

Metropolitan Life Insurance Company  
1300 Hall Boulevard, Bloomfield, CT 06002  
Email: [mark.newton@metlife.com](mailto:mark.newton@metlife.com)



**Mark D. Newton, FSA, MAAA**

August 18, 2019

Maryland Insurance Administration  
200 St. Paul Place, Suite 2700, Baltimore, MD 21202

Re: LTC.02, et al, administered by MetLife on behalf of Teachers Insurance and Annuity Association (“TIAA”), LTC.03 administered by MetLife on behalf of Teachers Insurance and Annuity Association (“TIAA”), TCL-LTC.04 Ed. 4/00 issued by Metropolitan Life Insurance Company (MetLife)  
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 previous 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 and Attachments on specific aspects of the Maryland Administrative Code as well as supporting data based on earlier reviews. These documents are outlined and summarized here for your convenience.

Title	Description
<b>Actuarial Memorandum</b> Exhibit I-A	Lifetime Loss Ratio (“LLR”) <ul style="list-style-type: none"><li>• <b>Nationwide</b> experience</li><li>• Without/with proposed rate increase of 15.00%</li><li>• Weighted average statutory rate 4.51%</li></ul> LLR without rate increase – 117.1% LLR with rate increase – 114.2%
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"><li>• <b>Maryland</b> experience</li><li>• Without/with proposed rate increase of 15.00%</li><li>• Weighted average statutory rate 4.51%</li></ul> LLR without rate increase – 118.1% LLR with rate increase – 114.6%
Exhibit II-B	Demonstration of rate action meeting Rate Stability (58/85) limitations

<b>Review of Prior Correspondence</b>	Attachment 1 – Assumptions Summary Attachment 2 – A/E Ratios (Policy Duration) Attachment 3 – A/E Ratios (Calendar Year) Attachment 4 – A/E Ratios (Lapse, Mortality, Incidence, Claim Termination)
---------------------------------------	---

#### Rationale for the Rate Increase Request

Exhibit I demonstrates that the combination of historical and projected experience using the most recent Best Estimate assumptions is clearly far beyond the expected loss ratio using the original pricing assumptions. Attachments 2 and 3 support the development of the experience by analyzing the Actual-to-Expected Ratios by Calendar Year and Policy Duration.

Attachment 1 compares the development of the changes in assumptions from the time of original pricing to the latest Experience Study. Generally, worse than expected morbidity and lower decrements are the primary reasons for the rate action.

#### Assumption Setting and Review

All projection assumptions are based on the Experience Study performed each year. In general, the assumptions used in all projections are those that reproduce historical experience within a non-material degree of tolerance. Attachment 4 shows the Actual-to-Expected Ratios comparing the latest Best Estimate assumptions with the set of actual experience for Lapse, Mortality, Incidence, and Claim Termination.

Some actuarial judgment is used in areas where credibility or trending requires adjustment. In any case, the methodology, results, conclusions and use are prescribed by MetLife internal Standards and Actuarial Standards of Practice and are reviewed and approved by MetLife management, internal auditors, and external auditors.

#### Calculation of the Rate Request

MetLife's evaluation of the Justifiable Rate Increase ("JRI") uses the industry standard "If Knew" basis. This method calculates the premium needed at time zero to achieve the original loss ratio if all current experience had been known at inception. Of course, the Company cannot retroactively charge such premiums, so all historical losses stemming from past premium shortfalls are taken by the Company.

#### Additional Notes

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.*" The requested rate increase for this filing is 15.00%.

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.

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 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.

The actuarial justification for experience analysis and projections, including assumptions and methods, are reflective of the Code of Professional Conduct and applicable Actuarial Standards of Practice. 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.

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

Sincerely,

A handwritten signature in black ink that reads "Mark D. Newton". The signature is written in a cursive, flowing style with a large, prominent "M" and "N".

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

# **METROPOLITAN LIFE INSURANCE COMPANY**

**New York, NY**

## **Actuarial Memorandum**

**August 18, 2019**

This actuarial memorandum pertains to individual long-term care policies for which:

- Metropolitan Life Insurance Company (“MetLife”) acts as administrator on behalf of Teachers Insurance and Annuity Association (“TIAA”), under an administrative agreement between MetLife and TIAA that became effective on May 1, 2004;
- MetLife acts as administrator on behalf of TIAA-CREF Life Insurance Company (“T-C Life”) under an administrative agreement between MetLife and T-C Life that became effective on May 1, 2004; or
- MetLife is the direct insurer through assumption reinsurance agreements with TIAA and T-C Life.

Although separate filings are being submitted for rate increases related to the above described long-term care policies (due to the fact that there are currently three different insuring entities involved – TIAA, T-C Life and MetLife), for purposes of this actuarial memorandum and review and approval of our premium rate schedule increase, we are treating the policies to which the filings relate as one block of business.

### **Policy Forms**

#### **Policy Form Series Originally Issued by TIAA**

These policies are either administered by MetLife on behalf of TIAA or assumed by MetLife:

LTC.02 Policy Form Series - this policy form series is referred to as LTC.02 throughout this actuarial memorandum and includes the following policy form(s):

LTC-MD.02 Ed. 11-91  
LTC-E-MD.02 Ed. 11-91  
LTC-MD.02 (RPU) Ed. 11-91  
LTC-E-MD.02 (RPU) Ed. 11-91  
LTC-MD.02 Ed. 11-96  
LTC-E-MD.02 Ed. 11-96  
LTC-MD.02 (RPU) Ed. 11-96  
LTC-E-MD.02 (RPU) Ed. 11-96

LTC.02 also includes any riders or endorsements approved for issue with the above listed policies.

LTC.03 Policy Form Series - this policy form series is referred to as LTC.03 throughout this actuarial memorandum and includes the following policy form(s):

LTC.03

LTC.03 also includes any riders or endorsements approved for issue with the above listed policy.

# **METROPOLITAN LIFE INSURANCE COMPANY**

**New York, NY**

## **Actuarial Memorandum**

**August 18, 2019**

### **Policy Form Series Originally Issued by T-C Life**

These policies are either administered by MetLife on behalf of T-C Life or assumed by MetLife:

TCL-LTC.04 Policy Form Series - this policy form series is referred to as LTC.04 throughout this actuarial memorandum and includes the following policy form(s):

TCL-LTC.04 (MD) ed. 4/00

LTC.04 also includes any riders or endorsements approved for issue with the above listed policy.

### **Dates of Issue**

LTC.02, LTC.03 and LTC.04 are no longer being issued. LTC.02 forms were issued in Maryland from 1992 to 1999. LTC.03 forms were issued in Maryland from 1999 to 2002. LTC.04 forms were issued in Maryland from 2000 to 2004. Nationwide, the last policies were issued in 2004.

### **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**

Each of LTC.02, LTC.03 and LTC.04 is a comprehensive long-term care insurance policy form series. These long-term care policy forms provide benefits for care in a facility and care at home for insureds who are unable to perform a certain number of activities of daily living or who suffer cognitive impairment. Each of the series has optional benefits, including, but not limited to, nonforfeiture and inflation protection benefits.

### **3. Renewability**

These policy forms are guaranteed renewable for life.

### **4. Applicability**

This filing is applicable to inforce 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.

# METROPOLITAN LIFE INSURANCE COMPANY

New York, NY

## Actuarial Memorandum

August 18, 2019

### 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, 2017.
- b. Voluntary Termination Rates vary by duration as developed from actual experience through June 30, 2017 and are shown in the following table:

Voluntary Termination Rates	
Policy Duration	Lapse Rate
1	5.00%
2	4.50%
3	3.00%
4	2.00%
5	1.50%
6	0.70%
7	0.70%
8-10	0.60%
11+	0.50%

In the year of rate increase implementation, it is assumed that an additional 1.34% of policies lapse and there is a 0.4% net reduction to premiums and benefits due to benefit downgrades.

- c. Mortality 92% of Annuity 2000 Basic Table with selection consistent with experience.
- d. Adverse Selection No adverse selection is assumed.
- e. 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. The assumptions used in this filing were developed from the actual experience on these forms and supplemented, as needed, based on the experience of other 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.

# **METROPOLITAN LIFE INSURANCE COMPANY**

**New York, NY**

## **Actuarial Memorandum**

**August 18, 2019**

### **6. Marketing Method**

These policy forms were marketed through direct response methods without the use of agents or brokers.

### **7. Underwriting Description**

Individual medical underwriting was performed based on health status, functional capacity, and other health data.

### **8. Premiums**

Premium rates are level premiums from the date of issue except when Periodic Inflation Additions are taken. Premiums do not vary by occupation or sex. Premiums do vary by plan design, payment method, and the selection of additional 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):

<b>Premium Mode</b>	<b>Modal Factors for Direct Payment Methods</b>	<b>Modal Factors for Automatic Payment Methods</b>
Annual	1.00*AP	1.00*AP
Semi-Annual	0.51*AP	0.50699*AP
Quarterly	0.26*AP	0.25527*AP
Monthly	0.088*AP	0.08549*AP

### **12. Reserves**

Active life reserves have not been used in this rate increase analysis. Claim reserves as of December 31, 2017 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, 2017 have been allocated to a calendar year of incurral and included in historical incurred claims.

# **METROPOLITAN LIFE INSURANCE COMPANY**

**New York, NY**

## **Actuarial Memorandum**

**August 18, 2019**

### **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 experiences for all policy forms combined are shown in Exhibit I-A and Exhibit I-B respectively. Exhibit I-A normalizes the premium to reflect the prior rate action authorized by Maryland rather than the prior rate action authorized by other states.

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 4.51%. Incurred but not reported reserves were allocated based on a historical analysis of claim development pattern.

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

A lifetime loss ratio as of December 31, 2017 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 4.51%.

### **15. Projected Earned Premiums and Incurred Claims**

Earned premiums for projection years 2018 through 2098 are developed by multiplying each prior period's earned premium (starting with December 31, 2017 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 Exhibit 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 4.51%.

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

Projections in Exhibit II-A and Exhibit II-B 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



# METROPOLITAN LIFE INSURANCE COMPANY

New York, NY

## Actuarial Memorandum

August 18, 2019

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.

### 16. History of Previous Rate Increases

Round	Authorized %	Authorization Date	Implementation Date
1	15.00%	10/27/2011	6/1/2012
2	15.00%	11/3/2017	5/1/2017
3	9.60%	11/14/2018	5/1/2019

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 an increase of 15.00% for the policy forms listed above.

Corresponding rate tables reflecting the increase are included with this filing. Please 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, mortality, and interest were as follows:

- a. Incidence and continuance rates for nursing home care were based on a study published by the Society of Actuaries based on the 1985 NNHS with modifications. Home health care incidence and continuance rates were based on the nursing home care rates with modifications.
- b. Voluntary termination rates vary by duration and issue age as shown in the following table<sup>1</sup>.

---

<sup>1</sup> For certain younger issue ages with specific inflation options only, policy form series LTC.02 had slightly higher lapse rates in some durations.

