

I 000010 STIP

Section I - Rate Recommendation
Subsection A - Introduction
7/1/2022

Section I - A
Exhibit 1

RATE INDICATION SUMMARY

Statewide Rate Change Summary		
<i>Indication Effective Date: 7/1/2022</i>		
(1)	Indicated Rate Change Based on Policy Year 2017 Data (Section I-B, Exhibit 1)	-2.8%
(2)	Indicated Rate Change Based on Policy Year 2018 Data (Section I-B, Exhibit 1)	-4.1%
(3)	Average Indicated Rate Change = [(1) + (2)] / 2.0	-3.46%

Expense Constants			
	Current	Recommended	
(4)	For Risks developing at least \$1,000 in Standard Premium (Section VI-D, Exhibit 1)	\$338	\$338
(5)	For Risks developing at least \$200 and less than \$1,000 in Standard Premium (Section VI-D, Exhibit 1)	\$250	\$250
(6)	For Risks developing less than \$200 in Standard Premium (Section VI-D, Exhibit 1)	\$159	\$159
(7)	Per Capita Risks (for each exposure, up to a maximum of 4)	\$64	\$64

I 000011 STIP

Section I - Rate Recommendation
 Subsection B - Calculation of Indicated Rate Change
 7/1/2022

Section I - B
 Exhibit 1

Calculation of Indicated Rate Change		Policy Year <u>2017</u>	Policy Year <u>2018</u>
(1)	Standard Earned Premium plus Adjusted ARAP Premium (Section I-D, Exhibit 2)	1,272,315,507	1,236,067,013
(2)	Composite Adjustment Factor (Section I-D, Exhibit 2)	1.044	1.039
(3)	Adjusted Standard Earned Premium plus Adjusted ARAP = [(1) x (2)]	1,328,098,053	1,283,738,372
(4)	Cumulative Premium Development Factor to Ultimate (Section I-D, Exhibit 2)	0.999	1.012
(5)	Rate On-Level Factor (Section I-D, Exhibit 2)	0.812	0.864
(6)	Factor to Remove Expense Constant (Section I-D, Exhibit 2)	0.962	0.962
(7)	Adjusted On-Level Standard Earned Premium plus Adjusted ARAP at Ultimate = [(3) x (4) x (5) x (6)]	1,036,705,347	1,078,616,826
(8)	Annual Wage Trend (Section I-D, Exhibit 4)	0.036	0.036
(9)	Wage Trend Factor to 7/1/2023 (based on Section I-D, Exhibit 4)	1.212	1.171
(10)	Standard Earned Premium plus ARAP Projected to Prospective Effective Period = [(7) x (9)]	1,256,693,537	1,262,531,342
(11)	Average On-Level Incurred Losses Projected to Prospective Effective Period (Section I-C Exhibit I, Page 1 Item (30), Page 2 Item (30))	764,778,679	758,035,285
(12)	Loss Ratio Projected to Prospective Effective Period = [(11) / (10)]	0.609	0.600
(13)	Factor to Remove the Large Deductible Contribution to the Residual Market Subsidy (Section I-E)	0.999	0.999
(14)	Loss Adjustment Expense Factor (Section I-D, Exhibit 5)	1.187	1.187
(15)	Fixed Expense Ratio (Section VI-B, Exhibit 1)	0.059	0.058
(16)	Indicated Policy Year Loss, LAE, and Fixed Expense Ratio = { [(12) x (14)] + (15) } x (13)	0.780	0.770
(17)	Commission and Other Acquisition Expense Ratio (Section I-D, Exhibit 5)	0.126	0.126
(18)	Premium Tax Ratio (Section I-D, Exhibit 5)	0.022	0.022
(19)	Premium Discount Ratio (Section I-D, Exhibit 5)	0.054	0.054
(20)	Variable Expense Ratio = [(17) + (18) + (19)]	0.202	0.202
(21)	Underwriting Profit Provision (Section VII-A)	-0.005	-0.005
(22)	Permissible Loss, LAE, and Fixed Expense Ratio = [1.0 - (20) - (21)]	0.803	0.803
(23)	Indicated Rate Change = [(16) / (22)] - 1.0	-2.8%	-4.1%
(24)	Overall Indicated Rate Change = [(23) PY2017 + (23) PY2018] / 2.0	-3.46%	

I 000012 STIP

Section I - Rate Recommendation
 Subsection C - Indicated Rate Change Detail
 7/1/2022

Section I - C
 Exhibit 1
 Page 1

Premium and Incurred Losses Projected to the Prospective Effective Period Policy Year 2017

Premium

(1)	Adjusted On-Level Standard Earned Premium plus Adjusted ARAP at Ultimate (Section I -D, Exhibit 2)	1,036,705,347
(2)	Annual Wage Trend (Section I-D, Exhibit 4)	0.036
(3)	Wage Trend Factor to Prospective Effective Period (7/1/2023)	1.212
(4)	Standard Earned Premium plus ARAP Projected to Prospective Effective Period = [(1) x (3)]	1,256,693,537

Indemnity Losses

		<u>Paid</u>	<u>Paid + Case</u>
(5)	Indemnity Losses at Latest Month - Industry Total (Section I-D, Exhibit 1)	265,134,215	373,977,130
(6)	Indemnity Loss Development Factor to 252 Months (Section I-D, Exhibit 1)	1.689	1.239
(7)	Tail Factor 252 Months to Ultimate (Section I-D, Exhibit 1)	1.036	1.016
(8)	Factor to Adjust for Escalated Benefits (Section I-D, Exhibit 1)	1.037	1.007
(9)	Estimated Ultimate Indemnity Loss = [(5) x (6) x (7) x (8)]	481,201,829	474,114,588
(10)	Annual Indemnity Loss Trend (Section I-D, Exhibit 4)	0.005	0.005
(11)	Indemnity Loss Trend Factor to 7/1/2023	1.029	1.029
(12)	Estimated Indemnity Losses Trended = [(9) x (11)]	495,232,621	487,938,732
(13)	Estimated Benefit Change Factor Prior to 1/1/2022 (Section I-D, Exhibit 3)	1.072	1.072
(14)	On Level Losses = [(12) x (13)]	531,078,070	523,256,242
(15)	Estimated Benefit Change Factor Subsequent to 1/1/2022 (Section I-D, Exhibit 3)	0.988	0.988
(16)	On-Level Incurred Losses Projected to Prospective Effective Period = [(14) x (15)]	524,500,312	516,775,362

Medical Losses

(17)	Medical Losses at Latest Month - Industry Total (Section I-D, Exhibit 1)	172,563,579	232,214,913
(18)	Medical Loss Development Factor to 252 Months (Section I-D, Exhibit 1)	1.293	0.988
(19)	Tail Factor 252 Months to Ultimate (Section I-D, Exhibit 1)	1.077	1.017
(20)	Factor to Adjust for Escalated Benefits (1.000 for Medical Losses)	1.000	1.000
(21)	Estimated Ultimate Medical Loss = [(17) x (18) x (19) x (20)]	240,341,463	233,314,817
(22)	Annual Medical Loss Trend (Section I-D, Exhibit 4)	0.006	0.006
(23)	Medical Loss Trend Factor to 7/1/2023	1.031	1.031
(24)	Estimated Medical Losses Trended = [(21) x (23)]	247,762,648	240,519,036
(25)	Estimated Benefit Change Factor Prior to 1/1/2022 (Section I-D, Exhibit 3)	1.000	1.000
(26)	On Level Losses = [(24) x (25)]	247,762,648	240,519,036
(27)	Estimated Benefit Change Factor Subsequent to 1/1/2022 (Section I-D, Exhibit 3)	1.000	1.000
(28)	On-Level Incurred Losses Projected to Prospective Effective Period = [(26) x (27)]	247,762,648	240,519,036

Total Combined Medical and Indemnity Losses

(29)	Total Estimated Ultimate Losses Trended and On Level = [(16) + (28)]	772,262,960	757,294,398
(30)	Average On-Level Incurred Losses Projected to Prospective Effective Period	764,778,679	

I 000013 STIP

Section I - Rate Recommendation
 Subsection C - Indicated Rate Change Detail
 7/1/2022

Section I - C
 Exhibit 1
 Page 2

Premium and Incurred Losses Projected to the Prospective Effective Period Policy Year 2018

Premium

(1)	Adjusted On-Level Standard Earned Premium plus Adjusted ARAP at Ultimate (Section I -D, Exhibit 2)	1,078,616,826
(2)	Annual Wage Trend (Section I-D, Exhibit 4)	0.036
(3)	Wage Trend Factor to Prospective Effective Period (7/1/2023)	1.171
(4)	Standard Earned Premium plus ARAP Projected to Prospective Effective Period = [(1) x (3)]	1,262,531,342

Indemnity Losses

		<u>Paid</u>	<u>Paid + Case</u>
(5)	Indemnity Losses at Latest Month - Industry Total (Section I-D, Exhibit 1)	144,804,518	256,002,748
(6)	Indemnity Loss Development Factor to 252 Months (Section I-D, Exhibit 1)	3.189	1.760
(7)	Tail Factor 252 Months to Ultimate (Section I-D, Exhibit 1)	1.036	1.016
(8)	Factor to Adjust for Escalated Benefits (Section I-D, Exhibit 1)	1.037	1.007
(9)	Estimated Ultimate Indemnity Loss = [(5) x (6) x (7) x (8)]	496,150,009	461,249,634
(10)	Annual Indemnity Loss Trend (Section I-D, Exhibit 4)	0.005	0.005
(11)	Indemnity Loss Trend Factor to 7/1/2023	1.024	1.024
(12)	Estimated Indemnity Losses Trended = [(9) x (11)]	507,954,677	472,223,933
(13)	Estimated Benefit Change Factor Prior to 1/1/2022 (Section I-D, Exhibit 3)	1.062	1.062
(14)	On Level Losses = [(12) x (13)]	539,415,361	501,471,598
(15)	Estimated Benefit Change Factor Subsequent to 1/1/2022 (Section I-D, Exhibit 3)	0.988	0.988
(16)	On-Level Incurred Losses Projected to Prospective Effective Period = [(14) x (15)]	532,734,340	495,260,535

Medical Losses

(17)	Medical Losses at Latest Month - Industry Total (Section I-D, Exhibit 1)	138,169,849	214,948,316
(18)	Medical Loss Development Factor to 252 Months (Section I-D, Exhibit 1)	1.656	1.050
(19)	Tail Factor 252 Months to Ultimate (Section I-D, Exhibit 1)	1.077	1.017
(20)	Factor to Adjust for Escalated Benefits (1.000 for Medical Losses)	1.000	1.000
(21)	Estimated Ultimate Medical Loss = [(17) x (18) x (19) x (20)]	246,528,033	229,554,165
(22)	Annual Medical Loss Trend (Section I-D, Exhibit 4)	0.006	0.006
(23)	Medical Loss Trend Factor to 7/1/2023	1.025	1.025
(24)	Estimated Medical Losses Trended = [(21) x (23)]	252,738,585	235,337,110
(25)	Estimated Benefit Change Factor Prior to 1/1/2022 (Section I-D, Exhibit 3)	1.000	1.000
(26)	On Level Losses = [(24) x (25)]	252,738,585	235,337,110
(27)	Estimated Benefit Change Factor Subsequent to 1/1/2022 (Section I-D, Exhibit 3)	1.000	1.000
(28)	On-Level Incurred Losses Projected to Prospective Effective Period = [(26) x (27)]	252,738,585	235,337,110

Total Combined Medical and Indemnity Losses

(29)	Total Estimated Ultimate Losses Trended and On Level = [(16) + (28)]	785,472,925	730,597,645
(30)	Average On-Level Incurred Losses Projected to Prospective Effective Period	758,035,285	

I 000014 STIP

Section I - Rate Recommendation
 Subsection D - Loss Development Summary
 7/1/2022

Section I - D
 Exhibit 1

Summary of Estimated Ultimate Losses

Paid Loss Development Method

Policy Year (1)	Benefit Type (2)	Paid Losses at 12/31/19 (3)	Cumulative Factors from Latest Month to 252 Months (4)	Losses Developed to 252 Months (5)	Tail Factor from 252 Months to Ultimate (6)	Factor to Adjust for Escalated Benefits (7)	Estimated Ultimate Losses (8)
2017	Indemnity	265,134,215	1.689	447,893,527	1.036	1.037	481,201,829
2017	Medical	172,563,579	1.293	223,100,576	1.077	1.000	240,341,463
2017	Total	437,697,794		670,994,103			721,543,291
2018	Indemnity	144,804,518	3.189	461,807,010	1.036	1.037	496,150,009
2018	Medical	138,169,849	1.656	228,843,353	1.077	1.000	246,528,033
2018	Total	282,974,367		690,650,363			742,678,042

Paid Plus Case Loss Development Method

Policy Year (9)	Benefit Type (10)	Paid Plus Case Losses at 12/31/19 (11)	Cumulative Factors from Latest Month to 252 Months (12)	Losses Developed to 252 Months (13)	Tail Factor from 252 Months to Ultimate (14)	Factor to Adjust for Escalated Benefits (15)	Estimated Ultimate Losses (16)
2017	Indemnity	373,977,130	1.239	463,197,172	1.016	1.007	474,114,588
2017	Medical	232,214,913	0.988	229,499,290	1.017	1.000	233,314,817
2017	Total	606,192,043		692,696,463			707,429,405
2018	Indemnity	256,002,748	1.760	450,628,459	1.016	1.007	461,249,634
2018	Medical	214,948,316	1.050	225,800,138	1.017	1.000	229,554,165
2018	Total	470,951,064		676,428,597			690,803,799

Notes:

- (3), (11): Aggregate Financial Data.
- (4), (12): Section II - B, Exhibit 1.
- (5) = (3) x (4)
- (6): Section II - C, Exhibit 1, Page 1.
- (7): Section II - D, Exhibit 1, Page 1.
- (8) = (5) x (6) x (7)
- (13) = (11) x (12)
- (14): Section II - C, Exhibit 2, Page 1.
- (15): Section II - D, Exhibit 2, Page 1.
- (16) = (13) x (14) x (15)

I 000015 STIP

Section I - Rate Recommendation
 Subsection D - Premium Summary
 7/1/2022

Section I - D
 Exhibit 2

Policy Year Aggregate Financial Data
 Calculation of Standard Premium plus Adjusted ARAP Premium Development Factors
 Industrywide

Summary Exhibit

	Policy Year as of 12/31/2019	
	2017	2018
(1) Standard Earned Premium plus Adjusted ARAP Premium	1,272,315,507	1,236,067,013
(2) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.041	1.038
(3) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.002	1.000
(4) Composite Adjustment Factor = (2) x (3)	1.044	1.039
(5) Adjusted Standard Earned Premium plus ARAP = (1) x (4)	1,328,098,053	1,283,738,372
(6) Cumulative Premium Development Factor to Ultimate (see Section III-A, Exhibit 1, Page 2)	0.999	1.012
(7) Rate On-Level Factor	0.812	0.864
(8) Factor to Remove Expense Constant	0.962	0.962
(9) Adjusted On-Level Standard Earned Premium plus Adjusted ARAP at Ultimate = (5) x (6) x (7) x (8)	1,036,705,347	1,078,616,826

Notes:

- (1): Section III-B, Exhibit 2
- (2): Section III-B, Exhibit 1
- (3): Section III-C, Exhibit 1
- (6): Premiums are deemed to be fully developed at 252 months.
- (7): Section III-D, Exhibit 1
- (8): Section VI-F, Exhibit 2.

I 000016 STIP

Section I - Rate Recommendation
 Subsection D - Benefit Change Adjustments Summary
 7/1/2022

Section I - D
 Exhibit 3

Benefit Level Adjustment Factors

All Injury Types

Time Period		Indemnity					Medical	Total
Beginning Period	Ending Period	Death	Permanent Total	Permanent Partial	Temporary Total	All Injury Types	All Injury Types	All Injury Types
1/1/2022	Prosp. Eff. Period					0.988	1.000	
PY 2017	1/1/2022					1.072	1.000	
PY 2018	1/1/2022					1.062	1.000	
PY 2004	Prosp. Eff. Period	1.105	1.126	1.218	1.075	1.167	1.036	
PY 2005	Prosp. Eff. Period	1.099	1.117	1.201	1.070	1.155	1.032	
PY 2006	Prosp. Eff. Period	1.094	1.109	1.184	1.066	1.143	1.032	
PY 2007	Prosp. Eff. Period	1.088	1.100	1.167	1.061	1.130	1.032	
PY 2008	Prosp. Eff. Period	1.081	1.091	1.151	1.056	1.118	1.024	
PY 2009	Prosp. Eff. Period	1.079	1.088	1.145	1.054	1.113	1.002	
PY 2010	Prosp. Eff. Period	1.080	1.088	1.146	1.055	1.114	1.000	
PY 2011	Prosp. Eff. Period	1.076	1.083	1.136	1.053	1.107	1.000	
PY 2012	Prosp. Eff. Period	1.071	1.076	1.124	1.049	1.097	1.000	
PY 2013	Prosp. Eff. Period	1.069	1.073	1.118	1.047	1.093	1.000	
PY 2014	Prosp. Eff. Period	1.063	1.069	1.111	1.045	1.087	1.000	
PY 2015	Prosp. Eff. Period	1.051	1.063	1.100	1.041	1.078	1.000	
PY 2016	Prosp. Eff. Period	1.045	1.056	1.088	1.037	1.069	1.000	
PY 2017	Prosp. Eff. Period	1.039	1.048	1.076	1.032	1.059	1.000	
PY 2018	Prosp. Eff. Period	1.032	1.039	1.063	1.026	1.049	1.000	
PY 2016	CPY 2018_07	1.017	1.020	1.031	1.014		1.000	
PY 2017	CPY 2019_07	1.018	1.021	1.032	1.014		1.000	
PY 2018	CPY 2020_07	1.023	1.028	1.044	1.019		1.000	
CPY 2018_07	Prosp. Eff. Period							1.029
CPY 2019_07	Prosp. Eff. Period							1.022
CPY 2020_07	Prosp. Eff. Period							1.010
CPY 2008_09	Prosp. Eff. Period							1.075
Prior Eff. Period (using benefit level projections from prior filing)	Prosp. Eff. Period					1.024	1.000	1.016

Notes:

From Section IV-A, Exhibit 1.

1/1/2022 refers to a point in time. All other time periods refer to Policy Years.

Example: PY 2010 to Prosp. Eff. Period for Permanent Partial = 1.146 = 1.228 / 1.072

where 1.228 is the Index Factor for Prosp. Eff. Period and 1.072 is the Index Factor for PY 2010 for Indemnity Permanent Partial, from Exhibit 2.

Paid Trend Summary

	Indemnity				Medical								SAWW	
	Severity		Frequency		Lost-Time Medical				Medical Only				Trend	Credibility
	Trend	Credibility	Trend	Credibility	Severity		Frequency		Severity		Frequency			
					Trend	Credibility	Trend	Credibility	Trend	Credibility	Trend	Credibility		
(1) Massachusetts Trend														
5 Year	1.1%	83.0%	-1.2%	53.5%	1.1%	47.5%	-1.2%	53.5%	2.8%	100.0%	-2.3%	38.9%	3.6%	100.0%
6 Year	1.9%	71.8%	-1.4%	76.7%	2.3%	49.1%	-1.4%	76.7%	2.2%	100.0%	-2.9%	44.1%	3.4%	100.0%
7 Year	2.0%	94.8%	-1.5%	100.0%	2.3%	65.2%	-1.5%	100.0%	2.0%	100.0%	-3.3%	52.1%	3.4%	100.0%
8 Year	2.0%	100.0%	-1.6%	100.0%	2.2%	79.5%	-1.6%	100.0%	2.2%	100.0%	-3.7%	47.0%	3.3%	100.0%
9 Year	2.3%	100.0%	-1.8%	100.0%	2.3%	93.0%	-1.8%	100.0%	2.2%	100.0%	-4.1%	47.2%	3.1%	100.0%
10 Year	2.1%	100.0%	-1.6%	85.2%	2.0%	89.8%	-1.6%	85.2%	2.1%	100.0%	-4.0%	52.8%	3.0%	100.0%
(2) Selected Trend	2.0%		-1.5%		2.3%		-1.5%		2.8%		-4.0%		3.6%	
(3) 15 Year Massachusetts Complement of Credibility	2.3%		-1.7%		2.1%		-1.7%		2.0%		-4.1%		2.7%	
(4) Credibility Weighted Trend	2.0%		-1.5%		2.3%		-1.5%		2.8%		-4.0%		3.6%	

	Lost-Time Medical	Medical Only
(5) Medical Loss Trend	0.8%	-1.4%
(6) Fraction of Total Medical	88.0%	12.0%
(7) Total Medical Loss Trend	0.6%	

	Indemnity	Medical
(8) Total Loss Trend	0.5%	0.6%
(9) SAWW Trend	3.6%	3.6%
(10) Total Net Trend	-2.9%	-2.9%

Notes:

- (1), (3): Section V, Exhibit 2 Severity; Exhibit 3 Frequency and SAWW.
- (2): Selection based on the fit with the highest credibility and least number of years.
- (4) = Credibility Weighted Selected Trend
- (5) = $[(1.0 + \text{Credibility Weighted Severity Trend}) \times (1.0 + \text{Credibility Weighted Frequency Trend})] - 1.0$
- (6) Medical Only = Medical Only Fraction of Total Medical from Section IV-E, Exhibit 2
 Lost Time Medical = $1.0 - \text{Medical Only}$
- (7) = Weighted Average of (5) using (6) as weights
- (8): Indemnity = $(1.0 + \text{Credibility Weighted Severity Trend}) \times (1.0 + \text{Credibility Weighted Frequency Trend}) - 1.0$
 Medical = Row (7)
- (9): (4) for SAWW.
- (10) = $\{ [1.0 + (8)] / [1.0 + (9)] \} - 1.0$

I 000017 STIP

I 000018 STIP

Section I - Rate Recommendation
Subsection D - Expenses Summary
7/1/2022

Section I - D
Exhibit 5

Summary of Expense Ratios

(1)	Commission and Other Acquisition Expense Ratio	12.6%
(2)	Average Premium Discount as a % of Standard Premium + ARAP	5.4%
(3)	Premium Tax Ratio = 2.28% x [1.0 - (2)]	2.2%
(4)	Variable Expense Ratio = (1) + (2) + (3)	20.2%
(5)	Fixed Expense Ratio	5.9%
(6)	Total Loss Adjustment Expense Ratio (LAE / Loss)	18.7%

Notes:

(1): Section VI-G, Exhibit 1.

(2): Section VI-E, Exhibit 1.

(3): 2.28% from Section VI-B, Exhibit 3.

(5): Section VI-B, Exhibit 1.

(6): Section VI-H, Exhibit 1.

I 00024 STIP

Section I - Rate Recommendation
 Subsection E - Reflecting the Impact of Large Deductibles
 7/1/2022

Section I - E
 Exhibit 1
 Page 1

Factor to Remove the Large Deductible Contribution to the Residual Market Subsidy

		Total Market	Residual Market ("rm")	Voluntary Market ("vol")
(1)	Permissible Loss, LAE, and Fixed Expense Ratio	80.3%		
(2)	Fixed Expense Ratio	5.9%		
(3)	Permissible Loss and LAE Ratio = [(1) - (2)]	74.4%		
(4)	Loss Ratio Differential, r	1.203		
(5)	Market Weight - w_x		21%	79%
(6)	Implied Permissible Loss and LAE Ratio		0.858	0.714
(7)	Implied Permissible Loss, LAE, and Fixed Expense Ratio		0.917	0.772
(8)	Implied Permissible Loss, LAE, and Fixed Expense Ratio Differential	1.188		
(9)	Variable Expense Ratio	20.2%	9.8%	23.0%
(10)	Underwriting Profit Provision	-0.50%		
(11)	Implied Rate Factor Equivalent		1.011	0.996
(12)	Implied Rate Differential, d	1.015		
(13)	Residual Market Rate equivalent, Q_{rm}	1.012		
(14)	Proportion of Total Voluntary Assessable Premium Not from Large Deductibles, u	0.740		
(15)	Factor to Remove the Large Deductible Contribution to the Residual Market Subsidy	0.999		

Notes

- (1): from Section VI-A, Exhibit 1 and Section VII-A, Exhibit 1
- (2): Section VI-B, Exhibit 1, average of column (18).
- (4): Loss Ratio Differential from Page 2, assumes LAE as % of loss is the same for Residual and Voluntary Market.
- (5): Residual Market weight, w_{rm} , from Section I-E, Exhibit 2, Voluntary Market weight, $w_{vol} = 1.0 - w_{rm}$
- (6): Voluntary Market Implied Permissible Loss and LAE Ratio = (3) / [(5 w_{rm}) x (4) + (5 w_{vol})]
 Residual Market Permissible Implied Loss and LAE Ratio = (4) x (6)_{vol}
- (7) = (2) + (6)
- (8) = (7)_{rm} / (7)_{vol}
- (9): Section VI-A, Exhibit 1, Total Market; Residual Market commission calculated based on the Residual Market - Pool Procedures - Producer Fee Schedule.
 Premium discounts were discontinued in the Residual Market effective 1/1/1991.
- (10): Section VII-A, Exhibit 1.
- (11) = (7) / [1.0 - (9) - (10)]
- (12) = (11)_{rm} / (11)_{vol}
- (13) = d / [$w_{vol} + (w_{rm} \times d)$]
- (14): Exhibit 2.
- (15) = [1.0 - $w_{rm} \times Q_{rm} \times (1.0 - u)$] / [1.0 - $w_{rm} \times (1.0 - u)$]

Calculation of Residual Market to Voluntary Loss Ratio Differential
 (\$ amounts in millions)

Policy Year	Total Market			Residual Market			Voluntary Market			Loss Ratio Differential LR _{rm} / LR _{vol} = (7) / (10)
	Standard Earned Premium plus ARAP	Paid Losses and Case Reserves	Paid + Case Loss Ratio = (3) / (2)	Standard Earned Premium Plus ARAP	Paid Losses and Case Reserves	Paid + Case Loss Ratio = (6) / (5)	Standard Earned Premium Plus ARAP	Paid Losses and Case Reserves	Paid + Case Loss Ratio = (9) / (8)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2012	967	583	60.3%	176	129	73.3%	791	454	57.4%	1.276
2013	1,019	575	56.4%	209	123	58.8%	810	452	55.8%	1.053
2014	1,077	666	61.8%	242	163	67.2%	835	503	60.2%	1.116
2015	1,150	645	56.1%	262	160	60.8%	888	485	54.7%	1.113
2016	1,198	625	52.2%	267	167	62.4%	931	459	49.3%	1.266
2017	1,270	606	47.7%	273	150	55.0%	997	456	45.8%	1.203
2018	1,233	471	38.2%	259	118	45.6%	974	353	36.2%	1.260
(12) Average Last 2 Years				266	134	50.5%	985	404	41.0%	1.229
(13) Average All Years				241	144	59.8%	889	452	50.8%	1.177
(14) Selected Loss Ratio Differential										1.203

Notes:
 Data as of 12/31/2019 from Aggregate Financial Database, excluding large deductible policies.

I 000025 STIP

Residual Market Weight "w_m"
 Proportion of Voluntary Assessable Premium Not from Large Deductibles "u"
 (\$ amounts in millions)

Calendar Year	Voluntary Assessable Premium Basis Used to Determine Shares of the Residual Market	Take-Out Program Written Premium	Take-Out Credits	Residual Market Direct Written Premium	Large Deductible Standard + ARAP Written Premium	Voluntary Non-Large Deductible Not in Take-Out Program Written Premium = (2) - (3) - (6) + (4)	Residual Market Weight "w _m " = (5) / [(3) + (5) + (7)]	"u" -- Proportion of Assessable Premium Not from Large Deductibles = (7) / [(7) + (6)]
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2018	1170	50	46	266	287	879	0.222	0.754
2019	1231	61	55	242	334	891	0.203	0.727
Selected	1200	55	51	254	311	885	0.213	0.740

Note:

Refers to the prospective effective period from 7/1/2022 through 7/1/2023.

(2),(3),(4),(5),(6): Massachusetts Workers' Compensation Assigned Risk Pool Special Bulletin No. SB-11-19 for Calendar Year 2018 and Special Bulletin No. SB-11-20 for Calendar Year 2019.

(2),(3),(4),(5),(6),(7): Selected based on two-year average of Calendar Year 2018 and 2019.

II 000011 STIP

Section II - Loss Development
 Subsection A - Loss Development Summary
 7/1/2022

Section II - A
 Exhibit 1

Summary of Estimated Ultimate Losses Industry

Paid Loss Development Method

Policy Year (1)	Benefit Type (2)	Paid Losses at 12/31/19 (3)	Cumulative Factors from Latest Month to 252 Months (4)	Losses Developed to 252 Months (5)	Tail Factor from 252 Months to Ultimate (6)	Factor to Adjust for Escalated Benefits (7)	Estimated Ultimate Losses (8)
2017	Indemnity	265,134,215	1.689	447,893,527	1.036	1.037	481,201,829
2017	Medical	172,563,579	1.293	223,100,576	1.077	1.000	240,341,463
2017	Total	437,697,794		670,994,103			721,543,291

2018	Indemnity	144,804,518	3.189	461,807,010	1.036	1.037	496,150,009
2018	Medical	138,169,849	1.656	228,843,353	1.077	1.000	246,528,033
2018	Total	282,974,367		690,650,363			742,678,042

Paid Plus Case Loss Development Method

Policy Year (9)	Benefit Type (10)	Paid Plus Case Losses at 12/31/19 (11)	Cumulative Factors from Latest Month to 252 Months (12)	Losses Developed to 252 Months (13)	Tail Factor from 252 Months to Ultimate (14)	Factor to Adjust for Escalated Benefits (15)	Estimated Ultimate Losses (16)
2017	Indemnity	373,977,130	1.239	463,197,172	1.016	1.007	474,114,588
2017	Medical	232,214,913	0.988	229,499,290	1.017	1.000	233,314,817
2017	Total	606,192,043		692,696,463			707,429,405

2018	Indemnity	256,002,748	1.760	450,628,459	1.016	1.007	461,249,634
2018	Medical	214,948,316	1.050	225,800,138	1.017	1.000	229,554,165
2018	Total	470,951,064		676,428,597			690,803,799

Notes:

- (3), (11): Aggregate Financial Data.
- (4), (12): Section II - B, Exhibit 1.
- (5) = (3) x (4)
- (6): Section II - C, Exhibit 1, Page 1.
- (7): Section II - D, Exhibit 1, Page 1.
- (8) = (5) x (6) x (7)
- (13) = (11) x (12)
- (14): Section II - C, Exhibit 2, Page 1.
- (15): Section II - D, Exhibit 2, Page 1.
- (16) = (13) x (14) x (15)

Policy Year Aggregate Financial Data
 Summary of Loss Development Factors
 Industry

Loss Development Factors From																			
Months of Development	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252
(1) Indemnity Paid Losses																			
2 Year Average	1.888	1.314	1.130	1.045	1.028	1.015	1.008	1.006	1.006	1.004	1.003	1.003	1.002	1.004	1.002	1.002	1.000	1.001	1.001
Cumulative Factor to 252	3.189	1.689	1.285	1.137	1.088	1.058	1.043	1.034	1.027	1.021	1.017	1.014	1.011	1.010	1.006	1.004	1.003	1.002	1.001
(2) Medical Paid Losses																			
2 Year Average	1.281	1.087	1.034	1.020	1.009	1.012	1.012	1.008	1.006	1.006	1.010	1.010	1.006	1.007	1.006	1.008	1.007	1.009	1.006
Cumulative Factor to 252	1.656	1.293	1.189	1.150	1.127	1.117	1.104	1.091	1.082	1.076	1.070	1.060	1.049	1.043	1.036	1.030	1.022	1.015	1.006
(3) Indemnity Paid Plus Case Losses																			
5 Year Average	1.421	1.128	1.058	1.017	1.004	1.000	0.998	1.004	1.001	1.002	1.003	1.002	1.000	1.001	1.001	1.000	1.000	1.001	1.001
Cumulative Factor to 252	1.760	1.239	1.098	1.037	1.020	1.016	1.016	1.017	1.013	1.012	1.010	1.006	1.005	1.004	1.003	1.002	1.002	1.002	1.001
(4) Medical Paid Plus Case Losses																			
5 Year Average	1.063	1.020	1.000	0.996	0.994	0.996	0.998	0.992	0.998	0.997	1.000	1.004	1.002	0.995	0.997	1.003	1.002	0.996	0.998
Cumulative Factor to 252	1.050	0.988	0.969	0.968	0.972	0.978	0.982	0.984	0.992	0.994	0.997	0.996	0.992	0.990	0.995	0.998	0.995	0.993	0.998

Notes:

- (1): Exhibit 2, Page 1.
- (2): Exhibit 2, Page 2.
- (3): Exhibit 3, Page 1.
- (4): Exhibit 3, Page 2.

II 00014 STIP

Policy Year Aggregate Financial Data
 Calculation of Medical Paid Loss Development Factors
 Industry

Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	24	36			144	156	
2013	116,206	148,983	1.282	2003	156,812	158,159	1.009
2014	127,654	166,068	1.301	2004	171,969	173,307	1.008
2015	126,708	164,287	1.297	2005	169,612	170,892	1.008
2016	129,008	162,811	1.262	2006	173,287	175,831	1.015
2017	132,279	171,979	1.300	2007	173,277	174,073	1.005
2 Yr Average			1.281	2 Yr Average			1.010
5 Yr Average			1.288	5 Yr Average			1.009
Selected Average			1.281	Selected Average			1.010
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	36	48			156	168	
2012	147,535	160,651	1.089	2002	146,298	147,646	1.009
2013	148,983	160,964	1.080	2003	158,159	159,469	1.008
2014	166,068	181,331	1.092	2004	173,307	174,579	1.007
2015	164,287	178,683	1.088	2005	170,892	171,903	1.006
2016	162,811	176,948	1.087	2006	175,831	178,471	1.015
2 Yr Average			1.087	2 Yr Average			1.010
5 Yr Average			1.087	5 Yr Average			1.009
Selected Average			1.087	Selected Average			1.010
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	48	60			168	180	
2011	160,284	166,472	1.039	2001	129,213	130,369	1.009
2012	160,651	166,330	1.035	2002	147,646	148,914	1.009
2013	160,964	165,520	1.028	2003	159,469	160,489	1.006
2014	181,331	188,175	1.038	2004	174,579	175,346	1.004
2015	178,683	183,985	1.030	2005	171,903	173,142	1.007
2 Yr Average			1.034	2 Yr Average			1.006
5 Yr Average			1.034	5 Yr Average			1.007
Selected Average			1.034	Selected Average			1.006
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	60	72			180	192	
2010	158,660	161,452	1.018	2000	123,295	124,225	1.008
2011	166,472	170,599	1.025	2001	130,369	131,344	1.007
2012	166,330	168,522	1.013	2002	148,914	150,213	1.009
2013	165,520	168,364	1.017	2003	160,489	161,604	1.007
2014	188,175	192,590	1.023	2004	175,346	176,458	1.006
2 Yr Average			1.020	2 Yr Average			1.007
5 Yr Average			1.019	5 Yr Average			1.007
Selected Average			1.020	Selected Average			1.007
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	72	84			192	204	
2009	155,123	157,101	1.013	1999	115,888	117,423	1.013
2010	161,452	165,015	1.022	2000	124,225	125,582	1.011
2011	170,599	172,630	1.012	2001	131,344	132,400	1.008
2012	168,522	170,128	1.010	2002	150,213	151,253	1.007
2013	168,364	169,822	1.009	2003	161,604	162,471	1.005
2 Yr Average			1.009	2 Yr Average			1.006
5 Yr Average			1.013	5 Yr Average			1.009
Selected Average			1.009	Selected Average			1.006
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	84	96			204	216	
2008	155,523	156,703	1.008	1998	111,689	112,472	1.007
2009	157,101	157,351	1.002	1999	117,423	118,491	1.009
2010	165,015	167,184	1.013	2000	125,582	126,934	1.011
2011	172,630	174,846	1.013	2001	132,400	133,289	1.007
2012	170,128	172,100	1.012	2002	151,253	152,569	1.009
2 Yr Average			1.012	2 Yr Average			1.008
5 Yr Average			1.009	5 Yr Average			1.008
Selected Average			1.012	Selected Average			1.008
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	96	108			216	228	
2007	168,388	169,832	1.009	1997	99,715	100,106	1.004
2008	156,703	157,783	1.007	1998	112,472	113,660	1.011
2009	157,351	158,626	1.008	1999	118,491	119,496	1.008
2010	167,184	169,265	1.012	2000	126,934	127,907	1.008
2011	174,846	176,859	1.012	2001	133,289	134,122	1.006
2 Yr Average			1.012	2 Yr Average			1.007
5 Yr Average			1.010	5 Yr Average			1.007
Selected Average			1.012	Selected Average			1.007
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	108	120			228	240	
2006	166,494	168,565	1.012	1996	97,376	98,311	1.010
2007	169,832	171,043	1.007	1997	100,106	100,450	1.003
2008	157,783	158,502	1.005	1998	113,660	114,473	1.007
2009	158,626	159,701	1.007	1999	119,496	120,376	1.007
2010	169,265	170,754	1.009	2000	127,907	129,276	1.011
2 Yr Average			1.008	2 Yr Average			1.009
5 Yr Average			1.008	5 Yr Average			1.008
Selected Average			1.008	Selected Average			1.009
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	120	132			240	252	
2005	166,606	168,180	1.009	1995	99,550	100,585	1.010
2006	168,565	170,881	1.014	1996	98,311	98,873	1.006
2007	171,043	172,264	1.007	1997	100,450	100,941	1.005
2008	158,502	159,364	1.005	1998	114,473	115,025	1.005
2009	159,701	160,600	1.006	1999	120,376	121,227	1.007
2 Yr Average			1.006	2 Yr Average			1.006
5 Yr Average			1.008	5 Yr Average			1.007
Selected Average			1.006	Selected Average			1.006
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	132	144			252	264	
2004	170,816	171,969	1.007	1995	99,550	100,585	1.010
2005	168,180	169,612	1.009	1996	98,311	98,873	1.006
2006	170,881	173,287	1.014	1997	100,450	100,941	1.005
2007	172,264	173,277	1.006	1998	114,473	115,025	1.005
2008	159,364	160,190	1.005	1999	120,376	121,227	1.007
2 Yr Average			1.006	2 Yr Average			1.006
5 Yr Average			1.008	5 Yr Average			1.007
Selected Average			1.006	Selected Average			1.006

Notes:
 Losses from Aggregate Financial Data.

II 00016 STIP

Policy Year Aggregate Financial Data
 Calculation of Medical Paid Plus Case Loss Development Factors
 Industry

Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	24	36			144	156	
2013	193,215	199,181	1.031	2003	178,457	177,741	0.996
2014	223,897	237,260	1.060	2004	197,933	197,064	0.996
2015	209,227	226,561	1.083	2005	191,353	193,653	1.012
2016	209,540	219,835	1.049	2006	199,385	200,679	1.006
2017	211,950	231,458	1.092	2007	190,676	188,994	0.991
2 Yr Average			1.071	2 Yr Average			0.999
5 Yr Average			1.063	5 Yr Average			1.000
Selected Average			1.063	Selected Average			1.000
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	36	48			156	168	
2012	209,211	216,400	1.034	2002	170,110	171,879	1.010
2013	199,181	198,797	0.998	2003	177,741	178,074	1.002
2014	237,260	240,904	1.015	2004	197,064	197,030	1.000
2015	226,561	231,441	1.022	2005	193,653	193,665	1.000
2016	219,835	226,908	1.032	2006	200,679	202,244	1.008
2 Yr Average			1.027	2 Yr Average			1.004
5 Yr Average			1.020	5 Yr Average			1.004
Selected Average			1.020	Selected Average			1.004
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	48	60			168	180	
2011	213,313	214,288	1.005	2001	154,076	154,819	1.005
2012	216,400	217,351	1.004	2002	171,879	172,501	1.004
2013	198,797	200,174	1.007	2003	178,074	178,995	1.005
2014	240,904	241,360	1.002	2004	197,030	197,700	1.003
2015	231,441	227,844	0.984	2005	193,665	192,758	0.995
2 Yr Average			0.993	2 Yr Average			0.999
5 Yr Average			1.000	5 Yr Average			1.002
Selected Average			1.000	Selected Average			1.002
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	60	72			180	192	
2010	199,077	200,362	1.006	2000	156,555	152,726	0.976
2011	214,288	210,652	0.983	2001	154,819	154,446	0.998
2012	217,351	214,837	0.988	2002	172,501	172,067	0.997
2013	200,174	200,669	1.002	2003	178,995	180,265	1.007
2014	241,360	240,824	0.998	2004	197,700	197,344	0.998
2 Yr Average			1.000	2 Yr Average			1.003
5 Yr Average			0.996	5 Yr Average			0.995
Selected Average			0.996	Selected Average			0.995
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	72	84			192	204	
2009	190,396	188,980	0.993	1999	138,740	140,097	1.010
2010	200,362	200,496	1.001	2000	152,726	152,404	0.998
2011	210,652	211,840	1.006	2001	154,446	154,215	0.999
2012	214,837	210,352	0.979	2002	172,067	171,959	0.999
2013	200,669	198,983	0.992	2003	180,265	176,404	0.979
2 Yr Average			0.985	2 Yr Average			0.989
5 Yr Average			0.994	5 Yr Average			0.997
Selected Average			0.994	Selected Average			0.997
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	84	96			204	216	
2008	176,012	173,242	0.984	1998	139,630	138,967	0.995
2009	188,980	186,625	0.988	1999	140,097	143,081	1.021
2010	200,496	202,627	1.011	2000	152,404	151,880	0.997
2011	211,840	210,870	0.995	2001	154,215	154,467	1.002
2012	210,352	210,719	1.002	2002	171,959	171,672	0.998
2 Yr Average			0.999	2 Yr Average			1.000
5 Yr Average			0.996	5 Yr Average			1.003
Selected Average			0.996	Selected Average			1.003
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	96	108			216	228	
2007	194,610	192,684	0.990	1997	109,699	110,085	1.004
2008	173,242	172,736	0.997	1998	138,967	139,668	1.005
2009	186,625	186,936	1.002	1999	143,081	143,436	1.002
2010	202,627	203,131	1.002	2000	151,880	152,345	1.003
2011	210,870	210,721	0.999	2001	154,467	153,773	0.996
2 Yr Average			1.001	2 Yr Average			0.999
5 Yr Average			0.998	5 Yr Average			1.002
Selected Average			0.998	Selected Average			1.002
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	108	120			228	240	
2006	198,139	199,942	1.009	1996	109,718	110,352	1.006
2007	192,684	191,694	0.995	1997	110,085	109,539	0.995
2008	172,736	172,300	0.997	1998	139,668	136,328	0.976
2009	186,936	184,026	0.984	1999	143,436	143,919	1.003
2010	203,131	198,256	0.976	2000	152,345	152,003	0.998
2 Yr Average			0.980	2 Yr Average			1.001
5 Yr Average			0.992	5 Yr Average			0.996
Selected Average			0.992	Selected Average			0.996
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	120	132			240	252	
2005	192,840	191,885	0.995	1995	109,341	109,936	1.005
2006	199,942	199,685	0.999	1996	110,352	109,642	0.994
2007	191,694	192,763	1.006	1997	109,539	109,618	1.001
2008	172,300	172,788	1.003	1998	136,328	136,218	0.999
2009	184,026	181,545	0.987	1999	143,919	142,501	0.990
2 Yr Average			0.995	2 Yr Average			0.995
5 Yr Average			0.998	5 Yr Average			0.998
Selected Average			0.998	Selected Average			0.998
Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Policy Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	132	144			252	264	
2004	197,812	197,933	1.001	1994	109,341	109,936	1.005
2005	191,885	191,353	0.997	1995	110,352	109,642	0.994
2006	199,685	199,385	0.999	1996	110,352	109,642	0.994
2007	192,763	190,676	0.989	1997	109,539	109,618	1.001
2008	172,788	173,059	1.002	1998	136,328	136,218	0.999
2 Yr Average			0.995	1999	143,919	142,501	0.990
5 Yr Average			0.997	2 Yr Average			0.995
Selected Average			0.997	5 Yr Average			0.998

Notes:
 Losses from Aggregate Financial Data.

Paid Loss Tail Factors

Indemnity Paid 252nd Month to Ultimate Loss Tail Development Factor

(1) Policy Year	(2) Losses for Policy Year 252 mo	(3) Losses for All Prior Years		(5) 252 - Ult for PY	(6) Growth Factor	(7) Indicated 252 - Ult for PY
		Previous	Current			
1994	220,907,502		9,166,140,668			
1995	221,228,456	9,387,048,170	9,400,885,890	1.063	0.500	1.031
1996	200,990,876	9,622,114,346	9,635,623,554	1.067	0.480	1.032
1997	213,776,022	9,836,614,430	9,853,854,775	1.081	0.510	1.041
1998	230,819,822	10,067,630,797	10,082,109,894	1.063	0.570	1.036
1999	246,167,495	10,312,929,716	10,327,786,341	1.060	0.630	1.038
					5yr average	1.036

Medical Paid 252nd Month to Ultimate Loss Tail Development Factor

(8) Policy Year	(9) Losses for Policy Year 252 mo	(10) Losses for All Prior Years		(12) 252 - Ult for PY	(13) Growth Factor	(14) Indicated 252 - Ult for PY
		Previous	Current			
1994	110,818,128		2,840,665,024			
1995	100,585,212	2,951,483,152	2,962,341,528	1.108	0.730	1.079
1996	98,872,873	3,062,926,740	3,073,877,787	1.111	0.710	1.079
1997	100,940,783	3,172,750,660	3,183,985,887	1.111	0.750	1.083
1998	115,024,553	3,284,926,670	3,295,060,885	1.088	0.820	1.072
1999	121,227,075	3,410,085,438	3,420,407,239	1.085	0.860	1.073
					5yr average	1.077

Notes:

- (2), (3), (4): Indemnity Paid Losses from Aggregate Financial Data.
- (9), (10), (11): Medical Paid Losses from Aggregate Financial Data.
- (5) = 1.000 + ((4)-(3)) / (2)
- (6): From Page 2
- (7) = 1.000 + [(5) - 1.000] x (6)
- (12) = 1.000 + ((11)-(10)) / (9)
- (13): From Page 3
- (14) = 1.000 + [(12) - 1.000] x (13)

Paid Loss Tail Factors

Indemnity Paid 252nd Month to Ultimate Loss Tail Development Factor

(1) Policy Year	(2) Losses for Policy Year 252 mo	(3) Losses for All Prior Years		(5) 252 - Ult for PY	(6) Growth Factor	(7) Indicated 252 - Ult for PY
		Previous	Current			
1994	220,907,502		9,166,140,668			
1995	221,228,456	9,387,048,170	9,400,885,890	1.063	0.500	1.031
1996	200,990,876	9,622,114,346	9,635,623,554	1.067	0.480	1.032
1997	213,776,022	9,836,614,430	9,853,854,775	1.081	0.510	1.041
1998	230,819,822	10,067,630,797	10,082,109,894	1.063	0.570	1.036
1999	246,167,495	10,312,929,716	10,327,786,341	1.060	0.630	1.038
					5yr average	1.036

Medical Paid 252nd Month to Ultimate Loss Tail Development Factor

(8) Policy Year	(9) Losses for Policy Year 252 mo	(10) Losses for All Prior Years		(12) 252 - Ult for PY	(13) Growth Factor	(14) Indicated 252 - Ult for PY
		Previous	Current			
1994	110,818,128		2,840,665,024			
1995	100,585,212	2,951,483,152	2,962,341,528	1.108	0.730	1.079
1996	98,872,873	3,062,926,740	3,073,877,787	1.111	0.710	1.079
1997	100,940,783	3,172,750,660	3,183,985,887	1.111	0.750	1.083
1998	115,024,553	3,284,926,670	3,295,060,885	1.088	0.820	1.072
1999	121,227,075	3,410,085,438	3,420,407,239	1.085	0.860	1.073
					5yr average	1.077

Notes:

- (2), (3), (4): Indemnity Paid Losses from Aggregate Financial Data.
- (9), (10), (11): Medical Paid Losses from Aggregate Financial Data.
- (5) = 1.000 + ((4)-(3)) / (2)
- (6): From Page 2
- (7) = 1.000 + [(5) - 1.000] x (6)
- (12) = 1.000 + ((11)-(10)) / (9)
- (13): From Page 3
- (14) = 1.000 + [(12) - 1.000] x (13)

Paid Plus Case Loss Tail Factors

Indemnity Paid Plus Case 252nd Month to Ultimate Loss Tail Development Factor

(1) Policy Year	(2) Losses for Policy Year 252 mo	(3) Losses for All Prior Years		(5) 252 - Ult for PY	(6) Growth Factor	(7) Indicated 252 - Ult for PY
		Previous	Current			
1994	226,250,009		9,275,085,644			
1995	225,776,852	9,501,335,653	9,509,392,209	1.036	0.470	1.017
1996	204,468,195	9,735,169,061	9,742,844,670	1.038	0.430	1.016
1997	217,139,138	9,947,312,865	9,953,370,311	1.028	0.480	1.013
1998	234,468,757	10,170,509,449	10,177,040,139	1.028	0.540	1.015
1999	248,701,254	10,411,508,896	10,420,137,991	1.035	0.600	1.021
					5yr average	1.016

Medical Paid Plus Case 252nd Month to Ultimate Loss Tail Development Factor

(8) Policy Year	(9) Losses for Policy Year 252 mo	(10) Losses for All Prior Years		(12) 252 - Ult for PY	(13) Growth Factor	(14) Indicated 252 - Ult for PY
		Previous	Current			
1994	123,219,172		2,991,021,145			
1995	109,935,789	3,114,240,317	3,125,251,202	1.100	0.700	1.070
1996	109,642,204	3,235,186,991	3,238,071,503	1.026	0.690	1.018
1997	109,617,639	3,347,713,707	3,343,030,942	0.957	0.730	0.969
1998	136,217,508	3,452,648,581	3,455,122,964	1.018	0.900	1.016
1999	142,500,682	3,591,340,472	3,592,876,422	1.011	0.900	1.010
					5yr average	1.017

Notes:

- (2), (3), (4): Indemnity Paid Plus Case Losses from Aggregate Financial Data.
- (9), (10), (11): Medical Paid Plus Case Losses from Aggregate Financial Data.
- (5) = 1.000 + ((4)-(3)) / (2)
- (6): From Page 2
- (7) = 1.000 + [(5) - 1.000] x (6)
- (12) = 1.000 + ((11)-(10)) / (9)
- (13): From Page 3
- (14) = 1.000 + [(12) - 1.000] x (13)

Growth Factor Adjustment
 Medical Paid Plus Case Losses

Policy Year (1)	Incurred Losses (2)	Relative Development for Report Interval (3)					Dollar Development (4)					On-Level Dollar Development (5)				
							Prior to 1999	Prior to 1998	Prior to 1997	Prior to 1996	Prior to 1995	Prior to 1999	Prior to 1998	Prior to 1997	Prior to 1996	Prior to 1995
1975	31,935,594					0.033%					10,589					34,607
1976	35,848,325					0.009%				3,098					8,848	69,213
1977	40,538,158			-0.015%	0.017%	0.099%				(5,984)					(15,664)	103,820
1978	52,386,790		0.008%	-0.030%	0.026%	0.133%			4,100	(15,466)				10,203	(31,328)	26,543
1979	60,704,663	0.005%	0.016%	-0.044%	0.035%	0.166%	2,800	9,503	(26,882)	20,981			5,965	20,407	(46,991)	35,391
1980	67,230,488	0.009%	0.023%	-0.059%	0.043%	0.199%	6,203	15,787	(39,695)	29,046			11,931	30,610	(62,655)	44,238
1981	83,085,174	0.014%	0.031%	-0.074%	0.052%	0.232%	11,498	26,013	(61,321)	43,075			17,896	40,813	(78,319)	53,086
1982	80,267,860	0.018%	0.039%	-0.089%	0.060%	0.265%	14,811	31,413	(71,090)	48,550			23,861	51,017	(93,983)	61,934
1983	91,348,952	0.023%	0.047%	-0.103%	0.069%	0.298%	21,069	42,900	(94,388)	63,146			29,826	61,220	(109,647)	70,781
1984	109,642,321	0.028%	0.055%	-0.118%	0.078%	0.332%	30,346	60,073	(129,474)	85,266			35,792	71,423	(125,310)	79,629
1985	144,597,512	0.032%	0.063%	-0.133%	0.086%	0.365%	46,692	90,542	(192,096)	124,944			41,757	81,627	(140,974)	88,477
1986	170,175,338	0.037%	0.070%	-0.148%	0.095%	0.398%	62,801	119,878	(251,195)	161,749			47,722	91,830	(156,638)	97,324
1987	206,082,789	0.042%	0.078%	-0.162%	0.104%	0.431%	85,559	161,303	(334,618)	213,686			53,687	102,033	(172,302)	106,172
1988	223,130,251	0.046%	0.086%	-0.177%	0.112%	0.464%	102,929	192,111	(395,234)	250,643	1,035,749		59,653	112,237	(187,966)	115,020
1989	236,001,380	0.051%	0.094%	-0.192%	0.121%	0.497%	119,753	221,664	(452,869)	285,493	1,173,745		65,618	122,440	(203,629)	123,867
1990	222,519,498	0.055%	0.102%	-0.207%	0.130%	0.531%	123,177	226,418	(459,844)	288,412	1,180,473		71,583	132,643	(219,293)	132,715
1991	189,003,207	0.060%	0.110%	-0.221%	0.138%	0.564%	113,342	207,108	(418,480)	261,302	1,065,335		77,549	142,847	(234,957)	141,563
1992	147,102,539	0.065%	0.117%	-0.236%	0.147%	0.597%	95,001	172,708	(347,420)	216,084	877,932		83,514	153,050	(250,621)	150,410
1993	129,907,619	0.069%	0.125%	-0.251%	0.156%	0.630%	89,889	162,688	(325,986)	202,051	818,383		89,479	163,254	(266,285)	159,258
1994	118,984,752	0.074%	0.133%	-0.266%	0.164%	0.663%	87,819	158,322	(316,139)	195,343	789,023		95,444	173,457	(281,948)	168,106
1995	104,373,871	0.078%	0.141%	-0.280%	0.173%		81,850	147,050	(292,725)	180,375			101,410	183,660	(297,612)	176,954
1996	102,394,268	0.083%	0.149%	-0.295%			85,021	152,275	(302,288)				107,375	193,864	(313,276)	
1997	106,116,375	0.088%	0.157%				93,007	166,116					113,340	204,067		
1998	130,359,416	0.092%					120,268						119,305			
1999	129,315,658															
							1,393,835	2,367,971	(4,533,194)	2,693,830	10,453,818	1,252,707	2,142,703	(3,289,398)	1,858,012	7,267,403
(6) Indicated Growth Factor:												0.899	0.905	0.726	0.690	0.695
(7) Selected Growth Factor:												0.900	0.900	0.730	0.690	0.700

- Notes:
 (2): Losses from Aggregate Financial Data evaluated as of 108 months.
 (3): Estimated % paid loss emergence for the report interval.
 (4) = (2) x (3)
 (5) = (3) x [(2) for PY199X] respectively for each 'Prior to 199X' column
 (6) = [Sum of (5)] / [Sum of (4)]

II 000022 STIP

II 000023 STIP

Section II - Loss Development
 Subsection D - Adjustment for Escalation of Benefits
 7/1/2022

Section II - D
 Exhibit 1
 Page 1

Differential in Indemnity Loss Development

Paid Loss Development Method Calculation of Adjustment for Differential in Loss Development

Escalated or Unescalated (1)	Injury Type (2)	Implicit LDF to Ultimate From Month				
		168	180	192 (3)	204	216
Escalated	Fatal	3.036	2.859	2.703	2.562	2.433
Escalated	Permanent Total	4.073	3.719	3.417	3.157	2.929
Escalated	Other Indemnity	1.000	1.000	1.000	1.000	1.000
Escalated	Total Indemnity	1.133	1.129	1.124	1.119	1.115
Unescalated	Fatal	1.942	1.861	1.789	1.725	1.668
Unescalated	Permanent Total	2.452	2.295	2.160	2.043	1.941
Unescalated	Other Indemnity	1.000	1.000	1.000	1.000	1.000
Unescalated	Total Indemnity	1.052	1.050	1.047	1.045	1.042

Escalated or Unescalated (4)	Injury Type (5)	Differential in Loss Development at Month				
		168	180	192 (6)	204	216
Escalated	Fatal	1.563	1.536	1.511	1.485	1.459
Escalated	Permanent Total	1.661	1.620	1.582	1.545	1.509
Escalated	Other Indemnity	1.000	1.000	1.000	1.000	1.000
Escalated	Total Indemnity	1.077	1.075	1.074	1.072	1.069

Selected Differential in Indemnity Loss Development at Month 408 1.037

Notes:

(3) = [(8) Exhibit 1, Page 2] / [(9) Exhibit 1, Page 2]

(6) = [(3) for Escalated] / [(3) for Unescalated]

II 000024 STIP

Differential in Indemnity Loss Development

Paid Loss Development Method Calculation of Adjustment for Differential in Loss Development

Escalated or Unescalated (1)	Injury Type (2)	Losses at Month						Injury Type Weights @ Ultimate (5)
		Ultimate (3)	168	180	192 (4)	204	216	
Escalated	Fatal	874,958	288,217	306,023	323,680	341,550	359,626	1.44%
Escalated	Permanent Total	1,668,738	409,709	448,697	488,350	528,641	569,759	9.18%
Escalated	Other Indemnity							56.43%
Escalated	Total Indemnity							67.06%
Unescalated	Fatal	465,615	239,708	250,218	260,195	269,862	279,221	0.77%
Unescalated	Permanent Total	824,906	336,400	359,427	381,858	403,713	424,987	4.54%
Unescalated	Other Indemnity							56.43%
Unescalated	Total Indemnity							61.74%

Escalated or Unescalated (6)	Injury Type (7)	Estimated Losses at Month					
		Ultimate (8)	168	180	192 (9)	204	216
Escalated	Fatal	1,443	475	505	534	563	593
Escalated	Permanent Total	9,179	2,254	2,468	2,686	2,908	3,134
Escalated	Other Indemnity	56,435	56,435	56,435	56,435	56,435	56,435
Escalated	Total Indemnity	67,057	59,164	59,408	59,655	59,906	60,162
Unescalated	Fatal	768	395	413	429	445	461
Unescalated	Permanent Total	4,537	1,850	1,977	2,100	2,221	2,338
Unescalated	Other Indemnity	56,435	56,435	56,435	56,435	56,435	56,435
Unescalated	Total Indemnity	61,740	58,681	58,825	58,965	59,101	59,233

Notes:

Escalation calculation applied only to Fatal and Permanent Total Injury Types.

(4): Average discounted losses are calculated from Simulation Model loss flows using a 3.5% discount rate.

(5): Escalated: From Section IV-E, Exhibit 2, Page 1. As a % of total losses, Indemnity and Medical.

Unescalated: [(5) for Escalated] x { [(3) for Unescalated] / [(3) for Escalated] }.

(8) = (5) x 100,000

(9) = (8) x [(4) / (3)]

II 000025 STIP

Section II - Loss Development
 Subsection D - Adjustment for Escalation of Benefits
 7/1/2022

Section II - D
 Exhibit 2
 Page 1

Differential in Indemnity Loss Development

Paid Plus Case Loss Development Method Calculation of Adjustment for Differential in Loss Development

Escalated or Unescalated (1)	Injury Type (2)	Implicit LDF to Ultimate From Month				
		168	180	192 (3)	204	216
Escalated	Fatal	1.364	1.340	1.317	1.295	1.274
Escalated	Permanent Total	1.398	1.368	1.340	1.313	1.288
Escalated	Other Indemnity	1.000	1.000	1.000	1.000	1.000
Escalated	Total Indemnity	1.047	1.044	1.042	1.039	1.037
Unescalated	Fatal	1.212	1.198	1.184	1.171	1.159
Unescalated	Permanent Total	1.253	1.234	1.215	1.198	1.183
Unescalated	Other Indemnity	1.000	1.000	1.000	1.000	1.000
Unescalated	Total Indemnity	1.017	1.016	1.015	1.014	1.013

Escalated or Unescalated (4)	Injury Type (5)	Differential in Loss Development at Month				
		168	180	192 (6)	204	216
Escalated	Fatal	1.125	1.119	1.112	1.105	1.099
Escalated	Permanent Total	1.115	1.109	1.102	1.096	1.089
Escalated	Other Indemnity	1.000	1.000	1.000	1.000	1.000
Escalated	Total Indemnity	1.029	1.027	1.026	1.024	1.023

Selected Differential in Indemnity Loss Development at Month 408 1.007

Notes:

(3) = [(8) Exhibit 2, Page 2] / [(9) Exhibit 2, Page 2]

(6) = [(3) for Escalated] / [(3) for Unescalated]

II 000026 STIP

Section II - Loss Development
 Subsection D - Adjustment for Escalation of Benefits
 7/1/2022

Section II - D
 Exhibit 2
 Page 2

Differential in Indemnity Loss Development

Paid Plus Case Loss Development Method Calculation of Adjustment for Differential in Loss Development

Escalated or Unescalated (1)	Injury Type (2)	Losses at Month						Injury Type Weights @ Ultimate (5)
		Ultimate (3)	168	180	192 (4)	204	216	
Escalated	Fatal	874,958	641,246	652,979	664,504	675,808	686,874	1.44%
Escalated	Permanent Total	1,668,738	1,193,905	1,219,988	1,245,595	1,270,688	1,295,221	9.18%
Escalated	Other Indemnity							56.43%
Escalated	Total Indemnity							67.06%
Unescalated	Fatal	465,615	384,035	388,719	393,217	397,535	401,676	0.77%
Unescalated	Permanent Total	824,906	658,201	668,658	678,696	688,321	697,538	4.54%
Unescalated	Other Indemnity							56.43%
Unescalated	Total Indemnity							61.74%

Escalated or Unescalated (6)	Injury Type (7)	Estimated Losses at Month					
		Ultimate (8)	168	180	192 (9)	204	216
Escalated	Fatal	1,443	1,058	1,077	1,096	1,115	1,133
Escalated	Permanent Total	9,179	6,567	6,711	6,851	6,989	7,124
Escalated	Other Indemnity	56,435	56,435	56,435	56,435	56,435	56,435
Escalated	Total Indemnity	67,057	64,060	64,223	64,383	64,539	64,692
Unescalated	Fatal	768	634	641	649	656	663
Unescalated	Permanent Total	4,537	3,620	3,678	3,733	3,786	3,837
Unescalated	Other Indemnity	56,435	56,435	56,435	56,435	56,435	56,435
Unescalated	Total Indemnity	61,740	60,689	60,754	60,817	60,877	60,934

Notes:

Escalation calculation applied only to Fatal and Permanent Total Injury Types.

(4): Average discounted losses are calculated from Simulation Model loss flows using a 3.5% discount rate.

(5): Escalated: From Section IV-E, Exhibit 2, Page 1. As a % of total losses, Indemnity and Medical.

Unescalated: [(5) for Escalated] x [(3) for Unescalated] / [(3) for Escalated] }.

(8) = (5) x 100,000

(9) = (8) x [(4) / (3)]

Accident Year Aggregate Financial Data
 Summary of Loss Development Factors

Months of Development	Loss Development Factors From																			Tail Factor	Escalation Factor	
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240			240-252
<u>(1) Indemnity Paid Losses</u>																						
2 Year Average	2.984	1.572	1.217	1.074	1.040	1.017	1.013	1.006	1.007	1.005	1.004	1.002	1.003	1.003	1.002	1.002	1.001	1.000	1.001	1.001	1.036	1.037
Cumulative	7.337	2.458	1.564	1.285	1.196	1.151	1.131	1.117	1.110	1.102	1.096	1.092	1.090	1.087	1.083	1.081	1.079	1.077	1.077	1.076	1.074	1.037
<u>(2) Medical Paid Losses</u>																						
2 Yr Average	1.963	1.148	1.054	1.026	1.016	1.008	1.013	1.010	1.008	1.006	1.009	1.009	1.006	1.008	1.006	1.007	1.008	1.007	1.009	1.005	1.077	1.000
Cumulative	2.996	1.526	1.329	1.261	1.230	1.211	1.201	1.185	1.173	1.164	1.158	1.148	1.137	1.130	1.121	1.115	1.107	1.099	1.092	1.082	1.077	1.000

Notes:
 Tail Factors from Section II-C, Exhibit 1, Page 1 (accident year tail factors, were approximated using policy year tail factors).
 Escalation Factor from Section II-D, Exhibit 1, page 1.

