Re: 1LTC-97-MD-1, 1LTC-97-MD-2, 2LTC-97-MD-1, 2LTC-97-MD-2

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 <u>Automatic Inflation Choices "Landing Spots"</u> 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")	
	 Without/with proposed rate increase of 	
	32.25% (actuarially equivalent to two 15%	
	increases)	
	• <i>Nationwide</i> experience	
	 Weighted average statutory rate 4.5% 	
	LLR without rate increase – 112.9%	
	LLR with rate increase – 103.7%	
Exhibit II-A	Demonstration of rate action meeting Rate Stability	
	(58/85) limitations	
Exhibit I-B	Lifetime Loss Ratio ("LLR")	
	 Without/with proposed rate increase of 	
	32.25% (equivalent to two 15% increases)	
	• <i>Maryland</i> experience	
	 Weighted average statutory rate 4.5% 	
	LLR without rate increase –115.6 %	
	LLR with rate increase – 105.5%	
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	Nationwide Actual-to-Expected Loss Ratios by	
	Duration	
	LLR without rate increase – 112.9%; A/E – 1.85	
Attachment 3	Nationwide Actual-to-Expected Loss Ratios by	
	Calendar Year	
	LLR without rate increase – 112.9%; A/E – 1.88	

Attachment 4	Actual-to-Expected results for Lapse, Mortality and Morbidity assumptions
Addendum – Actuarial Memorandum	
Addendum	Memorandum on Premium Rates for use as
	"Landing Spots" with Rate Increases

Additional Notes

MetLife requests the rate action based on deviations from anticipated experience outlined in the Actuarial Memorandum, the Addendum, 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

Mark Debuton

Actuarial Director, Metropolitan Life Insurance Company

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Policy Forms

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

- 1LTC-97-MD-1
- 1LTC-97-MD-2
- 2LTC-97-MD-1
- 2LTC-97-MD-2

These forms were developed as part of a nationwide series and were issued in Maryland from April 2000 to July 2003, but are no longer being marketed in any state. Nationwide, the last policies under this series were issued in 2003.

Policy forms 1LTC-97-MD and 2LTC-97-MD (subsequently referred to as 1LTC-97 and 2LTC-97 respectively) are existing individual tax-qualified policy forms and were previously approved in 2000, along with any rider or endorsement forms that were contemporaneously or subsequently approved for use with these policy forms.

Policy form 1LTC-97 provides comprehensive coverage. Policy form 2LTC-97 provides coverage for long-term care services received in a nursing home, assisted living facility (ALF), or hospice facility.

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

1LTC-97 and 2LTC-97 are 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.

1LTC-97 also includes a home/community-based care benefit which reimburses 100% of charges from formal caregivers, up to a maximum home/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.

For both policy forms, the daily benefit amount, home care/adult day care percentage, and maximum benefit period are selected at issue. Additional benefits for initial care advisory service and

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transition expenses are also provided. In addition, 1LTC-97 provides benefits for respite care, caregiver training, chore/transportation services, and alternate services.

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, respite care, caregiver training, or initial care advisory services; 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 chose one of three inflation options: Automatic Simple Inflation Protection, Automatic Compound Inflation Protection, or Optional Inflation Protection. The insured could also elect nonforfeiture coverage at issue. For married couples that each had a primary policy, a Survivorship/Joint Waiver of Premium Rider was also available that provides for premiums to be waived when premiums are being waived on the spouse's policy and for a policy to become paid up when the spouse's policy is terminated due to death or exhaustion of the total lifetime benefit.

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.

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

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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. <u>Expenses</u> 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, level and payable for life. The premiums vary by issue age, benefit period, initial daily benefit, waiting period, home and community care percentage, inflation protection option, and the selection of any other options or riders.

9. Issue Age Range

The issue ages are from 20 to 85 except for the unlimited benefit period option which was only issued to age 81.

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 1LTC-97 and 2LTC-97 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 4.50%. 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 4.50%.

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-A and I-B 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 4.50%.

The assumptions used in the projections in Exhibit I-A and I-B 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	15.00%	8/21/2009	2/1/2010
2	15.00%	3/5/2014	8/1/2014
3	15.00%	5/4/2016	9/1/2016

The 2009 premium rate increase applied to policyholders with an issue age under 70, except when reduced by new business caps that were based on policies with similar benefits that were available for sale from MetLife.

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

17. Requested Rate Increase

The company is requesting two rate increases of 15.00% each, resulting in a cumulative compounded increase of 32.25%. Corresponding rate tables reflecting the increases are included with this filing.

Phase	Request	Expected Implementation Date
1	15%	1/1/2019
2	15%	4/1/2020

The rate tables reflect the prior authorized increases, but do not reflect any issue age and/or new business cap associated with the 2009 rate increase. Also note that the actual rates implemented may vary slightly from those filed due to implementation rounding algorithms.

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 claim termination rates: The original pricing expected claim costs for nursing home care were derived from the 1985 National Nursing Home Survey (TSA, 88-90 Reports). The incidence rates and lengths of stay vary by age and sex. The effects of selection at issue were assumed to reduce nursing home admission rates for the first seven policy durations.

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Home Care prevalence rates were derived from the 1982-1984 National Long-Term Care Surveys. These prevalence rates vary by age and sex. The effects of selection were assumed to reduce home care prevalence rates for the first nine policy durations.

The original pricing expected claim costs for nursing home, home and community care, and additional benefits were also adjusted to reflect the benefits available under these policy forms.

b. The original pricing expected voluntary termination rates varied by duration as shown in the following table:

Duration	Lapse Rate
1	10.0%
2	9.0%
3	8.0%
4	7.5%
5	7.0%
6	6.5%
7	6.0%
8	5.5%
9	5.0%
10+	4.5%

c. The original pricing expected mortality rates were based on the 1983 Group Annuity Mortality Table, adjusted to remove loading. These mortality rates vary by age and sex. The effects of selection at issue were assumed to reduce mortality rates for the first six durations.

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.

Similar analyses were done for the prior premium rate increases. Since then, morbidity levels have been worse than that assumed in the prior rate increase.

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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:	\$2,416
After 1 st phase of 15%:	\$2,779
After 2 nd phase of 15%:	\$3,196

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

Before increase:	\$2,445
After 1 st phase of 15%:	\$2,812
After 2 nd phase of 15%:	\$3,234

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	4%
45-49	8%
50-54	19%
55-59	24%
60-64	22%

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65-69	14%
70-74	6%
75+	2%
Total	100%

By Benefit Period

Benefit Period	%
1 Year	0%
1.5 Year	0%
2 Year	5%
3 Year	17%
4 Year	13%
5 Year	20%
6 Year	0%
7 Year	0%
Lifetime	45%
Total	100%

By Inflation Option

Inflation Type	%
Compound 3%	0%
Compound 5%	38%
Simple 5%	31%
FPO	31%
None	0%
Total	100%

By Home Care Percentage

Home Care Percentage	%
None (FC Only)	6%
50%	0%
60%	11%
75%	0%
80%	11%
100%	72%
Total	100%

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By Gender

Gender	%
Female	63%
Male	37%
Total	100%

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:

		ed Before Rate gulation Effective Date	Issued On or After Rate Stability Regulation Effective Date					
	Number of Insured	2017 Annualized Premium	Number of Insured	2017 Annualized Premium				
Maryland	308	750,539	108	\$266,202				
Nationwide	14,563	\$35,623,386	1,236	\$2,544,063				

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;

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- 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.

Mark D. Newton, FSA, MAAA

Mark Dlbuton

Actuarial Director, Metropolitan Life Insurance Company

Exhibit I-A

Metropolitan Life Insurance Company

Nationwide Experience Projections (Premium Normalized to Include Prior Authorized Increases) and With No Future Increase Policy Forms: 1LTC97 and 2LTC97

