

June 13, 2018

Re: LTC2-FAC-MD, LTC2-VAL-MD, LTC2-IDEAL-MD, LTC2-PREM-MD
(Policies with application dates after January 15, 2009)
Issued by Metropolitan Life Insurance Company (MetLife)

Attached is the filing for the captioned forms. This letter provides an overview of the filing and notes on some of the content. After a careful review of earlier filings, we have endeavored to reflect in this filing additional content based on all the questions submitted by your Department. Hopefully, this will make your review easier and more effective.

Filing Overview

In addition to this overview, this filing consists of the Actuarial Memorandum, the Addendum Automatic Inflation Choices “Landing Spots” focusing on premium rates for various levels of inflation protection for use as Landing Spots consequent to rate action, and supporting data based on earlier reviews. These documents are outlined and summarized here for your convenience.

Title	Description
Actuarial Memorandum Exhibit I-A	Lifetime Loss Ratio (“LLR”) <ul style="list-style-type: none">• Without/with proposed rate increase of 16.52% (actuarially equivalent to two increases of 15% and 1.32%)• <i>Nationwide</i> experience• Weighted average statutory rate 4% LLR without rate increase – 83.0 % LLR with rate increase – 75.1%
Exhibit II-A	Demonstration of rate action meeting Rate Stability (58/85) limitations
Exhibit I-B	Lifetime Loss Ratio (“LLR”) <ul style="list-style-type: none">• Without/with proposed rate increase of 16.52% (equivalent to two increases of 15% and 1.32%)• <i>Maryland</i> experience• Weighted average statutory rate 4% LLR without rate increase – 82.8% LLR with rate increase – 75.2%
Exhibit II-B	Demonstration of rate action meeting Rate Stability (58/85) limitations
Review of Prior Correspondence Attachment 1	Comparison of Original Pricing and Current Best Estimate Assumptions
Attachment 2	<i>Nationwide</i> Actual-to-Expected Loss Ratios by Duration

	LLR without rate increase – 82.3%; A/E – 1.19
Attachment 3	<i>Nationwide</i> Actual-to-Expected Loss Ratios by Calendar Year LLR without rate increase – 82.7%; A/E – 1.23
Attachment 4	Actual-to-Expected results for Lapse, Mortality and Morbidity assumptions

Additional Notes

MetLife requests the rate action based on deviations from anticipated experience outlined in the Actuarial Memorandum and the supporting attachments. Lifetime Loss Ratios exceed all minimum requirements in Maryland as well as the application of rate stability standards even at the full requested rate action. In addition, though Maryland-only experience is not necessarily credible, the Maryland LLR's still meet the standards above at the full rate action level.

COMAR 31.14.01.04A(5) states, "An insurer may not charge a renewal premium rate for a long-term care policy which exceeds by more than 15 percent any premium charged for the policy during the preceding 12 months." This filing limits the requested rate increase to 15%.

Despite the rate action requested, the experience of the block does not fully return to pricing levels. In general, the rate action restricts consideration of recovering historical losses by focusing on future lifetime experience. We will continue, of course, to analyze and adjust experience assumptions and reserve the right to update those in the future along with requesting any resulting changes in premium rates.

Thank you for your consideration. I look forward to hearing from you.



Mark D. Newton, FSA, MAAA
Actuarial Director, Metropolitan Life Insurance Company

METROPOLITAN LIFE INSURANCE COMPANY

New York, NY

Actuarial Memorandum for VIP2 Series

June 13, 2018

Policy Forms

The premium rate schedule increase for which we are seeking approval will apply to the following individual long-term care policy forms:

- LTC2-FAC-MD
- LTC2-VAL-MD
- LTC2-IDEAL-MD
- LTC2-PREM-MD

These forms were developed as part of a nationwide series and were issued in Maryland from March 2009 to December 2011, but are no longer being marketed in any state. Nationwide, the last policies under this series were issued in 2011.

Policy forms LTC2-FAC-MD, LTC2-VAL-MD, LTC2-IDEAL-MD, and LTC2-PREM-MD (subsequently referred to as LTC2-FAC, LTC2-VAL, LTC2-IDEAL, and LTC2-PREM, respectively) are existing individual tax-qualified policy forms and were previously approved in 2009, along with any rider or endorsement forms that were contemporaneously or subsequently approved for use with these policy forms. Note, however, that the increase will only apply to those policies issued to policyholders in your state in connection with policy applications dated after January 15, 2009.

Policy form LTC2-FAC provides coverage for long-term care services received in a nursing home, assisted living facility (ALF), or hospice facility. Policy forms LTC2-VAL, LTC2-IDEAL and LTC2-PREM provide comprehensive long-term care coverage.