II 00029 STIP

Accident Year Aggregate Financial Data
 Calculation of Medical Paid Loss Development Factors

Accident Year	Losses (in 000's) Evaluated at Month		Loss Development Factor	Accident Year	Losses (in 000's) Evaluated at Month		Loss Development Factor
	12	24			132	144	
	2014	73,552			145,258	1.975	
2015	75,860	149,460	1.970	2005	171,320	172,948	1.009
2016	78,916	152,508	1.933	2006	162,061	163,269	1.007
2017	77,962	149,117	1.913	2007	179,238	181,507	1.013
2018	81,842	164,765	2.013	2008	170,206	171,020	1.005
2 Yr Average			1.963	2 Yr Average			1.009
5 Yr Average			1.961	5 Yr Average			1.009
Selected Average			1.963	Selected Average			1.009
2013	140,449	161,218	1.148	2003	156,309	157,641	1.009
2014	145,258	166,388	1.145	2004	170,485	171,883	1.008
2015	149,460	172,005	1.151	2005	172,948	174,381	1.008
2016	152,508	173,305	1.136	2006	163,269	164,301	1.006
2017	149,117	172,972	1.160	2007	181,507	183,706	1.012
2 Yr Average			1.148	2 Yr Average			1.009
5 Yr Average			1.148	5 Yr Average			1.009
Selected Average			1.148	Selected Average			1.009
2012	147,757	156,303	1.058	2002	139,652	141,115	1.010
2013	161,218	169,471	1.051	2003	157,641	158,865	1.008
2014	166,388	176,609	1.061	2004	171,883	173,127	1.007
2015	172,005	181,904	1.058	2005	174,381	175,263	1.005
2016	173,305	182,074	1.051	2006	164,301	165,550	1.008
2 Yr Average			1.054	2 Yr Average			1.006
5 Yr Average			1.056	5 Yr Average			1.008
Selected Average			1.054	Selected Average			1.006
2011	164,828	168,833	1.024	2001	121,956	122,702	1.006
2012	156,303	160,633	1.028	2002	141,115	142,562	1.010
2013	169,471	172,320	1.017	2003	158,865	159,855	1.006
2014	176,609	181,971	1.030	2004	173,127	174,441	1.008
2015	181,904	185,740	1.021	2005	175,263	176,629	1.008
2 Yr Average			1.026	2 Yr Average			1.008
5 Yr Average			1.024	5 Yr Average			1.008
Selected Average			1.026	Selected Average			1.008
2010	155,823	158,085	1.015	2000	119,950	121,461	1.013
2011	168,833	173,656	1.029	2001	122,702	123,289	1.005
2012	160,633	162,656	1.013	2002	142,562	144,197	1.011
2013	172,320	174,094	1.010	2003	159,855	160,778	1.006
2014	181,971	185,814	1.021	2004	174,441	175,608	1.007
2 Yr Average			1.016	2 Yr Average			1.006
5 Yr Average			1.017	5 Yr Average			1.008
Selected Average			1.016	Selected Average			1.006
2009	150,415	151,824	1.009	1999	115,056	115,965	1.008
2010	158,085	158,450	1.002	2000	121,461	123,078	1.013
2011	173,656	175,231	1.009	2001	123,289	123,896	1.005
2012	162,656	164,311	1.010	2002	144,197	145,416	1.008
2013	174,094	175,206	1.006	2003	160,778	161,585	1.005
2 Yr Average			1.008	2 Yr Average			1.007
5 Yr Average			1.007	5 Yr Average			1.008
Selected Average			1.008	Selected Average			1.007
2008	165,814	167,233	1.009	1998	105,080	105,620	1.005
2009	151,824	153,213	1.009	1999	115,965	116,891	1.008
2010	158,450	160,617	1.014	2000	123,078	124,622	1.013
2011	175,231	177,518	1.013	2001	123,896	124,359	1.004
2012	164,311	166,552	1.014	2002	145,416	147,067	1.011
2 Yr Average			1.013	2 Yr Average			1.008
5 Yr Average			1.012	5 Yr Average			1.008
Selected Average			1.013	Selected Average			1.008
2007	172,587	174,640	1.012	1997	96,966	97,550	1.006
2008	167,233	168,259	1.006	1998	105,620	106,477	1.008
2009	153,213	154,260	1.007	1999	116,891	117,726	1.007
2010	160,617	162,420	1.011	2000	124,622	125,865	1.010
2011	177,518	178,963	1.008	2001	124,359	124,749	1.003
2 Yr Average			1.010	2 Yr Average			1.007
5 Yr Average			1.009	5 Yr Average			1.007
Selected Average			1.010	Selected Average			1.007
2006	159,710	160,881	1.007	1996	98,031	99,266	1.013
2007	174,640	176,942	1.013	1997	97,550	97,988	1.004
2008	168,259	169,154	1.005	1998	106,477	107,160	1.006
2009	154,260	155,131	1.006	1999	117,726	118,270	1.005
2010	162,420	164,074	1.010	2000	125,865	127,476	1.013
2 Yr Average			1.008	2 Yr Average			1.009
5 Yr Average			1.008	5 Yr Average			1.008
Selected Average			1.008	Selected Average			1.009
2005	169,890	171,320	1.008	1995	101,657	102,247	1.006
2006	160,881	162,061	1.007	1996	99,266	99,856	1.006
2007	176,942	179,238	1.013	1997	97,988	98,456	1.005
2008	169,154	170,206	1.006	1998	107,160	107,606	1.004
2009	155,131	155,894	1.005	1999	118,270	118,857	1.005
2 Yr Average			1.006	2 Yr Average			1.005
5 Yr Average			1.008	5 Yr Average			1.005
Selected Average			1.006	Selected Average			1.005

Notes:
 Losses from Aggregate Financial Data.

III 000006 STIP

Section III - Premiums
 Subsection A - Summary
 7/1/2022

Section III - A
 Exhibit 1
 Page 1

Policy Year Aggregate Financial Data
 Calculation of Adjusted On-Level Standard Premium plus Adjusted ARAP at Ultimate
 Industrywide

Summary Exhibit

	Policy Year as of 12/31/2019	
	2017	2018
(1) Standard Earned Premium plus Adjusted ARAP Premium	1,272,315,507	1,236,067,013
(2) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.041	1.038
(3) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.002	1.000
(4) Composite Adjustment Factor = (2) x (3)	1.044	1.039
(5) Adjusted Standard Earned Premium plus ARAP = (1) x (4)	1,328,098,053	1,283,738,372
(6) Cumulative Premium Development Factor to Ultimate (see Page 2)	0.999	1.012
(7) Rate On-Level Factor	0.812	0.864
(8) Factor to Remove Expense Constant	0.962	0.962
(9) Adjusted On-Level Standard Earned Premium plus Adjusted ARAP at Ultimate = (5) x (6) x (7) x (8)	1,036,705,347	1,078,616,826

Notes:

- (1): Section III-B, Exhibit 2
- (2): Section III-B, Exhibit 1
- (3): Section III-C, Exhibit 1
- (6): Premiums are deemed to be fully developed at 252 months.
- (7): Section III-D, Exhibit 1
- (8): Section VI-F, Exhibit 2.

Policy Year Aggregate Financial Data
 Calculation of Standard Premium plus Adjusted ARAP Premium Development Factors
 Industrywide

Premium Development Factors From:																			
Months of Development	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252
2 Year Average	1.016	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cumulative Factor to 252	1.015	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Year Average	1.012	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cumulative Factor to 252	1.012	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Notes:
 From Page 3

III 000008 STIP

Section III - Premiums
Subsection A - Summary
7/1/2022

Section III - A
Exhibit 1
Page 3

Policy Year Aggregate Financial Data Calculation of Standard Premium plus Adjusted ARAP Premium Development Factors Industrywide

Policy Year	Premium (in 000's) Evaluated at Month		Premium Development Factor	Policy Year	Premium (in 000's) Evaluated at Month		Premium Development Factor
	24	36			132	144	
2013	969,574	977,351	1.008	2004	911,355	911,354	1.000
2014	1,013,545	1,028,781	1.015	2005	946,502	946,503	1.000
2015	1,080,427	1,088,524	1.007	2006	1,004,834	1,004,833	1.000
2016	1,117,787	1,132,501	1.013	2007	988,396	988,392	1.000
2017	1,183,358	1,204,893	1.018	2008	811,714	811,713	1.000
2 yr Average			1.016	2 yr Average			1.000
5 yr Average			1.012	5 yr Average			1.000
	36	48			144	156	
2012	932,514	930,454	0.998	2003	908,308	908,294	1.000
2013	977,351	976,011	0.999	2004	911,354	911,353	1.000
2014	1,028,781	1,027,787	0.999	2005	946,503	946,503	1.000
2015	1,088,524	1,088,017	1.000	2006	1,004,833	1,004,831	1.000
2016	1,132,501	1,131,655	0.999	2007	988,392	988,392	1.000
2 yr Average			0.999	2 yr Average			1.000
5 yr Average			0.999	5 yr Average			1.000
	48	60			156	168	
2011	913,508	916,122	1.003	2002	852,725	852,725	1.000
2012	930,454	930,375	1.000	2003	908,294	908,294	1.000
2013	976,011	975,743	1.000	2004	911,353	911,352	1.000
2014	1,027,787	1,027,443	1.000	2005	946,503	946,501	1.000
2015	1,088,017	1,087,541	1.000	2006	1,004,831	1,004,830	1.000
2 yr Average			1.000	2 yr Average			1.000
5 yr Average			1.000	5 yr Average			1.000
	60	72			168	180	
2010	845,601	846,003	1.000	2001	738,214	738,214	1.000
2011	916,122	915,931	1.000	2002	852,725	852,725	1.000
2012	930,375	930,270	1.000	2003	908,294	908,294	1.000
2013	975,743	975,711	1.000	2004	911,352	911,352	1.000
2014	1,027,443	1,027,373	1.000	2005	946,501	946,501	1.000
2 yr Average			1.000	2 yr Average			1.000
5 yr Average			1.000	5 yr Average			1.000
	72	84			180	192	
2009	773,793	773,834	1.000	2000	681,658	681,658	1.000
2010	846,003	845,791	1.000	2001	738,214	738,216	1.000
2011	915,931	915,886	1.000	2002	852,725	852,719	1.000
2012	930,270	930,284	1.000	2003	908,294	908,294	1.000
2013	975,711	975,697	1.000	2004	911,352	911,352	1.000
2 yr Average			1.000	2 yr Average			1.000
5 yr Average			1.000	5 yr Average			1.000
	84	96			192	204	
2008	811,659	811,669	1.000	1999	696,369	696,369	1.000
2009	773,834	773,808	1.000	2000	681,658	681,658	1.000
2010	845,791	845,815	1.000	2001	738,216	738,213	1.000
2011	915,886	915,897	1.000	2002	852,719	852,719	1.000
2012	930,284	930,274	1.000	2003	908,294	908,294	1.000
2 yr Average			1.000	2 yr Average			1.000
5 yr Average			1.000	5 yr Average			1.000
	96	108			204	216	
2007	988,470	988,415	1.000	1998	722,376	722,376	1.000
2008	811,669	811,753	1.000	1999	696,369	696,369	1.000
2009	773,808	773,800	1.000	2000	681,658	681,658	1.000
2010	845,815	845,834	1.000	2001	738,213	738,213	1.000
2011	915,897	915,878	1.000	2002	852,719	852,719	1.000
2 yr Average			1.000	2 yr Average			1.000
5 yr Average			1.000	5 yr Average			1.000
	108	120			216	228	
2006	1,004,820	1,004,831	1.000	1997	732,719	732,719	1.000
2007	988,415	988,399	1.000	1998	722,376	722,376	1.000
2008	811,753	811,708	1.000	1999	696,369	696,369	1.000
2009	773,800	773,824	1.000	2000	681,658	681,658	1.000
2010	845,834	846,017	1.000	2001	738,213	738,213	1.000
2 yr Average			1.000	2 yr Average			1.000
5 yr Average			1.000	5 yr Average			1.000
	120	132			228	240	
2005	946,487	946,502	1.000	1996	695,465	695,465	1.000
2006	1,004,831	1,004,834	1.000	1997	732,719	732,718	1.000
2007	988,399	988,396	1.000	1998	722,376	722,376	1.000
2008	811,708	811,714	1.000	1999	696,369	696,369	1.000
2009	773,824	773,822	1.000	2000	681,658	681,658	1.000
2 yr Average			1.000	2 yr Average			1.000
5 yr Average			1.000	5 yr Average			1.000
					240	252	
				1995	794,289	794,289	1.000
				1996	695,465	695,466	1.000
				1997	732,718	732,718	1.000
				1998	722,376	722,376	1.000
				1999	696,369	696,369	1.000
				2 yr Average			1.000
				5 yr Average			1.000

Adjustment for Experience and Merit Rating, ARAP and Construction Credit Off-Balance

Rate Level Effective Date (1)	Experience Mod for Non-Merit Rated Risks		Merit Rating Impact		Average Experience Mod and Merit Rating Factor (6)	ARAP Charge in Rates (7)	Construction Credit in Construction Rates (8)	Policy Year Written Weights		Calendar Year Earned Weights		
	Anticipated in Rates (2)	Percentage of Premium (3)	Anticipated in Rates (4)	Percentage of Premium (5)				2017	2018	2017	2018	2019
								(9)	(10)	(11)	(12)	(13)
4/1/2014	1.000	0.841	-0.019	0.159	0.997	0.052	-0.032			10.4%		
7/1/2016	1.000	0.845	-0.020	0.155	0.997	0.052	-0.042	100.0%	56.8%	89.6%	87.6%	11.7%
7/1/2018	1.000	0.856	-0.021	0.144	0.997	0.051	-0.033		43.2%		12.4%	88.3%
7/1/2020	1.000	0.866	-0.022	0.134	0.997	0.053	-0.033					

	Policy Year		Calendar Year Earned		
	2017	2018	2017	2018	2019
(14) Weighted Average Experience and Merit Rating factor anticipated in rates	0.997	0.997	0.997	0.997	0.997
(15) Weighted ARAP Charge anticipated in rates	0.052	0.052	0.052	0.052	0.051
(16) Percentage of Premium for CCPAP Eligible Classes	0.376	0.381	0.370	0.378	0.378
(17) Weighted Average Construction Credit anticipated in rates	-0.016	-0.015	-0.015	-0.015	-0.013
(18) Combined Weighted Average impact anticipated in rates = (14) x [1.0 + (15)] x [1.0 + (17)]	1.032	1.033	1.033	1.032	1.035
(19) Manual Premium	1,252,654,707	1,230,344,716	1,211,950,542	1,241,499,712	
(20) Standard Earned Premium at DSR Level, excluding Expense Constants	1,187,575,374	1,169,701,956	1,150,200,487	1,178,638,665	
(21) ARAP Premium	51,198,038	51,798,318	50,053,773	51,498,178	
(22) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.053	1.055	1.051	1.053	
(23) Standard Earned Premium plus Adjusted ARAP = (20) + [(21) x (22)]	1,241,509,621	1,224,325,187	1,202,815,280	1,232,875,608	
(24) Combined Actual impact = (23) / (19)	0.991	0.995	0.992	0.993	0.993
(25) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance = (18) / (24)	1.041	1.038	1.041	1.040	1.042

Notes:
 (3) = 1.0 - (5)
 (2), (4), (5), (7), (8): Previous filings.
 (6) = [(2) x (3)] + [1.0 + (4)] x (5)
 (9),(10): Section III-D, Exhibit 2.
 (11),(12): Section III-D, Exhibit 3.
 (13): Section III-D, Exhibit 4.
 (14) = Sum [(6) x (9) through (13)]
 (15) = Sum [(7) x (9) through (13)]
 (17) = Sum [(8) x (9) through (13)] x (16)
 (16), (19), (20), (21): Unit Statistical Plan Data, Excluding Large Deductible Policies. CY 2019 uses CY 2018 values.
 (22): from Section III-B, Exhibit 2.

III 000009 STIP

Policy Year Aggregate Financial Data
 Calculation of Standard Premium plus ARAP Premium
 Industrywide

	Policy Year valued as of 12/31/2019		Calendar Years		
	2017	2018	2017	2018	2019
(1) Aggregate Financial: Standard Earned Premium at DSR Level	1,218,313,736	1,182,307,589	1,183,483,586	1,211,091,948	1,185,110,252
(2) Aggregate Financial: Standard Earned Premium at Company Level	1,156,505,866	1,121,162,973	1,125,877,630	1,149,936,295	1,122,556,750
(3) Aggregate Financial: ARAP Premium	51,262,136	50,979,184	50,885,501	51,610,877	52,633,448
(4) Adjustment Factor to Adjust from Company Level to DSR Level Premium = (1) / (2)	1.053	1.055	1.051	1.053	1.056
(5) Adjusted ARAP Premium = (3) x (4)	54,001,771	53,759,424	53,489,077	54,355,635	55,566,401
(6) Standard Earned Premium plus adjusted ARAP Premium = (1) + (5)	1,272,315,507	1,236,067,013	1,236,972,663	1,265,447,583	1,240,676,653

Notes:

(1),(2),(3): Aggregate Financial Policy Year Calls

Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments

Rate Level Effective Date (1)	Loading for Recoupment of Insolvency Fund Assessments (2)	Policy Year Weights		Calendar Year Earned Weights		
		2017 (3)	2018 (4)	2017 (5)	2018 (6)	2019 (7)
4/1/2014	0.19%			10.4%		
7/1/2016	-0.23%	100.0%	56.8%	89.6%	87.6%	11.7%
7/1/2018	0.26%		43.2%		12.4%	88.3%
7/1/2020						

Policy Year		Calendar Year Earned		
2017	2018	2017	2018	2019

(8) Weighted Average Loading for Recoupment of Insolvency Fund Assessment in the Rates = Sum [(2) x (3) through (7)]	-0.0023	-0.0002	-0.0019	-0.0017	0.0020
(9) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments = [1.0 - (8)]	1.002	1.000	1.002	1.002	0.998

- Notes:
 (2): Previous filings.
 (3),(4): Section III-D, Exhibit 2.
 (5),(6): Section III-D, Exhibit 3.
 (7): Section III-D, Exhibit 4.

III 000012 STIP

Section III - Premiums
 Subsection D - Rate On-Level Factors
 7/1/2022

Section III - D
 Exhibit 1

Rate On-Level Factors

Rate Level Effective Date (1)	Rate Change (2)	Cumulative Rate Level Change (3)	Factor to Current Rate Level (4)	Policy Year Weights	
				2017 (5)	2018 (6)
7/1/2016		1.000	0.812	100.0%	56.8%
7/1/2018	0.871	0.871	0.932		43.2%
7/1/2020	0.932	0.812	1.000		

Policy Year	
2017	2018
0.812	0.864

(7) Rate On-Level Factor
 = Sum [(4) x (5) through (6)]

Notes:

(2) From previous filings.

(3): $(3)_t = (2)_t \times (3)_{t-1}$

(4): $(3)_{\text{latest rate level effective date}} / (3)$.

(5),(6): Exhibit 2.

III 000013 STIP

Section III - Premiums
 Subsection D - Premium On-Level Factors
 7/1/2022

Section III - D
 Exhibit 2

Policy Year Weights for On-Leveling Earned Premium

Policy Year (1)	Policy Month (2)	Standard Earned Premium plus ARAP at Rate Level Effective			Earned Premiums (6)
		4/1/2014 (3)	7/1/2016 (4)	7/1/2018 (5)	
2017	1		207,338,253		207,338,253
2017	2		77,277,639		77,277,639
2017	3		95,943,513		95,943,513
2017	4		118,742,165		118,742,165
2017	5		93,228,401		93,228,401
2017	6		109,368,490		109,368,490
2017	7		146,154,269		146,154,269
2017	8		76,702,606		76,702,606
2017	9		93,273,047		93,273,047
2017	10		94,333,680		94,333,680
2017	11		74,064,570		74,064,570
2017	12		99,214,454		99,214,454
2017	Total		1,285,641,088		1,285,641,088

2018	1		211,619,485		211,619,485
2018	2		79,730,946		79,730,946
2018	3		97,143,666		97,143,666
2018	4		117,740,978		117,740,978
2018	5		97,685,838		97,685,838
2018	6		116,200,326		116,200,326
2018	7			137,345,415	137,345,415
2018	8			72,464,164	72,464,164
2018	9			87,084,773	87,084,773
2018	10			90,026,589	90,026,589
2018	11			69,517,681	69,517,681
2018	12			92,076,752	92,076,752
2018	Total		720,121,238	548,515,375	1,268,636,612

2019	1			193,438,521	193,438,521
2019	2			72,892,984	72,892,984
2019	3			88,797,628	88,797,628
2019	4			107,625,227	107,625,227
2019	5			89,293,107	89,293,107
2019	6			106,216,976	106,216,976
2019	7			144,139,761	144,139,761
2019	8			76,048,926	76,048,926
2019	9			91,392,786	91,392,786
2019	10			94,480,133	94,480,133
2019	11			72,956,685	72,956,685
2019	12			96,631,718	96,631,718
2019	Total			1,233,914,453	1,233,914,453

Rate Level Effective Date (7)	Policy Year Weights		
	2017 (8)	2018 (9)	2019 (10)
4/1/2014			
7/1/2016	100.0%	56.8%	
7/1/2018		43.2%	100.0%

Notes:

(3),(4),(5): From Unit Statistical Plan Data. PY 2019 based on PY 2018 data subject to adjustments for rate level, exposure growth, and wage changes.

(6) = (3) + (4) + (5)

(8),(9),(10) = [PY Total of (3), (4) or (5)] / [PY Total of (6)]

III 000014 STIP

Section III - Premiums
 Subsection D - Premium On-Level Factors
 7/1/2022

Section III - D
 Exhibit 3

Calendar Year ("CY") Weights for On-Leveling Earned Premium

Policy Year (1)	Policy Month (2)	CY in which Premium is Earned (3)	Standard Earned Premium plus ARAP at Rate Level Effective			Earned Premiums (7)
			4/1/2014 (4)	7/1/2016 (5)	7/1/2018 (6)	
2015	12	2017				0
2016	1	2017	2,184,182			2,184,182
2016	2	2017	7,230,351			7,230,351
2016	3	2017	16,713,577			16,713,577
2016	4	2017	29,347,775			29,347,775
2016	5	2017	29,676,146			29,676,146
2016	6	2017	45,455,839			45,455,839
2016	7	2017		67,285,056		67,285,056
2016	8	2017		44,391,945		44,391,945
2016	9	2017		63,555,882		63,555,882
2016	10	2017		68,663,506		68,663,506
2016	11	2017		57,724,326		57,724,326
2016	12	2017		92,210,150		92,210,150
2017	1	2017		205,033,166		205,033,166
2017	2	2017		69,310,219		69,310,219
2017	3	2017		78,259,267		78,259,267
2017	4	2017		87,716,261		87,716,261
2017	5	2017		61,151,390		61,151,390
2017	6	2017		61,469,428		61,469,428
2017	7	2017		73,008,008		73,008,008
2017	8	2017		30,545,434		30,545,434
2017	9	2017		28,863,609		28,863,609
2017	10	2017		22,210,418		22,210,418
2017	11	2017		10,840,004		10,840,004
2017	12	2017		3,593,964		3,593,964
Total		2017	130,607,869	1,125,832,033		1,256,439,903

2016	12	2018		30		30
2017	1	2018		2,280,955		2,280,955
2017	2	2018		7,962,375		7,962,375
2017	3	2018		17,678,349		17,678,349
2017	4	2018		31,017,817		31,017,817
2017	5	2018		32,071,575		32,071,575
2017	6	2018		47,893,259		47,893,259
2017	7	2018		73,138,098		73,138,098
2017	8	2018		46,153,993		46,153,993
2017	9	2018		64,405,955		64,405,955
2017	10	2018		72,120,581		72,120,581
2017	11	2018		63,223,130		63,223,130
2017	12	2018		95,619,387		95,619,387
2018	1	2018		209,317,619		209,317,619
2018	2	2018		71,554,283		71,554,283
2018	3	2018		79,153,309		79,153,309
2018	4	2018		86,923,168		86,923,168
2018	5	2018		64,718,161		64,718,161
2018	6	2018		65,232,774		65,232,774
2018	7	2018			68,407,271	68,407,271
2018	8	2018			29,044,576	29,044,576
2018	9	2018			26,558,283	26,558,283
2018	10	2018			21,254,138	21,254,138
2018	11	2018			10,500,863	10,500,863
2018	12	2018			3,596,888	3,596,888
Total		2018		1,130,464,820	159,362,018	1,289,826,838

Rate Level Effective Date (8)	Calendar Year Earned Weights	
	2017 (9)	2018 (10)
4/1/2014	10.4%	
7/1/2016	89.6%	87.6%
7/1/2018		12.4%

Notes:
 (4),(5),(6): From Unit Statistical Plan Data.
 (7) = (4) + (5) + (6)
 (9),(10) = [CY Total of (4), (5) or (6)] / [CY Total of (7)]

III 000015 STIP

Section III - Premiums
 Subsection D - Premium On-Level Factors
 7/1/2022

Section III - D
 Exhibit 4

Calendar Year ("CY") Weights for On-Leveling Earned Premium

Policy Year (1)	Policy Month (2)	CY in which Premium is Earned (3)	Standard Earned Premium plus ARAP at Rate Level Effective			PY Premiums Earned During CY (7)
			4/1/2014 (4)	7/1/2016 (5)	7/1/2018 (6)	
2017	12	2019		2		2
2018	1	2019		2,288,106		2,288,106
2018	2	2019		8,174,090		8,174,090
2018	3	2019		17,987,767		17,987,767
2018	4	2019		30,814,945		30,814,945
2018	5	2019		32,966,086		32,966,086
2018	6	2019		50,966,355		50,966,355
2018	7	2019			68,937,575	68,937,575
2018	8	2019			43,420,028	43,420,028
2018	9	2019			60,528,151	60,528,151
2018	10	2019			68,774,549	68,774,549
2018	11	2019			59,018,808	59,018,808
2018	12	2019			88,483,489	88,483,489
2019	1	2019			191,358,207	191,358,207
2019	2	2019			65,422,733	65,422,733
2019	3	2019			72,171,437	72,171,437
2019	4	2019			79,255,912	79,255,912
2019	5	2019			59,013,486	59,013,486
2019	6	2019			59,478,472	59,478,472
2019	7	2019			71,609,450	71,609,450
2019	8	2019			30,403,975	30,403,975
2019	9	2019			27,800,134	27,800,134
2019	10	2019			22,246,882	22,246,882
2019	11	2019			10,990,756	10,990,756
2019	12	2019			3,764,338	3,764,338
	Total	2019		143,197,351	1,082,678,381	1,225,875,732

Rate Level Effective Date (8)	Calendar Year Earned Weights
	2019 (9)
4/1/2014	
7/1/2016	11.7%
7/1/2018	88.3%

Notes:

(4),(5),(6): From Unit Statistical Plan Data. PY 2019 based on PY 2018 data subject to adjustments for rate level, exposure growth, and wage changes.

(7) = (4) + (5) + (6)

(9) = [CY Total of (4), (5) or (6)] / [CY Total of (7)]

III 000016 STIP

Section III - Premiums
Subsection E - Premium Adjustment Factors
7/1/2022

Section III - E
Exhibit 1

Calculation of Premium Adjustment Factor PY 2018 to Prospective Effective Period 7/1/2022 - 6/30/2023

(1)	Wage Trend from PY 2018 to Prospective Effective Period 7/1/2022 - 6/30/2023	1.173
(2)	Exposure Growth	1.063
(3)	Rate On-Level Factor	0.864
(4)	Overall Indicated Rate Change for Policies Effective 7/1/2022	0.9654
(5)	Adjustment Factor to Balance Experience Rating, ARAP, and Construction Credits	1.038
(6)	Impact of Change in Indicated Loading for Recoupment of Insolvency Fund Assessments	1.005
(7)	Adjustment Factor = (1) x (2) x (3) x (4) x (5) x (6)	1.086
(8)	Selected Factor	1.09

Notes:

(1):	Statewide Average Weekly Wage for PY 2018 (Section V-G, Exhibit 1)	1,445.94
	Statewide Average Weekly Wage for 10/1/2020, based on data period 4/1/19 to 4/1/20 (Section V-G, Exhibit 1)	1,487.78
	Statewide Average Weekly Wage at 7/1/2023 (using wage trend of 3.6%, Section V-A, Exhibit 1)	1,696.58
(2):	Exposure growth from PY 2018 to Prospective Effective Period 7/1/2022 - 6/30/2023 (Section V-H, Exhibit 3)	
(3):	Section III-D Exhibit 1.	
(4):	Section I-B Exhibit 1.	
(5):	Exhibit 2.	
(6):	PY 2018 factor to load for Recoupment of Insolvency Fund (Section III-C, Exhibit 1: [1.0 + (8)]).	1.000
	Policy Effective factor to load for Recoupment of Insolvency Fund Assessments (Section IX-K, Exhibit 5, Page 1).	1.005

III 000017 STIP

Section III - Premiums
Subsection E - Premium Adjustment Factors
7/1/2022

Section III - E
Exhibit 2

Factor to Balance Experience Rating, ARAP, and Construction Credit

Beginning Period - PY 2018

(1)	Anticipated Impact on Manual Rates of Experience Rating, ARAP, and Construction Credits	1.033
(2)	Actual Impact on Manual Rates of Experience Rating, ARAP, and Construction Credits	0.995
(3)	Ratio of Anticipated to Actual = (1) / (2)	1.038

Ending Period - Prospective Effective Period 7/1/2022 - 6/30/2023

(4)	Anticipated Impact on Manual Rates of Experience Rating, ARAP, and Construction Credits	1.036
(5)	Actual is Assumed to be equal to the Anticipated, Since the Actual Impact has yet to be Determined	1.036
(6)	Ratio of Anticipated to Actual is Assumed to be 1.000	1.000
(7)	Adjustment Factor to Balance Experience Rating, ARAP, and Construction Credits = (3) / (6)	1.038

Notes:

(1),(2): PY 2018, Section III-B, Exhibit 1.

(4),(5): Prospective Effective Period, Section IX-K, Exhibit 1.

IV 000007 STIP

Section IV - Benefit Change Adjustments
 Subsection A - Summary
 7/1/2022

Section IV - A
 Exhibit 1

Benefit Level Adjustment Factors

All Injury Types

Time Period		Indemnity					Medical	Total
Beginning Period	Ending Period	Death	Permanent Total	Permanent Partial	Temporary Total	All Injury Types	All Injury Types	All Injury Types
1/1/2022	Prosp. Eff. Period					0.988	1.000	
PY 2017	1/1/2022					1.072	1.000	
PY 2018	1/1/2022					1.062	1.000	
PY 2004	Prosp. Eff. Period	1.105	1.126	1.218	1.075	1.167	1.036	
PY 2005	Prosp. Eff. Period	1.099	1.117	1.201	1.070	1.155	1.032	
PY 2006	Prosp. Eff. Period	1.094	1.109	1.184	1.066	1.143	1.032	
PY 2007	Prosp. Eff. Period	1.088	1.100	1.167	1.061	1.130	1.032	
PY 2008	Prosp. Eff. Period	1.081	1.091	1.151	1.056	1.118	1.024	
PY 2009	Prosp. Eff. Period	1.079	1.088	1.145	1.054	1.113	1.002	
PY 2010	Prosp. Eff. Period	1.080	1.088	1.146	1.055	1.114	1.000	
PY 2011	Prosp. Eff. Period	1.076	1.083	1.136	1.053	1.107	1.000	
PY 2012	Prosp. Eff. Period	1.071	1.076	1.124	1.049	1.097	1.000	
PY 2013	Prosp. Eff. Period	1.069	1.073	1.118	1.047	1.093	1.000	
PY 2014	Prosp. Eff. Period	1.063	1.069	1.111	1.045	1.087	1.000	
PY 2015	Prosp. Eff. Period	1.051	1.063	1.100	1.041	1.078	1.000	
PY 2016	Prosp. Eff. Period	1.045	1.056	1.088	1.037	1.069	1.000	
PY 2017	Prosp. Eff. Period	1.039	1.048	1.076	1.032	1.059	1.000	
PY 2018	Prosp. Eff. Period	1.032	1.039	1.063	1.026	1.049	1.000	
PY 2016	CPY 2018_07	1.017	1.020	1.031	1.014		1.000	
PY 2017	CPY 2019_07	1.018	1.021	1.032	1.014		1.000	
PY 2018	CPY 2020_07	1.023	1.028	1.044	1.019		1.000	
CPY 2018_07	Prosp. Eff. Period							1.029
CPY 2019_07	Prosp. Eff. Period							1.022
CPY 2020_07	Prosp. Eff. Period							1.010
CPY 2008_09	Prosp. Eff. Period							1.075
Prior Eff. Period (using benefit level projections from prior filing)	Prosp. Eff. Period					1.024	1.000	1.016

Notes:

1/1/2022 refers to a point in time. All other time periods refer to Policy Years.

Example: PY 2010 to Prosp. Eff. Period for Permanent Partial = 1.146 = 1.228 / 1.072

where 1.228 is the Index Factor for Prosp. Eff. Period and 1.072 is the Index Factor for PY 2010 for Indemnity Permanent Partial, from Exhibit 2.

Benefit Level Changes and Weights

Injury Type: Death																							Weighted Average Benefit Level		
Date of Change	10/1/2003	9/1/2004	10/1/2004	10/1/2005	10/1/2006	10/1/2007	10/1/2008	4/1/2009	10/1/2009	10/1/2010	10/1/2011	10/1/2012	10/1/2013	10/1/2014	3/24/2015	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019	10/1/2020	10/1/2021		10/1/2022	10/1/2023
Benefit Level Change	1.000	1.000	1.005	1.005	1.005	1.006	1.006	1.000	1.000	0.999	1.006	1.004	1.001	1.004	1.009	1.005	1.005	1.007	1.007	1.007	1.008	1.022	0.990	1.007	
Cumulative Benefit Level Change	1.000	1.000	1.005	1.010	1.015	1.021	1.027	1.027	1.026	1.032	1.037	1.038	1.042	1.051	1.056	1.062	1.069	1.076	1.084	1.093	1.117	1.106	1.113		
Time Period																									
PY 2004	0.281	0.061	0.629	0.028																				1.003	
PY 2005			0.335	0.635	0.029																				1.008
PY 2006				0.340	0.632	0.028																			1.014
PY 2007					0.343	0.630	0.027																		1.019
PY 2008						0.350	0.417	0.209	0.025																1.025
PY 2009							0.055	0.290	0.629	0.026															1.027
PY 2010									0.333	0.641	0.027														1.027
PY 2011									0.343	0.632	0.025														1.030
PY 2012										0.341	0.634	0.025													1.035
PY 2013											0.340	0.635	0.025												1.037
PY 2014												0.340	0.408	0.227	0.025										1.043
PY 2015													0.340	0.295	0.636	0.024									1.054
PY 2016															0.340	0.636	0.025	0.025							1.060
PY 2017																0.341	0.635	0.025	0.025						1.067
PY 2018																	0.635	0.025	0.640	0.025					1.074
CPY 2018_07																	0.335	0.640	0.270	0.025					1.078
CPY 2019_07																	0.038	0.692	0.678	0.274	0.274				1.086
CPY 2020_07																		0.048	0.678	0.678	0.274	0.274			1.099
CPY 2008_09								0.004	0.180	0.426	0.390									0.048	0.678	0.274			1.027
Prior Eff. Period																					0.048	0.677	0.275		1.099
Prosp. Eff. Period																					1.000				1.109
1/1/2022																									1.117

Indemnity All Injury Types - Average Benefit Level for Current Policy Period, Estimated at 7/1/2020 (using benefit level projections from prior filing).

Date of Change	10/1/2003	9/1/2004	10/1/2004	10/1/2005	10/1/2006	10/1/2007	10/1/2008	4/1/2009	10/1/2009	10/1/2010	10/1/2011	10/1/2012	10/1/2013	10/1/2014	3/24/2015	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019	10/1/2020	10/1/2021	Weighted Average Benefit Level
Benefit Level Change	1.000	1.000	1.009	1.011	1.011	1.011	1.012	1.000	1.000	0.998	1.011	1.008	1.002	1.007	1.000	1.008	1.008	1.010	1.010	1.010	1.009	1.009	1.147
Cumulative Level Change	1.000	1.000	1.009	1.020	1.031	1.043	1.055	1.055	1.055	1.053	1.065	1.073	1.075	1.083	1.083	1.092	1.101	1.112	1.123	1.134	1.144	1.154	1.147

Medical All Injury Types - Average Benefit Level for Current Policy Period, Estimated at 7/1/2020 (using benefit level projections from prior filing).

Date of Change	10/1/2003	9/1/2004	10/1/2004	10/1/2005	10/1/2006	10/1/2007	10/1/2008	4/1/2009	10/1/2009	10/1/2010	10/1/2011	10/1/2012	10/1/2013	10/1/2014	3/24/2015	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019	10/1/2020	10/1/2021	Weighted Average Benefit Level	
Benefit Level Change	1.000	1.014	1.000	1.000	1.000	1.000	1.000	1.032	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.046	
Cumulative Level Change	1.000	1.014	1.014	1.014	1.014	1.014	1.014	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046

All Injury Types - Average Benefit Level for Current Policy Period, Estimated at 7/1/2020 (using benefit level projections from prior filing).

Date of Change	10/1/2003	9/1/2004	10/1/2004	10/1/2005	10/1/2006	10/1/2007	10/1/2008	4/1/2009	10/1/2009	10/1/2010	10/1/2011	10/1/2012	10/1/2013	10/1/2014	3/24/2015	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019	10/1/2020	10/1/2021	Weighted Average Benefit Level
Benefit Level Change	1.000	1.005	1.006	1.007	1.007	1.007	1.007	1.013	1.000	0.999	1.007	1.005	1.001	1.005	1.000	1.005	1.005	1.007	1.006	1.006	1.006	1.006	1.112
Cumulative Level Change	1.000	1.005	1.011	1.018	1.025	1.032	1.040	1.053	1.053	1.052	1.059	1.065	1.066	1.071	1.071	1.077	1.082	1.090	1.096	1.104	1.110	1.117	1.112

Index Factors for All Injury Types

Time Period	Death	Indemnity			All Injury Types	Medical All Injury Types	Total All Injury Types
		Permanent Total	Permanent Partial	Temporary Total			
PY 2004	1.003	1.005	1.008	1.003	1.006	1.010	1.008
PY 2005	1.008	1.013	1.023	1.007	1.017	1.014	1.016
PY 2006	1.014	1.020	1.038	1.011	1.028	1.014	1.023
PY 2007	1.019	1.028	1.053	1.016	1.039	1.014	1.030
PY 2008	1.025	1.037	1.067	1.020	1.051	1.022	1.040
PY 2009	1.027	1.040	1.073	1.022	1.055	1.045	1.052
PY 2010	1.027	1.039	1.072	1.022	1.054	1.046	1.053
PY 2011	1.030	1.044	1.081	1.024	1.061	1.046	1.057
PY 2012	1.035	1.051	1.093	1.027	1.070	1.046	1.063
PY 2013	1.037	1.054	1.098	1.029	1.075	1.046	1.066
PY 2014	1.043	1.058	1.106	1.032	1.081	1.046	1.069
PY 2015	1.054	1.064	1.117	1.035	1.089	1.046	1.075
PY 2016	1.060	1.071	1.129	1.039	1.098	1.046	1.081
PY 2017	1.067	1.080	1.142	1.044	1.109	1.046	1.087
PY 2018	1.074	1.088	1.156	1.050	1.120	1.046	1.094
CPY 2018_07	1.078	1.093	1.163	1.053	1.126	1.046	1.098
CPY 2019_07	1.086	1.102	1.178	1.059	1.137	1.046	1.106
CPY 2020_07	1.099	1.119	1.206	1.070	1.158	1.046	1.119
CPY 2008_09	1.027	1.040	1.073	1.022	1.055	1.040	1.051
Prior Eff. Period	1.099	1.119	1.206	1.070	1.158	1.046	1.119
Prosp. Eff. Period	1.109	1.131	1.228	1.078	1.174	1.046	1.130
1/1/2022	1.117	1.142	1.248	1.085	1.189	1.046	1.139

Notes:
 1/1/2022 refers to a point in time. All other time periods refer to Policy Years.
 Index Factors for All Injury Types Table is an Excel Data Table that repeats the calculation of the Weighted Average Benefit Level for all Injury Types.

IV 000008 STIP

IV 000009 STIP

Section IV - Benefit Change Adjustments
 Subsection A - Summary
 7/1/2022

Section IV - A
 Exhibit 3

Historical and Estimated Benefit Level Changes

Effective Date (1)	Indemnity					Medical	Total
	Death (2)	Permanent Total (3)	Permanent Partial (4)	Temporary Total (5)	All Injury Types (6)	All Injury Types (7)	All Injury Types (8)
10/1/2002	-0.1%	-0.1%	-0.3%	-0.1%	-0.2%	0.0%	-0.1%
12/1/2002	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	2.0%
10/1/2003	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
9/1/2004	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.5%
10/1/2004	0.5%	0.7%	1.2%	0.4%	0.9%	0.0%	0.6%
10/1/2005	0.5%	0.8%	1.5%	0.4%	1.1%	0.0%	0.7%
10/1/2006	0.5%	0.7%	1.5%	0.4%	1.1%	0.0%	0.7%
10/1/2007	0.6%	0.9%	1.4%	0.5%	1.1%	0.0%	0.7%
10/1/2008	0.6%	0.8%	1.5%	0.5%	1.2%	0.0%	0.7%
4/1/2009	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	1.3%
10/1/2009	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
10/1/2010	-0.1%	-0.1%	-0.2%	-0.1%	-0.2%	0.0%	-0.1%
10/1/2011	0.6%	0.8%	1.4%	0.4%	1.1%	0.0%	0.7%
10/1/2012	0.4%	0.6%	1.0%	0.3%	0.8%	0.0%	0.5%
10/1/2013	0.1%	0.1%	0.2%	0.1%	0.2%	0.0%	0.1%
10/1/2014	0.4%	0.5%	0.9%	0.3%	0.7%	0.0%	0.5%
3/24/2015	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
10/1/2015	0.5%	0.6%	1.1%	0.3%	0.8%	0.0%	0.5%
10/1/2016	0.5%	0.7%	1.0%	0.4%	0.8%	0.0%	0.5%
10/1/2017	0.7%	0.8%	1.3%	0.6%	1.0%	0.0%	0.7%
10/1/2018	0.7%	0.8%	1.2%	0.5%	1.0%	0.0%	0.6%
10/1/2019	0.7%	0.8%	1.2%	0.5%	1.0%	0.0%	0.6%
10/1/2020	0.8%	1.0%	1.4%	0.7%	1.2%	0.0%	0.8%
10/1/2021	2.2%	2.8%	4.8%	1.9%	3.7%	0.0%	2.5%
10/1/2022	-1.0%	-1.3%	-2.0%	-0.9%	-1.6%	0.0%	-1.1%
10/1/2023	0.7%	0.8%	1.3%	0.6%	1.0%	0.0%	0.7%

Notes:

Estimated changes for 10/1/2022 and 10/1/2023 use projected SAWW values for 10/1/2022 and 10/1/2023.

Effects of SAWW Change

Person(s) Receiving Benefits (1)	Number of Cases (2)	Average Number of Dependents (3)	Average Arithmetic Age (4)	Annuity Symbol (5)	Annuity Value (6)	Effects of SAWW Change of 10/1/2020		Effects of SAWW Change of 10/1/2021		Effects of SAWW Change of 10/1/2022		Effects of SAWW Change of 10/1/2023	
						10/1/2019 Cost (7)	10/1/2020 Cost (8)	10/1/2020 Cost (9)	10/1/2021 Cost (10)	10/1/2021 Cost (11)	10/1/2022 Cost (12)	10/1/2022 Cost (13)	10/1/2023 Cost (14)
None	204	0	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Spouse, No Children	212	1	40	$a_{40:\overline{Life}}$	24.75	229,177,845	231,006,927	228,650,923	233,448,498	240,604,641	238,319,851	245,232,796	246,810,240
Spouse with Children	407	1	38	$a_{38:\overline{Life}}$	24.73	439,545,112	443,053,149	438,534,517	447,735,889	461,460,811	457,078,763	470,337,248	473,362,661
Child(ren)		1.9	10	$a_{\overline{8}}$	7.35								
Orphan, No Sibling	21	1	13	$a_{13:\overline{5}}$	4.69	4,302,885	4,337,227	4,292,992	4,383,068	4,517,427	4,474,529	4,604,322	4,633,939
Orphan with Sibling(s)	15	2.5	12	$a_{\overline{6}}$	5.59	3,665,395	3,694,649	3,656,968	3,733,699	3,848,152	3,811,609	3,922,173	3,947,402
Other Dependents (No Spouse)	141	1.7	58	$a_{58:\overline{Life}}$	19.48	18,943,675	18,943,675	18,943,074	18,943,074	18,944,746	18,944,746	18,946,477	18,946,477
(15) Total Survivor Benefits	1,000					695,634,913	701,035,627	694,078,474	708,244,228	729,375,776	722,629,499	743,043,015	747,700,718
(16) Cost of Burial (1,000 cases)						11,453,280	11,902,240	11,902,240	13,553,920	13,553,920	12,765,789	12,765,789	13,220,782
(17) Total Monetary Cost [= (15) + (16)]						707,088,193	712,937,867	705,980,714	721,798,148	742,929,696	735,395,288	755,808,804	760,921,500
(18) Fatal Benefit Change Factors							1.008		1.022		0.990		1.007

Notes:

(2), (3): Section IV-D, Exhibit 2.

(4): Section IV-D, Exhibit 2, Column (4) rounded to nearest whole number.

(5): For two or more dependents, benefits are last-survivor contingent. An annuity certain is used to approximate the joint-survivor annuity for "Child(ren)" and "Orphan with Sibling(s)".

(6): Life annuity values from *Massachusetts Workers' Compensation Statistical Plan*, Part I, Section IX (Effective 7/1/2021).

Annuity certain values assume the same discount rate and elevation rate used in the derivation of the Pension Tables contained in the *Massachusetts Workers' Compensation Statistical Plan*.

(7), (9), (11), (13) = $52 \times (2) \times (6) \times [\text{Page 2, (14)}]$ for Spouses and Orphans and = $52 \times (2) \times (3) \times (6) \times [\text{Page 2, (30)}]$ for All Others Dependents

(8), (10), (12), (14) = $52 \times (2) \times (6) \times [\text{Page 2, (15)}]$ for Spouses and Orphans and = $52 \times (2) \times (3) \times (6) \times [\text{Page 2, (31)}]$ for All Others Dependents

(16) = $8 \times \text{SAWW}$

(18): Ratio of (17) for later date to (17) for earlier date.

IV 000010 STIP

IV 00011 STIP

Determination of the Average Weekly Survivor Benefit for Fatalities

Fatal: Spouse and Orphans - Effective 10/1/2020

(1)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	66.67%
(2)	Min Weekly Compensation	110.00
(3)	Max Weekly Compensation	1,487.78
(4)	Average Injured Worker Weekly Wage ("AIWWW") for 12 months starting 10/1/2020	1,360.40

Wage Intervals (5)	Benefit (6)	Wage Distribution Entry Ratios = (5) / (4) (7)		Percentage in Interval		Average Wage in Interval = (9) / (8) x (4) (10)	Average Benefit in Interval (11)
				Workers (8)	Wages (9)		
0.00 165.00	Statutory Minimum	0.00	0.10	0.35%	0.02%	86.77	110.00
165.00 2,231.67	Actual Wage x Comp. Rate	0.10	1.65	88.63%	75.22%	1,154.60	769.73
2,231.67 over	Statutory Maximum	1.65	over	11.03%	24.76%	3,054.43	1,487.78

(12) Average Weekly Benefit **846.63**

	Effects of SAWW Change			
	10/1/2020	10/1/2021	10/1/2022	10/1/2023
(13) Starting date of 12 month period for AIWWW	10/1/2020	10/1/2021	10/1/2022	10/1/2023
(14) Benefits Effective	10/1/2019	10/1/2020	10/1/2021	10/1/2022
Average Weekly Benefits	839.92	837.99	881.80	898.76
(15) Benefits Effective	10/1/2020	10/1/2021	10/1/2022	10/1/2023
Average Weekly Benefits	846.63	855.58	873.43	904.55
(16) Fatal: Spouse and Orphans Benefit Change Factors	1.008	1.021	0.991	1.006

Fatal: All Others - Effective 10/1/2020

(17)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	66.67%
(18)	Min Weekly Compensation	0.00
(19)	Max Weekly Compensation	80.00
(20)	Average Injured Worker Weekly Wage ("AIWWW") for 12 months starting 10/1/2020	1,360.40

Wage Intervals (21)	Benefit (22)	Wage Distribution Entry Ratios = (21) / (20) (23)		Percentage in Interval		Average Wage in Interval = (25) / (24) x (20) (26)	Average Benefit in Interval (27)
				Workers (24)	Wages (25)		
0.00 0.00	Statutory Minimum	0.00	0.00	0.00%	0.00%	0.00	0.00
0.00 120.00	Actual Wage x Comp. Rate	0.00	0.10	0.35%	0.02%	86.77	57.84
120.00 over	Statutory Maximum	0.10	over	99.65%	99.98%	1,364.83	80.00

(28) Average Weekly Benefit **79.92**

	Effects of SAWW Change			
	10/1/2020	10/1/2021	10/1/2022	10/1/2023
(29) Starting date of 12 month period for AIWWW	10/1/2020	10/1/2021	10/1/2022	10/1/2023
(30) Benefits Effective	10/1/2019	10/1/2020	10/1/2021	10/1/2022
Average Weekly Benefits	79.92	79.92	79.93	79.94
(31) Benefits Effective	10/1/2020	10/1/2021	10/1/2022	10/1/2023
Average Weekly Benefits	79.92	79.92	79.93	79.94
(32) Fatal: All Others Benefit Change Factors	1.000	1.000	1.000	1.000

Notes:

- (1)-(3), (17)-(19): Section IV-C, Exhibit 1.
- (4), (20): Section IV-D, Exhibit 3.
- (5), (21): Wage Intervals follow Massachusetts General Law.
- (7), (23): Rounded to nearest 0.05.
- (8), (24): Section IV-D, Exhibit 1, column (2).
- (9), (25): Section IV-D, Exhibit 1, column (3).
- (11), (27): Comp Rate x Average Wage in Interval, subject to a statutory maximum and statutory minimum.
- (12) = Sum [(8) x (11)]
- (14), (15): Average Weekly Benefits results from an Excel Data Table that repeats the calculation of (12) for different dates.
- (16) = (15) / (14)
- (28) = Sum [(24) x (27)]
- (30), (31): Average Weekly Benefits results from an Excel Data Table that repeats the calculation of (28) for different dates.
- (32) = (31) / (30)

IV 000012 STIP

Section IV - Benefit Change Adjustments
 Subsection B - Effects of SAWW Change
 7/1/2022

Section IV-B
 Exhibit 2

Determination of the Average Weekly Benefit for Permanent Totals

Permanent Total - Effective 10/1/2020

(1)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	66.67%
(2)	Min Weekly Compensation	297.56
(3)	Max Weekly Compensation	1,487.78
(4)	Average Injured Worker Weekly Wage ("AIWWW") for 12 months starting 10/1/2020	1,360.40

Wage Intervals (5)		Benefit (6)	Wage Distribution Entry Ratios = (5) / (4) (7)		Percentage in Interval		Average Wage in Interval = (9) / (8) x (4) (10)	Average Benefit in Interval (11)
			Workers (8)	Wages (9)	Workers (8)	Wages (9)		
0.00	446.33	Statutory Minimum	0.00	0.35	7.27%	1.83%	341.66	297.56
446.33	2,231.67	Actual Wage x Comp. Rate	0.35	1.65	81.70%	73.41%	1,222.41	814.94
2,231.67	over	Statutory Maximum	1.65	over	11.03%	24.76%	3,054.43	1,487.78

(12) Average Weekly Benefit **851.52**

	Effects of SAWW Change			
	10/1/2020	10/1/2021	10/1/2022	10/1/2023
(13) Starting date of 12 month period for AIWWW	10/1/2020	10/1/2021	10/1/2022	10/1/2023
(14) Benefits Effective Average Weekly Wage Loss Benefit	10/1/2019 844.22	10/1/2020 843.09	10/1/2021 889.33	10/1/2022 904.26
(15) Benefits Effective Average Weekly Wage Loss Benefit	10/1/2020 851.52	10/1/2021 863.75	10/1/2022 879.52	10/1/2023 910.87
(16) Permanent Total Wage Loss Benefit Change Factors	1.009	1.024	0.989	1.007
(17) Specific Injury Benefits SAWW Effect on Specific Injury Benefits	1.039	1.139	0.942	1.036
(18) Benefit Proportions Associated with Permanent Total Claims				
(a) Permanent Total Wage Loss Benefits	96.50%	96.50%	96.50%	96.50%
(b) Specific Injury Benefits	3.50%	3.50%	3.50%	3.50%
(19) Permanent Total Benefit Change Factors = [(16) x (18a)] + [(17) x (18b)]	1.010	1.028	0.987	1.008

Notes:

- (1), (2), (3): Section IV-C, Exhibit 1.
- (4): Section IV-D, Exhibit 3.
- (5): Wage Intervals follow Massachusetts General Law.
- (7): Rounded to nearest 0.05.
- (8): Section IV-D, Exhibit 1, column (2).
- (9): Section IV-D, Exhibit 1, column (3).
- (11): Comp Rate x Average Wage in Interval, subject to a statutory maximum and statutory minimum.
- (12) = Sum [(8) x (11)]
- (14), (15): Average Weekly Benefits results from an Excel Data Table that repeats the calculation of (12) for different dates.
- (16) = (15) / (14)
- (17): Ratio of SAWW from Section IV-D, Exhibit 3.
 Example: Effect of SAWW Change of 10/1/2021 = SAWW 10/1/2021 / SAWW 10/1/2020 = 1.139 = 1,487.78 / 1,431.66
- (18): Estimated Average Schedule Benefit compared to Average Indemnity Cost per Claim.
 DCI data for Permanent Total Claims in Massachusetts.

IV 000013 STIP

Section IV - Benefit Change Adjustments
 Subsection B - Effects of SAWW Change
 7/1/2022

Section IV-B
 Exhibit 3

Determination of the Average Weekly Benefit for Permanent Partials

Permanent Partial - Effective 10/1/2020

(1)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	37.20%
(2)	Min Weekly Compensation	0.00
(3)	Max Weekly Compensation	1,115.84
(4)	Average Injured Worker Weekly Wage ("AIWW") for 12 months starting 10/1/2020	1,360.40
(5)	SAWW effective 10/1/2020	1,487.78

Wage Intervals (6)		Benefit (7)	Wage Distribution Entry Ratios = (6) / (4) (8)		Percentage in Interval		Average Wage in Interval =(10) / (9) x (4) (11)	Average Benefit in Interval (12)
					Workers (9)	Wages (10)		
0.00	2,999.56	Actual Wage x Comp. Rate	0.00	2.20	96.38%	89.09%	1,257.48	467.78
2,999.56	4,894.01	Statutory Maximum	2.20	3.60	3.03%	7.93%	3,563.32	1115.84
4,894.01	7,830.42	Statutorily Reduced	3.60	5.75	0.50%	2.16%	5,915.21	727.78
7,830.42	over	Exceeds Statutory Limit	5.75	over	0.09%	0.82%	12,028.18	0.00

(13) Average Weekly Benefit **488.27**

	Effects of SAWW Change			
	10/1/2020	10/1/2021	10/1/2022	10/1/2023
(14) Starting date of 12 month period for AIWW				
(15) Benefits Effective Average Weekly Wage Loss Benefit	10/1/2019 486.31	10/1/2020 482.69	10/1/2021 503.84	10/1/2022 517.71
(16) Benefits Effective Average Weekly Wage Loss Benefit	10/1/2020 488.27	10/1/2021 487.67	10/1/2022 501.48	10/1/2023 519.35
(17) Permanent Partial Wage Loss Benefit Change Factors	1.004	1.010	0.995	1.003
(18) Specific Injury Benefits SAWW Effect on Specific Injury Benefits	1.039	1.139	0.942	1.036
(19) Permanent Partial Healing Period Effect on Healing Period Benefits	1.007	1.019	0.991	1.006
(20) Benefit Proportions Associated with Permanent Partial Claims				
(a) Permanent Partial Wage Loss Benefits	27%	27%	27%	27%
(b) Specific Injury Benefits	26%	26%	26%	26%
(c) Healing Period - Temporary Total Benefits	47%	47%	47%	47%
(21) Permanent Partial Benefit Change Factors = [(17) x (20a)] + [(18) x (20b)] + [(19) x (20c)]	1.014	1.048	0.980	1.013

Notes:

- (1), (2), (3): Section IV-C, Exhibit 1.
- (4), (5): Section IV-D, Exhibit 3.
- (6): Wage Intervals follow Massachusetts General Law.
- (7): Statutory Maximum: Insurer may reduce benefit to level at which benefits + earnings = 2 x SAWW.
- (8): Rounded to nearest 0.05.
- (9): Section IV-D, Exhibit 1, column (2).
- (10): Section IV-D, Exhibit 1, column (3).
- (12): Comp Rate x Average Wage in Interval, subject to a statutory maximum and a statutory limitation.
- (13) = Sum [(9) x (12)]
- (15), (16): Average Weekly Benefits results from an Excel Data Table that repeats the calculation of (13) for different dates.
- (17) = (16) / (15)
- (18): Ratio of SAWW from Section IV-D, Exhibit 3.
 Example: Effect of SAWW Change of 10/1/2021 = 1.139 = 1,487.78 / 1,431.66
- (19): Temporary Total Benefit Change Factors, Exhibit 4.
- (20): DCI data for Permanent Partial Claims in Massachusetts.