				Loss R	atio Demonstr					ors Derived fr	om Projected Value		•	nly	Interest Ra	
	Calendar	Earned	/ithout Interest Incurred	Loss	Life	Earned	With Interest Incurred	Loss	Premium Rate Increase	Benefit	Policy	Persistency F Policy	Policy	Premium	Calendar Year Effective	Mid-Year Disc / Accum
	Year	Premium	Claims	Ratio	Years	Premium	Claims	Ratio	Factor	Downgrade	Lapse & Mortality	,		Persistency	Int Rate	Factor
	1998	168,478	- 0.400	0.0%	398	380,359	-	0.0%							4.50%	2.2576
	1999 2000	2,560,434 11,396,617	6,469 808,649	0.3% 7.1%	3,034 9,449	5,531,574 23,561,057	13,976 1,671,778	0.3% 7.1%							4.50% 4.50%	2.1604 2.0674
	2001	26,357,874	1,975,285	7.5%	17,147	52,145,025	3,907,799	7.5%							4.50%	1.9783
	2002	40,913,902	6,033,271	14.7%	24,572	77,456,365	11,421,919	14.7%							4.50%	1.8932
	2003 2004	45,945,058 43,368,430	8,205,406 5,026,571	17.9% 11.6%	24,335 23,394	83,235,525 75,184,330	14,865,174 8,714,159	17.9% 11.6%							4.50% 4.50%	1.8116 1.7336
Historical	2005	41,865,927	8,327,622	19.9%	22,685	69,454,126	13,815,237	19.9%							4.50%	1.6590
Experience	2006	40,589,310	12,617,728	31.1%	22,125	64,436,616	20,030,980	31.1%							4.50%	1.5875
	2007 2008	39,481,834 38,471,868	17,587,086 23,105,271	44.5% 60.1%	21,685 21,218	59,979,395 55,928,316	26,717,675 33,589,191	44.5% 60.1%							4.50% 4.50%	1.5192 1.4537
	2009	37,185,285	17,503,935	47.1%	20,756	51,730,096	24,350,500	47.1%							4.50%	1.3911
	2010	37,426,671	18,162,716	48.5%	20,189	49,823,827	24,178,908	48.5%							4.50%	1.3312
	2011 2012	38,554,435 37,114,827	19,564,570 27,943,876	50.7% 75.3%	19,689 19,043	49,114,976 45,245,016	24,923,550 34,065,122	50.7% 75.3%							4.50% 4.50%	1.2739 1.2191
	2013	35,630,361	23,284,466	65.4%	18,571	41,564,948	27,162,723	65.4%							4.50%	1.1666
	2014	34,329,227	31,145,026	90.7%	18,159	38,322,581	34,767,977	90.7%							4.50%	1.1163
	2015 2016	35,649,087 34,356,233	29,763,082 32,308,665	83.5% 94.0%	17,660 17,108	38,082,272 35,120,742	31,794,524 33,027,611	83.5% 94.0%							4.50% 4.50%	1.0683 1.0223
Projected	2017	35,674,134	30,375,144	85.1%	16,463	34,897,579	29,713,937	85.1%		N/A	0.0377	N/A	0.962	0.959		0.9782
Future	2018	34,632,273	33,328,638	96.2%	15,807	32,419,519	31,199,177	96.2%	1.4758	N/A		N/A	0.960	0.946		0.9361
Experience	2019 2020	32,684,546	36,466,696 39,806,922	111.6% 129.4%	15,140	29,278,696	32,666,732 34,123,344	111.6% 129.4%	1.4758 1.4758	N/A N/A		N/A N/A	0.958 0.955	0.944	4.50% 4.50%	0.8958 0.8572
	2020	30,761,682 28,864,681	43,299,584	150.0%	14,464 13,782	26,369,571 23,677,915	34,123,344 35,518,975	150.0%	1.4758	N/A N/A		N/A N/A	0.955	0.941 0.938		0.8572
	2022	26,988,637	46,913,241	173.8%	13,094	21,185,629	36,826,110	173.8%	1.4758	N/A	0.0499	N/A	0.950	0.935	4.50%	0.7850
	2023	25,144,057	50,605,770 54,330,574	201.3%	12,404	18,887,717	38,014,051	201.3%		N/A		N/A	0.947	0.932		0.7512
	2024 2025	23,337,457 21,581,038	54,320,574 58,016,066	232.8% 268.8%	11,714 11,026	16,775,727 14,845,125	39,047,405 39,907,986	232.8% 268.8%	1.4758 1.4758	N/A N/A		N/A N/A	0.944 0.941	0.928 0.925		0.7188 0.6879
	2026	19,873,707	61,589,431	309.9%	10,343	13,082,000	40,541,651	309.9%	1.4758	N/A		N/A	0.938	0.921	4.50%	0.6583
	2027	18,224,755	64,965,624	356.5%	9,669	11,479,967	40,922,538	356.5%	1.4758	N/A		N/A	0.935	0.917	4.50%	0.6299
	2028 2029	16,640,067 15,124,938	68,115,324 70,978,478	409.3% 469.3%	9,004 8,354	10,030,388 8,724,488	41,058,917 40,942,377	409.3% 469.3%	1.4758 1.4758	N/A N/A		N/A N/A	0.931 0.928	0.913 0.909		0.6028 0.5768
	2030	13,683,025	73,476,760	537.0%	7,719	7,552,873	40,558,331	537.0%	1.4758	N/A		N/A	0.924	0.905		0.5520
	2031	12,319,639	75,559,697	613.3%	7,104	6,507,464	39,912,046	613.3%	1.4758	N/A		N/A	0.920	0.900		0.5282
	2032	11,037,780	77,145,167	698.9%	6,509	5,579,294	38,994,758	698.9%	1.4758	N/A		N/A	0.916	0.896		0.5055
	2033 2034	9,838,269 8,722,341	78,188,780 78,698,595	794.7% 902.3%	5,938 5,391	4,758,827 4,037,364	37,820,359 36,427,712	794.7% 902.3%	1.4758 1.4758	N/A N/A	0.0878 0.0920	N/A N/A	0.912 0.908	0.891 0.887	4.50% 4.50%	0.4837 0.4629
	2035	7,690,471	78,589,676	1021.9%	4,872	3,406,446	34,810,810	1021.9%	1.4758	N/A		N/A	0.904	0.882		0.4429
	2036	6,742,882	77,845,355	1154.5%	4,381	2,858,103	32,996,285	1154.5%	1.4758	N/A		N/A	0.899	0.877		0.4239
	2037 2038	5,877,326 5,090,284	76,542,278 74,610,781	1302.3% 1465.7%	3,919 3,488	2,383,943 1,975,794	31,046,842 28,960,186	1302.3% 1465.7%	1.4758 1.4758	N/A N/A		N/A N/A	0.895 0.890	0.872 0.866		0.4056 0.3882
	2039	4,382,044	72,072,510	1644.7%	3,087	1,627,647	26,770,292	1644.7%	1.4758	N/A		N/A	0.885	0.861	4.50%	0.3714
	2040	3,749,038	69,023,180	1841.1%	2,717	1,332,561	24,533,649	1841.1%	1.4758	N/A		N/A	0.880	0.856		0.3554
	2041 2042	3,186,583 2,691,183	65,513,816 61,676,559	2055.9% 2291.8%	2,377 2,068	1,083,867 875,947	22,283,519 20,074,962	2055.9% 2291.8%	1.4758 1.4758	N/A N/A		N/A N/A	0.875 0.870	0.850 0.845		0.3401 0.3255
	2042	2,257,394	57,571,157	2550.3%	1,789	703,114	17,931,774	2550.3%	1.4758	N/A N/A		N/A	0.865	0.839		0.3255
	2044	1,880,462	53,270,404	2832.8%	1,537	560,488	15,877,715	2832.8%	1.4758	N/A	0.1405	N/A	0.860	0.833	4.50%	0.2981
	2045	1,556,058	48,864,311	3140.3%	1,313	443,825	13,937,263	3140.3%	1.4758	N/A		N/A	0.854	0.827	4.50%	0.2852
	2046 2047	1,278,739 1,043,271	44,444,821 40,077,867	3475.7% 3841.6%	1,114 939	349,021 272,490	12,130,832 10,467,856	3475.7% 3841.6%	1.4758 1.4758	N/A N/A		N/A N/A	0.849 0.843	0.822 0.816		0.2729 0.2612
	2048	844,798	35,822,942	4240.4%	787	211,149	8,953,608	4240.4%	1.4758	N/A		N/A	0.837	0.810		0.2499
	2049	679,353	31,718,680	4669.0%	654	162,486	7,586,399	4669.0%	1.4758	N/A		N/A	0.832	0.804		0.2392
	2050 2051	541,928 429,016	27,829,204 24,179,452	5135.2% 5636.0%	541 443	124,035 93,964	6,369,496 5,295,835	5135.2% 5636.0%	1.4758 1.4758	N/A N/A		N/A N/A	0.826 0.820	0.798 0.792		0.2289 0.2190
	2052	337,039	20,800,584	6171.6%	361	70,640	4,359,606	6171.6%	1.4758	N/A		N/A	0.814	0.786		0.2096
	2053	262,795	17,703,199	6736.5%	291	52,708	3,550,644	6736.5%	1.4758	N/A		N/A	0.807	0.780		0.2006
	2054 2055	203,212 155,928	14,903,181 12,418,463	7333.8% 7964.2%	233 185	39,002 28,638	2,860,343 2,280,818	7333.8% 7964.2%	1.4758 1.4758	N/A N/A		N/A N/A	0.801 0.795	0.773 0.767		0.1919 0.1837
	2056	118,570	10,231,166	8628.8%	146	20,839	1,798,174	8628.8%	1.4758	N/A N/A		N/A	0.795	0.767		0.1637
	2057	89,455	8,358,104	9343.4%	114	15,045	1,405,717	9343.4%	1.4758	N/A	0.2214	N/A	0.779	0.754	4.50%	0.1682
	2058 2059	67,006 49,842	6,763,891 5,417,347	10094.5% 10869.1%	88 68	10,784 7,676	1,088,606 834,342	10094.5% 10869.1%	1.4758 1.4758	N/A N/A		N/A N/A	0.775 0.768	0.749 0.744		0.1609 0.1540
	2059	36,796	5,417,347 4,296,230	10869.1%	51	7,676 5,423	633,182	10869.1%	1.4758	N/A N/A		N/A N/A	0.768	0.744		0.1540
	2061	26,932	3,372,638	12522.6%	39	3,798	475,658	12522.6%	1.4758	N/A	0.2446	N/A	0.755	0.732	4.50%	0.1410
	2062	19,552	2,616,945	13384.5%	29	2,639	353,186	13384.5%	1.4758	N/A		N/A	0.747	0.726		0.1350
	2063 2064	14,065 10,031	2,009,068 1,518,993	14283.8% 15143.4%	22 16	1,817 1,240	259,470 187,729	14283.8% 15143.4%	1.4758 1.4758	N/A N/A		N/A N/A	0.743 0.732	0.719 0.713		0.1291 0.1236
	2065	7,090	1,133,879	15993.2%	12	838	134,099	15993.2%	1.4758	N/A		N/A	0.729	0.707		0.1230
	2066	4,962	832,144	16769.5%	8	562	94,176	16769.5%	1.4758	N/A		N/A	0.715	0.700		0.1132
	2067 2068	3,441 2,357	598,923 425,061	17405.4% 18033.6%	6	373 244	64,863 44,052	17405.4% 18033.6%	1.4758 1.4758	N/A N/A		N/A N/A	0.707 0.703	0.693 0.685		0.1083 0.1036
	2068	2,357 1,592	425,061 294,091	18033.6%	3	244 158	29,166	18033.6%	1.4758	N/A N/A		N/A N/A	0.703	0.685 0.675		0.1036
	2070	1,061	202,745	19111.2%	2	101	19,241	19111.2%	1.4758	N/A	0.3164	N/A	0.684	0.666	4.50%	0.0949
	2071	697	138,435	19858.7%	1	63	12,572	19858.7%	1.4758	N/A		N/A	0.649	0.657		0.0908
	2072 2073	457 300	92,400 63,724	20209.4% 21268.6%	1	40 25	8,030 5,299	20209.4% 21268.6%	1.4758 1.4758	N/A N/A		N/A N/A	N/A N/A	N/A N/A	4.50% 4.50%	0.0869 0.0832
	2074	196	43,240	22014.7%	0	16	3,441	22014.7%	1.4758	N/A		N/A	N/A	N/A	4.50%	0.0796
	2075	130	29,887	22997.5%	0	10	2,276	22997.5%	1.4758	N/A		N/A	N/A	N/A	4.50%	0.0762
	2076 2077-2097	84 110	20,180 30,097	24035.5% 27323.1%	0	6 2	1,471 2,099	24035.5% 27323.1%	1.4758 1.4758	N/A N/A		N/A N/A	N/A N/A	N/A N/A	4.50% 4.50%	0.0729 0.0697
	2011 2001	110	30,037		<u> </u>		2,033	_, 525.170	1.7700		1 19/7	1 N/ /\	I N/ /\	1 1 / / \	1 7.50 /0	0.0037
	Past	621,365,858	283,369,694	45.6%	341,217	916,297,146	369,018,801	40.3%								
	Future Lifetime	436,467,557 1,057,833,415	2,095,818,101 2,379,187,795	480.2% 224.9%	231,632 572,849	308,817,715 1,225,114,861	1,014,731,989 1,383,750,790	328.6% 112.9%								
Note:	-notifie	1,007,000,410	2,013,101,130	224.370	512,048	1,44,001	1,000,100,180	114.370	<u> </u>							

