	52,120
2002	94,867,800	20,738,471	21.9%	2.2345	52,494
2003	93,394,706	31,757,105	34.0%	2.1486	50,846
2004	90,547,414	28,466,030	31.4%	2.0659	49,664
2005	88,512,363	37,677,827	42.6%	1.9865	48,635
2006	86,572,307	45,195,536	52.2%	1.9101	47,769
2007	84,774,544	54,199,206	63.9%	1.8366	46,921
2008	83,816,658	72,901,244	87.0%	1.7660	45,680
2009	85,394,374	71,890,984	84.2%	1.6980	44,360
2010	84,173,636	96,044,137	114.1%	1.6327	43,261
2011	82,719,799	121,223,342	146.5%	1.5699	42,124
2012	85,362,430	131,510,322	154.1%	1.5096	41,007
2013	84,973,291	164,077,696	193.1%	1.4515	39,789
2014	84,785,719	151,168,293	178.3%	1.3957	38,643
2015	87,468,726	188,435,296	215.4%	1.3420	37,534
2016	93,583,195	191,661,488	204.8%	1.2904	36,435
2017	100,619,175	232,438,958	231.0%	1.2407	35,248
2018	94,559,217	248,467,966	262.8%	1.1930	34,068
2019	87,033,292	233,162,148	267.9%	1.1471	32,831
2020 2021	89,707,711	231,618,927	258.2% 278.8%	1.1030 1.0606	31,529
2021	90,494,347 94,020,586	252,320,093 323,860,886	344.5%	1.0198	30,297 29,088
2023	101,221,553	245,673,606	242.7%	0.9806	27,499
2024	94,081,418	247,919,502	263.5%	0.9429	26,009
2025	87,288,356	251,374,161	288.0%	0.9066	24,517
2026	80,730,260	254,084,246	314.7%	0.8717	23,011
2027	74,386,145	256,276,792	344.5%	0.8382	21,494
2028	68,246,032	256,531,524	375.9%	0.8060	19,979
2029	62,324,294	254,301,288	408.0%	0.7750	18,476
2030	56,641,075	249,772,654	441.0%	0.7452	16,996
2031	51,218,426	243,206,722	474.8%	0.7165	15,551
2032	46,075,288	235,535,212	511.2%	0.6889	14,150
2033	41,233,077	228,031,329	553.0%	0.6624	12,805
2034	36,697,657	220,206,371	600.1%	0.6370	11,518
2035	32,463,798	209,925,375	646.6%	0.6125	10,295
2036	28,529,190	197,108,544	690.9%	0.5889	9,142
2037	24,902,813	182,375,651	732.3%	0.5663	8,061
2038	21,583,004	166,721,825	772.5%	0.5445	7,059
2039	18,570,496	151,174,666	814.1%	0.5235	6,137
2040	15,858,969	135,440,660	854.0%	0.5034	5,297
2041	13,432,664	119,819,986	892.0%	0.4840	4,536
2042	11,284,139	104,597,273	926.9%	0.4654	3,855
2043 2044	9,403,138 7,772,831	89,922,210 76,475,769	956.3% 983.9%	0.4475 0.4303	3,253 2,724
2044	6,373,783	64,393,801	1010.3%	0.4303	2,724
2045	5,186,213	53,859,054	1038.5%	0.4138	1,873
2047	4,187,830	44,815,740	1070.1%	0.3825	1,539
2048	3,356,853	37,180,236	1107.6%	0.3678	1,257
2049	2,673,794	30,917,670	1156.3%	0.3537	1,021
2050	2,117,280	25,687,695	1213.2%	0.3401	827
2051	1,667,528	21,257,373	1274.8%	0.3270	667
2052	1,307,191	17,500,279	1338.8%	0.3144	535
2053	1,019,962	14,316,284	1403.6%	0.3023	428
2054	792,136	11,630,765	1468.3%	0.2907	341
2055	612,410	9,404,344	1535.6%	0.2795	271
2056	471,414	7,595,507	1611.2%	0.2688	215
2057	361,281	6,130,271	1696.8%	0.2584	170
2058	275,531	4,940,432	1793.1%	0.2485	133
2059	208,963	3,977,008	1903.2%	0.2389	104
2060	157,634	3,168,555	2010.1%	0.2297	81
2061	118,422	2,474,987	2090.0%	0.2209	63
2062	88,464	1,852,850	2094.5%	0.2124	48
2063	65,682	1,354,722	2062.5%	0.2042	37
2064	48,420	988,392	2041.3%	0.1964	27
2065	35,412	716,780	2024.1%	0.1888	21
2066	25,744 19,615	517,559 271,530	2010.4%	0.1816	15
2067 2068	18,615 13,383	371,520 266,504	1995.8% 1991.4%	0.1746 0.1679	12 9
2069	9,575	189,692	1981.0%	0.1614	9 7
2070	6,800	134,203	1973.7%	0.1552	5
2071	4,791	93,561	1953.0%	0.1492	4
2072	3,355	64,064	1909.6%	0.1435	3
2073	2,337	43,792	1873.8%	0.1380	2
2074	1,621	29,693	1831.3%	0.1327	1
2075	1,119	20,011	1788.5%	0.1276	1
2076	764	13,266	1736.5%	0.1227	1
2077	517	8,690	1679.8%	0.1179	1
2078	347	5,643	1626.3%	0.1134	0
2079	230	3,633	1579.7%	0.1090	0
2080	148	2,353	1590.7%	0.1049	0
2081	94	1,511	1610.4%	0.1008	0
2082	57	976	1703.8%	0.0969	0