IV 000014 STIP

Section IV - Benefit Change Adjustments
 Subsection B - Effects of SAWW Change
 7/1/2022

Section IV-B
 Exhibit 4

Determination of the Average Weekly Benefit for Temporary Totals

Temporary Total - Effective 10/1/2020

(1)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	60.00%
(2)	Min Weekly Compensation	297.56
(3)	Max Weekly Compensation	1,487.78
(4)	Average Injured Worker Weekly Wage ("AIWWW") for 12 months starting 10/1/2020	1,360.40

Wage Intervals (5)	Benefit (6)	Wage Distribution Entry Ratios = (5) / (4) (7)		Percentage in Interval		Average Wage in Interval = (9) / (8) x (4) (10)	Average Benefit in Interval (11)
				Workers (8)	Wages (9)		
0.00 - 297.56	Actual Wage	0.00	0.20	1.71%	0.24%	190.28	190.28
297.56 - 495.93	Statutory Minimum	0.20	0.35	5.56%	1.59%	388.33	297.56
495.93 - 2,479.63	Actual Wage x Comp. Rate	0.35	1.80	84.70%	78.57%	1,261.98	757.19
2,479.63 - over	Statutory Maximum	1.80	over	8.03%	19.60%	3,320.51	1,487.78
(12) Average Weekly Benefit							780.61

	Effects of SAWW Change			
	10/1/2020	10/1/2021	10/1/2022	10/1/2023
(13) Starting date of 12 month period for AIWW				
(14) Benefits Effective Average Weekly Benefits	10/1/2019 775.33	10/1/2020 772.31	10/1/2021 811.29	10/1/2022 828.35
(15) Benefits Effective Average Weekly Benefits	10/1/2020 780.61	10/1/2021 786.91	10/1/2022 804.31	10/1/2023 832.97
(16) Temporary Total Benefit Change Factors	1.007	1.019	0.991	1.006

Notes:

- (1), (2), (3): Section IV-C, Exhibit 1.
- (4): Section IV-D, Exhibit 3.
- (5): Wage Intervals follow Massachusetts General Law.
- (7): Rounded to nearest 0.05.
- (8): Section IV-D, Exhibit 1, column (2).
- (9): Section IV-D, Exhibit 1, column (3).
- (11): Comp Rate x Average Wage in Interval, subject to a statutory maximum and statutory minimum, unless the actual wage is less than the statutory minimum.
- (12) = Sum [(8) x (11)]
- (14), (15): Average Weekly Benefits results from an Excel Data Table that repeats the calculation of (12) for different dates.
- (16) = (15) / (14)

Summary of Principal Benefit Changes Due to the Increase in the Maximum and Minimum Weekly Benefit

	10/1/2019	10/1/2020	10/1/2021	10/1/2022	10/1/2023
(1) Fatal					
% Rate of Compensation	66.67%	66.67%	66.67%	66.67%	66.67%
Minimum Weekly Benefit					
Widow/Orphan	\$110.00	\$110.00	\$110.00	\$110.00	\$110.00
Others	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Maximum Weekly Benefit					
Widow/Orphan	\$1,431.66	\$1,487.78	\$1,694.24	<i>\$1,595.72</i>	<i>\$1,652.60</i>
Others	\$80.00	\$80.00	\$80.00	\$80.00	\$80.00
Each Additional Child	\$6.00, if benefit under \$150.00	\$6.00, if benefit under \$150.00	\$6.00, if benefit under \$150.00	\$6.00, if benefit under \$150.00	\$6.00, if benefit under \$150.00
Maximum Aggregate Payable	250 x SAWW	250 x SAWW	250 x SAWW	250 x SAWW	250 x SAWW
Burial Allowance	8 X SAWW	8 X SAWW	8 X SAWW	8 X SAWW	8 X SAWW
Cost of Living Adjustment - benefits increase annually by	Each October 1 after 2 years after injury. Based on the lesser of 5% N.E. region urban area CPI, and the % change in the SAWW	Each October 1 after 2 years after injury. Based on the lesser of 5% N.E. region urban area CPI, and the % change in the SAWW	Each October 1 after 2 years after injury. Based on the lesser of 5% N.E. region urban area CPI, and the % change in the SAWW	Each October 1 after 2 years after injury. Based on the lesser of 5% N.E. region urban area CPI, and the % change in the SAWW	Each October 1 after 2 years after injury. Based on the lesser of 5% N.E. region urban area CPI, and the % change in the SAWW
(2) Total Disability					
Permanent Total					
% Rate of Compensation	66.67%	66.67%	66.67%	66.67%	66.67%
Minimum Weekly Benefit	\$286.33	\$297.56	\$338.85	<i>\$319.14</i>	<i>\$330.52</i>
Maximum Weekly Benefit	\$1,431.66	\$1,487.78	\$1,694.24	<i>\$1,595.72</i>	<i>\$1,652.60</i>
Duration	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime
Cost of Living Adjustment - benefits increase annually by	Same as Fatal	Same as Fatal	Same as Fatal	Same as Fatal	Same as Fatal
Temporary Total					
% Rate of Compensation	60.00%	60.00%	60.00%	60.00%	60.00%
Minimum Weekly Benefit	\$286.33	\$297.56	\$338.85	<i>\$319.14</i>	<i>\$330.52</i>
Maximum Weekly Benefit	\$1,431.66	\$1,487.78	\$1,694.24	<i>\$1,595.72</i>	<i>\$1,652.60</i>
Waiting Period/Retroactive After	5 days/21 days	5 days/21 days	5 days/21 days	5 days/21 days	5 days/21 days
(3) Permanent Partial Disability					
% Rate of Compensation	37.20%	37.20%	37.20%	37.20%	37.20%
Minimum Weekly Benefit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Maximum Weekly Benefit	\$1,073.75	\$1,115.84	\$1,270.68	<i>\$1,196.79</i>	<i>\$1,239.45</i>
(4) Specific Injury Payments					
Scheduled Injuries	According to the injury, a scheduled number multiplied by the SAWW	According to the injury, a scheduled number multiplied by the SAWW	According to the injury, a scheduled number multiplied by the SAWW	According to the injury, a scheduled number multiplied by the SAWW	According to the injury, a scheduled number multiplied by the SAWW
Non-Scheduled Injuries	32 x SAWW	32 x SAWW	32 x SAWW	32 x SAWW	32 x SAWW
Disfigurement					
Maximum Benefit	\$15,000	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
Benefit	As determined by the reviewing board	As determined by the reviewing board	As determined by the reviewing board	As determined by the reviewing board	As determined by the reviewing board

Notes:
 Source: The General Laws of Massachusetts, Chapter 152, Sections 31-36.
 (1), (2): Maximum Weekly Benefit for Fatalities and To
 (2): Minimum Weekly Benefit for Total Disability is 20% of the SAWW
 (3): Maximum Weekly Benefit for Permanent Partial is 75% of the SAWW. There is no Minimum Weekly Benefit for Permanent Partial D
 (3): Permanent Partial % Rate of Compensation is 60% of 62%, the lost wage-earning capacity.
Values in Italics are Projected

IV 000015 STIP

IV 000016 STIP

Section IV - Benefit Change Adjustments
 Subsection D - Massachusetts Data
 7/1/2022

Section IV-D
 Exhibit 1

Standard Wage Distribution Table

R = Ratio to Average Wage
 A = Cumulative Percentage of Workers
 B = Cumulative Percentage of Wages

R (1)	A (2)	B (3)	R (1)	A (2)	B (3)	R (1)	A (2)	B (3)
0.05	0.1035	0.0031	2.40	97.4598	91.5605	4.75	99.7840	98.5435
0.10	0.3465	0.0221	2.45	97.6612	92.0487	4.80	99.7930	98.5865
0.15	0.8421	0.0854	2.50	97.8414	92.4948	4.85	99.8017	98.6281
0.20	1.7130	0.2396	2.55	98.0031	92.9029	4.90	99.8099	98.6684
0.25	3.0495	0.5424	2.60	98.1483	93.2767	4.95	99.8178	98.7074
0.30	4.8994	1.0533	2.65	98.2789	93.6197	5.00	99.8254	98.7452
0.35	7.2702	1.8259	2.70	98.3968	93.9349	5.05	99.8327	98.7817
0.40	10.1357	2.9025	2.75	98.5033	94.2251	5.10	99.8397	98.8171
0.45	13.4453	4.3108	2.80	98.5998	94.4929	5.15	99.8463	98.8513
0.50	17.1314	6.0631	2.85	98.6875	94.7405	5.20	99.8527	98.8844
0.55	21.1178	8.1571	2.90	98.7673	94.9700	5.25	99.8589	98.9165
0.60	25.3249	10.5770	2.95	98.8402	95.1832	5.30	99.8648	98.9475
0.65	29.6752	13.2963	3.00	98.9069	95.3817	5.35	99.8704	98.9775
0.70	34.0956	16.2803	3.05	98.9682	95.5670	5.40	99.8758	99.0065
0.75	38.5205	19.4883	3.10	99.0246	95.7404	5.45	99.8810	99.0346
0.80	42.8927	22.8764	3.15	99.0767	95.9031	5.50	99.8859	99.0618
0.85	47.1638	26.3995	3.20	99.1249	96.0561	5.55	99.8907	99.0881
0.90	51.2943	30.0131	3.25	99.1696	96.2003	5.60	99.8953	99.1135
0.95	55.2534	33.6745	3.30	99.2112	96.3365	5.65	99.8996	99.1381
1.00	59.0180	37.3442	3.35	99.2500	96.4654	5.70	99.9038	99.1619
1.05	62.5721	40.9863	3.40	99.2862	96.5878	5.75	99.9078	99.1848
1.10	65.9060	44.5693	3.45	99.3202	96.7041	5.80	99.9117	99.2071
1.15	69.0152	48.0662	3.50	99.3521	96.8149	5.85	99.9154	99.2286
1.20	71.8995	51.4543	3.55	99.3821	96.9206	5.90	99.9189	99.2493
1.25	74.5623	54.7154	3.60	99.4103	97.0216	5.95	99.9223	99.2694
1.30	77.0100	57.8353	3.65	99.4370	97.1183	6.00	99.9255	99.2888
1.35	79.2510	60.8038	3.70	99.4622	97.2110	6.05	99.9287	99.3076
1.40	81.2954	63.6140	3.75	99.4861	97.2999	6.10	99.9316	99.3257
1.45	83.1542	66.2621	3.80	99.5087	97.3853	6.15	99.9345	99.3432
1.50	84.8392	68.7468	3.85	99.5302	97.4674	6.20	99.9372	99.3601
1.55	86.3625	71.0693	3.90	99.5506	97.5465	6.25	99.9399	99.3765
1.60	87.7363	73.2324	3.95	99.5700	97.6227	6.30	99.9424	99.3923
1.65	88.9725	75.2406	4.00	99.5885	97.6961	6.35	99.9448	99.4075
1.70	90.0825	77.0995	4.05	99.6061	97.7670	6.40	99.9471	99.4223
1.75	91.0777	78.8156	4.10	99.6229	97.8354	6.45	99.9493	99.4365
1.80	91.9684	80.3962	4.15	99.6389	97.9014	6.50	99.9514	99.4502
1.85	92.7646	81.8489	4.20	99.6542	97.9653	6.55	99.9535	99.4635
1.90	93.4755	83.1815	4.25	99.6688	98.0270	6.60	99.9554	99.4763
1.95	94.1096	84.4019	4.30	99.6827	98.0866	6.65	99.9573	99.4887
2.00	94.6749	85.5181	4.35	99.6961	98.1443	6.70	99.9591	99.5007
2.05	95.1785	86.5377	4.40	99.7088	98.2001	6.75	99.9608	99.5122
2.10	95.6272	87.4684	4.45	99.7210	98.2541	6.80	99.9624	99.5233
2.15	96.0267	88.3172	4.50	99.7327	98.3064	6.85	99.9640	99.5341
2.20	96.3826	89.0911	4.55	99.7439	98.3569	6.90	99.9655	99.5445
2.25	96.6997	89.7965	4.60	99.7546	98.4059	6.95	99.9670	99.5545
2.30	96.9824	90.4395	4.65	99.7648	98.4533	7.00	99.9684	99.5642
2.35	97.2346	91.0257	4.70	99.7746	98.4991			

Notes:

Source: NCCI - The 2019 Standard Wage Distribution Table.

IV 000017 STIP

Section IV - Benefit Change Adjustments
 Subsection D - Massachusetts Data
 7/1/2022

Section IV-D
 Exhibit 2

Dependency Table

Dependency Class (1)	Number of Cases (2)	Average Number of Dependents (3)	Average Dependent Age (4)
No Dependents	204	0	N/A
Spouse, No Children	212	1	40
Spouse with Children	153	1	38
1 Child		1	11
Spouse with Children	166	1	38
2 Children		2	10
Spouse with Children	63	1	37
3 Children		3	10
Spouse with Children	18	1	37
4 Children		4	10
Spouse with Children	5	1	37
5 Children		5	10
Spouse with Children	2	1	38
More than 5 Children		7	10
Spouse with Children	407	1	38
Summary		1.9	10
Orphan, No Sibling	21	1	13
1 Child			
Orphans with Sibling(s)	10	2	12
2 Children	3	3	12
3 Children	1	4	12
4 Children	1	5	12
More than 4 Children			
Orphans with Sibling(s)	15	2.5	12
Summary			
Other Dependents (No Spouse)	41	1	62
1 Parent	91	2	58
2 Parents	7	1	37
Sibling	2	2	31
Other			
Other Dependents	141	1.7	58
Summary			

Notes:

Source: NCCI, CPS data, 1989-1993, reweighted using DCI Data for Fatalities, 1984-1993.

(2): Dependent count includes working adult household members standardized to a total of 1,000 cases.

Derivation of Estimated SAWW (Statewide Average Weekly Wage) and AIWWW (Average Injured Worker Weekly Wage)

SAWW Effective Date (1)	SAWW Based on Data (2)	Midpoint of the SAWW Data (3)	Actual SAWW (4)	Estimated Annual SAWW Trend Factor (5)	Actual and Projected SAWW (6)	AIWWW Period (7)	Actual and Projected Effective AIWWW (8)
10/1/2019	4/1/18 to 4/1/19	10/1/2018	1,431.66		1,431.66	10/1/19 to 10/1/20	1,315.77
10/1/2020	4/1/19 to 4/1/20	10/1/2019	1,487.78		1,487.78	10/1/20 to 10/1/21	1,360.40
10/1/2021	4/1/20 to 4/1/21	10/1/2020	1,694.24		1,694.24	10/1/21 to 10/1/22	1,343.18
10/1/2022	4/1/21 to 4/1/22	10/1/2021		1.036	1,595.72	10/1/22 to 10/1/23	1,391.05
10/1/2023	4/1/22 to 4/1/23	10/1/2022		1.036	1,652.60	10/1/23 to 10/1/24	1,440.63

Notes:

(4): Source: Department of Unemployment Assistance (DUA); previously this data was compiled by the Division of Employment and Training (DET).

(5): 3.6% Estimated Annual Trend in SAWW, Section V-A, Exhibit 1.

(6): For SAWW Effective Date 10/1/2019 - 10/1/2021, (6) = (4)

For SAWW Effective Date 10/1/2022, (6) = (5)^2 x (6) from 10/1/2020

For SAWW Effective Date 10/1/2023, (6) = (5) x (6) from prior period

(8): For the AIWWW Period 10/1/19 to 10/1/20, (8) is the product of .827 and the average of the SAWWs effective 10/1/2020 and 10/1/2021, respectively.

For the AIWWW Period 10/1/20 to 10/1/21, (8) is the product of .827 and the average of the SAWWs effective 10/1/2021 and 10/1/2022, respectively.

For the AIWWW Period 10/1/21 to 10/1/22, (8) is the product of .827 and the average of the SAWWs effective 10/1/2022 and 10/1/2023, respectively.

For the AIWWW Periods 10/1/22 to 10/1/23 and 10/1/23 to 10/1/24, (8) = (5) x (8 from Prior Period).

Historical Relationship of .827 for the ratio of AIWWW to SAWW is selected based on DCI data.

4/1/1996: SAWW = 648, AIWWW = 536

4/1/1994: SAWW = 595, AIWWW = 492

IV 000019 STIP

Section IV - Benefit Change Adjustments
 Subsection D - Massachusetts Data
 7/1/2022

Section IV-D
 Exhibit 4

Average Wage Loss for Permanent Partial Claimants

DCI Report Level	(Pre-Injury - Post-Injury) / Pre-Injury Wage					Average
	1979 (1)	1980 (2)	1981 (3)	1982 (4)	1983 (5)	
Average Wage Loss for Major Permanent Partial Claimants						
1	0.61	0.62	0.60	0.62	0.60	0.61
2	0.62	0.62	0.59	0.63	0.62	0.62
3	0.64	0.60	0.65	0.60		0.62
4	0.60	0.64	0.62			0.62
(6) Selected Average Wage Loss for Major Permanent Partial Claimants						0.62

Average Wage Loss for Minor Permanent Partial Claimants						
1	0.58	0.58	0.58	0.60	0.59	0.59
2	0.62	0.60	0.59	0.58	0.64	0.61
3	0.66	0.64	0.65	0.56		0.63
4	0.62	0.70	0.66			0.66
(7) Selected Average Wage Loss for Minor Permanent Partial Claimants						0.62

Notes:

Source: Detail Claim Information ("DCI") Data, compiled as of 10/1/1985.

(6), (7): These data were compiled prior to Chapter 398. To be consistent with Chapter 398, 62% will be used as the wage loss as a percent of pre-injury wage.

The percent of that that is paid is 60% subject to maximums.

Post-Chapter 398 Injury Type Weights at 5th Report

Injury Type (1)	Policy Year (2)	Indemnity - Likely to Develop			Indemnity - Not Likely to Develop			Indemnity On-level Losses at Fifth Report = (5) + (8) (9)	Weights at 5th report (10)
		Losses at Fifth Report (3)	Benefit On-Level Factor to Prosp. Eff. Period (4)	On-level Losses at Fifth Report = (3) x (4) (5)	Losses at Fifth Report (6)	Benefit On-Level Factor to Prosp. Eff. Period (7)	On-level Losses at Fifth Report = (6) x (7) (8)		
Death	2010	1,255,173	1.080	1,355,120	4,442,116	1.080	4,795,833	6,150,952	
Death	2011	381,438	1.076	410,355	7,241,840	1.076	7,790,839	8,201,193	
Death	2012	1,909,719	1.071	2,045,060	8,207,921	1.071	8,789,612	10,834,672	
Death	2013	1,592,212	1.069	1,701,491	8,255,702	1.069	8,822,318	10,523,809	
Death	2014	6,153,067	1.063	6,540,915	2,550,363	1.063	2,711,121	9,252,036	
Total Death		11,291,609		12,052,940	30,697,942		32,909,722	44,962,662	1.43%
Permanent Total	2010	32,871,502	1.088	35,780,240	0	1.088	0	35,780,240	
Permanent Total	2011	41,480,634	1.083	44,932,773	0	1.083	0	44,932,773	
Permanent Total	2012	57,202,597	1.076	61,559,074	0	1.076	0	61,559,074	
Permanent Total	2013	56,331,180	1.073	60,451,579	0	1.073	0	60,451,579	
Permanent Total	2014	66,479,058	1.069	71,064,643	0	1.069	0	71,064,643	
Total Permanent Total		254,364,971		273,788,309	0		0	273,788,309	8.72%
Permanent Partial	2010	81,838,021	1.146	93,770,890	129,360,236	1.146	148,222,358	241,993,247	
Permanent Partial	2011	86,955,593	1.136	98,804,016	124,132,645	1.136	141,046,750	239,850,766	
Permanent Partial	2012	74,757,767	1.124	84,005,841	118,069,159	1.124	132,675,164	216,681,006	
Permanent Partial	2013	72,325,331	1.118	80,877,157	123,591,722	1.118	138,205,342	219,082,499	
Permanent Partial	2014	87,506,291	1.111	97,200,137	137,778,943	1.111	153,041,936	250,242,073	
Total Permanent Partial		403,383,003		454,658,041	632,932,705		713,191,550	1,167,849,591	37.21%
Temporary Total	2010	30,374,666	1.055	32,042,228	63,374,026	1.055	66,853,246	98,895,474	
Temporary Total	2011	31,778,863	1.053	33,447,795	77,335,587	1.053	81,397,023	114,844,818	
Temporary Total	2012	36,565,807	1.049	38,359,713	72,654,892	1.049	76,219,316	114,579,028	
Temporary Total	2013	31,820,845	1.047	33,324,239	83,026,205	1.047	86,948,824	120,273,063	
Temporary Total	2014	40,794,937	1.045	42,621,839	85,028,986	1.045	88,836,801	131,458,640	
Total Temporary Total		171,335,118		179,795,813	381,419,696		400,255,210	580,051,023	18.48%
(11) Total Indemnity		840,374,701		920,295,103	1,045,050,343		1,146,356,482	2,066,651,585	65.85%

IV 000020 STIP

- (12) Aggregate Financial Policy Year Call, Indemnity Fifth to Ultimate Development Factor Paid + Case 1.044
 (13) Tail Development Attributed to Likely to Develop Claims 0.8
 (14) Percentage Likely to Develop 0.445
 (15) Indemnity Likely to Develop - Loss Development Factor from 5th Report to Ultimate = $1.0 + \{ [(12) - 1.0] \times (13) \} / (14)$ 1.078
 (16) Indemnity Not Likely to Develop - Loss Development Factor from 5th Report to Ultimate = $1.0 + \{ [(12) - 1.0] \times [1.0 - (13)] \} / [1.0 - (14)]$ 1.016

Notes:

- (3), (6): Unit Statistical Plan data, excluding Large Deductibles.
 (4), (7): Section IV - A, Exhibit 1
 (10) = (9), Total / Page 2, Column (9), Total Medical & Indemnity
 (12) = $1.02 \times 1.016 \times 1.007$ where 1.02 is the loss development factor from Section II - B, Exhibit 1, 1.016 is the tail factor from Section II - C, Exhibit 2, Page 1.
 and 1.007 is the escalation factor from Section II - D, Exhibit 2, Page 1.
 (14) = (5), Total Indemnity / (9), Total Indemnity

Post-Chapter 398 Injury Type Weights at 5th Report

Injury Type (1)	Policy Year (2)	Medical - Likely to Develop			Medical - Not Likely to Develop			Medical On-level Losses at Fifth Report = (5) + (8) (9)	Weights at 5th report (10)
		Losses at Fifth Report (3)	Benefit On-Level Factor to Prosp. Eff. Period (4)	On-level Losses at Fifth Report = (3) x (4) (5)	Losses at Fifth Report (6)	Benefit On-Level Factor to Prosp. Eff. Period (7)	On-level Losses at Fifth Report = (6) x (7) (8)		
Death	2010	23,434	1.000	23,434	176,427	1.000	176,427	199,861	
Death	2011	13,739	1.000	13,739	271,119	1.000	271,119	284,858	
Death	2012	233,322	1.000	233,322	334,710	1.000	334,710	568,032	
Death	2013	277,312	1.000	277,312	593,619	1.000	593,619	870,931	
Death	2014	2,281,814	1.000	2,281,814	198,777	1.000	198,777	2,480,591	
Total Death		2,829,621		2,829,621	1,574,652		1,574,652	4,404,273	0.14%
Permanent Total	2010	31,011,650	1.000	31,011,650	0	1.000	0	31,011,650	
Permanent Total	2011	29,242,012	1.000	29,242,012	0	1.000	0	29,242,012	
Permanent Total	2012	41,548,609	1.000	41,548,609	0	1.000	0	41,548,609	
Permanent Total	2013	28,303,749	1.000	28,303,749	0	1.000	0	28,303,749	
Permanent Total	2014	39,102,359	1.000	39,102,359	0	1.000	0	39,102,359	
Total Permanent Total		169,208,379		169,208,379	0		0	169,208,379	5.39%
Permanent Partial	2010	27,983,168	1.000	27,983,168	51,649,304	1.000	51,649,304	79,632,472	
Permanent Partial	2011	40,335,790	1.000	40,335,790	47,011,933	1.000	47,011,933	87,347,723	
Permanent Partial	2012	32,572,485	1.000	32,572,485	43,145,138	1.000	43,145,138	75,717,623	
Permanent Partial	2013	27,627,669	1.000	27,627,669	48,590,145	1.000	48,590,145	76,217,814	
Permanent Partial	2014	40,221,218	1.000	40,221,218	50,671,304	1.000	50,671,304	90,892,522	
Total Permanent Partial		168,740,330		168,740,330	241,067,824		241,067,824	409,808,154	13.06%
Temporary Total	2010	14,345,982	1.000	14,345,982	48,355,786	1.000	48,355,786	62,701,768	
Temporary Total	2011	16,306,663	1.000	16,306,663	55,232,405	1.000	55,232,405	71,539,068	
Temporary Total	2012	16,484,002	1.000	16,484,002	55,961,666	1.000	55,961,666	72,445,668	
Temporary Total	2013	13,067,702	1.000	13,067,702	58,890,156	1.000	58,890,156	71,957,858	
Temporary Total	2014	21,363,196	1.000	21,363,196	60,754,029	1.000	60,754,029	82,117,225	
Total Temporary Total		81,567,545		81,567,545	279,194,042		279,194,042	360,761,587	11.50%
Medical Only	2010	0	1.000	0	25,553,029	1.000	25,553,029	25,553,029	
Medical Only	2011	0	1.000	0	25,617,224	1.000	25,617,224	25,617,224	
Medical Only	2012	0	1.000	0	25,210,964	1.000	25,210,964	25,210,964	
Medical Only	2013	0	1.000	0	25,635,723	1.000	25,635,723	25,635,723	
Medical Only	2014	0	1.000	0	25,478,305	1.000	25,478,305	25,478,305	
Total Medical Only		0		0	127,495,245		127,495,245	127,495,245	4.06%
(11) Total Medical		422,345,875		422,345,875	649,331,763		649,331,763	1,071,677,638	34.15%
(12) Total Medical & Indemnity		1,262,720,576		1,342,640,978	1,694,382,106		1,795,688,245	3,138,329,223	

- (13) Medical Only fraction of Total Medical 11.90%
- (14) Aggregate Financial Policy Year Call, Medical Fifth to Ultimate Development Factor Paid + Cash 0.989
- (15) Tail Development Attributed to Likely to Develop Claims 0.8
- (16) Percentage Likely to Develop 0.394
- (17) Medical Likely to Develop - Loss Development Factor from 5th Report to Ultimate = $1.0 + \{ [(14) - 1.0] \times (15) \} / (16)$ 0.977
- (18) Medical Not Likely to Develop - Loss Development Factor from 5th Report to Ultimate = $1.0 + \{ [(14) - 1.0] \times [1.0 - (15)] \} / [1.0 - (16)]$ 0.996
- (19) Indemnity Likely Weight at 5th Report 29.32%
- (20) Indemnity Not Likely Weight at 5th Report 36.53%
- (21) Medical Likely Weight at 5th Report 13.46%
- (22) Medical Not Likely Weight at 5th Report 20.69%

Notes:

- (3), (6): Unit Statistical Plan data, excluding Large Deductibles.
- (4), (7): Section IV - A, Exhibit 1
- (10) = (9), Total / (9), Total Medical & Indemnity
- (13) = (10), Total Medical Only / (10), Total Medical
- (14) = 0.972×1.017 where 0.972 is the loss development factor from Section II - B, Exhibit 1, 1.017 is the tail factor from Section II - C, Exhibit 2, Page 1.
- (16) = (5), Total Medical / (9), Total Medical
- (19) = Page 1, (5), Total Indemnity / (9), Total Medical & Indemnity
- (20) = Page 1, (8), Total Indemnity / (9), Total Medical & Indemnity
- (21) = (5), Total Medical / (9), Total Medical & Indemnity
- (22) = (8), Total Medical / (9), Total Medical & Indemnity

IV 000021 STIP

Post-Chapter 398 Injury Type Weights at Ultimate

Injury Type (1)	Policy Year (2)	Indemnity - Likely to Develop			Indemnity - Not Likely to Develop			Indemnity Ult. On-level Losses at Ultimate = (5) + (8) (9)	Weights at Ultimate (10)
		On-level Losses at Fifth Report (3)	Development Factors 5th to Ultimate (4)	Est. Ult On-level Losses = (3) x (4) (5)	On-level Losses at Fifth Report (6)	Development Factors 5th to Ultimate (7)	Est. Ult On-level Losses = (6) x (7) (8)		
Death	2010	1,355,120	1.078	1,461,130	4,795,833	1.016	4,871,130	6,332,260	
Death	2011	410,355	1.078	442,456	7,790,839	1.016	7,913,160	8,355,616	
Death	2012	2,045,060	1.078	2,205,044	8,789,612	1.016	8,927,614	11,132,658	
Death	2013	1,701,491	1.078	1,834,597	8,822,318	1.016	8,960,834	10,795,431	
Death	2014	6,540,915	1.078	7,052,607	2,711,121	1.016	2,753,687	9,806,295	
Total Death		12,052,940		12,995,835	32,909,722		33,426,426	46,422,260	1.44%
Permanent Total	2010	35,780,240	1.078	38,579,306	0	1.016	0	38,579,306	
Permanent Total	2011	44,932,773	1.078	48,447,837	0	1.016	0	48,447,837	
Permanent Total	2012	61,559,074	1.078	66,374,804	0	1.016	0	66,374,804	
Permanent Total	2013	60,451,579	1.078	65,180,670	0	1.016	0	65,180,670	
Permanent Total	2014	71,064,643	1.078	76,623,987	0	1.016	0	76,623,987	
Total Permanent Total		273,788,309		295,206,604	0		0	295,206,604	9.18%
Permanent Partial	2010	93,770,890	1.078	101,106,530	148,222,358	1.016	150,549,544	251,656,074	
Permanent Partial	2011	98,804,016	1.078	106,533,394	141,046,750	1.016	143,261,275	249,794,669	
Permanent Partial	2012	84,005,841	1.078	90,577,568	132,675,164	1.016	134,758,250	225,335,817	
Permanent Partial	2013	80,877,157	1.078	87,204,128	138,205,342	1.016	140,375,255	227,579,383	
Permanent Partial	2014	97,200,137	1.078	104,804,046	153,041,936	1.016	155,444,793	260,248,838	
Total Permanent Partial		454,658,041		490,225,666	713,191,550		724,389,115	1,214,614,781	37.77%
Temporary Total	2010	32,042,228	1.078	34,548,873	66,853,246	1.016	67,902,885	102,451,757	
Temporary Total	2011	33,447,795	1.078	36,064,396	81,397,023	1.016	82,675,009	118,739,404	
Temporary Total	2012	38,359,713	1.078	41,360,570	76,219,316	1.016	77,416,008	118,776,578	
Temporary Total	2013	33,324,239	1.078	35,931,174	86,948,824	1.016	88,313,977	124,245,150	
Temporary Total	2014	42,621,839	1.078	45,956,119	88,836,801	1.016	90,231,596	136,187,716	
Total Temporary Total		179,795,813		193,861,131	400,255,210		406,539,474	600,400,605	18.67%
(11) Total Indemnity		920,295,103		992,289,236	1,146,356,482		1,164,355,015	2,156,644,251	67.06%

IV 000022 STIP

Notes:

- (3): Exhibit 1, Page 1, Column (5)
- (4): Exhibit 1, Page 1, Row (15)
- (6): Exhibit 1, Page 1, Column (8)
- (7): Exhibit 1, Page 1, Row (16)
- (10) = (9), Total / Page 2, Column (9), Total Medical & Indemnity

Post-Chapter 398 Injury Type Weights at Ultimate

Injury Type (1)	Policy Year (2)	Medical - Likely to Develop			Medical - Not Likely to Develop			Medical On-level Losses at Ultimate = (5) + (8) (9)	Weights at Ultimate (10)
		On-level Losses at Fifth Report (3)	Development Factors 5th to Ultimate (4)	Est. Ult On-level Losses = (3) x (4) (5)	On-level Losses at Fifth Report (6)	Development Factors 5th to Ultimate (7)	Est. Ult On-level Losses = (6) x (7) (8)		
Death	2010	23,434	0.977	22,893	176,427	0.996	175,764	198,657	
Death	2011	13,739	0.977	13,422	271,119	0.996	270,100	283,522	
Death	2012	233,322	0.977	227,931	334,710	0.996	333,453	561,384	
Death	2013	277,312	0.977	270,905	593,619	0.996	591,389	862,294	
Death	2014	2,281,814	0.977	2,229,094	198,777	0.996	198,030	2,427,125	
Total Death		2,829,621		2,764,245	1,574,652		1,568,736	4,332,981	0.13%
Permanent Total	2010	31,011,650	0.977	30,295,148	0	0.996	0	30,295,148	
Permanent Total	2011	29,242,012	0.977	28,566,396	0	0.996	0	28,566,396	
Permanent Total	2012	41,548,609	0.977	40,588,658	0	0.996	0	40,588,658	
Permanent Total	2013	28,303,749	0.977	27,649,811	0	0.996	0	27,649,811	
Permanent Total	2014	39,102,359	0.977	38,198,927	0	0.996	0	38,198,927	
Total Permanent Total		169,208,379		165,298,941	0		0	165,298,941	5.14%
Permanent Partial	2010	27,983,168	0.977	27,336,637	51,649,304	0.996	51,455,261	78,791,898	
Permanent Partial	2011	40,335,790	0.977	39,403,861	47,011,933	0.996	46,835,312	86,239,173	
Permanent Partial	2012	32,572,485	0.977	31,819,921	43,145,138	0.996	42,983,044	74,802,966	
Permanent Partial	2013	27,627,669	0.977	26,989,352	48,590,145	0.996	48,407,595	75,396,946	
Permanent Partial	2014	40,221,218	0.977	39,291,936	50,671,304	0.996	50,480,935	89,772,871	
Total Permanent Partial		168,740,330		164,841,706	241,067,824		240,162,147	405,003,853	12.59%
Temporary Total	2010	14,345,982	0.977	14,014,528	48,355,786	0.996	48,174,116	62,188,645	
Temporary Total	2011	16,306,663	0.977	15,929,909	55,232,405	0.996	55,024,900	70,954,810	
Temporary Total	2012	16,484,002	0.977	16,103,151	55,961,666	0.996	55,751,421	71,854,572	
Temporary Total	2013	13,067,702	0.977	12,765,782	58,890,156	0.996	58,668,909	71,434,691	
Temporary Total	2014	21,363,196	0.977	20,869,615	60,754,029	0.996	60,525,780	81,395,395	
Total Temporary Total		81,567,545		79,682,986	279,194,042		278,145,127	357,828,113	11.13%
Medical Only	2010	0	0.977	0	25,553,029	0.996	25,457,028	25,457,028	
Medical Only	2011	0	0.977	0	25,617,224	0.996	25,520,982	25,520,982	
Medical Only	2012	0	0.977	0	25,210,964	0.996	25,116,248	25,116,248	
Medical Only	2013	0	0.977	0	25,635,723	0.996	25,539,411	25,539,411	
Medical Only	2014	0	0.977	0	25,478,305	0.996	25,382,585	25,382,585	
Total Medical Only		0		0	127,495,245		127,016,253	127,016,253	3.95%
(11) Total Medical		422,345,875		412,587,877	649,331,763		646,892,264	1,059,480,141	32.94%
(12) Total Medical & Indemnity		1,342,640,978		1,404,877,113	1,795,688,245		1,811,247,278	3,216,124,392	

- (13) Medical Only fraction of Total Medical 11.99%
- (14) Indemnity Likely to Develop at Ultimate 30.85%
- (15) Indemnity Not Likely to Develop at Ultimate 36.20%
- (16) Medical Likely to Develop at Ultimate 12.83%
- (17) Medical Not Likely to Develop at Ultimate 20.11%

Notes:

- (3): Exhibit 1, Page 2, Column (5)
- (4): Exhibit 1, Page 2, Row (17)
- (6): Exhibit 1, Page 2, Column (8)
- (7): Exhibit 1, Page 2, Row (18)
- (10) = (9), Total / Total Medical & Indemnity
- (12) = (11), Total Medical + Page 1, (11) Total Indemnity
- (13) = (10), Total Medical Only / (10), Total Medical

IV 000023 STIP

USL&HW Benefit Level Factors

All Injury Types

Time Period		Indemnity					Medical	Total
Beginning Period	Ending Period	Death	Permanent Total	Permanent Partial	Temporary Total	All Injury Types	All Injury Types	All Injury Types
PY 2014	Prosp. Eff. Period	1.043	1.034	1.016	1.034		1.000	
PY 2015	Prosp. Eff. Period	1.039	1.031	1.015	1.031		1.000	
PY 2016	Prosp. Eff. Period	1.035	1.028	1.014	1.028		1.000	
PY 2017	Prosp. Eff. Period	1.030	1.024	1.012	1.024		1.000	
PY 2018	Prosp. Eff. Period	1.025	1.020	1.010	1.020		1.000	
CPY 2018_07	Prosp. Eff. Period							1.008
CPY 2019_07	Prosp. Eff. Period							1.006
CPY 2020_07	Prosp. Eff. Period							1.004
Prior Eff. Period (using benefit level projections from prior filing)	Prosp. Eff. Period					1.006	1.000	1.004

IV 000024 STIP

Notes:

All time periods refer to Policy Years.

Example: PY 2018 to Prosp. Eff. Period for Indemnity Permanent Partial = 1.010 = 1.017 / 1.007

where 1.017 is the Index Factor of Prosp. Eff. Period and 1.007 is the Index Factor of PY 2018 for Indemnity Permanent Partial, from Exhibit 2.

USL&HW Benefit Level Changes and Weights

Death												
Benefit Level Change	10/1/2013	10/1/2014	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019	10/1/2020	10/1/2021	10/1/2022	10/1/2023	Weighted Average Benefit Level
Cumulative Benefit Level Change	1.000	1.004	1.008	1.012	1.017	1.022	1.027	1.032	1.038	1.043	1.048	
Time Period												
PY 2014	0.396	0.594	0.010									1.002
PY 2015		0.368	0.626	0.006								1.007
PY 2016			0.383	0.612	0.005							1.011
PY 2017				0.323	0.673	0.005						1.015
PY 2018					0.349	0.648	0.003					1.020
CPY 2018_07					0.012	0.436	0.553					1.025
CPY 2019_07						0.008	0.398	0.594				1.030
CPY 2020_07							0.008	0.398	0.594			1.035
Prior Eff. Period							0.008	0.398	0.594			1.035
Prosp. Eff. Period									0.008	0.397	0.595	1.046

Indemnity All Injury Types - Average Benefit Level for Current Policy Period, Estimated at 7/1/2020 (using benefit level projections from prior filing).

Date of Change	10/1/2013	10/1/2014	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019	10/1/2020	10/1/2021	Weighted Average Benefit Level
Benefit Level Change	1.000	1.003	1.002	1.002	1.003	1.003	1.003	1.003	1.003	
Cumulative Level Change	1.000	1.003	1.005	1.007	1.010	1.013	1.016	1.019	1.022	1.021

Medical All Injury Types - Average Benefit Level for Current Policy Period, Estimated at 7/1/2020 (using benefit level projections from prior filing).

Date of Change	10/1/2013	10/1/2014	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019	10/1/2020	10/1/2021	Weighted Average Benefit Level
Benefit Level Change	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Cumulative Level Change	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

All Injury Types - Average Benefit Level for Current Policy Period, Estimated at 7/1/2020 (using benefit level projections from prior filing).

Date of Change	10/1/2013	10/1/2014	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019	10/1/2020	10/1/2021	Weighted Average Benefit Level
Benefit Level Change	1.000	1.002	1.001	1.001	1.002	1.002	1.002	1.002	1.002	
Cumulative Level Change	1.000	1.002	1.003	1.004	1.006	1.008	1.010	1.012	1.014	1.013

Index Factors for All Injury Types

Time Period	Indemnity					Medical	Total
	Death	Permanent Total	Permanent Partial	Temporary Total	All Injury Types	All Injury Types	All Injury Types
PY 2014	1.002	1.002	1.001	1.002	1.002	1.000	1.001
PY 2015	1.007	1.006	1.003	1.006	1.004	1.000	1.003
PY 2016	1.011	1.009	1.004	1.009	1.006	1.000	1.004
PY 2017	1.015	1.013	1.005	1.013	1.009	1.000	1.005
PY 2018	1.020	1.017	1.007	1.017	1.012	1.000	1.007
CPY 2018_07	1.025	1.020	1.009	1.020	1.015	1.000	1.009
CPY 2019_07	1.030	1.025	1.011	1.025	1.018	1.000	1.011
CPY 2020_07	1.035	1.029	1.013	1.029	1.021	1.000	1.013
Prior Eff. Period	1.035	1.029	1.013	1.029	1.021	1.000	1.013
Prosp. Eff. Period	1.046	1.037	1.017	1.037	1.027	1.000	1.017

Notes:

All time periods refer to Policy Years.

Index Factors for All Injury Types is an Excel Data Table that repeats the calculation of the Weighted Average Benefit Level for all Injury Types.

IV 00026 STIP

Section IV - Benefit Change Adjustments
 Subsection F - Effects of USL&HW Benefit Changes
 7/1/2022

Section IV - F
 Exhibit 3

USL&HW Historical and Estimated Benefit Level Changes

Effective Date (1)	Indemnity					Medical	Total
	Death (2)	Permanent Total (3)	Permanent Partial (4)	Temporary Total (5)	All Injury Types (6)	All Injury Types (7)	All Injury Types (8)
10/1/2013	0.3%	0.3%	0.1%	0.3%	0.2%	0.0%	0.1%
10/1/2014	0.4%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%
10/1/2015	0.4%	0.3%	0.1%	0.3%	0.2%	0.0%	0.1%
10/1/2016	0.4%	0.3%	0.1%	0.3%	0.2%	0.0%	0.1%
10/1/2017	0.5%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%
10/1/2018	0.5%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%
10/1/2019	0.5%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%
10/1/2020	0.5%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%
10/1/2021	0.5%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%
10/1/2022	0.5%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%
10/1/2023	0.5%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%

Notes:

Values prior to 10/1/2018 are from NCCI's Annual Statistical Bulletin, 2020 Edition, Exhibit 3.
 Changes for 10/1/2018 - 10/1/2023 are assumed to be the same as 10/1/2017.

Paid Trend Summary

	Indemnity				Medical								SAWW		
	Severity		Frequency		Lost-Time Medical				Medical Only				Trend	Credibility	
	Trend	Credibility	Trend	Credibility	Severity		Frequency		Severity		Frequency				
					Trend	Credibility	Trend	Credibility	Trend	Credibility	Trend	Credibility			
(1) Massachusetts Trend															
5 Year	1.1%	83.0%	-1.2%	53.5%	1.1%	47.5%	-1.2%	53.5%	2.8%	100.0%	-2.3%	38.9%	3.6%	100.0%	
6 Year	1.9%	71.8%	-1.4%	76.7%	2.3%	49.1%	-1.4%	76.7%	2.2%	100.0%	-2.9%	44.1%	3.4%	100.0%	
7 Year	2.0%	94.8%	-1.5%	100.0%	2.3%	65.2%	-1.5%	100.0%	2.0%	100.0%	-3.3%	52.1%	3.4%	100.0%	
8 Year	2.0%	100.0%	-1.6%	100.0%	2.2%	79.5%	-1.6%	100.0%	2.2%	100.0%	-3.7%	47.0%	3.3%	100.0%	
9 Year	2.3%	100.0%	-1.8%	100.0%	2.3%	93.0%	-1.8%	100.0%	2.2%	100.0%	-4.1%	47.2%	3.1%	100.0%	
10 Year	2.1%	100.0%	-1.6%	85.2%	2.0%	89.8%	-1.6%	85.2%	2.1%	100.0%	-4.0%	52.8%	3.0%	100.0%	
(2) Selected Trend	2.0%		-1.5%		2.3%		-1.5%		2.8%		-4.0%		3.6%		
(3) 15 Year Massachusetts Complement of Credibility	2.3%		-1.7%		2.1%		-1.7%		2.0%		-4.1%		2.7%		
(4) Credibility Weighted Trend	2.0%		-1.5%		2.3%		-1.5%		2.8%		-4.0%		3.6%		
(5) Medical Loss Trend					Lost-Time Medical				Medical Only						
(6) Fraction of Total Medical					0.8%				-1.4%						
(7) Total Medical Loss Trend									0.6%						
(8) Total Loss Trend	Indemnity				Medical										
(9) SAWW Trend	0.5%				0.6%										
(10) Total Net Trend	-2.9%				-2.9%										

Notes:

- (1), (3): Section V, Exhibit 2 Severity; Exhibit 3 Frequency and SAWW
- (2): Selection based on the fit with the highest credibility and least number of years
- (4) = Credibility Weighted Selected Trend
- (5) = $[(1.0 + \text{Credibility Weighted Severity Trend}) \times (1.0 + \text{Credibility Weighted Frequency Trend})] - 1.0$
- (6) Medical Only = Medical Only Fraction of Total Medical from Section IV-E, Exhibit 2
 Lost Time Medical = 1.0 - Medical Only
- (7) = Weighted Average of (5) using (6) as weights
- (8): Indemnity = $(1.0 + \text{Credibility Weighted Severity Trend}) \times (1.0 + \text{Credibility Weighted Frequency Trend}) - 1.0$
 Medical = Row (7)
- (9): (4) for SAWW.
- (10) = $[(1.0 + (8))] / [(1.0 + (9))] - 1.0$

V 000020 STIP

Indemnity Paid Severity Trend Calculation

Policy Year	Massachusetts Indemnity Severity	5 Year		6 Year		7 Year		8 Year		9 Year		10 Year	
		Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared
2009	26,824											26,274	302,308
2010	25,861									26,590	530,715	26,835	949,411
2011	27,538							27,585	2,217	27,204	111,173	27,408	16,696
2012	28,048					28,166	13,903	28,138	8,178	27,833	46,223	27,994	2,961
2013	28,039			28,805	586,292	28,724	469,570	28,703	441,202	28,476	191,238	28,591	304,939
2014	30,366	29,991	140,764	29,351	1,029,569	29,294	1,149,357	29,279	1,180,210	29,135	1,516,011	29,202	1,355,231
2015	30,090	30,314	50,070	29,908	33,071	29,874	46,351	29,867	49,542	29,808	79,405	29,825	70,032
2016	30,384	30,640	65,444	30,475	8,311	30,467	6,830	30,467	6,830	30,497	12,743	30,462	6,055
2017	30,639	30,970	109,339	31,053	171,575	31,071	186,270	31,078	192,873	31,202	316,695	31,112	223,857
2018	31,748	31,303	197,447	31,642	11,062	31,687	3,708	31,702	2,064	31,923	30,805	31,777	837
(1)	Massachusetts Trend		1.1%		1.9%		2.0%		2.0%		2.3%		2.1%
(2)	n		5		6		7		8		9		10
(3)	s		433.23		678.21		612.53		560.23		636.40		635.64
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		6.49		7.00		7.50		8.00		8.50		9.00
(6)	$[1 + 1/n + 12 \times m^2 / (n^3 - n)]^{.5}$		2.33		1.99		1.77		1.63		1.52		1.44
(7)	Confidence Interval		2,373.04		2,879.01		2,190.56		1,771.75		1,834.10		1,705.40
(8)	Projected Value Prospective Period		32,846.74		34,434.84		34,610.72		34,669.93		35,376.97		34,947.09
(9)	CI/Projected Severity		0.07		0.08		0.06		0.05		0.05		0.05
(10)	Credibility - MA Trend (Z)		83%		72%		95%		100%		100%		100%
(11)	Complement of Credibility								2.3%				
(12)	Credibility Weighted Severity Trend		1.3%		2.0%		2.0%		2.0%		2.3%		2.1%

Notes:

- (1): Massachusetts Trend from exponential fit to Severities.
- (2): Number of data points used in the exponential fitting of the severities.
- (3): $\sqrt{SSR / (n - 2)}$ where SSR is the sum of squared residuals and n is the number of data points used in the exponential fitting of the data.
- (4): T-value based on a two-tailed t-test with probability parameter, p, of 90% and a t-distribution with n - 2 degrees of freedom.
- (5): Number of years between midpoint of data and projected point.
- (7) = (3) x (4) x (6)
- (8): Severity projected to policy effective period using exponential fit to data.
- (9) = (7) / (8)
- (10): The credibility is the ratio of the target value, k, to the quotient of the confidence interval and the projected frequency, capped at 100%. Numerically, (10) = the minimum of k / (9) and 100%.
- (11): Complement of credibility is based on a fifteen-year exponential fit to the MA Indemnity Paid Severities. Section C, Exhibit 1, Page 3
- (12) = [(1) x (10)] + { (11) x [1.0 - (10)] }

V 000021 STIP

Lost Time Medical Paid Severity Trend Calculation

Policy Year	Lost Time Medical Severity	5 Year		6 Year		7 Year		8 Year		9 Year		10 Year	
		Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared
2009	10,502											10,113	150,838
2010	10,024									10,145	14,631	10,316	85,435
2011	10,529							10,443	7,323	10,381	21,909	10,523	34
2012	10,609					10,622	190	10,672	4,024	10,622	176	10,734	15,633
2013	10,480			10,877	157,870	10,868	150,480	10,906	181,472	10,869	151,075	10,949	219,599
2014	11,766	11,462	92,142	11,126	409,269	11,119	417,937	11,145	385,049	11,121	415,212	11,168	357,254
2015	11,333	11,594	68,321	11,380	2,272	11,376	1,912	11,390	3,248	11,380	2,232	11,392	3,500
2016	11,575	11,727	23,287	11,640	4,309	11,639	4,178	11,639	4,178	11,644	4,848	11,620	2,050
2017	11,745	11,862	13,788	11,906	26,130	11,908	26,800	11,895	22,450	11,915	28,979	11,853	11,672
2018	12,237	11,999	57,048	12,178	3,471	12,184	2,878	12,155	6,727	12,192	2,072	12,090	21,663
(1)	Massachusetts Trend		1.1%		2.3%		2.3%		2.2%		2.3%		2.0%
(2)	n		5		6		7		8		9		10
(3)	s		291.31		388.37		347.67		320.02		302.64		329.33
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		6.49		7.00		7.50		8.00		8.50		9.00
(6)	$[1 + 1/n + 12 \times m^2 / (n^3 - n)]^{.5}$		2.33		1.99		1.77		1.63		1.52		1.44
(7)	Confidence Interval		1,595.67		1,648.63		1,243.35		1,012.08		872.21		883.58
(8)	Projected Value Prospective Period		12,631.20		13,482.26		13,502.47		13,402.47		13,518.51		13,219.50
(9)	CI/Projected Severity		0.13		0.12		0.09		0.08		0.06		0.07
(10)	Credibility - MA Trend (Z)		47%		49%		65%		79%		93%		90%
(11)	Complement of Credibility						2.1%						
(12)	Credibility Weighted Severity Trend		1.6%		2.2%		2.2%		2.2%		2.3%		2.0%

Notes:

- (1): Massachusetts Trend from exponential fit to Severities.
- (2): Number of data points used in the exponential fitting of the severities.
- (3): $\sqrt{SSR / (n - 2)}$ where SSR is the sum of squared residuals and n is the number of data points used in the exponential fitting of the data.
- (4): T-value based on a two-tailed t-test with probability parameter, p, of 90% and a t-distribution with n - 2 degrees of freedom.
- (5): Number of years between midpoint of data and projected point.
- (7) = (3) x (4) x (6)
- (8): Severity projected to policy effective period using exponential fit to data.
- (9) = (7) / (8)
- (10): The credibility is the ratio of the target value, k, to the quotient of the confidence interval and the projected frequency, capped at 100%. Numerically, (10) = the minimum of k / (9) and 100%.
- (11): Complement of credibility is based on a fifteen-year exponential fit to the MA Lost Time Medical Paid Severities. Section D, Exhibit 1, Page 3.
- (12) = [(1) x (10)] + { (11) x [1.0 - (10)] }

V 000022 STIP

Medical Only Paid Severity Trend Calculation

Policy Year	Massachusetts Medical Only Severity	5 Year		6 Year		7 Year		8 Year		9 Year		10 Year	
		Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared
2009	789											784	30
2010	797									798	0	800	10
2011	807							815	75	815	69	817	108
2012	846					838	70	833	181	833	189	834	147
2013	865			849	256	855	107	851	204	851	210	852	178
2014	848	855	41	868	372	872	544	869	427	869	421	870	449
2015	887	879	76	887	0	889	4	888	0	888	0	888	0
2016	902	903	0	906	15	907	20	907	20	907	20	907	17
2017	929	928	2	926	11	925	20	926	10	926	9	926	15
2018	950	954	11	947	14	943	48	946	16	946	15	945	28
(1)	Massachusetts Trend		2.8%		2.2%		2.0%		2.2%		2.2%		2.1%
(2)	n		5		6		7		8		9		10
(3)	s		6.60		12.93		12.75		12.47		11.55		11.09
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		6.49		7.00		7.50		8.00		8.50		9.00
(6)	$[1 + 1/n + 12 \times m^2/(n^3-n)]^{.5}$		2.33		1.99		1.77		1.63		1.52		1.44
(7)	Confidence Interval		36.16		54.88		45.59		39.44		33.29		29.74
(8)	Projected Value Prospective Period		1,078.25		1,043.78		1,031.00		1,041.43		1,041.95		1,037.74
(9)	CI/Projected Severity		0.03		0.05		0.04		0.04		0.03		0.03
(10)	Credibility - MA Trend (Z)		100%		100%		100%		100%		100%		100%
(11)	Complement of Credibility						2.0%						
(12)	Credibility Weighted Severity Trend		2.8%		2.2%		2.0%		2.2%		2.2%		2.1%

Notes:

- (1): Massachusetts Trend from exponential fit to Severities.
- (2): Number of data points used in the exponential fitting of the severities.
- (3): $\sqrt{SSR/(n - 2)}$ where SSR is the sum of squared residuals and n is the number of data points used in the exponential fitting of the data.
- (4): T-value based on a two-tailed t-test with probability parameter, p, of 90% and a t-distribution with n - 2 degrees of freedom.
- (5): Number of years between midpoint of data and projected point.
- (7) = (3) x (4) x (6)
- (8): Severity projected to policy effective period using exponential fit to data.
- (9) = (7) / (8)
- (10): The credibility is the ratio of the target value, k, to the quotient of the confidence interval and the projected frequency, capped at 100%. Numerically, (10) = the minimum of k / (9) and 100%.
- (11): Complement of credibility is based on a fifteen-year exponential fit to the MA Medical Only Paid Severities. Section D, Exhibit 2, Page 2.
- (12) = [(1) x (10)] + { (11) x [1.0 - (10)] }

V 000023 STIP

Lost Time Frequency Trend Calculation

Policy Year	Adjusted Claim Frequency	5 Year		6 Year		7 Year		8 Year		9 Year		10 Year	
		Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared
2009	183.51											190	43
2010	193.60									190	13	187	42
2011	187.40							185	6	187	1	184	10
2012	181.06					180	0	182	1	183	4	181	0
2013	178.34			177	1	178	0	179	0	180	2	179	0
2014	176.63	174	6	175	3	175	2	176	1	176	0	176	1
2015	169.58	172	6	172	8	173	9	173	12	173	13	173	12
2016	167.04	170	8	170	9	170	10	170	10	170	9	170	11
2017	171.07	168	10	168	11	168	12	167	14	167	17	168	11
2018	165.43	166	0	165	0	165	0	165	1	164	3	165	0
(1)	Massachusetts Trend		-1.2%		-1.4%		-1.5%		-1.6%		-1.8%		-1.6%
(2)	n		5		6		7		8		9		10
(3)	s		3.21		2.86		2.59		2.70		2.97		4.04
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		6.49		7.00		7.50		8.00		8.50		9.00
(6)	$[1 + 1/n + 12 \times m^2 / (n^3 - n)]^{.5}$		2.33		1.99		1.77		1.63		1.52		1.44
(7)	Confidence Interval		17.59		12.15		9.25		8.53		8.55		10.83
(8)	Projected Value Prospective Period		156.93		155.40		154.70		152.74		150.70		153.89
(9)	CI/Projected Frequency		0.11		0.08		0.06		0.06		0.06		0.07
(10)	Credibility - MA Trend (Z)		54%		77%		100%		100%		100%		85%
(11)	Complement of Credibility								-1.7%				
(12)	Credibility Weighted Frequency Trend		-1.5%		-1.5%		-1.5%		-1.6%		-1.8%		-1.6%

Notes:

- (1): Massachusetts Trend from exponential fit to Adjusted Claim Frequencies
- (2): Number of data points used in the exponential fitting of the adjusted claim frequencies.
- (3): $\sqrt{SSR / (n - 2)}$ where SSR is the sum of squared residuals and n is the number of data points used in the exponential fitting of the data.
- (4): T-value based on a two-tailed t-test with probability parameter, p, of 90% and a t-distribution with n - 2 degrees of freedom.
- (5): Number of years between midpoint of data and projected point.
- (7) = (3) x (4) x (6)
- (8): Frequency projected to policy effective period using exponential fit to data.
- (9) = (7) / (8)
- (10): The credibility is the ratio of the target value, k, to the quotient of the confidence interval and the projected frequency, capped at 100%. Numerically, (10) = the minimum of k / (9) and 100%.
- (11): Complement of credibility is based on a fifteen-year exponential fit to the Adjusted Claim Frequencies. Section B, Exhibit 1.
- (12) = [(1) x (10)] + {(11) x [1.0 - (10)]}

V 000024 STIP

Medical Only Frequency Trend Calculation

Policy Year	Adjusted Med Only Claim Frequency	5 Year		6 Year		7 Year		8 Year		9 Year		10 Year	
		Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared
2009	415.10											419	19
2010	417.68											403	225
2011	395.54											387	80
2012	366.74					360	41	368	1	372	30	371	20
2013	352.17			345	59	349	13	354	3	357	24	356	18
2014	336.14	329	57	334	3	337	1	341	20	343	41	342	36
2015	316.86	321	18	325	61	326	87	328	120	329	137	328	135
2016	304.86	314	80	315	106	316	114	316	114	315	106	315	110
2017	308.70	307	4	306	8	305	12	304	25	302	41	303	35
2018	303.46	300	15	297	42	295	67	292	124	290	181	291	163
(1)	Massachusetts Trend		-2.3%		-2.9%		-3.3%		-3.7%		-4.1%		-4.0%
(2)	n		5		6		7		8		9		10
(3)	s		7.60		8.33		8.19		9.93		10.61		10.25
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		6.49		7.00		7.50		8.00		8.50		9.00
(6)	$[1 + 1/n + 12 \times m^2 / (n^3 - n)]^{.5}$		2.33		1.99		1.77		1.63		1.52		1.44
(7)	Confidence Interval		41.66		35.38		29.28		31.40		30.59		27.49
(8)	Projected Value Prospective Period		270.13		259.93		254.33		246.21		240.53		242.04
(9)	CI/Projected Frequency		0.15		0.14		0.12		0.13		0.13		0.11
(10)	Credibility - MA Trend (Z)		39%		44%		52%		47%		47%		53%
(11)	Complement of Credibility								-4.1%				
(12)	Credibility Weighted Frequency Trend		-3.4%		-3.6%		-3.7%		-3.9%		-4.1%		-4.0%

Notes:

- (1): Massachusetts Trend from exponential fit to Adjusted Claim Frequencies
- (2): Number of data points used in the exponential fitting of the adjusted claim frequencies.
- (3): $\sqrt{SSR / (n - 2)}$ where SSR is the sum of squared residuals and n is the number of data points used in the exponential fitting of the data.
- (4): T-value based on a two-tailed t-test with probability parameter, p, of 90% and a t-distribution with n - 2 degrees of freedom.
- (5): Number of years between midpoint of data and projected point.
- (7) = (3) x (4) x (6)
- (8): Frequency projected to policy effective period using exponential fit to data.
- (9) = (7) / (8)
- (10): The credibility is the ratio of the target value, k, to the quotient of the confidence interval and the projected frequency, capped at 100%. Numerically, (10) = the minimum of k / (9) and 100%.
- (11): Complement of credibility is based on a fifteen-year exponential fit to the Adjusted Claim Frequencies. Section B, Exhibit 2.
- (12) = [(1) x (10)] + [(11) x [1.0 - (10)]]

V 000025 STIP

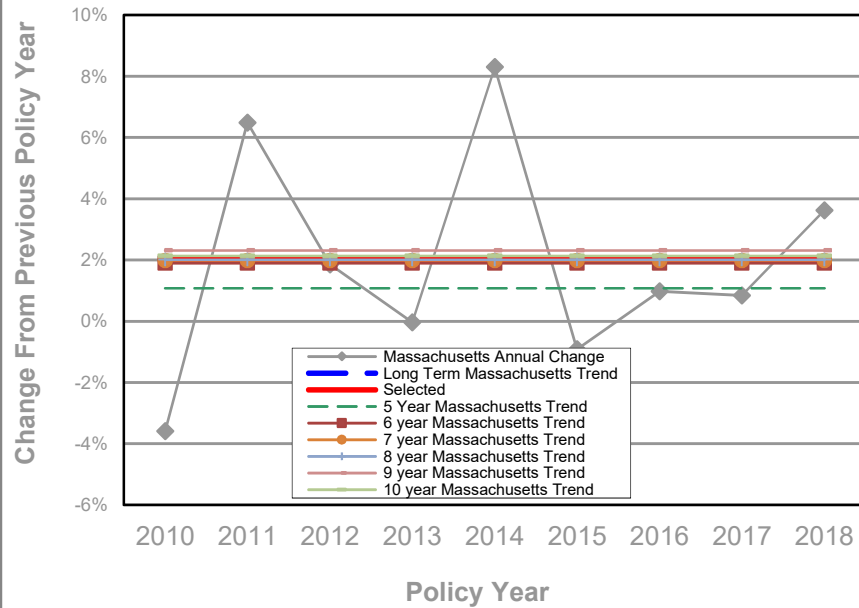
Statewide Average Weekly Wage Trend Calculation

Data Period	Statewide Average Weekly Wage	5 Year		6 Year		7 Year		8 Year		9 Year		10 Year	
		Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared
4/1/10 to 4/1/11	1,135.82											1,123	165
4/1/11 to 4/1/12	1,173.06											1,157	257
4/1/12 to 4/1/13	1,181.28							1,176	27	1,187	35	1,192	118
4/1/13 to 4/1/14	1,214.99					1,212	7	1,215	0	1,224	89	1,228	177
4/1/14 to 4/1/15	1,256.47			1,252	22	1,254	8	1,256	0	1,263	39	1,266	82
4/1/15 to 4/1/16	1,291.74	1,291	0	1,295	11	1,296	21	1,298	38	1,302	111	1,304	149
4/1/16 to 4/1/17	1,338.05	1,337	1	1,340	3	1,340	6	1,341	10	1,343	25	1,343	30
4/1/17 to 4/1/18	1,383.41	1,385	2	1,386	6	1,386	7	1,386	7	1,385	3	1,384	1
4/1/18 to 4/1/19	1,431.66	1,434	6	1,434	4	1,433	2	1,432	0	1,428	10	1,426	29
4/1/19 to 4/1/20	1,487.78	1,485	6	1,483	22	1,482	33	1,480	58	1,473	212	1,470	334
(1)	Massachusetts Trend		3.6%		3.4%		3.4%		3.3%		3.1%		3.0%
(2)	n		5		6		7		8		9		10
(3)	s		2.28		4.08		4.10		4.85		11.97		12.95
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		5.75		6.25		6.75		7.25		7.75		8.25
(6)	$[1 + 1/n + 12 \times m^2/(n^3-n)]^{.5}$		2.12		1.84		1.66		1.54		1.45		1.39
(7)	Confidence Interval		11.41		16.04		13.75		14.52		32.96		33.41
(8)	Projected Value Prospective Period		1,693.75		1,684.43		1,680.24		1,674.43		1,653.80		1,643.95
(9)	CI/Projected Wage		0.01		0.01		0.01		0.01		0.02		0.02
(10)	Credibility - MA Trend (Z)		100%		100%		100%		100%		100%		100%
(11)	Complement of Credibility							2.7%					
(12)	Credibility Weighted Wage Trend		3.6%		3.4%		3.4%		3.3%		3.1%		3.0%

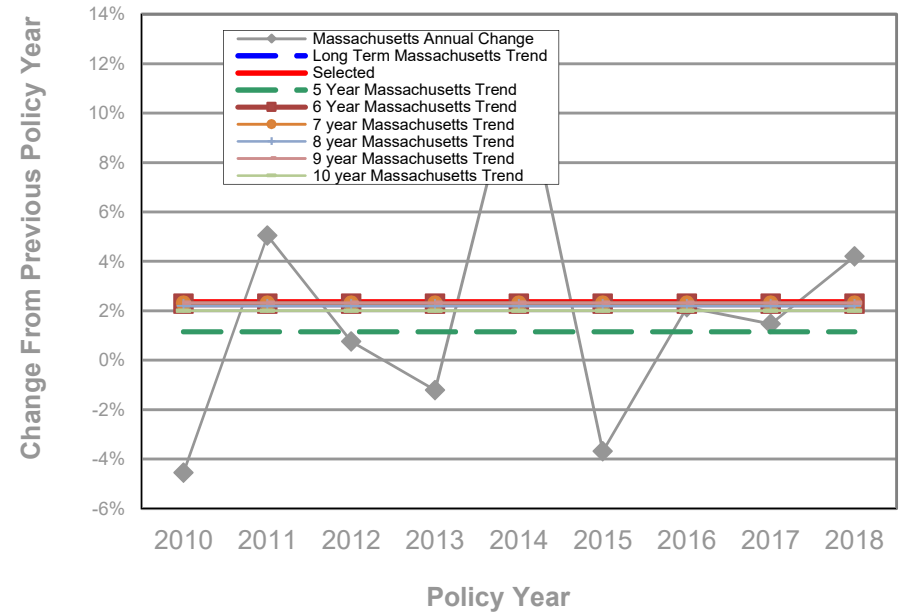
- Notes:
- (1): Massachusetts Trend from exponential fit to the SAWW.
 - (2): Number of data points used in the exponential fitting of the statewide average weekly wages.
 - (3): $\sqrt{SSR/(n - 2)}$ where SSR is the sum of squared residuals and n is the number of data points used in the exponential fitting of the data.
 - (4): T-value based on a two-tailed t-test with probability parameter, p, of 90% and a t-distribution with n - 2 degrees of freedom.
 - (5): Number of years between midpoint of data and projected point.
 - (7) = (3) x (4) x (6)
 - (8): SAWW projected to policy effective period using exponential fit to data.
 - (9) = (7) / (8)
 - (10): The credibility is the ratio of the target value, k, to the quotient of the confidence interval and the projected frequency, capped at 100%. Numerically, (10) = the minimum of k / (9) and 100%.
 - (11): Complement of credibility is based on a fifteen-year exponential fit to the SAWWs. Section G, Exhibit 1.
 - (12) = [(1) x (10)] + [(11) x [1.0 - (10)]]

V 000026 STIP

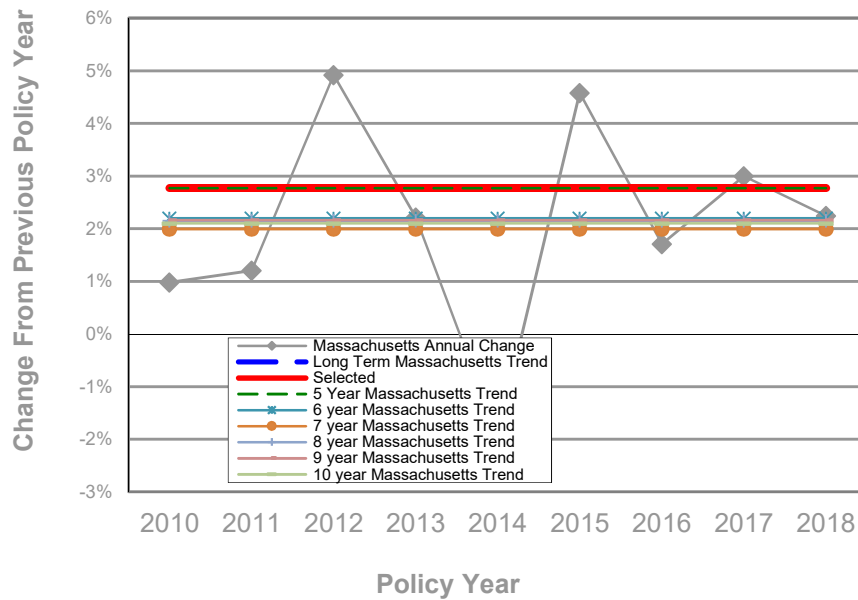
Indemnity Severity Trend



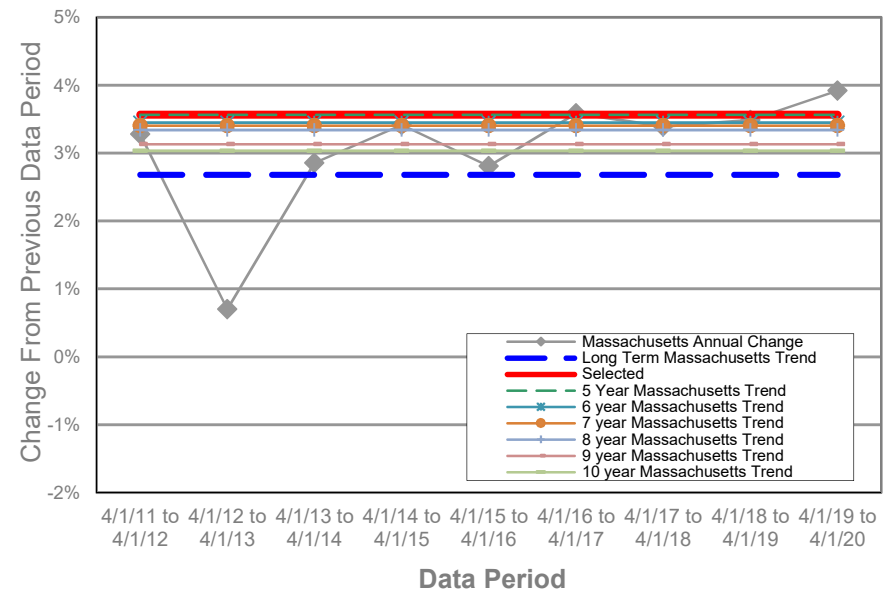
Lost Time Medical Severity Trend



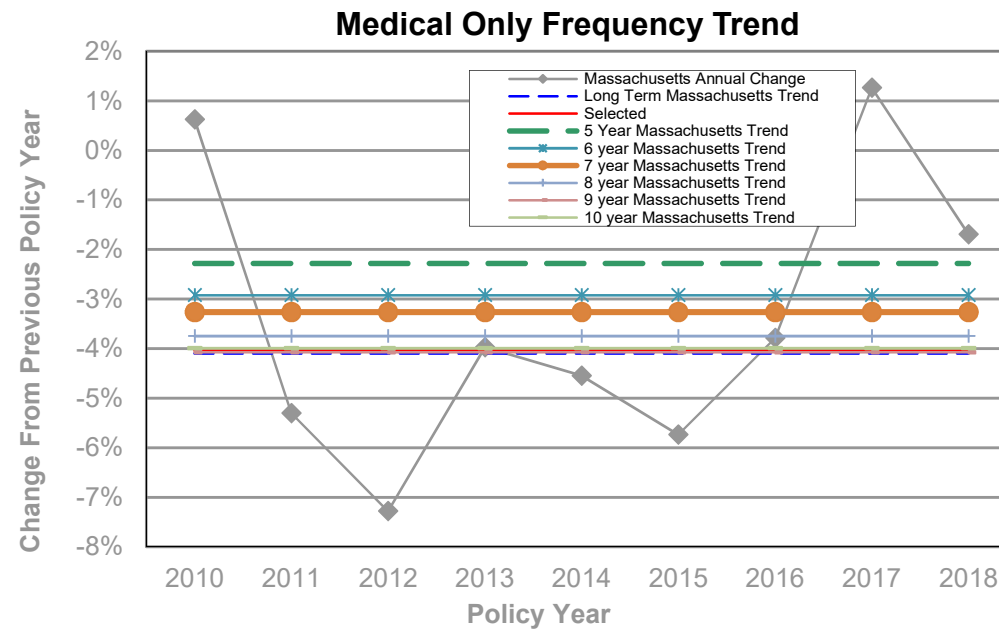
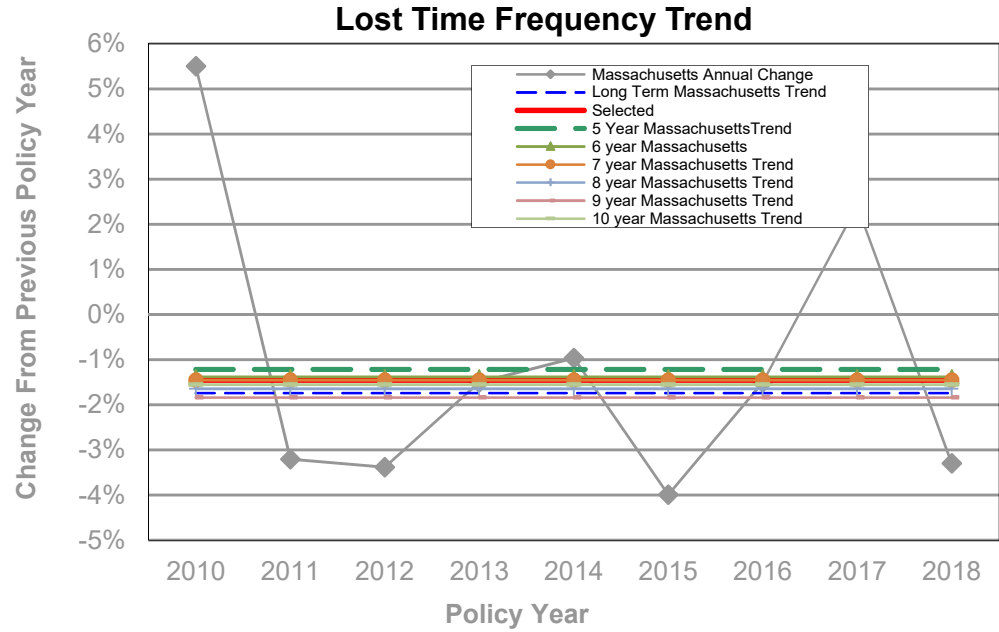
Medical Only Severity Trend



SAWW Trend



V 000027 STIP



V 000028 STIP

Lost Time Reported Claim Counts - Industrywide

Policy Year (1)	Lost Time Reported Claim Counts										Developed to Tenth Report (3)	Estimated Million Worker-Weeks (4)	Unadjusted Claim Frequency = (3) / (4) (5)	Class Mix Adjustment (6)	Adjusted Claim Frequency = (5) x (6) (7)	Percent Change = (7)/previous year (7)-1 (8)
	Age of Development															
	18	30	42	54	66	78	90	102	114	126						
2004_01	17,495	17,733	17,781	17,836	17,865	17,872	17,882	17,886	17,880	17,882	17,882	71.62	249.68	0.863	215.37	
2005_01	16,774	17,058	17,138	17,174	17,199	17,208	17,215	17,218	17,230	17,237	17,237	73.57	234.29	0.893	209.20	-2.9%
2006_01	15,489	15,766	15,865	15,914	15,925	15,942	15,943	15,943	15,962	15,968	15,968	75.65	211.07	0.947	199.86	-4.5%
2007_01	15,211	15,548	15,655	15,698	15,720	15,729	15,733	15,740	15,752	15,756	15,756	78.30	201.23	0.993	199.78	0.0%
2008_01	13,908	14,174	14,264	14,313	14,352	14,365	14,367	14,374	14,381	14,387	14,387	78.57	183.11	1.026	187.82	-6.0%
2009_01	12,975	13,210	13,270	13,305	13,317	13,327	13,334	13,336	13,346	13,345	13,345	75.29	177.25	1.035	183.51	-2.3%
2010_01	14,379	14,656	14,725	14,773	14,799	14,814	14,817	14,816	14,816		14,819	79.76	185.79	1.042	193.60	5.5%
2011_01	14,468	14,697	14,790	14,830	14,865	14,878	14,878	14,882			14,890	82.97	179.47	1.044	187.40	-3.2%
2012_01	14,207	14,462	14,532	14,562	14,587	14,590	14,596				14,605	83.65	174.61	1.037	181.06	-3.4%
2013_01	14,410	14,671	14,747	14,797	14,818	14,822					14,834	85.14	174.23	1.024	178.34	-1.5%
2014_01	14,800	15,071	15,155	15,194	15,212						15,228	87.12	174.80	1.010	176.63	-1.0%
2015_01	14,850	15,068	15,146	15,188							15,224	90.34	168.53	1.006	169.58	-4.0%
2016_01	14,636	14,850	14,935								15,011	90.17	166.47	1.003	167.04	-1.5%
2017_01	15,270	15,545									15,709	91.63	171.43	0.998	171.07	2.4%
2018_01	14,914										15,318	92.59	165.43	1.000	165.43	-3.3%
Age-to-Age Development Factors											Selected Complement of Credibility			-1.7%		
	18 - 30	30 - 42	42 - 54	54 - 66	66 - 78	78 - 90	90 - 102	102 - 114	114 - 126							
2 Yr Weighted Average	1.016	1.005	1.003	1.001	1.000	1.000	1.000	1.000	1.000							
Selected	1.016	1.005	1.003	1.001	1.000	1.000	1.000	1.000	1.000							
Cumulative	1.027	1.011	1.005	1.002	1.001	1.001	1.001	1.001	1.000							

Notes:
 Development factors are claim count weighted averages from latest two years.
 (4): Section V-E, Exhibit 1.
 (6): Section V-F, Exhibit 1.