# METROPOLITAN LIFE INSURANCE COMPANY

New York, NY

## Actuarial Memorandum

August 18, 2019

Duration	Issue Age											
	25	35	42	47	52	57	62	67	72	77	82	87+
1	5.00%	6.00%	6.00%	6.00%	6.00%	6.00%	4.00%	3.00%	3.00%	3.00%	3.00%	0.00%
2	4.50%	5.50%	5.50%	5.50%	5.50%	5.50%	3.50%	3.00%	3.00%	2.50%	2.50%	0.00%
3	4.00%	5.00%	5.00%	5.00%	5.00%	5.00%	3.00%	3.00%	3.00%	2.00%	2.00%	0.00%
4	3.50%	4.50%	4.50%	4.50%	4.50%	4.50%	3.00%	3.00%	3.00%	2.00%	2.00%	0.00%
5	3.00%	4.00%	4.00%	4.00%	4.00%	4.00%	3.00%	3.00%	3.00%	2.00%	2.00%	0.00%
6	2.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.00%	3.00%	3.00%	2.00%	2.00%	0.00%
7	2.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.00%	2.00%	0.00%
8	1.50%	2.50%	2.50%	2.50%	2.50%	2.50%	3.00%	3.00%	3.00%	2.00%	2.00%	0.00%
9	1.00%	2.30%	2.30%	2.30%	2.30%	2.30%	3.00%	3.00%	3.00%	2.00%	2.00%	0.00%
10	1.00%	2.00%	2.00%	2.00%	2.00%	2.00%	3.00%	3.00%	3.00%	2.00%	2.00%	0.00%
11	1.00%	1.80%	1.80%	1.80%	2.00%	2.00%	3.00%	3.00%	3.00%	2.00%	2.00%	0.00%
12	1.00%	1.50%	1.50%	1.50%	2.00%	2.00%	3.00%	3.00%	3.00%	2.00%	2.00%	0.00%
13	1.00%	1.30%	1.30%	1.50%	2.00%	2.00%	3.00%	3.00%	3.00%	2.00%	2.00%	0.00%
14	1.00%	1.00%	1.00%	1.50%	2.00%	2.00%	3.00%	3.00%	3.00%	2.00%	2.00%	0.00%
15	1.00%	1.00%	1.00%	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	0.00%
16	1.00%	1.00%	1.00%	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	0.00%
17	1.00%	1.00%	1.00%	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	0.00%
18	1.00%	1.00%	1.00%	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	0.00%
19	1.00%	1.00%	1.00%	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	0.00%
20	1.00%	1.00%	1.00%	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	0.00%
21	1.00%	1.00%	1.00%	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	0.00%
22	1.00%	1.00%	1.00%	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	0.00%
23	1.00%	1.00%	1.00%	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	0.00%
24	1.00%	1.00%	1.00%	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	0.00%
25+	1.00%	1.00%	1.00%	1.50%	2.00%	2.00%	2.00%	1.00%	1.00%	1.00%	1.00%	0.00%

c. Mortality was assumed based on TIAA's own 1983 Table A Merged Gender Mod 1 (with ages set back 4.5 years)

Age	Mortality
22	0.000348
27	0.000435
32	0.000548
37	0.000664
42	0.000857
47	0.001356
52	0.002327
57	0.003694
62	0.005352
67	0.007955
72	0.012906
77	0.021114
82	0.035309
87	0.059251

# METROPOLITAN LIFE INSURANCE COMPANY

New York, NY

## Actuarial Memorandum

August 18, 2019

92	0.097039
97	0.149565
102	0.363419
107	0.480274
110	1.000000

d. Investment earnings rate was assumed at 5.75%.

As part of the inforce management of the business, MetLife monitors the performance of the business 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 increases.

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-A and I-B have been relied upon by the actuary in the development of this memorandum.

### 19. Loss Ratio Requirement Compliance Demonstration

Projected experience reflecting the implementation of the increase is shown in Exhibit I. As shown in these exhibits, the expected lifetime loss ratio with and without the requested rate increase meet the requirements under rate stability regulations.

### 20. Average Annual Premium

The average September 30, 2018 annualized premiums for all premium-paying policies issued in Maryland, before and after the current requested increase of 15.00% are:

Before increase:	\$2,338
After prior authorized 9.60% increase:	\$2,563
After current requested 15.00% increase:	\$2,947

# METROPOLITAN LIFE INSURANCE COMPANY

New York, NY

## Actuarial Memorandum

August 18, 2019

### 21. Proposed Effective Date

This rate increase will apply to policies on their policy anniversary date following at least a 60-day policyholder notification period following approval.

### 22. Nationwide Distribution of Business as of September 20, 2018 (based on premium-paying policies inforce count)

#### By Policy Form:

Policy Form	Count	Percent
LTC.02	6,044	22%
LTC.03	13,224	47%
LTC.04	8,833	31%
Total	28,101	100%

#### By Issue Age:

Issue Ages	Count	Percent
<40	106	0%
40-49	1,292	5%
50-59	9,144	33%
60-64	8,002	28%
65-69	6,319	22%
70-74	2,737	10%
75-79	468	2%
>79	33	0%
Total	28,101	100%

#### By Elimination Period:

Elimination Period	Count	Percent
30-day	2,503	9%
60-day	569	2%
90-day	23,869	85%
100-day	118	0%

**METROPOLITAN LIFE INSURANCE COMPANY**

**New York, NY**

**Actuarial Memorandum**

**August 18, 2019**

365-day	1,042	4%
Total	28,101	100%

By Benefit Period:

<b>Benefit Period</b>	<b>Count</b>	<b>Percent</b>
3 Year	7,162	25%
5 Year	8,038	29%
7 Year	5,547	20%
Lifetime	7,354	26%
Total	28,101	100%

By Inflation Option:

<b>Inflation Option</b>	<b>Count</b>	<b>Percent</b>
3% Capped	172	1%
5% Capped	250	1%
5% Uncapped	4,028	14%
No Inflation	23,651	84%
Total	28,101	100%

By Home Care Percentage:

<b>HC%</b>	<b>Count</b>	<b>Percent</b>
50%	8,758	31%
100%	19,343	69%
Total	28,101	100%

# METROPOLITAN LIFE INSURANCE COMPANY

New York, NY

## Actuarial Memorandum

August 18, 2019

### 23. Number of Policyholders

As of September 30, 2018, 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	2018 Annualized Premium	Number of Insured	2018 Annualized Premium
Maryland	568	\$1,331,933	187	\$433,296

### 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.

The projections contained in this actuarial memorandum are based on best estimate assumptions that do not reflect any margins for moderately adverse experience. I certify that (1) if the requested premium rate schedule increase is implemented and (2) unless underlying assumptions which reflect moderately adverse conditions are realized, no further premium rate schedule increases are anticipated. Moderately adverse conditions are interpreted as those conditions where aggregate experience deviates unfavorably from the aggregate experience assumptions used in determining the lifetime projections, such that the value of the deviation is equal to 5% of gross premiums or more

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; 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.

**METROPOLITAN LIFE INSURANCE COMPANY**

**New York, NY**

**Actuarial Memorandum**

**August 18, 2019**

A handwritten signature in black ink that reads "Mark D. Newton". The signature is written in a cursive, flowing style.

---

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

Exhibit I-A  
Metropolitan Life Insurance Company  
Nationwide Experience Projections (Premium Normalized to Include Prior Authorized Increases)  
Policy Forms: LTC.02, LTC.03 and LTC.04