1. Purpose of Filing

This actuarial memorandum has been prepared for the purpose of demonstrating that the anticipated loss ratio standard of this product meets the minimum requirements of your state and may not be suitable for other purposes.

2. Description of Benefits

LTC2-FAC is part of a nationwide series of individually underwritten policy forms which reimburses 100% of charges, up to a maximum facility benefit amount, for confinement in a licensed nursing home or assisted living facility. Benefits are payable under skilled, intermediate, or custodial levels of care, as well as inpatient hospice care.

The daily benefit amount and the maximum benefit period are selected at issue. Additional benefits for needs assessment expenses and transition expenses are also provided. In addition, LTC2-FAC provides benefits for international coverage, caregiver training, and alternate services.

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LTC2-VAL is part of a nationwide series of individually underwritten policy forms which reimburses 100% of charges, up to a maximum facility benefit amount, for confinement in a licensed nursing home. Benefits are payable under skilled, intermediate, or custodial levels of care, as well as inpatient hospice care.

LTC2-VAL also includes an assisted living/home care/community-based care benefit which reimburses 100% of charges from formal caregivers, up to a maximum assisted living/home/community-based care benefit amount, for services received at home or assisted living facility or at an adult day care center for maintenance or personal care, including hospice care.

The daily benefit amount, assisted living/home care/adult day care percentage, and maximum benefit period are selected at issue. Additional benefits for needs assessment expenses are also provided. In addition, LTC2-VAL provides benefits for respite care, international coverage, caregiver training, and alternate services.

LTC2-IDEAL is part of a nationwide series of individually underwritten policy forms which reimburses 100% of charges, up to a maximum facility benefit amount, for confinement in a licensed nursing home or assisted living facility. Benefits are payable under skilled, intermediate, or custodial levels of care, as well as inpatient hospice care.

LTC2-IDEAL also includes a home care/community-based care benefit which reimburses 100% of charges from formal caregivers, up to a maximum home care/community-based care benefit amount, for services received at home or at an adult day care center for maintenance or personal care, including hospice care.

The daily benefit amount, home care/adult day care percentage, and maximum benefit period are selected at issue. Additional benefits for needs assessment expenses and transition expenses are also provided. In addition, LTC2-IDEAL provides benefits for respite care, international coverage, caregiver training, alternate services, and supportive services/specialized transportation.

LTC2-PREM is part of a nationwide series of individually underwritten policy forms which reimburses a maximum facility benefit amount, for confinement in a licensed nursing home. Benefits are payable under skilled, intermediate, or custodial levels of care, as well as inpatient hospice care.

LTC2-PREM also includes a home/community-based care benefit which reimburses a maximum home/community-based care benefit amount, for services received at home or assisted living facility or at an adult day care center for maintenance or personal care, including hospice care.

The daily benefit amount, home care/adult day care percentage, and maximum benefit period are selected at issue. Additional benefits for needs assessment expenses and international coverage are also provided.

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LTC2-FAC, LTC2-VAL, LTC2-IDEAL, and LTC2-PREM

For all these policies, benefit eligibility is based on the inability to perform at least two of six activities of daily living (ADLs) including bathing, continence, dressing, eating, toileting, and transferring, for a period of at least 90 days due to loss of functional capacity; or due to severe cognitive impairment.

Benefit payments commence after a specified number of days in a waiting period, selected at issue, which accumulate over the lifetime of the policy. The waiting period need not be satisfied before receiving coverage for hospice care (except LTC2-PREM) or (if covered under the policy form) respite care, needs assessment or caregiver training; however, receipt of these services does not count towards satisfying the waiting period. Waiver of premium is provided beginning on the first day of the policy month coincident with or following the day the insured becomes eligible for benefit payments (includes completion of the waiting period).

At issue, the insured had the option of choosing one of the following benefit increase riders: 5% Compound, 5% Simple, or Future Purchase (in some states, a 3% Compound Inflation Rider was also available).

At issue, the insured had the option of selecting the following riders: Nonforfeiture Coverage Rider, Return of Premium Rider, Restoration of Benefits Rider, Shared Care Rider, Home Care Elimination Period Waiver Rider (except LTC2-PREM), Indemnity Rider (LTC2-VAL only), Calendar Day Elimination Period Rider (except LTC2-FAC and LTC2-PREM), Ten Year Premium Payment Rider, (except LTC2-FAC and LTC2-PREM), Paid-up Rider, Double Pay First Year Rider or Reduced Pay at 65 Rider. A Contingent Benefits Upon Lapse Rider is attached to all policies, except those that select the Nonforfeiture Coverage Rider, for no additional premium.