Accumulated and Present Values as of 12/31/2022

 Past:
 3,283,011,698
 3,946,358,702
 120.2%

 Future:
 775,348,146
 3,252,248,624
 419.5%

 Lifetime:
 4,058,359,844
 7,198,607,326
 177.4%

*Includes all rate increases approved in your state applied to all policies nationwide, but prior to the rate increase requested in this filing

Actuarial Memorandum September 2023

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

	_			4%		
Calendar Year	Earned Premium	Incurred Claims	Loss Ratio	Discount Factor	Lives	
1997 1998	233,867	200 206	0.0% 5.8%	2.7186 2.6141	300	
1998	5,129,722 32,088,016	299,306 2,974,534	9.3%	2.5135	8,65 ⁴ 27,02	
2000	69,692,857	11,437,379	16.4%	2.4169	46,34	
2001	101,928,416	23,117,245	22.7%	2.3239	55,60	
2002	107,834,330	30,245,715	28.0%	2.2345	56,44	
2003	106,857,020	36,574,921	34.2%	2.1486	54,95	
2004	102,467,775	46,899,877	45.8%	2.0659	52,93	
2005	97,792,399	50,277,083	51.4%	1.9865	50,96	
2006	92,912,988	59,661,507	64.2%	1.9101	48,93	
2007	88,168,083	63,890,248	72.5%	1.8366	46,92	
2008	84,047,811	71,620,501	85.2%	1.7660	44,38	
2009	81,989,266	81,091,400	98.9%	1.6980	41,88	
2010	77,233,096	84,585,851	109.5%	1.6327	39,49	
2011	72,294,147	88,726,493	122.7%	1.5699	37,08	
2012	70,403,519	82,043,603	116.5%	1.5096	34,77	
2013	65,534,780	83,895,588	128.0%	1.4515	32,32	
2014	59,806,446	83,089,278	138.9%	1.3957	30,06	
2015	56,548,472	80,061,641	141.6%	1.3420	27,82	
2016	55,408,703	82,679,815	149.2%	1.2904	25,77	
2017	54,218,679	75,217,884	138.7%	1.2407	23,84	
2018	46,651,336	74,932,807	160.6%	1.1930	21,99	
2019	38,054,090	65,163,381	171.2%	1.1471	20,14	
2020 2021	33,451,129 29,797,706	63,065,567 65,186,895	188.5% 218.8%	1.1030 1.0606	18,42 16,89	
2021	29,797,706 27,465,343	65,186,895 73,396,024	218.8% 267.2%	1.0606 1.0198	16,89 15,54	
2022	27,531,991	70,106,961	254.6%	0.9806	13,99	
2023	24,239,659	65,014,104	268.2%	0.9429	12,60	
2025	21,363,010	60,863,259	284.9%	0.9066	11,29	
2026	18,727,383	56,894,890	303.8%	0.8717	10,06	
2027	16,425,062	53,077,307	323.1%	0.8382	8,91	
2028	14,325,957	49,319,838	344.3%	0.8060	7,87	
2029	12,472,012	45,557,694	365.3%	0.7750	6,91	
2030	10,809,917	41,764,787	386.4%	0.7452	6,04	
2031	9,326,843	38,001,598	407.4%	0.7165	5,25	
2032	8,013,513	34,348,619	428.6%	0.6889	4,55	
2033	6,854,015	31,074,058	453.4%	0.6624	3,92	
2034	5,828,484	28,043,194	481.1%	0.6370	3,35	
2035	4,926,628	25,021,951	507.9%	0.6125	2,85	
2036	4,139,984	22,083,222	533.4%	0.5889	2,41	
2037	3,455,942	19,240,902	556.7%	0.5663	2,02	
2038	2,862,829	16,556,111	578.3%	0.5445	1,69	
2039	2,353,423	14,071,231	597.9%	0.5235	1,40	
2040	1,919,156	11,813,917	615.6%	0.5034	1,15	
2041	1,552,553	9,809,110	631.8%	0.4840	93	
2042	1,245,146	8,032,983	645.1%	0.4654	75	
2043	990,088	6,498,838	656.4%	0.4475	61	
2044	780,712	5,194,002	665.3%	0.4303	48	
2045	611,066	4,102,939	671.4%	0.4138	38	
2046	474,827	3,214,188	676.9%	0.3978	30	
2047 2048	366,490 281,280	2,502,200	682.7% 689.9%	0.3825 0.3678	24 18	
2046	214,877	1,940,594 1,507,173	701.4%	0.3537	14	
2049	163,628	1,176,378	718.9%	0.3401	11	
2051	124,368	924,317	743.2%	0.3270	9	
2052	94,481	728,968	771.5%	0.3144	7	
2052	71,768	575,756	802.2%	0.3023	5	
2054	54,462	455,175	835.8%	0.2907	4	
2055	41,298	361,428	875.2%	0.2795	3	
2056	31,314	290,369	927.3%	0.2688	2	
2057	23,709	235,514	993.3%	0.2584	1	
2058	17,903	192,508	1075.3%	0.2485	1	
2059	13,441	157,544	1172.1%	0.2389	1	
2060	10,027	129,151	1288.0%	0.2297		
2061	7,453	106,560	1429.8%	0.2209		
2062	5,495	85,294	1552.2%	0.2124		
2063	4,027	64,785	1608.6%	0.2042		
2064	2,895	47,834	1652.4%	0.1964		
2065	2,040	35,087	1719.8%	0.1888		
2066	1,431	25,353	1772.3%	0.1816		
2067	999	18,164	1818.8%	0.1746		
2068	691	13,026	1885.6%	0.1679		
2069	474	9,263	1954.8%	0.1614		
2070	321	6,539	2037.9%	0.1552		
2071	215	4,554	2120.4%	0.1492		
2072	142	3,122	2201.7%	0.1435		
2073	93	2,127	2291.4%	0.1380		
2074	60	1,436	2373.2%	0.1327		
2075	38	960	2539.6%	0.1276		
2076	24	637	2663.9%	0.1227		
2077	15	418	2822.9%	0.1179		
2078	9	273	2995.2%	0.1134		
2079 2080	5 3	178	3545.2% 3901.9%	0.1090		
2080	2	112	3an1 a%	0.1049		