		Loss Ratio Demonstration							Factors Derived from Projected Values for Illustrative Purposes Only						Interest Rate Factors	
		Without Interest				With Interest			Premium Rate Increase Factor	Benefit Downgrade	Persistency Factors				Calendar Year Effective Int Rate	Mid-Year Disc / Accum Factor
		Earned Premium	Incurred Claims	Loss Ratio	Life Years	Earned Premium	Incurred Claims	Loss Ratio			Policy Lapse & Mortality	Policy Shock Lapse	Policy Persistency	Premium Persistency		
Historical Experience	1991	236,752	-	0.0%	318	762,037	-	0.0%							4.51%	3.2187
	1992	1,001,528	12,795	1.3%	693	3,084,525	39,406	1.3%							4.51%	3.0798
	1993	1,836,721	88,383	4.8%	1,217	5,412,656	260,458	4.8%							4.51%	2.9469
	1994	2,576,020	630,822	24.5%	1,778	7,263,711	1,778,754	24.5%							4.51%	2.8197
	1995	4,000,511	355,644	8.9%	3,527	10,793,618	959,548	8.9%							4.51%	2.6981
	1996	8,028,467	1,479,819	18.4%	6,611	20,726,519	3,820,342	18.4%							4.51%	2.5816
	1997	11,468,941	1,826,216	15.9%	7,787	28,330,823	4,511,157	15.9%							4.51%	2.4702
	1998	16,887,682	2,710,864	16.1%	11,882	39,916,098	6,407,458	16.1%							4.51%	2.3636
	1999	28,570,510	5,905,951	20.7%	20,137	64,615,718	13,357,034	20.7%							4.51%	2.2616
	2000	38,527,352	7,405,276	19.2%	31,662	83,374,165	16,025,205	19.2%							4.51%	2.1640
	2001	48,864,876	9,570,375	19.6%	37,340	101,181,540	19,816,795	19.6%							4.51%	2.0706
	2002	55,785,945	13,959,089	25.0%	40,621	110,527,777	27,656,914	25.0%							4.51%	1.9813
	2003	61,686,649	17,919,043	29.0%	43,992	116,944,546	33,970,630	29.0%							4.51%	1.8958
	2004	64,809,682	23,294,582	35.9%	43,706	117,563,047	42,255,756	35.9%							4.51%	1.8140
	2005	64,016,577	33,631,116	52.5%	42,813	111,113,172	58,373,318	52.5%							4.51%	1.7357
	2006	63,346,011	29,298,106	46.3%	41,973	105,204,550	48,658,060	46.3%							4.51%	1.6608
	2007	62,994,681	35,823,680	56.9%	41,116	100,106,271	56,928,219	56.9%							4.51%	1.5891
	2008	62,696,015	45,210,430	72.1%	40,259	95,332,173	68,744,536	72.1%							4.51%	1.5205
	2009	62,119,757	46,923,133	75.5%	39,577	90,379,816	68,269,812	75.5%							4.51%	1.4549
	2010	61,366,092	51,237,723	83.5%	38,613	85,430,377	71,330,239	83.5%							4.51%	1.3921
	2011	59,402,016	53,047,819	89.3%	37,587	79,127,454	70,663,240	89.3%							4.51%	1.3321
	2012	59,525,159	60,887,612	102.3%	36,403	75,869,762	77,606,323	102.3%							4.51%	1.2746
	2013	63,376,539	71,261,820	112.4%	35,545	77,292,764	86,909,494	112.4%							4.51%	1.2196
	2014	61,409,394	76,044,062	123.8%	34,297	71,661,729	88,739,662	123.8%							4.51%	1.1670
	2015	59,016,364	82,859,304	140.4%	33,015	65,897,217	92,520,059	140.4%							4.51%	1.1166
	2016	55,757,532	91,561,658	164.2%	31,781	59,571,744	97,825,127	164.2%							4.51%	1.0684
	2017	54,417,050	94,963,030	174.5%	30,515	55,630,622	97,080,832	174.5%							4.51%	1.0223
Projected Future Experience	2018	60,735,662	94,618,935	155.8%	28,948	59,410,724	92,554,839	155.8%	1.3149	N/A	0.0513	N/A	0.949	N/A	4.51%	0.9782
	2019	57,990,968	98,928,016	170.6%	27,419	54,277,969	92,593,932	170.6%	1.3538	N/A	0.0528	N/A	0.947	0.927	4.51%	0.9360
	2020	57,101,286	102,738,764	179.9%	25,822	51,138,887	92,010,993	179.9%	1.4438	N/A	0.0582	N/A	0.942	0.923	4.51%	0.8956
	2021	52,671,940	105,955,043	201.2%	24,205	45,136,393	90,796,512	201.2%	1.4490	N/A	0.0626	N/A	0.937	0.919	4.51%	0.8569
	2022	48,170,917	108,611,320	225.5%	22,712	39,497,954	89,056,327	225.5%	1.4490	N/A	0.0617	N/A	0.938	0.915	4.51%	0.8200
	2023	43,829,123	110,673,322	252.5%	21,240	34,387,026	86,830,996	252.5%	1.4490	N/A	0.0648	N/A	0.935	0.910	4.51%	0.7846
	2024	39,669,919	112,032,136	282.4%	19,787	29,780,728	84,103,991	282.4%	1.4490	N/A	0.0684	N/A	0.932	0.905	4.51%	0.7507
	2025	35,716,887	112,710,280	315.6%	18,360	25,656,047	80,961,710	315.6%	1.4490	N/A	0.0721	N/A	0.928	0.900	4.51%	0.7183
	2026	31,968,564	112,558,065	352.1%	16,967	21,972,599	77,363,287	352.1%	1.4490	N/A	0.0759	N/A	0.924	0.895	4.51%	0.6873
	2027	28,451,362	111,571,122	392.1%	15,612	18,711,280	73,375,698	392.1%	1.4490	N/A	0.0798	N/A	0.920	0.890	4.51%	0.6577
	2028	25,182,090	109,765,590	435.9%	14,303	15,846,537	69,073,079	435.9%	1.4490	N/A	0.0839	N/A	0.916	0.885	4.51%	0.6293
	2029	22,163,063	107,108,717	483.3%	13,045	13,344,876	64,492,553	483.3%	1.4490	N/A	0.0880	N/A	0.912	0.880	4.51%	0.6021
	2030	19,388,991	103,740,144	535.0%	11,843	11,170,744	59,768,692	535.0%	1.4490	N/A	0.0922	N/A	0.908	0.875	4.51%	0.5761
	2031	16,860,840	99,675,772	591.2%	10,700	9,294,976	54,948,857	591.2%	1.4490	N/A	0.0965	N/A	0.903	0.870	4.51%	0.5513
	2032	14,571,021	95,001,051	652.0%	9,619	7,686,014	50,111,756	652.0%	1.4490	N/A	0.1010	N/A	0.899	0.864	4.51%	0.5275
	2033	12,513,832	89,825,230	717.8%	8,605	6,316,023	45,336,887	717.8%	1.4490	N/A	0.1054	N/A	0.895	0.859	4.51%	0.5047
	2034	10,679,137	84,191,113	788.4%	7,659	5,157,410	40,659,475	788.4%	1.4490	N/A	0.1100	N/A	0.890	0.853	4.51%	0.4829
	2035	9,055,227	78,258,744	864.2%	6,781	4,184,437	36,163,507	864.2%	1.4490	N/A	0.1146	N/A	0.885	0.848	4.51%	0.4621
	2036	7,629,291	72,140,302	945.6%	5,971	3,373,370	31,897,583	945.6%	1.4490	N/A	0.1194	N/A	0.881	0.843	4.51%	0.4422
	2037	6,386,684	65,956,499	1032.7%	5,230	2,702,075	27,904,842	1032.7%	1.4490	N/A	0.1241	N/A	0.876	0.837	4.51%	0.4231
	2038	5,311,468	59,821,952	1126.3%	4,556	2,150,199	24,217,243	1126.3%	1.4490	N/A	0.1288	N/A	0.871	0.832	4.51%	0.4048
	2039	4,388,397	53,771,124	1225.3%	3,947	1,699,856	20,828,375	1225.3%	1.4490	N/A	0.1337	N/A	0.866	0.826	4.51%	0.3874
	2040	3,601,998	47,946,172	1331.1%	3,400	1,335,033	17,770,611	1331.1%	1.4490	N/A	0.1385	N/A	0.861	0.821	4.51%	0.3706
	2041	2,936,957	42,369,965	1442.6%	2,913	1,041,569	15,026,184	1442.6%	1.4490	N/A	0.1434	N/A	0.857	0.815	4.51%	0.3546
	2042	2,378,642	37,133,852	1561.1%	2,481	807,164	12,600,934	1561.1%	1.4490	N/A	0.1482	N/A	0.852	0.810	4.51%	0.3393
	2043	1,913,595	32,257,244	1685.7%	2,101	621,334	10,473,748	1685.7%	1.4490	N/A	0.1531	N/A	0.847	0.804	4.51%	0.3247
	2044	1,529,046	27,763,252	1815.7%	1,770	475,048	8,625,561	1815.7%	1.4490	N/A	0.1579	N/A	0.842	0.799	4.51%	0.3107
	2045	1,213,681	23,700,413	1952.8%	1,481	360,798	7,045,553	1952.8%	1.4490	N/A	0.1630	N/A	0.837	0.794	4.51%	0.2973
	2046	957,013	20,042,098	2094.2%	1,233	272,219	5,700,914	2094.2%	1.4490	N/A	0.1677	N/A	0.832	0.789	4.51%	0.2844
	2047	749,783	16,802,131	2240.9%	1,020	204,070	4,573,070	2240.9%	1.4490	N/A	0.1723	N/A	0.828	0.783	4.51%	0.2722
	2048	583,718	13,968,529	2393.0%	840	152,016	3,637,779	2393.0%	1.4490	N/A	0.1772	N/A	0.823	0.779	4.51%	0.2604
	2049	451,738	11,511,986	2548.4%	687	112,568	2,868,653	2548.4%	1.4490	N/A	0.1818	N/A	0.818	0.774	4.51%	0.2492
	2050	347,673	9,403,655	2704.7%	559	82,897	2,242,160	2704.7%	1.4490	N/A	0.1863	N/A	0.814	0.770	4.51%	0.2384
	2051	266,319	7,622,670	2862.2%	452	60,759	1,739,079	2862.2%	1.4490	N/A	0.1908	N/A	0.809	0.766	4.51%	0.2281
	2052	203,088	6,133,688	3020.2%	364	44,334	1,338,986	3020.2%	1.4490	N/A	0.1946	N/A	0.805	0.763	4.51%	0.2183
	2053	154,190	4,895,940	3175.3%	292	32,207	1,022,663	3175.3%	1.4490	N/A	0.1992	N/A	0.801	0.759	4.51%	0.2089
	2054	116,636	3,874,074	3321.5%	233	23,311	774,295	3321.5%	1.4490	N/A	0.2017	N/A	0.798	0.756	4.51%	0.1999
	2055	87,985	3,048,184													



Exhibit I-A  
Metropolitan Life Insurance Company  
Nationwide Experience Projections (Premium Normalized to Include Prior Authorized Increases) and With 15.00% Future Increase  
Policy Forms: LTC.02, LTC.03 and LTC.04