- The premiums are normalized to reflect prior authorized increase by Maryland instead of rate action authorized by other state.

- The 1st round authorized increase of 15% was implemented from Febuary 2010 through January 2011 and the 2nd round authorized increase of 15% was implemented from August 2014 through July 2015 and the 3rd round authorized increase of 15% was implemented from September 2016 through August 2017.

- The projections are based on the assumptions derived using experience data through 6/30/2016.

Exhibit I-A Metropolitan Life Insurance Company Nationwide Experience Projections (Premium Normalized to Include Prior Authorized Increases) and With 32.25% Future Increase Policy Forms: 1LTC97 and 2LTC97

	-	W.	thout Interest	Loss Ra	atio Demonstr		With Interest		Factor Premium	ors Derived fr	om Projected Value	es for Illustration		Only
	Calendar	Earned	Incurred	Loss	Life	Earned	Incurred	Loss	Rate Increase	Benefit	Policy	Policy	Policy	Premium
	Year 1998	Premium 168,478	Claims -	Ratio 0.0%	Years 398	Premium 380,359	Claims	Ratio 0.0%	Factor	Downgrade	Lapse & Mortality	Shock Lapse	Persistency	Persistend
	1999	2,560,434	6,469	0.3%	3,034	5,531,574	13,976	0.3%						
	2000	11,396,617	808,649	7.1%	9,449	23,561,057	1,671,778	7.1%						
	2001 2002	26,357,874 40,913,902	1,975,285 6,033,271	7.5% 14.7%	17,147 24,572	52,145,025 77,456,365	3,907,799 11,421,919	7.5% 14.7%						
	2003	45,945,058	8,205,406	17.9%	24,335	83,235,525	14,865,174	17.9%						
	2004	43,368,430	5,026,571	11.6%	23,394	75,184,330	8,714,159	11.6%						
Historical	2005	41,865,927	8,327,622	19.9%	22,685	69,454,126	13,815,237	19.9%						
xperience	2006 2007	40,589,310 39,481,834	12,617,728 17,587,086	31.1% 44.5%	22,125 21,685	64,436,616 59,979,395	20,030,980 26,717,675	31.1% 44.5%						
	2008	38,471,868	23,105,271	60.1%	21,218	55,928,316	33,589,191	60.1%						
	2009	37,185,285	17,503,935	47.1%	20,756	51,730,096	24,350,500	47.1%						
	2010	37,426,671	18,162,716	48.5%	20,189	49,823,827	24,178,908	48.5%						
	2011 2012	38,554,435 37,114,827	19,564,570 27,943,876	50.7% 75.3%	19,689 19,043	49,114,976 45,245,016	24,923,550 34,065,122	50.7% 75.3%						
	2013	35,630,361	23,284,466	65.4%	18,571	41,564,948	27,162,723	65.4%						
	2014	34,329,227	31,145,026	90.7%	18,159	38,322,581	34,767,977	90.7%						
	2015	35,649,087	29,763,082	83.5%	17,660	38,082,272	31,794,524	83.5%						
rojected	2016 2017	34,356,233 35,674,134	32,308,665 30,375,144	94.0% 85.1%	17,108 16,463	35,120,742 34,897,579	33,027,611 29,713,937	94.0% 85.1%	1.4384	1.0000	0.0377	1.0000	0.962	0.9
Future	2017	34,632,273	33,328,638	96.2%	15,807	32,419,519	31,199,177	96.2%	1.4758	1.0000	0.0377		0.962	
perience	2019	34,012,626	35,096,840	103.2%	14,812	30,468,386	31,439,620	103.2%	1.5957	0.9838	0.0629	0.9783	0.937	
	2020	34,486,229	37,068,206	107.5%	13,886	29,562,332	31,775,658	107.5%	1.7767	0.9700	0.0625		0.937	
	2021	35,450,605	40,320,573	113.7%	13,230	29,080,398	33,075,269	113.7%	1.9464	0.9700			0.953	
	2022 2023	33,236,831 30,965,208	43,685,610 47,124,093	131.4% 152.2%	12,570 11,908	26,090,356 23,260,450	34,292,473 35,398,684	131.4% 152.2%	1.9517 1.9517	0.9700 0.9700	0.0499 0.0527		0.950 0.947	
	2024	28,740,358	50,583,319	176.0%	11,245	20,659,509	36,360,943	176.0%	1.9517	0.9700	0.0556		0.944	
	2025	26,577,307	54,024,561	203.3%	10,585	18,281,950	37,162,316	203.3%	1.9517	0.9700			0.941	0.
	2026	24,474,709	57,352,078	234.3%	9,929	16,110,639	37,752,386	234.3%	1.9517	0.9700	0.0619		0.938	
	2027 2028	22,444,004 20,492,442	60,495,989 63,428,990	269.5% 309.5%	9,282 8,644	14,137,717 12,352,543	38,107,067 38,234,063	269.5% 309.5%	1.9517 1.9517	0.9700 0.9700	0.0652 0.0687		0.935 0.931	0. 0.
	2029	18,626,542	66,095,159	354.8%	8,020	10,744,312	38,125,542	354.8%	1.9517	0.9700	0.0722		0.928	
	2030	16,850,810	68,421,559	406.0%	7,411	9,301,454	37,767,918	406.0%	1.9517	0.9700	0.0760		0.924	
	2031	15,171,783	70,361,190	463.8%	6,820	8,014,020	37,166,098	463.8%	1.9517	0.9700	0.0798		0.920	
	2032 2033	13,593,159 12,115,946	71,837,580 72,809,392	528.5% 600.9%	6,249 5,700	6,870,967 5,860,552	36,311,918 35,218,318	528.5% 600.9%	1.9517 1.9517	0.9700 0.9700	0.0837 0.0878		0.916 0.912	
	2034	10,741,667	73,284,132	682.2%	5,176	4,972,063	33,921,486	682.2%	1.9517	0.9700	0.0920		0.908	
	2035	9,470,907	73,182,706	772.7%	4,677	4,195,079	32,415,826	772.7%	1.9517	0.9700	0.0963		0.904	
	2036	8,303,940	72,489,595	873.0%	4,206	3,519,788	30,726,140	873.0%	1.9517	0.9700	0.1008		0.899	
	2037 2038	7,237,998 6,268,745	71,276,170 69,477,559	984.7% 1108.3%	3,763 3,348	2,935,854 2,433,214	28,910,819 26,967,725	984.7% 1108.3%	1.9517 1.9517	0.9700 0.9700	0.1054 0.1101		0.895 0.890	
	2039	5,396,540	67,113,921	1243.6%	2,964	2,004,467	24,928,496	1243.6%	1.9517	0.9700	0.1149		0.885	
	2040	4,616,985	64,274,385	1392.1%	2,608	1,641,064	22,845,733	1392.1%	1.9517	0.9700	0.1199		0.880	
	2041	3,924,316	61,006,466	1554.6%	2,282	1,334,796	20,750,413	1554.6%	1.9517	0.9700	0.1249		0.875	
	2042 2043	3,314,225 2,780,008	57,433,212 53,610,261	1732.9% 1928.4%	1,986 1,717	1,078,739 865,893	18,693,805 16,698,068	1732.9% 1928.4%	1.9517 1.9517	0.9700 0.9700	0.1301 0.1352		0.870 0.865	
	2044	2,315,812	49,605,400	2142.0%	1,476	690,248	14,785,328	2142.0%	1.9517	0.9700	0.1405		0.860	
	2045	1,916,304	45,502,446	2374.5%	1,260	546,575	12,978,379	2374.5%	1.9517	0.9700	0.1460		0.854	0
	2046	1,574,783	41,387,018	2628.1%	1,070	429,823	11,296,231	2628.1%	1.9517	0.9700	0.1514		0.849	
	2047 2048	1,284,801 1,040,379	37,320,510 33,358,323	2904.8% 3206.4%	902 755	335,575 260,033	9,747,668 8,337,600	2904.8% 3206.4%	1.9517 1.9517	0.9700 0.9700	0.1569 0.1627		0.843 0.837	
	2049	836,632	29,536,435	3530.4%	628	200,033	7,064,455	3530.4%	1.9517	0.9700	0.1680		0.832	
	2050	667,391	25,914,554	3883.0%	519	152,751	5,931,274	3883.0%	1.9517	0.9700	0.1740		0.826	
	2051	528,338	22,515,906	4261.6%	425	115,718	4,931,481	4261.6%	1.9517	0.9700	0.1802		0.820	
	2052 2053	415,067 323,636	19,369,504 16,485,219	4666.6% 5093.8%	346 279	86,994 64,910	4,059,665 3,306,360	4666.6% 5093.8%	1.9517 1.9517	0.9700 0.9700	0.1861 0.1928		0.814 0.807	
	2054	250,258	13,877,842	5545.4%	224	48,032	2,663,551	5545.4%	1.9517	0.9700	0.1928		0.807	
	2055	192,028	11,564,073	6022.1%	178	35,268	2,123,898	6022.1%	1.9517	0.9700	0.2051		0.795	
	2056	146,020	9,527,262	6524.6%	140	25,664	1,674,459	6524.6%	1.9517	0.9700	0.2130		0.787	
	2057	110,165	7,783,067	7064.9%	109	18,528	1,309,004	7064.9%	1.9517	0.9700	0.2214		0.779	
	2058 2059	82,519 61,381	6,298,535 5,044,634	7632.9% 8218.6%	84 65	13,281 9,453	1,013,709 776,940	7632.9% 8218.6%	1.9517 1.9517	0.9700 0.9700	0.2255 0.2317		0.775 0.768	
	2060	45,314	4,000,649	8828.7%	49	6,678	589,620	8828.7%	1.9517	0.9700	0.2394		0.761	0
	2061	33,168	3,140,600	9468.9%	37	4,678	442,933	9468.9%	1.9517	0.9700	0.2446		0.755	
	2062 2063	24,079 17,322	2,436,899 1,870,844	10120.6% 10800.6%	28 21	3,250	328,887 241,618	10120.6% 10800.6%	1.9517 1.9517	0.9700 0.9700	0.2533 0.2572		0.747 0.743	
	2063	12,353	1,414,486	11450.6%	15	2,237 1,527	174,813	11450.6%	1.9517	0.9700	0.2677		0.743	
	2065	8,731	1,055,868	12093.2%	11	1,033	124,873	12093.2%	1.9517	0.9700			0.729	
	2066	6,111	774,892	12680.2%	8	692	87,697	12680.2%	1.9517	0.9700	0.2850		0.715	
	2067	4,238	557,717	13161.0%	6	459	60,401	13161.0%	1.9517	0.9700	0.2928		0.707	
	2068 2069	2,903 1,960	395,817 273,857	13636.0% 13970.5%	4 3	301 194	41,021 27,159	13636.0% 13970.5%	1.9517 1.9517	0.9700 0.9700	0.2973 0.3276		0.703 0.672	
	2009	1,306	188,796	14450.8%	2	124	17,917	14450.8%	1.9517	0.9700	0.3164		0.672	
	2071	858	128,911	15016.0%	1	78	11,707	15016.0%	1.9517	0.9700	0.3511		0.649	
	2072	563	86,043	15281.2%	1	49	7,478	15281.2%	1.9517	0.9700			N/A	
	2073	369	59,340	16082.1%	0	31	4,935	16082.1%	1.9517	0.9700			N/A	
	2074 2075	242 160	40,265 27,831	16646.3% 17389.4%	0	19 12	3,204 2,119	16646.3% 17389.4%	1.9517 1.9517	0.9700 0.9700	N/A N/A		N/A N/A	
	2076	103	18,791	18174.3%	0	8	1,369	18174.3%	1.9517	0.9700			N/A	
	2077-2097	136	28,026	20660.2%	0	9	1,954	20660.2%	1.9517	0.9700			N/A	
	Pact	604 265 050	202 260 604	AE 60/	244 047	016 007 140	260 040 004	40.00/						
	Past Future	621,365,858 511,505,727	283,369,694 1,957,147,688	45.6% 382.6%	341,217 223,935	916,297,146 356,147,978	369,018,801 950,129,609	40.3% 266.8%						
	Lifetime	1,132,871,585	2,240,517,382	197.8%	565,152	1,272,445,124	1,319,148,410	103.7%						