Accumulated and Present Values as of 12/31/2022

2080

2081

2082

 Past:
 2,938,506,288
 2,252,179,914
 76.6%

 Future:
 163,281,777
 556,870,874
 341.0%

 Lifetime:
 3,101,788,066
 2,809,050,788
 90.6%

3

2

112

65

34

3901.9%

3911.4%

3679.0%

0.1049

0.1008

0.0969

0

0

0

^{*}Includes all rate increases approved in your state applied to all policies nationwide, but prior to the rate increase requested in this filing

Actuarial Memorandum September 2023

Exhibit Id: PCS II Policy Forms - Nationwide Experience Limited High BIO - With Maryland Approved Rate Increase*

	4%	
_	4 1	

				4%	
Calendar Year	Earned Premium	Incurred Claims	Loss Ratio	Discount Factor	Lives
1997	408,251	964	0.2%	2.7186	614
1998	7,344,835	2,785	0.0%	2.6141	14,766
1999	45,019,805	2,905,548	6.5%	2.5135	48,134
2000	105,041,295	6,359,103	6.1%	2.4169	92,755
2001	169,349,352	15,248,037	9.0%	2.3239	119,179
2002	185,501,094	18,064,005	9.7%	2.2345	122,262
2003	186,004,877	26,239,494	14.1%	2.1486	119,604
2004	181,057,119	41,451,343	22.9%	2.0659	116,592
2005	176,257,026	56,549,345	32.1%	1.9865	113,968
2006	171,750,767	62,322,879	36.3%	1.9101	111,456
2007	167,590,046	71,436,255	42.6%	1.8366	109,117
2008	164,926,363	95,584,800	58.0%	1.7660	105,611
2009	166,366,718	116,300,371	69.9%	1.6980	101,964
2010	162,092,197	133,943,449	82.6%	1.6327	98,858
2011	157,611,005	153,259,155	97.2%	1.5699	95,472
2012	159,601,215	196,454,819	123.1%	1.5096	91,981
2013	155,446,811	209,783,073	135.0%	1.4515	88,449
2013					85,006
	151,766,180	228,038,244	150.3%	1.3957	•
2015	153,074,878	248,879,783	162.6%	1.3420	81,615
2016	160,338,826	286,946,726	179.0%	1.2904	78,329
2017	168,039,407	303,846,586	180.8%	1.2407	74,855
2018	153,558,589	327,136,304	213.0%	1.1930	71,312
2019	136,677,423	330,594,441	241.9%	1.1471	67,764
2020	135,123,942	293,799,595	217.4%	1.1030	64,140
2021	131,889,075	342,158,136	259.4%	1.0606	60,744
2022	132,538,967	396,313,838	299.0%	1.0198	57,605
2023	135,085,097	347,584,292	257.3%	0.9806	53,587
2024	123,595,396	347,644,318	281.3%	0.9429	49,841
2025	112,891,510	349,024,298	309.2%	0.9066	46,170
	102,793,864		338.9%		
2026		348,389,262		0.8717	42,571
2027	93,280,645	345,959,135	370.9%	0.8382	39,048
2028	84,143,349	340,860,420	405.1%	0.8060	35,627
2029	75,598,597	332,669,545	440.0%	0.7750	32,339
2030	67,592,499	321,384,423	475.5%	0.7452	29,202
2031	60,102,154	307,361,921	511.4%	0.7165	26,218
2032	53,171,848	291,275,868	547.8%	0.6889	23,417
2033	46,779,611	275,530,624	589.0%	0.6624	20,794
2034	40,908,793	259,643,269	634.7%	0.6370	18,348
2035	35,529,541	241,687,235	680.2%	0.6125	16,079
2036	30,628,481	222,054,810	725.0%	0.5889	13,989
2037	26,202,108	200,993,447	767.1%	0.5663	12,078
2038	22,238,745	179,452,290	806.9%	0.5445	10,347
2039	18,716,590	158,205,244	845.3%	0.5235	8,797
2040	15,620,647	137,723,079	881.7%	0.5034	7,419
2041	12,922,579	118,492,820	916.9%	0.4840	6,207
2042	10,593,828	100,600,165	949.6%	0.4654	5,151
2043	8,607,613	84,303,241	979.4%	0.4475	4,241
2044	6,930,960	69,911,869	1008.7%	0.4303	3,466
2045	5,532,244	57,401,669	1037.6%	0.4138	2,814
2046	4,379,986	46,853,988	1069.7%	0.3978	2,269
2047	3,440,429	38,004,821	1104.7%	0.3825	1,818
2048	2,682,280	30,677,480	1143.7%	0.3678	1,449
2049	2,077,194	24,708,130	1189.5%	0.3537	1,149
2050	1,598,365	19,865,195	1242.8%	0.3401	908
2051	1,223,760	15,967,607	1304.8%	0.3270	715
2052	932,304	12,765,037	1369.2%	0.3144	560
2053	706,927	10,125,910	1432.4%	0.3023	437
2054	533,331	7,968,899	1494.2%	0.2907	339
2055	400,335	6,222,286	1554.3%	0.2795	263
2056	299,084	4,854,730	1623.2%	0.2688	203
2057	•		1623.2%	0.2584	203 157
	222,265	3,770,489			
2058	164,122	2,920,661	1779.6%	0.2485	119
2059	120,125	2,251,818	1874.6%	0.2389	89
2060	87,259	1,739,344	1993.3%	0.2297	67
2061	63,156	1,328,508	2103.5%	0.2209	51
2062	45,410	1,002,027	2206.6%	0.2124	38
2063	32,405	733,423	2263.3%	0.2042	28
2064	22,870	530,437	2319.3%	0.1964	20
2065	15,932	378,468	2375.5%	0.1888	15
2066	11,037	269,333	2440.4%	0.1816	11
2067	7,588	191,496	2523.6%	0.1746	8
2068	5,184	135,213	2608.3%	0.1679	6
2069	3,514	95,119	2707.2%	0.1614	4
2070	2,352	65,999	2806.5%	0.1552	3
2070	1,554	45,027	2898.4%	0.1492	2
2071		30,324	3029.5%	0.1492	4
	1,001	•			
2073	636	20,219	3178.5%	0.1380	1
2074	395	13,378	3386.5%	0.1327	1
2075	243	8,729	3586.2%	0.1276	0
2076	152	5,571	3657.5%	0.1227	0
2077	91	3,483	3833.2%	0.1179	0
2078	54	2,122	3913.0%	0.1134	0
2079	32	1,261	3975.6%	0.1090	0
2080	18	732	4035.0%	0.1049	0
2081	10	418	4278.1%	0.1008	0
2082	5	238	5088.5%	0.0969	0
-	J			-	•