		Loss Ratio Demonstration							Factors Derived from Projected Values for Illustrative Purposes Only					Interest Rate Factors		
		Without Interest				With Interest			Premium Rate Increase Factor	Benefit Downgrade	Persistence Factors				Calendar Year Effective Int Rate	Mid-Year Disc / Accum Factor
		Earned Premium	Incurred Claims	Loss Ratio	Life Years	Earned Premium	Incurred Claims	Loss Ratio			Policy Lapse & Mortality	Policy Shock Lapse	Policy Persistency	Premium Persistency		
Historical Experience	1991	236,752	-	0.0%	318	762,037	-	0.0%							4.51%	3.2187
	1992	1,001,528	12,795	1.3%	693	3,084,525	39,406	1.3%							4.51%	3.0798
	1993	1,836,721	88,383	4.8%	1,217	5,412,656	260,458	4.8%							4.51%	2.9469
	1994	2,576,020	630,822	24.5%	1,778	7,263,711	1,778,754	24.5%							4.51%	2.8197
	1995	4,000,511	355,644	8.9%	3,527	10,793,618	959,548	8.9%							4.51%	2.6981
	1996	8,028,467	1,479,819	18.4%	6,611	20,726,519	3,820,342	18.4%							4.51%	2.5816
	1997	11,468,941	1,826,216	15.9%	7,787	28,330,823	4,511,157	15.9%							4.51%	2.4702
	1998	16,887,682	2,710,864	16.1%	11,882	39,916,098	6,407,458	16.1%							4.51%	2.3636
	1999	28,570,510	5,905,951	20.7%	20,137	64,615,718	13,357,034	20.7%							4.51%	2.2616
	2000	38,527,352	7,405,276	19.2%	31,662	83,374,165	16,025,205	19.2%							4.51%	2.1640
	2001	48,864,876	9,570,375	19.6%	37,340	101,181,540	19,816,795	19.6%							4.51%	2.0706
	2002	55,785,945	13,959,089	25.0%	40,621	110,527,777	27,656,914	25.0%							4.51%	1.9813
	2003	61,686,649	17,919,043	29.0%	43,992	116,944,546	33,970,630	29.0%							4.51%	1.8958
	2004	64,809,682	23,294,582	35.9%	43,706	117,563,047	42,255,756	35.9%							4.51%	1.8140
	2005	64,016,577	33,631,116	52.5%	42,813	111,113,172	58,373,318	52.5%							4.51%	1.7357
	2006	63,346,011	29,298,106	46.3%	41,973	105,204,550	48,658,060	46.3%							4.51%	1.6608
	2007	62,994,681	35,823,680	56.9%	41,116	100,106,271	56,928,219	56.9%							4.51%	1.5891
	2008	62,696,015	45,210,430	72.1%	40,259	95,332,173	68,744,536	72.1%							4.51%	1.5205
	2009	62,119,757	46,923,133	75.5%	39,577	90,379,816	68,269,812	75.5%							4.51%	1.4549
	2010	61,366,092	51,237,723	83.5%	38,613	85,430,377	71,330,239	83.5%							4.51%	1.3921
Projected Future Experience	2011	59,402,016	53,047,819	89.3%	37,587	79,127,454	70,663,240	89.3%							4.51%	1.3321
	2012	59,525,159	60,887,612	102.3%	36,403	75,869,762	77,606,323	102.3%							4.51%	1.2746
	2013	63,376,539	71,261,820	112.4%	35,545	77,292,764	86,909,494	112.4%							4.51%	1.2196
	2014	61,409,394	76,044,062	123.8%	34,297	71,661,729	88,739,662	123.8%							4.51%	1.1670
	2015	59,016,364	82,859,304	140.4%	33,015	65,897,217	92,520,059	140.4%							4.51%	1.1166
	2016	55,757,532	91,561,658	164.2%	31,781	59,571,744	97,825,127	164.2%							4.51%	1.0684
	2017	54,417,050	94,963,030	174.5%	30,515	55,630,622	97,080,832	174.5%							4.51%	1.0223
	2018	60,735,662	94,618,935	155.8%	28,948	59,410,724	92,554,839	155.8%	1.3149	1.0000	0.0513	1.0000	0.949	N/A	4.51%	0.9782
	2019	57,990,968	98,928,016	170.6%	27,419	54,277,969	92,593,932	170.6%	1.3538	1.0000	0.0528	1.0000	0.947	0.927	4.51%	0.9360
	2020	57,626,390	102,614,648	178.1%	25,798	51,609,161	91,899,837	178.1%	1.4588	0.9997	0.0591	0.9991	0.941	0.923	4.51%	0.8956
	2021	58,211,025	104,473,592	179.5%	23,943	49,883,025	89,527,005	179.5%	1.6241	0.9968	0.0719	0.9892	0.928	0.919	4.51%	0.8569
	2022	54,435,624	106,727,305	196.1%	22,407	44,634,728	87,511,520	196.1%	1.6664	0.9960	0.0642	0.9866	0.936	0.915	4.51%	0.8200
	2023	49,529,173	108,753,538	219.6%	20,955	38,859,116	85,324,791	219.6%	1.6664	0.9960	0.0648	0.9866	0.935	0.910	4.51%	0.7846
	2024	44,829,057	110,088,782	245.6%	19,521	33,653,760	82,645,090	245.6%	1.6664	0.9960	0.0684	0.9866	0.932	0.905	4.51%	0.7507
	2025	40,361,926	110,755,163	274.4%	18,114	28,992,658	79,557,316	274.4%	1.6664	0.9960	0.0721	0.9866	0.928	0.900	4.51%	0.7183
	2026	36,126,128	110,605,587	306.2%	16,739	24,830,171	76,021,312	306.2%	1.6664	0.9960	0.0759	0.9866	0.924	0.895	4.51%	0.6873
	2027	32,151,508	109,635,765	341.0%	15,403	21,144,713	72,102,894	341.0%	1.6664	0.9960	0.0798	0.9866	0.920	0.890	4.51%	0.6577
	2028	28,457,062	107,861,552	379.0%	14,112	17,907,405	67,874,910	379.0%	1.6664	0.9960	0.0839	0.9866	0.916	0.885	4.51%	0.6293
	2029	25,045,406	105,250,766	420.2%	12,871	15,080,399	63,373,839	420.2%	1.6664	0.9960	0.0880	0.9866	0.912	0.880	4.51%	0.6021
	2030	21,910,561	101,940,626	465.3%	11,684	12,623,518	58,731,920	465.3%	1.6664	0.9960	0.0922	0.9866	0.908	0.875	4.51%	0.5761
2031	19,053,620	97,946,757	514.1%	10,556	10,503,803	53,995,692	514.1%	1.6664	0.9960	0.0965	0.9866	0.903	0.870	4.51%	0.5513	
2032	16,466,006	93,353,125	566.9%	9,491	8,685,593	49,242,497	566.9%	1.6664	0.9960	0.1010	0.9866	0.899	0.864	4.51%	0.5275	
2033	14,141,276	88,267,085	624.2%	8,490	7,137,432	44,550,455	624.2%	1.6664	0.9960	0.1054	0.9866	0.895	0.859	4.51%	0.5047	
2034	12,067,977	82,730,700	685.5%	7,556	5,828,140	39,954,179	685.5%	1.6664	0.9960	0.1100	0.9866	0.890	0.853	4.51%	0.4829	
2035	10,232,874	76,901,236	751.5%	6,690	4,728,629	35,536,200	751.5%	1.6664	0.9960	0.1146	0.9866	0.885	0.848	4.51%	0.4621	
2036	8,621,493	70,888,927	822.2%	5,891	3,812,082	31,344,274	822.2%	1.6664	0.9960	0.1194	0.9866	0.881	0.843	4.51%	0.4422	
2037	7,217,283	64,812,391	898.0%	5,160	3,053,484	27,420,793	898.0%	1.6664	0.9960	0.1241	0.9866	0.876	0.837	4.51%	0.4231	
2038	6,002,233	58,784,257	979.4%	4,495	2,429,836	23,797,161	979.4%	1.6664	0.9960	0.1288	0.9866	0.871	0.832	4.51%	0.4048	
2039	4,959,115	52,838,388	1065.5%	3,894	1,920,925	20,467,078	1065.5%	1.6664	0.9960	0.1337	0.9866	0.866	0.826	4.51%	0.3874	
2040	4,070,443	47,114,479	1157.5%	3,355	1,508,656	17,462,355	1157.5%	1.6664	0.9960	0.1385	0.9866	0.861	0.821	4.51%	0.3706	
2041	3,318,914	41,634,999	1254.5%	2,874	1,177,027	14,765,533	1254.5%	1.6664	0.9960	0.1434	0.9866	0.857	0.815	4.51%	0.3546	
2042	2,687,988	36,489,714	1357.5%	2,448	912,137	12,382,353	1357.5%	1.6664	0.9960	0.1482	0.9866	0.852	0.810	4.51%	0.3393	
2043	2,162,461	31,697,697	1465.8%	2,073	702,139	10,292,067	1465.8%	1.6664	0.9960	0.1531	0.9866	0.847	0.804	4.51%	0.3247	
2044	1,727,901	27,281,659	1578.9%	1,746	536,829	8,475,939	1578.9%	1.6664	0.9960	0.1579	0.9866	0.842	0.799	4.51%	0.3107	
2045	1,371,522	23,289,296	1698.1%	1,461	407,720	6,923,338	1698.1%	1.6664	0.9960	0.1630	0.9866	0.837	0.794	4.51%	0.2973	
2046	1,081,474	19,694,439	1821.1%	1,216	307,622	5,602,024	1821.1%	1.6664	0.9960	0.1677	0.9866	0.832	0.789	4.51%	0.2844	
2047	847,294	16,510,675	1948.6%	1,007	230,610	4,493,744	1948.6%	1.6664	0.9960	0.1723	0.9866	0.828	0.783	4.51%	0.2722	
2048	659,632	13,726,226	2080.9%	828	171,786	3,574,677	2080.9%	1.6664	0.9960	0.1772	0.9866	0.823	0.779	4.51%	0.2604	
2049	510,488	11,312,295	2216.0%	678	127,208	2,818,892	2216.0%	1.6664	0.9960	0.1818	0.9866	0.818	0.774	4.51%	0.2492	
2050	392,888	9,240,536	2351.9%	552	93,678	2,203,267	2351.9%	1.6664	0.9960	0.1863	0.9866	0.814	0.770	4.51%	0.2384	
2051	300,954	7,490,445	2488.9%	446	68,661	1,708,912	2488.9%	1.6664	0.9960	0.1908	0.9866	0.809	0.766	4.51%	0.2281	
2052	229,500	6,027,290	2626.3%	359	50,100	1,315,759	2626.3%	1.6664	0.9960	0.1946	0.9866	0.805	0.763	4.51%	0.2183	
2053	174,24															

**Exhibit II-A**  
**Demonstration that Lifetime Incurred Claims with Requested Increase are**  
**Not Less than Lifetime Earned Premium with Prescribed Factors**  
**Policy Forms: LTC.02, LTC.03 and LTC.04**

1	Accumulated value of initial earned premium	1,736,768,486	x	58%	=	1,007,325,722
2a	Accumulated value of earned premium	1,783,114,430				
2b	Accumulated value of prior premium rate schedule increases (2a-1)	46,345,944	x	85%	=	39,394,053
3	Present value of future projected initial earned premium	330,320,130	x	58%	=	191,585,676
4a	Present value of future projected premium	507,435,151				
4b	Present value of future projected premium in excess of the projected initial earned premiums (4a-3)	177,115,020	x	85%	=	150,547,767
<b>5</b>	<b>Lifetime Earned Premium Times Prescribed Factor: Sum of 1, 2b, 3, and 4b</b>					<b>1,388,853,217</b>
6a	Accumulated value of incurred claims without the inclusion of active life reserves					1,154,508,377
6b	Present value of future projected incurred claims without the inclusion of active life reserves					1,461,990,769
<b>7</b>	<b>Lifetime Incurred Claims with Rate Increase: Sum of 6a and 6b</b>					<b>2,616,499,146</b>
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)  
Policy Forms: LTC.02, LTC.03 and LTC.04