Medical Only Reported Claim Counts - Industrywide

Policy Year (1)	Medical Only Reported Claim Counts										Developed to Tenth Report (3)	Estimated Million Worker-Weeks (4)	Unadjusted Claim Frequency = (3) / (4) (5)	Class Mix Adjustment (6)	Adjusted Claim Frequency = (5) x (6) (7)	Percent Change = (7)/previous year (7)-1 (8)	
	Age of Development																
	18	30	42	54	66	78	90	102	114	126							
					(2)												
2004_01	41,844	42,823	42,924	42,980	42,989	42,998	43,004	43,003	43,008	43,016	43,016	71.62	600.61	0.863	518.09		
2005_01	40,395	41,188	41,301	41,315	41,320	41,323	41,320	41,328	41,331	41,332	41,332	73.57	561.79	0.893	501.63	-3.2%	
2006_01	37,304	38,011	38,090	38,118	38,117	38,118	38,123	38,146	38,177	38,176	38,176	75.65	504.63	0.947	477.83	-4.7%	
2007_01	36,550	37,075	37,123	37,122	37,131	37,121	37,124	37,161	37,161	37,159	37,159	78.30	474.58	0.993	471.16	-1.4%	
2008_01	32,711	33,074	33,138	33,153	33,174	33,171	33,190	33,193	33,191	33,194	33,194	78.57	422.48	1.026	433.35	-8.0%	
2009_01	29,840	30,132	30,166	30,174	30,180	30,187	30,186	30,186	30,181	30,187	30,187	75.29	400.96	1.035	415.10	-4.2%	
2010_01	31,550	31,919	31,969	31,976	31,969	31,967	31,969	31,967	31,967	31,966	31,971	79.76	400.83	1.042	417.68	0.6%	
2011_01	30,939	31,372	31,423	31,446	31,441	31,437	31,430	31,427			31,428	82.97	378.81	1.044	395.54	-5.3%	
2012_01	29,128	29,510	29,565	29,592	29,587	29,585	29,584				29,583	83.65	353.67	1.037	366.74	-7.3%	
2013_01	28,893	29,224	29,285	29,303	29,300	29,298					29,293	85.14	344.05	1.024	352.17	-4.0%	
2014_01	28,527	28,929	28,989	28,987	28,988						28,981	87.12	332.66	1.010	336.14	-4.6%	
2015_01	27,918	28,379	28,443	28,454							28,446	90.34	314.89	1.006	316.86	-5.7%	
2016_01	26,911	27,369	27,399								27,396	90.17	303.82	1.003	304.86	-3.8%	
2017_01	27,939	28,303									28,348	91.63	309.35	0.998	308.70	1.3%	
2018_01	27,640										28,098	92.59	303.46	1.000	303.46	-1.7%	
	Age-to-Age Development Factors																
	18 - 30	30 - 42	42 - 54	54 - 66	66 - 78	78 - 90	90 - 102	102 - 114	114 - 126				Selected Complement of Credibility				-4.1%
2 Yr Weighted Average	1.015	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000								
Selected	1.015	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000								
Cumulative	1.017	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000								

Notes:
 Development factors are claim count weighted averages from latest two years.
 (4): Section V-E, Exhibit 1.
 (6): Section V-F, Exhibit 1.

V 000030 STIP

Indemnity Paid Losses (in 000's)

Policy Year (1)	Developed to Tenth Report (2)	Indemnity On-Level Factor (3)	On-Level Indemnity Losses (in 000's) Developed to Tenth Report = (2) x (3) (4)	Developed Claim Counts (5)	Severity = 1,000 x (4) / (5) (6)
2004_01	359,957	1.167	420,075	17,882	23,491
2005_01	349,657	1.155	403,849	17,237	23,429
2006_01	343,142	1.143	392,041	15,968	24,552
2007_01	342,885	1.130	387,491	15,756	24,593
2008_01	332,279	1.118	371,324	14,387	25,810
2009_01	321,646	1.113	357,970	13,345	26,824
2010_01	343,998	1.114	383,226	14,819	25,861
2011_01	370,442	1.107	410,033	14,890	27,538
2012_01	373,380	1.097	409,648	14,605	28,048
2013_01	380,697	1.093	415,943	14,834	28,039
2014_01	425,554	1.087	462,423	15,228	30,366
2015_01	424,986	1.078	458,091	15,224	30,090
2016_01	426,600	1.069	456,082	15,011	30,384
2017_01	454,446	1.059	481,303	15,709	30,639
2018_01	463,676	1.049	486,296	15,318	31,748

15 Year Indemnity Trend

2.3%

Notes:

- (2): (3) Exhibit 1, Page 2
- (3): Section IV-A, Exhibit 1.
- (5): Section V-B, Exhibit 1.

V 000031 STIP

Indemnity Paid Losses (in 000's)
 Industrywide

Policy Year (1)	Age of Development										Developed to Tenth Report (3)
	18	30	42	54	66	78	90	102	114	126	
	(2)										
2004_01	107,820	198,020	260,479	301,960	327,370	339,300	348,443	352,669	356,713	359,957	359,957
2005_01	110,114	196,752	259,782	297,958	321,547	335,386	342,734	344,717	347,959	349,657	349,657
2006_01	100,324	186,197	254,668	293,733	313,566	324,673	333,625	338,678	341,533	343,142	343,142
2007_01	106,029	195,075	253,709	293,152	314,356	325,087	333,860	339,052	341,169	342,885	342,885
2008_01	103,033	194,337	253,244	288,542	309,174	320,808	324,438	327,815	329,773	332,279	332,279
2009_01	96,346	181,298	241,870	281,307	301,938	311,416	316,235	318,413	320,696	321,646	321,646
2010_01	101,956	196,131	261,018	302,564	325,334	333,604	337,047	342,181			343,998
2011_01	108,820	209,336	285,745	327,104	346,063	355,377	362,544	365,708			370,442
2012_01	109,341	213,099	283,775	327,474	349,051	359,355	365,689				373,380
2013_01	117,487	223,350	294,451	335,757	356,510	365,942					380,697
2014_01	127,547	247,414	334,872	379,771	397,930						425,554
2015_01	132,254	250,966	331,099	376,902							424,986
2016_01	132,665	252,932	332,983								426,600
2017_01	140,223	269,156									454,446
2018_01	143,541										463,676

Age-to-Age Development Factors

	18 - 30	30 - 42	42 - 54	54 - 66	66 - 78	78 - 90	90 - 102	102 - 114	114 - 126
2004_01	1.837	1.315	1.159	1.084	1.036	1.027	1.012	1.011	1.009
2005_01	1.787	1.320	1.147	1.079	1.043	1.022	1.006	1.009	1.005
2006_01	1.856	1.368	1.153	1.068	1.035	1.028	1.015	1.008	1.005
2007_01	1.840	1.301	1.155	1.072	1.034	1.027	1.016	1.006	1.005
2008_01	1.886	1.303	1.139	1.072	1.038	1.011	1.010	1.006	1.008
2009_01	1.882	1.334	1.163	1.073	1.031	1.015	1.007	1.007	1.003
2010_01	1.924	1.331	1.159	1.075	1.025	1.010	1.007	1.008	
2011_01	1.924	1.365	1.145	1.058	1.027	1.020	1.009		
2012_01	1.949	1.332	1.154	1.066	1.030	1.018			
2013_01	1.901	1.318	1.140	1.062	1.026				
2014_01	1.940	1.353	1.134	1.048					
2015_01	1.898	1.319	1.138						
2016_01	1.907	1.316							
2017_01	1.919								
2 Yr Weighted Average	1.913	1.318	1.136	1.054	1.028	1.019	1.008	1.008	1.005
5 Yr Weighted Average	1.913	1.328	1.142	1.061	1.028	1.015	1.010	1.007	1.005
Selected	1.913	1.318	1.136	1.054	1.028	1.019	1.008	1.008	1.005
Cumulative	3.230	1.688	1.281	1.128	1.069	1.040	1.021	1.013	1.005

Notes:
 Development factors are loss weighted average, paid data uses two years.

V 000032 STIP

Lost Time Medical Paid Losses (in 000's)

Policy Year (1)	Developed to Tenth Report (2)	Medical On-Level Factor (3)	On-Level Lost Time Medical Losses (in 000's) Developed to Tenth Report = (2) x (3) (4)	Developed Claim Counts (5)	Severity = 1,000 x (4) / (5) (6)
2004_01	156,198	1.036	161,825	17,882	9,050
2005_01	148,621	1.032	153,377	17,237	8,898
2006_01	152,728	1.032	157,616	15,968	9,871
2007_01	152,795	1.032	157,684	15,756	10,008
2008_01	135,151	1.024	138,443	14,387	9,623
2009_01	139,906	1.002	140,147	13,345	10,502
2010_01	148,539	1.000	148,539	14,819	10,024
2011_01	156,770	1.000	156,770	14,890	10,529
2012_01	154,941	1.000	154,941	14,605	10,609
2013_01	155,465	1.000	155,465	14,834	10,480
2014_01	179,172	1.000	179,172	15,228	11,766
2015_01	172,528	1.000	172,528	15,224	11,333
2016_01	173,742	1.000	173,742	15,011	11,575
2017_01	184,495	1.000	184,495	15,709	11,745
2018_01	187,447	1.000	187,447	15,318	12,237

15 Year Lost Time Medical Trend

2.1%

Notes:
 (2): (3) Exhibit 1, Page 2
 (3): Section IV-A, Exhibit 1.
 (5): Section V-B, Exhibit 1.

V 000033 STIP

Lost Time Medical Paid Losses (in 000's)
 Industrywide

Policy Year (1)	Age of Development										Developed to Tenth Report (3)
	18	30	42	54	66	78	90	102	114	126	
	(2)										
2004_01	87,471	118,219	131,022	139,202	144,312	147,598	149,998	152,404	154,748	156,198	156,198
2005_01	88,369	115,528	127,448	134,077	138,067	140,547	143,417	145,078	146,961	148,621	148,621
2006_01	85,564	112,793	126,804	133,695	138,424	141,821	145,744	148,143	150,548	152,728	152,728
2007_01	92,238	120,976	132,565	138,596	142,037	144,973	147,725	149,794	151,366	152,795	152,795
2008_01	84,096	110,557	122,487	127,169	129,750	131,263	132,319	133,517	134,272	135,151	135,151
2009_01	86,941	113,382	124,678	129,710	132,469	134,607	135,955	137,559	138,929	139,906	139,906
2010_01	88,055	116,161	127,772	133,970	137,178	141,219	143,573	145,595	147,536		148,539
2011_01	93,517	121,633	136,257	142,710	146,925	149,825	152,043	153,911			156,770
2012_01	96,025	126,297	136,907	142,691	145,929	147,930	150,140				154,941
2013_01	96,069	124,445	136,659	143,134	146,183	148,441					155,465
2014_01	107,811	141,090	155,274	163,632	168,618						179,172
2015_01	105,924	139,818	152,571	158,221							172,528
2016_01	108,971	138,462	152,400								173,742
2017_01	113,962	147,669									184,495
2018_01	116,894										187,447
	Age-to-Age Development Factors										
	18 - 30	30 - 42	42 - 54	54 - 66	66 - 78	78 - 90	90 - 102	102 - 114	114 - 126		
2004_01	1.352	1.108	1.062	1.037	1.023	1.016	1.016	1.015	1.009		
2005_01	1.307	1.103	1.052	1.030	1.018	1.020	1.012	1.013	1.011		
2006_01	1.318	1.124	1.054	1.035	1.025	1.028	1.016	1.016	1.014		
2007_01	1.312	1.096	1.045	1.025	1.021	1.019	1.014	1.010	1.009		
2008_01	1.315	1.108	1.038	1.020	1.012	1.008	1.009	1.006	1.007		
2009_01	1.304	1.100	1.040	1.021	1.016	1.010	1.012	1.010	1.007		
2010_01	1.319	1.100	1.049	1.024	1.029	1.017	1.014	1.013			
2011_01	1.301	1.120	1.047	1.030	1.020	1.015	1.012				
2012_01	1.315	1.084	1.042	1.023	1.014	1.015					
2013_01	1.295	1.098	1.047	1.021	1.015						
2014_01	1.309	1.101	1.054	1.030							
2015_01	1.320	1.091	1.037								
2016_01	1.271	1.101									
2017_01	1.296										
2 Yr Weighted Average	1.283	1.096	1.046	1.026	1.015	1.015	1.013	1.012	1.007		
5 Yr Weighted Average	1.298	1.095	1.046	1.026	1.019	1.013	1.012	1.011	1.010		
Selected	1.283	1.096	1.046	1.026	1.015	1.015	1.013	1.012	1.007		
Cumulative	1.604	1.249	1.140	1.090	1.063	1.047	1.032	1.019	1.007		

Notes:
 Development factors are loss weighted averages, paid data uses two years

V 000034 STIP

Medical Only Paid Losses (in 000's)

Policy Year (1)	Developed to Tenth Report (2)	Medical On-Level Factor (3)	On-Level Medical Only Losses (in 000's) Developed to Tenth Report = (2) x (3) (4)	Developed Claim Counts (5)	Severity = 1,000 x (4) / (5) (6)
2004_01	27,544	1.036	28,536	43,016	663
2005_01	28,840	1.032	29,763	41,332	720
2006_01	28,353	1.032	29,260	38,176	766
2007_01	28,845	1.032	29,768	37,159	801
2008_01	26,531	1.024	27,177	33,194	819
2009_01	23,784	1.002	23,825	30,187	789
2010_01	25,480	1.000	25,480	31,971	797
2011_01	25,351	1.000	25,351	31,428	807
2012_01	25,036	1.000	25,036	29,583	846
2013_01	25,339	1.000	25,339	29,293	865
2014_01	24,587	1.000	24,587	28,981	848
2015_01	25,238	1.000	25,238	28,446	887
2016_01	24,721	1.000	24,721	27,396	902
2017_01	26,347	1.000	26,347	28,348	929
2018_01	26,702	1.000	26,702	28,098	950

15 Year Medical Only Trend

2.0%

Notes:

- (2): (3) Exhibit 2, Page 2
- (3): Section IV-A, Exhibit 1.
- (5): Section V-B, Exhibit 2.

V 000035 STIP

Medical Only Paid Losses (in 000's)
 Industrywide

Policy Year (1)	Age of Development										Developed to Tenth Report (3)
	18	30	42	54	66	78	90	102	114	126	
	(2)										
2004_01	24,717	26,986	27,384	27,426	27,459	27,520	27,497	27,511	27,524	27,544	27,544
2005_01	26,403	28,509	28,742	28,784	28,775	28,798	28,790	28,807	28,825	28,840	28,840
2006_01	25,974	27,944	28,154	28,278	28,296	28,344	28,192	28,258	28,354	28,353	28,353
2007_01	26,357	28,208	28,474	28,642	28,693	28,681	28,714	28,837	28,837	28,845	28,845
2008_01	24,281	25,926	26,165	26,213	26,321	26,367	26,412	26,528	26,536	26,531	26,531
2009_01	21,701	23,376	23,513	23,670	23,777	23,851	23,870	23,891	23,768	23,784	23,784
2010_01	23,381	25,035	25,324	25,363	25,424	25,457	25,475	25,486	25,475		25,480
2011_01	23,243	25,043	25,329	25,448	25,412	25,440	25,421	25,415			25,351
2012_01	22,799	24,519	24,895	25,047	25,033	25,077	25,097				25,036
2013_01	23,730	24,877	25,213	25,280	25,333	25,400					25,339
2014_01	22,820	24,293	24,676	24,570	24,593						24,587
2015_01	22,946	24,744	25,082	25,205							25,238
2016_01	22,503	24,303	24,680								24,721
2017_01	24,490	25,926									26,347
2018_01	24,582										26,702
	Age-to-Age Development Factors										
	18 - 30	30 - 42	42 - 54	54 - 66	66 - 78	78 - 90	90 - 102	102 - 114	114 - 126		
2004_01	1.092	1.015	1.002	1.001	1.002	0.999	1.001	1.000	1.001		
2005_01	1.080	1.008	1.001	1.000	1.001	1.000	1.001	1.001	1.001		
2006_01	1.076	1.007	1.004	1.001	1.002	0.995	1.002	1.003	1.000		
2007_01	1.070	1.009	1.006	1.002	1.000	1.001	1.004	1.000	1.000		
2008_01	1.068	1.009	1.002	1.004	1.002	1.002	1.004	1.000	1.000		
2009_01	1.077	1.006	1.007	1.005	1.003	1.001	1.001	0.995	1.001		
2010_01	1.071	1.012	1.002	1.002	1.001	1.001	1.000	1.000			
2011_01	1.077	1.011	1.005	0.999	1.001	0.999	1.000				
2012_01	1.075	1.015	1.006	0.999	1.002	1.001					
2013_01	1.048	1.013	1.003	1.002	1.003						
2014_01	1.065	1.016	0.996	1.001							
2015_01	1.078	1.014	1.005								
2016_01	1.080	1.016									
2017_01	1.059										
2 Yr Weighted Average	1.069	1.015	1.000	1.002	1.002	1.000	1.000	0.997	1.000		
5 Yr Weighted Average	1.066	1.015	1.003	1.001	1.002	1.001	1.002	1.000	1.000		
Selected	1.069	1.015	1.000	1.002	1.002	1.000	1.000	0.997	1.000		
Cumulative	1.086	1.016	1.002	1.001	1.000	0.998	0.998	0.997	1.000		

Notes:
 Development factors are loss weighted averages, paid data uses two years

V 000036 STIP

Worker Weeks by Policy Year

Policy Year (1)	Payroll (in millions of dollars)										Developed to Tenth Report (3)	State Average Weekly Wage (4)	Estimated Million Worker-Weeks = (3) / (4) (5)	
	Age of Development													
	18	30	42	54	66	78	90	102	114	126				
	(2)													
2004_01											69,408	69,408	969.11	71.62
2005_01											74,399	74,399	1,011.25	73.57
2006_01											79,901	79,901	1,056.18	75.65
2007_01									85,512		85,512	85,512	1,092.12	78.30
2008_01								85,859	85,859		85,859	85,859	1,092.79	78.57
2009_01							82,942	82,944	82,944		82,944	82,944	1,101.70	75.29
2010_01						91,313	91,311	91,311	91,311		91,311	91,311	1,144.80	79.76
2011_01					97,427	97,424	97,419	97,419			97,418	97,418	1,174.21	82.97
2012_01				99,600	99,595	99,579	99,582				99,582	99,582	1,190.50	83.65
2013_01			104,396	104,382	104,352	104,351					104,350	104,350	1,225.60	85.14
2014_01		110,264	110,244	110,230	110,227						110,216	110,216	1,265.09	87.12
2015_01	117,826	117,820	117,798	117,799							117,769	117,769	1,303.66	90.34
2016_01	121,768	121,733	121,711								121,673	121,673	1,349.36	90.17
2017_01	127,651	127,946									127,882	127,882	1,395.56	91.63
2018_01	133,812										133,884	133,884	1,445.94	92.59

Age-to-Age Development Factors

	18 - 30	30 - 42	42 - 54	54 - 66	66 - 78	78 - 90	90 - 102	102 - 114	114 - 126
2 Yr Weighted Average	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cumulative	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Notes:
 Development factors are payroll weighted average from latest two years.
 (4): Section V-G, Exhibit 1.
 For all policy years the following class codes are excluded from reported Schedule Z payrolls: 0059, 0065, 0066, 0067, 0088, 0770, 0771, 0773, 0774, 0775, 0776, 0779, 0799, 0908, 0909, 0912, 0913, 7445, 7453, and 9985.

V 000037 STIP

Class Mix Adjustment Factors

Policy Year (1)	Average Rates Based on Rates Effective 7/1/20 (2)	Class Mix Adjustment Factor = 0.795 / (2) (3)
2004_01	0.922	0.863
2005_01	0.891	0.893
2006_01	0.840	0.947
2007_01	0.801	0.993
2008_01	0.775	1.026
2009_01	0.768	1.035
2010_01	0.763	1.042
2011_01	0.762	1.044
2012_01	0.767	1.037
2013_01	0.777	1.024
2014_01	0.787	1.010
2015_01	0.790	1.006
2016_01	0.793	1.003
2017_01	0.797	0.998
2018_01	0.795	1.000

Notes:

(2): Current rates (Effective 7/1/20) averaged over class payrolls (excluding large deductibles) by Policy Year.

(3): Adjustment to 2018_01 Policy Year level.

Summary of Statewide Average Weekly Wage (SAWW) Data

Date Promulgated by DUA (1)	Period of Data Used by DUA (2)	SAWW (3)
10/1/02	4/1/01 to 4/1/02	882.57
10/1/03	4/1/02 to 4/1/03	884.46
10/1/04	4/1/03 to 4/1/04	918.78
10/1/05	4/1/04 to 4/1/05	958.58
10/1/06	4/1/05 to 4/1/06	1,000.43
10/1/07	4/1/06 to 4/1/07	1,043.54
10/1/08	4/1/07 to 4/1/08	1,093.27
10/1/09	4/1/08 to 4/1/09	1,094.70
10/1/10	4/1/09 to 4/1/10	1,088.06
10/1/11	4/1/10 to 4/1/11	1,135.82
10/1/12	4/1/11 to 4/1/12	1,173.06
10/1/13	4/1/12 to 4/1/13	1,181.28
10/1/14	4/1/13 to 4/1/14	1,214.99
10/1/15	4/1/14 to 4/1/15	1,256.47
10/1/16	4/1/15 to 4/1/16	1,291.74
10/1/17	4/1/16 to 4/1/17	1,338.05
10/1/18	4/1/17 to 4/1/18	1,383.41
10/1/19	4/1/18 to 4/1/19	1,431.66
10/1/20	4/1/19 to 4/1/20	1,487.78
15 Year Exponential Fit, Trend =		2.7%

Policy Year (4)	SAWW (5)
2004_01	969.11
2005_01	1,011.25
2006_01	1,056.18
2007_01	1,092.12
2008_01	1,092.79
2009_01	1,101.70
2010_01	1,144.80
2011_01	1,174.21
2012_01	1,190.50
2013_01	1,225.60
2014_01	1,265.09
2015_01	1,303.66
2016_01	1,349.36
2017_01	1,395.56
2018_01	1,445.94

Notes:

(5): $SAWW \text{ for Policy Year } i = [0.03125 \times SAWW \text{ during period } 4/1/(i-1) \text{ to } 4/1/i] + [0.6875 \times SAWW \text{ during period } 4/1/i \text{ to } 4/1/(i+1)] + [0.28125 \times SAWW \text{ during period } 4/1/(i+1) \text{ to } 4/1/(i+2)]$
 The DUA is the Department of Unemployment Assistance; previously this data was compiled by the DET (Division of Employment and Training).

Calculation of Expense Trend Index

Time Interval (1)	Time Index (2)	Expense Trend Index (3)	Expense Trend Factors		
			PY2017 (4)	PY2018 (5)	7/1/2022 (6)
CY2005	7/1/2005	69.61			
CY2006	7/1/2006	68.12			
CY2007	7/1/2007	75.10			
CY2008	7/1/2008	79.85			
CY2009	7/1/2009	80.18			
CY2010	7/1/2010	82.45			
CY2011	7/1/2011	79.48			
CY2012	7/1/2012	79.73			
CY2013	7/1/2013	84.48			
CY2014	7/1/2014	84.82			
CY2015	7/1/2015	90.01			
CY2016	7/1/2016	91.54			
CY2017	7/1/2017	92.59	1.023	1.063	1.210
CY2018	7/1/2018	96.77	0.978	1.017	1.158
CY2019	7/1/2019	100.00	0.947	0.984	1.121

15 Year Exponential Fit, Trend: 2.4%

PY2017	1/1/2018	94.68			1.184
PY2018	1/1/2019	98.39			1.139
7/1/2021	7/1/2022	108.93			1.029
7/1/2022	7/1/2023	112.07			

Notes:

- (1): 7/1/21 and 7/1/22 are time intervals comparable to the policy years.
- (2): Midpoint of the time interval used for determination of Expense Trend Index exponential trend rate of 2.9%.
- (3): Calendar Years: Exhibit 2, Page 2, col (17), Converted to Index with 2019 = 100.
 PY2017 - Average of indices for CY2017 and CY2018.
 PY2018 - Average of indices for CY2018 and CY2019.
 The exponential trend rate derived from an exponential regression of the Expense Trend Index for CY2013 - CY2019 is applied to the CY2019 Expense Trend Index value to derive the Expense Trend Index values for 7/1/2021 and 7/1/2022
- (4) = [(3) for PY2017] / (3)
- (5) = [(3) for PY2018] / (3)
- (6) = [(3) for 7/1/2022] / (3)

Calculation of Credibility Weighted Expense Trend

Calendar Year (1)	Expense Index (2)	7 Year Exponential Fit (3)	Difference Squared (4)
2013	84.48	83.83	0.43
2014	84.82	86.25	2.03
2015	90.01	88.74	1.62
2016	91.54	91.31	0.05
2017	92.59	93.94	1.83
2018	96.77	96.66	0.01
2019	100.00	99.45	0.30

(5)	7 Year Expense Index Trend	2.9%
(6)	n	7
(7)	s	1.12
(8)	t	2.02
(9)	m	7.00
(10)	$[1 + 1/n + 12 \times m^2/(n^3-n)]^{.5}$	1.70
(11)	Confidence Interval	3.84
(12)	Projected Value Prospective Period	111.45
(13)	CI/Projected Expense Index	0.03
(14)	Credibility - 7 Year Expense Index Trend (Z)	100%
(15)	Complement of Credibility - 15 year	2.4%
(16)	Credibility Weighted Expense Trend	2.9%

Notes:

(2): Exhibit 1.

(5): 7 Year Massachusetts Trend from seven-year exponential fit to expense trend indices.

(6): Number of data points used in the exponential fitting of the 7 Year Massachusetts Trend.

(7): $\sqrt{SSR/(n-2)}$ where SSR is the sum of squared residuals and n is the number of data points used in the exponential fitting of the data.

(8): T-value based on a two-tailed t-test with probability parameter, p, of 90% and a t-distribution with 5 (= n - 2) degrees of freedom

(9): Number of years between midpoint of data and projected point.

(11) = (7) x (8) x (10)

(12): Projected to prospective effective period using exponential fit to data.

(13) = (11) / (12)

(14): The credibility is the ratio of the target value, k, to the quotient of the confidence interval and the projected frequency, capped at 100%. Numerically, (14) = the minimum of k / (13) and 100%.

(15): Complement of credibility is based on a 15-year exponential fit, Exhibit 1.

(16) = [(5) x (14)] + [(15) x [1.0 - (14)]]

Calculation of Expense Trend Index

Economic Indices							
Calendar Year (1)	Average Weekly Earnings (2)	Food (3)	Private Transportation (4)	Phone (5)	Postage (6)	Machines & Equipment (7)	Paper (8)
2005	1,609.00	193.30	170.30	95.00	191.70	115.10	159.60
2006	1,559.00	199.10	177.50	95.90	201.90	114.70	167.40
2007	1,752.00	206.41	181.50	98.37	206.88	114.60	169.30
2008	1,865.00	215.61	192.49	100.50	213.86	122.10	184.30
2009	1,873.00	223.38	173.49	102.34	224.22	123.50	179.60
2010	1,940.00	226.20	189.26	102.09	230.14	121.00	182.10
2011	1,842.00	231.50	209.94	100.63	239.40	122.20	191.20
2012	1,847.00	238.19	215.46	100.96	247.83	121.20	191.60
2013	1,985.00	243.13	214.71	100.64	263.37	117.60	190.80
2014	1,990.00	249.00	212.77	99.93	274.08	118.80	192.70
2015	2,136.00	256.18	193.84	97.74	274.84	122.70	189.80
2016	2,180.00	262.91	188.94	97.17	276.56	123.10	186.70
2017	2,212.00	269.03	196.44	89.56	283.79	122.50	186.40
2018	2,338.00	276.13	207.10	88.00	289.73	121.10	197.60
2019	2,430.00	284.61	206.11	86.61	305.97	122.10	200.60

Economic Indices, Percentage Changes from Prior Calendar Year								
Calendar Year (9)	Average Weekly Earnings (10)	Food (11)	Private Transportation (12)	Phone (13)	Postage (14)	Machines & Equipment (15)	Paper (16)	Weighted Average (17)
2005								
2006	-3.1%	3.0%	4.2%	0.9%	5.3%	-0.3%	4.9%	-2.1%
2007	12.4%	3.7%	2.3%	2.6%	2.5%	-0.1%	1.1%	10.2%
2008	6.4%	4.5%	6.1%	2.2%	3.4%	6.5%	8.9%	6.3%
2009	0.4%	3.6%	-9.9%	1.8%	4.8%	1.1%	-2.6%	0.4%
2010	3.6%	1.3%	9.1%	-0.2%	2.6%	-2.0%	1.4%	2.8%
2011	-5.1%	2.3%	10.9%	-1.4%	4.0%	1.0%	5.0%	-3.6%
2012	0.3%	2.9%	2.6%	0.3%	3.5%	-0.8%	0.2%	0.3%
2013	7.5%	2.1%	-0.3%	-0.3%	6.3%	-3.0%	-0.4%	6.0%
2014	0.3%	2.4%	-0.9%	-0.7%	4.1%	1.0%	1.0%	0.4%
2015	7.3%	2.9%	-8.9%	-2.2%	0.3%	3.3%	-1.5%	6.1%
2016	2.1%	2.6%	-2.5%	-0.6%	0.6%	0.3%	-1.6%	1.7%
2017	1.5%	2.3%	4.0%	-7.8%	2.6%	-0.5%	-0.2%	1.2%
2018	5.7%	2.6%	5.4%	-1.7%	2.1%	-1.1%	6.0%	4.5%
2019	3.9%	3.1%	-0.5%	-1.6%	5.6%	0.8%	1.5%	3.3%

Weights							
Calendar Year (18)	Average Weekly Earnings (19)	Food (20)	Private Transportation (21)	Phone (22)	Postage (23)	Machines & Equipment (24)	Paper (25)
2005	79.8%	2.1%	2.1%	2.0%	2.0%	10.0%	2.0%
2006	80.9%	2.1%	2.1%	1.8%	1.8%	9.3%	1.8%
2007	79.9%	2.1%	2.1%	1.8%	1.8%	10.4%	1.8%
2008	78.3%	2.1%	2.1%	1.9%	1.9%	11.9%	1.8%
2009	79.5%	1.6%	1.6%	1.8%	1.8%	12.3%	1.4%
2010	80.3%	1.8%	1.8%	2.0%	2.0%	10.7%	1.4%
2011	81.8%	1.8%	1.8%	1.7%	1.7%	9.9%	1.1%
2012	82.0%	1.8%	1.8%	1.6%	1.6%	10.0%	1.1%
2013	81.2%	1.9%	1.9%	1.5%	1.5%	11.0%	0.9%
2014	80.9%	2.1%	2.1%	1.5%	1.5%	10.9%	0.9%
2015	80.7%	1.9%	1.9%	1.4%	1.4%	12.0%	0.8%
2016	80.0%	1.7%	1.7%	1.3%	1.3%	13.3%	0.7%
2017	79.0%	1.7%	1.7%	1.3%	1.3%	14.4%	0.6%
2018	79.2%	1.7%	1.7%	1.3%	1.3%	14.4%	0.6%
2019	79.9%	1.7%	1.7%	1.2%	1.2%	13.6%	0.6%

Notes:
 (2): Average Weekly Earnings, Covered Employment and Wages, Private Fire, Marine, and Casualty Insurers - Massachusetts
 Unadjusted for Seasonality
 Years CY2013 - CY2019: Bureau of Labor Statistics, Series ID ENU25000405524126 (Direct Property and Casualty Insurer Average Weekly Wage.)
 (3): Food Away From Home, Consumer Price Index, Urban Wage Earners and Clerical Workers - U.S.
 Unadjusted for Seasonality, Base: 1982 - 1984 = 100. Bureau of Labor Statistics, Series ID CWUR0000SEFV
 (4): Private Transportation, Consumer Price Index, Urban Wage Earners and Clerical Workers - U.S.
 Unadjusted for Seasonality, Base: 1982 - 1984 = 100. Bureau of Labor Statistics, Series ID CWUR0000SAT1
 (5): Telephone Services, Consumer Price Index, Urban Wage Earners and Clerical Workers - U.S.
 Unadjusted for Seasonality, Base: December 1997= 100. Bureau of Labor Statistics, Series ID CWUR0000SEED
 (6): Postage, Consumer Price Index, Urban Wage Earners and Clerical Workers - U.S.
 Unadjusted for Seasonality, Base: 1982 - 1984 = 100. Bureau of Labor Statistics, Series ID CWUR0000SEEC01
 (7): Office and Store Machines and Equipment, Producer Price Index
 Unadjusted for Seasonality, Base: 1982 = 100. Bureau of Labor Statistics, Series ID WPU1193
 (8): Paper, Producer Price Index
 Unadjusted for Seasonality, Base: 1982 - 1984 = 100. Bureau of Labor Statistics, Series ID WPU0913
 (17) Weighted average of (10)-(16) using weights for prior year from columns (19)-(25)
 (19)-(25): Section V-H, Exhibit 2, Page 3 and Page 4 for Calendar Year 2018-2019. Prior Filings for all other year

V 000042 STIP

Calendar Year 2018
 Weights for Expense Trends

Expense Component (1)	Percentage of Net Written Premium (2)	% of Total = (2) / Total (2) (3)	Corresponding Index (4)	Weights (5)
Salaries	7.21%	64.4%		
Payroll Taxes	0.46%	4.1%	Average Weekly Earnings Covered Employment and Wages; Private Fire, Marine, Casualty Massachusetts	79.2%
Employee Relations	1.19%	10.6%		
Travel & Travel Items	0.37%	3.3%	Food Away From Home-CPI-US Private Transportation-CPI-US	1.7% 1.7%
Postage & Telephone	0.28%	2.5%	Postage-CPI-US Telephone-CPI-US	1.3% 1.3%
Equipment	1.61%	14.4%	Office & Stores Machines & Equipment-PPI	14.4%
Printing & Stationery	0.07%	0.6%	Paper-PPI	0.6%
Total	11.19%	100.0%		100.0%

Notes:

(2): 2019 Best's Aggregates and Averages, Property-Casualty, Totals for Commercial Casualty Companies with Written Premium Net of Reinsurance Ceded over \$15 million.

(5) = Based on (3)

V 000043 STIP

Calendar Year 2019
 Weights for Expense Trends

Expense Component (1)	Percentage of Net Written Premium (2)	% of Total = (2) / Total (2) (3)	Corresponding Index (4)	Weights (5)
Salaries	7.27%	64.7%		
Payroll Taxes	0.49%	4.4%	Average Weekly Earnings Covered Employment and Wages; Private Fire, Marine, Casualty Massachusetts	79.9%
Employee Relations	1.22%	10.9%		
Travel & Travel Items	0.38%	3.4%	Food Away From Home-CPI-US Private Transportation-CPI-US	1.7% 1.7%
Postage & Telephone	0.28%	2.5%	Postage-CPI-US Telephone-CPI-US	1.2% 1.2%
Equipment	1.53%	13.6%	Office & Stores Machines & Equipment-PPI	13.6%
Printing & Stationary	0.07%	0.6%	Paper-PPI	0.6%
Total	11.24%	100.0%		100.0%

Notes:

(2): 2020 Best's Aggregates and Averages, Property-Casualty, Totals for Commercial Casualty Companies with Written Premium Net of Reinsurance Ceded over \$15 million.

(5) = Based on (3)

V 000044 STIP

Exposure Growth Estimate Based on Trend in Million Worker-Weeks

Policy Year (1)	Estimated Million Worker-Weeks (2)	5 Year Exponential Fit (3)	Difference Squared (4)
2004	71.62		
2005	73.57		
2006	75.65		
2007	78.30		
2008	78.57		
2009	75.29		
2010	79.76		
2011	82.97		
2012	83.65		
2013	85.14		
2014	87.12	87.93	0.65
2015	90.34	89.13	1.45
2016	90.17	90.35	0.03
2017	91.63	91.59	0.00
2018	92.59	92.85	0.06

15 Year Million Worker-Weeks Trend

1.9%

(5)	5 Year MA Trend	1.4%
(6)	n	5
(7)	s	0.86
(8)	t	2.35
(9)	m	6.49
(10)	$[1 + 1/n + 12 \times m^2/(n^3-n)]^{.5}$	2.33
(11)	Confidence Interval	4.69
(12)	Projected	98.70
(13)	CI / Projected	0.05
(14)	Credibility - 5 Year MA Trend (Z)	100%
(15)	Complement of Credibility	1.9%
(16)	Credibility-Weighted Overall Exposure Growth	1.4%

Notes:

(2): Section V-E, Exhibit 1.

(5): 5 Year Massachusetts Trend from five-year exponential fit to estimated million worker-weeks.

(6): Number of data points used in the exponential fitting of the 5 Year Massachusetts Trend.

(7): $\sqrt{SSR/(n-2)}$ where SSR is the sum of squared residuals and n is the number of data points used in the exponential fitting of the data.

(8): T-value based on a two-tailed t-test with probability parameter, p, of 90% and a t-distribution with 3 (= n - 2) degrees of freedom

(9): Number of years between midpoint of data and projected point.

(11) = (7) x (8) x (10)

(12): Million Worker-Weeks projected to prospective effective period using exponential fit to data.

(13) = (11) / (12)

(14): The credibility is the ratio of the target value, k, to the quotient of the confidence interval and the projected frequency, capped at 100%

Numerically, (14) = the minimum of k / (13) and 100%.

(15): Complement of credibility is based on a 15-year exponential fit.

(16) = [(5) x (14)] + { (15) x [1.0 - (14)] }

VI 000008 STIP

Section VI - Expenses
Subsection A - Summary
7/1/2022

Section VI - A
Exhibit 1

Summary of Expense Ratios

(1)	Commission and Other Acquisition Expense Ratio	12.6%
(2)	Average Premium Discount as a % of Standard Premium + ARAP	5.4%
(3)	Premium Tax Ratio = 2.28% x [1.0 - (2)]	2.2%
(4)	Variable Expense Ratio = (1) + (2) + (3)	20.2%
(5)	Fixed Expense Ratio	5.9%
(6)	Total Loss Adjustment Expense Ratio (LAE / Loss)	18.7%

Notes:

(1): Section VI-G, Exhibit 1.

(2): Section VI-E, Exhibit 1.

(3): 2.28% from Section VI-B, Exhibit 3.

(5): Section VI-B, Exhibit 1.

(6): Section VI-H, Exhibit 1.

Calculation of Fixed Expenses

Calendar Year (1)	General Expense Exclusive of Expense Constant Premium (2)	Total Pool Expenses for non-Large Deductible (3)	Total General Expense = (2) + (3) (4)	Projected to PY 2017			Projected to PY 2018		
				Expense Trend Factor (5)	Exposure Growth Factor (6)	Projected General Expense = (4) x (5) x (6) (7)	Expense Trend Factor (8)	Exposure Growth Factor (9)	Projected General Expense = (4) x (8) x (9) (10)
2017	39,435,028	1,327,872	40,762,901	1.023	1.007	41,967,374	1.063	1.021	44,206,848
2018	35,881,923	1,415,243	37,297,166	0.978	0.993	36,244,380	1.017	1.007	38,178,462
2019	34,884,182	1,313,173	36,197,354	0.947	0.980	33,579,442	0.984	0.993	35,371,318
Average			38,085,807			37,263,732			39,252,209

Policy Year (11)	Three Year Average Projected General Expense to PY (12)	Provision for Other Taxes (13)	Provision for Fixed Expenses = (12) + (13) (14)	Expense Trends from PYs to 7/1/2023 (15)	Trended Fixed Expenses = (14) x (15) (16)	Standard Earned Premium plus ARAP Projected to Prospective Effective Period (17)	Fixed Expense Ratio to Standard Earned Premium plus ARAP = (16) / (17) (18)
2017	37,263,732	2,133,135	39,396,867	1.184	46,633,080	793,863,444	5.9%
2018	39,252,209	2,246,964	41,499,173	1.139	47,272,117	809,418,185	5.8%
Average							5.9%

Notes:

- (2): Exhibit 2, Page 1.
- (3): Exhibit 2, Page 3.
- (5): Section V-H, Exhibit 1.
- (6): 1.4% annual growth in worker-weeks, from Section V-H, Exhibit 3; 0.5 years from CY 2017 to PY 2017, -0.5 years from CY 2018 to PY 2017, -1.5 years from CY 2019 to PY 2017.
- (8): Section V-H, Exhibit 1.
- (9): 1.4% annual growth in worker-weeks, from Section V-H, Exhibit 3; 1.5 years from CY 2017 to PY 2018, 0.5 years from CY 2018 to PY 2018, -0.5 years from CY 2019 to PY 2018.
- (13): Section VI-C, Exhibit 1.
- (15): Section V-H, Exhibit 1.
- (17): These premium amounts do not match those displayed in Section I. This is due to the exclusion of data from company groups included in the Section I data. The premium amounts displayed have been adjusted by the same development, trend, and premium level factors shown in Section I and off-balance factors shown in Section III. The ARAP premium has been adjusted from company level to DSR level premium using the policy year adjustment factors from Section III-B, Exhibit 2.

VI 000010 STIP

Section VI - Expenses
 Subsection B - Fixed Expenses
 7/1/2022

Section VI - B
 Exhibit 2
 Page 1

General Expense Exclusive of Proposed Expense Constant

	Calendar Year		
	2017	2018	2019
(1) Standard Earned Premium Including Expense Constant Premium	747,041,873	770,886,926	759,618,201
(2) ARAP Premium at Company Level	29,559,592	31,088,424	31,534,080
(3) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.051	1.053	1.056
(4) Standard Earned Premium plus Adjusted ARAP = (1) + [(2) x (3)]	778,113,893	803,628,688	792,909,490
(5) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.041	1.040	1.042
(6) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.002	1.002	0.998
(7) Adjusted Standard Earned Premium plus ARAP = (4) x (5) x (6)	811,253,735	836,927,365	824,554,604
(8) Ratio of Adjusted General Expense to Adjusted Standard Earned Premium plus ARAP	6.5%	6.0%	6.0%
(9) General Expenses = (7) x (8)	52,626,465	49,894,938	49,364,853
(10) Expense Constant Premium	30,008,841	30,483,056	30,504,577
(11) General Expense Portion of Expense Constant	51.0%	51.0%	51.0%
(12) Average Expense Constant in Effect	253.05	252.90	253.08
(13) Proposed Average Expense Constant	264.14	264.14	264.14
(14) Expense Trend Factor - Calendar Year XXXX to 7/1/23, the midpoint of the Prospective Effective Period	1.210	1.158	1.121
(15) Trend Factor to Adjust Proposed Average Expense Constant to Calendar Year XXX = 1.0 / (14)	0.826	0.863	0.892
(16) Detrended Proposed Average Expense Constant = (13) x (15)	218.23	228.08	235.69
(17) Adjusted General Expenses Generated by the Expense Constant = [(10) x (11)] x [(16) / (12)]	13,191,437	14,013,015	14,480,671
(18) General Expenses Exclusive of Expense Constant Premium = (9) - (17)	39,435,028	35,881,923	34,884,182

Notes:

- (1),(2): Aggregate Financial Policy Year Call, excludes large deductible policies.
- (3): Section III-B, Exhibit 2.
- (5): Section III-B, Exhibit 1.
- (6): Section III-C, Exhibit 1.
- (8): Page 2.
- (10): Calculated expense constant premium based on historical Unit Statistical Plan Data.
- (11): Exhibit 3.
- (12): Calculated average expense constant in effect based on historical Unit Statistical Plan Data.
- (13): Section VI-D, Exhibit 1.
- (14): Section V-H, Exhibit 1.

VI 00011 STIP

Section VI - Expenses
 Subsection B - Fixed Expenses
 7/1/2022

Section VI - B
 Exhibit 2
 Page 2

Calculation of General Expense

	Calendar Year		
	2017	2018	2019
(1) Standard Earned Premium Including Expense Constant Premium	896,751,631	931,573,495	950,622,544
(2) ARAP Premium at Company Level	35,842,348	38,295,877	38,795,384
(3) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.051	1.053	1.056
(4) Standard Earned Premium plus Adjusted ARAP = (1) + [(2) x (3)]	934,427,866	971,906,015	991,579,767
(5) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.041	1.040	1.042
(6) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.002	1.002	0.998
(7) Adjusted Standard Earned Premium plus ARAP = (4) x (5) x (6)	974,225,115	1,012,177,331	1,031,153,835
(8) Actual WCRIBMA Expenses	10,838,906	9,145,885	8,929,031
(9) General Expenses (excluding Boards & Bureaus Expenses)	52,359,600	51,196,896	52,804,609
(10) Adjusted General Expense = (8) + (9)	63,198,506	60,342,781	61,733,640
(11) Ratio of Adjusted General Expense to Adjusted Standard Earned Premium plus ARAP (including expense constants) = (10) / (7)	6.5%	6.0%	6.0%

Notes:

- (1),(2): Aggregate Financial Reconciliation Report Calls, Calendar Years 2017 - 2019, including large deductible policies.
 (3): Section III-B, Exhibit 2.
 (5): Section III-B, Exhibit 1.
 (6): Section III-C, Exhibit 1.
 (8): WCRIBMA Financial Statements and Expense Analysis Report. Excludes Workers' Compensation Bureau Pool Expenses.
 (9): Aggregate Financial Expense Calls, Calendar Years 2017 - 2019.

VI 000012 STIP

Section VI - Expenses
 Subsection B - Fixed Expenses
 7/1/2022

Section VI - B
 Exhibit 2
 Page 3

Calculation of Pool Expense

	Calendar Year		
	2017	2018	2019
(1) Administrative Expenses	520,626	484,110	548,444
(2) Other Expense Allowances	-	-	-
(3) Workers' Compensation Bureau Pool Expenses	2,294,318	2,403,510	2,121,129
(4) Total Pool Expenses = (1) + (2) + (3)	2,814,944	2,887,620	2,669,573
(5) Target Pool Expenses for Excluded Companies	1,020,960	975,596	895,450
(6) Total Pool Expenses, excluding 4 company(ies) = (4) - (5)	1,793,984	1,912,024	1,774,124
(7) Proportion of Voluntary Assessable Premium Not from Large Deductibles " u "	0.740	0.740	0.740
(8) Total Pool Expenses for Non-Large Deductibles = (6) x (7)	1,327,872	1,415,243	1,313,173

Notes:

- (1),(2): Massachusetts Workers' Compensation Assigned Risk Pool Annual Report and WCRIBMA Financial Statements and Expense Analysis Report, adjusted for non-large deductible policies.
- (3): From the WCRIB Financial Statements and Expense Analysis Report
- (7): Section I-E, Exhibit 2.

VI 000013 STIP

Section VI - Expenses
Subsection B - Fixed Expenses
7/1/2022

Section VI - B
Exhibit 3

Expense Constant Components

(1)	Portion of Expense Constant for General Expenses Loaded for Premium Taxes	52.2%
(2)	Current Premium Tax Rate	2.28%
(3)	General Expense Portion of Expense Constant = (1) x [1.0 - (2)]	51.0%
(4)	Other Acquisition Portion of Expense Constant = [1.0 - (1)] x [1.0 - (2)]	46.7%

Notes:

(1): NCCI 1991 Calendar Year Expense database.

(2): Massachusetts Department of Revenue, 2020 Form 63-23P.

2.28% is Premium Tax as % of Net Premium.

VI 000014 STIP

Section VI - Expenses
 Subsection C - Other Taxes
 7/1/2022

Section VI - C
 Exhibit 1

Calculation of Other Taxes

(1)	Calendar Year 2019 Standard Earned Premium Including Expense Constant Premium	759,618,201	
(2)	Calendar Year 2019 ARAP Premium at Company Level	31,534,080	
(3)	Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.056	
(4)	Calendar Year 2019 Standard Earned Premium plus Adjusted ARAP = (1) + [(2) x (3)]	792,909,490	
(5)	Calendar Year 2019 Other Taxes Ratio	0.29%	
(6)	Calendar Year 2019 Other Taxes = (4) x (5)	2,299,438	
		<u>PY2017</u>	<u>PY2018</u>
(7)	Other Tax Trend Factor from CY 2019 to PY XXXX	0.947	0.984
(8)	Annual Exposure Growth	1.4%	1.4%
(9)	Trend Length	-1.5	-0.5
(10)	Provision for Other Taxes = (6) x (7) x { [1.0 + (8)] ^ (9) }	2,133,135	2,246,964

Notes:

(1),(2): Based on from Aggregate Financial Policy Year Call.

(3): Section III-B, Exhibit 2.

(5): 2020 Best's Aggregates and Averages. Page 26.

(7): Section V-H, Exhibit 1.

(8): Section V-H, Exhibit 3.

(9): -1.5 years from CY 2019 to PY 2017, -0.5 years from CY 2019 to PY 2018.

VI 000015 STIP

Section VI - Expenses
 Subsection D - Expense Constant
 7/1/2022

Section VI - D
 Exhibit 1

Calculation of Expense Constant

Standard Premium Ranges		PY 2018 Adjusted Policy Count	Adjusted Policy Distribution	Current Expense Constant	Trend Factor from 7/1/22 to 7/1/23	Selected Trend Factor	Proposed Expense Constant = (5) x (7) (8)
Unadjusted	Adjusted						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Less than \$200	Less Than \$183	36,531	30%	\$159.00	1.029	1.000	\$159.00
\$200 to \$1,000	\$183 to \$917	27,686	23%	\$250.00	1.029	1.000	\$250.00
\$1,000 or more	\$917 or more	57,300	47%	\$338.00	1.029	1.000	\$338.00
Total		121,517	100%	\$264.14			\$264.14

Notes:

Risk sizes in terms of Massachusetts Standard Premium.

(2): Instead of projecting the premiums for all policies forward to the prospective effective period, the end points of the Standard Premium Ranges are adjusted. This is done by dividing the end points by the Premium Adjustment Factor, 1.09, from Section III-E, Exhibit 1.

(3): Unit Statistical Plan Data PY 2018 (excluding Large Deductible policies).

(4) = (3) / Total (3)

TOTAL (5) = (5) weighted by (4)

(6): Section V-H, Exhibit 1.

Total (8) = (8) weighted by (4)

VI 000016 STIP

Section VI - Expenses
Subsection E - Expenses Net of Premium Discount
7/1/2022

Section VI - E
Exhibit 1

Calculation of Average Premium Discount

	<u>Elected Premium Discount Table</u>	
	<u>Type A</u>	<u>Type B</u>
(1) Average Premium Discount as a % of Standard Premium	7.6%	4.0%
(2) Percentage of Voluntary Written Premium by Discount Type	74.7%	25.3%
(3) Weighted Average Premium Discount as a % of Standard Premium in Voluntary Market = (1) weighted by (2)	6.7%	
(4) Voluntary Market Share	85.3%	
(5) Average Premium Discount in Total Market = (3) x (4)	5.7%	
(6) Average ARAP Surcharge for Prospective Effective Period as a % of Standard Premium	5.4%	
(7) Average Premium Discount as a % of Standard Premium + ARAP = (5) / [1.0 + (6)]	5.4%	

Notes:

(1): Type "A" - Exhibit 2, Total (10).

Type "B" - Exhibit 3, Total (10).

(2): Exhibit 4.

(4): Special Bulletin 10/27/2021 Market Share is estimated using Standard Premium plus ARAP.

(6): Section IX-K, Exhibit 3.

VI 000017 STIP

Section VI - Expenses
 Subsection E - Expenses Net of Premium Discount
 7/1/2022

Section VI - E
 Exhibit 2

Average Premium Discount Voluntary Market Risks - Type "A" Discounts

Intrastate Intervals					
Layer of Standard Premium (1)	Standard Premium Ranges - PY 2018				Total = [Sum of (2)] (3)
	0 - 10,000	10,000 - 200,000	200,000 - 1,750,000	1,750,000 & Over	
0 - 10,000	107,693,795	78,270,000	3,000,000	70,000	189,033,795
10,000 - 200,000		189,602,678	57,000,000	1,330,000	247,932,678
200,000 - 1,750,000			66,186,199	10,850,000	77,036,199
1,750,000 - & Over				8,665,140	8,665,140
Total	107,693,795	267,872,678	126,186,199	20,915,140	522,667,812

Interstate Intervals					
Layer of Standard Premium (4)	Standard Premium Ranges - PY 2018				Total Premium in Layer (6)
	0 - 10,000	10,000 - 200,000	200,000 - 1,750,000	1,750,000 & Over	
0 - 10,000	116,614	4,082,024	1,700,524	210,839	6,110,001
10,000 - 200,000		24,980,740	32,309,956	4,005,940	61,296,636
200,000 - 1,750,000			59,293,056	32,680,039	91,973,095
1,750,000 - & Over				75,548,766	75,548,766
Total	116,614	29,062,764	93,303,536	112,445,584	234,928,498

Layer of Standard Premium (7)	Total = (3) + (6) (8)	Proportion of Premium in Layer (9)	% Premium Discount Type A Company (10)
0 - 10,000	195,143,796	25.8%	0.0%
10,000 - 200,000	309,229,314	40.8%	9.1%
200,000 - 1,750,000	169,009,294	22.3%	11.3%
1,750,000 - & Over	84,213,906	11.1%	12.3%
Total	757,596,310	100.0%	7.6%

Notes:

Unit Statistical Plan Data.

Layers correspond to the Premium Discount layers.

For interstate rated policies, the ratio of Massachusetts Standard Premium to Countrywide Standard Premium is assumed to equal the ratio of Massachusetts Expected Losses (used in an interstate experience modification) to Countrywide Expected Losses.

(9) = (8) / Total (8)

Total (10) = (10) weighted by (9)

VI 000018 STIP

Section VI - Expenses
 Subsection E - Expenses Net of Premium Discount
 7/1/2022

Section VI - E
 Exhibit 3

Average Premium Discount Voluntary Market Risks - Type "B" Discounts

Intrastate Intervals					
Layer of Standard Premium (1)	Standard Premium Ranges - PY 2018				Total = [Sum of (2)] (3)
	0 - 10,000	10,000 - 200,000	200,000 - 1,750,000	1,750,000 & Over	
0 - 10,000	57,441,701	29,350,000	740,000	10,000	87,541,701
10,000 - 200,000		50,889,024	14,060,000	190,000	65,139,024
200,000 - 1,750,000			15,677,298	1,550,000	17,227,298
1,750,000 - & Over				2,382,204	2,382,204
Total	57,441,701	80,239,024	30,477,298	4,132,204	172,290,227

Interstate Intervals					
Layer of Standard Premium (4)	Standard Premium Ranges - PY 2018				Total Premium in Layer (6)
	0 - 10,000	10,000 - 200,000	200,000 - 1,750,000	1,750,000 & Over	
0 - 10,000	49,987	1,466,618	466,024	56,060	2,038,689
10,000 - 200,000		8,508,894	8,854,459	1,065,145	18,428,498
200,000 - 1,750,000			15,951,404	8,689,339	24,640,743
1,750,000 - & Over				43,817,821	43,817,821
Total	49,987	9,975,512	25,271,887	53,628,365	88,925,751

Layer of Standard Premium (7)	Total = (3) + (6) (8)	Proportion of Premium in Layer (9)	% Premium Discount Type B Company (10)
0 - 10,000	89,580,390	34.3%	0.0%
10,000 - 200,000	83,567,522	32.0%	5.1%
200,000 - 1,750,000	41,868,041	16.0%	6.5%
1,750,000 - & Over	46,200,025	17.7%	7.5%
Total	261,215,978	100.0%	4.0%

Notes:

Unit Statistical Plan Data.

Layers correspond to the Premium Discount layers.