3. Renewability

These policy forms are guaranteed renewable for life.

4. Applicability

This filing is applicable to in-force policies only, as these policy forms are no longer being sold in the market. The premium changes will apply to the base forms as well as all applicable riders. Note, however, that the increase will only apply to those policies issued to policyholders in your state in connection with policy applications dated after January 15, 2009.

5. Actuarial Assumptions

- a. Expected Claim Costs are the product of attained age frequency rates and continuance curves, adjusted by utilization factors and underwriting selection factors based on actual experience through June 30, 2016.

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- b. Voluntary Termination Rates vary by duration as developed from actual experience through June 30, 2016 and are shown in the following table:

Voluntary Termination Rates

Policy Duration	Lapse Rate
1	5.00%
2	4.50%
3	4.00%
4	3.50%
5	2.50%
6	2.00%
7	1.80%
8	1.50%
9	1.30%
10	1.10%
11+	1.10%

In the year of rate increase implementation, it is assumed that an additional 4.0% of policies lapse and there is 3.0% net reduction to future premiums and benefits due to benefit downgrades. There is no adverse selection assumed due to the additional lapse rates.

- c. Mortality 88% of Annuity 2000 Basic Table with selection consistent with experience.
- d. Expenses Expenses have not been explicitly projected. It is assumed that the originally filed expense assumptions remain appropriate.

The above assumptions are based on actual inforce experience of MetLife and are deemed reasonable for these particular policy forms. In establishing the assumptions described in this section, the policy design, underwriting, and claims adjudication practices for the above-referenced policy forms were taken into consideration.

6. Marketing Method

These policy forms were marketed by agents and brokers of MetLife.

7. Underwriting Description

These policy forms were fully underwritten with the use of various underwriting tools in addition to the application, which may have included medical records, an attending physician's statement, telephone interview and/or face-to-face assessment.

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8. Premiums

Premiums are unisex, but vary by issue age, rating class, benefit period, initial daily benefit, waiting period, home and community care percentage, inflation protection option, payment method, premium mode and the selection of any other options or riders.

9. Issue Age Range

These policy forms were issued up to age 84.

10. Area Factors

Area factors are not used for this product.

11. Premium Modalization Rules

The following modal factors are applied to the annual premium (AP):

Premium Mode	Modal Factors
Annual	1.00*AP
Semi-Annual	0.51*AP
Quarterly	0.265*AP
Monthly	0.09*AP

12. Reserves

Active life reserves have not been used in this rate increase analysis. Claim reserves as of December 31, 2016 have been discounted to the incurral date of each respective claim and included in historical incurred claims. Incurred but not reported reserve balances as of December 31, 2016 have been allocated to a calendar year of incurral and included in historical incurred claims.

13. Trend Assumptions

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

14. Past and Future Policy Experience

Nationwide and Maryland experience for policy form series LTC2-FAC, LTC2-VAL, LTC2-IDEAL, and LTC2-PREM are shown in Exhibit I-A and I-B, respectively.

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Historical experience is shown by claim incurral year. Claim payments and reserves were discounted to the mid-point of the year of incurral at the weighted average maximum valuation interest rate for contract reserves which is 4.00%. Incurred but not reported reserve balances as of December 31, 2016 have been allocated to a calendar year of incurral and included in historical incurred claims.

Annual loss ratios are calculated, with and without interest, as incurred claims divided by earned premiums.

A lifetime loss ratio as of December 31, 2016 is calculated as the sum of accumulated past experience and discounted future experience where accumulation and discounting occur at the weighted average maximum valuation interest rate for contract reserves, which is 4.00%.

15. Projected Earned Premiums and Incurred Claims

Earned premiums for projection years 2017 through 2097 are developed by multiplying each prior period's earned premium (starting with December 31, 2016 actual earned premium) by a persistency factor. For a year in which the rate increase is effective, the earned premium prior to the increase is multiplied by 1 plus the rate increase percent and an effectiveness factor.

Each projection year claim amount is calculated by multiplying incidence, continuance and utilization factors by the policy and rider benefits on a seriatim basis.

Present and accumulated values in the lifetime projections in Exhibit I are determined at the average maximum valuation interest rate for contract reserves applicable to LTC business issued in the years in which the applicable business of this filing were issued. The maximum valuation interest rate averages 4.00%.

The assumptions used in the projections in Exhibit I were developed from the company's LTC insurance experience.

Projections in Exhibit II provide a demonstration that the sum of the accumulated value of incurred claims without the inclusion of active life reserves, and the present value of future projected incurred claims, without the inclusion of active life reserves, will not be less than the sum of the following:

1. Accumulated value of the initial earned premium times 58%;
2. 85% of the accumulated value of prior premium rate schedule increases;
3. Present value of future projected initial earned premium times 58%; and
4. 85% of the present value of future projected premium in excess of the projected initial earned premium.