		Loss Ratio Demonstration							Factors Derived from Projected Values for Illustrative Purposes Only							Interest Rate Factors	
		Without Interest				With Interest			Premium Rate Increase Factor	Benefit Downgrade	Persistency Factors				Calendar Year Effective Int Rate	Mid-Year Disc / Accum Factor	
		Earned Premium	Incurred Claims	Loss Ratio	Life Years	Earned Premium	Incurred Claims	Loss Ratio			Policy Lapse & Mortality	Policy Shock Lapse	Policy Persistency	Premium Persistency			
Historical Experience	1991	-	-	N/A	-	-	-	N/A							4.51%	3.2187	
	1992	1,261	-	0.0%	4	3,884	-	0.0%							4.51%	3.0798	
	1993	16,965	-	0.0%	18	49,995	-	0.0%							4.51%	2.9469	
	1994	44,414	-	0.0%	25	125,235	-	0.0%							4.51%	2.8197	
	1995	45,528	-	0.0%	23	122,837	-	0.0%							4.51%	2.6981	
	1996	45,794	-	0.0%	23	118,224	-	0.0%							4.51%	2.5816	
	1997	43,812	-	0.0%	20	108,227	-	0.0%							4.51%	2.4702	
	1998	105,442	-	0.0%	89	249,226	-	0.0%							4.51%	2.3636	
	1999	371,260	-	0.0%	276	839,650	-	0.0%							4.51%	2.2616	
	2000	706,171	128,416	18.2%	472	1,528,172	277,896	18.2%							4.51%	2.1640	
	2001	1,017,728	397,314	39.0%	774	2,107,348	822,695	39.0%							4.51%	2.0706	
	2002	1,235,409	137,260	11.1%	862	2,447,695	271,951	11.1%							4.51%	1.9813	
	2003	1,480,878	16,773	1.1%	1,003	2,807,424	31,797	1.1%							4.51%	1.8958	
	2004	1,594,274	760,323	47.7%	1,014	2,891,971	1,379,206	47.7%							4.51%	1.8140	
	2005	1,572,461	189,556	12.1%	995	2,729,310	329,011	12.1%							4.51%	1.7357	
	2006	1,574,533	414,984	26.4%	987	2,614,972	689,203	26.4%							4.51%	1.6608	
	2007	1,585,745	108,632	6.9%	982	2,519,943	172,630	6.9%							4.51%	1.5891	
	2008	1,601,543	1,004,788	62.7%	971	2,435,220	1,527,827	62.7%							4.51%	1.5205	
	2009	1,609,311	671,188	41.7%	960	2,341,433	976,531	41.7%							4.51%	1.4549	
	2010	1,592,099	1,574,941	98.9%	939	2,216,430	2,192,543	98.9%							4.51%	1.3921	
2011	1,539,965	609,049	39.5%	919	2,051,337	811,295	39.5%							4.51%	1.3321		
2012	1,559,182	1,320,396	84.7%	891	1,987,306	1,682,954	84.7%							4.51%	1.2746		
2013	1,679,086	2,495,617	148.6%	891	2,047,780	3,043,605	148.6%							4.51%	1.2196		
2014	1,647,255	1,707,507	103.7%	871	1,922,266	1,992,576	103.7%							4.51%	1.1670		
2015	1,608,467	1,599,002	99.4%	851	1,796,002	1,785,433	99.4%							4.51%	1.1166		
2016	1,564,070	846,007	54.1%	833	1,671,064	903,880	54.1%							4.51%	1.0684		
2017	1,562,568	2,323,774	148.7%	808	1,597,415	2,375,597	148.7%							4.51%	1.0223		
Projected Future Experience	2018	1,658,341	2,286,851	137.9%	771	1,622,164	2,236,963	137.9%	1.3149	N/A	0.0462	N/A	0.954	0.961	4.51%	0.9782	
	2019	1,596,933	2,443,949	153.0%	734	1,494,686	2,287,469	153.0%	1.3538	N/A	0.0474	N/A	0.953	0.935	4.51%	0.9360	
	2020	1,586,183	2,594,735	163.6%	695	1,420,557	2,323,798	163.6%	1.4438	N/A	0.0526	N/A	0.947	0.931	4.51%	0.8956	
	2021	1,476,232	2,732,572	185.1%	656	1,265,034	2,341,635	185.1%	1.4490	N/A	0.0570	N/A	0.943	0.927	4.51%	0.8569	
	2022	1,362,440	2,865,258	210.3%	619	1,117,139	2,349,381	210.3%	1.4490	N/A	0.0558	N/A	0.944	0.923	4.51%	0.8200	
	2023	1,251,260	2,982,453	238.4%	583	981,702	2,339,944	238.4%	1.4490	N/A	0.0587	N/A	0.941	0.918	4.51%	0.7846	
	2024	1,143,431	3,079,407	269.3%	547	858,389	2,311,751	269.3%	1.4490	N/A	0.0623	N/A	0.938	0.914	4.51%	0.7507	
	2025	1,039,664	3,159,285	303.9%	511	746,808	2,269,368	303.9%	1.4490	N/A	0.0657	N/A	0.934	0.909	4.51%	0.7183	
	2026	939,957	3,213,851	341.9%	475	646,050	2,208,941	341.9%	1.4490	N/A	0.0694	N/A	0.931	0.904	4.51%	0.6873	
	2027	845,249	3,243,042	383.7%	441	555,885	2,132,814	383.7%	1.4490	N/A	0.0731	N/A	0.927	0.899	4.51%	0.6577	
	2028	756,191	3,253,286	430.2%	407	475,854	2,047,222	430.2%	1.4490	N/A	0.0770	N/A	0.923	0.895	4.51%	0.6293	
	2029	672,802	3,239,085	481.4%	374	405,109	1,950,326	481.4%	1.4490	N/A	0.0809	N/A	0.919	0.890	4.51%	0.6021	
	2030	595,144	3,200,883	537.8%	342	342,885	1,844,152	537.8%	1.4490	N/A	0.0847	N/A	0.915	0.885	4.51%	0.5761	
	2031	523,443	3,138,511	599.6%	312	288,562	1,730,186	599.6%	1.4490	N/A	0.0889	N/A	0.911	0.880	4.51%	0.5513	
	2032	457,701	3,050,165	666.4%	283	241,431	1,608,920	666.4%	1.4490	N/A	0.0932	N/A	0.907	0.874	4.51%	0.5275	
	2033	397,791	2,937,941	738.6%	255	200,774	1,482,847	738.6%	1.4490	N/A	0.0974	N/A	0.903	0.869	4.51%	0.5047	
	2034	343,625	2,804,582	816.2%	229	165,951	1,354,452	816.2%	1.4490	N/A	0.1018	N/A	0.898	0.864	4.51%	0.4829	
	2035	294,958	2,654,864	900.1%	205	136,301	1,226,817	900.1%	1.4490	N/A	0.1065	N/A	0.894	0.858	4.51%	0.4621	
	2036	251,562	2,489,489	989.6%	182	111,231	1,100,753	989.6%	1.4490	N/A	0.1106	N/A	0.889	0.853	4.51%	0.4422	
	2037	213,196	2,317,022	1086.8%	161	90,199	980,284	1086.8%	1.4490	N/A	0.1157	N/A	0.884	0.847	4.51%	0.4231	
	2038	179,490	2,142,376	1193.6%	142	72,661	867,281	1193.6%	1.4490	N/A	0.1203	N/A	0.880	0.842	4.51%	0.4048	
	2039	150,039	1,954,068	1302.4%	124	58,118	756,913	1302.4%	1.4490	N/A	0.1255	N/A	0.874	0.836	4.51%	0.3874	
	2040	124,573	1,768,646	1419.8%	108	46,172	655,525	1419.8%	1.4490	N/A	0.1298	N/A	0.870	0.830	4.51%	0.3706	
	2041	102,692	1,588,426	1546.8%	93	36,419	563,323	1546.8%	1.4490	N/A	0.1352	N/A	0.865	0.824	4.51%	0.3546	
	2042	84,012	1,409,993	1678.3%	80	28,508	478,465	1678.3%	1.4490	N/A	0.1403	N/A	0.860	0.818	4.51%	0.3393	
	2043	68,225	1,244,150	1823.6%	68	22,152	403,969	1823.6%	1.4490	N/A	0.1458	N/A	0.854	0.812	4.51%	0.3247	
	2044	54,964	1,085,406	1974.8%	58	17,076	337,217	1974.8%	1.4490	N/A	0.1514	N/A	0.849	0.806	4.51%	0.3107	
	2045	43,933	937,720	2134.4%	49	13,060	278,761	2134.4%	1.4490	N/A	0.1553	N/A	0.845	0.799	4.51%	0.2973	
	2046	34,816	799,627	2296.7%	41	9,903	227,452	2296.7%	1.4490	N/A	0.1610	N/A	0.839	0.792	4.51%	0.2844	
	2047	27,363	672,263	2456.9%	34	7,447	182,971	2456.9%	1.4490	N/A	0.1662	N/A	0.834	0.786	4.51%	0.2722	
	2048	21,336	559,800	2623.8%	28	5,556	145,787	2623.8%	1.4490	N/A	0.1734	N/A	0.827	0.780	4.51%	0.2604	
	2049	16,511	459,962	2785.9%	23	4,114	114,617	2785.9%	1.4490	N/A	0.1745	N/A	0.826	0.774	4.51%	0.2492	
	2050	12,667	375,572	2965.0%	19	3,020	89,549	2965.0%	1.4490	N/A	0.1832	N/A	0.817	0.767	4.51%	0.2384	
	2051	9,640	303,413	3147.5%	16	2,199	69,222	3147.5%	1.4490	N/A	0.1871	N/A	0.813	0.761	4.51%	0.2281	
	2052	7,280	242,244	3327.3%	13	1,589	52,882	3327.3%	1.4490	N/A	0.1949	N/A	0.805	0.755	4.51%	0.2183	
	2053	5,451	192,271	3527.2%	10	1,139	40,161	3527.2%	1.4490	N/A	0.1933	N/A	0.807	0.749	4.51%	0.2089	
	2054	4,046	150,218	3712.6%	8	809	30,024	3712.6%	1.4490	N/A	0.2020	N/A	0.798	0.742	4.51%	0.1999	
	2055	2,978	115,050	3863.8%	6	569	22,002	3863.8%	1.4490	N/A	0.2047	N/A	0.795	0.736	4.51%	0.1912	
	2056	2,182	86,713	3974.7%	5	399	15,867	3974.7%	1.4490	N/A	0.2044	N/A	0.796	0.733	4.51%	0.1830	
	2057	1,589	65,215	4104.3%	4	278	11,419	4104.3%	1.4490	N/A	0.2196	N/A	0.780	0.728	4.51%	0.1751	
	2058	1,147	48,891	4264.0%	3	192	8,191	4264.0%	1.4490	N/A	0.2060	N/A	0.794	0.722	4.51%	0.1675	
	2059	821	35,966	4378.7%	2	132	5,766	4378.7%	1.4490	N/A	0.2247	N/A	0.775	0.716	4.51%	0.1603	
	2060	585	26,426	4513.5%	2	90	4,053	4513.5%	1.4490	N/A	0.220						

Exhibit I-B  
Metropolitan Life Insurance Company  
Maryland Experience Projections (Premium Normalized to Include Prior Authorized Increases) and With 15.00% Future Increase  
Policy Forms: LTC.02, LTC.03 and LTC.04