Accumulated and Present Values as of 12/31/2022

Past:6,104,191,3885,289,885,50486.7%Future:944,136,8774,038,997,775427.8%Lifetime:7,048,328,2659,328,883,279132.4%

*Includes all rate increases approved in your state applied to all policies nationwide, but prior to the rate increase requested in this filling

Actuarial Memorandum September 2023

Exhibit IIa: PCS II Policy Forms - Nationwide Experience Lifetime Low BIO - With 155% Requested Rate Increase*

				4%	
Calendar Year	Earned Premium	Incurred Claims	Loss Ratio	Discount Factor	Lives
1997	49,727	-	0.0%	2.7186	64
1998	1,096,573	8,296	0.8%	2.6141	1,744
1999 2000	6,448,944 13,337,526	1,516,002 3,084,042	23.5% 23.1%	2.5135 2.4169	5,002 8,274
2001	19,260,302	6,997,613	36.3%	2.3239	9,964
2002	20,419,964	9,562,845	46.8%	2.2345	9,981
2003	20,176,555	12,407,788	61.5%	2.1486	9,801
2004	19,626,268	14,932,261	76.1%	2.0659	9,557
2005	19,084,561	12,952,558	67.9%	1.9865	9,334
2006 2007	18,483,441 17,868,871	14,348,564 16,567,166	77.6% 92.7%	1.9101 1.8366	9,104 8,882
2007	17,474,251	19,641,873	112.4%	1.7660	8,595
2009	17,670,255	19,394,604	109.8%	1.6980	8,257
2010	17,126,768	23,557,164	137.5%	1.6327	7,946
2011	16,538,506	22,162,398	134.0%	1.5699	7,615
2012	16,638,708	26,155,661	157.2%	1.5096	7,289
2013	16,065,623	22,317,233	138.9%	1.4515	6,930
2014 2015	15,309,092 15,069,010	24,961,078 31,206,402	163.0% 207.1%	1.3957 1.3420	6,569 6,228
2016	15,443,154	32,596,404	211.1%	1.2904	5,864
2017	15,703,437	28,196,678	179.6%	1.2407	5,521
2018	14,029,511	29,620,197	211.1%	1.1930	5,200
2019	11,997,081	27,247,268	227.1%	1.1471	4,835
2020	11,106,604	23,371,944	210.4%	1.1030	4,475
2021	10,344,881	25,480,627	246.3%	1.0606	4,162
2022	9,843,881 10,017,084	22,505,353 25,607,494	228.6% 255.6%	1.0198 0.9806	3,877 3,558
2024	11,730,907	25,201,083	214.8%	0.9429	3,265
2025	15,998,779	25,571,741	159.8%	0.9066	2,983
2026	14,459,892	24,019,987	166.1%	0.8717	2,712
2027	12,992,909	22,536,374	173.5%	0.8382	2,452
2028	11,600,605	21,053,473	181.5%	0.8060	2,206
2029	10,291,784	19,517,304	189.6%	0.7750	1,974
2030 2031	9,072,281 7,944,056	17,961,035 16,415,722	198.0% 206.6%	0.7452 0.7165	1,757 1,556
2032	6,911,045	14,894,390	215.5%	0.6889	1,370
2033	5,976,639	13,516,458	226.2%	0.6624	1,200
2034	5,133,793	12,253,001	238.7%	0.6370	1,045
2035	4,380,521	10,963,341	250.3%	0.6125	905
2036	3,712,056	9,678,440	260.7%	0.5889	778
2037	3,121,685	8,412,165	269.5%	0.5663	664
2038 2039	2,604,471	7,211,141	276.9%	0.5445	563
2040	2,154,901 1,767,853	6,119,776 5,114,767	284.0% 289.3%	0.5235 0.5034	474 395
2041	1,437,916	4,218,791	293.4%	0.4840	328
2042	1,159,029	3,437,925	296.6%	0.4654	270
2043	925,959	2,761,656	298.2%	0.4475	220
2044	733,258	2,187,938	298.4%	0.4303	179
2045	575,434	1,707,845	296.8%	0.4138	144
2046	447,799	1,321,288	295.1%	0.3978	115
2047 2048	345,760 264,911	1,019,120 786,454	294.7% 296.9%	0.3825 0.3678	92 73
2049	201,398	606,336	301.1%	0.3537	73 57
2050	152,133	463,720	304.8%	0.3401	45
2051	114,188	350,030	306.5%	0.3270	35
2052	85,233	259,741	304.7%	0.3144	27
2053	63,228	190,105	300.7%	0.3023	21
2054	46,604	138,322	296.8%	0.2907	16
2055	34,135	99,545	291.6%	0.2795	12
2056 2057	24,841 17,918	71,498 51,205	287.8% 285.8%	0.2688 0.2584	10 7
2058	12,818	36,766	286.8%	0.2485	5
2059	9,102	26,256	288.5%	0.2389	4
2060	6,396	18,798	293.9%	0.2297	3
2061	4,484	13,462	300.2%	0.2209	2
2062	3,120	9,530	305.4%	0.2124	2
2063	2,155	6,687	310.3%	0.2042	1
2064	1,476	4,568	309.6%	0.1964	1
2065 2066	1,004 682	3,174 2,214	316.2% 324.7%	0.1888 0.1816	0
2067	464	1,501	323.6%	0.1746	0
2068	314	992	315.5%	0.1679	0
2069	210	647	308.7%	0.1614	0
2070	136	419	308.9%	0.1552	0
2071	85	274	320.9%	0.1492	0
2072	53	179	341.5%	0.1435	0
2073	33	120 75	364.7%	0.1380	0
2074 2075	19 11	75 50	386.9% 434.0%	0.1327 0.1276	0 0
2076	7	33	489.1%	0.1276	0
2077	4	20	488.6%	0.1179	0
2078	3	7	271.3%	0.1134	0
2079	2	3	205.5%	0.1090	0
2080	1	2	189.4%	0.1049	0
2081	1	1	169.6%	0.1008	0
2082	0	0	143.5%	0.0969	0