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16. History of Previous Inforce Rate Increases

Round	Authorized %	Authorization Date	Implementation Date
1	15%	10/10/2017	4/1/2018

The experience and projections in Exhibit I-A have been restated to reflect a rate level similar to that approved in Maryland on a nationwide basis.

17. Requested Rate Increase

The company is requesting two rate increases, resulting in a cumulative compounded increase of 16.52%. Corresponding rate tables reflecting the increases are included with this filing.

Phase	Request	Expected Implementation Date
1	15%	6/1/2019
2	1.32%	9/1/2020

The actual rates implemented may vary slightly from those filed due to implementation rounding algorithms. Also note that the increase will only apply to those policies issued to policyholders in your state in connection with policy applications dated after January 15, 2009.

18. Analysis Performed

The initial premium schedule was based on pricing assumptions believed to be appropriate, given the information available, at the time the initial rate schedule was developed. The original pricing assumptions for claim costs, voluntary termination rates, and mortality were as follows:

- a. Incidence and continuance rates: The morbidity assumptions used in the pricing were primarily based on the company’s own experience. Since the company’s own individual block of business was relatively new, these assumptions were modified to reflect the experience of other long term care business that MetLife issued or administered, and to incorporate industry expectation and competitive rate information. Morbidity selection factors were also applied to reflect the effect of underwriting. Due to lack of actual experience of the individual business, we used industry standard selection factors developed by our consultants. These issue-age and duration dependent selection factors are expected to be consistent with our underwriting methods in early durations. Due to lack of actual data, late duration selection factors primarily reflect industry expectations.
- b. The original pricing expected voluntary termination rates varied by duration as shown in the following table:

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Policy Duration	Lapse Rate
1	5.50%
2	3.00%
3	1.75%
4	1.55%
5	1.40%
6	1.20%
7	1.00%
8	0.95%
9+	0.90%

- c. The original pricing expected mortality rates were based on the company's own experience. The mortality rates used in the pricing were equal to 88% of the Annuity 2000 Basic Mortality Table with additional modifications to reflect the selection effects of underwriting.

As part of the in-force management of its long-term care insurance business, MetLife monitors its performance by completing periodic analyses of lapse rates, mortality rates, claim incidence rates, claim continuance rates and claim utilization rates. The findings from these analyses were used to determine the current experience assumptions. A model of this business was developed for use in the cash flow testing that is part of the company's annual statutory reporting requirements. Using this model, a future projection of these policies under the new experience assumptions was performed and the projected lifetime loss ratio for these policies was determined. For these policies, the past experience and future projections based on current experience assumptions combine to a resulting loss ratio that far exceeds both original pricing expectations and state minimum requirements.

The experience analysis, management's view of when a change to the original rate schedule may be considered, and the seriatim inforce and claim data used in developing the projections in Exhibit I and II have been relied upon by the actuary in the development of this memorandum.

19. Loss Ratio Requirement Compliance Demonstration

Projected experience assuming the increases are implemented is shown in Exhibit I-A and I-B. As shown in these exhibits, the expected lifetime loss ratio, both with and without the requested rate increase, exceeds the minimum loss ratio requirement.

20. Average Annual Premium

The average September 30, 2017 annualized premium for all premium-paying policies before and after the requested increases are:

Before increase:	\$2,648
After prior authorized increase:	\$3,046
After 1 st phase of 15%::	\$3,502

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After 2nd phase of 1.32%: \$3,549

The average September 30, 2017 annualized premiums for all premium-paying policies issued in Maryland, before and after the requested increases are:

Before increase: \$2,947
After prior authorized increase: \$3,390
After 1st phase of 15%: \$3,898
After 2nd phase of 1.32%: \$3,949

21. Proposed Effective Date

This rate increase will become effective on each policy's modal premium due date (monthly, quarterly, semi-annually and annually) following at least a 60-day advance written notification to the policyholder.