	Calendar Year	Loss Ratio Demonstration							Factors Derived from Projected Values for Illustrative Purposes Only					Interest Rate Factors		
		Without Interest				With Interest			Premium Rate Increase Factor	Benefit Downgrade	Persistency Factors				Calendar Year Effective Int Rate	Mid-Year Disc / Accum Factor
		Earned Premium	Incurred Claims	Loss Ratio	Life Years	Earned Premium	Incurred Claims	Loss Ratio			Policy Lapse & Mortality	Policy Shock Lapse	Policy Persistency	Premium Persistency		
Historical Experience	1991	-	-	N/A	-	-	-	N/A							4.51%	3.2187
	1992	1,261	-	0.0%	4	3,884	-	0.0%							4.51%	3.0798
	1993	16,965	-	0.0%	18	49,995	-	0.0%							4.51%	2.9469
	1994	44,414	-	0.0%	25	125,235	-	0.0%							4.51%	2.8197
	1995	45,528	-	0.0%	23	122,837	-	0.0%							4.51%	2.6981
	1996	45,794	-	0.0%	23	118,224	-	0.0%							4.51%	2.5816
	1997	43,812	-	0.0%	20	108,227	-	0.0%							4.51%	2.4702
	1998	105,442	-	0.0%	89	249,226	-	0.0%							4.51%	2.3636
	1999	371,260	-	0.0%	276	839,650	-	0.0%							4.51%	2.2616
	2000	706,171	128,416	18.2%	472	1,528,172	277,896	18.2%							4.51%	2.1640
	2001	1,017,728	397,314	39.0%	774	2,107,348	822,695	39.0%							4.51%	2.0706
	2002	1,235,409	137,260	11.1%	862	2,447,695	271,951	11.1%							4.51%	1.9813
	2003	1,480,878	16,773	1.1%	1,003	2,807,424	31,797	1.1%							4.51%	1.8958
	2004	1,594,274	760,323	47.7%	1,014	2,891,971	1,379,206	47.7%							4.51%	1.8140
	2005	1,572,461	189,556	12.1%	995	2,729,310	329,011	12.1%							4.51%	1.7357
	2006	1,574,533	414,984	26.4%	987	2,614,972	689,203	26.4%							4.51%	1.6608
	2007	1,585,745	108,632	6.9%	982	2,519,943	172,630	6.9%							4.51%	1.5891
	2008	1,601,543	1,004,788	62.7%	971	2,435,220	1,527,827	62.7%							4.51%	1.5205
	2009	1,609,311	671,188	41.7%	960	2,341,433	976,531	41.7%							4.51%	1.4549
	2010	1,592,099	1,574,941	98.9%	939	2,216,430	2,192,543	98.9%							4.51%	1.3921
	2011	1,539,965	609,049	39.5%	919	2,051,337	811,295	39.5%							4.51%	1.3321
	2012	1,559,182	1,320,396	84.7%	891	1,987,306	1,682,954	84.7%							4.51%	1.2746
	2013	1,679,086	2,495,617	148.6%	891	2,047,780	3,043,605	148.6%							4.51%	1.2196
	2014	1,647,255	1,707,507	103.7%	871	1,922,266	1,992,576	103.7%							4.51%	1.1670
	2015	1,608,467	1,599,002	99.4%	851	1,796,002	1,785,433	99.4%							4.51%	1.1166
	2016	1,564,070	846,007	54.1%	833	1,671,064	903,880	54.1%							4.51%	1.0684
	2017	1,562,568	2,323,774	148.7%	808	1,597,415	2,375,597	148.7%							4.51%	1.0223
Projected Future Experience	2018	1,658,341	2,286,851	137.9%	771	1,622,164	2,236,963	137.9%	1.3149	1.0000	0.0462	1.0000	0.954	0.961	4.51%	0.9782
	2019	1,596,933	2,443,949	153.0%	734	1,494,686	2,287,469	153.0%	1.3538	1.0000	0.0474	1.0000	0.953	0.935	4.51%	0.9360
	2020	1,600,769	2,591,600	161.9%	695	1,433,620	2,320,991	161.9%	1.4588	0.9997	0.0535	0.9991	0.946	0.931	4.51%	0.8956
	2021	1,631,476	2,694,365	165.1%	649	1,398,067	2,308,894	165.1%	1.6241	0.9968	0.0663	0.9892	0.934	0.927	4.51%	0.8569
	2022	1,539,628	2,815,556	182.9%	611	1,262,424	2,308,628	182.9%	1.6664	0.9960	0.0583	0.9866	0.942	0.923	4.51%	0.8200
	2023	1,413,989	2,930,718	207.3%	575	1,109,374	2,299,354	207.3%	1.6664	0.9960	0.0587	0.9866	0.941	0.918	4.51%	0.7846
	2024	1,292,137	3,025,990	234.2%	539	970,024	2,271,650	234.2%	1.6664	0.9960	0.0623	0.9866	0.938	0.914	4.51%	0.7507
	2025	1,174,874	3,104,483	264.2%	504	843,932	2,230,003	264.2%	1.6664	0.9960	0.0657	0.9866	0.934	0.909	4.51%	0.7183
	2026	1,062,200	3,158,102	297.3%	469	730,070	2,170,623	297.3%	1.6664	0.9960	0.0694	0.9866	0.931	0.904	4.51%	0.6873
	2027	955,175	3,186,787	333.6%	435	628,179	2,095,817	333.6%	1.6664	0.9960	0.0731	0.9866	0.927	0.899	4.51%	0.6577
	2028	854,535	3,196,853	374.1%	401	537,740	2,011,710	374.1%	1.6664	0.9960	0.0770	0.9866	0.923	0.895	4.51%	0.6293
	2029	760,301	3,182,899	418.6%	369	457,794	1,916,494	418.6%	1.6664	0.9960	0.0809	0.9866	0.919	0.890	4.51%	0.6021
	2030	672,543	3,145,359	467.7%	337	387,478	1,812,163	467.7%	1.6664	0.9960	0.0847	0.9866	0.915	0.885	4.51%	0.5761
	2031	591,518	3,084,069	521.4%	307	326,090	1,700,173	521.4%	1.6664	0.9960	0.0889	0.9866	0.911	0.880	4.51%	0.5513
	2032	517,226	2,997,256	579.5%	279	272,830	1,581,011	579.5%	1.6664	0.9960	0.0932	0.9866	0.907	0.874	4.51%	0.5275
	2033	449,524	2,886,978	642.2%	252	226,885	1,457,125	642.2%	1.6664	0.9960	0.0974	0.9866	0.903	0.869	4.51%	0.5047
	2034	388,314	2,755,933	709.7%	226	187,534	1,330,957	709.7%	1.6664	0.9960	0.1018	0.9866	0.898	0.864	4.51%	0.4829
	2035	333,318	2,608,812	782.7%	202	154,027	1,205,537	782.7%	1.6664	0.9960	0.1065	0.9866	0.894	0.858	4.51%	0.4621
	2036	284,278	2,446,305	860.5%	180	125,697	1,081,659	860.5%	1.6664	0.9960	0.1106	0.9866	0.889	0.853	4.51%	0.4422
	2037	240,923	2,276,830	945.0%	159	101,929	963,280	945.0%	1.6664	0.9960	0.1157	0.9866	0.884	0.847	4.51%	0.4231
	2038	202,833	2,105,213	1037.9%	140	82,111	852,237	1037.9%	1.6664	0.9960	0.1203	0.9866	0.880	0.842	4.51%	0.4048
	2039	169,552	1,920,172	1132.5%	122	65,676	743,783	1132.5%	1.6664	0.9960	0.1255	0.9866	0.874	0.836	4.51%	0.3874
	2040	140,774	1,737,966	1234.6%	106	52,176	644,154	1234.6%	1.6664	0.9960	0.1298	0.9866	0.870	0.830	4.51%	0.3706
	2041	116,048	1,560,873	1345.0%	92	41,155	553,552	1345.0%	1.6664	0.9960	0.1352	0.9866	0.865	0.824	4.51%	0.3546
	2042	94,937	1,385,535	1459.4%	79	32,216	470,165	1459.4%	1.6664	0.9960	0.1403	0.9866	0.860	0.818	4.51%	0.3393
	2043	77,097	1,222,569	1585.7%	68	25,033	396,961	1585.7%	1.6664	0.9960	0.1458	0.9866	0.854	0.812	4.51%	0.3247
	2044	62,112	1,066,579	1717.2%	57	19,297	331,367	1717.2%	1.6664	0.9960	0.1514	0.9866	0.849	0.806	4.51%	0.3107
	2045	49,647	921,454	1856.0%	48	14,759	273,926	1856.0%	1.6664	0.9960	0.1553	0.9866	0.845	0.799	4.51%	0.2973
	2046	39,344	785,756	1997.1%	41	11,191	223,506	1997.1%	1.6664	0.9960	0.1610	0.9866	0.839	0.792	4.51%	0.2844
	2047	30,921	660,602	2136.4%	34	8,416	179,797	2136.4%	1.6664	0.9960	0.1662	0.9866	0.834	0.786	4.51%	0.2722
	2048	24,110	550,090	2281.5%	28	6,279	143,258	2281.5%	1.6664	0.9960	0.1734	0.9866	0.827	0.780	4.51%	0.2604
	2049	18,658	451,984	2422.5%	23	4,649	112,629	2422.5%	1.6664	0.9960	0.1745	0.9866	0.826	0.774	4.51%	0.2492
	2050	14,314	369,057	2578.2%	19	3,413	87,996	2578.2%	1.6664	0.9960	0.1832	0.9866	0.817	0.767	4.51%	0.2384
	2051	10,893	298,150	2737.0%	15	2,485	68,022	2737.0%	1.6664	0.9960	0.1871	0.9866	0.813	0.761	4.51%	0.2281
	2052	8,227	238,042	2893.3%	12	1,796	51,965	2893.3%	1.6664	0.9960	0.1949	0.9866	0.805	0.755	4.51%	0.2183
	2053	6,160	188,935	3067.2%	10	1,287	39,465	3067.2%	1.6664	0.9960	0.1933	0.9866	0.807	0.749	4.51%	0.2089
	2054	4,572	147,613	3228.3%	8	914	29,503	3228.3%	1.6664	0.9960	0.2020	0.9866	0.798	0.742	4.51%	0.1999
	2055	3,365	113,055	3359.8%	6	644	21,621	3359.8%	1.6664	0.9960	0.2047	0.9866	0.795	0.736	4.51%	0.1912
	2056	2,465	85,209	3456.2%	5	451	15,592	3456.2%	1.6664	0.9960	0.2044	0.9866	0.796	0.733	4.51%	0.1830
	2057	1,796	64,084	3568.9%	4	314	11,221	3568.9%	1.6664	0.9960	0.2196	0.9866	0.780	0.		

**Exhibit II-B**  
**Demonstration that Lifetime Incurred Claims with Requested Increase are**  
**Not Less than Lifetime Earned Premium with Prescribed Factors**  
**Policy Forms: LTC.02, LTC.03 and LTC.04**

1	Accumulated value of initial earned premium	40,061,714	x	58%	=	23,235,794
2a	Accumulated value of earned premium	41,330,364				
2b	Accumulated value of prior premium rate schedule increases (2a-1)	1,268,651	x	85%	=	1,078,353
3	Present value of future projected initial earned premium	9,505,775	x	58%	=	5,513,349
4a	Present value of future projected premium	14,645,494				
4b	Present value of future projected premium in excess of the projected initial earned premiums (4a-3)	5,139,719	x	85%	=	4,368,761
<b>5</b>	<b>Lifetime Earned Premium Times Prescribed Factor: Sum of 1, 2b, 3, and 4b</b>					<b>34,196,257</b>
6a	Accumulated value of incurred claims without the inclusion of active life reserves					21,266,629
6b	Present value of future projected incurred claims without the inclusion of active life reserves					42,867,516
<b>7</b>	<b>Lifetime Incurred Claims with Rate Increase: Sum of 6a and 6b</b>					<b>64,134,146</b>
8	Test: 7 is not less than 5					TRUE

**Attachment 1**  
**Metropolitan Life Insurance Company**  
**Assumption Comparison**

	Original Pricing Assumptions	Current Best Estimate Assumptions																																							
Interest Rate:	5.75%	Maximum valuation interest rate for contract reserves, which average to 4.51%																																							
Mortality:	TIAA's annuity data 1983 Table A Merged Gender Mod 1 (with ages set back 2.5 years for LTC.02 and 4.5 years for LTC.03/LTC.04)	92% 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%															
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%																																								
Voluntary Lapse Rates:	<table border="1"> <thead> <tr> <th>Issue Age</th><th>Ultimate Lapse</th></tr> </thead> <tbody> <tr><td>25-42</td><td>1%</td></tr> <tr><td>47</td><td>1.5%</td></tr> <tr><td>52-62</td><td>2%</td></tr> <tr><td>67-82</td><td>1%</td></tr> <tr><td>87+</td><td>0%</td></tr> </tbody> </table>	Issue Age	Ultimate Lapse	25-42	1%	47	1.5%	52-62	2%	67-82	1%	87+	0%	<table border="1"> <thead> <tr> <th>Duration</th><th>Lapse Rate</th></tr> </thead> <tbody> <tr><td>1</td><td>5.00%</td></tr> <tr><td>2</td><td>4.50%</td></tr> <tr><td>3</td><td>3.00%</td></tr> <tr><td>4</td><td>2.00%</td></tr> <tr><td>5</td><td>1.50%</td></tr> <tr><td>6-7</td><td>0.70%</td></tr> <tr><td>8-10</td><td>0.60%</td></tr> <tr><td>11+</td><td>0.50%</td></tr> </tbody> </table>	Duration	Lapse Rate	1	5.00%	2	4.50%	3	3.00%	4	2.00%	5	1.50%	6-7	0.70%	8-10	0.60%	11+	0.50%									
Issue Age	Ultimate Lapse																																								
25-42	1%																																								
47	1.5%																																								
52-62	2%																																								
67-82	1%																																								
87+	0%																																								
Duration	Lapse Rate																																								
1	5.00%																																								
2	4.50%																																								
3	3.00%																																								
4	2.00%																																								
5	1.50%																																								
6-7	0.70%																																								
8-10	0.60%																																								
11+	0.50%																																								
Morbidity U/W:	Morbidity underwriting savings vary by age and duration. Actual assumption is not available.	Current TIAA block experience With Morbidity U/W Selection Factors of: <table border="1"> <thead> <tr> <th>Duration</th><th>U/W Selection</th></tr> </thead> <tbody> <tr><td>1</td><td>58%</td></tr> <tr><td>2</td><td>74%</td></tr> <tr><td>3</td><td>83%</td></tr> <tr><td>4+</td><td>100%</td></tr> </tbody> </table>	Duration	U/W Selection	1	58%	2	74%	3	83%	4+	100%																													
Duration	U/W Selection																																								
1	58%																																								
2	74%																																								
3	83%																																								
4+	100%																																								
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. Home health care incidence and continuance rates were based on the nursing home care rates with modifications.	Sample Ultimate Smoothed Incidence Rates (before gross-up to zero-day elimination) <table border="1"> <thead> <tr> <th rowspan="2">Attained Age</th><th colspan="2">Male</th><th colspan="2">Female</th></tr> <tr> <th>Facility Care</th><th>Home Care</th><th>Facility Care</th><th>Home Care</th></tr> </thead> <tbody> <tr><td>80</td><td>1.04%</td><td>0.87%</td><td>1.36%</td><td>0.94%</td></tr> <tr><td>81</td><td>1.23%</td><td>1.03%</td><td>1.61%</td><td>1.10%</td></tr> <tr><td>82</td><td>1.44%</td><td>1.20%</td><td>1.89%</td><td>1.28%</td></tr> <tr><td>83</td><td>1.68%</td><td>1.40%</td><td>2.21%</td><td>1.49%</td></tr> <tr><td>84</td><td>1.93%</td><td>1.62%</td><td>2.54%</td><td>1.72%</td></tr> <tr><td>85</td><td>2.21%</td><td>1.87%</td><td>2.90%</td><td>1.96%</td></tr> </tbody> </table> <u>Change</u> In 2018, incidence curves were reshaped to better reflect the emerged experience over the years.	Attained Age	Male		Female		Facility Care	Home Care	Facility Care	Home Care	80	1.04%	0.87%	1.36%	0.94%	81	1.23%	1.03%	1.61%	1.10%	82	1.44%	1.20%	1.89%	1.28%	83	1.68%	1.40%	2.21%	1.49%	84	1.93%	1.62%	2.54%	1.72%	85	2.21%	1.87%	2.90%	1.96%
Attained Age	Male			Female																																					
	Facility Care	Home Care	Facility Care	Home Care																																					
80	1.04%	0.87%	1.36%	0.94%																																					
81	1.23%	1.03%	1.61%	1.10%																																					
82	1.44%	1.20%	1.89%	1.28%																																					
83	1.68%	1.40%	2.21%	1.49%																																					
84	1.93%	1.62%	2.54%	1.72%																																					
85	2.21%	1.87%	2.90%	1.96%																																					
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. Home health care incidence and continuance rates were based on the nursing home care rates with modifications.	Continuance curves were constructed in 2016 by gender and care path separately for deaths and recoveries. 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 are recombined into a single termination table for modeling and valuation uses.																																							
Utilization:	<table border="1"> <thead> <tr> <th>Home Care</th><th>Facility Care</th></tr> </thead> <tbody> <tr> <td>Not available</td><td>Not available</td></tr> </tbody> </table>	Home Care	Facility Care	Not available	Not available	<table border="1"> <thead> <tr> <th>Home Care</th><th>Facility Care</th></tr> </thead> <tbody> <tr> <td>61%</td><td>78%</td></tr> </tbody> </table>	Home Care	Facility Care	61%	78%																															
Home Care	Facility Care																																								
Not available	Not available																																								
Home Care	Facility Care																																								
61%	78%																																								