For interstate rated policies, the ratio of Massachusetts Standard Premium to Countrywide Standard Premium is assumed to equal the ratio of Massachusetts Expected Losses (used in an interstate experience modification) to Countrywide Expected Losses.

(9) = (8) / Total (8)

Total (10) = (10) weighted by (9)

VI 000019 STIP

Section VI - Expenses

Subsection E - Expenses Net of Premium Discount

7/1/2022

Section VI - E

Exhibit 4

Page 1

Calendar Year 2019 Direct Written Premiums by Premium Discount Election - Type "A" or Type "B"

NAIC Company Number	Company Name	Elected Discount Schedule	Direct Written Premium	Residual Market Written Premium	Adjusted Voluntary Written Premium		
					Total Written Premium	Type A Written Premium	Type B Written Premium
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
33758	ASSOCIATED INDUSTRIES OF MASS. MUTUAL INS. CO.	A	95,375,511	53,289,843	42,085,668	42,085,668	0
23841	NEW HAMPSHIRE INSURANCE COMPANY	B	72,941,293	0	72,941,293	0	72,941,293
22667	ACE AMERICAN INSURANCE COMPANY	A	58,247,324	26,043,989	32,203,335	32,203,335	0
25682	TRAVELERS INDEMNITY COMPANY OF CONNECTICUT	A	49,889,231	0	49,889,231	49,889,231	0
11104	ASSOCIATED EMPLOYERS INSURANCE COMPANY	B	38,267,233	0	38,267,233	0	38,267,233
25666	TRAVELERS INDEMNITY COMPANY OF AMERICA	A	38,175,420	32,641,589	5,533,831	5,533,831	0
44326	ATLANTIC CHARTER INSURANCE COMPANY	A	33,909,088	10,334,548	23,574,540	23,574,540	0
30104	HARTFORD UNDERWRITERS INSURANCE COMPANY	A	33,544,242	20,576,511	12,967,731	12,967,731	0
42390	AMGUARD INSURANCE COMPANY	A	31,756,346	18,286,747	13,469,599	13,469,599	0
40142	AMERICAN ZURICH INSURANCE COMPANY	A	31,095,561	11,541,821	19,553,740	19,553,740	0
25658	TRAVELERS INDEMNITY COMPANY	A	29,274,227	-7,555	29,281,782	29,281,782	0
33600	LM INSURANCE CORPORATION	A	28,697,532	25,976,466	2,721,066	2,721,066	0
23035	LIBERTY MUTUAL FIRE INSURANCE COMPANY	A	27,891,821	0	27,891,821	27,891,821	0
31470	NORGUARD INSURANCE COMPANY	A	27,388,611	0	27,388,611	27,388,611	0
16535	ZURICH AMERICAN INSURANCE COMPANY	A	25,333,303	0	25,333,303	25,333,303	0
29459	TWIN CITY FIRE INSURANCE COMPANY	B	24,600,153	0	24,600,153	0	24,600,153
25674	TRAVELERS PROPERTY CASUALTY COMPANY OF AMERICA	A	23,748,931	22,915,420	833,511	833,511	0
11984	INDEPENDENCE CASUALTY INSURANCE COMPANY	A	22,874,807	0	22,874,807	22,874,807	0
42404	LIBERTY INSURANCE CORPORATION	A	20,914,210	0	20,914,210	20,914,210	0
19682	HARTFORD FIRE INSURANCE COMPANY	B	19,150,422	0	19,150,422	0	19,150,422
25011	WESCO INSURANCE COMPANY	A	18,780,426	0	18,780,426	18,780,426	0
22357	HARTFORD ACCIDENT AND INDEMNITY COMPANY	A	17,636,474	0	17,636,474	17,636,474	0
19429	INSURANCE COMPANY OF THE STATE OF PENNSYLVANIA	A	16,372,529	0	16,372,529	16,372,529	0
20281	FEDERAL INSURANCE COMPANY	A	15,215,194	0	15,215,194	15,215,194	0
31325	ACADIA INSURANCE COMPANY	B	14,862,261	873,829	13,988,432	0	13,988,432
12886	MASSACHUSETTS EMPLOYERS INSURANCE COMPANY	A	14,233,288	0	14,233,288	14,233,288	0
37478	HARTFORD INSURANCE COMPANY OF THE MIDWEST	B	14,217,628	0	14,217,628	0	14,217,628
24074	OHIO CASUALTY INSURANCE COMPANY (THE)	A	13,830,568	0	13,830,568	13,830,568	0
24147	OLD REPUBLIC INSURANCE COMPANY	A	13,381,705	0	13,381,705	13,381,705	0
12262	PENNSYLVANIA MANUFACTURERS' ASSOCIATION INS. CO.	A	11,814,503	0	11,814,503	11,814,503	0
29424	HARTFORD CASUALTY INSURANCE COMPANY	B	11,218,503	0	11,218,503	0	11,218,503
41360	ARBELLA PROTECTION INSURANCE COMPANY, INC.	A	10,988,191	0	10,988,191	10,988,191	0
13083	NEW HAMPSHIRE EMPLOYERS INSURANCE COMPANY	A	10,861,937	0	10,861,937	10,861,937	0
11030	MEMIC INDEMNITY COMPANY	A	10,281,450	0	10,281,450	10,281,450	0
12777	CHUBB INDEMNITY INSURANCE COMPANY	A	8,590,690	0	8,590,690	8,590,690	0
23965	NORFOLK & DEDHAM MUTUAL FIRE INSURANCE COMPANY	A	7,910,464	0	7,910,464	7,910,464	0
22292	HANOVER INSURANCE COMPANY (THE)	A	7,378,545	0	7,378,545	7,378,545	0
21113	UNITED STATES FIRE INSURANCE COMPANY	A	7,352,347	0	7,352,347	7,352,347	0
28258	CONTINENTAL INDEMNITY COMPANY	B	7,096,473	0	7,096,473	0	7,096,473
20443	CONTINENTAL CASUALTY COMPANY	B	7,020,304	2,844,619	4,175,685	0	4,175,685
39926	SELECTIVE INSURANCE COMPANY OF THE SOUTHEAST	A	6,955,867	0	6,955,867	6,955,867	0
11150	ARCH INSURANCE COMPANY	A	6,883,405	0	6,883,405	6,883,405	0
18023	STAR INSURANCE COMPANY	A	6,715,865	0	6,715,865	6,715,865	0
20346	PACIFIC INDEMNITY COMPANY	A	6,648,870	0	6,648,870	6,648,870	0
20052	NATIONAL LIABILITY & FIRE INSURANCE COMPANY	A	6,615,395	0	6,615,395	6,615,395	0
21458	EMPLOYERS INSURANCE COMPANY OF WAUSAU	B	6,330,370	0	6,330,370	0	6,330,370
13374	ARROW MUTUAL LIABILITY INSURANCE COMPANY	B	6,211,179	0	6,211,179	0	6,211,179
13803	FARM FAMILY CASUALTY INSURANCE COMPANY	A	6,092,808	0	6,092,808	6,092,808	0
19445	NATIONAL UNION FIRE INS. CO. OF PITTSBURGH PA	B	6,050,709	0	6,050,709	0	6,050,709
19038	TRAVELERS CASUALTY AND SURETY COMPANY	A	5,935,045	0	5,935,045	5,935,045	0
13935	FEDERATED MUTUAL INSURANCE COMPANY	A	5,852,900	0	5,852,900	5,852,900	0
25224	GREAT DIVIDE INSURANCE COMPANY	A	5,828,262	0	5,828,262	5,828,262	0
42376	TECHNOLOGY INSURANCE COMPANY INC.	A	5,408,741	0	5,408,741	5,408,741	0
25976	UTICA MUTUAL INSURANCE COMPANY	A	5,355,666	0	5,355,666	5,355,666	0

VI 00020 STIP

Section VI - Expenses
 Subsection E - Expenses Net of Premium Discount
 7/1/2022

Section VI - E
 Exhibit 4
 Page 2

Calendar Year 2019 Direct Written Premiums by Premium Discount Election - Type "A" or Type "B"

NAIC Company Number (1)	Company Name (2)	Elected Discount Schedule (3)	Direct Written Premium (4)	Residual Market Written Premium (5)	Adjusted Voluntary Written Premium		
					Total Written Premium (6)	Type A Written Premium (7)	Type B Written Premium (8)
25623	PHOENIX INSURANCE COMPANY, (THE)	A	5,153,817	0	5,153,817	5,153,817	0
38318	STARR INDEMNITY & LIABILITY COMPANY	A	4,825,776	0	4,825,776	4,825,776	0
23817	ILLINOIS NATIONAL INSURANCE COMPANY	B	4,777,052	0	4,777,052	0	4,777,052
24988	SENTRY INSURANCE A MUTUAL COMPANY	A	4,686,597	0	4,686,597	4,686,597	0
21415	EMPLOYERS MUTUAL CASUALTY COMPANY	A	4,648,518	0	4,648,518	4,648,518	0
14788	NGM INSURANCE COMPANY	A	4,420,351	0	4,420,351	4,420,351	0
12416	PROTECTIVE INSURANCE COMPANY	A	4,154,540	0	4,154,540	4,154,540	0
15105	SAFETY NATIONAL CASUALTY CORPORATION	A	4,119,150	0	4,119,150	4,119,150	0
31534	CITIZENS INSURANCE COMPANY OF AMERICA	A	4,094,354	0	4,094,354	4,094,354	0
22306	MASSACHUSETTS BAY INSURANCE COMPANY	A	4,089,808	0	4,089,808	4,089,808	0
12831	STATE NATIONAL INSURANCE COMPANY INC.	A	4,064,386	0	4,064,386	4,064,386	0
21784	FIREMEN'S INSURANCE COMPANY OF WASHINGTON, D.C.	B	3,905,049	0	3,905,049	0	3,905,049
16608	NEW YORK MARINE AND GENERAL INSURANCE COMPANY	A	3,645,918	0	3,645,918	3,645,918	0
24139	OLD REPUBIC GENERAL INSURANCE CORPORATION	A	3,616,786	0	3,616,786	3,616,786	0
20478	NATIONAL FIRE INSURANCE COMPANY OF HARTFORD	B	3,503,694	0	3,503,694	0	3,503,694
25615	CHARTER OAK FIRE INSURANCE COMPANY, (THE)	A	3,349,357	0	3,349,357	3,349,357	0
14164	MEMIC CASUALTY COMPANY	A	3,330,277	0	3,330,277	3,330,277	0
10664	ENDEAVOUR INSURANCE COMPANY	B	3,298,041	0	3,298,041	0	3,298,041
21261	ELECTRIC INSURANCE COMPANY	A	3,288,807	0	3,288,807	3,288,807	0
24082	OHIO SECURITY INSURANCE COMPANY	A	3,270,308	0	3,270,308	3,270,308	0
20427	AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA	B	3,246,787	0	3,246,787	0	3,246,787
21105	NORTH RIVER INSURANCE COMPANY	A	3,214,408	0	3,214,408	3,214,408	0
21172	VANLINER INSURANCE COMPANY	A	3,211,630	0	3,211,630	3,211,630	0
10017	ARBELLA INDEMNITY INSURANCE COMPANY, INC.	A	3,191,432	0	3,191,432	3,191,432	0
10052	CHUBB NATIONAL INSURANCE COMPANY	A	3,105,395	0	3,105,395	3,105,395	0
20494	TRANSPORTATION INSURANCE COMPANY	B	2,908,739	0	2,908,739	0	2,908,739
23809	GRANITE STATE INSURANCE COMPANY	B	2,747,964	-532	2,748,496	0	2,748,496
35289	CONTINENTAL INSURANCE COMPANY, (THE)	B	2,695,995	0	2,695,995	0	2,695,995
25844	UNION INSURANCE COMPANY	B	2,695,431	0	2,695,431	0	2,695,431
27855	ZURICH AMERICAN INSURANCE COMPANY OF ILLINOIS	A	2,603,610	0	2,603,610	2,603,610	0
19259	SELECTIVE INSURANCE COMPANY OF SOUTH CAROLINA	A	2,524,289	0	2,524,289	2,524,289	0
37257	PRAETORIAN INSURANCE COMPANY	A	2,361,758	0	2,361,758	2,361,758	0
12475	REPUBLIC FRANKLIN INSURANCE COMPANY	A	2,353,765	0	2,353,765	2,353,765	0
11000	SENTINEL INSURANCE COMPANY, LTD.	A	2,275,292	0	2,275,292	2,275,292	0
16109	STARR SPECIALTY INSURANCE COMPANY	A	2,217,597	0	2,217,597	2,217,597	0
35408	IMPERIUM INSURANCE COMPANY	A	2,207,864	0	2,207,864	2,207,864	0
36064	HANOVER AMERICAN INSURANCE COMPANY (THE)	A	2,199,095	0	2,199,095	2,199,095	0
23329	MERCHANTS MUTUAL INSURANCE COMPANY	A	2,045,921	0	2,045,921	2,045,921	0
10687	UTICA NATIONAL ASSURANCE COMPANY	A	2,020,505	0	2,020,505	2,020,505	0
31003	TRI-STATE INSURANCE COMPANY OF MINNESOTA	A	1,995,594	0	1,995,594	1,995,594	0
20303	GREAT NORTHERN INSURANCE COMPANY	A	1,983,704	0	1,983,704	1,983,704	0
31232	WORK FIRST CASUALTY COMPANY	A	1,983,572	0	1,983,572	1,983,572	0
10120	EVEREST NATIONAL INSURANCE COMPANY	B	1,962,677	0	1,962,677	0	1,962,677
25402	EMPLOYERS ASSURANCE COMPANY	A	1,899,991	0	1,899,991	1,899,991	0
37885	XL SPECIALTY INSURANCE COMPANY	A	1,893,931	0	1,893,931	1,893,931	0
25984	GRAPHIC ARTS MUTUAL INSURANCE COMPANY	A	1,872,659	0	1,872,659	1,872,659	0
20508	VALLEY FORGE INSURANCE COMPANY	B	1,856,456	0	1,856,456	0	1,856,456
41840	ALLMERICA FINANCIAL BENEFIT INSURANCE COMPANY	A	1,795,856	0	1,795,856	1,795,856	0
29939	MAIN STREET AMERICA ASSURANCE COMPANY	A	1,793,937	0	1,793,937	1,793,937	0
10166	ACCIDENT FUND INSURANCE COMPANY OF AMERICA	A	1,770,490	0	1,770,490	1,770,490	0
14702	EASTGUARD INSURANCE COMPANY	A	1,766,567	0	1,766,567	1,766,567	0
20044	BERKSHIRE HATHAWAY HOMESTATE INSURANCE COMPANY	A	1,757,284	0	1,757,284	1,757,284	0
10346	EMPLOYERS PREFERRED INSURANCE COMPANY	A	1,738,700	0	1,738,700	1,738,700	0
13706	DORCHESTER MUTUAL INSURANCE COMPANY	A	1,688,671	0	1,688,671	1,688,671	0

VI 00021 STIP

Section VI - Expenses
 Subsection E - Expenses Net of Premium Discount
 7/1/2022

Section VI - E
 Exhibit 4
 Page 3

Calendar Year 2019 Direct Written Premiums by Premium Discount Election - Type "A" or Type "B"

NAIC Company Number	Company Name	Elected Discount Schedule	Direct Written Premium	Residual Market Written Premium	Adjusted Voluntary Written Premium		
					Total Written Premium	Type A Written Premium	Type B Written Premium
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
24554	XL INSURANCE AMERICA, INC.	A	1,638,886	0	1,638,886	1,638,886	0
11149	MAINE EMPLOYERS' MUTUAL INSURANCE COMPANY	B	1,625,685	0	1,625,685	0	1,625,685
33588	FIRST LIBERTY INSURANCE CORPORATION (THE)	A	1,584,331	0	1,584,331	1,584,331	0
21423	UNION INSURANCE COMPANY OF PROVIDENCE	A	1,560,438	0	1,560,438	1,560,438	0
19801	ARGONAUT INSURANCE COMPANY	A	1,552,841	0	1,552,841	1,552,841	0
41343	HDI GLOBAL INSURANCE COMPANY	A	1,481,264	0	1,481,264	1,481,264	0
40045	STARNET INSURANCE COMPANY	A	1,426,296	0	1,426,296	1,426,296	0
18767	CHURCH MUTUAL INSURANCE COMPANY	B	1,419,098	0	1,419,098	0	1,419,098
40460	SAGAMORE INSURANCE COMPANY	A	1,405,916	0	1,405,916	1,405,916	0
38911	BERKLEY NATIONAL INSURANCE COMPANY	A	1,402,289	0	1,402,289	1,402,289	0
28460	SENTRY CASUALTY COMPANY	A	1,364,028	0	1,364,028	1,364,028	0
26247	AMERICAN GUARANTEE AND LIABILITY INSURANCE COMPANY	A	1,336,955	0	1,336,955	1,336,955	0
20230	CENTRAL MUTUAL INSURANCE COMPANY	B	1,317,553	0	1,317,553	0	1,317,553
42552	NOVA CASUALTY COMPANY	A	1,226,039	0	1,226,039	1,226,039	0
11126	SOMPO JAPAN INSURANCE COMPANY OF AMERICA	A	1,184,610	0	1,184,610	1,184,610	0
31348	CRUM & FORSTER INDEMNITY COMPANY	B	1,144,137	0	1,144,137	0	1,144,137
25496	STARSTONE NATIONAL INSURANCE COMPANY	A	1,134,974	0	1,134,974	1,134,974	0
11512	EMPLOYERS COMPENSATION INSURANCE COMPANY	A	1,118,797	0	1,118,797	1,118,797	0
24414	GENERAL CASUALTY COMPANY OF WISCONSIN	A	1,059,143	0	1,059,143	1,059,143	0
23434	MIDDLESEX INSURANCE COMPANY	A	1,040,349	0	1,040,349	1,040,349	0
20397	VIGILANT INSURANCE COMPANY	A	1,005,835	0	1,005,835	1,005,835	0
27154	ATLANTIC SPECIALTY INSURANCE COMPANY	A	999,047	0	999,047	999,047	0
38997	SOMPO AMERICAN FIRE AND MARINE INSURANCE COMPANY	A	986,465	0	986,465	986,465	0
23442	PATRIOT GENERAL INSURANCE COMPANY	A	967,787	0	967,787	967,787	0
16045	EVEREST PREMIER INSURANCE COMPANY	A	960,773	0	960,773	960,773	0
28932	MARKEL AMERICAN INSURANCE COMPANY	A	949,963	0	949,963	949,963	0
11673	REDWOOD FIRE AND CASUALTY INSURANCE COMPANY	A	892,797	0	892,797	892,797	0
32620	NATIONAL INTERSTATE INSURANCE COMPANY	A	886,979	0	886,979	886,979	0
38970	MARKEL INSURANCE COMPANY	A	866,837	0	866,837	866,837	0
19410	COMMERCE AND INDUSTRY INSURANCE COMPANY	B	835,835	0	835,835	0	835,835
22136	GREAT AMERICAN INSURANCE COMPANY OF NEW YORK	A	790,353	0	790,353	790,353	0
15954	AMTRUST INSURANCE COMPANY	A	708,664	0	708,664	708,664	0
28304	FEDERATED SERVICE INSURANCE COMPANY	A	701,963	0	701,963	701,963	0
19879	SECURITY NATIONAL INSURANCE COMPANY	A	695,006	0	695,006	695,006	0
10340	STONINGTON INSURANCE COMPANY	A	678,937	0	678,937	678,937	0
15067	QUINCY MUTUAL FIRE INSURANCE COMPANY	A	667,791	0	667,791	667,791	0
12901	MERCHANTS PREFERRED INSURANCE COMPANY	A	662,978	0	662,978	662,978	0
10804	CONTINENTAL WESTERN INSURANCE COMPANY	B	659,832	0	659,832	0	659,832
20362	MITSUI SUMITOMO INSURANCE COMPANY OF AMERICA	A	640,105	0	640,105	640,105	0
11991	NATIONAL CASUALTY COMPANY	A	625,076	0	625,076	625,076	0
43478	UTICA NATIONAL INSURANCE COMPANY OF TEXAS	A	583,691	0	583,691	583,691	0
13978	FLORISTS' MUTUAL INSURANCE COMPANY	A	576,617	0	576,617	576,617	0
12304	ACCIDENT FUND GENERAL INSURANCE COMPANY	A	555,771	0	555,771	555,771	0
10391	BERKSHIRE HATHAWAY DIRECT INSURANCE COMPANY	A	555,388	0	555,388	555,388	0
13714	PHARMACISTS MUTUAL INSURANCE COMPANY	A	548,929	0	548,929	548,929	0
20222	ALL AMERICA INSURANCE COMPANY	A	538,347	0	538,347	538,347	0
44393	WEST AMERICAN INSURANCE COMPANY	A	496,458	0	496,458	496,458	0
41106	TRIUMPHE CASUALTY COMPANY	A	478,619	0	478,619	478,619	0
28886	TRANSGUARD INSURANCE COMPANY OF AMERICA, INC.	A	476,893	0	476,893	476,893	0
10945	TOKIO MARINE AMERICA INSURANCE COMPANY	A	469,196	0	469,196	469,196	0
21180	SENTRY SELECT INSURANCE COMPANY	A	444,955	0	444,955	444,955	0
26832	GREAT AMERICAN ALLIANCE INSURANCE COMPANY	A	437,846	0	437,846	437,846	0
26182	HARLEYSVILLE WORCESTER INSURANCE COMPANY	A	436,860	0	436,860	436,860	0
27626	FIRSTCOMP INSURANCE COMPANY	A	431,217	0	431,217	431,217	0

VI 00022 STIP

Section VI - Expenses
 Subsection E - Expenses Net of Premium Discount
 7/1/2022

Section VI - E
 Exhibit 4
 Page 4

Calendar Year 2019 Direct Written Premiums by Premium Discount Election - Type "A" or Type "B"

NAIC Company Number (1)	Company Name (2)	Elected Discount Schedule (3)	Direct Written Premium (4)	Residual Market Written Premium (5)	Adjusted Voluntary Written Premium		
					Total Written Premium (6)	Type A Written Premium (7)	Type B Written Premium (8)
14923	PATRONS MUTUAL INSURANCE COMPANY OF CONNECTICUT	A	426,925	0	426,925	426,925	0
29157	UNITED WISCONSIN INSURANCE COMPANY	A	425,376	0	425,376	425,376	0
22551	MITSUI SUMITOMO INSURANCE USA INC.	A	423,190	0	423,190	423,190	0
23396	AMERISURE MUTUAL INSURANCE COMPANY	B	387,710	0	387,710	0	387,710
15032	GUIDEONE MUTUAL INSURANCE COMPANY	A	385,084	0	385,084	385,084	0
10510	CAROLINA CASUALTY INSURANCE COMPANY	A	359,159	0	359,159	359,159	0
10800	PREMIER GROUP INSURANCE COMPANY	B	356,257	0	356,257	0	356,257
14190	OBI NATIONAL INSURANCE COMPANY	A	338,791	0	338,791	338,791	0
24066	AMERICAN FIRE AND CASUALTY COMPANY	A	333,754	0	333,754	333,754	0
16044	EVEREST DENALI INSURANCE COMPANY	A	316,086	0	316,086	316,086	0
10724	EASTERN ALLIANCE INSURANCE COMPANY	A	312,472	0	312,472	312,472	0
21849	AMERICAN AUTOMOBILE INSURANCE COMPANY	A	305,609	0	305,609	305,609	0
10665	AMERITRUST INSURANCE CORPORATION	A	304,997	0	304,997	304,997	0
41394	BENCHMARK INSURANCE COMPANY	A	301,838	0	301,838	301,838	0
10677	CINCINNATI INSURANCE COMPANY	A	289,228	0	289,228	289,228	0
21881	NATIONAL SURETY CORPORATION	A	288,360	0	288,360	288,360	0
16024	FEDERATED RESERVE INSURANCE COMPANY	A	265,573	0	265,573	265,573	0
31925	FALLS LAKE NATIONAL INSURANCE COMPANY	A	257,446	0	257,446	257,446	0
11371	GREAT WEST CASUALTY COMPANY	A	255,220	0	255,220	255,220	0
19828	ARGONAUT-MIDWEST INSURANCE COMPANY	A	254,830	0	254,830	254,830	0
41238	TRANS PACIFIC INSURANCE COMPANY	A	236,945	0	236,945	236,945	0
23582	HARLEYSVILLE INSURANCE COMPANY	A	233,280	0	233,280	233,280	0
15563	CLEAR SPRING PROPERTY AND CASUALTY COMPANY	A	229,938	0	229,938	229,938	0
28665	CINCINNATI CASUALTY COMPANY	A	207,861	0	207,861	207,861	0
13269	ZENITH INSURANCE COMPANY	A	206,033	0	206,033	206,033	0
21873	FIREMAN'S FUND INSURANCE COMPANY	A	201,663	0	201,663	201,663	0
26662	MILWAUKEE CASUALTY INSURANCE CO.	A	200,879	0	200,879	200,879	0
25135	STATE AUTOMOBILE MUTUAL INSURANCE COMPANY	A	185,980	0	185,980	185,980	0
13528	BROTHERHOOD MUTUAL INSURANCE COMPANY	B	179,547	0	179,547	0	179,547
25127	STATE AUTO PROPERTY & CASUALTY INSURANCE COMPANY	A	178,054	0	178,054	178,054	0
31895	AMERICAN INTERSTATE INSURANCE COMPANY	A	175,785	0	175,785	175,785	0
18279	BANKERS STANDARD INSURANCE COMPANY	A	174,917	0	174,917	174,917	0
24767	ST. PAUL FIRE & MARINE INSURANCE COMPANY	A	160,365	0	160,365	160,365	0
21857	AMERICAN INSURANCE COMPANY, (THE)	A	152,096	0	152,096	152,096	0
35696	HARLEYSVILLE PREFERRED INSURANCE COMPANY	A	151,250	0	151,250	151,250	0
27847	INSURANCE COMPANY OF THE WEST	A	145,433	0	145,433	145,433	0
12866	T.H.E INSURANCE COMPANY	B	139,459	0	139,459	0	139,459
13056	RLI INSURANCE COMPANY	A	137,051	0	137,051	137,051	0
22322	GREENWICH INSURANCE COMPANY	A	130,192	0	130,192	130,192	0
24198	PEERLESS INSURANCE COMPANY	A	124,119	0	124,119	124,119	0
23280	CINCINNATI INDEMNITY COMPANY	A	121,744	0	121,744	121,744	0
10642	CHEROKEE INSURANCE COMPANY	A	117,646	0	117,646	117,646	0
28223	NATIONWIDE AGRIBUSINESS INSURANCE COMPANY	B	117,470	0	117,470	0	117,470
19488	AMERISURE INSURANCE COMPANY	B	115,326	0	115,326	0	115,326
11123	SAFETY FIRST INSURANCE COMPANY	A	102,388	0	102,388	102,388	0
15645	OBI AMERICA INS CO	A	92,775	0	92,775	92,775	0
27740	NORTH POINTE INSURANCE COMPANY	A	90,585	0	90,585	90,585	0
23043	LIBERTY MUTUAL INSURANCE COMPANY	B	79,058	16,763,985	0	0	0
34630	OAK RIVER INSURANCE COMPANY	A	56,149	0	56,149	56,149	0
40517	ADVANTAGE WORKERS COMPENSATION INSURANCE COMPANY	A	55,757	0	55,757	55,757	0
15911	AMERICAN MINING INSURANCE COMPANY	A	55,635	0	55,635	55,635	0
19984	ACIG INSURANCE COMPANY	A	55,294	0	55,294	55,294	0
19380	AMERICAN HOME ASSURANCE COMPANY	B	55,230	0	55,230	0	55,230
29580	BERKLEY REGIONAL INSURANCE COMPANY	A	52,033	0	52,033	52,033	0

VI 00023 STIP

Section VI - Expenses
 Subsection E - Expenses Net of Premium Discount
 7/1/2022

Section VI - E
 Exhibit 4
 Page 5

Calendar Year 2019 Direct Written Premiums by Premium Discount Election - Type "A" or Type "B"

NAIC Company Number (1)	Company Name (2)	Elected Discount Schedule (3)	Direct Written Premium (4)	Residual Market Written Premium (5)	Adjusted Voluntary Written Premium		
					Total Written Premium (6)	Type A Written Premium (7)	Type B Written Premium (8)
18333	PEERLESS INDEMNITY INSURANCE COMPANY	A	36,584	0	36,584	36,584	0
25143	STATE FARM FIRE AND CASUALTY COMPANY	A	32,235	0	32,235	32,235	0
12305	ACCIDENT FUND NATIONAL INSURANCE COMPANY	A	28,949	0	28,949	28,949	0
24449	REGENT INSURANCE COMPANY	A	28,558	0	28,558	28,558	0
36897	MANUFACTURERS ALLIANCE INSURANCE COMPANY	A	24,987	0	24,987	24,987	0
16691	GREAT AMERICAN INSURANCE COMPANY	A	24,099	0	24,099	24,099	0
26344	GREAT AMERICAN ASSURANCE COMPANY	A	20,798	0	20,798	20,798	0
10212	ALLMERICA FINANCIAL ALLIANCE INSURANCE COMPANY	A	19,232	0	19,232	19,232	0
23469	AMERICAN MODERN HOME INSURANCE COMPANY	A	14,352	0	14,352	14,352	0
14982	PENN MILLERS INSURANCE COMPANY	A	14,013	0	14,013	14,013	0
21709	TRUCK INSURANCE EXCHANGE	A	13,356	0	13,356	13,356	0
38300	SAMSUNG FIRE & MARINE INSURANCE CO. LTD (U.S. BRANCH)	A	12,293	0	12,293	12,293	0
43575	INDEMNITY INSURANCE COMPANY OF NORTH AMERICA	A	11,996	0	11,996	11,996	0
23612	MIDWEST EMPLOYERS CASUALTY COMPANY	A	11,207	0	11,207	11,207	0
36684	RIVERPORT INSURANCE COMPANY	A	10,826	0	10,826	10,826	0
22713	INSURANCE COMPANY OF NORTH AMERICA	A	9,920	0	9,920	9,920	0
26069	WAUSAU BUSINESS INSURANCE COMPANY	A	8,841	0	8,841	8,841	0
11242	ALLIED EASTERN INDEMNITY COMPANY	A	7,516	0	7,516	7,516	0
39152	SERVICE AMERICAN INDEMNITY COMPANY	A	6,187	0	6,187	6,187	0
10749	INTREPID INS CO	B	4,996	0	4,996	0	4,996
20931	ATLANTA INTERNATIONAL INSURANCE COMPANY	B	4,610	0	4,610	0	4,610
32280	WELLFLEET INSURANCE COMPANY	A	4,224	0	4,224	4,224	0
34690	PROPERTY AND CASUALTY INSURANCE CO. OF HARTFORD	A	4,045	0	4,045	4,045	0
12297	PETROLEUM CASUALTY COMPANY	A	3,954	0	3,954	3,954	0
19690	AMERICAN ECONOMY INSURANCE COMPANY	A	3,952	0	3,952	3,952	0
24171	NETHERLANDS INSURANCE COMPANY (THE)	A	3,794	0	3,794	3,794	0
14990	PENNSYLVANIA NATIONAL MUTUAL CASUALTY INS. CO.	B	2,480	0	2,480	0	2,480
20095	BITCO GENERAL INSURANCE CORPORATION	A	2,318	0	2,318	2,318	0
22748	PACIFIC EMPLOYERS INSURANCE COMPANY	A	1,769	0	1,769	1,769	0
23663	NATIONAL AMERICAN INSURANCE COMPANY	A	1,359	0	1,359	1,359	0
13019	EASTERN ADVANTAGE ASSURANCE COMPANY	A	957	0	957	957	0
36307	GRAY INSURANCE COMPANY (THE)	A	910	0	910	910	0
20699	ACE PROPERTY AND CASUALTY INSURANCE COMPANY	A	255	0	255	255	0
20702	ACE FIRE UNDERWRITERS INSURANCE COMPANY	A	69	0	69	69	0
23450	AMERICAN FAMILY HOME INSURANCE COMPANY	A	16	0	16	16	0
23787	NATIONWIDE MUTUAL INSURANCE COMPANY	A	3	0	3	3	0
Total			1,278,752,921	242,081,280	1,053,356,568	787,144,846	266,211,722

Percentage of Voluntary written premium electing Type A Discount: 74.7%
 Percentage of Voluntary written premium electing Type B Discount: 25.3%

Notes:
 (4) = Annual Statement Exhibit of Premium and Losses
 (5) = consistent with the Annual Statement Exhibit of Premium and Losses
 (6) = (4) - (5), subject to a minimum of 0

VI 00024 STIP

Section VI - Expenses
Subsection F - Expense Constant Offset
7/1/2022

Section VI - F
Exhibit 1

Calculation of Expense Constant as Percent of Premium for Prospective Effective Period

(1) Expense Constant Offset for Policy Year 2018	0.962
(2) Expense Constant as Percent of Premium for Policy Year 2018 = 1.0 - (1)	3.8%
(3) Calculated Expense Constant for Policy Year 2018	\$251.91
(4) Factor to Bring Policy Year 2018 Premium to Premium Level of Prospective Effective Period	1.09
(5) Estimated Expense Constant for Prospective Effective Period	\$264.14
(6) Expense Constant as Percent of Premium for Prospective Effective Period = { (2) x [(5) / (3)] } / { [(1) x (4)] + [(2) x ((5) / (3))] }	3.7%

Notes:

(1): Exhibit 2.

(3): Based on Unit Statistical Plan Data

(4): Section III-E, Exhibit 1.

(5): Section D, Exhibit 1.

VI 00025 STIP

Section VI - Expenses
 Subsection F - Expense Constant Offset
 7/1/2022

Section VI - F
 Exhibit 2

Expense Constant Offsets

Used in Section I and Section III

Policy Year (1)	Standard Premium Excluding Expense Constant (2)	ARAP at Company Level (3)	Factor to Adjust ARAP from Company Level to DSR Level Premium (4)	Expense Constant (5)	Expense Constant Offset (6)
2017	1,181,140,014	51,198,038	1.053	48,300,467	0.962
2018	1,163,068,414	51,798,318	1.055	48,597,576	0.962

Used in the Calculation of Expense Constant as Percent of Premium for Prospective Effective Period

Policy Year (7)	Standard Premium Excluding Expense Constant (8)	ARAP at Company Level (9)	Factor to Adjust ARAP from Company Level to DSR Level Premium (10)	Expense Constant (11)	Expense Constant Offset (12)
2018	742,261,083	31,580,296	1.055	30,870,044	0.962

Notes:

Based on Unit Statistical Plan Data, excluding Large Deductible Policies.

(4) Section III-B, Exhibit 2.

(6) = $\{ (2) + [(3) * (4)] \} / [\{ (2) + [(3) * (4)] \} + (5)]$

(10) Section III-B, Exhibit 2.

(12) = $\{ (8) + [(9) * (10)] \} / [\{ (8) + [(9) * (10)] \} + (11)]$

The Standard Premium excluding Expense Constant values for Policy Year 2018 used in Section I and Section III differ from those used in the calculation of the Expense Constant because of a differing company mixes.

VI 00026 STIP

Section VI - Expenses
Subsection G - Acquisition Expenses
7/1/2022

Section VI - G
Exhibit 1

Provision for Commission and Other Acquisition Expense Including Frictional Reinsurance Expenses

(1)	Other Acquisition and Field Supervision Expense Ratio, Excluding Expense Constants	2.3%
(2)	Selected Average Commission Ratio, Excluding Expense Constants	9.4%
(3)	Selected Frictional Reinsurance Expenses Ratio (relative to Standard plus ARAP premiums, excluding expense constants)	1.0%
(4)	Selected Effect of Incidental Income and EBUP Expense, Excluding of Expense Constants	0.0%
(5)	Commission and Other Acquisition Expense Ratio = (1) + (2) + (3) + (4)	12.6%

Notes:

(1): Exhibit 2.

(2): Exhibit 3.

(3): Exhibit 4, Page 1.

(4): Exhibit 5.

VI 00027 STIP

Section VI - Expenses
 Subsection G - Acquisition Expenses
 7/1/2022

Section VI - G
 Exhibit 2

Calculation of Other Acquisition Expense

	Calendar Year		
	2017	2018	2019
(1) Standard Earned Premium Including Expense Constant Premium	896,751,631	931,573,495	950,622,544
(2) ARAP Premium at Company Level	35,842,348	38,295,877	38,795,384
(3) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.051	1.053	1.056
(4) Standard Earned Premium plus Adjusted ARAP = (1) + [(2) x (3)]	934,427,866	971,906,015	991,579,767
(5) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.041	1.040	1.042
(6) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.002	1.002	0.998
(7) Adjusted Standard Earned Premium plus ARAP = (4) x (5) x (6)	974,225,115	1,012,177,331	1,031,153,835
(8) Other Acquisition, Field Supervision, Collection Expenses for Home Office and Branch Office, excluding Commissions	35,741,309	40,403,086	41,841,671
(9) Other Acquisition Expense Ratio = (8) / (7)	3.7%	4.0%	4.1%
(10) Three Year Average		3.9%	
(11) Expense Constant as Percent of Premium for Prospective Effective Period		3.7%	
(12) Other Acquisition Portion of Expense Constant		46.7%	
(13) Percent of Premium due to Portion of Expense Constant for Other Acquisition Expense = (11) x (12)		1.7%	
(14) Other Acquisition and Field Supervision Expense Ratio, Excluding Expense Constants = [(10) - (13)] / [1.0 - (11)]		2.3%	

Notes:

- (1), (2): Aggregate Financial Reconciliation Report Calls, Calendar Years 2017 - 2019.
 Reported Premium, plus ARAP, and including Large Deductible Policies at Standard Premium.
- (3): Section III-B, Exhibit 2.
- (5): Section III-B, Exhibit 1.
- (6): Section III-C, Exhibit 1.
- (8): Aggregate Financial Expense Calls, Calendar Years 2017 - 2019.
- (11): Section VI-F, Exhibit 1.
- (12): Section VI-B, Exhibit 3.

VI 000028 STIP

Section VI - Expenses
Subsection G - Acquisition Expenses
7/1/2022

Section VI - G
Exhibit 3

Calculation of Average Commission Rate

	Calendar Year		
	2017	2018	2019
(1) Direct Written Premium	792,540,870	801,524,045	803,391,423
(2) Total Commissions for Agents and Brokers	75,329,409	71,855,548	68,877,762
(3) Average Commission Rate = (2) / (1)	9.5%	9.0%	8.6%
(4) Three Year Average		9.0%	
(5) Expense Constant as Percent of Premium for Prospective Effective Period		3.7%	
(6) Average Commission Ratio, Excluding Expense Constants = (4) / [1.0 - (5)]		9.4%	
(7) Selected Average Commission Ratio, Excluding Expense Constants		9.4%	

Notes:

(1): Annual Statement Exhibit of Premium and Losses, Calendar Years 2017 - 2019.

(2): Total Commissions for Agents and Brokers comes from Statutory Page 14, Exhibit of Premium and Loss.

(5): Section VI-F, Exhibit 1.

VI 00029 STIP

Section VI - Expenses
 Subsection G - Acquisition Expenses
 7/1/2022

Section VI - G
 Exhibit 4
 Page 1

Frictional Reinsurance Expenses

Calendar Year	Reinsurer Underwriting Expenses as Percentage of Net Written Premium				
	Commission and Brokerage	Other Acquisition	General Expenses	Taxes	Total Underwriting Expenses = (2) + (3) + (4) + (5)
(1)	(2)	(3)	(4)	(5)	(6)
2005	26.2%	8.0%	6.4%	0.7%	41.3%
2006	13.3%	4.6%	4.4%	0.5%	22.8%
2007	14.0%	4.9%	4.2%	0.5%	23.6%
2008	18.4%	4.3%	3.9%	0.6%	27.2%
2009	19.8%	2.9%	3.4%	0.2%	26.3%
2010	17.7%	3.2%	3.8%	0.2%	24.9%
2011	19.2%	3.0%	2.8%	0.2%	25.2%
2012	19.1%	3.1%	2.7%	0.3%	25.2%
2013	17.4%	3.6%	3.5%	0.3%	24.8%
2014	18.1%	3.5%	5.3%	0.4%	27.3%
2015	18.5%	3.2%	3.2%	0.3%	25.2%
2016	18.2%	3.0%	3.4%	0.3%	24.9%
2017	18.8%	2.6%	3.0%	0.3%	24.7%
2018	20.9%	2.0%	2.1%	0.2%	25.2%
2019	19.8%	1.8%	2.7%	0.3%	24.6%
(7) Average	18.6%	3.6%	3.7%	0.4%	26.2%
(8) Estimated Ceding Commission & Brokerage Rate for Workers' Compensation Non-Proportional Reinsurance	16.1%				
(9) Adjusted Average = (7) - (8)	2.5%	3.6%	3.7%	0.4%	10.1%
(10) Estimated % of Direct Premium Ceded for Workers' Compensation Non-Proportional Reinsurance					14.6%
(11) Implied Frictional Reinsurance Expenses Relative to Direct Premiums (as a %) = Total (9) x (10)					1.47%
(12) Selected Frictional Reinsurance Expenses Ratio (relative to Standard plus ARAP premiums, excluding expense constants)					1.0%

Notes:

(2)-(5): Insurance Expense Exhibit database - By Line Underwriting Experience from Best's Aggregates & Averages for Reinsurance Editions 2006 - 2020.

(8): Page 2, (10).

(10): Page 2, (11).

VI 00030 STIP

Section VI - Expenses
 Subsection G - Acquisition Expenses
 7/1/2022

Section VI - G
 Exhibit 4
 Page 2

Estimate of Ceding Commission & Brokerage Rate for Workers' Compensation Non-Proportional Reinsurance

Calendar Year (1)	Written Premiums (000's)			Ratio of Commission & Brokerage Incurred to Written Premium		Commission & Brokerage Expenses Incurred (000's)		
	Direct (2)	Net (3)	Direct - Net = (2) - (3) (4)	Direct (5)	Net (6)	Direct = (2) x (5) (7)	Net = (3) x (6) (8)	Direct - Net = (7) - (8) (9)
2005	53,139,231	46,633,441	6,505,790	0.068	0.056	3,613,468	2,611,473	1,001,995
2006	50,942,134	45,033,012	5,909,122	0.072	0.069	3,667,834	3,107,278	560,556
2007	50,367,861	44,207,021	6,160,840	0.071	0.061	3,576,118	2,696,628	879,490
2008	42,686,615	37,535,546	5,151,069	0.077	0.060	3,286,869	2,252,133	1,034,737
2009	37,879,014	32,642,883	5,236,131	0.079	0.060	2,992,442	1,958,573	1,033,869
2010	37,180,836	32,184,623	4,996,213	0.079	0.060	2,937,286	1,931,077	1,006,209
2011	41,651,380	35,751,070	5,900,310	0.084	0.068	3,498,716	2,431,073	1,067,643
2012	44,555,061	37,992,643	6,562,418	0.084	0.070	3,742,625	2,659,485	1,083,140
2013	49,384,867	41,250,232	8,134,635	0.084	0.068	4,148,329	2,805,016	1,343,313
2014	52,613,735	44,053,515	8,560,220	0.084	0.066	4,419,554	2,907,532	1,512,022
2015	54,522,916	45,090,969	9,431,947	0.088	0.073	4,798,017	3,291,641	1,506,376
2016	58,255,242	47,961,376	10,293,866	0.085	0.067	4,951,696	3,213,412	1,738,283
2017	55,749,285	45,032,688	10,716,597	0.092	0.075	5,128,934	3,377,452	1,751,483
2018	54,900,760	47,963,539	6,937,221	0.091	0.085	4,995,969	4,076,901	919,068
2019	54,118,597	47,105,490	7,013,107	0.091	0.086	4,924,792	4,051,072	873,720
Total	737,947,534	630,438,048	107,509,486	0.082	0.069	60,682,648	43,370,745	17,311,904

- (10) Estimated Ceding Commission & Brokerage Rate for Workers' Compensation Non-Proportional Reinsurance = Total (9) / Total (4) 16.1%
- (11) Estimated % of Direct Premium Ceded for Workers' Compensation Non-Proportional Reinsurance = Total (4) / Total (2) 14.6%

Notes:

(2), (3), (5), (6): Insurance Expense Exhibit database - By Line Underwriting Experience from Best's Aggregates & Averages for Workers' Comp Editions 2006 - 2020.

VI 00031 STIP

Section VI - Expenses
 Subsection G - Acquisition Expenses
 7/1/2022

Section VI - G
 Exhibit 5

Effect of Incidental Income and Earned but Uncollected Premium

	Calendar Year		
	2017	2018	2019
(1) Standard Earned Premium Including Expense Constant Premium	896,751,631	931,573,495	950,622,544
(2) ARAP Premium at Company Level	35,842,348	38,295,877	38,795,384
(3) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.051	1.053	1.056
(4) Standard Earned Premium plus Adjusted ARAP = (1) + [(2) x (3)]	934,427,866	971,906,015	991,579,767
(5) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.041	1.040	1.042
(6) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.002	1.002	0.998
(7) Adjusted Standard Earned Premium plus ARAP = (4) x (5) x (6)	974,225,115	1,012,177,331	1,031,153,835
(8) Earned But Uncollected Premium ("EBUP")	5,475,413	5,715,900	5,148,442
(9) Incidental Income	1,240,215	1,203,959	1,237,766
(10) Net Effect of Incidental Income and EBUP Expense = [(8) - (9)] / (7)	0.4%	0.4%	0.4%
(11) Three Year Average		0.4%	
(12) Expense Constant as Percent of Premium for Prospective Effective Period		3.7%	
(13) Effect of Incidental Income and EBUP Expense, Exclusive of Expense Constants = (11) / [1.0 - (12)]		0.4%	
(14) Selected Effect of Incidental Income and EBUP Expense, Excluding of Expense Constants		0.0%	

Notes:

- (1), (2): Aggregate Financial Reconciliation Report Calls, Calendar Years 2017 - 2019.
 Reported Premium and ARAP, including Large Deductible Policies at Standard Premium.
 (3): Section III-B, Exhibit 2.
 (5): Section III-B, Exhibit 1.
 (6): Section III-C, Exhibit 1.
 (8),(9): Aggregate Financial Expense Call.
 (12): Section VI-F, Exhibit 1.

VI 00032 STIP

Section VI - Expenses
Subsection H - Loss Adjustment Expense
7/1/2022

Section VI - H
Exhibit 1
Page 1

Defense and Cost Containment Expense ("DCCE") Ratio and Total Loss Adjustment Expense ("LAE") Ratio

	Policy Year		
	2017	2018	2019
(1) Defense and Cost Containment Expense Ratio	8.8%	8.7%	8.0%
(2) Three Year Average Defense and Cost Containment Expense Ratio = Average of (1)		8.5%	
(3) Selected Three Year Average Defense and Cost Containment Expense Ratio		8.5%	
(4) Total Loss Adjustment Expense Ratio (LAE / Loss)		18.7%	

Notes:

(1): Section VI-H, Exhibit 1, Page 2

(4): (3) + [(9) from Section VI-H, Exhibit 2]

VI 00033 STIP

Section VI - Expenses
 Subsection H - Loss Adjustment Expense
 7/1/2022

Section VI - H
 Exhibit 1
 Page 2

Paid Defense and Cost Containment ("DCCE")

Policy Year (1)	Age of Development									
	12	24	36	48	60	72	84	96	108	120
2004					16,362,496	17,389,955	18,037,537	18,408,048	18,689,428	18,788,044
2005				15,026,306	16,415,940	17,261,801	17,748,379	18,066,870	18,326,092	18,522,731
2006			13,330,189	16,223,682	17,867,316	18,754,991	19,366,806	19,683,141	19,958,779	20,120,116
2007		9,586,452	15,577,223	18,532,283	20,311,404	21,370,256	22,040,829	22,476,880	22,777,470	23,059,154
2008	2,506,056	10,973,631	16,546,204	19,352,926	21,142,888	22,340,571	23,041,029	23,553,762	23,876,088	24,158,920
2009	2,378,851	10,419,714	15,930,155	18,978,876	20,642,264	21,696,107	22,422,170	22,771,178	23,099,776	23,324,348
2010	2,167,865	9,924,930	15,679,233	18,894,850	20,956,949	22,020,186	22,692,211	23,057,476	23,345,820	23,598,896
2011	2,261,100	11,610,333	18,354,590	22,358,139	24,543,419	25,647,098	26,391,567	26,803,696	27,142,166	
2012	2,434,212	12,371,831	19,926,650	23,862,283	26,224,130	27,518,796	28,190,254	28,857,426		
2013	2,652,528	13,151,212	20,772,670	24,598,492	26,699,184	27,507,737	28,005,747			
2014	2,953,479	14,207,243	22,536,925	26,809,642	29,674,387	30,899,307				
2015	2,536,317	13,173,571	21,376,186	25,651,743	28,086,301					
2016	2,787,258	14,442,988	23,163,527	27,842,815						
2017	2,792,190	14,815,086	23,841,307							
2018	3,065,557	15,413,254								
2019	2,805,079									

Paid Losses

Policy Year (1)	Age of Development									
	12	24	36	48	60	72	84	96	108	120
2004					211,349,911	219,274,089	223,923,250	226,526,577	228,781,232	230,966,366
2005				189,106,308	206,318,143	215,855,035	220,282,594	224,720,459	227,252,743	228,848,202
2006			160,174,986	199,005,556	220,219,619	230,146,104	235,624,964	240,639,742	244,497,265	245,499,504
2007		120,425,706	183,521,489	223,208,627	243,734,190	255,488,288	260,087,841	265,638,893	270,597,694	273,326,883
2008	30,565,754	123,670,439	186,907,962	224,410,988	245,095,522	256,945,957	263,234,458	266,477,028	268,908,944	270,103,802
2009	30,341,592	123,945,136	189,173,310	226,718,699	252,519,709	266,363,828	272,539,166	276,679,828	279,372,830	281,301,851
2010	30,378,778	119,885,232	181,874,158	221,326,259	247,502,430	258,459,389	265,673,701	269,351,228	270,989,419	273,858,668
2011	32,888,746	131,671,364	204,050,224	256,991,689	286,201,892	296,567,749	301,738,937	306,271,225	310,253,485	
2012	32,091,484	138,045,115	222,373,733	272,444,868	301,216,898	317,705,945	324,183,588	329,048,569		
2013	32,473,727	142,719,773	222,811,006	270,142,695	297,523,644	308,013,341	313,578,253			
2014	37,444,248	156,917,961	250,340,274	315,828,768	349,120,796	362,567,532				
2015	36,476,625	154,609,172	246,739,738	304,179,673	332,569,536					
2016	38,425,024	161,766,047	257,468,673	313,403,709						
2017	37,631,171	165,648,260	264,448,071							
2018	40,128,686	174,463,387								
2019	41,474,796									

Paid Defense and Cost Containment ("DCCE") Ratios

Policy Year (1)	Age of Development										Developed to Tenth Report (3)
	12	24	36	48	60	72	84	96	108	120	
	(4) = (2) / (3)										
2004					0.077	0.079	0.081	0.081	0.082	0.081	0.081
2005				0.079	0.080	0.080	0.081	0.080	0.081	0.081	0.081
2006			0.083	0.082	0.081	0.081	0.082	0.082	0.082	0.082	0.082
2007		0.080	0.085	0.083	0.083	0.084	0.085	0.085	0.084	0.084	0.084
2008	0.082	0.089	0.089	0.086	0.086	0.087	0.088	0.088	0.089	0.089	0.089
2009	0.078	0.084	0.084	0.084	0.082	0.081	0.082	0.082	0.083	0.083	0.083
2010	0.071	0.083	0.086	0.085	0.085	0.085	0.085	0.086	0.086	0.086	0.086
2011	0.069	0.088	0.090	0.087	0.086	0.086	0.087	0.088	0.087	0.088	0.088
2012	0.076	0.090	0.090	0.088	0.087	0.087	0.087	0.088		0.088	0.088
2013	0.082	0.092	0.093	0.091	0.090	0.089	0.089			0.090	0.090
2014	0.079	0.091	0.090	0.085	0.085	0.085				0.087	0.087
2015	0.070	0.085	0.087	0.084	0.084					0.086	0.086
2016	0.073	0.089	0.090	0.089						0.090	0.090
2017	0.074	0.089	0.090							0.088	0.088
2018	0.076	0.088								0.087	0.087
2019	0.068									0.080	0.080
	Age-to-Age Development Factors										
	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120		
2004					1.024	1.016	1.009	1.005	0.996		
2005				1.001	1.005	1.008	0.998	1.003	1.004		
2006			0.980	0.995	1.004	1.009	0.995	1.009	1.004		
2007		1.066	0.978	1.004	1.004	1.013	0.998	0.995	1.002		
2008	1.082	0.998	0.974	1.000	1.008	1.007	1.010	1.005	1.007		
2009	1.072	1.002	0.994	0.977	0.996	1.010	1.000	1.005	1.003		
2010	1.160	1.041	0.990	0.992	1.006	1.003	1.002	1.006	1.000		
2011	1.283	1.020	0.967	0.986	1.008	1.011	1.001	1.000			
2012	1.182	1.000	0.977	0.994	0.995	1.004	1.009				
2013	1.128	1.012	0.977	0.986	0.995	1.000					
2014	1.148	0.994	0.943	1.001	1.003						
2015	1.225	1.017	0.973	1.001							
2016	1.231	1.008	0.987								
2017	1.205	1.008									
2018	1.156										
2 Yr Weighted Average	1.181	1.008	0.981	1.001	0.999	1.002	1.005	1.003	1.001		
3 Yr Weighted Average	1.197	1.011	0.968	0.996	0.998	1.005	1.004	1.004	1.003		
5 Yr Weighted Average	1.192	1.008	0.972	0.993	1.001	1.006	1.004	1.002	1.003		
Selected	1.197	1.011	0.968	0.996	0.998	1.005	1.004	1.004	1.003		
Cumulative	1.182	0.987	0.977	1.009	1.013	1.016	1.011	1.007	1.003		

Notes:
 (2),(3): Aggregate Financial Policy Year Calls.
 Paid DCCE Ratios are calculated as Paid DCCE/(Paid Medical + Paid Indemnity)

VI 00034 STIP

Section VI - Expenses
 Subsection H - Loss Adjustment Expense
 7/1/2022

Section VI - H
 Exhibit 2

Adjusting and Other ("AO") Expense Ratio

	Calendar Year		
	2017	2018	2019
(1) Direct Incurred Losses	483,834,527	455,473,000	453,267,327
(2) Factor to Adjust the Direct Losses to Full Coverage Losses	1.182	1.189	1.221
(3) Estimated Full Coverage Incurred Losses = (1) x (2)	571,873,330	541,719,261	553,429,121
(4) Direct Incurred Adjusting and Other Expense	49,212,879	50,609,742	55,588,038
(5) Factor to Adjust the Direct Adjusting and Other Expense to Full Coverage AO Expense	1.083	1.086	1.099
(6) Estimated Full Coverage Adjusting and Other Expense = (4) x (5)	53,316,896	54,986,933	61,118,799
(7) Adjusted Adjusting and Other Expense Ratio = (6) / (3)	9.32%	10.15%	11.04%
(8) Three Year Average Adjusted Adjusting and Other Expense Ratio = Average of (7)		10.2%	
(9) Selected Three Year Average Adjusted Adjusting and Other Expense Ratio		10.2%	

Notes:

(1): Direct Incurred Losses comes from Statutory Page 14 Exhibit of Premium and Loss.

(4): Aggregate Financial Calendar Year Expense Data Calls, 2017 - 2019.

VI 00035 STIP

Section VI - Expenses
Subsection I - Adjustment for Large Deductible Policies
7/1/2022

Section VI - I
Exhibit 1
Page 1

Adjustment to the Adjusting and Other Expense Provision

	Calendar Year		
	2017	2018	2019
(1) Average Premium Reduction Factor for Large Deductible Policies	0.815	0.820	0.837
(2) Loss Elimination Ratio (LER) for Large Deductible Policies = (1) x 1.123	91.5%	92.0%	94.0%
(3) Market Share (Standard Premium Basis) of Large Deductible Policies	16.8%	17.3%	19.3%
(4) LER for Full Coverage plus Large Deductible Policies = [(2) x (3)] + { 0.0 x [1.0 - (3)] }	15.4%	15.9%	18.1%
(5) Factor to Adjust the Direct Losses to Full Coverage Losses = 1.0 / [1.0 - (4)]	1.182	1.189	1.221
(6) Factor to Adjust the Direct AO Expense to Full Coverage AO Expense = 1.0 / { 1.0 - [0.5 x (4)] }	1.083	1.086	1.099

Notes:

(1),(3): Exhibit 2.

(2): 1.123 from Exhibit 1, Page 2.

(6): Assumes 50% of Adjusting & Other expense varies directly with losses.

VI 00036 STIP

Section VI - Expenses
 Subsection I - Adjustment for Large Deductible Policies
 7/1/2022

Section VI - I
 Exhibit 1
 Page 2

Loss Elimination Ratio for Large Deductible Policies

		As a % of Standard Premium plus ARAP
(1)	Commission and Other Acquisition Expense Ratio	12.2%
(2)	Average Premium Discount as a % of Standard Premium + ARAP	5.3%
(3)	Premium Tax Ratio = 2.28% x [1.0 - (2)]	2.2%
(4)	Profit Provision	-0.8%
(5)	Insolvency Fund Assessment	-0.5%
(6)	Residual Market Subsidy (Retrospectively-rated policies)	0.2%
(7)	Variable Expense Ratio = (1) + (2) + (3) + (4) + (5) + (6)	18.6%
(8)	Expected Loss Ratio without LAE	63.8%
(9)	Defense and Cost Containment Expense ("DCC")	5.6%
(10)	Adjusting and Other Expenses ("AO")	6.3%
(11)	Variable Adjusting and Other Expenses = 0.5 x (10)	3.2%
(12)	Portion of Expected Loss + LAE Ratio that varies with deductible (ELARD) = (8) + (9) + (11)	72.5%
(13)	LER / D = [1.0 - (7)] / (12)	1.123

D = Average Premium Reduction Factor for Large Deductible Policies

LER = Loss Elimination Ratio

ELARD = Loss + DCC + (1/2 x AO)

$D = [\text{LER} \times \text{ELARD}] / [100\% - (\text{Variable Expense})]$

$\text{LER} = D \times [1.0 - (\text{Variable Expense})] / \text{LER} \times (1.0 + \text{DCC} + 1/2 \times \text{AO})$

Notes:

Values approved for rates effective 7/1/20.

(1) - (6) = From prior Rate Decision/Stipulation

(8) = From prior Rate Decision/Stipulation

(9) = 8.8% x (8), ratio of DCC to Losses from the 7/1/20 filing.

(10) = 10.0% x (8), ratio of AO to Losses from the 7/1/20 filing.

VI 00037 STIP

Section VI - Expenses
 Subsection I - Adjustment for Large Deductible Policies
 7/1/2022

Section VI - I
 Exhibit 2

Average Large Deductible Premium Reduction Factor and Large Deductible Market Share

		Policy Year												
		2016	2017	2018	2019*									
(1)	Standard Earned Premium Excluding Large Deductible Policies	713,674,095	772,224,702	759,104,707	410,527,469									
(2)	Earned Premium Net of Deductible Credit for Large Deductible Policies	27,239,007	28,348,942	29,279,229	15,824,497									
(3)	Standard Earned Premium for Large Deductible Policies	146,106,152	154,359,797	165,874,767	106,329,997									
(4)	Standard Earned Premium for All Policies = (1) + (3)	859,780,247	926,584,499	924,979,474	516,857,466									
(5)	Average Premium Reduction Factor for Large Deductible Policies = $1.0 - [(2) / (3)]$	0.814	0.816	0.823	0.851									
(6)	Market Share (Standard Premium Basis) of Large Deductible Policies = (3) / (4)	17.0%	16.7%	17.9%	20.6%									
		<table border="1" style="width: 100%; border-collapse: collapse; margin: 10px auto;"> <thead> <tr> <th colspan="3" style="text-align: center;">Calendar Year</th> </tr> <tr> <th style="text-align: center;">2017</th> <th style="text-align: center;">2018</th> <th style="text-align: center;">2019</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0.815</td> <td style="text-align: center;">0.820</td> <td style="text-align: center;">0.837</td> </tr> </tbody> </table>				Calendar Year			2017	2018	2019	0.815	0.820	0.837
Calendar Year														
2017	2018	2019												
0.815	0.820	0.837												
(7)	Average Premium Reduction Factor for Large Deductible Policies = Average of PY-1 and PY													
(8)	Market Share (Standard Premium Basis) of Large Deductible Policies = Average of PY-1 and PY		16.8%	17.3%	19.3%									

Notes:

- (1): Aggregate Financial Policy Year Call, Policy Year Accumulated Earned Premium – Standard at Bureau DSR Level.
- (2): Aggregate Financial Policy Year Large Deductible Call, Policy Year Accumulated Earned Premium – Net.
- (3): Aggregate Financial Policy Year Large Deductible Call, Policy Year Accumulated Earned Premium – Standard at Bureau DSR Level.
- * Policy Year 2019 is an incomplete Policy Year, valued as of 12/31/2019

VI 00038 STIP

Section VI - Expenses
Subsection J - Expected Loss Ratios Underlying the Proposed Rates & Rating Values
7/1/2022

Section VI - J
Exhibit 1

Expected Loss Ratios Underlying the Proposed Rates & Rating Values

	<u>As a % of Standard Premium plus Adjusted ARAP</u>
(1) Commission and Other Acquisition Expense Ratio	12.6%
(2) Average Premium Discount as a % of Standard Premium + ARAP	5.4%
(3) Premium Tax Ratio = 2.28% x [1.0 - (2)]	2.2%
(4) Variable Expense Ratio = (1) + (2) + (3)	20.2%
(5) Underwriting Profit Provision	-0.5%
(6) Permissible Loss, LAE, and Fixed Expense Ratio = 1.0 - [(4) + (5)]	80.3%
(7) Fixed Expense Ratio	6.1%
(8) Expected Loss and Loss Adjustment Expense Ratio = (6) - (7)	74.2%
(9) Total Loss Adjustment Expense Ratio (LAE / Loss)	18.7%
(10) Expected Loss Ratio without Loss Adjustment Expense = (8) / [1.0 + (9)]	62.5%

Notes:

(1): Section VI-G, Exhibit 1.

(2): Section VI-E, Exhibit 1.

(3): 2.28% from Section VI-B, Exhibit 3.

(5): Section VII-A, Exhibit 1.

(7): Section VI-B, Exhibit 1. The Average Fixed Expense Ratio, 5.9%, is divided by [1.0 + indicated rate change], -3.5%, to derive the Fixed Expense Ratio underlying the proposed rates.

(9): Section VI-H, Exhibit 1.

VII 000016 STIP

Section VII - Profit
Subsection A - Summary
7/1/2022

Section VII-A
Exhibit 1

TABLE A1: ASSUMPTIONS AND PROFIT PROVISION CALCULATION

Underwriting Assumptions:		
(1)	Written Premium	
(a)	Gross - Before Premium Discount	1,000.00
(b)	Net - After Premium Discount	945.85
(2)	Collected Premium Net - After Premium Discount	945.85
(3)	Loss & LAE Ratio	74.24%
(4)	Commission Ratio	9.36%
(5)	Premium Discount	5.42%
(6)	General Expense Ratio	5.73%
(7)	Other Acquisition Expense Ratio	2.27%
(8)	Premium Tax Rate	2.16%
(9)	Reinsurance Expense Ratio	1.00%
(10)	Miscellaneous and Other Taxes	0.33%
Cost of Capital:		
(11)	Weighted Average Cost of Capital	7.14%
Portfolio Rate of Return:		
(12)	After Tax Portfolio Rate of Return	3.02%
Leverage Ratio:		
(13)	Reserves to Surplus Ratio	1.96
Profit Provision:		
(14)	Profit Provision Calculation	-0.50%

Notes:

(1b) = (1a) x [1.0 - (5)]

(2) = (1b), assumed that all premium is collectible.