22. Nationwide Distribution of Business as of September 30, 2017 (based on premium-paying policies inforce count)

By Issue Age

Issue Age	%
<45	10%
45-49	8%
50-54	13%
55-59	19%
60-64	20%
65-69	14%
70-74	10%
75+	8%
Total	100%

By Benefit Period

Benefit Period	%
1 Year	0%
1.5 Year	0%
2 Year	12%
3 Year	40%
4 Year	17%
5 Year	23%
7 Year	8%

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Lifetime	0%
Total	100%

By Inflation Type

Inflation Type	%
Compound 3%	0%
Compound 5%	12%
Simple 5%	42%
FPO	19%
None	27%
Total	100%

By Home Care Percentage

Home Care Percentage	%
None (FC only)	1%
50%	4%
75%	3%
100%	93%
Total	100%

By Gender

Gender	%
Female	60%
Male	40%
Total	100%

By Premium Payment Option

Payment Option	%
Standard	98%
Ten Year	2%
Total	100%

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23. Number of Policyholders

As of September 30, 2017, the number of premium-paying policies inforce and premiums that will be affected by this increase are:

	Issued Before Rate Stability Regulation Effective Date		Issued On or After Rate Stability Regulation Effective Date	
	Number of Insured	2017 Annualized Premium	Number of Insured	2017 Annualized Premium
Maryland	-	-	200	\$589,392
Nationwide	1,595	\$4,963,381	5,332	\$13,377,400

24. Actuarial Certification

I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries, and I meet the Academy’s qualification standards for preparing health rate filings and to render the actuarial opinion contained herein.

This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

I hereby certify that, to the best of my knowledge and judgment, this rate submission is in compliance with the applicable laws and regulations of Maryland except the filing does not include the certification required for certain policies subject to your Department’s long-term care Rate Stability rules. A larger rate increase would be needed in order to certify.

I further certify that:

- the analysis described in Section 18 of this memorandum was used in determining the need for a rate increase;
- the policy design, underwriting and claims adjudication practices have been taken into consideration in this rate increase request;
- the actuarial assumptions are appropriate and the gross premiums bear reasonable relationship to the benefits; and
- the relationship between renewal premium rate schedules and new business premium rate schedules is not applicable because we are no longer marketing new business.

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A handwritten signature in black ink that reads "Mark D. Newton". The signature is written in a cursive style with a horizontal line underneath it.

Mark D. Newton, FSA, MAAA
Actuarial Director, Metropolitan Life Insurance Company

Exhibit II-A
Demonstration that Lifetime Incurred Claims with Requested Increase are
Not Less than Lifetime Earned Premium with Prescribed Factors
Policy Forms: LTC2-FAC, LTC2- VAL, LTC2-IDEAL and LTC2-PREM
Policies with Application Dates On or After January 16, 2009 on New Rate Basis

1	Accumulated value of initial earned premium	154,011,452	x	58%	=	89,326,642
2a	Accumulated value of earned premium	154,011,452				
2b	Accumulated value of prior premium rate schedule increases (2a-1)	0	x	85%	=	0
3	Present value of future projected initial earned premium	181,202,312	x	58%	=	105,097,341
4a	Present value of future projected premium	217,185,351				
4b	Present value of future projected premium in excess of the projected initial earned premiums (4a-3)	35,983,039	x	85%	=	30,585,583
5	Lifetime Earned Premium Times Prescribed Factor: Sum of 1, 2b, 3, and 4b					225,009,566
6a	Accumulated value of incurred claims without the inclusion of active life reserves					13,883,554
6b	Present value of future projected incurred claims without the inclusion of active life reserves					265,069,197
7	Lifetime Incurred Claims with Rate Increase: Sum of 6a and 6b					278,952,751
8	Test: 7 is not less than 5					TRUE

Exhibit II-B
Demonstration that Lifetime Incurred Claims with Requested Increase are
Not Less than Lifetime Earned Premium with Prescribed Factors
Policy Forms: LTC2-FAC, LTC2- VAL, LTC2-IDEAL and LTC2-PREM
Policies with Application Dates On or After January 16, 2009 on New Rate Basis

1	Accumulated value of initial earned premium	5,331,276	x	58%	=	3,092,140
2a	Accumulated value of earned premium	5,331,276				
2b	Accumulated value of prior premium rate schedule increases (2a-1)	0	x	85%	=	0
3	Present value of future projected initial earned premium	5,581,300	x	58%	=	3,237,154
4a	Present value of future projected premium	6,678,964				
4b	Present value of future projected premium in excess of the projected initial earned premiums (4a-3)	1,097,664	x	85%	=	933,014
5	Lifetime Earned Premium Times Prescribed Factor: Sum of 1, 2b, 3, and 4b					7,262,309
6a	Accumulated value of incurred claims without the inclusion of active life reserves					638,025
6b	Present value of future projected incurred claims without the inclusion of active life reserves					8,399,015
7	Lifetime Incurred Claims with Rate Increase: Sum of 6a and 6b					9,037,040
8	Test: 7 is not less than 5					TRUE

Attachment 1
Metropolitan Life Insurance Company
Policy Forms: LTC2-FAC, LTC2-VAL, LTC2-IDEAL, LTC2-PREM, LTC2-FAC-P and LTC2-IDEAL-P
Assumptions Summary