**Attachment 2**  
**Metropolitan Life Insurance Company**  
**Nationwide Experience Projections (Premium Normalized to Include Prior Authorized Increases)**  
**Actual to Expected Ratios**  
**Policy Forms: LTC.02, LTC.03 and LTC.04**

Duration	Actual or Projected Experience			Expected Pricing Experience			G = C / F
	Actual Experience through 12/31/2017			Reproduced based on Original Pricing			
	Projections based on Current Assumptions			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	Actual to Expected Ratio
1	42,122,688	2,825,252	6.7%	42,122,688	1,729,115	4.1%	1.63
2	76,311,225	7,344,764	9.6%	76,311,225	4,830,254	6.3%	1.52
3	71,811,023	13,121,440	18.3%	72,201,489	6,627,192	9.2%	1.99
4	69,413,219	15,414,220	22.2%	68,345,295	8,417,246	12.3%	1.80
5	67,731,502	21,622,002	31.9%	64,629,221	10,501,394	16.2%	1.96
6	66,383,304	23,663,862	35.6%	61,035,113	12,587,782	20.6%	1.73
7	65,611,303	30,862,794	47.0%	57,524,139	15,962,125	27.7%	1.70
8	64,906,031	34,108,620	52.6%	54,061,778	19,389,605	35.9%	1.47
9	64,303,780	41,040,137	63.8%	50,657,541	23,729,423	46.8%	1.36
10	63,448,567	45,794,204	72.2%	47,293,052	27,619,963	58.4%	1.24
11	62,589,593	48,208,930	77.0%	43,985,515	31,224,828	71.0%	1.09
12	62,096,284	60,627,050	97.6%	40,718,880	34,571,676	84.9%	1.15
13	61,624,432	55,990,655	90.9%	37,499,331	37,376,517	99.7%	0.91
14	61,723,004	71,528,293	115.9%	34,368,007	40,920,998	119.1%	0.97
15	61,887,337	80,129,090	129.5%	31,320,218	42,997,789	137.3%	0.94
16	61,757,367	83,278,712	134.8%	28,653,567	44,969,594	156.9%	0.86
17	60,720,880	87,180,615	143.6%	26,027,486	48,460,857	186.2%	0.77
18	59,900,473	98,271,202	164.1%	23,431,076	50,889,881	217.2%	0.76
19	61,292,305	95,177,258	155.3%	20,948,482	53,527,991	255.5%	0.61
20	59,842,597	100,356,524	167.7%	18,592,835	54,391,593	292.5%	0.57
21	56,448,960	108,909,683	192.9%	16,384,883	55,446,877	338.4%	0.57
22	52,130,188	108,837,718	208.8%	14,296,892	56,692,598	396.5%	0.53
23	47,917,728	114,128,472	238.2%	12,360,941	55,413,390	448.3%	0.53
24	43,638,795	116,611,935	267.2%	10,669,158	52,637,720	493.4%	0.54
25	39,418,478	118,555,968	300.8%	9,161,559	51,867,776	566.1%	0.53
26	35,397,550	118,541,421	334.9%	7,818,235	52,370,410	669.8%	0.50
27	31,580,013	118,655,547	375.7%	6,575,031	50,830,982	773.1%	0.49
28	27,998,527	117,315,694	419.0%	5,491,992	46,377,619	844.5%	0.50
29	24,656,899	115,096,395	466.8%	4,598,798	39,739,652	864.1%	0.54
30	21,575,527	111,932,361	518.8%	3,845,604	37,460,420	974.1%	0.53
31	18,756,707	107,929,739	575.4%	3,180,794	36,551,873	1149.1%	0.50
32	16,198,671	103,215,049	637.2%	2,604,689	33,670,242	1292.7%	0.49
33	13,895,445	97,784,015	703.7%	2,159,082	26,692,442	1236.3%	0.57
34	11,837,340	91,783,167	775.4%	1,817,458	23,042,319	1267.8%	0.61
35	10,015,621	85,386,627	852.5%	1,515,380	21,817,776	1439.8%	0.59
36	8,415,746	78,736,569	935.6%	1,229,801	22,332,541	1815.9%	0.52
37	7,022,399	71,949,917	1024.6%	960,606	22,453,567	2337.4%	0.44
38	5,818,779	65,137,542	1119.4%	727,710	20,203,172	2776.3%	0.40
39	4,787,839	58,465,928	1221.1%	552,386	16,514,723	2989.7%	0.41
40	3,912,094	51,987,558	1328.9%	446,181	9,512,861	2132.1%	0.62
41	3,174,409	45,818,159	1443.4%	392,080	4,834,351	1233.0%	1.17
42	2,557,716	40,015,039	1564.5%	354,931	3,837,385	1081.2%	1.45
43	2,046,475	34,647,252	1693.0%	320,622	4,043,499	1261.1%	1.34
44	1,626,136	29,720,076	1827.7%	286,222	4,384,946	1532.0%	1.19
45	1,283,458	25,272,135	1969.1%	251,312	4,662,143	1855.1%	1.06
46	1,006,292	21,328,880	2119.6%	216,656	4,901,344	2262.3%	0.94
47	783,793	17,831,738	2275.1%	183,071	5,049,216	2758.1%	0.82
48	606,706	14,768,823	2434.3%	152,087	4,951,054	3255.4%	0.75
49	466,841	12,122,582	2596.7%	125,180	4,686,627	3743.9%	0.69
50	357,303	9,859,359	2759.4%	104,295	3,521,490	3376.5%	0.82
51	272,154	7,961,677	2925.4%	89,696	2,558,937	2852.9%	1.03
52	206,460	6,384,027	3092.1%	77,652	1,951,714	2513.4%	1.23
53	156,044	5,069,811	3249.0%	66,674	2,051,000	3076.2%	1.06
54	117,613	4,002,855	3403.4%	55,740	2,202,615	3951.6%	0.86
55	88,420	3,141,024	3552.4%	44,719	2,319,314	5186.4%	0.68
56	66,399	2,455,997	3698.9%	33,925	2,398,802	7070.9%	0.52
57	49,848	1,908,449	3828.5%	23,691	2,442,662	10310.4%	0.37
58	37,452	1,482,128	3957.4%	14,521	2,387,321	16440.7%	0.24
59	28,202	1,145,108	4060.4%	7,064	2,219,333	31417.4%	0.13
60	21,316	886,920	4160.9%	2,373	1,474,568	62136.4%	0.07
Lifetime	1,761,853,255	3,263,328,971	185.2%	1,008,926,631	1,369,233,105	135.7%	1.36
Lifetime*	980,827,944	1,149,658,529	117.2%	609,348,892	432,637,752	71.0%	1.65

Note:

- Figures in column A are normalized to reflect the prior rate action authorized by Maryland rather than the prior rate action approved by other states.
- Figures in column D do not reflect any rate action.
- \* Columns A and B are discounted back to the inception date at an interest rate of 4.51%, 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 5.75%.



Attachment 3  
Metropolitan Life Insurance Company  
Nationwide Experience Projections (Premium Normalized to Include Prior Authorized Increases)  
Actual to Expected Ratios  
Policy Forms: LTC.02, LTC.03 and LTC.04