(3) - (10): Section VII-H, Exhibit 1 (average of the two policy years).

(3), (6), (10) are divided by (1.0 + Rate Change).

(11): Section VII-E, Exhibit 1.

(12): Section VII-J, Exhibit 1, page 1.

(13): Section VII-F, Exhibit 1.

(14) = 1.0 - [(3) + (4) + (5) + (6) + (7) + (8) + (9) + (10)]

VII 000035 STIP

Section VII - Profit
Subsection B - DCF Models
7/1/2022

Section VII-B
Exhibit 1

TABLE B1: INTERNAL RATE OF RETURN (IRR) MODEL - PRESENT VALUE (PV) NOMINAL CASH FLOWS TO INVESTORS

TIME INTERVAL		POST TAX CASH FROM UW MINUS INVESTABLE RESERVES	BOND INTEREST TAX DEDUCTION FOR INSURERS	NET CASH FLOW FROM UNDERWRITING	CASH POST-TAX INCOME	NET FLOW FROM SURPLUS ACCOUNT	SURPLUS POST-TAX INCOME	CASH FLOWS TO INVESTORS (NOMINAL)	CASH FLOWS TO INVESTORS (PV NOMINAL)
FROM (1)	TO (2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
07/01/21	09/30/21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/01/21	12/31/21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01/01/22	03/31/22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04/01/22	06/30/22	(4.37)	0.00	(4.37)	0.00	0.00	0.00	(4.37)	(4.15)
07/01/22	09/30/22	(7.96)	0.00	(7.95)	0.04	(113.23)	0.00	(121.14)	(113.07)
10/01/22	12/31/22	(14.88)	0.02	(14.86)	0.28	(85.36)	0.85	(99.09)	(90.90)
01/01/23	03/31/23	(16.25)	0.03	(16.21)	0.89	(110.30)	1.48	(124.14)	(111.95)
04/01/23	06/30/23	(5.74)	0.05	(5.69)	1.80	(77.97)	2.31	(79.55)	(70.51)
07/01/23	09/30/23	13.28	0.07	13.34	2.67	45.35	2.89	64.25	55.98
10/01/23	12/31/23	15.85	0.06	15.90	3.24	40.75	2.55	62.45	53.48
01/01/24	03/31/24	10.72	0.05	10.77	3.39	34.25	2.25	50.66	42.64
04/01/24	06/30/24	(13.18)	0.04	(13.14)	3.29	28.68	1.99	20.82	17.22
07/01/24	09/30/24	(9.20)	0.04	(9.16)	3.20	24.86	1.78	20.68	16.82
10/01/24	12/31/24	11.32	0.04	11.36	3.06	23.03	1.59	39.03	31.20
01/01/25	03/31/25	6.20	0.03	6.23	2.74	20.35	1.42	30.75	24.15
04/01/25	06/30/25	3.02	0.03	3.05	2.45	18.05	1.27	24.82	19.17
07/01/25	09/30/25	1.27	0.03	1.29	2.19	16.03	1.13	20.64	15.67
10/01/25	12/31/25	0.55	0.02	0.57	1.96	14.51	1.01	18.06	13.47
01/01/26	03/31/26	0.25	0.02	0.27	1.75	12.35	0.90	15.28	11.21
04/01/26	06/30/26	0.25	0.02	0.27	1.57	10.50	0.81	13.16	9.48
07/01/26	09/30/26	0.25	0.02	0.27	1.42	8.89	0.73	11.32	8.02
10/01/26	12/31/26	0.25	0.02	0.27	1.29	7.74	0.67	9.97	6.94
01/01/27	03/31/27	0.15	0.01	0.16	1.18	6.14	0.61	8.09	5.54
04/01/27	06/30/27	0.15	0.01	0.16	1.09	4.77	0.56	6.59	4.43
07/01/27	09/30/27	0.15	0.01	0.16	1.03	3.88	0.53	5.60	3.70
10/01/27	12/31/27	0.15	0.01	0.16	0.97	3.53	0.50	5.16	3.35
01/01/28	03/31/28	0.10	0.01	0.11	0.92	3.03	0.47	4.54	2.90
04/01/28	06/30/28	0.10	0.01	0.11	0.87	2.60	0.45	4.04	2.54
07/01/28	09/30/28	0.10	0.01	0.11	0.84	2.23	0.43	3.61	2.23
10/01/28	12/31/28	0.10	0.01	0.11	0.80	1.96	0.41	3.29	2.00
01/01/29	03/31/29	0.11	0.01	0.12	0.78	1.59	0.40	2.88	1.72
04/01/29	06/30/29	0.11	0.01	0.12	0.75	1.27	0.39	2.52	1.48
07/01/29	09/30/29	0.11	0.01	0.12	0.73	1.10	0.38	2.33	1.34
10/01/29	12/31/29	0.11	0.01	0.11	0.72	1.08	0.37	2.29	1.30
01/01/30	03/31/30	0.08	0.01	0.09	0.70	1.05	0.36	2.20	1.23
04/01/30	06/30/30	0.08	0.01	0.09	0.69	1.02	0.35	2.15	1.18
07/01/30	09/30/30	0.08	0.01	0.09	0.67	0.96	0.35	2.06	1.11
10/01/30	12/31/30	0.08	0.01	0.09	0.66	0.87	0.34	1.95	1.03
01/01/31	03/31/31	0.11	0.01	0.11	0.65	0.74	0.33	1.84	0.95
04/01/31	06/30/31	0.11	0.01	0.11	0.64	0.63	0.33	1.71	0.87
07/01/31	09/30/31	0.11	0.01	0.11	0.63	0.59	0.32	1.65	0.83
10/01/31	12/31/31	0.11	0.01	0.11	0.62	0.59	0.32	1.64	0.81
01/01/32	03/31/32	0.08	0.01	0.09	0.61	0.59	0.31	1.60	0.77
04/01/32	06/30/32	0.08	0.01	0.09	0.60	0.59	0.31	1.58	0.75
07/01/32	09/30/32	0.08	0.01	0.09	0.59	0.57	0.30	1.55	0.73
10/01/32	12/31/32	0.08	0.01	0.09	0.58	0.54	0.30	1.51	0.69
01/01/33	03/31/33	0.07	0.01	0.08	0.58	0.49	0.30	1.44	0.65
04/01/33	06/30/33	0.07	0.01	0.08	0.57	0.45	0.29	1.39	0.62
07/01/33	09/30/33	0.07	0.01	0.08	0.56	0.43	0.29	1.36	0.60
10/01/33	12/31/33	0.07	0.01	0.08	0.56	0.43	0.29	1.35	0.58
01/01/34	03/31/34	0.06	0.01	0.07	0.55	0.43	0.28	1.33	0.56
04/01/34	06/30/34	0.06	0.01	0.07	0.54	0.43	0.28	1.32	0.55
07/01/34	09/30/34	0.06	0.01	0.07	0.54	0.42	0.28	1.30	0.53
10/01/34	12/31/34	0.06	0.01	0.07	0.53	0.41	0.27	1.29	0.52
01/01/35	03/31/35	0.06	0.01	0.07	0.53	0.39	0.27	1.25	0.49
04/01/35	06/30/35	0.06	0.01	0.07	0.52	0.38	0.27	1.23	0.48
07/01/35	09/30/35	0.06	0.01	0.07	0.51	0.37	0.26	1.21	0.46
10/01/35	12/31/35	0.06	0.01	0.07	0.51	0.36	0.26	1.19	0.45
01/01/36	03/31/36	0.06	0.01	0.06	0.50	0.34	0.26	1.17	0.43
04/01/36	06/30/36	0.06	0.01	0.06	0.50	0.33	0.26	1.15	0.41
07/01/36	09/30/36	0.06	0.01	0.06	0.49	0.33	0.25	1.14	0.41
10/01/36	12/31/36	0.06	0.01	0.06	0.49	0.35	0.25	1.15	0.40
01/01/37	03/31/37	0.05	0.01	0.06	0.48	0.37	0.25	1.16	0.40
04/01/37	06/30/37	0.05	0.01	0.06	0.48	0.38	0.25	1.16	0.39
07/01/37	09/30/37	0.05	0.01	0.06	0.47	0.38	0.24	1.15	0.38
10/01/37	12/31/37	0.05	0.01	0.06	0.47	0.35	0.24	1.12	0.37
01/01/38	03/31/38	0.05	0.01	0.06	0.46	0.32	0.24	1.08	0.34
04/01/38	06/30/38	0.05	0.01	0.06	0.46	0.29	0.23	1.04	0.33
07/01/38	09/30/38	0.05	0.01	0.06	0.45	0.28	0.23	1.02	0.32
10/01/38	12/31/38	0.05	0.01	0.06	0.45	0.28	0.23	1.02	0.31
01/01/39	03/31/39	0.05	0.01	0.05	0.45	0.28	0.23	1.01	0.30
04/01/39	06/30/39	0.05	0.01	0.05	0.44	0.28	0.23	1.00	0.29
07/01/39	09/30/39	0.05	0.01	0.05	0.44	0.29	0.22	1.00	0.29
10/01/39	12/31/39	0.05	0.01	0.05	0.43	0.29	0.22	0.99	0.28
01/01/40	03/31/40	0.04	0.01	0.04	0.43	0.29	0.22	0.98	0.27
04/01/40	06/30/40	0.04	0.01	0.04	0.42	0.29	0.22	0.97	0.27
07/01/40	09/30/40	0.04	0.01	0.04	0.42	0.28	0.22	0.96	0.26
10/01/40	12/31/40	0.04	0.01	0.04	0.42	0.26	0.21	0.93	0.25
01/01/41	03/31/41	0.01	0.00	0.02	0.41	0.23	0.21	0.88	0.23
04/01/41	06/30/41	0.01	0.00	0.02	0.41	0.21	0.21	0.85	0.22
07/01/41	09/30/41	0.01	0.00	0.02	0.41	0.22	0.21	0.85	0.21
10/01/41	12/31/41	0.01	0.00	0.02	0.40	0.24	0.21	0.87	0.22
01/01/42	03/31/42	0.00	0.00	0.01	0.40	0.27	0.21	0.88	0.21
04/01/42	06/30/42	0.00	0.00	0.01	0.40	0.30	0.20	0.90	0.22

VII 000036 STIP

Section VII - Profit
Subsection B - DCF Models
7/1/2022

Section VII-B
Exhibit 1

TABLE B1: INTERNAL RATE OF RETURN (IRR) MODEL - PRESENT VALUE (PV) NOMINAL CASH FLOWS TO INVESTORS

TIME INTERVAL		POST TAX CASH FROM UW MINUS INVESTABLE RESERVES	BOND INTEREST TAX DEDUCTION FOR INSURERS	NET CASH FLOW FROM UNDERWRITING	CASH POST-TAX INCOME	NET FLOW FROM SURPLUS ACCOUNT	SURPLUS POST-TAX INCOME	CASH FLOWS TO INVESTORS (NOMINAL)	CASH FLOWS TO INVESTORS (PV NOMINAL)
FROM (1)	TO (2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
07/01/42	09/30/42	0.00	0.00	0.01	0.39	0.30	0.20	0.90	0.21
10/01/42	12/31/42	0.00	0.00	0.01	0.39	0.27	0.20	0.87	0.20
01/01/43	03/31/43	0.00	0.00	0.01	0.38	0.24	0.20	0.83	0.19
04/01/43	06/30/43	0.00	0.00	0.01	0.38	0.21	0.19	0.80	0.18
07/01/43	09/30/43	0.00	0.00	0.01	0.38	0.23	0.19	0.81	0.18
10/01/43	12/31/43	0.00	0.00	0.01	0.37	0.29	0.19	0.86	0.19
01/01/44	03/31/44	0.00	0.00	0.01	0.37	0.36	0.19	0.93	0.20
04/01/44	06/30/44	0.00	0.00	0.01	0.36	0.42	0.19	0.98	0.20
07/01/44	09/30/44	0.00	0.00	0.01	0.36	0.45	0.18	1.00	0.21
10/01/44	12/31/44	0.00	0.00	0.01	0.35	0.46	0.18	1.00	0.20
01/01/45	03/31/45	0.00	0.00	0.01	0.35	0.45	0.18	0.98	0.19
04/01/45	06/30/45	0.00	0.00	0.01	0.34	0.45	0.17	0.97	0.19
07/01/45	09/30/45	0.00	0.00	0.01	0.33	0.45	0.17	0.96	0.18
10/01/45	12/31/45	0.00	0.00	0.01	0.33	0.46	0.17	0.96	0.18
01/01/46	03/31/46	0.00	0.00	0.01	0.32	0.45	0.16	0.94	0.17
04/01/46	06/30/46	0.00	0.00	0.01	0.31	0.45	0.16	0.93	0.17
07/01/46	09/30/46	0.00	0.00	0.01	0.31	0.45	0.16	0.92	0.16
10/01/46	12/31/46	0.00	0.00	0.01	0.30	0.46	0.15	0.92	0.16
01/01/47	03/31/47	0.00	0.00	0.01	0.29	0.45	0.15	0.90	0.16
04/01/47	06/30/47	0.00	0.00	0.01	0.29	0.45	0.15	0.89	0.15
07/01/47	09/30/47	0.00	0.00	0.01	0.28	0.45	0.14	0.88	0.15
10/01/47	12/31/47	0.00	0.00	0.01	0.27	0.46	0.14	0.87	0.14
01/01/48	03/31/48	0.00	0.00	0.01	0.27	0.45	0.14	0.86	0.14
04/01/48	06/30/48	0.00	0.00	0.01	0.26	0.45	0.13	0.85	0.13
07/01/48	09/30/48	0.00	0.00	0.01	0.25	0.45	0.13	0.84	0.13
10/01/48	12/31/48	0.00	0.00	0.01	0.25	0.46	0.13	0.83	0.13
01/01/49	03/31/49	0.00	0.00	0.01	0.24	0.45	0.12	0.82	0.12
04/01/49	06/30/49	0.00	0.00	0.01	0.23	0.45	0.12	0.81	0.12
07/01/49	09/30/49	0.00	0.00	0.01	0.23	0.45	0.12	0.80	0.12
10/01/49	12/31/49	0.00	0.00	0.01	0.22	0.46	0.11	0.79	0.11
01/01/50	03/31/50	0.00	0.00	0.01	0.21	0.45	0.11	0.78	0.11
04/01/50	06/30/50	0.00	0.00	0.01	0.21	0.45	0.11	0.77	0.11
07/01/50	09/30/50	0.00	0.00	0.01	0.20	0.45	0.10	0.76	0.10
10/01/50	12/31/50	0.00	0.00	0.01	0.19	0.46	0.10	0.75	0.10
01/01/51	03/31/51	0.00	0.00	0.01	0.19	0.45	0.10	0.74	0.10
04/01/51	06/30/51	0.00	0.00	0.01	0.18	0.45	0.09	0.73	0.09
07/01/51	09/30/51	0.00	0.00	0.01	0.17	0.45	0.09	0.72	0.09
10/01/51	12/31/51	0.00	0.00	0.01	0.17	0.46	0.08	0.71	0.09
01/01/52	03/31/52	0.00	0.00	0.01	0.16	0.45	0.08	0.70	0.09
04/01/52	06/30/52	0.00	0.00	0.01	0.15	0.45	0.08	0.69	0.08
07/01/52	09/30/52	0.00	0.00	0.00	0.15	0.45	0.07	0.68	0.08
10/01/52	12/31/52	0.00	0.00	0.00	0.14	0.46	0.07	0.67	0.08
01/01/53	03/31/53	0.00	0.00	0.00	0.13	0.45	0.07	0.66	0.08
04/01/53	06/30/53	0.00	0.00	0.00	0.13	0.45	0.06	0.65	0.07
07/01/53	09/30/53	0.00	0.00	0.00	0.12	0.45	0.06	0.64	0.07
10/01/53	12/31/53	0.00	0.00	0.00	0.11	0.46	0.06	0.63	0.07
01/01/54	03/31/54	0.00	0.00	0.00	0.11	0.45	0.05	0.62	0.07
04/01/54	06/30/54	0.00	0.00	0.00	0.10	0.45	0.05	0.61	0.06
07/01/54	09/30/54	0.00	0.00	0.00	0.09	0.45	0.05	0.60	0.06
10/01/54	12/31/54	0.00	0.00	0.00	0.09	0.46	0.04	0.59	0.06
01/01/55	03/31/55	0.00	0.00	0.00	0.08	0.45	0.04	0.58	0.06
04/01/55	06/30/55	0.00	0.00	0.00	0.07	0.45	0.04	0.57	0.06
07/01/55	09/30/55	0.00	0.00	0.00	0.07	0.45	0.03	0.56	0.05
10/01/55	12/31/55	0.00	0.00	0.00	0.06	0.46	0.03	0.55	0.05
01/01/56	03/31/56	0.00	0.00	0.00	0.05	0.45	0.03	0.54	0.05
04/01/56	06/30/56	0.00	0.00	0.00	0.05	0.45	0.02	0.53	0.05
07/01/56	09/30/56	0.00	0.00	0.00	0.04	0.45	0.02	0.52	0.05
10/01/56	12/31/56	0.00	0.00	0.00	0.03	0.46	0.02	0.51	0.04
01/01/57	03/31/57	0.00	0.00	0.00	0.03	0.45	0.01	0.50	0.04
04/01/57	06/30/57	0.00	0.00	0.00	0.02	0.45	0.01	0.48	0.04
07/01/57	09/30/57	0.00	0.00	0.00	0.01	0.39	0.01	0.41	0.03
10/01/57	12/31/57	0.00	0.00	0.00	0.01	0.30	0.00	0.31	0.03
01/01/58	03/31/58	(0.00)	0.00	0.00	0.00	0.17	0.00	0.17	0.01
04/01/58	06/30/58	0.00	0.00	0.00	0.00	0.06	0.00	0.06	0.00
TOTAL		(3.91)	1.19	(2.72)	86.55	(0.00)	50.93	134.76	(0.00)

Notes:

(3) = Table C1, (14) - [Table C3, (7), incremental]

(4) = Table B2, (5)

(5) = (3) + (4)

(6) = Table C3, (7)_k, x { [1.0 + Table A1, (12)] ^ 0.25 - 1.0 }

(7) = -1.0 X Table D1, (7), incremental

(8) = Table D1, (7)_k, x { [1.0 + Table A1, (12)] ^ 0.25 - 1.0 }

(9) = (5) + (6) + (7) + (8)

(10) = (9) x (1 + WACC)^{time in years}, based on the time interval with beginning date 07/01/21

WACC is the weighted average cost of capital from Section VII-E, Exhibit 1 which is equal to 7.14%.

The Total PV is equal to zero which implies that the profit provision derived from an investors prospective is equal to the profit provision derived from insurers prospective and is equal to -0.5% from Table A1, (14).

VII 000037 STIP

TABLE B2: INSURER CAPITAL COST (ICC) MODEL - PRESENT VALUE (PV) CASH FLOW TO INSURER

TIME INTERVAL		INVESTOR SUPPLIED	NET CAPITAL CHARGES			SOURCES TO PAY NET CAPITAL CHARGE					CASH FLOW TO INSURER (11)	PV CASH FLOW TO INSURER (12)
						INVESTOR SUPPLIED	POLICYHOLDER SUPPLIED					
							AFTER TAX INV INCOME ON INVESTOR SUPPLIED FUNDS (7)	POLICYHOLDER SUPPLIED INVESTABLE FUNDS (8)	AFTER TAX INV INCOME ON POLICYHOLDER SUPPLIED FUNDS (9)	POST TAX CASH FROM UW AVAILABLE TO INVESTORS (10)		
FROM (1)	TO (2)	CAPITAL NEEDED FROM INVESTORS (3)	INVESTOR REQUIRED RETURN CAPITAL CHARGE (4)	BOND INTEREST TAX DEDUCTION FOR INSURERS (5)	NET CAPITAL COST TO INSURERS (6)							
07/01/21	09/30/21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10/01/21	12/31/21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
01/01/22	03/31/22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
04/01/22	06/30/22	4.37	0.00	0.00	0.00	0.00	1.21	0.00	0.00	0.00	0.00	
07/01/22	09/30/22	125.55	0.08	0.00	0.08	0.03	25.77	0.01	0.00	0.00	(0.03)	
10/01/22	12/31/22	225.79	2.18	0.02	2.16	0.94	91.24	0.19	0.00	0.00	(1.03)	
01/01/23	03/31/23	352.34	3.93	0.03	3.89	1.69	196.90	0.68	0.00	0.00	(1.52)	
04/01/23	06/30/23	436.05	6.13	0.05	6.07	2.63	308.14	1.47	0.00	0.00	(1.97)	
07/01/23	09/30/23	377.42	7.58	0.07	7.51	3.26	397.58	2.30	0.00	0.00	(1.95)	
10/01/23	12/31/23	320.82	6.56	0.06	6.50	2.82	433.04	2.97	0.00	0.00	(0.71)	
01/01/24	03/31/24	275.84	5.58	0.05	5.53	2.40	430.32	3.24	0.00	0.11	0.09	
04/01/24	06/30/24	260.35	4.80	0.04	4.75	2.06	406.20	3.22	0.00	0.52	0.43	
07/01/24	09/30/24	244.69	4.53	0.04	4.49	1.95	377.60	3.04	0.00	0.49	0.40	
10/01/24	12/31/24	210.34	4.25	0.04	4.22	1.83	346.56	2.82	0.00	0.43	0.35	
01/01/25	03/31/25	183.79	3.66	0.03	3.62	1.57	314.00	2.59	0.00	0.54	0.42	
04/01/25	06/30/25	162.71	3.19	0.03	3.17	1.37	282.36	2.35	0.00	0.55	0.43	
07/01/25	09/30/25	145.42	2.83	0.03	2.80	1.22	252.71	2.11	0.00	0.52	0.40	
10/01/25	12/31/25	130.36	2.53	0.02	2.51	1.09	225.22	1.89	0.00	0.47	0.35	
01/01/26	03/31/26	117.76	2.27	0.02	2.25	0.97	201.56	1.68	0.00	0.41	0.30	
04/01/26	06/30/26	107.01	2.05	0.02	2.03	0.88	181.52	1.51	0.00	0.36	0.26	
07/01/26	09/30/26	97.86	1.86	0.02	1.84	0.80	164.63	1.36	0.00	0.31	0.22	
10/01/26	12/31/26	89.87	1.70	0.02	1.69	0.73	149.99	1.23	0.00	0.28	0.19	
01/01/27	03/31/27	83.58	1.56	0.01	1.55	0.67	138.24	1.12	0.00	0.24	0.17	
04/01/27	06/30/27	78.67	1.45	0.01	1.44	0.62	129.17	1.03	0.00	0.22	0.15	
07/01/27	09/30/27	74.64	1.37	0.01	1.36	0.59	121.83	0.97	0.00	0.20	0.13	
10/01/27	12/31/27	70.96	1.30	0.01	1.29	0.56	115.18	0.91	0.00	0.18	0.12	
01/01/28	03/31/28	67.82	1.23	0.01	1.22	0.53	109.40	0.86	0.00	0.17	0.11	
04/01/28	06/30/28	65.12	1.18	0.01	1.17	0.51	104.46	0.82	0.00	0.16	0.10	
07/01/28	09/30/28	62.79	1.13	0.01	1.12	0.49	100.25	0.78	0.00	0.15	0.09	
10/01/28	12/31/28	60.72	1.09	0.01	1.08	0.47	96.57	0.75	0.00	0.14	0.08	
01/01/29	03/31/29	59.03	1.06	0.01	1.05	0.45	93.57	0.72	0.00	0.13	0.08	
04/01/29	06/30/29	57.66	1.03	0.01	1.02	0.44	91.20	0.70	0.00	0.12	0.07	
07/01/29	09/30/29	56.45	1.00	0.01	0.99	0.43	89.15	0.68	0.00	0.12	0.07	
10/01/29	12/31/29	55.26	0.98	0.01	0.97	0.42	87.13	0.67	0.00	0.12	0.07	
01/01/30	03/31/30	54.13	0.96	0.01	0.95	0.41	85.18	0.65	0.00	0.11	0.06	
04/01/30	06/30/30	53.03	0.94	0.01	0.93	0.40	83.29	0.64	0.00	0.11	0.06	
07/01/30	09/30/30	52.00	0.92	0.01	0.91	0.40	81.53	0.62	0.00	0.10	0.06	
10/01/30	12/31/30	51.05	0.90	0.01	0.90	0.39	79.94	0.61	0.00	0.10	0.05	
01/01/31	03/31/31	50.20	0.89	0.01	0.88	0.38	78.57	0.60	0.00	0.10	0.05	
04/01/31	06/30/31	49.46	0.87	0.01	0.87	0.38	77.40	0.59	0.00	0.10	0.05	
07/01/31	09/30/31	48.77	0.86	0.01	0.85	0.37	76.33	0.58	0.00	0.10	0.05	
10/01/31	12/31/31	48.07	0.85	0.01	0.84	0.36	75.26	0.57	0.00	0.09	0.05	
01/01/32	03/31/32	47.41	0.84	0.01	0.83	0.36	74.21	0.56	0.00	0.09	0.05	
04/01/32	06/30/32	46.74	0.82	0.01	0.82	0.35	73.17	0.55	0.00	0.09	0.04	
07/01/32	09/30/32	46.10	0.81	0.01	0.81	0.35	72.17	0.55	0.00	0.09	0.04	
10/01/32	12/31/32	45.48	0.80	0.01	0.79	0.34	71.23	0.54	0.00	0.09	0.04	
01/01/33	03/31/33	44.92	0.79	0.01	0.78	0.34	70.34	0.53	0.00	0.09	0.04	
04/01/33	06/30/33	44.40	0.78	0.01	0.77	0.34	69.54	0.53	0.00	0.09	0.04	
07/01/33	09/30/33	43.89	0.77	0.01	0.76	0.33	68.77	0.52	0.00	0.09	0.04	
10/01/33	12/31/33	43.39	0.76	0.01	0.76	0.33	67.99	0.51	0.00	0.09	0.04	
01/01/34	03/31/34	42.89	0.75	0.01	0.75	0.32	67.22	0.51	0.00	0.08	0.04	
04/01/34	06/30/34	42.40	0.75	0.01	0.74	0.32	66.46	0.50	0.00	0.08	0.03	
07/01/34	09/30/34	41.92	0.74	0.01	0.73	0.32	65.71	0.50	0.00	0.08	0.03	
10/01/34	12/31/34	41.45	0.73	0.01	0.72	0.31	64.97	0.49	0.00	0.08	0.03	
01/01/35	03/31/35	40.99	0.72	0.01	0.71	0.31	64.27	0.49	0.00	0.08	0.03	
04/01/35	06/30/35	40.55	0.71	0.01	0.71	0.31	63.59	0.48	0.00	0.08	0.03	
07/01/35	09/30/35	40.13	0.71	0.01	0.70	0.30	62.94	0.48	0.00	0.08	0.03	
10/01/35	12/31/35	39.71	0.70	0.01	0.69	0.30	62.30	0.47	0.00	0.08	0.03	
01/01/36	03/31/36	39.31	0.69	0.01	0.68	0.30	61.69	0.47	0.00	0.08	0.03	
04/01/36	06/30/36	38.93	0.68	0.01	0.68	0.29	61.11	0.46	0.00	0.08	0.03	
07/01/36	09/30/36	38.53	0.68	0.01	0.67	0.29	60.52	0.46	0.00	0.08	0.03	
10/01/36	12/31/36	38.13	0.67	0.01	0.66	0.29	59.90	0.45	0.00	0.08	0.03	
01/01/37	03/31/37	37.71	0.66	0.01	0.66	0.28	59.24	0.45	0.00	0.08	0.03	
04/01/37	06/30/37	37.27	0.66	0.01	0.65	0.28	58.55	0.44	0.00	0.07	0.03	
07/01/37	09/30/37	36.84	0.65	0.01	0.64	0.28	57.87	0.44	0.00	0.07	0.02	
10/01/37	12/31/37	36.44	0.64	0.01	0.63	0.28	57.23	0.43	0.00	0.07	0.02	
01/01/38	03/31/38	36.07	0.63	0.01	0.63	0.27	56.66	0.43	0.00	0.07	0.02	
04/01/38	06/30/38	35.73	0.63	0.01	0.62	0.27	56.14	0.42	0.00	0.07	0.02	
07/01/38	09/30/38	35.40	0.62	0.01	0.62	0.27	55.65	0.42	0.00	0.07	0.02	
10/01/38	12/31/38	35.06	0.62	0.01	0.61	0.26	55.14	0.42	0.00	0.07	0.02	
01/01/39	03/31/39	34.73	0.61	0.01	0.60	0.26	54.64	0.41	0.00	0.07	0.02	
04/01/39	06/30/39	34.40	0.60	0.01	0.60	0.26	54.14	0.41	0.00	0.07	0.02	
07/01/39	09/30/39	34.07	0.60	0.01	0.59	0.26	53.63	0.40	0.00	0.07	0.02	
10/01/39	12/31/39	33.74	0.59	0.01	0.59	0.25	53.12	0.40	0.00	0.07	0.02	
01/01/40	03/31/40	33.41	0.59	0.01	0.58	0.25	52.60	0.40	0.00	0.07	0.02	
04/01/40	06/30/40	33.09	0.58	0.01	0.58	0.25	52.09	0.39	0.00	0.07	0.02	
07/01/40	09/30/40	32.77	0.58	0.01	0.57	0.25	51.60	0.39	0.00	0.07	0.02	
10/01/40	12/31/40	32.47	0.57	0.01	0.56	0.24	51.14	0.39	0.00	0.07	0.02	
01/01/41	03/31/41	32.23	0.56	0.01	0.56	0.24	50.72	0.38	0.00	0.07	0.02	
04/01/41	06/30/41	32.00	0.56	0.00	0.56	0.24	50.35	0.38	0.00	0.06	0.02	

VII 000038 STIP

TABLE B2: INSURER CAPITAL COST (ICC) MODEL - PRESENT VALUE (PV) CASH FLOW TO INSURER

TIME INTERVAL		INVESTOR SUPPLIED	NET CAPITAL CHARGES			SOURCES TO PAY NET CAPITAL CHARGE					CASH FLOW TO INSURER (11)	PV CASH FLOW TO INSURER (12)
						INVESTOR SUPPLIED	POLICYHOLDER SUPPLIED					
							AFTER TAX INV INCOME ON INVESTOR SUPPLIED FUNDS (7)	POLICYHOLDER SUPPLIED INVESTABLE FUNDS (8)	AFTER TAX INV INCOME ON POLICYHOLDER SUPPLIED FUNDS (9)	POST TAX CASH FROM UW AVAILABLE TO INVESTORS (10)		
FROM (1)	TO (2)	CAPITAL NEEDED FROM INVESTORS (3)	INVESTOR REQUIRED RETURN CAPITAL CHARGE (4)	BOND INTEREST TAX DEDUCTION FOR INSURERS (5)	NET CAPITAL COST TO INSURERS (6)							
07/01/41	09/30/41	31.77	0.56	0.00	0.55	0.24	49.96	0.38	0.00	0.06	0.02	
10/01/41	12/31/41	31.52	0.55	0.00	0.55	0.24	49.53	0.37	0.00	0.06	0.02	
01/01/42	03/31/42	31.25	0.55	0.00	0.54	0.24	49.01	0.37	0.00	0.06	0.02	
04/01/42	06/30/42	30.95	0.54	0.00	0.54	0.23	48.45	0.37	0.00	0.06	0.01	
07/01/42	09/30/42	30.65	0.54	0.00	0.53	0.23	47.89	0.36	0.00	0.06	0.01	
10/01/42	12/31/42	30.38	0.53	0.00	0.53	0.23	47.36	0.36	0.00	0.06	0.01	
01/01/43	03/31/43	30.14	0.53	0.00	0.52	0.23	46.90	0.35	0.00	0.06	0.01	
04/01/43	06/30/43	29.92	0.52	0.00	0.52	0.23	46.48	0.35	0.00	0.06	0.01	
07/01/43	09/30/43	29.68	0.52	0.00	0.52	0.22	46.03	0.35	0.00	0.06	0.01	
10/01/43	12/31/43	29.39	0.52	0.00	0.51	0.22	45.46	0.34	0.00	0.05	0.01	
01/01/44	03/31/44	29.02	0.51	0.00	0.51	0.22	44.76	0.34	0.00	0.05	0.01	
04/01/44	06/30/44	28.60	0.50	0.00	0.50	0.22	43.93	0.33	0.00	0.05	0.01	
07/01/44	09/30/44	28.14	0.50	0.00	0.49	0.21	43.05	0.33	0.00	0.05	0.01	
10/01/44	12/31/44	27.68	0.49	0.00	0.48	0.21	42.16	0.32	0.00	0.05	0.01	
01/01/45	03/31/45	27.23	0.48	0.00	0.48	0.21	41.27	0.32	0.00	0.04	0.01	
04/01/45	06/30/45	26.77	0.47	0.00	0.47	0.20	40.39	0.31	0.00	0.04	0.01	
07/01/45	09/30/45	26.31	0.47	0.00	0.46	0.20	39.50	0.30	0.00	0.04	0.01	
10/01/45	12/31/45	25.85	0.46	0.00	0.45	0.20	38.61	0.30	0.00	0.04	0.01	
01/01/46	03/31/46	25.40	0.45	0.00	0.45	0.19	37.73	0.29	0.00	0.04	0.01	
04/01/46	06/30/46	24.94	0.44	0.00	0.44	0.19	36.85	0.28	0.00	0.03	0.01	
07/01/46	09/30/46	24.48	0.43	0.00	0.43	0.19	35.96	0.28	0.00	0.03	0.01	
10/01/46	12/31/46	24.02	0.43	0.00	0.42	0.18	35.07	0.27	0.00	0.03	0.01	
01/01/47	03/31/47	23.57	0.42	0.00	0.41	0.18	34.18	0.26	0.00	0.03	0.00	
04/01/47	06/30/47	23.11	0.41	0.00	0.41	0.18	33.30	0.26	0.00	0.03	0.00	
07/01/47	09/30/47	22.65	0.40	0.00	0.40	0.17	32.42	0.25	0.00	0.02	0.00	
10/01/47	12/31/47	22.19	0.39	0.00	0.39	0.17	31.53	0.24	0.00	0.02	0.00	
01/01/48	03/31/48	21.74	0.39	0.00	0.38	0.17	30.64	0.24	0.00	0.02	0.00	
04/01/48	06/30/48	21.28	0.38	0.00	0.37	0.16	29.76	0.23	0.00	0.02	0.00	
07/01/48	09/30/48	20.82	0.37	0.00	0.37	0.16	28.87	0.22	0.00	0.01	0.00	
10/01/48	12/31/48	20.36	0.36	0.00	0.36	0.16	27.98	0.22	0.00	0.01	0.00	
01/01/49	03/31/49	19.91	0.35	0.00	0.35	0.15	27.09	0.21	0.00	0.01	0.00	
04/01/49	06/30/49	19.45	0.35	0.00	0.34	0.15	26.21	0.20	0.00	0.01	0.00	
07/01/49	09/30/49	18.99	0.34	0.00	0.34	0.15	25.33	0.20	0.00	0.01	0.00	
10/01/49	12/31/49	18.53	0.33	0.00	0.33	0.14	24.44	0.19	0.00	0.00	0.00	
01/01/50	03/31/50	18.08	0.32	0.00	0.32	0.14	23.55	0.18	0.00	0.00	0.00	
04/01/50	06/30/50	17.62	0.31	0.00	0.31	0.14	22.67	0.18	0.00	(0.00)	(0.00)	
07/01/50	09/30/50	17.16	0.31	0.00	0.30	0.13	21.78	0.17	0.00	(0.00)	(0.00)	
10/01/50	12/31/50	16.70	0.30	0.00	0.30	0.13	20.89	0.16	0.00	(0.00)	(0.00)	
01/01/51	03/31/51	16.25	0.29	0.00	0.29	0.12	20.01	0.16	0.00	(0.01)	(0.00)	
04/01/51	06/30/51	15.79	0.28	0.00	0.28	0.12	19.13	0.15	0.00	(0.01)	(0.00)	
07/01/51	09/30/51	15.33	0.27	0.00	0.27	0.12	18.24	0.14	0.00	(0.01)	(0.00)	
10/01/51	12/31/51	14.87	0.27	0.00	0.26	0.11	17.35	0.14	0.00	(0.01)	(0.00)	
01/01/52	03/31/52	14.42	0.26	0.00	0.26	0.11	16.46	0.13	0.00	(0.02)	(0.00)	
04/01/52	06/30/52	13.96	0.25	0.00	0.25	0.11	15.58	0.12	0.00	(0.02)	(0.00)	
07/01/52	09/30/52	13.51	0.24	0.00	0.24	0.10	14.70	0.12	0.00	(0.02)	(0.00)	
10/01/52	12/31/52	13.05	0.23	0.00	0.23	0.10	13.80	0.11	0.00	(0.02)	(0.00)	
01/01/53	03/31/53	12.59	0.23	0.00	0.22	0.10	12.92	0.10	0.00	(0.02)	(0.00)	
04/01/53	06/30/53	12.13	0.22	0.00	0.22	0.09	12.04	0.10	0.00	(0.03)	(0.00)	
07/01/53	09/30/53	11.68	0.21	0.00	0.21	0.09	11.15	0.09	0.00	(0.03)	(0.00)	
10/01/53	12/31/53	11.22	0.20	0.00	0.20	0.09	10.26	0.08	0.00	(0.03)	(0.00)	
01/01/54	03/31/54	10.76	0.19	0.00	0.19	0.08	9.37	0.08	0.00	(0.03)	(0.00)	
04/01/54	06/30/54	10.30	0.19	0.00	0.19	0.08	8.49	0.07	0.00	(0.03)	(0.00)	
07/01/54	09/30/54	9.85	0.18	0.00	0.18	0.08	7.61	0.06	0.00	(0.04)	(0.00)	
10/01/54	12/31/54	9.39	0.17	0.00	0.17	0.07	6.72	0.06	0.00	(0.04)	(0.00)	
01/01/55	03/31/55	8.93	0.16	0.00	0.16	0.07	5.83	0.05	0.00	(0.04)	(0.00)	
04/01/55	06/30/55	8.47	0.16	0.00	0.15	0.07	4.95	0.04	0.00	(0.04)	(0.00)	
07/01/55	09/30/55	8.02	0.15	0.00	0.15	0.06	4.06	0.04	0.00	(0.05)	(0.00)	
10/01/55	12/31/55	7.56	0.14	0.00	0.14	0.06	3.17	0.03	0.00	(0.05)	(0.00)	
01/01/56	03/31/56	7.10	0.13	0.00	0.13	0.06	2.29	0.02	0.00	(0.05)	(0.00)	
04/01/56	06/30/56	6.64	0.12	0.00	0.12	0.05	1.40	0.02	0.00	(0.05)	(0.00)	
07/01/56	09/30/56	6.19	0.12	0.00	0.11	0.05	0.52	0.01	0.00	(0.05)	(0.00)	
10/01/56	12/31/56	5.73	0.11	0.00	0.11	0.05	0.00	0.00	(0.37)	(0.43)	(0.04)	
01/01/57	03/31/57	4.01	0.09	0.00	0.09	0.04	0.00	0.00	(0.89)	(0.94)	(0.08)	
04/01/57	06/30/57	2.68	0.07	0.00	0.07	0.03	0.00	0.00	(0.88)	(0.92)	(0.08)	
07/01/57	09/30/57	1.52	0.05	0.00	0.05	0.02	0.00	0.00	(0.76)	(0.79)	(0.07)	
10/01/57	12/31/57	0.65	0.03	0.00	0.03	0.01	0.00	0.00	(0.58)	(0.59)	(0.05)	
01/01/58	03/31/58	0.16	0.01	0.00	0.01	0.00	0.00	0.00	(0.32)	(0.33)	(0.03)	
04/01/58	06/30/58	0.00	0.00	0.00	0.00	0.00	(0.00)	0.00	(0.11)	(0.11)	(0.01)	
TOTAL		7,757.13	134.85	1.19	133.66	57.96	10,641.86	79.52	(3.91)	(0.09)	(0.00)	

Notes:

- (3) = Table D1, (9)
- (4) = $(3)_{t-1} \times [(1.0 + WACC)^{0.25} - 1.0]$, where WACC is the weighted average cost of capital from Section VII-E, Exhibit 1 which is equal to 7.14%
- (5) = $(3)_{t-1} \times [(1.0 + Debt Capital Cost)^{0.25} - 1.0] \times Debt Capital Share \times 0.21$, where Debt Capital Cost=1.37% and Debt Capital Share=22%, from Section VII-E, Exhibit 1.
- (6) = (4) - (5)
- (7) = $(3)_{t-1} \times [(1.0 + Table A1, (12))^{0.25} - 1.0]$
- (8) = Table C3, (10)
- (9) = $(8)_{t-1} \times [(1.0 + Table A1, (12))^{0.25} - 1.0]$
- (10) = Table C3, (9)
- (11) = $-1.0 \times [(6) - (7) - (9) - (10)]$
- (12) = $(11) \times (1 + WACC)^{time in years}$, based on the time interval with beginning date 07/01/21, where WACC is the weighted average cost of capital from Section VII-E, Exhibit 1 which is equal to 7.14%

VII 000039 STIP

TABLE C1: POLICYHOLDER SUPPLIED - UNDERWRITING (UW) CASH FLOWS

TIME INTERVAL		COLLECTED PREMIUM NET	LOSS & LAE PAYOUT	UNDERWRITING EXPENSES							PRE TAX CASH FLOWS FROM UW	FEDERAL INCOME TAX EXPENSE ON UW	POST TAX CASH FLOWS FROM UW
				COMMIS. & BROKER.	GENERAL EXPENSES	OTHER ACQ. EXPENSES	PREMIUM TAXES	MISC. AND OTHER TAXES	REINS. EXPENSES	TOTAL PRETAX UW EXPENSES			
FROM (1)	TO (2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
07/01/21	09/30/21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/01/21	12/31/21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01/01/22	03/31/22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04/01/22	06/30/22	5.58	0.00	0.55	0.00	0.94	0.00	0.00	0.00	1.49	4.09	2.88	1.21
07/01/22	09/30/22	55.86	6.03	5.53	8.09	5.48	0.00	0.81	2.48	22.39	27.45	2.88	24.56
10/01/22	12/31/22	117.42	15.56	11.62	8.62	5.10	5.34	0.70	2.12	33.51	68.35	2.88	65.47
01/01/23	03/31/23	180.67	27.81	17.88	12.91	6.44	4.57	0.96	2.92	45.67	107.18	1.53	105.65
04/01/23	06/30/23	198.31	38.25	19.62	13.38	4.69	6.29	0.82	2.49	47.29	112.78	1.53	111.24
07/01/23	09/30/23	163.49	44.80	16.18	6.18	0.00	5.36	0.00	0.00	27.72	90.97	1.53	89.44
10/01/23	12/31/23	97.95	46.61	9.69	4.66	0.00	0.00	0.00	0.00	14.35	36.99	1.53	35.46
01/01/24	03/31/24	52.26	48.40	5.17	2.62	0.00	0.00	0.00	0.00	7.79	(3.94)	(1.21)	(2.72)
04/01/24	06/30/24	28.22	49.89	2.79	0.87	0.00	0.00	0.00	0.00	3.66	(25.33)	(1.21)	(24.12)
07/01/24	09/30/24	20.86	48.61	2.06	0.00	0.00	0.00	0.00	0.00	2.06	(29.81)	(1.21)	(28.60)
10/01/24	12/31/24	14.18	45.03	1.40	0.00	0.00	0.00	0.00	0.00	1.40	(32.25)	(1.21)	(31.03)
01/01/25	03/31/25	7.04	39.80	0.70	0.00	0.00	0.00	0.00	0.00	0.70	(33.45)	(0.88)	(32.57)
04/01/25	06/30/25	3.08	35.30	0.31	0.00	0.00	0.00	0.00	0.00	0.31	(32.52)	(0.88)	(31.64)
07/01/25	09/30/25	0.90	31.34	0.09	0.00	0.00	0.00	0.00	0.00	0.09	(30.53)	(0.88)	(29.65)
10/01/25	12/31/25	0.00	28.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(28.37)	(0.88)	(27.49)
01/01/26	03/31/26	0.00	24.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(24.15)	(0.49)	(23.66)
04/01/26	06/30/26	0.00	20.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(20.53)	(0.49)	(20.04)
07/01/26	09/30/26	0.00	17.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(17.39)	(0.49)	(16.89)
10/01/26	12/31/26	0.00	15.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(15.13)	(0.49)	(14.64)
01/01/27	03/31/27	0.00	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(12.00)	(0.25)	(11.75)
04/01/27	06/30/27	0.00	9.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(9.32)	(0.25)	(9.07)
07/01/27	09/30/27	0.00	7.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(7.59)	(0.25)	(7.34)
10/01/27	12/31/27	0.00	6.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(6.91)	(0.25)	(6.65)
01/01/28	03/31/28	0.00	5.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(5.93)	(0.15)	(5.78)
04/01/28	06/30/28	0.00	5.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(5.09)	(0.15)	(4.94)
07/01/28	09/30/28	0.00	4.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(4.36)	(0.15)	(4.21)
10/01/28	12/31/28	0.00	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(3.83)	(0.15)	(3.68)
01/01/29	03/31/29	0.00	3.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(3.10)	(0.10)	(3.00)
04/01/29	06/30/29	0.00	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(2.47)	(0.10)	(2.37)
07/01/29	09/30/29	0.00	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(2.15)	(0.10)	(2.05)
10/01/29	12/31/29	0.00	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(2.12)	(0.10)	(2.02)
01/01/30	03/31/30	0.00	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(2.06)	(0.11)	(1.95)
04/01/30	06/30/30	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(2.00)	(0.11)	(1.89)
07/01/30	09/30/30	0.00	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.87)	(0.11)	(1.76)
10/01/30	12/31/30	0.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.70)	(0.11)	(1.59)
01/01/31	03/31/31	0.00	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.45)	(0.08)	(1.37)
04/01/31	06/30/31	0.00	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.24)	(0.08)	(1.16)
07/01/31	09/30/31	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.15)	(0.08)	(1.07)
10/01/31	12/31/31	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.15)	(0.08)	(1.08)
01/01/32	03/31/32	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.15)	(0.11)	(1.04)
04/01/32	06/30/32	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.15)	(0.11)	(1.04)
07/01/32	09/30/32	0.00	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.11)	(0.11)	(1.00)
10/01/32	12/31/32	0.00	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.05)	(0.11)	(0.95)
01/01/33	03/31/33	0.00	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.96)	(0.08)	(0.88)
04/01/33	06/30/33	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.08)	(0.81)
07/01/33	09/30/33	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.85)	(0.08)	(0.77)
10/01/33	12/31/33	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.85)	(0.08)	(0.77)
01/01/34	03/31/34	0.00	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.84)	(0.07)	(0.77)
04/01/34	06/30/34	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.83)	(0.07)	(0.76)
07/01/34	09/30/34	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.82)	(0.07)	(0.75)
10/01/34	12/31/34	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.80)	(0.07)	(0.73)
01/01/35	03/31/35	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.77)	(0.06)	(0.71)
04/01/35	06/30/35	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.74)	(0.06)	(0.68)
07/01/35	09/30/35	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.72)	(0.06)	(0.65)
10/01/35	12/31/35	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.70)	(0.06)	(0.64)
01/01/36	03/31/36	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.67)	(0.06)	(0.61)
04/01/36	06/30/36	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.64)	(0.06)	(0.58)
07/01/36	09/30/36	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.65)	(0.06)	(0.59)
10/01/36	12/31/36	0.00	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.68)	(0.06)	(0.62)
01/01/37	03/31/37	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.72)	(0.06)	(0.66)
04/01/37	06/30/37	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.75)	(0.06)	(0.69)
07/01/37	09/30/37	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.74)	(0.06)	(0.68)
10/01/37	12/31/37	0.00	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.69)	(0.06)	(0.64)
01/01/38	03/31/38	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.63)	(0.05)	(0.57)
04/01/38	06/30/38	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.57)	(0.05)	(0.52)
07/01/38	09/30/38	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.55)	(0.05)	(0.50)
10/01/38	12/31/38	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.55)	(0.05)	(0.50)
01/01/39	03/31/39	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.55)	(0.05)	(0.50)
04/01/39	06/30/39	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.55)	(0.05)	(0.50)
07/01/39	09/30/39	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.56)	(0.05)	(0.51)
10/01/39	12/31/39	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.56)	(0.05)	(0.51)
01/01/40	03/31/40	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.56)	(0.05)	(0.51)
04/01/40	06/30/40	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.56)	(0.05)	(0.51)
07/01/40	09/30/40	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.54)	(0.05)	(0.49)
10/01/40	12/31/40	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.51)	(0.05)	(0.46)
01/01/41	03/31/41	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.46)	(0.04)	(0.42)
04/01/41	06/30/41	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.41)	(0.04)	(0.37)
07/01/41	09/30/41	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.42)	(0.04)	(0.38)
10/01/41	12/31/41	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.47)	(0.04)	(0.43)
01/01/42	03/31/42	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.53)	(0.01)	(0.52)
04/01/42	06/30/42	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.58)	(0.01)	(0.56)
07/01/42	09/30/42												

VII 000040 STIP

TABLE C1: POLICYHOLDER SUPPLIED - UNDERWRITING (UW) CASH FLOWS

TIME INTERVAL		COLLECTED PREMIUM NET (3)	LOSS & LAE PAYOUT (4)	UNDERWRITING EXPENSES							PRE TAX CASH FLOWS FROM UW (12)	FEDERAL INCOME TAX EXPENSE ON UW (13)	POST TAX CASH FLOWS FROM UW (14)
				COMMISS. & BROKER. (5)	GENERAL EXPENSES (6)	OTHER ACQ. EXPENSES (7)	PREMIUM TAXES (8)	MISC. AND OTHER TAXES (9)	REINS. EXPENSES (10)	TOTAL PRETAX UW EXPENSES (11)			
FROM (1)	TO (2)												
10/01/42	12/31/42	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.53)	(0.01)	(0.52)
01/01/43	03/31/43	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.47)	(0.00)	(0.47)
04/01/43	06/30/43	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.41)	(0.00)	(0.41)
07/01/43	09/30/43	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.46)	(0.00)	(0.46)
10/01/43	12/31/43	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.57)	(0.00)	(0.57)
01/01/44	03/31/44	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.71)	(0.00)	(0.70)
04/01/44	06/30/44	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.82)	(0.00)	(0.82)
07/01/44	09/30/44	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/44	12/31/44	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/45	03/31/45	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/45	06/30/45	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/45	09/30/45	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/45	12/31/45	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/46	03/31/46	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/46	06/30/46	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/46	09/30/46	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/46	12/31/46	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/47	03/31/47	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/47	06/30/47	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/47	09/30/47	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/47	12/31/47	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/48	03/31/48	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/48	06/30/48	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/48	09/30/48	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/48	12/31/48	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/49	03/31/49	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/49	06/30/49	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/49	09/30/49	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/49	12/31/49	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/50	03/31/50	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/50	06/30/50	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/50	09/30/50	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/50	12/31/50	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/51	03/31/51	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/51	06/30/51	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/51	09/30/51	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/51	12/31/51	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/52	03/31/52	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/52	06/30/52	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/52	09/30/52	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/52	12/31/52	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/53	03/31/53	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/53	06/30/53	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/53	09/30/53	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/53	12/31/53	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/54	03/31/54	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/54	06/30/54	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/54	09/30/54	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/54	12/31/54	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/55	03/31/55	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/55	06/30/55	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/55	09/30/55	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/55	12/31/55	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/56	03/31/56	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/56	06/30/56	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/56	09/30/56	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
10/01/56	12/31/56	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
01/01/57	03/31/57	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.89)	(0.00)	(0.89)
04/01/57	06/30/57	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/57	09/30/57	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.77)	(0.00)	(0.76)
10/01/57	12/31/57	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.58)	(0.00)	(0.58)
01/01/58	03/31/58	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.32)	(0.00)	(0.32)
04/01/58	06/30/58	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.11)	(0.00)	(0.11)
TOTAL		945.85	742.37	93.59	57.33	22.66	21.57	3.28	10.00	208.43	(4.95)	(1.04)	(3.91)

Notes:

- (3) = Table A1, (2) x Table C5_1, (3)
- (4) = Table A1, (3) x Table A1, (1a) x Table C5_1, (4)
- (5) = Table A1, (4) x Table A1, (1a) x Table C5_1, (5)
- (6) = Table A1, (6) x Table A1, (1a) x Table C5_1, (6)
- (7) = Table A1, (7) x Table A1, (1a) x Table C5_1, (7)
- (8) = Table A1, (8) x Table A1, (1a) x Table C5_1, (8)
- (9) = Table A1, (10) x Table A1, (1a) x Table C5_1, (9)
- (10) = Table A1, (9) x Table A1, (1a) x Table C5_1, (10)
- (11) = (5) + (6) + (7) + (8) + (9) + (10)
- (12) = (3) - (4) - (11)
- (13) = Table C2_6, (6), annual tax expense allocated to the model time periods.
- (14) = (12) - (13)

VII 000041 STIP

TABLE C2_1: FEDERAL INCOME TAXES - TAXABLE PREMIUM REVENUE

TIME INTERVAL		WRITTEN PREMIUM NET (3)	UNEARNED PREMIUM RESERVES (4)	CHANGE IN UNEARNED PREMIUM RESERVES (5)	TAX DEDUCTIBLE CHANGE IN UNEARNED PREMIUM RESERVES (6)	NON TAX DEDUCTIBLE CHANGE IN UNEARNED PREMIUM RESERVES (7)	TAXABLE PREMIUM REVENUE (8)
FROM (1)	TO (2)						
01/01/21	12/31/21	0.00	0.00	0.00	0.00	0.00	0.00
01/01/22	12/31/22	434.95	316.61	316.61	253.29	63.32	181.66
01/01/23	12/31/23	510.89	113.48	(203.13)	(162.51)	(40.63)	673.40
01/01/24	12/31/24	0.00	0.00	(113.48)	(90.78)	(22.70)	90.78
01/01/25	12/31/25	0.00	0.00	0.00	0.00	0.00	0.00
01/01/26	12/31/26	0.00	0.00	0.00	0.00	0.00	0.00
01/01/27	12/31/27	0.00	0.00	0.00	0.00	0.00	0.00
01/01/28	12/31/28	0.00	0.00	0.00	0.00	0.00	0.00
01/01/29	12/31/29	0.00	0.00	0.00	0.00	0.00	0.00
01/01/30	12/31/30	0.00	0.00	0.00	0.00	0.00	0.00
01/01/31	12/31/31	0.00	0.00	0.00	0.00	0.00	0.00
01/01/32	12/31/32	0.00	0.00	0.00	0.00	0.00	0.00
01/01/33	12/31/33	0.00	0.00	0.00	0.00	0.00	0.00
01/01/34	12/31/34	0.00	0.00	0.00	0.00	0.00	0.00
01/01/35	12/31/35	0.00	0.00	0.00	0.00	0.00	0.00
01/01/36	12/31/36	0.00	0.00	0.00	0.00	0.00	0.00
01/01/37	12/31/37	0.00	0.00	0.00	0.00	0.00	0.00
01/01/38	12/31/38	0.00	0.00	0.00	0.00	0.00	0.00
01/01/39	12/31/39	0.00	0.00	0.00	0.00	0.00	0.00
01/01/40	12/31/40	0.00	0.00	0.00	0.00	0.00	0.00
01/01/41	12/31/41	0.00	0.00	0.00	0.00	0.00	0.00
01/01/42	12/31/42	0.00	0.00	0.00	0.00	0.00	0.00
01/01/43	12/31/43	0.00	0.00	0.00	0.00	0.00	0.00
01/01/44	12/31/44	0.00	0.00	0.00	0.00	0.00	0.00
01/01/45	12/31/45	0.00	0.00	0.00	0.00	0.00	0.00
01/01/46	12/31/46	0.00	0.00	0.00	0.00	0.00	0.00
01/01/47	12/31/47	0.00	0.00	0.00	0.00	0.00	0.00
01/01/48	12/31/48	0.00	0.00	0.00	0.00	0.00	0.00
01/01/49	12/31/49	0.00	0.00	0.00	0.00	0.00	0.00
01/01/50	12/31/50	0.00	0.00	0.00	0.00	0.00	0.00
01/01/51	12/31/51	0.00	0.00	0.00	0.00	0.00	0.00
01/01/52	12/31/52	0.00	0.00	0.00	0.00	0.00	0.00
01/01/53	12/31/53	0.00	0.00	0.00	0.00	0.00	0.00
01/01/54	12/31/54	0.00	0.00	0.00	0.00	0.00	0.00
01/01/55	12/31/55	0.00	0.00	0.00	0.00	0.00	0.00
01/01/56	12/31/56	0.00	0.00	0.00	0.00	0.00	0.00
01/01/57	12/31/57	0.00	0.00	0.00	0.00	0.00	0.00
01/01/58	12/31/58	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL		945.85	430.09	0.00	0.00	0.00	945.85

Notes:
 (3) = Table A1, (1b) x Percentage of Premium written in corresponding year
 (4) = Table A1, (1b) x Percentage of Unearned Premium in corresponding year
 (5) = (4), incremental
 (6) = 0.8 x (5)
 (7) = 0.2 x (5)
 (8) = (3) - (6)

VII 000042 STIP

TABLE C2_2: DERIVATION OF DISCOUNTED LOSS & LAE RESERVES

ACCIDENT YEAR 2022									
TIME INTERVAL		IRS DISCOUNT FACTOR	UNDISCOUNTED			DISCOUNTED			LOSS & LAE PAID DURING PERIOD
			LOSS & LAE UNPAID BEG OF PERIOD	LOSS & LAE UNPAID END OF PERIOD	CHANGE IN UNDISCOUNTED LOSS & LAE RESERVES	LOSS & LAE UNPAID BEG OF PERIOD	LOSS & LAE UNPAID END OF PERIOD	CHANGE IN DISCOUNTED LOSS & LAE RESERVES	
FROM (1)	TO (2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
01/01/21	12/31/21	0.8756	0.00	78.04	78.04	0.00	68.33	68.33	14.76
01/01/22	12/31/22	0.8600	78.04	53.70	(24.34)	68.33	46.18	(22.15)	24.34
01/01/23	12/31/23	0.8487	53.70	34.14	(19.55)	46.18	28.98	(17.20)	19.55
01/01/24	12/31/24	0.8332	34.14	22.35	(11.79)	28.98	18.62	(10.36)	11.79
01/01/25	12/31/25	0.8274	22.35	16.56	(5.79)	18.62	13.70	(4.92)	5.79
01/01/26	12/31/26	0.8219	16.56	13.66	(2.90)	13.70	11.23	(2.47)	2.90
01/01/27	12/31/27	0.8256	13.66	12.16	(1.50)	11.23	10.04	(1.19)	1.50
01/01/28	12/31/28	0.8344	12.16	11.13	(1.02)	10.04	9.29	(0.75)	1.02
01/01/29	12/31/29	0.8407	11.13	10.42	(0.71)	9.29	8.76	(0.53)	0.71
01/01/30	12/31/30	0.8602	10.42	9.85	(0.58)	8.76	8.47	(0.29)	0.58
01/01/31	12/31/31	0.8728	9.85	9.37	(0.47)	8.47	8.18	(0.29)	0.47
01/01/32	12/31/32	0.8856	9.37	8.95	(0.42)	8.18	7.93	(0.25)	0.42
01/01/33	12/31/33	0.8987	8.95	8.57	(0.38)	7.93	7.70	(0.23)	0.38
01/01/34	12/31/34	0.9121	8.57	8.24	(0.33)	7.70	7.51	(0.19)	0.33
01/01/35	12/31/35	0.9257	8.24	7.88	(0.36)	7.51	7.29	(0.22)	0.36
01/01/36	12/31/36	0.9395	7.88	7.57	(0.31)	7.29	7.11	(0.18)	0.31
01/01/37	12/31/37	0.9536	7.57	7.29	(0.28)	7.11	6.95	(0.16)	0.28
01/01/38	12/31/38	0.9679	7.29	7.01	(0.28)	6.95	6.78	(0.17)	0.28
01/01/39	12/31/39	0.9821	7.01	6.79	(0.22)	6.78	6.66	(0.12)	0.22
01/01/40	12/31/40	0.9848	6.79	6.52	(0.27)	6.66	6.42	(0.25)	0.27
01/01/41	12/31/41	0.9848	6.52	6.29	(0.23)	6.42	6.19	(0.23)	0.23
01/01/42	12/31/42	0.9848	6.29	5.92	(0.36)	6.19	5.83	(0.36)	0.36
01/01/43	12/31/43	0.9848	5.92	5.48	(0.44)	5.83	5.40	(0.44)	0.44
01/01/44	12/31/44	0.9848	5.48	5.03	(0.44)	5.40	4.96	(0.44)	0.44
01/01/45	12/31/45	0.9848	5.03	4.59	(0.44)	4.96	4.52	(0.44)	0.44
01/01/46	12/31/46	0.9848	4.59	4.15	(0.44)	4.52	4.08	(0.44)	0.44
01/01/47	12/31/47	0.9848	4.15	3.70	(0.44)	4.08	3.64	(0.44)	0.44
01/01/48	12/31/48	0.9848	3.70	3.26	(0.44)	3.64	3.21	(0.44)	0.44
01/01/49	12/31/49	0.9848	3.26	2.81	(0.44)	3.21	2.77	(0.44)	0.44
01/01/50	12/31/50	0.9848	2.81	2.37	(0.44)	2.77	2.33	(0.44)	0.44
01/01/51	12/31/51	0.9848	2.37	1.92	(0.44)	2.33	1.89	(0.44)	0.44
01/01/52	12/31/52	0.9848	1.92	1.48	(0.44)	1.89	1.46	(0.44)	0.44
01/01/53	12/31/53	0.9848	1.48	1.03	(0.44)	1.46	1.02	(0.44)	0.44
01/01/54	12/31/54	0.9848	1.03	0.59	(0.44)	1.02	0.58	(0.44)	0.44
01/01/55	12/31/55	0.9848	0.59	0.14	(0.44)	0.58	0.14	(0.44)	0.44
01/01/56	12/31/56	0.9848	0.14	0.00	(0.14)	0.14	0.00	(0.14)	0.14
01/01/57	12/31/57	0.9848	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01/01/58	12/31/58	0.9848	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL			388.95	388.95	0.00	344.16	344.16	0.00	92.80

- Notes:
- (3): Discount factors specified in IRS Internal Revenue Bulletin 2020-49.
 - (4) = (5)_{t-1}
 - (5) = (10), Total - (10), cumulative
 - (6) = (5) - (4)
 - (7) = (8)_{t-1}
 - (8) = (3) x (5)
 - (9) = (8) - (7)
 - (10) = Table A1, (3) x Table A1, (1a) x Loss & LAE Flow (from Section VII-I, Exhibit 1) for each accident year

VII 000043 STIP

TABLE C2_3: DERIVATION OF DISCOUNTED LOSS & LAE RESERVES

ACCIDENT YEAR 2023									
TIME INTERVAL		IRS DISCOUNT FACTOR (3)	UNDISCOUNTED			DISCOUNTED			LOSS & LAE PAID DURING PERIOD (10)
FROM (1)	TO (2)		LOSS & LAE UNPAID BEG OF PERIOD (4)	LOSS & LAE UNPAID END OF PERIOD (5)	CHANGE IN UNDISCOUNTED LOSS & LAE RESERVES (6)	LOSS & LAE UNPAID BEG OF PERIOD (7)	LOSS & LAE UNPAID END OF PERIOD (8)	CHANGE IN DISCOUNTED LOSS & LAE RESERVES (9)	
01/01/21	12/31/21		0.00	0.00	0.00	0.00	0.00	0.00	
01/01/22	12/31/22								
01/01/23	12/31/23	0.8756	0.00	428.65	428.65	0.00	375.31	375.31	131.71
01/01/24	12/31/24	0.8600	428.65	274.61	(154.04)	375.31	236.15	(139.16)	154.04
01/01/25	12/31/25	0.8487	274.61	173.77	(100.84)	236.15	147.47	(88.69)	100.84
01/01/26	12/31/26	0.8332	173.77	116.60	(57.17)	147.47	97.15	(50.32)	57.17
01/01/27	12/31/27	0.8274	116.60	92.15	(24.45)	97.15	76.24	(20.90)	24.45
01/01/28	12/31/28	0.8219	92.15	77.90	(14.25)	76.24	64.03	(12.21)	14.25
01/01/29	12/31/29	0.8256	77.90	71.29	(6.61)	64.03	58.86	(5.17)	6.61
01/01/30	12/31/30	0.8344	71.29	65.30	(5.99)	58.86	54.48	(4.38)	5.99
01/01/31	12/31/31	0.8407	65.30	61.83	(3.47)	54.48	51.98	(2.51)	3.47
01/01/32	12/31/32	0.8602	61.83	58.35	(3.48)	51.98	50.19	(1.79)	3.48
01/01/33	12/31/33	0.8728	58.35	55.77	(2.57)	50.19	48.68	(1.51)	2.57
01/01/34	12/31/34	0.8856	55.77	53.25	(2.52)	48.68	47.16	(1.52)	2.52
01/01/35	12/31/35	0.8987	53.25	51.04	(2.21)	47.16	45.87	(1.29)	2.21
01/01/36	12/31/36	0.9121	51.04	49.13	(1.91)	45.87	44.81	(1.06)	1.91
01/01/37	12/31/37	0.9257	49.13	46.82	(2.31)	44.81	43.34	(1.47)	2.31
01/01/38	12/31/38	0.9395	46.82	45.16	(1.65)	43.34	42.43	(0.90)	1.65
01/01/39	12/31/39	0.9536	45.16	43.48	(1.68)	42.43	41.47	(0.97)	1.68
01/01/40	12/31/40	0.9679	43.48	41.78	(1.70)	41.47	40.44	(1.03)	1.70
01/01/41	12/31/41	0.9821	41.78	40.59	(1.19)	40.44	39.86	(0.57)	1.19
01/01/42	12/31/42	0.9848	40.59	38.76	(1.83)	39.86	38.17	(1.69)	1.83
01/01/43	12/31/43	0.9848	38.76	37.58	(1.18)	38.17	37.01	(1.17)	1.18
01/01/44	12/31/44	0.9848	37.58	34.90	(2.68)	37.01	34.37	(2.64)	2.68
01/01/45	12/31/45	0.9848	34.90	32.22	(2.68)	34.37	31.73	(2.64)	2.68
01/01/46	12/31/46	0.9848	32.22	29.53	(2.68)	31.73	29.08	(2.64)	2.68
01/01/47	12/31/47	0.9848	29.53	26.85	(2.68)	29.08	26.44	(2.64)	2.68
01/01/48	12/31/48	0.9848	26.85	24.17	(2.68)	26.44	23.80	(2.64)	2.68
01/01/49	12/31/49	0.9848	24.17	21.48	(2.68)	23.80	21.16	(2.64)	2.68
01/01/50	12/31/50	0.9848	21.48	18.80	(2.68)	21.16	18.51	(2.64)	2.68
01/01/51	12/31/51	0.9848	18.80	16.11	(2.68)	18.51	15.87	(2.64)	2.68
01/01/52	12/31/52	0.9848	16.11	13.43	(2.68)	15.87	13.23	(2.64)	2.68
01/01/53	12/31/53	0.9848	13.43	10.75	(2.68)	13.23	10.58	(2.64)	2.68
01/01/54	12/31/54	0.9848	10.75	8.06	(2.68)	10.58	7.94	(2.64)	2.68
01/01/55	12/31/55	0.9848	8.06	5.38	(2.68)	7.94	5.30	(2.64)	2.68
01/01/56	12/31/56	0.9848	5.38	2.69	(2.68)	5.30	2.65	(2.64)	2.68
01/01/57	12/31/57	0.9848	2.69	0.01	(2.68)	2.65	0.01	(2.64)	2.68
01/01/58	12/31/58	0.9848	0.01	0.00	(0.01)	0.01	0.00	(0.01)	0.01
TOTAL			2,168.18	2,168.18	0.00	1,921.78	1,921.78	(0.00)	560.36

Notes:

(3): Discount factors specified in IRS Internal Revenue Bulletin 2020-49.