Accumulated and Present Values as of 12/31/2022

Past:639,755,195698,853,875109.2%Future:113,586,506231,512,338203.8%Lifetime:753,341,701930,366,213123.5%

*Includes all rate increases approved in your state applied to all policies nationwide, and the rate increase requested in this filing

Actuarial Memorandum September 2023

Exhibit IIb: PCS II Policy Forms - Nationwide Experience Lifetime High BIO - With 269% Requested Rate Increase*

Colondon Voor	Carred Dremium	Incurred Claims	Logo Detic	4%	Lives
Calendar Year	Earned Premium	Incurred Claims	Loss Ratio	Discount Factor	Lives
1997 1998	198,168	10 246	0.0% 0.6%	2.7186	248 5 669
	3,311,636	19,246		2.6141	5,668
1999	20,922,907	2,161,161	10.3%	2.5135	19,479
2000	51,577,077	9,678,574	18.8%	2.4169	39,947
2001	87,214,329	13,737,510	15.8%	2.3239	52,120
2002	94,867,800	20,738,471	21.9%	2.2345	52,494
2003	93,394,706	31,757,105	34.0%	2.1486	50,846
2004	90,547,414	28,466,030	31.4%	2.0659	49,664
2005	88,512,363	37,677,827	42.6%	1.9865	48,635
2006	86,572,307	45,195,536	52.2%	1.9101	47,769
2007	84,774,544	54,199,206	63.9%	1.8366	46,921
2008	83,816,658	72,901,244	87.0%	1.7660	45,680
2009	85,394,374	71,890,984	84.2%	1.6980	44,360
2010	84,173,636	96,044,137	114.1%	1.6327	43,261
2011	82,719,799	121,223,342	146.5%	1.5699	42,124
2012	85,362,430	131,510,322	154.1%	1.5096	41,007
2013	84,973,291	164,077,696	193.1%	1.4515	39,789
2014	84,785,719	151,168,293	178.3%	1.3957	38,643
2015	87,468,726	188,435,296	215.4%	1.3420	37,534
2016	93,583,195	191,661,488	204.8%	1.2904	36,435
2017	100,619,175	232,438,958	231.0%	1.2407	35,248
2018	94,559,217	248,467,966	262.8%	1.1930	34,068
2019	87,033,292	233,162,148	267.9%	1.1471	32,831
2020	89,707,711	231,618,927	258.2%	1.1030	31,529
2021	90,494,347	252,320,093	278.8%	1.0606	30,297
2022	94,020,586	323,860,886	344.5%	1.0198	29,088
2023	101,221,553	245,673,606	242.7%	0.9806	27,499
2024	161,679,496	267,459,909	165.4%	0.9429	26,009
2025	281,531,978	304,893,307	108.3%	0.9066	24,517
2026	265,462,270	304,282,870	114.6%	0.8717	23,011
2027	248,772,656	303,886,053	122.2%	0.8382	21,494
2028	231,637,472	301,671,192	130.2%	0.8060	19,979
2029	214,273,692	296,828,974	138.5%	0.7750	18,476
2030	196,915,146	289,564,747	147.1%	0.7452	16,996
2031	179,769,569	280,196,492	155.9%	0.7165	15,551
2032	163,028,762	269,758,992	165.5%	0.6889	14,150
2033	146,871,834	259,683,753	176.8%	0.6624	12,805
2034	131,421,347	249,367,393	189.7%	0.6370	11,518