Note:
- The premiums are normalized to reflect prior authorized increase by Maryland instead of rate action authorized by other state.

⁻ The 1st round authorized increase of 15% was implemented from Febuary 2010 through January 2011 and the 2nd round authorized increase of 15% was implemented from August 2014 through July 2015

and the 3rd round authorized increase of 15% was implemented from September 2016 through August 2017.

- The current requested increases of 32.25% are assumed to be implemented in two phases at 15% each with the 1st phase starting January 2019 and the 2nd phase starting April 2020.

⁻ The projections are based on the assumptions derived using experience data through 6/30/2016.

Exhibit II-A

Demonstration that Lifetime Incurred Claims with Requested Increase are Not Less than Lifetime Earned Premium with Prescribed Factors Policy Forms: 1LTC97 and 2LTC97

Accumulated value of initial earned premium	876,988,738	x	58% =	508,653,468
2a Accumulated value of earned premium 2b Accumulated value of prior premium rate schedule increases (2a-1)	916,297,146 39,308,408	x	85% =	33,412,146
3 Present value of future projected initial earned premium	209,871,494	x	58% =	121,725,466
4a Present value of future projected premium 4b Present value of future projected premium in excess of the projected initial earned premiums (4a-3)	356,147,978 146,276,485	x	85% =	124,335,012
5 Lifetime Earned Premium Times Prescribed Factor: Sum of 1, 2b, 3, and 4b				788,126,093
6a Accumulated value of incurred claims without the inclusion of active life reserves 6b Present value of future projected incurred claims without the inclusion of active life reserves				369,018,801 950,129,609
7 Lifetime Incurred Claims with Rate Increase: Sum of 6a and 6b				1,319,148,410
8 Test: 7 is not less than 5				TRUE

Exhibit I-B Metropolitan Life Insurance Company Maryland Experience Projections (Premium Normalized to Include Prior Authorized Increases) and With No Future Increase Policy Forms: 1LTC97 and 2LTC97