(4) = (5)_{t-1}

(5) = (10), Total - (10), cumulative

(6) = (5) - (4)

(7) = (8)_{t-1}

(8) = (3) x (5)

(9) = (8) - (7)

(10) = Table A1, (3) x Table A1, (1a) x Loss & LAE Flow (from Section VII-I, Exhibit 1) for each accident year

VII 000044 STIP

TABLE C2_4: DERIVATION OF DISCOUNTED LOSS & LAE RESERVES

ACCIDENT YEAR 2024									
TIME INTERVAL		IRS DISCOUNT FACTOR	UNDISCOUNTED			DISCOUNTED			LOSS & LAE PAID DURING PERIOD
			LOSS & LAE UNPAID BEG OF PERIOD	LOSS & LAE UNPAID END OF PERIOD	CHANGE IN UNDISCOUNTED LOSS & LAE RESERVES	LOSS & LAE UNPAID BEG OF PERIOD	LOSS & LAE UNPAID END OF PERIOD	CHANGE IN DISCOUNTED LOSS & LAE RESERVES	
FROM	TO		(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)	(2)	(3)							
1/1/2021	12/31/2021		0.00	0.00	0.00	0.00	0.00	0.00	
1/1/2022	12/31/2022		0.00	0.00	0.00	0.00	0.00	0.00	
1/1/2023	12/31/2023		0.00	0.00	0.00	0.00	0.00	0.00	
1/1/2024	12/31/2024	0.8756	0.00	59.95	59.95	0.00	52.49	52.49	29.26
1/1/2025	12/31/2025	0.8600	59.95	38.26	(21.69)	52.49	32.90	(19.59)	21.69
1/1/2026	12/31/2026	0.8487	38.26	24.56	(13.70)	32.90	20.85	(12.06)	13.70
1/1/2027	12/31/2027	0.8332	24.56	17.23	(7.33)	20.85	14.36	(6.49)	7.33
1/1/2028	12/31/2028	0.8274	17.23	13.90	(3.33)	14.36	11.50	(2.86)	3.33
1/1/2029	12/31/2029	0.8219	13.90	12.04	(1.86)	11.50	9.90	(1.60)	1.86
1/1/2030	12/31/2030	0.8256	12.04	11.03	(1.02)	9.90	9.10	(0.79)	1.02
1/1/2031	12/31/2031	0.8344	11.03	10.21	(0.82)	9.10	8.52	(0.59)	0.82
1/1/2032	12/31/2032	0.8407	10.21	9.66	(0.55)	8.52	8.12	(0.40)	0.55
1/1/2033	12/31/2033	0.8602	9.66	9.15	(0.51)	8.12	7.87	(0.25)	0.51
1/1/2034	12/31/2034	0.8728	9.15	8.74	(0.41)	7.87	7.63	(0.24)	0.41
1/1/2035	12/31/2035	0.8856	8.74	8.36	(0.38)	7.63	7.40	(0.23)	0.38
1/1/2036	12/31/2036	0.8987	8.36	8.02	(0.34)	7.40	7.21	(0.19)	0.34
1/1/2037	12/31/2037	0.9121	8.02	7.70	(0.33)	7.21	7.02	(0.19)	0.33
1/1/2038	12/31/2038	0.9257	7.70	7.36	(0.33)	7.02	6.82	(0.20)	0.33
1/1/2039	12/31/2039	0.9395	7.36	7.10	(0.26)	6.82	6.67	(0.15)	0.26
1/1/2040	12/31/2040	0.9536	7.10	6.83	(0.27)	6.67	6.51	(0.16)	0.27
1/1/2041	12/31/2041	0.9679	6.83	6.59	(0.24)	6.51	6.38	(0.14)	0.24
1/1/2042	12/31/2042	0.9821	6.59	6.36	(0.22)	6.38	6.25	(0.13)	0.22
1/1/2043	12/31/2043	0.9848	6.36	6.11	(0.26)	6.25	6.01	(0.24)	0.26
1/1/2044	12/31/2044	0.9848	6.11	5.84	(0.27)	6.01	5.75	(0.26)	0.27
1/1/2045	12/31/2045	0.9848	5.84	5.41	(0.43)	5.75	5.33	(0.42)	0.43
1/1/2046	12/31/2046	0.9848	5.41	4.98	(0.43)	5.33	4.91	(0.42)	0.43
1/1/2047	12/31/2047	0.9848	4.98	4.56	(0.43)	4.91	4.49	(0.42)	0.43
1/1/2048	12/31/2048	0.9848	4.56	4.13	(0.43)	4.49	4.07	(0.42)	0.43
1/1/2049	12/31/2049	0.9848	4.13	3.70	(0.43)	4.07	3.65	(0.42)	0.43
1/1/2050	12/31/2050	0.9848	3.70	3.28	(0.43)	3.65	3.23	(0.42)	0.43
1/1/2051	12/31/2051	0.9848	3.28	2.85	(0.43)	3.23	2.80	(0.42)	0.43
1/1/2052	12/31/2052	0.9848	2.85	2.42	(0.43)	2.80	2.38	(0.42)	0.43
1/1/2053	12/31/2053	0.9848	2.42	1.99	(0.43)	2.38	1.96	(0.42)	0.43
1/1/2054	12/31/2054	0.9848	1.99	1.57	(0.43)	1.96	1.54	(0.42)	0.43
1/1/2055	12/31/2055	0.9848	1.57	1.14	(0.43)	1.54	1.12	(0.42)	0.43
1/1/2056	12/31/2056	0.9848	1.14	0.71	(0.43)	1.12	0.70	(0.42)	0.43
1/1/2057	12/31/2057	0.9848	0.71	0.28	(0.43)	0.70	0.28	(0.42)	0.43
1/1/2058	12/31/2058	0.9848	0.28	0.00	(0.28)	0.28	0.00	(0.28)	0.28
TOTAL			322.01	322.01	0.00	285.71	285.71	0.00	89.21

Notes:

(3): Discount factors specified in IRS Internal Revenue Bulletin 2020-49.

(4) = (5)_{t-1}

(5) = (10), Total - (10), cumulative

(6) = (5) - (4)

(7) = (8)_{t-1}

(8) = (3) x (5)

(9) = (8) - (7)

(10) = Table A1, (3) x Table A1, (1a) x Loss & LAE Flow (from Section VII-I, Exhibit 1) for each accident year

TABLE C2_5: FEDERAL INCOME TAXES - UNDERWRITING (UW) TAX DEDUCTIONS

TIME INTERVAL		LOSS & LAE PAID DURING PERIOD	CHANGE IN DISCOUNTED LOSS & LAE RESERVES	TAX DEDUCTIBLE LOSS & LAE	TAX DEDUCTIBLE UW EXPENSES	TOTAL UW TAX DEDUCTIONS
FROM (1)	TO (2)	(3)	(4)	(5)	(6)	(7)
01/01/21	12/31/21	0.00	0.00	0.00	0.00	0.00
01/01/22	12/31/22	14.76	68.33	83.09	57.39	140.47
01/01/23	12/31/23	156.06	353.16	509.21	135.03	644.24
01/01/24	12/31/24	202.85	(103.87)	98.98	14.92	113.90
01/01/25	12/31/25	134.33	(118.63)	15.70	1.09	16.79
01/01/26	12/31/26	76.66	(67.30)	9.36	0.00	9.36
01/01/27	12/31/27	34.68	(29.87)	4.81	0.00	4.81
01/01/28	12/31/28	19.08	(16.26)	2.82	0.00	2.82
01/01/29	12/31/29	9.49	(7.52)	1.97	0.00	1.97
01/01/30	12/31/30	7.72	(5.70)	2.02	0.00	2.02
01/01/31	12/31/31	4.86	(3.38)	1.48	0.00	1.48
01/01/32	12/31/32	4.51	(2.48)	2.03	0.00	2.03
01/01/33	12/31/33	3.50	(2.01)	1.49	0.00	1.49
01/01/34	12/31/34	3.31	(1.99)	1.33	0.00	1.33
01/01/35	12/31/35	2.93	(1.71)	1.22	0.00	1.22
01/01/36	12/31/36	2.61	(1.48)	1.13	0.00	1.13
01/01/37	12/31/37	2.95	(1.85)	1.10	0.00	1.10
01/01/38	12/31/38	2.26	(1.27)	1.00	0.00	1.00
01/01/39	12/31/39	2.23	(1.28)	0.95	0.00	0.95
01/01/40	12/31/40	2.20	(1.31)	0.89	0.00	0.89
01/01/41	12/31/41	1.70	(0.96)	0.74	0.00	0.74
01/01/42	12/31/42	2.28	(2.04)	0.24	0.00	0.24
01/01/43	12/31/43	1.80	(1.76)	0.04	0.00	0.04
01/01/44	12/31/44	3.39	(3.34)	0.05	0.00	0.05
01/01/45	12/31/45	3.56	(3.50)	0.05	0.00	0.05
01/01/46	12/31/46	3.56	(3.50)	0.05	0.00	0.05
01/01/47	12/31/47	3.56	(3.50)	0.05	0.00	0.05
01/01/48	12/31/48	3.56	(3.50)	0.05	0.00	0.05
01/01/49	12/31/49	3.56	(3.50)	0.05	0.00	0.05
01/01/50	12/31/50	3.56	(3.50)	0.05	0.00	0.05
01/01/51	12/31/51	3.56	(3.50)	0.05	0.00	0.05
01/01/52	12/31/52	3.56	(3.50)	0.05	0.00	0.05
01/01/53	12/31/53	3.56	(3.50)	0.05	0.00	0.05
01/01/54	12/31/54	3.56	(3.50)	0.05	0.00	0.05
01/01/55	12/31/55	3.56	(3.50)	0.05	0.00	0.05
01/01/56	12/31/56	3.56	(3.50)	0.05	0.00	0.05
01/01/57	12/31/57	3.26	(3.21)	0.05	0.00	0.05
01/01/58	12/31/58	0.30	(0.29)	0.00	0.00	0.00
TOTAL		742.37	(0.00)	742.37	208.43	950.80

Notes:

(3) = Table C2_2, (10) + Table C2_3, (10) + Table C2_4, (10)

(4) = Table C2_2, (9) + Table C2_3, (9) + Table C2_4, (9)

(5) = (3) + (4)

(6) = Table C1, (11) by tax year

(7) = (5) + (6)

TABLE C2_6: FEDERAL INCOME TAX EXPENSE ON UNDERWRITING

TIME INTERVAL		TAXABLE PREMIUM REVENUE	TOTAL UW TAX DEDUCTIONS	TAX BASIS NET UW GAIN	FEDERAL INCOME TAX EXPENSE ON UW
FROM (1)	TO (2)	(3)	(4)	(5)	(6)
01/01/21	12/31/21	0.00	0.00	0.00	0.00
01/01/22	12/31/22	181.66	140.47	41.19	8.65
01/01/23	12/31/23	673.40	644.24	29.15	6.12
01/01/24	12/31/24	90.78	113.90	(23.12)	(4.85)
01/01/25	12/31/25	0.00	16.79	(16.79)	(3.53)
01/01/26	12/31/26	0.00	9.36	(9.36)	(1.97)
01/01/27	12/31/27	0.00	4.81	(4.81)	(1.01)
01/01/28	12/31/28	0.00	2.82	(2.82)	(0.59)
01/01/29	12/31/29	0.00	1.97	(1.97)	(0.41)
01/01/30	12/31/30	0.00	2.02	(2.02)	(0.42)
01/01/31	12/31/31	0.00	1.48	(1.48)	(0.31)
01/01/32	12/31/32	0.00	2.03	(2.03)	(0.43)
01/01/33	12/31/33	0.00	1.49	(1.49)	(0.31)
01/01/34	12/31/34	0.00	1.33	(1.33)	(0.28)
01/01/35	12/31/35	0.00	1.22	(1.22)	(0.26)
01/01/36	12/31/36	0.00	1.13	(1.13)	(0.24)
01/01/37	12/31/37	0.00	1.10	(1.10)	(0.23)
01/01/38	12/31/38	0.00	1.00	(1.00)	(0.21)
01/01/39	12/31/39	0.00	0.95	(0.95)	(0.20)
01/01/40	12/31/40	0.00	0.89	(0.89)	(0.19)
01/01/41	12/31/41	0.00	0.74	(0.74)	(0.16)
01/01/42	12/31/42	0.00	0.24	(0.24)	(0.05)
01/01/43	12/31/43	0.00	0.04	(0.04)	(0.01)
01/01/44	12/31/44	0.00	0.05	(0.05)	(0.01)
01/01/45	12/31/45	0.00	0.05	(0.05)	(0.01)
01/01/46	12/31/46	0.00	0.05	(0.05)	(0.01)
01/01/47	12/31/47	0.00	0.05	(0.05)	(0.01)
01/01/48	12/31/48	0.00	0.05	(0.05)	(0.01)
01/01/49	12/31/49	0.00	0.05	(0.05)	(0.01)
01/01/50	12/31/50	0.00	0.05	(0.05)	(0.01)
01/01/51	12/31/51	0.00	0.05	(0.05)	(0.01)
01/01/52	12/31/52	0.00	0.05	(0.05)	(0.01)
01/01/53	12/31/53	0.00	0.05	(0.05)	(0.01)
01/01/54	12/31/54	0.00	0.05	(0.05)	(0.01)
01/01/55	12/31/55	0.00	0.05	(0.05)	(0.01)
01/01/56	12/31/56	0.00	0.05	(0.05)	(0.01)
01/01/57	12/31/57	0.00	0.05	(0.05)	(0.01)
01/01/58	12/31/58	0.00	0.00	(0.00)	(0.00)
TOTAL		945.85	950.80	(4.95)	(1.04)

Notes:

(3) = Table C2_1, (8)

(4) = Table C2_5, (7)

(5) = (3) - (4)

(6) = 0.21 x (5), where 0.21 is the Federal income tax rate.

VII 000047 STIP

TABLE C2_7: ADMITTED PREPAID TAX (DEFERRED TAX ASSET - DTA)

TIME INTERVAL		AY 2022		AY 2023		AY 2024		DISCOUNT UNWOUND DURING PERIOD (9)	DTA ASSOCIATED WITH LOSS & LAE RESERVE (10)	UNEARNED PREMIUM RESERVE (11)	DTA ASSOCIATED WITH UNEARNED PREMIUM RESERVE (12)	ADMITTED PREPAID TAX (DTA) (13)
		CHANGE IN DISCOUNTED LOSS & LAE (3)	LOSS & LAE PAID DURING PERIOD (4)	CHANGE IN DISCOUNTED LOSS & LAE (5)	LOSS & LAE PAID DURING PERIOD (6)	CHANGE IN DISCOUNTED LOSS & LAE (7)	LOSS & LAE PAID DURING PERIOD (8)					
FROM (1)	TO (2)											
01/01/21	12/31/21							0.00	0.00			0.00
01/01/22	12/31/22							0.00	0.46	316.61	13.30	13.76
01/01/23	12/31/23	(22.15)	24.34					2.19	3.62	113.48	4.77	8.39
01/01/24	12/31/24	(17.20)	19.55	(139.16)	154.04			17.24	3.30	0.00	0.00	3.30
01/01/25	12/31/25	(10.36)	11.79	(88.69)	100.84	(19.59)	21.69	15.70	1.97	0.00	0.00	1.97
01/01/26	12/31/26	(4.92)	5.79	(50.32)	57.17	(12.06)	13.70	9.36	1.01	0.00	0.00	1.01
01/01/27	12/31/27	(2.47)	2.90	(20.90)	24.45	(6.49)	7.33	4.81	0.59	0.00	0.00	0.59
01/01/28	12/31/28	(1.19)	1.50	(12.21)	14.25	(2.86)	3.33	2.82	0.41	0.00	0.00	0.41
01/01/29	12/31/29	(0.75)	1.02	(5.17)	6.61	(1.60)	1.86	1.97	0.42	0.00	0.00	0.42
01/01/30	12/31/30	(0.53)	0.71	(4.38)	5.99	(0.79)	1.02	2.02	0.31	0.00	0.00	0.31
01/01/31	12/31/31	(0.29)	0.58	(2.51)	3.47	(0.59)	0.82	1.48	0.43	0.00	0.00	0.43
01/01/32	12/31/32	(0.29)	0.47	(1.79)	3.48	(0.40)	0.55	2.03	0.31	0.00	0.00	0.31
01/01/33	12/31/33	(0.25)	0.42	(1.51)	2.57	(0.25)	0.51	1.49	0.28	0.00	0.00	0.28
01/01/34	12/31/34	(0.23)	0.38	(1.52)	2.52	(0.24)	0.41	1.33	0.26	0.00	0.00	0.26
01/01/35	12/31/35	(0.19)	0.33	(1.29)	2.21	(0.23)	0.38	1.22	0.24	0.00	0.00	0.24
01/01/36	12/31/36	(0.22)	0.36	(1.06)	1.91	(0.19)	0.34	1.13	0.23	0.00	0.00	0.23
01/01/37	12/31/37	(0.18)	0.31	(1.47)	2.31	(0.19)	0.33	1.10	0.21	0.00	0.00	0.21
01/01/38	12/31/38	(0.16)	0.28	(0.90)	1.65	(0.20)	0.33	1.00	0.20	0.00	0.00	0.20
01/01/39	12/31/39	(0.17)	0.28	(0.97)	1.68	(0.15)	0.26	0.95	0.19	0.00	0.00	0.19
01/01/40	12/31/40	(0.12)	0.22	(1.03)	1.70	(0.16)	0.27	0.89	0.16	0.00	0.00	0.16
01/01/41	12/31/41	(0.25)	0.27	(0.57)	1.19	(0.14)	0.24	0.74	0.05	0.00	0.00	0.05
01/01/42	12/31/42	(0.23)	0.23	(1.69)	1.83	(0.13)	0.22	0.24	0.01	0.00	0.00	0.01
01/01/43	12/31/43	(0.36)	0.36	(1.17)	1.18	(0.24)	0.26	0.04	0.01	0.00	0.00	0.01
01/01/44	12/31/44	(0.44)	0.44	(2.64)	2.68	(0.26)	0.27	0.05	0.01	0.00	0.00	0.01
01/01/45	12/31/45	(0.44)	0.44	(2.64)	2.68	(0.42)	0.43	0.05	0.01	0.00	0.00	0.01
01/01/46	12/31/46	(0.44)	0.44	(2.64)	2.68	(0.42)	0.43	0.05	0.01	0.00	0.00	0.01
01/01/47	12/31/47	(0.44)	0.44	(2.64)	2.68	(0.42)	0.43	0.05	0.01	0.00	0.00	0.01
01/01/48	12/31/48	(0.44)	0.44	(2.64)	2.68	(0.42)	0.43	0.05	0.01	0.00	0.00	0.01
01/01/49	12/31/49	(0.44)	0.44	(2.64)	2.68	(0.42)	0.43	0.05	0.01	0.00	0.00	0.01
01/01/50	12/31/50	(0.44)	0.44	(2.64)	2.68	(0.42)	0.43	0.05	0.01	0.00	0.00	0.01
01/01/51	12/31/51	(0.44)	0.44	(2.64)	2.68	(0.42)	0.43	0.05	0.01	0.00	0.00	0.01
01/01/52	12/31/52	(0.44)	0.44	(2.64)	2.68	(0.42)	0.43	0.05	0.01	0.00	0.00	0.01
01/01/53	12/31/53	(0.44)	0.44	(2.64)	2.68	(0.42)	0.43	0.05	0.01	0.00	0.00	0.01
01/01/54	12/31/54	(0.44)	0.44	(2.64)	2.68	(0.42)	0.43	0.05	0.01	0.00	0.00	0.01
01/01/55	12/31/55	(0.44)	0.44	(2.64)	2.68	(0.42)	0.43	0.05	0.01	0.00	0.00	0.01
01/01/56	12/31/56	(0.44)	0.44	(2.64)	2.68	(0.42)	0.43	0.05	0.01	0.00	0.00	0.01
01/01/57	12/31/57	(0.14)	0.14	(2.64)	2.68	(0.42)	0.43	0.05	0.00	0.00	0.00	0.00
01/01/58	12/31/58	0.00	0.00	(0.01)	0.01	(0.28)	0.28	0.00	0.00	0.00	0.00	0.00

Notes:

- (3) = Table C2_2, (9), the initial value is not relevant in calculating the discount unwound during period.
- (4) = Table C2_2, (10)
- (5) = Table C2_3, (9), the initial value is not relevant in calculating the discount unwound during period.
- (6) = Table C2_3, (10)
- (7) = Table C2_4, (9), the initial value is not relevant in calculating the discount unwound during period.
- (8) = Table C2_4, (10)
- (9) = (3) + (4) + (5) + (6) + (7) + (8)
- (10) = $0.21 \times (9)_{t-1}$, where 0.21 is the Federal income tax rate.
- (11) = Table C2_1, (4)
- (12) = $0.2 \times 0.21 \times (11)$, 0.21 is the Federal income tax rate and 20% of unearned premiums is taxable.
- (13) = (10) + (12)

VII 000048 STIP

TABLE C3: POLICYHOLDER SUPPLIED INVESTABLE FUNDS

TIME INTERVAL		UNEARNED PREMIUM RESERVES (3)	LOSS & LAE RESERVES (4)	ADMITTED PREMIUM RECEIVABLES (5)	ADMITTED PREPAID TAX (DTA) (6)	INVESTABLE RESERVES (7)	CUMULATIVE POST TAX CASH FLOW FROM UW (8)	POST TAX CASH FROM UW AVAILABLE TO INVESTORS (9)	POLICYHOLDER SUPPLIED INVESTABLE FUNDS (10)	RESERVES FUNDED BY INVESTORS (11)
FROM (1)	TO (2)									
07/01/21	09/30/21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/01/21	12/31/21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01/01/22	03/31/22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04/01/22	06/30/22	0.00	0.00	(5.58)	0.00	5.58	1.21	0.00	1.21	4.37
07/01/22	09/30/22	201.88	19.51	172.97	10.32	38.10	25.77	0.00	25.77	12.33
10/01/22	12/31/22	318.41	69.88	256.08	13.76	118.45	91.24	0.00	91.24	27.21
01/01/23	03/31/23	444.04	159.91	351.19	12.42	240.35	196.90	0.00	196.90	43.45
04/01/23	06/30/23	472.68	283.72	387.99	11.07	357.34	308.14	0.00	308.14	49.20
07/01/23	09/30/23	268.76	398.97	224.50	9.73	433.50	397.58	0.00	397.58	35.92
10/01/23	12/31/23	115.03	473.01	126.55	8.39	453.11	433.04	0.00	433.04	20.07
01/01/24	03/31/24	28.72	492.36	74.29	7.11	439.67	430.32	0.00	430.32	9.35
04/01/24	06/30/24	0.00	465.00	30.43	5.84	428.73	406.20	0.00	406.20	22.53
07/01/24	09/30/24	0.00	416.39	2.49	4.57	409.33	377.60	0.00	377.60	31.73
10/01/24	12/31/24	0.00	371.36	1.09	3.30	366.98	346.56	0.00	346.56	20.41
01/01/25	03/31/25	0.00	331.57	0.39	2.96	328.21	314.00	0.00	314.00	14.21
04/01/25	06/30/25	0.00	296.27	0.09	2.63	293.55	282.36	0.00	282.36	11.19
07/01/25	09/30/25	0.00	264.93	0.00	2.30	262.63	252.71	0.00	252.71	9.92
10/01/25	12/31/25	0.00	236.56	0.00	1.97	234.60	225.22	0.00	225.22	9.38
01/01/26	03/31/26	0.00	212.41	0.00	1.73	210.69	201.56	0.00	201.56	9.12
04/01/26	06/30/26	0.00	191.88	0.00	1.49	190.40	181.52	0.00	181.52	8.87
07/01/26	09/30/26	0.00	174.50	0.00	1.25	173.25	164.63	0.00	164.63	8.62
10/01/26	12/31/26	0.00	159.37	0.00	1.01	158.36	149.99	0.00	149.99	8.37
01/01/27	03/31/27	0.00	147.36	0.00	0.91	146.46	138.24	0.00	138.24	8.22
04/01/27	06/30/27	0.00	138.04	0.00	0.80	137.24	129.17	0.00	129.17	8.07
07/01/27	09/30/27	0.00	130.45	0.00	0.70	129.75	121.83	0.00	121.83	7.92
10/01/27	12/31/27	0.00	123.54	0.00	0.59	122.95	115.18	0.00	115.18	7.77
01/01/28	03/31/28	0.00	117.61	0.00	0.55	117.07	109.40	0.00	109.40	7.67
04/01/28	06/30/28	0.00	112.53	0.00	0.50	112.03	104.46	0.00	104.46	7.57
07/01/28	09/30/28	0.00	108.17	0.00	0.46	107.71	100.25	0.00	100.25	7.46
10/01/28	12/31/28	0.00	104.34	0.00	0.41	103.93	96.57	0.00	96.57	7.36
01/01/29	03/31/29	0.00	101.24	0.00	0.42	100.82	93.57	0.00	93.57	7.25
04/01/29	06/30/29	0.00	98.77	0.00	0.42	98.35	91.20	0.00	91.20	7.15
07/01/29	09/30/29	0.00	96.61	0.00	0.42	96.19	89.15	0.00	89.15	7.04
10/01/29	12/31/29	0.00	94.49	0.00	0.42	94.07	87.13	0.00	87.13	6.93
01/01/30	03/31/30	0.00	92.44	0.00	0.40	92.04	85.18	0.00	85.18	6.86
04/01/30	06/30/30	0.00	90.44	0.00	0.37	90.07	83.29	0.00	83.29	6.78
07/01/30	09/30/30	0.00	88.57	0.00	0.34	88.23	81.53	0.00	81.53	6.70
10/01/30	12/31/30	0.00	86.87	0.00	0.31	86.56	79.94	0.00	79.94	6.62
01/01/31	03/31/31	0.00	85.42	0.00	0.34	85.08	78.57	0.00	78.57	6.52
04/01/31	06/30/31	0.00	84.18	0.00	0.37	83.81	77.40	0.00	77.40	6.41
07/01/31	09/30/31	0.00	83.03	0.00	0.40	82.64	76.33	0.00	76.33	6.30
10/01/31	12/31/31	0.00	81.88	0.00	0.43	81.45	75.26	0.00	75.26	6.20
01/01/32	03/31/32	0.00	80.73	0.00	0.40	80.33	74.21	0.00	74.21	6.12
04/01/32	06/30/32	0.00	79.58	0.00	0.37	79.22	73.17	0.00	73.17	6.04
07/01/32	09/30/32	0.00	78.47	0.00	0.34	78.13	72.17	0.00	72.17	5.96
10/01/32	12/31/32	0.00	77.42	0.00	0.31	77.11	71.23	0.00	71.23	5.88
01/01/33	03/31/33	0.00	76.46	0.00	0.30	76.16	70.34	0.00	70.34	5.81
04/01/33	06/30/33	0.00	75.58	0.00	0.30	75.28	69.54	0.00	69.54	5.74
07/01/33	09/30/33	0.00	74.73	0.00	0.29	74.44	68.77	0.00	68.77	5.68
10/01/33	12/31/33	0.00	73.88	0.00	0.28	73.60	67.99	0.00	67.99	5.61
01/01/34	03/31/34	0.00	73.04	0.00	0.27	72.76	67.22	0.00	67.22	5.54
04/01/34	06/30/34	0.00	72.20	0.00	0.27	71.94	66.46	0.00	66.46	5.48
07/01/34	09/30/34	0.00	71.38	0.00	0.26	71.12	65.71	0.00	65.71	5.41
10/01/34	12/31/34	0.00	70.58	0.00	0.26	70.32	64.97	0.00	64.97	5.35
01/01/35	03/31/35	0.00	69.81	0.00	0.25	69.56	64.27	0.00	64.27	5.29
04/01/35	06/30/35	0.00	69.07	0.00	0.25	68.82	63.59	0.00	63.59	5.23
07/01/35	09/30/35	0.00	68.35	0.00	0.24	68.11	62.94	0.00	62.94	5.17
10/01/35	12/31/35	0.00	67.65	0.00	0.24	67.41	62.30	0.00	62.30	5.11
01/01/36	03/31/36	0.00	66.98	0.00	0.24	66.75	61.69	0.00	61.69	5.05
04/01/36	06/30/36	0.00	66.34	0.00	0.23	66.11	61.11	0.00	61.11	5.00
07/01/36	09/30/36	0.00	65.69	0.00	0.23	65.46	60.52	0.00	60.52	4.94
10/01/36	12/31/36	0.00	65.01	0.00	0.23	64.78	59.90	0.00	59.90	4.88
01/01/37	03/31/37	0.00	64.29	0.00	0.23	64.06	59.24	0.00	59.24	4.83
04/01/37	06/30/37	0.00	63.54	0.00	0.22	63.32	58.55	0.00	58.55	4.77
07/01/37	09/30/37	0.00	62.81	0.00	0.22	62.59	57.87	0.00	57.87	4.72
10/01/37	12/31/37	0.00	62.11	0.00	0.21	61.90	57.23	0.00	57.23	4.67
01/01/38	03/31/38	0.00	61.49	0.00	0.21	61.28	56.66	0.00	56.66	4.62
04/01/38	06/30/38	0.00	60.92	0.00	0.20	60.71	56.14	0.00	56.14	4.57
07/01/38	09/30/38	0.00	60.37	0.00	0.20	60.17	55.65	0.00	55.65	4.52
10/01/38	12/31/38	0.00	59.81	0.00	0.20	59.62	55.14	0.00	55.14	4.47
01/01/39	03/31/39	0.00	59.26	0.00	0.20	59.07	54.64	0.00	54.64	4.42
04/01/39	06/30/39	0.00	58.71	0.00	0.19	58.52	54.14	0.00	54.14	4.38
07/01/39	09/30/39	0.00	58.15	0.00	0.19	57.96	53.63	0.00	53.63	4.33
10/01/39	12/31/39	0.00	57.59	0.00	0.19	57.40	53.12	0.00	53.12	4.28
01/01/40	03/31/40	0.00	57.03	0.00	0.18	56.85	52.60	0.00	52.60	4.25
04/01/40	06/30/40	0.00	56.47	0.00	0.17	56.30	52.09	0.00	52.09	4.21
07/01/40	09/30/40	0.00	55.93	0.00	0.16	55.76	51.60	0.00	51.60	4.17
10/01/40	12/31/40	0.00	55.42	0.00	0.16	55.26	51.14	0.00	51.14	4.13
01/01/41	03/31/41	0.00	54.96	0.00	0.13	54.83	50.72	0.00	50.72	4.12
04/01/41	06/30/41	0.00	54.55	0.00	0.10	54.45	50.35	0.00	50.35	4.10
07/01/41	09/30/41	0.00	54.13	0.00	0.08	54.05	49.96	0.00	49.96	4.09

VII 000049 STIP

TABLE C3: POLICYHOLDER SUPPLIED INVESTABLE FUNDS

TIME INTERVAL		UNEARNED PREMIUM RESERVES (3)	LOSS & LAE RESERVES (4)	ADMITTED PREMIUM RECEIVABLES (5)	ADMITTED PREPAID TAX (DTA) (6)	INVESTABLE RESERVES (7)	CUMULATIVE POST TAX CASH FLOW FROM UW (8)	POST TAX CASH FROM UW AVAILABLE TO INVESTORS (9)	POLICYHOLDER SUPPLIED INVESTABLE FUNDS (10)	RESERVES FUNDED BY INVESTORS (11)
FROM (1)	TO (2)									
10/01/41	12/31/41	0.00	53.66	0.00	0.05	53.61	49.53	0.00	49.53	4.08
01/01/42	03/31/42	0.00	53.13	0.00	0.04	53.09	49.01	0.00	49.01	4.08
04/01/42	06/30/42	0.00	52.55	0.00	0.03	52.52	48.45	0.00	48.45	4.07
07/01/42	09/30/42	0.00	51.98	0.00	0.02	51.96	47.89	0.00	47.89	4.07
10/01/42	12/31/42	0.00	51.44	0.00	0.01	51.43	47.36	0.00	47.36	4.07
01/01/43	03/31/43	0.00	50.97	0.00	0.01	50.96	46.90	0.00	46.90	4.07
04/01/43	06/30/43	0.00	50.56	0.00	0.01	50.55	46.48	0.00	46.48	4.06
07/01/43	09/30/43	0.00	50.10	0.00	0.01	50.09	46.03	0.00	46.03	4.06
10/01/43	12/31/43	0.00	49.53	0.00	0.01	49.52	45.46	0.00	45.46	4.06
01/01/44	03/31/44	0.00	48.82	0.00	0.01	48.81	44.76	0.00	44.76	4.06
04/01/44	06/30/44	0.00	48.00	0.00	0.01	47.99	43.93	0.00	43.93	4.05
07/01/44	09/30/44	0.00	47.11	0.00	0.01	47.10	43.05	0.00	43.05	4.05
10/01/44	12/31/44	0.00	46.22	0.00	0.01	46.20	42.16	0.00	42.16	4.05
01/01/45	03/31/45	0.00	45.33	0.00	0.01	45.32	41.27	0.00	41.27	4.04
04/01/45	06/30/45	0.00	44.44	0.00	0.01	44.43	40.39	0.00	40.39	4.04
07/01/45	09/30/45	0.00	43.55	0.00	0.01	43.54	39.50	0.00	39.50	4.04
10/01/45	12/31/45	0.00	42.66	0.00	0.01	42.65	38.61	0.00	38.61	4.04
01/01/46	03/31/46	0.00	41.77	0.00	0.01	41.76	37.73	0.00	37.73	4.03
04/01/46	06/30/46	0.00	40.89	0.00	0.01	40.88	36.85	0.00	36.85	4.03
07/01/46	09/30/46	0.00	40.00	0.00	0.01	39.99	35.96	0.00	35.96	4.03
10/01/46	12/31/46	0.00	39.10	0.00	0.01	39.09	35.07	0.00	35.07	4.02
01/01/47	03/31/47	0.00	38.22	0.00	0.01	38.20	34.18	0.00	34.18	4.02
04/01/47	06/30/47	0.00	37.33	0.00	0.01	37.32	33.30	0.00	33.30	4.02
07/01/47	09/30/47	0.00	36.44	0.00	0.01	36.43	32.42	0.00	32.42	4.02
10/01/47	12/31/47	0.00	35.55	0.00	0.01	35.54	31.53	0.00	31.53	4.01
01/01/48	03/31/48	0.00	34.66	0.00	0.01	34.65	30.64	0.00	30.64	4.01
04/01/48	06/30/48	0.00	33.78	0.00	0.01	33.76	29.76	0.00	29.76	4.01
07/01/48	09/30/48	0.00	32.89	0.00	0.01	32.88	28.87	0.00	28.87	4.00
10/01/48	12/31/48	0.00	31.99	0.00	0.01	31.98	27.98	0.00	27.98	4.00
01/01/49	03/31/49	0.00	31.10	0.00	0.01	31.09	27.09	0.00	27.09	4.00
04/01/49	06/30/49	0.00	30.22	0.00	0.01	30.21	26.21	0.00	26.21	4.00
07/01/49	09/30/49	0.00	29.33	0.00	0.01	29.32	25.33	0.00	25.33	3.99
10/01/49	12/31/49	0.00	28.44	0.00	0.01	28.43	24.44	0.00	24.44	3.99
01/01/50	03/31/50	0.00	27.55	0.00	0.01	27.54	23.55	0.00	23.55	3.99
04/01/50	06/30/50	0.00	26.67	0.00	0.01	26.65	22.67	0.00	22.67	3.98
07/01/50	09/30/50	0.00	25.78	0.00	0.01	25.77	21.78	0.00	21.78	3.98
10/01/50	12/31/50	0.00	24.88	0.00	0.01	24.87	20.89	0.00	20.89	3.98
01/01/51	03/31/51	0.00	23.99	0.00	0.01	23.98	20.01	0.00	20.01	3.98
04/01/51	06/30/51	0.00	23.11	0.00	0.01	23.10	19.13	0.00	19.13	3.97
07/01/51	09/30/51	0.00	22.22	0.00	0.01	22.21	18.24	0.00	18.24	3.97
10/01/51	12/31/51	0.00	21.33	0.00	0.01	21.32	17.35	0.00	17.35	3.97
01/01/52	03/31/52	0.00	20.44	0.00	0.01	20.43	16.46	0.00	16.46	3.96
04/01/52	06/30/52	0.00	19.55	0.00	0.01	19.54	15.58	0.00	15.58	3.96
07/01/52	09/30/52	0.00	18.67	0.00	0.01	18.65	14.70	0.00	14.70	3.96
10/01/52	12/31/52	0.00	17.77	0.00	0.01	17.76	13.80	0.00	13.80	3.96
01/01/53	03/31/53	0.00	16.88	0.00	0.01	16.87	12.92	0.00	12.92	3.95
04/01/53	06/30/53	0.00	16.00	0.00	0.01	15.99	12.04	0.00	12.04	3.95
07/01/53	09/30/53	0.00	15.11	0.00	0.01	15.10	11.15	0.00	11.15	3.95
10/01/53	12/31/53	0.00	14.22	0.00	0.01	14.20	10.26	0.00	10.26	3.94
01/01/54	03/31/54	0.00	13.33	0.00	0.01	13.32	9.37	0.00	9.37	3.94
04/01/54	06/30/54	0.00	12.44	0.00	0.01	12.43	8.49	0.00	8.49	3.94
07/01/54	09/30/54	0.00	11.55	0.00	0.01	11.54	7.61	0.00	7.61	3.94
10/01/54	12/31/54	0.00	10.66	0.00	0.01	10.65	6.72	0.00	6.72	3.93
01/01/55	03/31/55	0.00	9.77	0.00	0.01	9.76	5.83	0.00	5.83	3.93
04/01/55	06/30/55	0.00	8.89	0.00	0.01	8.88	4.95	0.00	4.95	3.93
07/01/55	09/30/55	0.00	8.00	0.00	0.01	7.99	4.06	0.00	4.06	3.92
10/01/55	12/31/55	0.00	7.11	0.00	0.01	7.09	3.17	0.00	3.17	3.92
01/01/56	03/31/56	0.00	6.22	0.00	0.01	6.21	2.29	0.00	2.29	3.92
04/01/56	06/30/56	0.00	5.33	0.00	0.01	5.32	1.40	0.00	1.40	3.92
07/01/56	09/30/56	0.00	4.44	0.00	0.01	4.43	0.52	0.00	0.52	3.91
10/01/56	12/31/56	0.00	3.55	0.00	0.01	3.54	(0.37)	(0.37)	0.00	3.54
01/01/57	03/31/57	0.00	2.66	0.00	0.01	2.65	(1.26)	(0.89)	0.00	2.65
04/01/57	06/30/57	0.00	1.78	0.00	0.01	1.77	(2.14)	(0.88)	0.00	1.77
07/01/57	09/30/57	0.00	1.01	0.00	0.00	1.01	(2.90)	(0.76)	0.00	1.01
10/01/57	12/31/57	0.00	0.43	0.00	0.00	0.43	(3.48)	(0.58)	0.00	0.43
01/01/58	03/31/58	0.00	0.11	0.00	0.00	0.11	(3.80)	(0.32)	0.00	0.11
04/01/58	06/30/58	0.00	0.00	0.00	0.00	(0.00)	(3.91)	(0.11)	(0.00)	0.00
TOTAL		1,849.52	11,477.33	1,622.49	121.17	11,583.19	10,623.99	(3.91)	10,641.86	941.33

Notes:

- (3) = Table A1, (1b) x [Table C5_2, (6) - Table C5_2, (7)]
- (4) = Table A1, (1a) x Table A1, (3) x [Table C5_2, (8) - Table C5_1, (13)]
- (5) = Table C4, (7)
- (6) = Table C2_7, (13), DTA allocated to the model time periods.
- (7) = (3) + (4) - (5) - (6)
- (8) = Table C1, (14), cumulative
- (9) = [(8) - (10)] - (9)_{t-1}, cumulative
- (10) = min [max (0, (8)), (7)]
- (11) = (7) - (10)

TABLE C4: ADMITTED PREMIUM RECEIVABLES

TIME INTERVAL		CUMULATIVE		COLLECTED PREMIUM MINUS PRIOR PERIOD EARNED PREMIUM (5)	NONADMITTED PREMIUM RECEIVABLES (6)	ADMITTED PREMIUM RECEIVABLES (7)
		EARNED PREMIUM NET (3)	COLLECTED PREMIUM NET (4)			
FROM (1)	TO (2)					
07/01/21	09/30/21	0.00	0.00	0.00	0.00	0.00
10/01/21	12/31/21	0.00	0.00	0.00	0.00	0.00
01/01/22	03/31/22	0.00	0.00	0.00	0.00	0.00
04/01/22	06/30/22	0.00	5.58	5.58	0.00	(5.58)
07/01/22	09/30/22	32.54	61.45	61.45	0.00	172.97
10/01/22	12/31/22	116.55	178.87	146.33	0.00	256.08
01/01/23	03/31/23	266.69	359.54	243.00	0.00	351.19
04/01/23	06/30/23	473.16	557.85	291.17	0.00	387.99
07/01/23	09/30/23	677.09	721.35	248.18	0.00	224.50
10/01/23	12/31/23	830.81	819.30	142.21	0.00	126.55
01/01/24	03/31/24	917.13	871.56	40.74	0.00	74.29
04/01/24	06/30/24	945.85	899.78	(17.35)	15.63	30.43
07/01/24	09/30/24	945.85	920.64	(25.21)	22.71	2.49
10/01/24	12/31/24	945.85	934.82	(11.02)	9.93	1.09
01/01/25	03/31/25	945.85	941.87	(3.98)	3.58	0.39
04/01/25	06/30/25	945.85	944.95	(0.90)	0.81	0.09
07/01/25	09/30/25	945.85	945.85	0.00	0.00	0.00
10/01/25	12/31/25	945.85	945.85	0.00	0.00	0.00
01/01/26	03/31/26	945.85	945.85	0.00	0.00	0.00
04/01/26	06/30/26	945.85	945.85	0.00	0.00	0.00
07/01/26	09/30/26	945.85	945.85	0.00	0.00	0.00
10/01/26	12/31/26	945.85	945.85	0.00	0.00	0.00
01/01/27	03/31/27	945.85	945.85	0.00	0.00	0.00
04/01/27	06/30/27	945.85	945.85	0.00	0.00	0.00
07/01/27	09/30/27	945.85	945.85	0.00	0.00	0.00
10/01/27	12/31/27	945.85	945.85	0.00	0.00	0.00
01/01/28	03/31/28	945.85	945.85	0.00	0.00	0.00
04/01/28	06/30/28	945.85	945.85	0.00	0.00	0.00
07/01/28	09/30/28	945.85	945.85	0.00	0.00	0.00
10/01/28	12/31/28	945.85	945.85	0.00	0.00	0.00
01/01/29	03/31/29	945.85	945.85	0.00	0.00	0.00
04/01/29	06/30/29	945.85	945.85	0.00	0.00	0.00
07/01/29	09/30/29	945.85	945.85	0.00	0.00	0.00
10/01/29	12/31/29	945.85	945.85	0.00	0.00	0.00
01/01/30	03/31/30	945.85	945.85	0.00	0.00	0.00
04/01/30	06/30/30	945.85	945.85	0.00	0.00	0.00
07/01/30	09/30/30	945.85	945.85	0.00	0.00	0.00
10/01/30	12/31/30	945.85	945.85	0.00	0.00	0.00
01/01/31	03/31/31	945.85	945.85	0.00	0.00	0.00
04/01/31	06/30/31	945.85	945.85	0.00	0.00	0.00
07/01/31	09/30/31	945.85	945.85	0.00	0.00	0.00
10/01/31	12/31/31	945.85	945.85	0.00	0.00	0.00
01/01/32	03/31/32	945.85	945.85	0.00	0.00	0.00
04/01/32	06/30/32	945.85	945.85	0.00	0.00	0.00
07/01/32	09/30/32	945.85	945.85	0.00	0.00	0.00
10/01/32	12/31/32	945.85	945.85	0.00	0.00	0.00
01/01/33	03/31/33	945.85	945.85	0.00	0.00	0.00
04/01/33	06/30/33	945.85	945.85	0.00	0.00	0.00
07/01/33	09/30/33	945.85	945.85	0.00	0.00	0.00
10/01/33	12/31/33	945.85	945.85	0.00	0.00	0.00
01/01/34	03/31/34	945.85	945.85	0.00	0.00	0.00
04/01/34	06/30/34	945.85	945.85	0.00	0.00	0.00
07/01/34	09/30/34	945.85	945.85	0.00	0.00	0.00
10/01/34	12/31/34	945.85	945.85	0.00	0.00	0.00
01/01/35	03/31/35	945.85	945.85	0.00	0.00	0.00
04/01/35	06/30/35	945.85	945.85	0.00	0.00	0.00
07/01/35	09/30/35	945.85	945.85	0.00	0.00	0.00
10/01/35	12/31/35	945.85	945.85	0.00	0.00	0.00
01/01/36	03/31/36	945.85	945.85	0.00	0.00	0.00
04/01/36	06/30/36	945.85	945.85	0.00	0.00	0.00
07/01/36	09/30/36	945.85	945.85	0.00	0.00	0.00
10/01/36	12/31/36	945.85	945.85	0.00	0.00	0.00
01/01/37	03/31/37	945.85	945.85	0.00	0.00	0.00
04/01/37	06/30/37	945.85	945.85	0.00	0.00	0.00
07/01/37	09/30/37	945.85	945.85	0.00	0.00	0.00
10/01/37	12/31/37	945.85	945.85	0.00	0.00	0.00
01/01/38	03/31/38	945.85	945.85	0.00	0.00	0.00
04/01/38	06/30/38	945.85	945.85	0.00	0.00	0.00
07/01/38	09/30/38	945.85	945.85	0.00	0.00	0.00
10/01/38	12/31/38	945.85	945.85	0.00	0.00	0.00
01/01/39	03/31/39	945.85	945.85	0.00	0.00	0.00
04/01/39	06/30/39	945.85	945.85	0.00	0.00	0.00
07/01/39	09/30/39	945.85	945.85	0.00	0.00	0.00
10/01/39	12/31/39	945.85	945.85	0.00	0.00	0.00
01/01/40	03/31/40	945.85	945.85	0.00	0.00	0.00
04/01/40	06/30/40	945.85	945.85	0.00	0.00	0.00
07/01/40	09/30/40	945.85	945.85	0.00	0.00	0.00
10/01/40	12/31/40	945.85	945.85	0.00	0.00	0.00
01/01/41	03/31/41	945.85	945.85	0.00	0.00	0.00
04/01/41	06/30/41	945.85	945.85	0.00	0.00	0.00
07/01/41	09/30/41	945.85	945.85	0.00	0.00	0.00

TABLE C4: ADMITTED PREMIUM RECEIVABLES

TIME INTERVAL		CUMULATIVE		COLLECTED PREMIUM MINUS PRIOR PERIOD EARNED PREMIUM (5)	NONADMITTED PREMIUM RECEIVABLES (6)	ADMITTED PREMIUM RECEIVABLES (7)
		EARNED PREMIUM NET (3)	COLLECTED PREMIUM NET (4)			
FROM (1)	TO (2)					
10/01/41	12/31/41	945.85	945.85	0.00	0.00	0.00
01/01/42	03/31/42	945.85	945.85	0.00	0.00	0.00
04/01/42	06/30/42	945.85	945.85	0.00	0.00	0.00
07/01/42	09/30/42	945.85	945.85	0.00	0.00	0.00
10/01/42	12/31/42	945.85	945.85	0.00	0.00	0.00
01/01/43	03/31/43	945.85	945.85	0.00	0.00	0.00
04/01/43	06/30/43	945.85	945.85	0.00	0.00	0.00
07/01/43	09/30/43	945.85	945.85	0.00	0.00	0.00
10/01/43	12/31/43	945.85	945.85	0.00	0.00	0.00
01/01/44	03/31/44	945.85	945.85	0.00	0.00	0.00
04/01/44	06/30/44	945.85	945.85	0.00	0.00	0.00
07/01/44	09/30/44	945.85	945.85	0.00	0.00	0.00
10/01/44	12/31/44	945.85	945.85	0.00	0.00	0.00
01/01/45	03/31/45	945.85	945.85	0.00	0.00	0.00
04/01/45	06/30/45	945.85	945.85	0.00	0.00	0.00
07/01/45	09/30/45	945.85	945.85	0.00	0.00	0.00
10/01/45	12/31/45	945.85	945.85	0.00	0.00	0.00
01/01/46	03/31/46	945.85	945.85	0.00	0.00	0.00
04/01/46	06/30/46	945.85	945.85	0.00	0.00	0.00
07/01/46	09/30/46	945.85	945.85	0.00	0.00	0.00
10/01/46	12/31/46	945.85	945.85	0.00	0.00	0.00
01/01/47	03/31/47	945.85	945.85	0.00	0.00	0.00
04/01/47	06/30/47	945.85	945.85	0.00	0.00	0.00
07/01/47	09/30/47	945.85	945.85	0.00	0.00	0.00
10/01/47	12/31/47	945.85	945.85	0.00	0.00	0.00
01/01/48	03/31/48	945.85	945.85	0.00	0.00	0.00
04/01/48	06/30/48	945.85	945.85	0.00	0.00	0.00
07/01/48	09/30/48	945.85	945.85	0.00	0.00	0.00
10/01/48	12/31/48	945.85	945.85	0.00	0.00	0.00
01/01/49	03/31/49	945.85	945.85	0.00	0.00	0.00
04/01/49	06/30/49	945.85	945.85	0.00	0.00	0.00
07/01/49	09/30/49	945.85	945.85	0.00	0.00	0.00
10/01/49	12/31/49	945.85	945.85	0.00	0.00	0.00
01/01/50	03/31/50	945.85	945.85	0.00	0.00	0.00
04/01/50	06/30/50	945.85	945.85	0.00	0.00	0.00
07/01/50	09/30/50	945.85	945.85	0.00	0.00	0.00
10/01/50	12/31/50	945.85	945.85	0.00	0.00	0.00
01/01/51	03/31/51	945.85	945.85	0.00	0.00	0.00
04/01/51	06/30/51	945.85	945.85	0.00	0.00	0.00
07/01/51	09/30/51	945.85	945.85	0.00	0.00	0.00
10/01/51	12/31/51	945.85	945.85	0.00	0.00	0.00
01/01/52	03/31/52	945.85	945.85	0.00	0.00	0.00
04/01/52	06/30/52	945.85	945.85	0.00	0.00	0.00
07/01/52	09/30/52	945.85	945.85	0.00	0.00	0.00
10/01/52	12/31/52	945.85	945.85	0.00	0.00	0.00
01/01/53	03/31/53	945.85	945.85	0.00	0.00	0.00
04/01/53	06/30/53	945.85	945.85	0.00	0.00	0.00
07/01/53	09/30/53	945.85	945.85	0.00	0.00	0.00
10/01/53	12/31/53	945.85	945.85	0.00	0.00	0.00
01/01/54	03/31/54	945.85	945.85	0.00	0.00	0.00
04/01/54	06/30/54	945.85	945.85	0.00	0.00	0.00
07/01/54	09/30/54	945.85	945.85	0.00	0.00	0.00
10/01/54	12/31/54	945.85	945.85	0.00	0.00	0.00
01/01/55	03/31/55	945.85	945.85	0.00	0.00	0.00
04/01/55	06/30/55	945.85	945.85	0.00	0.00	0.00
07/01/55	09/30/55	945.85	945.85	0.00	0.00	0.00
10/01/55	12/31/55	945.85	945.85	0.00	0.00	0.00
01/01/56	03/31/56	945.85	945.85	0.00	0.00	0.00
04/01/56	06/30/56	945.85	945.85	0.00	0.00	0.00
07/01/56	09/30/56	945.85	945.85	0.00	0.00	0.00
10/01/56	12/31/56	945.85	945.85	0.00	0.00	0.00
01/01/57	03/31/57	945.85	945.85	0.00	0.00	0.00
04/01/57	06/30/57	945.85	945.85	0.00	0.00	0.00
07/01/57	09/30/57	945.85	945.85	0.00	0.00	0.00
10/01/57	12/31/57	945.85	945.85	0.00	0.00	0.00
01/01/58	03/31/58	945.85	945.85	0.00	0.00	0.00
04/01/58	06/30/58	945.85	945.85	0.00	0.00	0.00

Notes:

- (3) = Table A1, (1b) x Table C5_2, (7)
- (4) = Table A1, (1b) x Table C5_1, (12)
- (5) = (4) - (3)_{t-1}, t-1 implies that is nonadmitted if not received in 90 days.
- (6) = max{ 0, -(5) x [1.0 - Table A1, (4) x Table A1, (1a) / Table A1, (1b)] }
- (7) = Table A1, (1b) x [Table C5_2, (6) - Table C5_1, (12)] - (6)

VII 000052 STIP

TABLE C5_1: POLICYHOLDER SUPPLIED - UNDERWRITING CASH FLOW PATTERNS

TIME INTERVAL		COLLECTED PREMIUM	LOSS & LAE PAYOUT	COMMISS. & BROKER.	GENERAL EXPENSES	OTHER ACQ. EXPENSES	PREMIUM TAXES	MISC. AND OTHER TAXES	REINS. EXPENSES	PREMIUM DISCOUNT	CUMULATIVE	
FROM	TO										COLLECTED PREMIUM	LOSS & LAE PAYOUT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
07/01/21	09/30/21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
10/01/21	12/31/21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
01/01/22	03/31/22	0.00%	0.00%	0.0000%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
04/01/22	06/30/22	0.59%	0.00%	0.5902%	0.00%	4.13%	0.00%	0.00%	0.00%	0.59%	0.59%	0.00%
07/01/22	09/30/22	5.91%	0.81%	5.9063%	14.11%	24.19%	0.00%	24.78%	24.78%	5.91%	6.50%	0.81%
10/01/22	12/31/22	12.41%	2.10%	12.4145%	15.04%	22.53%	24.78%	21.20%	21.20%	12.41%	18.91%	2.91%
01/01/23	03/31/23	19.10%	3.75%	19.1017%	22.52%	28.44%	21.20%	29.16%	29.16%	19.10%	38.01%	6.65%
04/01/23	06/30/23	20.97%	5.15%	20.9668%	23.34%	20.71%	29.16%	24.86%	24.86%	20.97%	58.98%	11.81%
07/01/23	09/30/23	17.29%	6.03%	17.2852%	10.78%	0.00%	24.86%	0.00%	0.00%	17.29%	76.26%	17.84%
10/01/23	12/31/23	10.36%	6.28%	10.3562%	8.13%	0.00%	0.00%	0.00%	0.00%	10.36%	86.62%	24.12%
01/01/24	03/31/24	5.52%	6.52%	5.5248%	4.56%	0.00%	0.00%	0.00%	0.00%	5.52%	92.15%	30.64%
04/01/24	06/30/24	2.98%	6.72%	2.9839%	1.52%	0.00%	0.00%	0.00%	0.00%	2.98%	95.13%	37.36%
07/01/24	09/30/24	2.21%	6.55%	2.2054%	0.00%	0.00%	0.00%	0.00%	0.00%	2.21%	97.33%	43.91%
10/01/24	12/31/24	1.50%	6.07%	1.4996%	0.00%	0.00%	0.00%	0.00%	0.00%	1.50%	98.83%	49.98%
01/01/25	03/31/25	0.74%	5.36%	0.7448%	0.00%	0.00%	0.00%	0.00%	0.00%	0.74%	99.58%	55.34%
04/01/25	06/30/25	0.33%	4.75%	0.3259%	0.00%	0.00%	0.00%	0.00%	0.00%	0.33%	99.91%	60.09%
07/01/25	09/30/25	0.09%	4.22%	0.0947%	0.00%	0.00%	0.00%	0.00%	0.00%	0.09%	100.00%	64.31%
10/01/25	12/31/25	0.00%	3.82%	0.0000%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	68.13%
01/01/26	03/31/26	0.00%	3.25%	0.0000%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	71.39%
04/01/26	06/30/26	0.00%	2.77%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	74.15%
07/01/26	09/30/26	0.00%	2.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	76.49%
10/01/26	12/31/26	0.00%	2.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	78.53%
01/01/27	03/31/27	0.00%	1.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	80.15%
04/01/27	06/30/27	0.00%	1.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	81.41%
07/01/27	09/30/27	0.00%	1.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	82.43%
10/01/27	12/31/27	0.00%	0.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	83.36%
01/01/28	03/31/28	0.00%	0.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	84.16%
04/01/28	06/30/28	0.00%	0.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	84.84%
07/01/28	09/30/28	0.00%	0.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	85.43%
10/01/28	12/31/28	0.00%	0.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	85.94%
01/01/29	03/31/29	0.00%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	86.36%
04/01/29	06/30/29	0.00%	0.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	86.70%
07/01/29	09/30/29	0.00%	0.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	86.99%
10/01/29	12/31/29	0.00%	0.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	87.27%
01/01/30	03/31/30	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	87.55%
04/01/30	06/30/30	0.00%	0.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	87.82%
07/01/30	09/30/30	0.00%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	88.07%
10/01/30	12/31/30	0.00%	0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	88.30%
01/01/31	03/31/31	0.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	88.49%
04/01/31	06/30/31	0.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	88.66%
07/01/31	09/30/31	0.00%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	88.81%
10/01/31	12/31/31	0.00%	0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	88.97%
01/01/32	03/31/32	0.00%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	89.13%
04/01/32	06/30/32	0.00%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	89.28%
07/01/32	09/30/32	0.00%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	89.43%
10/01/32	12/31/32	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	89.57%
01/01/33	03/31/33	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	89.70%
04/01/33	06/30/33	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	89.82%
07/01/33	09/30/33	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	89.93%
10/01/33	12/31/33	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.05%
01/01/34	03/31/34	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.16%
04/01/34	06/30/34	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.27%
07/01/34	09/30/34	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.38%
10/01/34	12/31/34	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.49%
01/01/35	03/31/35	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.60%
04/01/35	06/30/35	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.70%
07/01/35	09/30/35	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.79%
10/01/35	12/31/35	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.89%
01/01/36	03/31/36	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.98%
04/01/36	06/30/36	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.06%
07/01/36	09/30/36	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.15%
10/01/36	12/31/36	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.24%
01/01/37	03/31/37	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.34%
04/01/37	06/30/37	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.44%
07/01/37	09/30/37	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.54%
10/01/37	12/31/37	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.63%
01/01/38	03/31/38	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.72%
04/01/38	06/30/38	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.79%
07/01/38	09/30/38	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.87%
10/01/38	12/31/38	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.94%
01/01/39	03/31/39	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.02%
04/01/39	06/30/39	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.09%
07/01/39	09/30/39	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.17%
10/01/39	12/31/39	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.24%
01/01/40	03/31/40	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.32%
04/01/40	06/30/40	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.39%
07/01/40	09/30/40	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.47%
10/01/40	12/31/40	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.53%
01/01/41	03/31/41	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.60%
04/01/41	06/30/41	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.65%
07/01/41	09/30/41	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.71%
10/01/41	12/31/41	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.77%
01/01/42	03/31/42	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.84%