	Original Pricing Assumptions	2017 Best Estimate Assumptions																																																																				
Interest Rate:	4.00%	Maximum valuation interest rate for contract reserves, which average to 4.00%																																																																				
Mortality:	88% of Annuity 2000 Basic table With Mortality Selection Factors of: <table border="1"> <thead> <tr> <th>Duration</th> <th>Mortality Selection</th> </tr> </thead> <tbody> <tr><td>1</td><td>33%</td></tr> <tr><td>2</td><td>40%</td></tr> <tr><td>3</td><td>47%</td></tr> <tr><td>4</td><td>53%</td></tr> <tr><td>5</td><td>60%</td></tr> <tr><td>6</td><td>67%</td></tr> <tr><td>7</td><td>73%</td></tr> <tr><td>8</td><td>80%</td></tr> <tr><td>9</td><td>87%</td></tr> <tr><td>10</td><td>93%</td></tr> <tr><td>11+</td><td>100%</td></tr> </tbody> </table>	Duration	Mortality Selection	1	33%	2	40%	3	47%	4	53%	5	60%	6	67%	7	73%	8	80%	9	87%	10	93%	11+	100%	88% of Annuity 2000 Basic table With Mortality Selection Factors of: <table border="1"> <thead> <tr> <th>Duration</th> <th>Mortality Selection</th> </tr> </thead> <tbody> <tr><td>1</td><td>25%</td></tr> <tr><td>2</td><td>50%</td></tr> <tr><td>3</td><td>55%</td></tr> <tr><td>4</td><td>65%</td></tr> <tr><td>5</td><td>70%</td></tr> <tr><td>6</td><td>75%</td></tr> <tr><td>7</td><td>80%</td></tr> <tr><td>8</td><td>85%</td></tr> <tr><td>9</td><td>90%</td></tr> <tr><td>10</td><td>95%</td></tr> <tr><td>11+</td><td>100%</td></tr> </tbody> </table>	Duration	Mortality Selection	1	25%	2	50%	3	55%	4	65%	5	70%	6	75%	7	80%	8	85%	9	90%	10	95%	11+	100%																				
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Continuance:	Continuance rates were based on MetLife's experience study.	Termination curves were constructed separately for deaths and recoveries, gender and care path. Coefficients to an exponential-shaped curve were based on experience adjusted to minimize differences between actual and expected terminations in total as well as at periodic duration points along the curves. Death and recovery termination rates were recombined into a single termination table for modelling and valuation uses.																																																																				
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Attachment 2
Metropolitan Life Insurance Company
Nationwide Experience Projections (Premium Normalized to Include Prior Authorized Increase of 15%) and With No Future Increase
Actual to Expected Ratios
Policy Forms: LTC2-FAC, LTC2- VAL, LTC2-IDEAL and LTC2- PREM