				Loss Ra	tio Demonst	ration				ors Derived fr	rom Projected Value			Only	Interest Ra	
	Calendar	Earned	Incurred	Loss	Life	Earned	With Interest Incurred	Loss	Premium Rate Increase	Benefit	Policy	Persistency Policy	Policy	Premium	Calendar Year Effective	Mid-Year Disc / Accum
	Year 1998	Premium -	Claims -	Ratio N/A	Years -	Premium -	Claims -	Ratio N/A	Factor	Downgrade	Lapse & Mortality	Shock Lapse	Persistency	Persistency	Int Rate 4.50%	Factor 2.2576
	1999 2000	- 132,961	-	N/A 0.0%	- 195	- 274,880	-	N/A 0.0%							4.50% 4.50%	2.1604 2.0674
	2001 2002	581,051 910,356	- 12,200	0.0% 1.3%	402 609	1,149,521 1,723,446	23,096	0.0% 1.3%							4.50% 4.50%	1.9783 1.8932
	2003	1,165,474	1,483	0.1%	636	2,111,409	2,687	0.1%							4.50%	1.8116
Historical		1,124,027 1,109,337	-	0.0% 0.0%	617 597	1,948,634 1,840,352	-	0.0% 0.0%							4.50% 4.50%	1.7336 1.6590
Experienc	2006 2007	1,088,244 1,047,863	436,289 94,898	40.1% 9.1%	587 575	1,727,617 1,591,876	692,620 144,166	40.1% 9.1%							4.50% 4.50%	1.5875 1.5192
	2008 2009	1,036,682 1,006,828	404,330 468,939	39.0% 46.6%	566 558	1,507,072 1,400,644	587,792 652,362	39.0% 46.6%							4.50% 4.50%	1.4537 1.3911
	2010	1,007,666	70,405	7.0%	540	1,341,444	93,726	7.0%							4.50%	1.3312
	2011 2012	1,038,276 994,593	499,295 1,713,741	48.1% 172.3%	528 502	1,322,672 1,212,463	636,058 2,089,145	48.1% 172.3%							4.50% 4.50%	1.2739 1.2191
	2013 2014	958,954 926,944	443,480 519,849	46.2% 56.1%	493 485	1,118,677 1,034,770	517,346 580,321	46.2% 56.1%							4.50% 4.50%	1.1666 1.1163
	2015 2016	959,441 929,918	860,764 882,173	89.7% 94.9%	470 457	1,024,927 950,611	919,514 901,804	89.7% 94.9%							4.50% 4.50%	1.0683 1.0223
Projected Future		938,096 911,414	754,158 823,655	80.4% 90.4%	440 422	917,676 853,181	737,741 771,030	80.4% 90.4%	1.4384 1.4758	N/A N/A				0.931 0.947	4.50% 4.50%	0.9782 0.9361
Experience	e 2019	861,133	900,316	104.6%	405	771,400	806,500	104.6%	1.4758	N/A	0.0418	N/A	0.958	0.945	4.50%	0.8958
	2020 2021	811,740 763,119	983,382 1,074,489	121.1% 140.8%	387 369	695,841 625,992	842,976 881,411	121.1% 140.8%	1.4758 1.4758	N/A N/A	0.0464	N/A	0.954	0.943 0.940	4.50% 4.50%	0.8572 0.8203
	2022 2023	715,274 668,231	1,172,785 1,276,979	164.0% 191.1%	351 333	561,478 501,962	920,617 959,241	164.0% 191.1%	1.4758 1.4758	N/A N/A	0.0516	N/A	0.948	0.937 0.934	4.50% 4.50%	0.7850 0.7512
	2024 2025	622,122 577,278	1,385,991 1,503,369	222.8% 260.4%	315 297	447,202 397,097	996,296 1,034,135	222.8% 260.4%	1.4758 1.4758	N/A N/A		N/A N/A		0.931 0.928	4.50% 4.50%	0.7188 0.6879
	2026 2027	533,635 491,404	1,623,815 1,741,614	304.3% 354.4%	279 261	351,269 309,541	1,068,887 1,097,061	304.3% 354.4%	1.4758 1.4758	N/A N/A		N/A N/A		0.924 0.921	4.50% 4.50%	0.6583 0.6299
	2028	450,639	1,861,056 1,975,444	413.0% 480.1%	244 227	271,639 237,321	1,121,817	413.0% 480.1%	1.4758 1.4758	N/A N/A	0.0666		0.933	0.917 0.913	4.50% 4.50%	0.6028 0.5768
	2029 2030	411,424 373,804	2,080,774	556.6%	210	206,336	1,139,491 1,148,563	556.6%	1.4758	N/A	0.0738	N/A	0.926	0.909	4.50%	0.5520
	2031 2032	338,059 304,161	2,177,451 2,259,261	644.1% 742.8%	194 178	178,569 153,745	1,150,171 1,141,994	644.1% 742.8%	1.4758 1.4758	N/A N/A	0.0815	N/A	0.918	0.904 0.900	4.50% 4.50%	0.5282 0.5055
	2033 2034	272,174 242,096	2,329,282 2,386,119	855.8% 985.6%	163 148	131,652 112,061	1,126,687 1,104,478	855.8% 985.6%	1.4758 1.4758	N/A N/A		N/A N/A		0.895 0.889	4.50% 4.50%	0.4837 0.4629
	2035 2036	214,072 188,060	2,415,435 2,424,683	1128.3% 1289.3%	134 120	94,822 79,713	1,069,902 1,027,750	1128.3% 1289.3%	1.4758 1.4758	N/A N/A	0.0950	N/A	0.905	0.884 0.878	4.50% 4.50%	0.4429 0.4239
	2037	164,086	2,410,452	1469.0%	108	66,556	977,720	1469.0%	1.4758 1.4758	N/A N/A	0.1050	N/A	0.895	0.873	4.50% 4.50%	0.4056
	2038 2039	142,036 122,034	2,365,604 2,298,977	1665.5% 1883.9%	96 85	55,131 45,328	918,210 853,922	1665.5% 1883.9%	1.4758	N/A	0.1160	N/A	0.884	0.866 0.859	4.50%	0.3882 0.3714
	2040 2041	104,040 87,937	2,209,645 2,098,960	2123.8% 2386.9%	74 65	36,980 29,911	785,398 713,929	2123.8% 2386.9%	1.4758 1.4758	N/A N/A		N/A N/A		0.853 0.845	4.50% 4.50%	0.3554 0.3401
	2042 2043	73,720 61,271	1,974,972 1,837,609	2679.0% 2999.1%	56 48	23,995 19,084	642,829 572,363	2679.0% 2999.1%	1.4758 1.4758	N/A N/A		N/A N/A		0.838 0.831	4.50% 4.50%	0.3255 0.3115
	2044 2045	50,482 41,228	1,692,182 1,537,351	3352.0% 3728.9%	41 35	15,047 11,759	504,370 438,489	3352.0% 3728.9%	1.4758 1.4758	N/A N/A		N/A N/A		0.824 0.817	4.50% 4.50%	0.2981 0.2852
	2046 2047	33,358 26,723	1,381,914 1,230,822	4142.6% 4605.9%	29 24	9,105 6,980	377,182 321,476	4142.6% 4605.9%	1.4758 1.4758	N/A N/A	0.1602	N/A	0.840	0.809 0.801	4.50% 4.50%	0.2729 0.2612
	2048	21,183	1,083,594	5115.3%	20	5,295	270,834	5115.3%	1.4758	N/A	0.1746	N/A	0.825	0.793	4.50%	0.2499
	2049 2050	16,621 12,935	942,387 808,555	5669.8% 6251.0%	17 13	3,975 2,961	225,398 185,061	5669.8% 6251.0%	1.4758 1.4758	N/A N/A	0.1892	N/A	0.811	0.785 0.778	4.50% 4.50%	0.2392 0.2289
	2051 2052	9,957 7,582	684,882 572,814	6878.6% 7555.2%	11 9	2,181 1,589	150,004 120,056	6878.6% 7555.2%	1.4758 1.4758	N/A N/A		N/A N/A		0.770 0.761	4.50% 4.50%	0.2190 0.2096
	2053 2054	5,716 4,272	472,570 385,443	8267.9% 9022.7%	7 5	1,146 820	94,781 73,977	8267.9% 9022.7%	1.4758 1.4758	N/A N/A				0.754 0.747	4.50% 4.50%	0.2006 0.1919
	2055 2056	3,166 2,322	310,965 247,355	9823.5% 10654.7%	4	581 408	57,113 43,474	9823.5% 10654.7%	1.4758 1.4758	N/A N/A	0.2309	N/A	0.769	0.741 0.733	4.50% 4.50%	0.1837 0.1758
	2057	1,685	196,199	11644.7%	2	283	32,998	11644.7%	1.4758	N/A	0.2541	N/A	0.746	0.726	4.50%	0.1682
	2058 2059	1,217 876	154,340 118,294	12686.4% 13509.4%	1	196 135	24,840 18,219	12686.4% 13509.4%	1.4758 1.4758	N/A N/A	0.2749		0.725	0.722 0.720	4.50% 4.50%	
	2060 2061	628 449	89,970 68,080	14316.2% 15158.3%	1 1	93 63	13,260 9,602	14316.2% 15158.3%	1.4758 1.4758	N/A N/A		N/A N/A		N/A N/A	4.50% 4.50%	0.1474 0.1410
	2062 2063	321 228	51,775 39,818	16134.7% 17446.4%	0	43 29	6,988 5,142	16134.7% 17446.4%	1.4758 1.4758	N/A N/A		N/A N/A		N/A N/A	4.50% 4.50%	0.1350 0.1291
	2064 2065	164 117	30,721 23,775	18777.3% 20377.1%	0	20 14	3,797 2,812	18777.3% 20377.1%	1.4758 1.4758	N/A N/A		N/A N/A		N/A N/A	4.50% 4.50%	0.1236 0.1183
	2066	82	18,619	22695.2%	0	9	2,107	22695.2%	1.4758	N/A	. N/A	N/A	N/A	N/A	4.50%	0.1132
	2067 2068	59 42	14,784 12,065	25253.0% 28889.1%	0	4	1,601 1,250	25253.0% 28889.1%	1.4758 1.4758	N/A N/A	. N/A	N/A	N/A	N/A N/A	4.50% 4.50%	0.1083 0.1036
	2069 2070	30 22	9,591 7,679	31747.3% 35542.9%	0	3 2	951 729	31747.3% 35542.9%	1.4758 1.4758	N/A N/A	. N/A		N/A	N/A N/A	4.50% 4.50%	0.0992 0.0949
	2071 2072	15 10	5,933 4,337	39185.0% 42103.6%	0	1 1	539 377	39185.0% 42103.6%	1.4758 1.4758	N/A N/A		N/A N/A		N/A N/A	4.50% 4.50%	0.0908 0.0869
	2073 2074	7 4	3,096 1,924	46417.2% 47750.8%	0 n	1 0	257 153	46417.2% 47750.8%	1.4758 1.4758	N/A N/A	. N/A	N/A	N/A	N/A N/A	4.50% 4.50%	0.0832 0.0796
	2075 2076	2	1,047 438	48949.6% 55015.3%	0	0	80 32	48949.6% 55015.3%	1.4758 1.4758	N/A N/A	. N/A	N/A	N/A	N/A N/A	4.50% 4.50% 4.50%	0.0762 0.0729
	2076	- -	208	55015.3% N/A	-	-	14	55015.3% N/A	1.4758	N/A N/A				N/A N/A	4.50%	0.0729
	Past	16,018,614	6,407,846	40.0%	8,817	23,281,013	7,840,638	33.7%								
	Future Lifetime	11,684,562 27,703,176	60,549,808 66,957,654	518.2% 241.7%	6,235 15,052	8,238,231 31,519,244	28,599,081 36,439,719	347.2% 115.6%								

⁻ The 1st round authorized increase of 15% was implemented from Febuary 2010 through January 2011 and the 2nd round authorized increase of 15% was implemented from August 2014 through July 2015 and the 3rd round authorized increase of 15% was implemented from September 2016 through August 2017.

- The projections are based on the assumptions derived using experience data through 6/30/2016.

Exhibit I-B Metropolitan Life Insurance Company Maryland Experience Projections (Premium Normalized to Include Prior Authorized Increases) and With 32.25% Future Increase Policy Forms: 1LTC97 and 2LTC97