2035	116,783,121	236,389,219	202.4%	0.6125	10,295
2036	103,033,637	220,733,341	214.2%	0.5889	9,142
2037	90,233,804	203,140,736	225.1%	0.5663	8,061
2038	78,422,525	184,763,628	235.6%	0.5445	7,059
2039	67,630,183	166,730,450	246.5%	0.5235	6,137
2040	57,864,650	148,683,664	257.0%	0.5034	5,297
2041	49,102,574	130,952,260	266.7%	0.4840	4,536
2042	41,317,424	113,832,734	275.5%	0.4654	3,855
2043	34,476,594	97,478,016	282.7%	0.4475	3,253
2044	28,530,463	82,600,695	289.5%	0.4303	2,724
2045	23,418,298	69,313,244	296.0%	0.4138	2,266
2046	19,071,394	57,767,168	302.9%	0.3978	1,873
2047	15,413,616	47,891,521	310.7%	0.3825	1,539
2048	12,367,030	39,594,716	320.2%	0.3678	1,257
2049	9,856,574	32,819,257	333.0% 348.1%	0.3537	1,021 827
2050 2051	7,808,107	27,183,739		0.3401	667
2052	6,151,692 4,823,325	22,429,024 18,411,978	364.6% 381.7%	0.3270 0.3144	535
2053	3,763,661	15,020,167	399.1%	0.3023	428
2054	2,922,983	12,169,652	416.3%	0.2907	341
2055	2,259,794	9,814,561	434.3%	0.2795	271
2056	1,739,516	7,907,093	454.6%	0.2688	215
2057	1,333,125	6,366,265	477.5%	0.2584	170
2058	1,016,709	5,119,036	503.5%	0.2485	133
2059	771,075	4,111,848	533.3%	0.2389	104
2060	581,668	3,269,246	562.0%	0.2297	81
2061	436,978	2,548,812	583.3%	0.2209	63
2062	326,432	1,904,641	583.5%	0.2124	48
2063	242,367	1,390,341	573.7%	0.2042	37
2064	178,670	1,012,802	566.9%	0.1964	27
2065	130,672	733,431	561.3%	0.1888	21
2066	94,996	528,879	556.7%	0.1816	15
2067	68,690	379,172	552.0%	0.1746	12
2068	49,383	271,676	550.1%	0.1679	9
2069	35,333	193,170	546.7%	0.1614	7
2070	25,090	136,531	544.2%	0.1552	5
2071	17,677	95,088	537.9%	0.1492	4
2072	12,379	65,047	525.5%	0.1435	3
2073	8,624	44,426	515.1%	0.1380	2
2074	5,983	30,099	503.1%	0.1327	1
2075	4,129	20,272	491.0%	0.1276	1
2076	2,819	13,430	476.4%	0.1227	1
2077	1,909	8,792	460.6%	0.1179	1
2078	1,280	5,705	445.6%	0.1134	0
2079	849	3,671	432.6%	0.1090	0
2080	546	2,376	435.3%	0.1049	0
2081	346	1,525	440.5%	0.1008	0
2082	211	984	465.7%	0.0969	0
			. 30.170	2.0000	· ·

Accumulated and Present Values as of 12/31/2022

Past:3,283,011,6983,946,358,702120.2%Future:2,271,442,0083,681,974,089162.1%Lifetime:5,554,453,7077,628,332,790137.3%

*Includes all rate increases approved in your state applied to all policies nationwide, and the rate increase requested in this filling

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Exhibit IIc: PCS II Policy Forms - Nationwide Experience Limited Low BIO - With 28.8% Requested Rate Increase*