Duration	Actual / Projected Experience			Expected Pricing Experience			G = C / F Actual to Expected Ratio
	Actual Experience through 12/31/2016 Projections based on Current Assumptions			Reproduced based on Original Pricing Assumptions since inception			
	A	B	C = B / A	D	E	F = E / D	
	Earned Premium	Incurred Claims	Loss Ratio	Earned Premium	Incurred Claims	Loss Ratio	
1	11,780,183	64,820	0.6%	11,780,183	777,547	6.6%	0.08
2	22,217,565	1,358,481	6.1%	22,210,622	2,060,520	9.3%	0.66
3	20,909,881	717,005	3.4%	21,119,273	3,050,494	14.4%	0.24
4	20,108,370	1,478,256	7.4%	20,273,165	3,804,216	18.8%	0.39
5	19,605,353	1,768,566	9.0%	19,436,110	4,313,146	22.2%	0.41
6	19,020,548	1,655,524	8.7%	18,596,768	5,043,178	27.1%	0.32
7	18,745,856	5,288,676	28.2%	17,758,604	5,584,254	31.4%	0.90
8	19,369,373	5,056,153	26.1%	16,914,133	6,305,097	37.3%	0.70
9	19,413,016	5,996,654	30.9%	16,028,491	7,282,588	45.4%	0.68
10	18,768,678	6,595,783	35.1%	15,092,931	7,883,514	52.2%	0.67
11	17,504,679	7,297,949	41.7%	14,119,253	8,623,569	61.1%	0.68
12	16,318,478	8,040,562	49.3%	13,138,332	9,055,332	68.9%	0.71
13	15,601,785	8,748,364	56.1%	12,179,147	9,611,303	78.9%	0.71
14	14,884,247	9,489,751	63.8%	11,243,932	10,150,111	90.3%	0.71
15	14,159,739	10,263,300	72.5%	10,333,215	10,481,501	101.4%	0.71
16	13,423,421	11,064,414	82.4%	9,465,798	10,919,385	115.4%	0.71
17	12,707,645	11,873,404	93.4%	8,640,086	11,074,127	128.2%	0.73
18	11,992,272	12,695,533	105.9%	7,855,032	11,310,264	144.0%	0.74
19	11,292,021	13,534,025	119.9%	7,114,169	11,184,382	157.2%	0.76
20	10,606,640	14,375,130	135.5%	6,420,206	11,166,038	173.9%	0.78
21	9,933,942	15,223,291	153.2%	5,780,377	11,129,871	192.5%	0.80
22	9,275,330	16,061,993	173.2%	5,190,129	10,868,866	209.4%	0.83
23	8,629,414	16,877,960	195.6%	4,645,453	10,721,948	230.8%	0.85
24	8,008,135	17,657,236	220.5%	4,148,160	9,976,666	240.5%	0.92
25	7,405,313	18,375,368	248.1%	3,698,934	9,664,221	261.3%	0.95
26	6,828,262	19,023,211	278.6%	3,295,744	9,379,110	284.6%	0.98
27	6,273,311	19,591,644	312.3%	2,933,526	8,908,944	303.7%	1.03
28	5,744,078	20,062,776	349.3%	2,608,668	8,585,895	329.1%	1.06
29	5,238,427	20,434,498	390.1%	2,320,728	7,669,406	330.5%	1.18
30	4,759,639	20,676,024	434.4%	2,068,178	7,330,867	354.5%	1.23
31	4,306,402	20,790,381	482.8%	1,846,471	7,027,719	380.6%	1.27
32	3,879,842	20,778,092	535.5%	1,649,931	6,628,397	401.7%	1.33
33	3,484,143	20,623,263	591.9%	1,476,069	6,333,998	429.1%	1.38
34	3,115,945	20,341,377	652.8%	1,323,891	5,683,172	429.3%	1.52
35	2,775,584	19,933,981	718.2%	1,191,204	5,353,700	449.4%	1.60
36	2,462,207	19,405,191	788.1%	1,073,976	5,143,294	478.9%	1.65
37	2,175,148	18,753,035	862.1%	969,947	4,891,200	504.3%	1.71
38	1,913,600	17,993,944	940.3%	878,082	4,709,459	536.3%	1.75
39	1,676,577	17,168,877	1024.0%	797,056	4,372,360	548.6%	1.87
40	1,462,830	16,274,228	1112.5%	725,186	4,316,955	595.3%	1.87
41	1,271,162	15,327,591	1205.8%	660,905	4,138,502	626.2%	1.93
42	1,100,583	14,360,523	1304.8%	602,357	4,087,275	678.5%	1.92
43	949,498	13,381,458	1409.3%	549,124	4,065,940	740.4%	1.90
44	816,186	12,389,153	1517.9%	500,177	4,060,049	811.7%	1.87
45	699,237	11,413,729	1632.3%	455,082	4,028,340	885.2%	1.84
46	597,074	10,462,895	1752.4%	413,591	3,922,599	948.4%	1.85
47	508,231	9,546,385	1878.4%	375,138	3,824,263	1019.4%	1.84
48	431,402	8,675,576	2011.0%	339,505	3,804,332	1120.6%	1.79
49	365,202	7,848,829	2149.2%	306,411	3,704,601	1209.0%	1.78
50	308,370	7,069,521	2292.5%	275,621	3,775,695	1369.9%	1.67
51	259,804	6,343,353	2441.6%	247,109	3,616,240	1463.4%	1.67
52	218,453	5,671,549	2596.2%	220,339	3,617,839	1641.9%	1.58
53	183,375	5,056,020	2757.2%	195,529	3,574,575	1828.2%	1.51
54	153,664	4,497,320	2926.7%	172,275	3,553,934	2062.9%	1.42
55	128,601	3,994,355	3106.0%	150,657	3,448,760	2289.1%	1.36
56	107,501	3,544,024	3296.7%	130,748	3,206,218	2452.2%	1.34
57	89,790	3,133,397	3489.7%	112,642	3,021,834	2682.7%	1.30
58	74,902	2,764,158	3690.4%	96,315	2,817,698	2925.5%	1.26
59	62,405	2,434,359	3900.9%	81,515	2,572,855	3156.3%	1.24
60	51,923	2,138,536	4118.7%	68,242	2,434,844	3568.0%	1.15
Lifetime	436,155,242	663,461,453	152.1%	334,294,443	369,653,007	110.6%	1.38
Lifetime*	266,568,371	219,470,238	82.3%	220,661,569	151,291,280	69.0%	1.19

Note:

- Figures in column A are normalized to reflect the prior rate action authorized by Maryland (15% on October 10, 2017) rather than the prior rate action approved by other states.