		\A/:41	hout Interest	Loss Rat	io Demonstra		Vith Interest		Factor Premium	ors Derived fr	om Projected Value	es for Illustrati Persistency I		Only
	Calendar	Earned	Incurred	Loss	Life	Earned	Incurred	Loss	Rate Increase	Benefit	Policy	Policy	Policy	Premiun
	Year 1998	Premium -	Claims -	Ratio N/A	Years -	Premium -	Claims -	Ratio N/A	Factor	Downgrade	Lapse & Mortality	Snock Lapse	Persistency	Persisten
	1999 2000	- 132,961	-	N/A 0.0%	- 195	- 274,880	-	N/A 0.0%						
	2001	581,051	-	0.0%	402	1,149,521	-	0.0%						
	2002	910,356	12,200	1.3%	609	1,723,446	23,096	1.3%						
	2003	1,165,474	1,483	0.1%	636	2,111,409	2,687	0.1%						
istorical	2004 2005	1,124,027 1,109,337	-	0.0% 0.0%	617 597	1,948,634 1,840,352	-	0.0% 0.0%						
perience	2006	1,088,244	436,289	40.1%	587	1,727,617	692,620	40.1%						
•	2007	1,047,863	94,898	9.1%	575	1,591,876	144,166	9.1%						
	2008	1,036,682	404,330	39.0%	566	1,507,072	587,792	39.0%						
	2009 2010	1,006,828 1,007,666	468,939 70,405	46.6% 7.0%	558 540	1,400,644 1,341,444	652,362 93,726	46.6% 7.0%						
	2011	1,038,276	499,295	48.1%	528	1,322,672	636,058	48.1%						
	2012	994,593	1,713,741	172.3%	502	1,212,463	2,089,145	172.3%						
	2013	958,954	443,480	46.2%	493	1,118,677	517,346	46.2%						
	2014 2015	926,944 959,441	519,849 860,764	56.1% 89.7%	485 470	1,034,770 1,024,927	580,321 919,514	56.1% 89.7%						
	2016	929,918	882,173	94.9%	457	950,611	901,804	94.9%						
rojected	2017	938,096	754,158	80.4%	440	917,676	737,741	80.4%	1.4384	1.0000	0.0375	1.0000	0.962	0.
Future	2018	911,414	823,655	90.4%	422	853,181	771,030	90.4%	1.4758	1.0000	0.0396			
perience	2019 2020	896,124 910,023	866,496 915,726	96.7% 100.6%	396 371	802,745 780,091	776,204 784,980	96.7% 100.6%	1.5957 1.7767	0.9838 0.9700	0.0626 0.0619			
	2021	937,236	1,000,564	100.8%	354	768,822	820,770	106.8%	1.7464	0.9700	0.0464			
	2022	880,869	1,092,097	124.0%	337	691,467	857,278	124.0%	1.9517	0.9700	0.0489			0
	2023	822,934	1,189,122	144.5%	320	618,172	893,245	144.5%	1.9517	0.9700	0.0516			
	2024 2025	766,151 710,925	1,290,635 1,399,938	168.5% 196.9%	302 285	550,735 489,030	927,751 962,987	168.5% 196.9%	1.9517 1.9517	0.9700 0.9700	0.0542 0.0571	0.9600 0.9600		
	2026	657,178	1,512,097	230.1%	268	432,592	995,348	230.1%	1.9517	0.9700	0.0601	0.9600		
	2027	605,170	1,621,791	268.0%	251	381,203	1,021,584	268.0%	1.9517	0.9700	0.0633			
	2028	554,968	1,733,015	312.3%	234	334,526	1,044,636	312.3%	1.9517	0.9700	0.0666			
	2029	506,673	1,839,533 1,937,616	363.1% 420.9%	218 202	292,263	1,061,094	363.1%	1.9517 1.9517	0.9700 0.9700	0.0701 0.0738	0.9600 0.9600		
	2030 2031	460,344 416,324	2,027,643	420.9% 487.0%	186	254,105 219,910	1,069,542 1,071,039	420.9% 487.0%	1.9517	0.9700	0.0738			
	2032	374,578	2,103,824	561.7%	171	189,339	1,063,425	561.7%	1.9517	0.9700	0.0815			
	2033	335,186	2,169,027	647.1%	156	162,131	1,049,171	647.1%	1.9517	0.9700	0.0860	0.9600		
	2034	298,145	2,221,954	745.3%	142	138,004	1,028,490	745.3%	1.9517	0.9700	0.0905			
	2035 2036	263,632 231,598	2,249,253 2,257,865	853.2% 974.9%	129 116	116,774 98,168	996,293 957,041	853.2% 974.9%	1.9517 1.9517	0.9700 0.9700	0.0950 0.1000			
	2037	202,074	2,244,613	1110.8%	104	81,965	910,453	1110.8%	1.9517	0.9700	0.1050			
	2038	174,919	2,202,851	1259.4%	92	67,895	855,037	1259.4%	1.9517	0.9700	0.1105			
	2039	150,287	2,140,808	1424.5%	81	55,822	795,172	1424.5%	1.9517	0.9700	0.1160			
	2040 2041	128,126 108,296	2,057,621 1,954,551	1605.9% 1804.8%	71 62	45,541 36,835	731,362 664,811	1605.9% 1804.8%	1.9517 1.9517	0.9700 0.9700	0.1217 0.1278			
	2042	90,787	1,839,094	2025.7%	54	29,550	598,602	2025.7%	1.9517	0.9700	0.1341	0.9600		
	2043	75,456	1,711,182	2267.8%	46	23,503	532,984	2267.8%	1.9517	0.9700	0.1401	0.9600		
	2044	62,169	1,575,760	2534.6%	40	18,530	469,669	2534.6%	1.9517	0.9700	0.1470			
	2045 2046	50,773 41,081	1,431,581 1,286,839	2819.6% 3132.4%	34 28	14,482 11,213	408,321 351,232	2819.6% 3132.4%	1.9517 1.9517	0.9700 0.9700	0.1527 0.1602	0.9600 0.9600		
	2047	32,909	1,146,141	3482.7%	23	8,596	299,358	3482.7%	1.9517	0.9700	0.1670			
	2048	26,088	1,009,043	3867.9%	19	6,520	252,201	3867.9%	1.9517	0.9700	0.1746			
	2049	20,469	877,551	4287.2%	16	4,896	209,891	4287.2%	1.9517	0.9700	0.1804	0.9600		
	2050 2051	15,930 12,262	752,927 637,762	4726.6% 5201.2%	13 10	3,646 2,686	172,328 139,684	4726.6% 5201.2%	1.9517 1.9517	0.9700 0.9700	0.1892 0.1954			C
	2052	9,337	533,405	5712.8%	8	1,957	111,797	5712.8%	1.9517	0.9700	0.2067	0.9600		
	2053	7,039	440,057	6251.7%	6	1,412	88,260	6251.7%	1.9517	0.9700	0.2103	0.9600	0.790	C
	2054	5,261	358,925	6822.5%	5	1,010	68,888	6822.5%	1.9517	0.9700	0.2249			
	2055 2056	3,898 2,859	289,570 230,337	7428.0% 8056.5%	3	716 502	53,183 40,483	7428.0% 8056.5%	1.9517 1.9517	0.9700 0.9700	0.2309 0.2382			
	2057	2,075	182,700	8805.1%	2	349	30,728	8805.1%	1.9517	0.9700	0.2541	0.9600		
	2058	1,498	143,722	9592.7%	2	241	23,131	9592.7%	1.9517	0.9700	0.2533			C
	2059	1,078	110,156	10215.1%	1	166	16,965	10215.1%		0.9700				
	2060 2061	774 553	83,780 63,396	10825.1% 11461.8%	1	114 78	12,348 8,941	10825.1% 11461.8%	1.9517 1.9517	0.9700 0.9700	N/A N/A			
	2062	395	48,213	12200.1%	0	53	6,507	12200.1%	1.9517	0.9700	N/A N/A			
	2063	281	37,079	13192.0%	0	36	4,789	13192.0%	1.9517	0.9700	N/A			
	2064	201	28,607	14198.3%	0	25	3,536	14198.3%	1.9517	0.9700	N/A			
	2065	144	22,139	15408.0%	0	17	2,618	15408.0%	1.9517	0.9700	N/A			
	2066 2067	101 72	17,338 13,767	17160.8% 19094.9%	0	11 8	1,962 1,491	17160.8% 19094.9%	1.9517 1.9517	0.9700 0.9700	N/A N/A			
	2068	51	11,235	21844.3%	0	5	1,164	21844.3%	1.9517	0.9700	N/A			
	2069	37	8,931	24005.5%	0	4	886	24005.5%	1.9517	0.9700	N/A			
	2070	27	7,151	26875.5%	0	3	679	26875.5%	1.9517	0.9700	N/A			
	2071 2072	19 13	5,525 4,039	29629.5% 31836.3%	0	2	502 351	29629.5% 31836.3%	1.9517 1.9517	0.9700 0.9700	N/A N/A			
	2073	8	2,883	35098.0%	0	1	240	35098.0%	1.9517	0.9700	N/A N/A			
	2074	5	1,791	36106.5%	0	0	143	36106.5%	1.9517	0.9700	N/A	0.9600	N/A	
	2075	3	975	37012.9%	0	0	74	37012.9%	1.9517	0.9700	N/A			
	2076 2077-2097	1	408 194	41599.5% N/A	-	0	30 13	41599.5% N/A	1.9517 1.9517	0.9700 0.9700	N/A N/A			
	2011-2091	<u>-</u>	194	IN/A	-	<u>-</u>	13	IN/A	1.8317	0.9700	IN/A	0.9000	IN/A	
	Past	16,018,614	6,407,846	40.0%	8,817	23,281,013	7,840,638	33.7%						
	Future	13,704,925	56,520,656	412.4%	6,028	9,509,323	26,760,459	281.4%						

⁻ The 1st round authorized increase of 15% was implemented from Febuary 2010 through January 2011 and the 2nd round authorized increase of 15% was implemented from August 2014 through July 2015 and the 3rd round authorized increase of 15% was implemented from September 2016 through August 2017.

- The current requested increases of 32.25% are assumed to be implemented in two phases at 15% each with the 1st phase starting January 2019 and the 2nd phase starting April 2020.

- The projections are based on the assumptions derived using experience data through 6/30/2016.

Exhibit II-B

Demonstration that Lifetime Incurred Claims with Requested Increase are Not Less than Lifetime Earned Premium with Prescribed Factors Policy Forms: 1LTC97 and 2LTC97

1 Accumulated value of initial earned premium	22,221,742	х	58%	=	12,888,610
2a Accumulated value of earned premium 2b Accumulated value of prior premium rate schedule increases (2a-1)	23,281,013 1,059,271	x	85%	=	900,380
3 Present value of future projected initial earned premium	5,598,441	х	58%	=	3,247,095
4a Present value of future projected premium 4b Present value of future projected premium in excess of the projected initial earned premiums (4a-3)	9,509,323 3,910,882	x	85%	=	3,324,250
5 Lifetime Earned Premium Times Prescribed Factor: Sum of 1, 2b, 3, and 4b					20,360,336
6a Accumulated value of incurred claims without the inclusion of active life reserves 6b Present value of future projected incurred claims without the inclusion of active life reserves					7,840,638 26,760,459
7 Lifetime Incurred Claims with Rate Increase: Sum of 6a and 6b					34,601,097
8 Test: 7 is not less than 5					TRUE

Attachment 1 Metropolitan Life Insurance Company Policy Forms: 1LTC97 and 2LTC97 Assumptions Summary