Calendar Year	Earned Premium	Incurred Claims	Loss Ratio	4% Discount Factor	Lives
1997	233,867	-	0.0%	2.7186	306
1998	5,129,722	299,306	5.8%	2.6141	8,654
1999	32,088,016	2,974,534	9.3%	2.5135	27,021
2000	69,692,857	11,437,379	16.4%	2.4169	46,343
2001	101,928,416	23,117,245	22.7%	2.3239	55,603
2002	107,834,330	30,245,715	28.0%	2.2345	56,441
2003	106,857,020	36,574,921	34.2%	2.1486	54,955
2004 2005	102,467,775	46,899,877	45.8%	2.0659	52,937
2005	97,792,399 92,912,988	50,277,083 59,661,507	51.4% 64.2%	1.9865 1.9101	50,967 48,933
2007	88,168,083	63,890,248	72.5%	1.8366	46,935
2007	84,047,811	71,620,501	85.2%	1.7660	44,385
2009	81,989,266	81,091,400	98.9%	1.6980	41,880
2010	77,233,096	84,585,851	109.5%	1.6327	39,491
2011	72,294,147	88,726,493	122.7%	1.5699	37,086
2012	70,403,519	82,043,603	116.5%	1.5096	34,770
2013	65,534,780	83,895,588	128.0%	1.4515	32,329
2014	59,806,446	83,089,278	138.9%	1.3957	30,066
2015	56,548,472	80,061,641	141.6%	1.3420	27,824
2016	55,408,703	82,679,815	149.2%	1.2904	25,778
2017	54,218,679	75,217,884	138.7%	1.2407	23,841
2018	46,651,336	74,932,807	160.6%	1.1930	21,992
2019	38,054,090	65,163,381	171.2%	1.1471	20,142
2020	33,451,129	63,065,567	188.5%	1.1030	18,421
2021	29,797,706	65,186,895	218.8%	1.0606	16,898
2022	27,465,343 27,531,991	73,396,024 70,106,961	267.2% 254.6%	1.0198 0.9806	15,540 13,996
2023 2024	26,203,607	65,589,205	250.3%	0.9429	12,607
2025	26,815,829	62,354,998	232.5%	0.9429	11,299
2026	23,712,192	58,231,377	245.6%	0.8717	10,067
2027	20,922,732	54,295,978	259.5%	0.8382	8,918
2028	18,329,933	50,438,375	275.2%	0.8060	7,870
2029	15,996,910	46,581,602	291.2%	0.7750	6,911
2030	13,884,133	42,693,734	307.5%	0.7452	6,042
2031	11,989,832	38,836,950	323.9%	0.7165	5,256
2032	10,307,522	35,093,830	340.5%	0.6889	4,551
2033	8,819,087	31,738,227	359.9%	0.6624	3,920
2034	7,501,653	28,631,693	381.7%	0.6370	3,357
2035	6,342,567	25,536,108	402.6%	0.6125	2,857
2036	5,330,666	22,526,624	422.6%	0.5889	2,417
2037	4,450,236	19,617,687	440.8%	0.5663	2,029
2038	3,686,914	16,872,131	457.6%	0.5445	1,692
2039 2040	3,031,045 2,471,811	14,332,952 12,028,175	472.9% 486.6%	0.5235 0.5034	1,400 1,150
2040	1,999,648	9,982,650	499.2%	0.4840	938
2042	1,603,722	8,171,567	509.5%	0.4654	759
2043	1,275,218	6,608,166	518.2%	0.4475	610
2044	1,005,552	5,279,232	525.0%	0.4303	488
2045	787,049	4,168,730	529.7%	0.4138	388
2046	611,574	3,264,644	533.8%	0.3978	307
2047	472,038	2,540,698	538.2%	0.3825	241
2048	362,289	1,969,891	543.7%	0.3678	189
2049	276,761	1,529,548	552.7%	0.3537	148
2050	210,753	1,193,511	566.3%	0.3401	115
2051	160,186	937,433	585.2%	0.3270	90
2052	121,691	738,989	607.3%	0.3144	70
2053	92,438	583,382	631.1%	0.3023	54
2054	70,147	460,955	657.1%	0.2907	42
2055	53,192	365,791	687.7%	0.2795	32
2056	40,332	293,684	728.2%	0.2688 0.2584	25
2057 2058	30,538 23,059	238,049 194,450	779.5%	0.2485	19 15
2059	17,312	159,011	843.3% 918.5%	0.2389	11
2060	12,915	130,249	1008.5%	0.2309	8
2061	9,599	107,384	1118.7%	0.2297	6
2062	7,077	85,892	1213.6%	0.2124	5
2063	5,187	65,205	1257.0%	0.2042	3
2064	3,728	48,125	1290.7%	0.1964	2
2065	2,628	35,289	1342.9%	0.1888	2
2066	1,843	25,492	1383.5%	0.1816	1
2067	1,286	18,259	1419.5%	0.1746	1
2068	890	13,091	1471.3%	0.1679	1
2069	610	9,308	1525.0%	0.1614	1
2070	413	6,569	1589.4%	0.1552	0
2071	277	4,574	1653.5%	0.1492	0
2072	183	3,135	1716.4%	0.1435	0
2073	120	2,135	1786.0%	0.1380	0
0074	78	1,441	1849.2%	0.1327	0
2074	49	963	1978.4%	0.1276	0
2075	~ .	639	2074.7%	0.1227	0
2075 2076	31		0407.00/	A 1170	^
2075 2076 2077	19	419	2197.8%	0.1179	0
2075 2076 2077 2078	19 12	419 274	2331.3%	0.1134	0
2075 2076 2077 2078 2079	19 12 6	419 274 178	2331.3% 2758.8%	0.1134 0.1090	0 0
2075 2076 2077 2078	19 12	419 274	2331.3%	0.1134	0

Accumulated and Present Values as of 12/31/2022

Past:2,938,506,2882,252,179,91476.6%Future:196,397,044566,808,880288.6%Lifetime:3,134,903,3322,818,988,79589.9%

^{*}Includes all rate increases approved in your state applied to all policies nationwide, and the rate increase requested in this filing

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Exhibit IId: PCS II Policy Forms - Nationwide Experience Limited High BIO - With 131% Requested Rate Increase*