- Figures in column D and E do not reflect any rate action.

* Columns A and B are discounted back to the inception date at an interest rate of 4%, which is the weighted average maximum valuation interest rate for contract reserves. Columns D and E are discounted back to the inception date at the original pricing interest rate of 4%.

Attachment 4
Metropolitan Life Insurance Company
Actual to Expected Lapse/Mortality
Individual Business

Lapse			
Policy Duration	Actual	Expected *	A/E%
1	11,005	12,576	87.51%
2	13,869	10,602	130.82%
3	9,584	8,983	106.70%
4	6,951	7,536	92.24%
5	5,557	4,842	114.76%
6	3,703	3,475	106.57%
7	2,683	2,861	93.79%
8	1,960	2,173	90.20%
9	1,470	1,584	92.81%
10+	2,634	3,386	77.79%

Mortality			
Policy Duration	Actual	Expected *	A/E%
1	536	541	99.05%
2	924	1,129	81.85%
3	1,110	1,317	84.25%
4	1,316	1,663	79.12%
5	1,532	1,922	79.73%
6	1,694	2,194	77.22%
7	1,859	2,446	75.99%
8	2,052	2,691	76.24%
9	2,105	2,872	73.29%
10	2,268	3,000	75.61%
11	2,270	3,049	74.45%
12	2,125	2,668	79.64%
13	1,883	2,201	85.57%
14+	4,505	4,701	95.82%

* The expecteds are based on current best estimate assumptions.

Attachment 4
Metropolitan Life Insurance Company
Actual to Expected Incidence
Individual Business

Individual Business												
Calendar Year	Female						Male					
	Facility Care			Home Care			Facility Care			Home Care		
	Actual Claims ¹	Expected Claims ²	A/E%	Actual Claims ¹	Expected Claims ²	A/E%	Actual Claims ¹	Expected Claims ²	A/E%	Actual Claims ¹	Expected Claims ²	A/E%
2002	3	2	152%	1	1	78%	2	1	282%	0	1	0%
2003	14	8	186%	6	5	115%	4	3	133%	2	3	67%
2004	19	17	114%	15	13	119%	7	6	111%	5	7	71%
2005	33	27	121%	16	20	79%	15	11	140%	9	12	76%
2006	49	40	124%	33	31	106%	23	16	144%	18	18	99%
2007	80	57	141%	55	48	116%	34	25	138%	31	29	105%
2008	114	81	141%	88	73	121%	33	37	90%	43	47	92%
2009	110	105	105%	91	96	95%	53	48	109%	56	60	93%
2010	129	130	99%	99	115	86%	65	59	109%	82	75	110%
2011	157	155	101%	135	136	99%	68	74	92%	77	91	84%
2012	197	182	108%	162	157	103%	93	88	106%	120	109	110%
2013	209	214	98%	168	180	93%	98	104	95%	103	126	82%
2014	235	248	95%	201	204	99%	105	122	86%	156	146	107%
2015	264	278	95%	233	219	106%	124	141	88%	170	165	103%
Total	1,613	1,543	105%	1,303	1,297	100%	724	734	99%	872	890	98%

¹ Based on actual experience through 6/30/2016 including adjustments for incurred but not reported claims.

² The expected claims are based on current best estimate assumptions.

Attachment 4
Metropolitan Life Insurance Company
Actual to Expected Claim Terminations
All Business (excl. AARP-Pru)

Claim Duration (Months)	Non AARP-Pru Block						
	Actual Deaths	Expected Deaths ¹	Actual Recoveries	Expected Recoveries ¹	Deaths A/E%	Recoveries A/E%	Total A/E%
1	774	482	59	75	160%	78%	149%
2	703	1,197	156	233	59%	67%	60%
3	746	1,036	218	222	72%	98%	77%
4	834	1,139	294	252	73%	116%	81%
5	831	934	262	206	89%	127%	96%
6	726	816	196	179	89%	110%	93%
7	623	676	174	148	92%	118%	97%
8	561	582	131	122	96%	107%	98%
9	546	510	104	103	107%	101%	106%
10	465	459	114	88	101%	130%	106%
11	443	423	73	76	105%	96%	103%
12	469	397	80	67	118%	119%	118%
13+	11,666	10,750	1,254	1,365	109%	92%	107%
Total	19,387	19,402	3,115	3,137	100%	99%	100%

¹ The expected deaths and recoveries are based on current best estimate assumptions.