	Original Pricing Assumptions	2017 Best Estimate Assumptions
Interest Rate:	6.00%	Maximum valuation interest rate for contract reserves, which average to 4.5%
Mortality:	1983 GAM Basic Mortality Table With Mortality Selection Factors of: Duration	88% of Annuity 2000 Basic table With Mortality Selection Factors of: Duration
Voluntary Lapse Rates:	Duration Lapse Rate 1 10.00% 2 9.00% 3 8.00% 4 7.50% 5 7.00% 6 6.50% 7 6.00% 8 5.50% 9 5.00% 10+ 4.50%	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%
Morbidity:	Morbidity underwriting savings vary by duration. However, we do not have the actual rates.	Current IB block experience with morbidity U/W Selection Factors of: Duration U/W Selection
Incidence:	Incidence rates for nursing home care were based on a study published by the Society of Actuaries based on the 1985 NNHS with modifications.	Sample Ultimate Smoothed Incidence Rates (before gross-up to zero-day elimination) Attained Male Female Age Facility Care Home Care 81 1.18% 1.61% 1.23% 82 1.45% 1.55% 1.86% 1.43% 83 1.74% 1.93% 2.09% 1.68% 84 2.07% 2.18% 2.35% 1.93% 85 2.39% 2.43% 2.57% 2.21%
Continuance:	Continuance rates for nursing home care were based on a study published by the Society of Actuaries based on the 1985 NNHS with modifications.	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.
Utilization:	Home care prevalence rates were based on 1982-1984 National Long Term Care Surveys with modifications. Note that the actual utilization assumption at original pricing is not available.	Home Care Facility Care 61% 79%

Attachment 2

Metropolitan Life Insurance Company

Nationwide Experience Projections (Premium Normalized to Include Prior Authorized Increases) and With No Future Increase Actual to Expected Ratios

Policy Forms: 1LTC97 and 2LTC97

		/ Projected Experi			ed Pricing Experie		
	•	erience through 12			d based on Original		
		ased on Current A			ptions since incept		
	A	B	C = B / A	D	E	F = E / D	G = C / F
Duration	Earned	Incurred Claims	Loss	Earned	Incurred Claims	Loss Ratio	Actual to Expected Ratio
1	Premium 30,925,558	681,323	Ratio 2.2%	Premium 30,925,558	2,166,585	7.0%	0.31
2	50,313,679	4,855,251	9.6%	50,313,679	4,892,458	9.7%	0.99
3	45,903,356	5,758,743	12.5%	45,421,962	5,966,558	13.1%	0.96
4	43,472,446	9,165,080	21.1%	41,244,048	7,429,981	18.0%	1.17
5	41,800,003	7,438,934	17.8%	37,584,429	8,835,423	23.5%	0.76
6	40,551,788	12,182,498	30.0%	34,306,263	10,329,283	30.1%	1.00
7	39,550,134	14,668,738	37.1%	31,401,198	11,080,251	35.3%	1.05
8	38,572,086	20,282,239	52.6%	28,800,631	11,856,163	41.2%	1.28
9	37,833,356	20,951,640	55.4%	26,457,493	13,108,429	49.5%	1.12
10	37,331,341	15,014,149	40.2%	24,312,332	14,050,790	57.8%	0.70
11	36,933,022	22,765,221	61.6%	22,350,853	14,553,488	65.1%	0.95
12	36,345,900	22,798,428	62.7%	20,494,317	15,084,707	73.6%	0.85
13	35,765,229	29,128,528	81.4%	18,746,293	15,596,016	83.2%	0.98
14	35,481,107	32,077,620	90.4%	17,103,440	16,399,703	95.9%	0.94
15	35,744,743	29,636,722	82.9%	15,562,913	16,866,802	108.4%	0.77
16	35,984,103	30,329,714	84.3%	14,122,667	17,400,439	123.2%	0.68
17	35,511,452	31,598,505	89.0%	12,779,924	17,748,681	138.9%	0.64
18	34,388,662	34,183,529	99.4%	11,531,970	18,031,320	156.4%	0.64
19	32,805,498	36,523,296	111.3%	10,374,584	18,183,378	175.3%	0.64
20	30,875,648	39,976,672	129.5%	9,304,019	18,292,679	196.6%	0.66
21	28,963,504	43,588,404	150.5%	8,317,610	19,484,007	234.3%	0.64
22	27,076,868	47,332,741	174.8%	7,411,598	20,199,121	272.5%	0.64
23	25,221,227	51,159,954	202.8%	6,582,335	20,912,348	317.7%	0.64
24	23,404,202	55,028,018	235.1%	5,824,883	21,363,883	366.8%	0.64
25	21,631,862	58,849,440	272.0%	5,135,005	21,972,410	427.9%	0.64
26	19,910,867	62,572,728	314.3%	4,509,748	22,584,380	500.8%	0.63
27	18,247,524	66,095,673	362.2%	3,945,273	22,902,937	580.5%	0.62
28	16,648,129	69,352,514	416.6%	3,437,876	23,171,863	674.0%	0.62
29	15,118,283	72,304,973	478.3%	2,982,851	23,219,323	778.4%	0.61
30	13,662,732	74,851,819	547.9%	2,576,241	23,234,123	901.9%	0.61
31	12,285,895	76,927,590	626.1%	2,215,243	22,717,900	1025.5%	0.61
32	10,991,269	78,513,909	714.3%	1,896,262	22,389,752	1180.7%	0.60
33	9,781,105	79,520,165	813.0%	1,615,916	21,888,752	1354.6%	0.60
34	8,656,776	79,908,474	923.1%	1,370,099	20,955,082	1529.5%	0.60
35	7,618,523	79,671,861	1045.8%	1,155,074	19,964,444	1728.4%	0.61
36	6,665,303	78,827,629	1182.7%	968,220	18,797,692	1941.5%	0.61
37	5,795,781	77,337,495	1334.4%	806,796	17,549,477	2175.2%	0.61 0.62
38 39	5,008,322	75,199,055	1501.5%	668,143	16,058,872	2403.5% 2642.3%	0.62
40	4,300,456 3,668,717	72,490,899 69,266,519	1685.7% 1888.0%	549,725 449,559	14,525,616 13,345,588	2042.3% 2968.6%	0.64
41	3,109,065	65,568,819	2109.0%	365,012	11,620,765	3183.7%	0.66
42	2,616,998	61,532,536	2351.3%	293,889	10,550,212	3589.9%	0.65
43	2,187,522	57,222,116	2615.8%	293,869	9,488,536	4038.5%	0.65
43	1,816,037	52,765,882	2905.6%	186,589	8,459,601	4533.8%	0.64
45	1,496,998	48,214,944	3220.8%	147,230	7,457,475	5065.2%	0.64
46	1,224,958	43,684,044	3566.2%	115,450	6,337,115	5489.1%	0.65
47	994,944	39,247,575	3944.7%	90,009	5,462,694	6069.0%	0.65
48	802,010	34,938,796	4356.4%	69,812	4,617,720	6614.5%	0.66
49	641,497	30,791,046	4799.9%	53,895	3,866,552	7174.2%	0.67
50	509,074	26,878,737	5279.9%	41,466	3,296,798	7950.6%	0.66
51	400,845	23,229,559	5795.2%	31,750	2,624,149	8264.9%	0.70
52	313,128	19,863,677	6343.6%	24,311	2,088,741	8591.7%	0.74
53	242,635	16,804,346	6925.8%	18,615	1,662,573	8931.4%	0.78
54	186,452	14,055,791	7538.6%	14,253	1,323,356	9284.5%	0.81
55	142,042	11,629,345	8187.3%	10,914	1,053,350	9651.6%	0.85
56	107,288	9,526,877	8879.7%	8,357	838,434	10033.2%	0.89
57	80,352	7,724,383	9613.1%	6,399	667,367	10429.8%	0.92
58	59,709	6,200,247	10384.0%	4,899	531,204	10842.2%	0.96
59	44,016	4,931,153	11203.1%	3,751	422,822	11270.9%	0.99
60	32,207	3,882,074	12053.6%	2,872	336,553	11716.5%	1.03
Lifetime	1.057.754.234	2.367.508.638	223.8%	567.281.458	747.816.723	131.8%	1.70

Lifetime 1,057,754,234 2,367,508,638 223.8% 567,281,458 747,816,723 131.8% 1.70 Lifetime* 591,711,816 210,315,056 668,004,598 112.9% 344,795,718 61.0% 1.85

Note:

⁻ Figures in column A are normalized to reflect the prior rate actions authorized by Maryland (15% on August 21, 2009, 15% on March 5, 2014 and 15% on May

^{4, 2016)} 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 4.5%, 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 6%.

Attachment 3

Metropolitan Life Insurance Company

Nationwide Experience Projections (Premium Normalized to Include Prior Authorized Increases) and With No Future Increase **Actual to Expected Ratios**