4%

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Calendar Year	Earned Premium	Incurred Claims	Loss Ratio	476 Discount Factor	Lives
1997	408,251	964	0.2%	2.7186	614
1998	7,344,835	2,785	0.0%	2.6141	14,766
1999	45,019,805	2,905,548	6.5%	2.5135	48,134
2000	105,041,295	6,359,103	6.1%	2.4169	92,755
2001	169,349,352	15,248,037	9.0%	2.3239	119,179
2002	185,501,094	18,064,005	9.7%	2.2345	122,262
2003	186,004,877	26,239,494	14.1%	2.1486	119,604
2004	181,057,119	41,451,343	22.9%	2.0659	116,592
2005	176,257,026	56,549,345	32.1%	1.9865	113,968
2006	171,750,767	62,322,879	36.3%	1.9101	111,456
2007	167,590,046	71,436,255	42.6%	1.8366	109,117
2008	164,926,363	95,584,800	58.0%	1.7660	105,611
2009	166,366,718	116,300,371	69.9%	1.6980	101,964
2010	162,092,197	133,943,449	82.6%	1.6327	98,858
2011	157,611,005	153,259,155	97.2%	1.5699	95,472
2012	159,601,215	196,454,819	123.1%	1.5096	91,981
2013	155,446,811	209,783,073	135.0%	1.4515	88,449
2014	151,766,180	228,038,244	150.3%	1.3957	85,006
2015	153,074,878	248,879,783	162.6%	1.3420	81,615
2016	160,338,826	286,946,726	179.0%	1.2904	78,329
2017	168,039,407	303,846,586	180.8%		
				1.2407	74,855
2018	153,558,589	327,136,304	213.0%	1.1930	71,312
2019	136,677,423	330,594,441	241.9%	1.1471	67,764
2020	135,123,942	293,799,595	217.4%	1.1030	64,140
2021	131,889,075	342,158,136	259.4%	1.0606	60,744
2022	132,538,967	396,313,838	299.0%	1.0198	57,605
2023	135,085,097	347,584,292	257.3%	0.9806	53,587
2024	170,430,485	360,897,592	211.8%	0.9429	49,841
2025	245,520,737	385,404,611	157.0%	0.9066	46,170
2026	226,825,307	382,719,971	168.7%	0.8717	42,571
2027	208,156,304	378,813,932	182.0%	0.8382	39,048
2028	189,519,632	372,341,475	196.5%	0.8060	35,627
2029	171,434,267	362,633,907	211.5%	0.7750	32,339
2030	154,025,393	349,577,355	227.0%	0.7452	29,202
2031	137,459,937	333,551,644	242.7%	0.7165	26,218
2032	121,922,237	315,338,723	258.6%	0.6889	23,417
2033	107,452,707	297,545,353	276.9%	0.6624	20,794
2034		279,639,984	297.2%		
	94,076,034	, ,		0.6370	18,348
2035	81,777,268	259,569,577	317.4%	0.6125	16,079
2036	70,548,356	237,806,272	337.1%	0.5889	13,989
2037	60,387,373	214,640,916	355.4%	0.5663	12,078
2038	51,272,396	191,109,324	372.7%	0.5445	10,347
2039	43,166,520	168,044,350	389.3%	0.5235	8,797
2040	36,035,937	145,922,252	404.9%	0.5034	7,419
2041	29,818,642	125,249,470	420.0%	0.4840	6,207
2042	24,449,289	106,095,964	433.9%	0.4654	5,151
2043	19,867,609	88,718,308	446.5%	0.4475	4,241
2044	15,999,038	73,426,270	458.9%	0.4303	3,466
2045	12,771,858	60,172,925	471.1%	0.4138	2,814
2046	10,112,828	49,017,262	484.7%	0.3978	2,269
2047	7,944,165	39,675,974	499.4%	0.3825	1,818
2048	6,193,947	31,962,361	516.0%	0.3678	1,449
2049	4,797,009	25,693,937	535.6%	0.3537	1,149
2050	3,691,737	20,619,373	558.5%	0.3401	908
2051	2,826,649	16,543,482	585.3%	0.3270	715
2052	2,153,596	13,201,249	613.0%	0.3144	560
2053	1,633,001	10,453,505	640.1%	0.3023	437
2054	1,231,996	8,212,351	666.6%	0.2907	339
2055	924,773	6,401,448	692.2%	0.2795	263
2056	690,885	4,985,821	721.7%	0.2688	203
2057	513,432	3,865,408	752.9%	0.2584	157
2058	379,121	2,989,328	788.5%	0.2485	119
2059	277,489	2,301,109	829.3%	0.2389	89
2060	201,568	1,774,733	880.5%	0.2297	67
2061	145,889	1,353,559	927.8%	0.2209	51
2062	104,896	1,019,599	972.0%	0.2124	38
2002	74.050	745 400	005.00/	0.0040	20

Accumulated and Present Values as of 12/31/2022

2063

2064

2065

2066

2067

2068

2069

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2072

2073

2074

2075

2076

2077

2078

2079

2080

2081

2082

 Past:
 6,104,191,388
 5,289,885,504
 86.7%

 Future:
 1,858,909,335
 4,331,489,931
 233.0%

 Lifetime:
 7,963,100,723
 9,621,375,435
 120.8%

74,856

52,830

36,803

25,494

17,529

11,975

8,116

5,432

3,589

2,312

1,469

913

562

352

210

125

73

42

23

11

745,486

538,582

383,897

272,946

193,897

136,800

96,164

66,680

45,456

30,583

20,374

13,470

8,784

5,603

3,501

2,133

1,268

735

419

238

995.9%

1019.5%

1043.1%

1070.6%

1106.2%

1142.4%

1184.8%

1227.4%

1266.7%

1322.7%

1386.5%

1476.1%

1562.2%

1592.3%

1668.1%

1702.3%

1729.4%

1754.3%

1859.4%

2208.0%

0.2042

0.1964

0.1888

0.1816

0.1746

0.1679

0.1614

0.1552

0.1492

0.1435

0.1380

0.1327

0.1276

0.1227

0.1179

0.1134

0.1090

0.1049

0.1008

0.0969

*Includes all rate increases approved in your state applied to all policies nationwide, and the rate increase requested in this filing