	Calendar Year	Actual or Projected Experience			Expected Pricing Experience			G = C / F Actual to Expected Ratio	Accumulative Loss Ratio as of 12/31/2017		
		A	B	C = B / A	D	E	F = E / D		H	I	J = H / I
		Earned Premium	Incurred Claims	Loss Ratio	Earned Premium	Incurred Claims	Loss Ratio		Actual/Projected at 4.51% (on C)	Expected at 5.75% (on F)	Actual to Expected Ratio
Historical Experience	1991	236,752	0	0.0%	236,752	13,051	5.5%	0.00	0.0%	5.5%	0.00
	1992	1,001,528	12,795	1.3%	1,319,993	89,695	6.8%	0.19	1.0%	6.6%	0.16
	1993	1,836,721	88,383	4.8%	2,174,781	174,758	8.0%	0.60	3.2%	7.4%	0.44
	1994	2,576,020	630,822	24.5%	2,794,493	273,545	9.8%	2.50	12.6%	8.4%	1.50
	1995	4,000,511	355,644	8.9%	5,278,559	494,086	9.4%	0.95	11.1%	8.8%	1.26
	1996	8,028,467	1,479,819	18.4%	9,743,868	887,574	9.1%	2.02	14.3%	8.9%	1.60
	1997	11,468,941	1,826,216	15.9%	11,441,992	1,283,375	11.2%	1.42	14.9%	9.7%	1.54
	1998	16,887,682	2,710,864	16.1%	21,566,873	2,188,098	10.1%	1.58	15.3%	9.8%	1.55
	1999	28,570,510	5,905,951	20.7%	33,381,322	3,476,623	10.4%	1.98	17.2%	10.0%	1.71
	2000	38,527,352	7,405,276	19.2%	48,003,078	5,283,258	11.0%	1.75	17.8%	10.3%	1.72
	2001	48,864,876	9,570,375	19.6%	54,084,963	7,160,002	13.2%	1.48	18.3%	11.1%	1.65
	2002	55,785,945	13,959,089	25.0%	57,274,692	9,269,540	16.2%	1.55	19.9%	12.1%	1.64
	2003	61,686,649	17,919,043	29.0%	60,469,423	11,631,848	19.2%	1.51	21.7%	13.3%	1.63
	2004	64,809,682	23,294,582	35.9%	58,408,001	14,184,437	24.3%	1.48	24.0%	14.8%	1.63
	2005	64,016,577	33,631,116	52.5%	55,347,692	16,946,263	30.6%	1.72	27.9%	16.5%	1.69
	2006	63,346,011	29,298,106	46.3%	52,341,831	20,081,193	38.4%	1.21	30.0%	18.4%	1.63
	2007	62,994,681	35,823,680	56.9%	49,368,733	23,407,205	47.4%	1.20	32.6%	20.5%	1.59
	2008	62,696,015	45,210,430	72.1%	46,422,674	26,850,402	57.8%	1.25	36.0%	22.7%	1.58
	2009	62,119,757	46,923,133	75.5%	43,498,253	30,253,481	69.6%	1.09	38.9%	25.1%	1.55
	2010	61,366,092	51,237,723	83.5%	40,602,337	33,365,740	82.2%	1.02	41.8%	27.6%	1.52
	2011	59,402,016	53,047,819	89.3%	37,747,995	36,372,076	96.4%	0.93	44.6%	30.0%	1.48
	2012	59,525,159	60,887,612	102.3%	34,929,654	39,092,320	111.9%	0.91	47.6%	32.6%	1.46
	2013	63,376,539	71,261,820	112.4%	32,192,558	41,499,030	128.9%	0.87	50.9%	35.1%	1.45
Projected Experience	2014	61,409,394	76,044,062	123.8%	29,550,386	43,651,453	147.7%	0.84	54.1%	37.6%	1.44
	2015	59,016,364	82,859,304	140.4%	27,016,908	46,813,668	173.3%	0.81	57.5%	40.1%	1.43
	2016	55,757,532	91,561,658	164.2%	24,567,935	49,149,088	200.1%	0.82	61.2%	42.7%	1.43
	2017	54,417,050	94,963,030	174.5%	22,203,622	51,012,754	229.7%	0.76	64.7%	45.2%	1.43
	2018	60,735,662	94,618,935	155.8%	19,949,535	52,384,462	262.6%	0.59	67.7%	47.6%	1.42
	2019	57,990,968	98,928,016	170.6%	17,800,040	53,325,231	299.6%	0.57	70.6%	50.0%	1.41
	2020	57,101,286	102,738,764	179.9%	15,762,420	53,814,801	341.4%	0.53	73.5%	52.3%	1.41
	2021	52,671,940	105,955,043	201.2%	13,857,023	53,640,894	387.1%	0.52	76.4%	54.5%	1.40
	2022	48,170,917	108,611,320	225.5%	12,098,442	52,673,268	435.4%	0.52	79.3%	56.5%	1.40
	2023	43,829,123	110,673,322	252.5%	10,502,455	51,311,462	488.6%	0.52	82.2%	58.4%	1.41
	2024	39,669,919	112,032,136	282.4%	9,057,903	49,874,141	550.6%	0.51	85.0%	60.1%	1.41
	2025	35,716,887	112,710,280	315.6%	7,758,291	48,100,209	620.0%	0.51	87.8%	61.7%	1.42
	2026	31,968,564	112,558,065	352.1%	6,602,016	45,396,651	687.6%	0.51	90.5%	63.1%	1.43
	2027	28,451,362	111,571,122	392.1%	5,588,853	42,167,856	754.5%	0.52	93.1%	64.4%	1.45
	2028	25,182,090	109,765,590	435.9%	4,711,312	38,882,627	825.3%	0.53	95.6%	65.5%	1.46
	2029	22,163,063	107,108,717	483.3%	3,950,205	36,042,448	912.4%	0.53	98.0%	66.5%	1.47
	2030	19,388,991	103,740,144	535.0%	3,296,946	32,872,025	997.0%	0.54	100.2%	67.3%	1.49
	2031	16,860,840	99,675,772	591.2%	2,746,846	29,444,604	1071.9%	0.55	102.2%	68.0%	1.50
	2032	14,571,021	95,001,051	652.0%	2,287,883	26,200,731	1145.2%	0.57	104.1%	68.6%	1.52
	2033	12,513,832	89,825,230	717.8%	1,900,575	23,735,519	1248.9%	0.57	105.9%	69.2%	1.53
	2034	10,679,137	84,191,113	788.4%	1,567,244	21,761,790	1388.5%	0.57	107.5%	69.6%	1.54
	2035	9,055,227	78,258,744	864.2%	1,279,887	19,816,450	1548.3%	0.56	108.9%	70.0%	1.56
	2036	7,629,291	72,140,302	945.6%	1,033,812	17,961,095	1737.4%	0.54	110.1%	70.4%	1.57
	2037	6,386,684	65,956,499	1032.7%	828,723	15,546,910	1876.0%	0.55	111.3%	70.6%	1.58
	2038	5,311,468	59,821,952	1126.3%	667,279	12,651,318	1896.0%	0.59	112.2%	70.9%	1.58
	2039	4,388,397	53,771,124	1225.3%	547,387	9,657,979	1764.4%	0.69	113.1%	71.0%	1.59
	2040	3,601,998	47,946,172	1331.1%	461,242	7,286,868	1579.8%	0.84	113.8%	71.1%	1.60
	2041	2,936,957	42,369,965	1442.6%	398,355	5,777,316	1450.3%	0.99	114.4%	71.2%	1.61
	2042	2,378,642	37,133,852	1561.1%	350,214	4,826,209	1378.1%	1.13	114.9%	71.3%	1.61
	2043	1,913,595	32,257,244	1685.7%	310,000	4,423,098	1426.8%	1.18	115.4%	71.3%	1.62
	2044	1,529,046	27,763,252	1815.7%	272,902	4,378,579	1604.4%	1.13	115.7%	71.4%	1.62
	2045	1,213,681	23,700,413	1952.8%	237,503	4,379,093	1843.8%	1.06	116.0%	71.4%	1.62
	2046	957,013	20,042,098	2094.2%	204,079	4,317,922	2115.8%	0.99	116.3%	71.5%	1.63
	2047	749,783	16,802,131	2240.9%	173,463	4,084,348	2354.6%	0.95	116.4%	71.5%	1.63
	2048	583,718	13,968,529	2393.0%	146,628	3,708,041	2528.9%	0.95	116.6%	71.5%	1.63
	2049	451,738	11,511,986	2548.4%	123,880	3,199,809	2583.0%	0.99	116.7%	71.6%	1.63
	2050	347,673	9,403,655	2704.7%	104,872	2,754,130	2626.2%	1.03	116.8%	71.6%	1.63
	2051	266,319	7,622,670	2862.2%	88,620	2,436,669	2749.6%	1.04	116.9%	72.0%	1.62
	2052	203,088	6,133,688	3020.2%	74,314	2,241,922	3016.8%	1.00	116.9%	72.0%	1.62
	2053	154,190	4,895,940	3175.3%	61,294	2,145,705	3500.7%	0.91	117.0%	72.0%	1.62
	2054	116,636	3,874,074	3321.5%	49,093	2,098,018	4273.6%	0.78	117.0%	72.0%	1.63
	2055	87,985	3,048,184	3464.5%	37,720	2,049,554	5433.6%	0.64	117.1%	72.0%	1.63
	2056	66,247	2,372,513	3581.3%	27,377	1,958,240	7152.8%	0.50	117.1%	72.0%	1.63
	2057	49,805	1,839,570	3693.6%	18,449	1,768,390	9585.4%	0.39	117.1%	72.0%	1.63
	2058	37,429	1,417,859	3788.1%	11,369	1,475,237	12975.8%	0.29	117.1%	72.0%	1.63
	2059	28,163	1,088,221	3864.1%	6,325	1,067,059	16870.6%	0.23	117.1%	72.0%	1.63
	2060	21,248	833,073	3920.7%	3,131	683,820	21837.3%	0.18	117.1%	72.0%	1.63
Past		1,133,724,822	857,908,350	75.7%	861,969,369	514,904,563	59.7%	1.27	64.7%	45.2%	1.43
Future		628,131,624	2,405,678,330	383.0%	146,955,906	854,322,499	581.3%	0.66	316.4%	485.4%	0.65
Lifetime		1,761,856,447	3,263,586,680	185.2%	1,008,925,275	1,369,227,063	135.7%	1.36	117.1%	72.0%	1.63

Note:  
- Figures in column A are normalized to reflect the prior rate action authorized by Maryland 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**  
**TIAA Business**

<b>Lapse</b>			
<b>Policy Duration</b>	<b>Actual</b>	<b>Expected *</b>	<b>A/E%</b>
1	870	2,433	35.75%
2	923	2,133	43.28%
3	661	1,391	47.53%
4	564	908	62.08%
5	446	668	66.73%
6+	2,497	3,020	82.70%

<b>Mortality</b>			
<b>Policy Duration</b>	<b>Actual</b>	<b>Expected *</b>	<b>A/E%</b>
1	96	124	77.25%
2	235	268	87.82%
3	311	318	97.92%
4	361	405	89.04%
5	445	472	94.38%
6	443	546	81.20%
7	514	627	82.04%
8	550	715	76.91%
9	660	811	81.40%
10	689	912	75.52%
11	726	1,018	71.31%
12	768	1,076	71.36%
13	834	1,134	73.56%
14+	4,594	5,316	86.42%

\* The expecteds are based on current best estimate assumptions.

**Attachment 4**  
**Metropolitan Life Insurance Company**  
**Actual to Expected Incidence**  
**TIAA Business**

Attained Age	Female						Male					
	Facility Care			Home Care			Facility Care			Home Care		
	Actual Claims <sup>1</sup>	Expected Claims <sup>2</sup>	A/E%	Actual Claims <sup>1</sup>	Expected Claims <sup>2</sup>	A/E%	Actual Claims <sup>1</sup>	Expected Claims <sup>2</sup>	A/E%	Actual Claims <sup>1</sup>	Expected Claims <sup>2</sup>	A/E%
under 50	0	1	0%	4	1	659%	0	0	0%	0	0	0%
50 to 54	1	2	58%	1	2	50%	1	1	135%	1	1	114%
55 to 59	3	6	46%	7	8	90%	1	3	32%	2	4	52%
60 to 64	15	20	76%	23	25	92%	8	11	71%	10	14	70%
65 to 69	50	51	99%	61	58	105%	38	35	109%	43	41	104%
70 to 74	220	187	118%	162	155	104%	128	132	97%	131	129	102%
75 to 79	476	491	97%	352	356	99%	349	346	101%	316	301	105%
80 to 84	764	773	99%	518	526	99%	524	527	99%	417	440	95%
85 to 89	659	650	101%	453	448	101%	426	422	101%	397	366	108%
over 89	249	267	93%	178	206	87%	162	161	101%	163	161	101%
<b>Total</b>	<b>2,437</b>	<b>2,446</b>	<b>100%</b>	<b>1,759</b>	<b>1,784</b>	<b>99%</b>	<b>1,637</b>	<b>1,638</b>	<b>100%</b>	<b>1,480</b>	<b>1,457</b>	<b>102%</b>

<sup>1</sup> Based on actual experience through 6/30/2017.

<sup>2</sup> The expected claims are based on current best estimate assumptions.

**Attachment 4**  
**Metropolitan Life Insurance Company**  
**Actual to Expected Claim Termination**  
**All Business (exclude AARP-Pru)**

<b>Claim Duration (Months)</b>	<b>Actual Deaths</b>	<b>Expected Deaths<sup>1</sup></b>	<b>Actual Recoveries</b>	<b>Expected Recoveries<sup>1</sup></b>	<b>Deaths A/E%</b>	<b>Recoveries A/E%</b>	<b>Total A/E%</b>
1	881	542	64	85	163%	76%	151%
2	766	1,329	163	260	58%	63%	58%
3	822	1,155	251	247	71%	102%	77%
4	928	1,272	324	281	73%	115%	81%
5	926	1,047	288	230	88%	125%	95%
6	806	916	212	199	88%	106%	91%
7	703	760	193	164	93%	118%	97%
8	631	654	143	136	96%	105%	98%
9	613	575	123	114	107%	108%	107%
10	541	519	120	97	104%	124%	107%
11	491	478	91	84	103%	108%	104%
12	536	449	87	74	119%	118%	119%
13	442	423	78	66	104%	118%	106%
14+	13,138	11,830	1,272	1,427	111%	89%	109%
<b>Total</b>	<b>22,224</b>	<b>21,949</b>	<b>3,409</b>	<b>3,461</b>	<b>101%</b>	<b>98%</b>	<b>101%</b>

<sup>1</sup> The expected deaths and recoveries are based on current best estimate assumptions.