Policy Forms: 1LTC97 and 2LTC97

		Actual / P	Projected Experience		Reproduced Expected Pricing		Experience		Accumulati	12/31/2016	
		Α	В	C = B / A	D	E	F=E/D	G = C / F	Н	I	J = H / I
	Calendar	Earned	Incurred	Loss	Earned	Incurred	Loss	Actual to	Actual/Projected	Expected at 6%	Actual to
	Year	Premium	Claims	Ratio	Premium	Claims	Ratio	Expected Ratio	,	(on F)	Expected Ratio
Historical	1998	168,478	0	0.0%	168,478	11,803	7.0%	0.00	0.0%	7.0%	0.00
Experience	1999	2,560,434	6,469	0.3%	1,864,484	140,430	7.5%	0.03	0.2%	7.5%	0.03
	2000	11,396,617	808,649	7.1%	8,312,609	682,259	8.2%	0.86	5.7%	8.1%	0.71
	2001	26,357,874	1,975,285	7.5%	20,333,104	1,855,401	9.1%	0.82	6.9%	8.7%	0.78
	2002	40,913,902	6,033,271	14.7%	33,676,757	3,503,259	10.4%	1.42	10.7%	9.6%	1.12
	2003	45,945,058	8,205,406	17.9%	42,706,122	5,307,908	12.4%	1.44	13.2%	10.6%	1.24
	2004	43,368,430	5,026,571	11.6%	41,254,260	6,643,515	16.1%	0.72	12.8%	12.0%	1.06
	2005	41,865,927	8,327,622	19.9%	37,752,156	7,893,798	20.9%	0.95	14.1%	13.6%	1.03
	2006	40,589,310	12,617,728	31.1%	34,643,864	9,036,497	26.1%	1.19	16.5%	15.3%	1.08
	2007	39,481,834	17,587,086	44.5%	31,861,537	10,053,939	31.6%	1.41	19.8%	17.0%	1.16
	2008	38,471,868	23,105,271	60.1%	29,361,837	10,959,535	37.3%	1.61	23.8%	18.7%	1.27
	2009	37,185,285	17,503,935	47.1%	27,096,854	11,865,287	43.8%	1.07	25.7%	20.4%	1.26
	2010	37,426,671	18,162,716	48.5%	25,022,945	12,737,947	50.9%	0.95	27.4%	22.1%	1.24
	2011	38,554,435	19,564,570	50.7%	23,099,557	13,447,453	58.2%	0.87	29.0%	23.8%	1.22
	2012	37,114,827	27,943,876	75.3%	21,296,446	14,045,997	66.0%	1.14	31.7%	25.4%	1.25
	2013	35,630,361	23,284,466	65.4%	19,586,699	14,663,829	74.9%	0.87	33.5%	27.0%	1.24
	2014	34,329,227	31,145,026	90.7%	17,968,964	15,294,392	85.1%	1.07	36.1%	28.6%	1.26
	2015	35,649,087	29,763,082	83.5%	16,440,613	15,918,293	96.8%	0.86	38.1%	30.2%	1.26
	2016	34,356,233	32,308,665	94.0%	15,001,546	16,438,774	109.6%	0.86	40.3%	31.7%	1.27
Projected	2017	35,674,134	30,375,144	85.1%	13,650,444	16,884,764	123.7%	0.69	41.9%	33.3%	1.26
Experience	2018	34,632,273	33,328,638	96.2%	12,385,454	17,245,373	139.2%	0.69	43.7%	34.7%	1.26
	2019	32,684,546	36,466,696	111.6%	11,204,377	17,620,260	157.3%	0.71	45.7%	36.2%	1.26
	2020	30,761,682	39,806,922	129.4%	10,104,781	18,148,647	179.6%	0.72	47.8%	37.6%	1.27
	2021	28,864,681	43,299,584	150.0%	9,084,286	18,861,258	207.6%	0.72	50.1%	39.0%	1.28
	2022	26,988,637	46,913,241	173.8%	8,140,395	19,741,345	242.5%	0.72	52.5%	40.4%	1.30
	2023	25,144,057	50,605,770	201.3%	7,270,048	20,507,043	282.1%	0.71	55.0%	41.8%	1.32
	2024	23,337,457	54,320,574	232.8%	6,469,940	21,206,992	327.8%	0.71	57.7%	43.2%	1.34
	2025	21,581,038	58,016,066	268.8%	5,736,740	21,854,484	381.0%	0.71	60.5%	44.6%	1.36
	2026	19,873,707	61,589,431	309.9%	5,067,371	22,464,639	443.3%	0.70	63.3%	45.9%	1.38
	2027	18,224,755	64,965,624	356.5%	4,458,818	22,972,088	515.2%	0.69	66.2%	47.2%	1.40
	2028	16,640,067	68,115,324	409.3%	3,907,651	23,317,404	596.7%	0.69	69.2%	48.5%	1.43
	2029	15,124,938	70,978,478	469.3%	3,410,307	23,510,996	689.4%	0.68	72.1%	49.7%	1.45
	2030	13,683,025	73,476,760	537.0%	2,963,284	23,511,734	793.4%	0.68	75.1%	50.9%	1.48
	2031	12,319,639	75,559,697	613.3%	2,563,380	23,350,167	910.9%	0.67	78.0%	52.0%	1.50
	2032	11,037,780	77,145,167	698.9%	2,207,488	22,991,770	1041.5%	0.67	80.9%	53.0%	1.53
	2032	9,838,269	78,188,780	794.7%	1,892,165	22,487,772	1188.5%	0.67	83.7%	53.9%	1.55
	2033	8,722,341	78,698,595	902.3%	1,613,870	21,770,004	1348.9%	0.67	86.5%	54.8%	1.58
	2034	7,690,471	78,589,676	1021.9%	1,369,161	20,822,682	1520.8%	0.67	89.1%	55.6%	1.60
	2033					19,719,153	l	0.67		56.3%	1.63
	l	6,742,882	77,845,355	1154.5%	1,154,964		1707.3%		91.6%		
	2037	5,877,326	76,542,278	1302.3%	968,562	18,457,106	1905.6%	0.68	94.0%	56.9%	1.65
	2038	5,090,284	74,610,781	1465.7%	807,330	17,082,795	2116.0%	0.69	96.2%	57.4%	1.68
	2039	4,382,044	72,072,510	1644.7%	668,740	15,640,032	2338.7%	0.70	98.3%	57.9%	1.70
	2040	3,749,038	69,023,180	1841.1%	550,329	14,189,347	2578.3%	0.71	100.2%	58.3%	1.72
	2041	3,186,583	65,513,816	2055.9%	449,785	12,829,540	2852.4%	0.72	101.9%	58.6%	1.74
	2042	2,691,183	61,676,559	2291.8%	364,932	11,515,038	3155.4%	0.73	103.5%	58.9%	1.76
	2043	2,257,394	57,571,157	2550.3%	293,906	10,379,331	3531.5%	0.72	104.9%	59.2%	1.77
	2044	1,880,462	53,270,404	2832.8%	235,086	9,288,407	3951.1%	0.72	106.2%	59.4%	1.79
	2045	1,556,058	48,864,311	3140.3%	186,828	8,200,242	4389.2%	0.72	107.3%	59.6%	1.80
	2046	1,278,739	44,444,821	3475.7%	147,565	7,141,149	4839.3%	0.72	108.2%	59.7%	1.81
	2047	1,043,271	40,077,867	3841.6%	115,879	6,133,139	5292.7%	0.73	109.0%	59.8%	1.82
	2048	844,798	35,822,942	4240.4%	90,517	5,241,568	5790.7%	0.73	109.8%	59.9%	1.83
	2049	679,353	31,718,680	4669.0%	70,375	4,438,801	6307.4%	0.74	110.4%	60.0%	1.84
	2050	541,928	27,829,204	5135.2%	54,491	3,710,943	6810.3%	0.75	110.9%	60.1%	1.85
	2051	429,016	24,179,452	5636.0%	42,060	3,059,436	7274.1%	0.77	111.3%	60.1%	1.85
	2052	337,039	20,800,584	6171.6%	32,394	2,464,050	7606.6%	0.81	111.6%	60.1%	1.86
	2053	262,795	17,703,199	6736.5%	24,936	1,971,831	7907.4%	0.85	111.9%	60.2%	1.86
	2054	203,212	14,903,181	7333.8%	19,196	1,577,938	8220.2%	0.89	112.2%	60.2%	1.86
	2055	155,928	12,418,463	7964.2%	14,777	1,262,726	8545.4%	0.93	112.3%	60.2%	1.87
	2056	118,570	10,231,166	8628.8%	11,375	1,010,472	8883.5%	0.97	112.5%	60.2%	1.87
	2057	89,455	8,358,104	9343.4%	8,756	808,616	9235.1%	1.01	112.6%	60.2%	1.87
	2058	67,006	6,763,891	10094.5%	6,740	647,073	9600.5%	1.05	112.7%	60.2%	1.87
	2059	49,842	5,417,347	10869.1%	5,188	517,806	9980.5%	1.09	112.8%	60.2%	1.87
	2060	36,796	4,296,230	11675.9%	3,994	414,362	10375.6%	1.13	112.8%	60.2%	1.87
	2061	26,932	3,372,638	12522.6%	3,074	331,568	10786.0%	1.16	112.8%	60.2%	1.87
	2062	19,552	2,616,945	13384.5%	2,366	265,320	11212.7%	1.19	112.9%	60.2%	1.87
	2063	14,065	2,009,068	14283.8%	1,821	212,303	11656.0%	1.23	112.9%	60.2%	1.87
	2064	10,031	1,518,993	15143.4%	1,402	169,880	12116.8%	1.25	112.9%	60.2%	1.87
	2065	7,090	1,133,879	15993.2%	1,079	135,934	12595.9%	1.27	112.9%	60.2%	1.87
	2066	4,962	832,144	16769.5%	831	108,771	13093.9%	1.28	112.9%	60.2%	1.87
	2067	3,441	598,923	17405.4%	639	87,036	13611.6%	1.28	112.9%	60.2%	1.87
	2068	2,357	425,061	18033.6%	492	69,644	14149.7%	1.27	112.9%	60.2%	1.87
	2069	1,592	294,091	18476.0%	379	55,728	14709.2%	1.26	112.9%	60.2%	1.87
	2003	1,061	202,745	19111.2%	292	44,592	15290.7%	1.25	112.9%	60.2%	1.87
	2070	1,001	_v_,ı +v	/0		1,002	10200.170	1.20	. 12.0/0	1 00.270	1.07
ſ	Past	621,365,858	283,369,694	45.6%	447,448,833	170,500,315	38.1%	1.20	40.3%	31.7%	1.27
			2,095,400,138	480.1%	119,841,038	578,451,100	482.7%	0.99	328.6%	329.7%	1.00
	Future	436,465,583 1,057,831,441	2,378,769,832	224.9%	567,289,871	748,951,415	132.0%	1.70	112.9%	60.0%	1.88

⁻ Figures in column A are normalized to reflect the prior rate actions authorized by Maryland (15% on August 21, 2009, 15% on March 5, 2014 and 15% on May 4, 2016) rather than the prior rate action approved by other states.
- Figures in column D do not reflect any rate action

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% 77.22%						
6	1,694	2,194							
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												
	Female						Male					
	Facility Care			Home Care			Facility Care			Home Care		
Calendar Year	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.

 $^{^{\}rm 2}\,\mbox{The}$ 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)

	Non AARP-Pru Block										
Claim Duration (Months)	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.