VII 00053 STIP

TABLE C5_1: POLICYHOLDER SUPPLIED - UNDERWRITING CASH FLOW PATTERNS

TIME INTERVAL		COLLECTED PREMIUM	LOSS & LAE PAYOUT	COMMISS. & BROKER.	GENERAL EXPENSES	OTHER ACQ. EXPENSES	PREMIUM TAXES	MISC. AND OTHER TAXES	REINS. EXPENSES	PREMIUM DISCOUNT	CUMULATIVE	
FROM	TO										COLLECTED PREMIUM	LOSS & LAE PAYOUT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
04/01/42	06/30/42	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.92%
07/01/42	09/30/42	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.00%
10/01/42	12/31/42	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.07%
01/01/43	03/31/43	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.13%
04/01/43	06/30/43	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.19%
07/01/43	09/30/43	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.25%
10/01/43	12/31/43	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.33%
01/01/44	03/31/44	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.42%
04/01/44	06/30/44	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.53%
07/01/44	09/30/44	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.65%
10/01/44	12/31/44	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.77%
01/01/45	03/31/45	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.89%
04/01/45	06/30/45	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.01%
07/01/45	09/30/45	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.13%
10/01/45	12/31/45	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.25%
01/01/46	03/31/46	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.37%
04/01/46	06/30/46	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.49%
07/01/46	09/30/46	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.61%
10/01/46	12/31/46	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.73%
01/01/47	03/31/47	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.85%
04/01/47	06/30/47	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.97%
07/01/47	09/30/47	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.09%
10/01/47	12/31/47	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.21%
01/01/48	03/31/48	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.33%
04/01/48	06/30/48	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.45%
07/01/48	09/30/48	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.57%
10/01/48	12/31/48	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.69%
01/01/49	03/31/49	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.81%
04/01/49	06/30/49	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.93%
07/01/49	09/30/49	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.05%
10/01/49	12/31/49	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.17%
01/01/50	03/31/50	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.29%
04/01/50	06/30/50	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.41%
07/01/50	09/30/50	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.53%
10/01/50	12/31/50	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.65%
01/01/51	03/31/51	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.77%
04/01/51	06/30/51	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.89%
07/01/51	09/30/51	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.01%
10/01/51	12/31/51	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.13%
01/01/52	03/31/52	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.25%
04/01/52	06/30/52	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.37%
07/01/52	09/30/52	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.49%
10/01/52	12/31/52	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.61%
01/01/53	03/31/53	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.73%
04/01/53	06/30/53	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.84%
07/01/53	09/30/53	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.96%
10/01/53	12/31/53	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.09%
01/01/54	03/31/54	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.20%
04/01/54	06/30/54	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.32%
07/01/54	09/30/54	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.44%
10/01/54	12/31/54	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.56%
01/01/55	03/31/55	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.68%
04/01/55	06/30/55	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.80%
07/01/55	09/30/55	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.92%
10/01/55	12/31/55	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.04%
01/01/56	03/31/56	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.16%
04/01/56	06/30/56	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.28%
07/01/56	09/30/56	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.40%
10/01/56	12/31/56	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.52%
01/01/57	03/31/57	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.64%
04/01/57	06/30/57	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.76%
07/01/57	09/30/57	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.86%
10/01/57	12/31/57	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.94%
01/01/58	03/31/58	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.99%
04/01/58	06/30/58	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%
TOTAL		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Notes:
 (3): The premium collection pattern for a single policy from Section VII-G, Exhibit 1, converted to a full policy year basis.
 (4): The loss & LAE payout pattern for a single policy from Section VII-I, Exhibit 1, converted to a full policy year basis.
 (5), (11) = (3)
 (6) = 0.5 x Table C5_2, (3) + 0.5 x Table C5_2, (4)
 (7) = 1/6 x Table C5_2, (3)_{t-1} + 5/6 x Table C5_2, (3)_t
 (8) = Table C5_2, (3)_{t-1}
 (9), (10) = Table C5_2, (3)
 (12) = (3), cumulative
 (13) = (4), cumulative

VII 000054 STIP

TABLE C5_2: ADDITIONAL PREMIUM AND LOSS PATTERNS

TIME INTERVAL		WRITTEN PREMIUM (3)	EARNED PREMIUM (4)	LOSS & LAE INCURRED (5)	CUMULATIVE		
FROM (1)	TO (2)				WRITTEN PREMIUM (6)	EARNED PREMIUM (7)	LOSS & LAE INCURRED (8)
07/01/21	09/30/21		0.00%	0.00%	0.00%	0.00%	0.00%
10/01/21	12/31/21		0.00%	0.00%	0.00%	0.00%	0.00%
01/01/22	03/31/22		0.00%	0.00%	0.00%	0.00%	0.00%
04/01/22	06/30/22		0.00%	0.00%	0.00%	0.00%	0.00%
07/01/22	09/30/22	24.78%	3.44%	3.44%	24.78%	3.44%	3.44%
10/01/22	12/31/22	21.20%	8.88%	8.88%	45.99%	12.32%	12.32%
01/01/23	03/31/23	29.16%	15.87%	15.87%	75.14%	28.20%	28.20%
04/01/23	06/30/23	24.86%	21.83%	21.83%	100.00%	50.03%	50.03%
07/01/23	09/30/23		21.56%	21.56%	100.00%	71.59%	71.59%
10/01/23	12/31/23		16.25%	16.25%	100.00%	87.84%	87.84%
01/01/24	03/31/24		9.13%	9.13%	100.00%	96.96%	96.96%
04/01/24	06/30/24		3.04%	3.04%	100.00%	100.00%	100.00%
07/01/24	09/30/24		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/24	12/31/24		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/25	03/31/25		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/25	06/30/25		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/25	09/30/25		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/25	12/31/25		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/26	03/31/26		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/26	06/30/26		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/26	09/30/26		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/26	12/31/26		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/27	03/31/27		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/27	06/30/27		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/27	09/30/27		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/27	12/31/27		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/28	03/31/28		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/28	06/30/28		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/28	09/30/28		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/28	12/31/28		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/29	03/31/29		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/29	06/30/29		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/29	09/30/29		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/29	12/31/29		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/30	03/31/30		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/30	06/30/30		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/30	09/30/30		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/30	12/31/30		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/31	03/31/31		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/31	06/30/31		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/31	09/30/31		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/31	12/31/31		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/32	03/31/32		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/32	06/30/32		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/32	09/30/32		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/32	12/31/32		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/33	03/31/33		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/33	06/30/33		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/33	09/30/33		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/33	12/31/33		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/34	03/31/34		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/34	06/30/34		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/34	09/30/34		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/34	12/31/34		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/35	03/31/35		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/35	06/30/35		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/35	09/30/35		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/35	12/31/35		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/36	03/31/36		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/36	06/30/36		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/36	09/30/36		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/36	12/31/36		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/37	03/31/37		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/37	06/30/37		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/37	09/30/37		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/37	12/31/37		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/38	03/31/38		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/38	06/30/38		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/38	09/30/38		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/38	12/31/38		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/39	03/31/39		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/39	06/30/39		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/39	09/30/39		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/39	12/31/39		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/40	03/31/40		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/40	06/30/40		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/40	09/30/40		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/40	12/31/40		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/41	03/31/41		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/41	06/30/41		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/41	09/30/41		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/41	12/31/41		0.00%	0.00%	100.00%	100.00%	100.00%

VII 000055 STIP

TABLE C5_2: ADDITIONAL PREMIUM AND LOSS PATTERNS

TIME INTERVAL		WRITTEN PREMIUM (3)	EARNED PREMIUM (4)	LOSS & LAE INCURRED (5)	CUMULATIVE		
FROM (1)	TO (2)				WRITTEN PREMIUM (6)	EARNED PREMIUM (7)	LOSS & LAE INCURRED (8)
01/01/42	03/31/42		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/42	06/30/42		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/42	09/30/42		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/42	12/31/42		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/43	03/31/43		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/43	06/30/43		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/43	09/30/43		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/43	12/31/43		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/44	03/31/44		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/44	06/30/44		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/44	09/30/44		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/44	12/31/44		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/45	03/31/45		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/45	06/30/45		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/45	09/30/45		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/45	12/31/45		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/46	03/31/46		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/46	06/30/46		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/46	09/30/46		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/46	12/31/46		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/47	03/31/47		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/47	06/30/47		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/47	09/30/47		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/47	12/31/47		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/48	03/31/48		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/48	06/30/48		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/48	09/30/48		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/48	12/31/48		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/49	03/31/49		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/49	06/30/49		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/49	09/30/49		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/49	12/31/49		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/50	03/31/50		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/50	06/30/50		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/50	09/30/50		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/50	12/31/50		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/51	03/31/51		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/51	06/30/51		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/51	09/30/51		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/51	12/31/51		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/52	03/31/52		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/52	06/30/52		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/52	09/30/52		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/52	12/31/52		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/53	03/31/53		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/53	06/30/53		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/53	09/30/53		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/53	12/31/53		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/54	03/31/54		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/54	06/30/54		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/54	09/30/54		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/54	12/31/54		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/55	03/31/55		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/55	06/30/55		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/55	09/30/55		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/55	12/31/55		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/56	03/31/56		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/56	06/30/56		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/56	09/30/56		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/56	12/31/56		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/57	03/31/57		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/57	06/30/57		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/57	09/30/57		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/57	12/31/57		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/58	03/31/58		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/58	06/30/58		0.00%	0.00%	100.00%	100.00%	100.00%
TOTAL		100.00%	100.00%	100.00%			

Notes:

- (3): Based on Unit Statistical Plan Data.
- (4): Single policy earned premium is earned uniformly through the one year policy term and then converted to a policy year basis.
- (5): We assume that the loss & LAE incurred pattern coincides with the earned premium pattern.
- (6) = (3), cumulative
- (7) = (4), cumulative
- (8) = (5), cumulative

VII 00056 STIP

TABLE D1: CAPITAL NEEDED FROM INVESTORS

TIME INTERVAL		UNEARNED PREMIUM RESERVES (3)	LOSS & LAE RESERVES (4)	TOTAL RESERVES (5)	RESERVES TO SURPLUS RATIO (6)	IMPLIED SURPLUS (7)	RESERVES FUNDED BY INVESTORS (8)	CAPITAL NEEDED FROM INVESTORS (9)
FROM (1)	TO (2)							
07/01/21	09/30/21	0.00	0.00	0.00	1.96	0.00	0.00	0.00
10/01/21	12/31/21	0.00	0.00	0.00	1.96	0.00	0.00	0.00
01/01/22	03/31/22	0.00	0.00	0.00	1.96	0.00	0.00	0.00
04/01/22	06/30/22	0.00	0.00	0.00	1.96	0.00	4.37	4.37
07/01/22	09/30/22	201.88	19.51	221.39	1.96	113.23	12.33	125.55
10/01/22	12/31/22	318.41	69.88	388.29	1.96	198.58	27.21	225.79
01/01/23	03/31/23	444.04	159.91	603.96	1.96	308.88	43.45	352.34
04/01/23	06/30/23	472.68	283.72	756.40	1.96	386.85	49.20	436.05
07/01/23	09/30/23	268.76	398.97	667.73	1.96	341.50	35.92	377.42
10/01/23	12/31/23	115.03	473.01	588.05	1.96	300.75	20.07	320.82
01/01/24	03/31/24	28.72	492.36	521.07	1.96	266.49	9.35	275.84
04/01/24	06/30/24	0.00	465.00	465.00	1.96	237.82	22.53	260.35
07/01/24	09/30/24	0.00	416.39	416.39	1.96	212.96	31.73	244.69
10/01/24	12/31/24	0.00	371.36	371.36	1.96	189.93	20.41	210.34
01/01/25	03/31/25	0.00	331.57	331.57	1.96	169.58	14.21	183.79
04/01/25	06/30/25	0.00	296.27	296.27	1.96	151.52	11.19	162.71
07/01/25	09/30/25	0.00	264.93	264.93	1.96	135.50	9.92	145.42
10/01/25	12/31/25	0.00	236.56	236.56	1.96	120.99	9.38	130.36
01/01/26	03/31/26	0.00	212.41	212.41	1.96	108.63	9.12	117.76
04/01/26	06/30/26	0.00	191.88	191.88	1.96	98.14	8.87	107.01
07/01/26	09/30/26	0.00	174.50	174.50	1.96	89.24	8.62	97.86
10/01/26	12/31/26	0.00	159.37	159.37	1.96	81.51	8.37	89.87
01/01/27	03/31/27	0.00	147.36	147.36	1.96	75.37	8.22	83.58
04/01/27	06/30/27	0.00	138.04	138.04	1.96	70.60	8.07	78.67
07/01/27	09/30/27	0.00	130.45	130.45	1.96	66.72	7.92	74.64
10/01/27	12/31/27	0.00	123.54	123.54	1.96	63.18	7.77	70.96
01/01/28	03/31/28	0.00	117.61	117.61	1.96	60.15	7.67	67.82
04/01/28	06/30/28	0.00	112.53	112.53	1.96	57.55	7.57	65.12
07/01/28	09/30/28	0.00	108.17	108.17	1.96	55.32	7.46	62.79
10/01/28	12/31/28	0.00	104.34	104.34	1.96	53.36	7.36	60.72
01/01/29	03/31/29	0.00	101.24	101.24	1.96	51.78	7.25	59.03
04/01/29	06/30/29	0.00	98.77	98.77	1.96	50.51	7.15	57.66
07/01/29	09/30/29	0.00	96.61	96.61	1.96	49.41	7.04	56.45
10/01/29	12/31/29	0.00	94.49	94.49	1.96	48.33	6.93	55.26
01/01/30	03/31/30	0.00	92.44	92.44	1.96	47.28	6.86	54.13
04/01/30	06/30/30	0.00	90.44	90.44	1.96	46.25	6.78	53.03
07/01/30	09/30/30	0.00	88.57	88.57	1.96	45.30	6.70	52.00
10/01/30	12/31/30	0.00	86.87	86.87	1.96	44.43	6.62	51.05
01/01/31	03/31/31	0.00	85.42	85.42	1.96	43.69	6.52	50.20
04/01/31	06/30/31	0.00	84.18	84.18	1.96	43.05	6.41	49.46
07/01/31	09/30/31	0.00	83.03	83.03	1.96	42.47	6.30	48.77
10/01/31	12/31/31	0.00	81.88	81.88	1.96	41.88	6.20	48.07
01/01/32	03/31/32	0.00	80.73	80.73	1.96	41.29	6.12	47.41
04/01/32	06/30/32	0.00	79.58	79.58	1.96	40.70	6.04	46.74
07/01/32	09/30/32	0.00	78.47	78.47	1.96	40.13	5.96	46.10
10/01/32	12/31/32	0.00	77.42	77.42	1.96	39.60	5.88	45.48
01/01/33	03/31/33	0.00	76.46	76.46	1.96	39.10	5.81	44.92
04/01/33	06/30/33	0.00	75.58	75.58	1.96	38.65	5.74	44.40
07/01/33	09/30/33	0.00	74.73	74.73	1.96	38.22	5.68	43.89
10/01/33	12/31/33	0.00	73.88	73.88	1.96	37.78	5.61	43.39
01/01/34	03/31/34	0.00	73.04	73.04	1.96	37.35	5.54	42.89
04/01/34	06/30/34	0.00	72.20	72.20	1.96	36.93	5.48	42.40
07/01/34	09/30/34	0.00	71.38	71.38	1.96	36.51	5.41	41.92
10/01/34	12/31/34	0.00	70.58	70.58	1.96	36.10	5.35	41.45
01/01/35	03/31/35	0.00	69.81	69.81	1.96	35.70	5.29	40.99
04/01/35	06/30/35	0.00	69.07	69.07	1.96	35.32	5.23	40.55
07/01/35	09/30/35	0.00	68.35	68.35	1.96	34.96	5.17	40.13
10/01/35	12/31/35	0.00	67.65	67.65	1.96	34.60	5.11	39.71
01/01/36	03/31/36	0.00	66.98	66.98	1.96	34.26	5.05	39.31
04/01/36	06/30/36	0.00	66.34	66.34	1.96	33.93	5.00	38.93
07/01/36	09/30/36	0.00	65.69	65.69	1.96	33.60	4.94	38.53
10/01/36	12/31/36	0.00	65.01	65.01	1.96	33.25	4.88	38.13
01/01/37	03/31/37	0.00	64.29	64.29	1.96	32.88	4.83	37.71
04/01/37	06/30/37	0.00	63.54	63.54	1.96	32.50	4.77	37.27
07/01/37	09/30/37	0.00	62.81	62.81	1.96	32.12	4.72	36.84
10/01/37	12/31/37	0.00	62.11	62.11	1.96	31.77	4.67	36.44
01/01/38	03/31/38	0.00	61.49	61.49	1.96	31.45	4.62	36.07
04/01/38	06/30/38	0.00	60.92	60.92	1.96	31.15	4.57	35.73
07/01/38	09/30/38	0.00	60.37	60.37	1.96	30.87	4.52	35.40
10/01/38	12/31/38	0.00	59.81	59.81	1.96	30.59	4.47	35.06
01/01/39	03/31/39	0.00	59.26	59.26	1.96	30.31	4.42	34.73
04/01/39	06/30/39	0.00	58.71	58.71	1.96	30.03	4.38	34.40
07/01/39	09/30/39	0.00	58.15	58.15	1.96	29.74	4.33	34.07
10/01/39	12/31/39	0.00	57.59	57.59	1.96	29.45	4.28	33.74
01/01/40	03/31/40	0.00	57.03	57.03	1.96	29.17	4.25	33.41
04/01/40	06/30/40	0.00	56.47	56.47	1.96	28.88	4.21	33.09
07/01/40	09/30/40	0.00	55.93	55.93	1.96	28.60	4.17	32.77
10/01/40	12/31/40	0.00	55.42	55.42	1.96	28.34	4.13	32.47
01/01/41	03/31/41	0.00	54.96	54.96	1.96	28.11	4.12	32.23
04/01/41	06/30/41	0.00	54.55	54.55	1.96	27.90	4.10	32.00
07/01/41	09/30/41	0.00	54.13	54.13	1.96	27.68	4.09	31.77
10/01/41	12/31/41	0.00	53.66	53.66	1.96	27.44	4.08	31.52

VII 000057 STIP

TABLE D1: CAPITAL NEEDED FROM INVESTORS

TIME INTERVAL		UNEARNED PREMIUM RESERVES (3)	LOSS & LAE RESERVES (4)	TOTAL RESERVES (5)	RESERVES TO SURPLUS RATIO (6)	IMPLIED SURPLUS (7)	RESERVES FUNDED BY INVESTORS (8)	CAPITAL NEEDED FROM INVESTORS (9)
FROM (1)	TO (2)							
01/01/42	03/31/42	0.00	53.13	53.13	1.96	27.17	4.08	31.25
04/01/42	06/30/42	0.00	52.55	52.55	1.96	26.88	4.07	30.95
07/01/42	09/30/42	0.00	51.98	51.98	1.96	26.58	4.07	30.65
10/01/42	12/31/42	0.00	51.44	51.44	1.96	26.31	4.07	30.38
01/01/43	03/31/43	0.00	50.97	50.97	1.96	26.07	4.07	30.14
04/01/43	06/30/43	0.00	50.56	50.56	1.96	25.86	4.06	29.92
07/01/43	09/30/43	0.00	50.10	50.10	1.96	25.62	4.06	29.68
10/01/43	12/31/43	0.00	49.53	49.53	1.96	25.33	4.06	29.39
01/01/44	03/31/44	0.00	48.82	48.82	1.96	24.97	4.06	29.02
04/01/44	06/30/44	0.00	48.00	48.00	1.96	24.55	4.05	28.60
07/01/44	09/30/44	0.00	47.11	47.11	1.96	24.09	4.05	28.14
10/01/44	12/31/44	0.00	46.22	46.22	1.96	23.64	4.05	27.68
01/01/45	03/31/45	0.00	45.33	45.33	1.96	23.18	4.04	27.23
04/01/45	06/30/45	0.00	44.44	44.44	1.96	22.73	4.04	26.77
07/01/45	09/30/45	0.00	43.55	43.55	1.96	22.27	4.04	26.31
10/01/45	12/31/45	0.00	42.66	42.66	1.96	21.82	4.04	25.85
01/01/46	03/31/46	0.00	41.77	41.77	1.96	21.36	4.03	25.40
04/01/46	06/30/46	0.00	40.89	40.89	1.96	20.91	4.03	24.94
07/01/46	09/30/46	0.00	40.00	40.00	1.96	20.46	4.03	24.48
10/01/46	12/31/46	0.00	39.10	39.10	1.96	20.00	4.02	24.02
01/01/47	03/31/47	0.00	38.22	38.22	1.96	19.54	4.02	23.57
04/01/47	06/30/47	0.00	37.33	37.33	1.96	19.09	4.02	23.11
07/01/47	09/30/47	0.00	36.44	36.44	1.96	18.64	4.02	22.65
10/01/47	12/31/47	0.00	35.55	35.55	1.96	18.18	4.01	22.19
01/01/48	03/31/48	0.00	34.66	34.66	1.96	17.73	4.01	21.74
04/01/48	06/30/48	0.00	33.78	33.78	1.96	17.27	4.01	21.28
07/01/48	09/30/48	0.00	32.89	32.89	1.96	16.82	4.00	20.82
10/01/48	12/31/48	0.00	31.99	31.99	1.96	16.36	4.00	20.36
01/01/49	03/31/49	0.00	31.10	31.10	1.96	15.91	4.00	19.91
04/01/49	06/30/49	0.00	30.22	30.22	1.96	15.46	4.00	19.45
07/01/49	09/30/49	0.00	29.33	29.33	1.96	15.00	3.99	18.99
10/01/49	12/31/49	0.00	28.44	28.44	1.96	14.54	3.99	18.53
01/01/50	03/31/50	0.00	27.55	27.55	1.96	14.09	3.99	18.08
04/01/50	06/30/50	0.00	26.67	26.67	1.96	13.64	3.98	17.62
07/01/50	09/30/50	0.00	25.78	25.78	1.96	13.18	3.98	17.16
10/01/50	12/31/50	0.00	24.88	24.88	1.96	12.73	3.98	16.70
01/01/51	03/31/51	0.00	23.99	23.99	1.96	12.27	3.98	16.25
04/01/51	06/30/51	0.00	23.11	23.11	1.96	11.82	3.97	15.79
07/01/51	09/30/51	0.00	22.22	22.22	1.96	11.36	3.97	15.33
10/01/51	12/31/51	0.00	21.33	21.33	1.96	10.91	3.97	14.87
01/01/52	03/31/52	0.00	20.44	20.44	1.96	10.45	3.96	14.42
04/01/52	06/30/52	0.00	19.55	19.55	1.96	10.00	3.96	13.96
07/01/52	09/30/52	0.00	18.67	18.67	1.96	9.55	3.96	13.51
10/01/52	12/31/52	0.00	17.77	17.77	1.96	9.09	3.96	13.05
01/01/53	03/31/53	0.00	16.88	16.88	1.96	8.63	3.95	12.59
04/01/53	06/30/53	0.00	16.00	16.00	1.96	8.18	3.95	12.13
07/01/53	09/30/53	0.00	15.11	15.11	1.96	7.73	3.95	11.68
10/01/53	12/31/53	0.00	14.22	14.22	1.96	7.27	3.94	11.22
01/01/54	03/31/54	0.00	13.33	13.33	1.96	6.82	3.94	10.76
04/01/54	06/30/54	0.00	12.44	12.44	1.96	6.36	3.94	10.30
07/01/54	09/30/54	0.00	11.55	11.55	1.96	5.91	3.94	9.85
10/01/54	12/31/54	0.00	10.66	10.66	1.96	5.45	3.93	9.39
01/01/55	03/31/55	0.00	9.77	9.77	1.96	5.00	3.93	8.93
04/01/55	06/30/55	0.00	8.89	8.89	1.96	4.55	3.93	8.47
07/01/55	09/30/55	0.00	8.00	8.00	1.96	4.09	3.92	8.02
10/01/55	12/31/55	0.00	7.11	7.11	1.96	3.63	3.92	7.56
01/01/56	03/31/56	0.00	6.22	6.22	1.96	3.18	3.92	7.10
04/01/56	06/30/56	0.00	5.33	5.33	1.96	2.73	3.92	6.64
07/01/56	09/30/56	0.00	4.44	4.44	1.96	2.27	3.91	6.19
10/01/56	12/31/56	0.00	3.55	3.55	1.96	1.82	3.54	5.35
01/01/57	03/31/57	0.00	2.66	2.66	1.96	1.36	2.65	4.01
04/01/57	06/30/57	0.00	1.78	1.78	1.96	0.91	1.77	2.68
07/01/57	09/30/57	0.00	1.01	1.01	1.96	0.52	1.01	1.52
10/01/57	12/31/57	0.00	0.43	0.43	1.96	0.22	0.43	0.65
01/01/58	03/31/58	0.00	0.11	0.11	1.96	0.06	0.11	0.16
04/01/58	06/30/58	0.00	0.00	0.00	1.96	0.00	0.00	0.00
TOTAL		1,849.52	11,477.33	13,326.86		6,815.80	941.33	7,757.13

Notes:

- (3) = Table A1, (1b) x [Table C5_2, (6) - Table C5_2, (7)]
- (4) = Table A1, (1a) x Table A1, (3) x [Table C5_2, (8) - Table C5_1, (13)]
- (5) = (3) + (4)
- (6) = Table A1, (13)
- (7) = (5) / (6)
- (8) = Table C3, (11)
- (9) = (7) + (8)

VII 000076 STIP

Section VII - Profit
Subsection E - Cost of Capital
7/1/2022

Section VII - E
Exhibit 1

Cost of Capital: Summary Exhibit

(1) Discounted Cash Flow	7.99%
(2) Capital Asset Pricing Model	9.45%
(3) Equity Capital Cost	8.72%
(4) Debt Capital Cost	1.37%
(5) Capital Structure	
(a) Equity Capital Share	78%
(b) Debt Capital Share	22%
(6) Weighted Average Cost of Capital (WACC)	7.14%

Notes:

(1): Exhibit 2, page 1

(2): Exhibit 3, page 1

(3) = [(1) + (2)] / 2.0

(4): Average of three-horizons yields:

 Short-Term = 0.08%, the average yield on 1-month Commercial Paper (line (1)' of Section VII-J, Exhibit 2, page 3)

 Intermediate-Term = 1.19%, the average yield on 5-year HQM yield (line (15) of Section VII-J, Exhibit 2, page 3)

 Long-Term = 2.84%, the average yield on 20-year industrial yield (Section VII-J, Exhibit 2, page 2)

(5): Exhibit 4

(6) = [(3) x (5a)] + [(4) x (5b)]

VII 000077 STIP

Section VII - Profit
Subsection E - Cost of Capital
7/1/2022

Section VII - E
Exhibit 2
Page 1

Cost of Capital Estimate Using Discounted Cash Flow (DCF) Analysis

$$V_0 = D_0 \sum_{t=1}^{\infty} \left(\frac{1 + g_t}{1 + k} \right)^t = D_1 \sum_{t=1}^{\infty} \frac{(1 + g_t)^{t-1}}{(1 + k)^t}$$

$$\frac{1}{\frac{D_1}{V_0}} = \sum_{t=1}^5 \frac{(1 + g_{ST})^{t-1}}{(1 + k)^t} + (1 + g_{ST})^4 \sum_{t=6}^9 \frac{\prod_{i=1}^{t-5} (1 + g_{IT_i})}{(1 + k)^t}$$

$$+ (1 + g_{ST})^4 (1 + g_{IT_1})(1 + g_{IT_2})(1 + g_{IT_3})(1 + g_{IT_4}) \sum_{t=10}^{\infty} \frac{(1 + g_{LT})^{t-9}}{(1 + k)^t}$$

	Time (t) (1)	Dividend Growth Rate (g) (2)	Discounted Dividends (3)
Stage 1	1	6.07%	
	2	6.07%	
	3	6.07%	
	4	6.07%	
	5	6.07%	4.47
Stage 2	6	5.95%	0.85
	7	5.84%	0.83
	8	5.72%	0.81
	9	5.60%	0.79
Stage 3	≥10	5.49%	33.47
(4) Total Discounted Dividends			41.21
(5) Dividend Yield Rate (D_1/V_0)			2.43%
(6) Cost of Capital (k)			7.99%

Notes:

(2): Stage 1 dividend growth rate is the short-term rate from Page 4.

Stage 2 dividend growth rate is a linear interpolation between dividend growth rate of stage 1 and stage 3.

Stage 3 dividend growth rate is the long-term rate from Page 2.

(3): Stage 1 = $(1.0 - [(1.0 + g_{ST}) / (1.0 + k)]^5) / (k - g_{ST})$

Stage 2, Time 6 = $[(1.0 + g_{ST})^4 \times (1.0 + g_{IT_1})] / (1.0 + k)^6$

Stage 2, Time 7 = $[(1.0 + g_{ST})^4 \times (1.0 + g_{IT_1}) \times (1.0 + g_{IT_2})] / (1.0 + k)^7$

Stage 2, Time 8 = $[(1.0 + g_{ST})^4 \times (1.0 + g_{IT_1}) \times (1.0 + g_{IT_2}) \times (1.0 + g_{IT_3})] / (1.0 + k)^8$

Stage 2, Time 9 = $[(1.0 + g_{ST})^4 \times (1.0 + g_{IT_1}) \times (1.0 + g_{IT_2}) \times (1.0 + g_{IT_3}) \times (1.0 + g_{IT_4})] / (1.0 + k)^9$

Stage 3 = $[(1.0 + g_{ST})^4 \times (1.0 + g_{IT_1}) \times (1.0 + g_{IT_2}) \times (1.0 + g_{IT_3}) \times (1.0 + g_{IT_4}) \times (1.0 + g_{LT})] / [(k - g_{LT}) \times (1.0 + k)^9]$

(5): Page 5

(6): Cost of Capital is calculated using excel function so that $[1.0 / (5)] - (4) = 0$.

VII 000078 STIP

Section VII - Profit
 Subsection E - Cost of Capital
 7/1/2022

Section VII - E
 Exhibit 2
 Page 2

Discounted Cash Flow (DCF) Analysis: Long-Term Dividend Growth Rate

Years (1)	Real Gross Domestic Product (2)	Real Gross Domestic Product Percent Change (3)
1929	1,110.2	
1930	1,015.8	-8.50%
1931	950.7	-6.41%
1932	828.1	-12.90%
1933	817.8	-1.24%
1934	906.2	10.81%
1935	986.9	8.91%
1936	1,114.1	12.89%
1937	1,171.1	5.12%
1938	1,132.3	-3.31%
1939	1,223.2	8.03%
1940	1,331.1	8.82%
1941	1,566.8	17.71%
1942	1,862.8	18.89%
1943	2,179.9	17.02%
1944	2,353.2	7.95%
1945	2,330.2	-0.98%
1946	2,059.8	-11.60%
1947	2,036.2	-1.15%
1948	2,120.0	4.12%
1949	2,108.0	-0.57%
1950	2,291.1	8.69%
1951	2,475.4	8.04%
1952	2,576.7	4.09%
1953	2,697.5	4.69%
1954	2,681.9	-0.58%
1955	2,873.2	7.13%
1956	2,934.4	2.13%
1957	2,996.2	2.11%
1958	2,974.0	-0.74%
1959	3,180.2	6.93%
1960	3,262.1	2.58%
1961	3,345.7	2.56%
1962	3,550.7	6.13%
1963	3,705.3	4.35%
1964	3,918.8	5.76%
1965	4,173.4	6.50%
1966	4,448.7	6.60%
1967	4,570.7	2.74%
1968	4,795.4	4.92%
1969	4,945.2	3.12%
1970	4,954.4	0.19%
1971	5,117.6	3.29%
1972	5,386.7	5.26%
1973	5,690.9	5.65%
1974	5,660.1	-0.54%
1975	5,648.5	-0.20%
1976	5,952.8	5.39%
1977	6,228.1	4.62%
1978	6,572.8	5.53%
1979	6,780.9	3.17%
1980	6,763.5	-0.26%

VII 000079 STIP

Section VII - Profit
 Subsection E - Cost of Capital
 7/1/2022

Section VII - E
 Exhibit 2
 Page 2

Discounted Cash Flow (DCF) Analysis: Long-Term Dividend Growth Rate

Years (1)	Real Gross Domestic Product (2)	Real Gross Domestic Product Percent Change (3)
1981	6,935.2	2.54%
1982	6,810.1	-1.80%
1983	7,122.3	4.58%
1984	7,637.7	7.24%
1985	7,956.2	4.17%
1986	8,231.7	3.46%
1987	8,516.4	3.46%
1988	8,872.2	4.18%
1989	9,198.0	3.67%
1990	9,371.5	1.89%
1991	9,361.3	-0.11%
1992	9,691.1	3.52%
1993	9,957.7	2.75%
1994	10,358.9	4.03%
1995	10,637.0	2.68%
1996	11,038.3	3.77%
1997	11,529.2	4.45%
1998	12,045.8	4.48%
1999	12,623.4	4.80%
2000	13,138.0	4.08%
2001	13,263.4	0.95%
2002	13,488.4	1.70%
2003	13,865.5	2.80%
2004	14,399.7	3.85%
2005	14,901.3	3.48%
2006	15,315.9	2.78%
2007	15,623.9	2.01%
2008	15,643.0	0.12%
2009	15,236.3	-2.60%
2010	15,649.0	2.71%
2011	15,891.5	1.55%
2012	16,254.0	2.28%
2013	16,553.3	1.84%
2014	16,932.1	2.29%
2015	17,390.3	2.71%
2016	17,680.3	1.67%
2017	18,079.1	2.26%
2018	18,606.8	2.92%
2019	19,032.7	2.29%
2020	18,384.7	-3.40%
(4) Average		3.25%
(5) Rate of Expected Inflation		2.17%
(6) Long-Term Dividend Growth Rate		5.49%

Notes:

(2): Bureau of Economic Analysis, Table 1.1.6.

(3) = $[(2)_t / (2)_{t-1}] - 1.0$

(5): Page 3

(6) = $\{ [1.0 + (4)] \times [1.0 + (5)] \} - 1.0$

VII 00080 STIP

Section VII - Profit
 Subsection E - Cost of Capital
 7/1/2022

Section VII - E
 Exhibit 2
 Page 3

Discounted Cash Flow (DCF) Analysis: Long-Term Dividend Growth Rate
 Rate of Expected Inflation

Time Period (1)	Market yield on U.S. Treasury Securities at 10-year Constant Maturity (2)	Inflation Indexed Market yield on U.S. Treasury Securities at 10-year Constant Maturity (3)	Rate of Expected Inflation (4) = (2) - (3)
2020-10	0.79	-0.92	1.71
2020-11	0.87	-0.84	1.71
2020-12	0.93	-0.98	1.91
2021-01	1.08	-1.00	2.08
2021-02	1.26	-0.92	2.18
2021-03	1.61	-0.66	2.27
2021-04	1.64	-0.71	2.35
2021-05	1.62	-0.85	2.47
2021-06	1.52	-0.82	2.34
2021-07	1.32	-1.01	2.33
2021-08	1.28	-1.07	2.35
2021-09	1.37	-0.97	2.34
Average			2.17%

Source: Federal Reserve Statistical Release, H.15.

VII 000081 STIP

Section VII - Profit
Subsection E - Cost of Capital
7/1/2022

Section VII - E
Exhibit 2
Page 4

Discounted Cash Flow (DCF) Analysis: Short-Term Dividend Growth Rate

(1) Growth Forecast { = [(a) + (b)] / 2.0 }	5.30
(a) Dividend Component	6.39
(b) Earnings Component	4.21
(2) Fundamental Analysis [= (a) + (b)]	6.84
(a) Retention to book	6.78
(b) Stock issuance factor	0.06
(3) Short-Term Dividend Growth Rate { = [(1) + (2)] / 2.0 }	6.07

Notes:

- (1a): Page 5, average of columns (3) through (5)
- (1b): Page 5, average of columns (6) through (8)
- (2a): Page 5, average of columns (9) through (11)
- (2b): Page 5, column (15)

Discounted Cash Flow (DCF) Analysis: Parameter Estimation

Companies (1)	Dividend Yield (2)	Average Dividend Growth Rate			Average Earnings Growth Rate			Average Earnings Retention Rates Retained Earnings as a Percent of Common Equity			Stock Issuance Adjustment Factor			
		Annual Rate of Change			Annual Rate of Change			Past 10 Years (9)	Past 5 Years (10)	Forecast (11)	2021 Shares (12)	2024 - 2026 Shares (13)	2024 - 2026 Market/ Book (14)	Stock Issuance Adjustment Factor (15)
		Past 10 Years (3)	Past 5 Years (4)	Forecast (5)	Past 10 Years (6)	Past 5 Years (7)	Forecast (8)							
ALLIANZ US PC INSURANCE COMPANIES	4.8	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
AMERICAN FINANCIAL GROUP INC	1.5	12.00	12.50	8.00	7.50	12.00	6.50	8.42	9.90	9.00	85.00	85.00	1.34	0.00
AMERICAN INTERNATIONAL GROUP	2.7	NA	20.50	7.00	NA	-17.00	31.50	4.52	3.30	6.50	860.00	750.00	1.03	-0.10
AMERICAN NATIONAL GROUP	3.2	NA	1.00	NA	NA	10.50	NA	4.48	5.16	NA	0.00	0.00	0.00	NA
AMERISAFE INC	2.1	NA	16.00	NA	NA	8.00	10.00	5.11	0.85	NA	0.00	0.00	0.00	NA
AMERITRUST GROUP	2.5	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
ARCH CAPITAL GROUP LTD	0.0	NA	NA	0.00	5.50	5.00	16.00	9.36	7.58	11.50	395.00	395.00	1.49	0.00
ARGO GROUP	2.4	NA	18.00	4.00	NA	NA	NMF	6.23	4.10	7.50	34.50	32.00	0.97	0.06
BERKLEY (W R) CORP	0.7	10.00	8.50	7.00	4.50	3.50	14.50	7.45	6.78	11.50	180.00	180.00	1.55	0.00
BERKSHIRE HATHAWAY	0.0	NA	NA	0.00	6.00	12.00	6.00	6.94	6.08	6.50	2450.00	2450.00	1.20	0.00
CHUBB LTD	1.7	9.50	4.00	4.00	1.50	-1.50	12.50	6.78	5.46	8.50	430.00	400.00	1.40	-0.72
CINCINNATI FINANCIAL CORP	2.0	3.50	3.50	5.50	8.00	3.50	17.50	2.60	2.24	7.50	161.00	160.00	2.36	-0.21
CNA FINANCIAL CORP	3.5	NA	8.50	4.00	2.00	1.00	13.50	4.18	4.26	8.50	272.00	275.00	1.70	0.19
EMPLOYERS HOLDINGS INC	2.5	NA	30.00	NA	NA	10.00	10.00	11.11	9.90	NA	0.00	0.00	0.00	NA
EVEREST RE GROUP	2.5	11.50	13.00	2.50	2.50	-10.00	11.00	8.89	6.05	6.50	40.00	42.00	0.80	-0.25
EXXON MOBIL	6.3	7.50	5.00	1.00	-17.00	-31.00	NMF	9.66	2.05	4.00	4233.00	4233.00	NA	NA
FAIRFAX FINANCIAL (USA) GROUP	2.5	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
GENERAL ELECTRIC	0.3	-15.00	-29.00	5.00	-10.00	-22.00	15.00	6.19	6.08	14.50	1100.00	1100.00	NA	NA
HANOVER INSURANCE GROUP INC	2.0	13.00	10.00	6.50	9.00	8.00	10.00	6.20	6.04	8.00	36.00	36.00	1.26	0.00
HARTFORD FINANCIAL	2.3	3.50	13.00	8.00	8.50	9.00	8.50	7.02	7.88	8.00	340.00	325.00	0.80	0.22
HDI/TALANX US PC GROUP	3.6	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
INTACT US INSURANCE GROUP	2.0	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
JAMES RIVER GROUP	3.2	NA	30.50	2.50	NA	-7.00	22.50	4.48	3.80	7.50	31.00	31.00	1.69	0.00
MARKEL CORP	0.0	NA	NA	0.00	9.00	19.50	6.50	5.66	6.90	6.50	14.00	14.00	1.29	0.00
MS&AD US INSURANCE GROUP	4.5	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
NATIONAL HEALTHCARE	3.2	NA	8.50	NA	NA	1.50	NA	4.78	3.56	NA	0.00	0.00	0.00	NA
OLD REPUBLIC INTL CORP	3.3	1.50	2.00	7.00	NA	12.00	12.50	4.48	5.18	8.50	305.00	310.00	1.75	0.31
PROASSURANCE CORP	0.8	NA	-3.50	NA	NA	NA	27.30	7.15	2.20	NA	0.00	0.00	0.00	NA
QBE NORTH AMERICA INSURANCE GROUP	1.2	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
RLI CORP	0.9	5.50	5.00	4.00	-0.50	-1.50	12.00	8.16	6.52	8.00	45.00	45.00	2.35	0.00
SAMSUNG F & M INSURANCE CO	3.7	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
SELECTIVE INS GROUP INC	1.2	5.00	9.00	10.00	11.50	13.50	12.00	7.39	8.88	11.00	60.00	65.00	1.78	1.58
SOMPO HOLDINGS US GROUP	3.8	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
STATE AUTO FINANCIAL CORP	0.8	NA	NA	NA	NA	-13.50	8.00	5.56	3.90	NA	0.00	0.00	0.00	NA
TOKIO MARINE US PC GROUP	4.2	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
TRAVELERS COS INC	2.2	9.50	8.00	2.50	5.00	-1.50	8.00	7.91	6.94	7.00	250.00	250.00	1.40	0.00
TREAN INSURANCE GROUP	0.0	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
XL REINSURANCE AMERICA GROUP	5.9	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
ZURICH INSURANCE US PC GROUP	4.9	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
Average	2.43	5.92	8.82	4.43	3.31	1.00	8.32	6.57	5.45	8.33				0.06

Notes:

Sources: Value Line Investment Survey, Part 3, The Ratings & Reports (VL)
 Value Line Investment Survey, Part 2, Small and Mid Cap Edition (VLSM)
<http://finance.yahoo.com> (data available in September 2021)

(2): The dividend yields needed for the DCF Analysis relate dividends at time 1, D₁, to stock prices at time 0, P₀. Dividend yields from VLIS, Small and Mid Cap Edition, must be adjusted because they are derived from the ratio of dividends at time 0, D₀, to stock price at time zero, P₀. D₁ is estimated from D₀ as follows:

$$D_1 = D_0 \times [1.0 + (0.5 \times \text{Dividend Growth Rate})] \quad \text{where Dividend Growth Rate} = 6.07\% \text{ from Page 4.}$$

(3) - (10): Data available only at Value Line Investment Surveys.

(11) - (14): Data available only at Value Line Investment Survey, Part 3.

(12), (13): in millions.

(15) = [(14) - 1.0] x [(13) / (12)]^t - 1.0 } x 100, where t is 0.25 for the years between midyear 2022 and midyear 2026.

VII 000082 STIP

VII 000083 STIP

Section VII - Profit
Subsection E - Cost of Capital
7/1/2022

Section VII - E
Exhibit 3
Page 1

Cost of Capital Estimate Using Capital Asset Pricing Model Analysis

$$\text{Cost of Capital: } K = r_f + (\beta \times r_d)$$

Time Horizon (1)	Risk-Free Yield (r_f) (2)	Market Risk Premium (r_d) (3)	Beta Coefficient (β) (4)	Estimated Cost of Capital (K) (5)
Short-Term	0.05	8.82	1.07	9.51
Intermediate-Term	0.80	7.83	1.07	9.20
Long-Term	1.86	7.25	1.07	9.64
Average	0.90	7.97	1.07	9.45

Notes:

(2): Section VII-J, Exhibit 2, page 3

Short-Term = average yield on 1-month U.S. Treasury Constant Maturities (line (2))

Intermediate-Term = average yield on 5-year U.S. Treasury (line (8))

Long-Term = average yield on 20-year U.S. Treasury (line (11))

(3): Section VII-J, Exhibit 4

Short-Term = S&P 500 total returns minus U.S. Treasury Bill total returns

Intermediate-Term = S&P 500 total returns minus Intermediate-Term Government Bonds income returns

Long-Term = S&P 500 total returns minus Long-Term Government Bonds income returns

(4): Average Beta Coefficient (Page 2).

(5) = (2) + [(4) x (3)]

VII 00084 STIP

Section VII - Profit
 Subsection E - Cost of Capital
 7/1/2022

Section VII - E
 Exhibit 3
 Page 2

Capital Asset Pricing Model - Beta Coefficient

<u>Companies</u>	<u>Beta Coefficients</u>
ALLIANZ US PC INSURANCE COMPANIES	1.3
AMERICAN FINANCIAL GROUP INC	1.4
AMERICAN INTERNATIONAL GROUP	1.5
AMERICAN NATIONAL GROUP	1.2
AMERISAFE INC	0.8
AMERITRUST GROUP	1.0
ARCH CAPITAL GROUP LTD	1.3
ARGO GROUP	1.0
BERKLEY (W R) CORP	1.1
BERKSHIRE HATHAWAY	1.0
CHUBB LTD	1.1
CINCINNATI FINANCIAL CORP	1.2
CNA FINANCIAL CORP	1.2
EMPLOYERS HOLDINGS INC	0.8
EVEREST RE GROUP	1.0
EXXON MOBIL	1.2
FAIRFAX FINANCIAL (USA) GROUP	1.1
GENERAL ELECTRIC	1.3
HANOVER INSURANCE GROUP INC	1.0
HARTFORD FINANCIAL	1.2
HDI/TALANX US PC GROUP	1.1
INTACT US INSURANCE GROUP	0.7
JAMES RIVER GROUP	0.9
MARKEL CORP	1.2
MS&AD US INSURANCE GROUP	0.6
NATIONAL HEALTHCARE	0.7
OLD REPUBLIC INTL CORP	1.2
PROASSURANCE CORP	0.7
QBE NORTH AMERICA INSURANCE GROUP	1.2
RLI CORP	0.8
SAMSUNG F & M INSURANCE CO	0.7
SELECTIVE INS GROUP INC	0.9
SOMPO HOLDINGS US GROUP	0.6
STATE AUTO FINANCIAL CORP	0.7
TOKIO MARINE US PC GROUP	0.5
TRAVELERS COS INC	1.0
TREAN INSURANCE GROUP	NA
XL REINSURANCE AMERICA GROUP	1.6
ZURICH INSURANCE US PC GROUP	0.7
Weighted Average	1.07

Notes:

Sources: Value Line Investment Survey, Part 3, The Ratings & Reports (VL)
 Value Line Investment Survey, Part 2, Small and Mid Cap Edition (VLSM)
<http://finance.yahoo.com> (data available in September 2021)

Weighted by direct premiums written.

VII 00085 STIP

Section VII - Profit
Subsection E - Cost of Capital
7/1/2022

Section VII - E
Exhibit 4

Capital Structure Ratios of Property-Casualty Insurance Companies

Companies (1)	Total Debt \$ in millions (2)	Preferred Stock \$ in millions (3)	Total Debt Capital =(2) + (3) (4)	Common Equity \$ in millions (5)	Equity Capital Share (6)	Debt Capital Share (7)
ALLIANZ US PC INSURANCE COMPANIES	35,524.0	0.0	35,524.0	79,949.2	0.69	0.31
AMERICAN FINANCIAL GROUP INC	1,963.0	0.0	1,963.0	11,329.4	0.85	0.15
AMERICAN INTERNATIONAL GROUP	35,600.0	0.0	35,600.0	46,791.0	0.57	0.43
AMERICAN NATIONAL GROUP	153.7	0.0	153.7	5,128.7	0.97	0.03
AMERISAFE INC	0.0	0.0	0.0	1,082.1	1.00	0.00
AMERITRUST GROUP	250,871.8	0.0	250,871.8	82,479.5	0.25	0.75
ARCH CAPITAL GROUP LTD	3,017.4	1,280.0	4,297.4	15,680.0	0.78	0.22
ARGO GROUP	458.3	0.0	458.3	1,795.7	0.80	0.20
BERKLEY (W R) CORP	2,919.1	0.0	2,919.1	12,987.4	0.82	0.18
BERKSHIRE HATHAWAY	116,895.0	0.0	116,895.0	500,485.2	0.81	0.19
CHUBB LTD	14,954.0	308.0	15,262.0	79,305.6	0.84	0.16
CINCINNATI FINANCIAL CORP	907.0	0.0	907.0	19,102.4	0.95	0.05
CNA FINANCIAL CORP	2,777.0	0.0	2,777.0	11,698.3	0.81	0.19
EMPLOYERS HOLDINGS INC	20.0	0.0	20.0	1,138.5	0.98	0.02
EVEREST RE GROUP	1,910.6	0.0	1,910.6	10,297.5	0.84	0.16
EXXON MOBIL	60,612.0	0.0	60,612.0	233,677.9	0.79	0.21
FAIRFAX FINANCIAL (USA) GROUP	10,266.1	0.0	10,266.1	11,640.8	0.53	0.47
GENERAL ELECTRIC	71,400.0	6.0	71,406.0	112,614.6	0.61	0.39
HANOVER INSURANCE GROUP INC	781.2	0.0	781.2	4,821.5	0.86	0.14
HARTFORD FINANCIAL	4,353.0	0.0	4,353.0	24,613.9	0.85	0.15
HDI/TALANX US PC GROUP	6,188.0	0.0	6,188.0	9,619.5	0.61	0.39
INTACT US INSURANCE GROUP	3,488.0	0.0	3,488.0	23,937.4	0.87	0.13
JAMES RIVER GROUP	366.4	0.0	366.4	1,071.8	0.75	0.25
MARKEL CORP	4,160.2	0.0	4,160.2	16,955.6	0.80	0.20
MS&AD US INSURANCE GROUP	809,093.0	0.0	809,093.0	19,190.8	0.02	0.98
NATIONAL HEALTHCARE	15.0	0.0	15.0	1,085.6	0.99	0.01
OLD REPUBLIC INTL CORP	1,590.1	0.0	1,590.1	7,409.6	0.82	0.18
PROASSURANCE CORP	284.7	0.0	284.7	1,302.3	0.82	0.18
QBE NORTH AMERICA INSURANCE GROUP	3,386.0	0.0	3,386.0	17,332.3	0.84	0.16
RLI CORP	149.6	0.0	149.6	4,739.3	0.97	0.03
SAMSUNG F & M INSURANCE CO	0.0	1.7	1.7	8,631,161.0	1.00	0.00
SELECTIVE INS GROUP INC	550.9	0.0	550.9	4,814.5	0.90	0.10
SOMPO HOLDINGS US GROUP	529,591.0	0.0	529,591.0	16,200.9	0.03	0.97
STATE AUTO FINANCIAL CORP	122.1	0.0	122.1	2,232.8	0.95	0.05
TOKIO MARINE US PC GROUP	230,597.0	0.0	230,597.0	36,299.9	0.14	0.86
TRAVELERS COS INC	7,290.0	0.0	7,290.0	39,207.8	0.84	0.16
TREAN INSURANCE GROUP	38.5	0.0	38.5	525.0	0.93	0.07
XL REINSURANCE AMERICA GROUP	28,403.0	0.0	28,403.0	66,038.1	0.70	0.30
ZURICH INSURANCE US PC GROUP	15,997.0	0.0	15,997.0	63,398.8	0.80	0.20
(8) Weighed Average					0.78	0.22

Notes:

Sources: Value Line Investment Survey, Part 3, The Ratings & Reports (VL)
Value Line Investment Survey, Part 2, Small and Mid Cap Edition (VLSM)
<http://finance.yahoo.com> (data available in September 2021)

(5) = (outstanding shares) * (one month average share price)
One month (Aug 30, 2021 - Sep 27, 2021) average share price from 'Yahoo Finance'

Value Line doesn't have debt information for Berkshire Hathaway. 'Yahoo Finance' used instead.

(6) = (5) / [(4) + (5)]

(7) = 1.0 - (6)

(8): Weighted by direct premiums written.

Loss & LAE and Unearned Premium Reserves to Surplus Ratio

Company	Loss & LAE and Unearned Premium Reserves (\$000)					Surplus (\$000)					Leverage Ratio				
	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016
(1)	(2)					(3)					(4) = (2) / (3)				
018674 Travelers Group (G)	56,497	53,741	51,786	50,125	48,359	21,558	20,680	20,207	19,903	20,249	2.62	2.60	2.56	2.52	2.39
018555 A.I.M. Mutual Insurance Companies (G)	365	351	336	332	325	319	295	258	237	215	1.14	1.19	1.30	1.40	1.51
000048 Hartford Insurance Group (G)	30,110	28,987	28,001	27,005	25,877	13,998	13,383	11,253	12,516	15,317	2.15	2.17	2.49	2.16	1.69
000060 Liberty Mutual Insurance Companies (G)	64,670	59,095	56,051	54,344	48,802	22,841	20,556	19,813	17,570	20,200	2.83	2.87	2.83	3.09	2.42
018498 Chubb INA Group (G)	40,278	35,571	34,027	30,970	32,596	17,722	17,646	18,647	17,691	17,837	2.27	2.02	1.82	1.75	1.83
018540 American International Group (G)	35,391	38,572	42,359	49,829	58,115	18,467	17,855	17,908	22,078	22,501	1.92	2.16	2.37	2.26	2.58
018549 Zurich Insurance US PC Group (G)	16,269	16,495	17,696	18,429	18,558	6,958	7,406	6,873	7,272	7,872	2.34	2.23	2.57	2.53	2.36
000811 Berkshire Hathaway Insurance Group (G)	93,002	86,021	78,905	72,444	61,701	237,308	216,255	160,938	171,554	137,180	0.39	0.40	0.49	0.42	0.45
018396 Charter Insurance Group (G)	100	98	107	117	124	84	81	69	68	65	1.20	1.22	1.56	1.74	1.92
000734 Old Republic Insurance Group (G)	6,858	6,621	6,593	6,438	6,434	4,079	4,120	3,713	3,766	3,581	1.68	1.61	1.78	1.71	1.80
018252 W. R. Berkley Insurance Group (G)	14,287	12,999	12,351	12,102	11,810	6,186	6,010	5,590	5,482	5,495	2.31	2.16	2.21	2.21	2.15
018313 CNA Insurance Companies (G)	33,334	32,312	32,209	32,250	32,449	10,704	10,775	10,392	10,700	10,748	3.11	3.00	3.10	3.01	3.02
018533 AmTrust Group (G)	5,098	5,123	5,117	4,638	3,665	2,210	2,128	2,164	2,092	2,076	2.31	2.41	2.36	2.22	1.77
004861 Hanover Ins Group Prop & Cas Cos (G)	6,830	6,453	6,103	5,748	5,304	2,589	2,470	2,171	2,074	2,173	2.64	2.61	2.81	2.77	2.44
018524 MEMIC Group (G)	949	912	904	828	749	488	470	424	439	415	1.95	1.94	2.13	1.89	1.80
018220 Arbella Insurance Group (G)	868	886	879	864	870	837	736	651	622	559	1.04	1.20	1.35	1.39	1.56
004202 Utica National Insurance Group (G)	2,121	1,968	1,849	1,764	1,673	1,257	1,139	1,021	990	924	1.69	1.73	1.81	1.78	1.81
003926 Selective Insurance Group (G)	5,129	4,855	4,610	4,364	4,179	2,125	1,932	1,768	1,673	1,584	2.41	2.51	2.61	2.61	2.64
005658 QBE North America Insurance Group (G)	3,650	3,394	3,128	2,831	2,822	1,625	1,718	1,741	1,640	1,844	2.25	1.98	1.80	1.73	1.53
018484 Arch Insurance Group (G)	5,213	3,918	3,183	2,186	3,581	1,978	1,779	1,975	2,923	2,769	2.64	2.20	1.61	0.75	1.29
000086 Sentry Insurance Group (G)	5,119	4,815	4,510	4,271	4,109	6,533	6,001	5,450	5,174	4,752	0.78	0.80	0.83	0.83	0.86
018132 AmeriTrust Group (G)	1,277	1,222	1,231	1,261	1,273	673	633	580	564	508	1.90	1.93	2.12	2.24	2.50
003116 Fairfax Financial (USA) Group (G)	15,700	14,180	13,098	12,179	11,793	7,469	7,037	6,650	6,921	6,853	2.10	2.01	1.97	1.76	1.72
004284 Federated Mutual Group (G)	3,398	2,948	2,636	2,345	2,184	3,975	3,778	3,404	3,307	3,114	0.85	0.78	0.77	0.71	0.70
018756 Starr International Group (G)	3,998	3,554	3,033	2,792	2,368	2,379	2,187	2,024	1,875	1,922	1.68	1.63	1.50	1.49	1.23
000706 Norfolk & Dedham Group Pool (G)	318	310	299	272	240	406	362	316	322	296	0.78	0.86	0.95	0.84	0.81
018943 AU Holding Company Group (G)	716	700	665	569	428	953	926	874	960	826	0.75	0.76	0.76	0.59	0.52
005686 Protective Insurance Corporation Group (G)	716	645	540	410	338	346	371	395	420	398	2.07	1.74	1.37	0.97	0.85
002947 American National Prop & Cas Group (G)	1,656	1,596	1,532	1,433	1,352	1,463	1,330	1,184	1,163	1,075	1.13	1.20	1.29	1.23	1.26
000346 EMC Insurance Companies (G)	3,182	2,898	2,795	2,669	2,567	1,566	1,575	1,662	1,713	1,633	2.03	1.84	1.68	1.56	1.57
018733 Tokio Marine US PC Group (G)	18,192	16,934	15,617	14,682	13,459	9,351	8,923	8,635	8,041	7,661	1.95	1.90	1.81	1.83	1.76
000174 Arrow Mutual Liability Insurance Company	10	11	11	12	12	32	32	31	30	30	0.33	0.32	0.37	0.39	0.41
005696 Everest Re U.S. Group (G)	9,752	7,814	7,012	4,971	4,741	5,276	3,739	3,651	3,392	3,635	1.85	2.09	1.92	1.47	1.30
000124 American Family Insurance Group (G)	12,975	12,480	11,519	10,200	9,684	7,489	7,007	7,739	8,490	8,755	1.73	1.78	1.49	1.20	1.11
018602 Employers Insurance Group (G)	1,842	1,970	2,017	2,031	2,016	1,046	1,021	928	892	829	1.76	1.93	2.17	2.28	2.43
018717 Skyward Specialty Insurance Group (G)	533	509	416	388	424	342	338	264	266	266	1.56	1.51	1.57	1.46	1.60
018949 GE Capital PC Group (G)	718	783	828	874	873	402	410	420	507	549	1.78	1.91	1.97	1.72	1.59
018468 Markel Corporation Group (G)	8,497	7,593	6,191	5,805	5,353	4,187	3,726	3,203	3,492	3,224	2.03	2.04	1.93	1.66	1.66
018557 XL Reinsurance America Group (G)	8,200	7,056	6,984	5,718	4,777	2,869	2,462	2,512	2,480	2,480	2.86	2.87	2.78	2.31	1.93
018385 Service Insurance Group (G)	157	146	157	163	161	156	145	132	130	125	1.01	1.01	1.19	1.25	1.29
004835 Great American P & C Insurance Group (G)	8,966	8,468	8,038	7,646	7,050	3,643	3,342	2,865	2,725	2,941	2.46	2.53	2.81	2.81	2.40
000590 Merchants Insurance Group (G)	506	456	420	408	393	267	244	225	203	190	1.89	1.87	1.87	2.00	2.06
018878 Sompo Holdings US Group (G)	5,044	3,722	3,187	2,340	2,030	2,423	2,028	2,127	1,840	1,733	2.08	1.84	1.50	1.27	1.17
000246 Central Insurance Companies (G)	976	918	863	790	756	893	897	809	822	743	1.09	1.02	1.07	0.96	1.02
000419 ProSight Specialty Group (G)	1,782	1,712	1,545	1,286	961	668	569	474	434	355	2.67	3.01	3.26	2.96	2.70

VII 000086 STIP

Loss & LAE and Unearned Premium Reserves to Surplus Ratio

Company	Loss & LAE and Unearned Premium Reserves (\$000)					Surplus (\$000)					Leverage Ratio				
	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016
(1)			(2)					(3)					(4) = (2) / (3)		
004019 Argo Group (G)	2,326	2,061	1,784	1,565	1,421	1,072	1,051	1,005	993	887	2.17	1.96	1.78	1.58	1.60
018680 AF Group (G)	2,768	2,596	2,387	2,237	1,936	1,213	1,087	937	995	897	2.28	2.39	2.55	2.25	2.16
018458 Intact US Insurance Group (G)	1,745	1,557	1,546	1,398	1,388	823	961	819	808	805	2.12	1.62	1.89	1.73	1.72
013103 Work First Casualty Company	43	40	37	31	28	25	21	18	15	13	1.75	1.93	2.06	2.07	2.24
004294 The Cincinnati Insurance Companies (G)	9,013	8,225	7,906	7,418	7,003	5,838	5,620	4,919	5,094	4,686	1.54	1.46	1.61	1.46	1.49
018922 Benchmark Insurance Group (G)	172	137	121	103	83	186	148	129	114	102	0.93	0.93	0.94	0.91	0.81
005987 Nationwide Group (G)	24,332	23,567	23,992	24,855	24,183	16,484	15,749	14,478	14,741	15,538	1.48	1.50	1.66	1.69	1.56
018887 Church Mutual Insurance Group (G)	1,263	1,170	1,118	947	887	743	679	619	704	695	1.70	1.72	1.80	1.35	1.28
018780 Core Specialty Insurance Group (G)	657	564	382	191	215	791	192	156	145	109	0.83	2.94	2.45	1.32	1.97
018782 MS&AD US Insurance Group (G)	750	740	729	713	698	1,489	1,144	559	545	498	0.50	0.65	1.30	1.31	1.40
000856 State Auto Insurance Companies (G)	2,686	2,619	2,664	2,878	2,773	1,210	1,247	1,138	1,133	1,166	2.22	2.10	2.34	2.54	2.38
018429 Allianz US PC Insurance Companies (G)	5,905	6,467	5,833	6,134	6,599	2,831	2,798	3,094	2,669	2,751	2.09	2.31	1.89	2.30	2.40
018923 Pharmacists Mutual Insurance Group (G)	215	187	167	159	159	172	176	138	131	115	1.25	1.07	1.22	1.21	1.38
004071 Amerisure Companies (G)	1,830	1,843	1,787	1,754	1,691	1,080	1,008	984	983	938	1.69	1.83	1.82	1.79	1.80
018626 James River Group (G)	435	432	361	297	240	286	267	242	219	185	1.52	1.62	1.49	1.35	1.30
003918 GuideOne Insurance Companies (G)	948	838	870	963	914	442	456	433	442	516	2.15	1.84	2.01	2.18	1.77
012124 Premier Group Insurance Company	18	17	17	17	17	36	39	40	39	35	0.51	0.45	0.43	0.43	0.48
000221 Brotherhood Mutual Insurance Company	474	436	397	314	294	298	280	241	266	245	1.59	1.56	1.65	1.18	1.20
018437 Quincy Mutual Group (G)	547	497	481	391	334	1,297	1,235	1,109	1,191	1,080	0.42	0.40	0.43	0.33	0.31
003883 RLI Group (G)	1,779	1,636	1,522	1,363	1,233	1,122	1,030	830	865	860	1.59	1.59	1.83	1.58	1.43
012138 Cherokee Insurance Company	399	374	345	322	290	289	227	186	198	181	1.38	1.65	1.85	1.63	1.61
002967 ICW Pool (G)	2,390	2,050	1,785	1,617	1,427	1,290	1,301	1,109	1,034	905	1.85	1.58	1.61	1.56	1.58
018211 AMERISAFE Insurance Group (G)	784	818	840	844	827	366	360	384	382	394	2.15	2.27	2.19	2.21	2.10
018559 ProAssurance Group (G)	3,214	3,024	2,668	2,682	2,742	1,421	1,488	1,778	1,906	2,229	2.26	2.03	1.50	1.41	1.23
018894 WCF Insurance Group (G)	1,233	1,170	1,142	1,117	1,095	1,074	1,041	946	935	882	1.15	1.12	1.21	1.20	1.24
000769 Petroleum Casualty Company	7	7	7	9	10	22	23	24	23	24	0.33	0.31	0.30	0.40	0.40
018067 American Contractors Insurance Group (G)	325	323	295	284	279	181	174	160	153	143	1.79	1.86	1.85	1.85	1.94
000088 State Farm Group (G)	66,417	64,820	65,737	66,649	62,758	126,077	116,308	100,887	97,134	87,695	0.53	0.56	0.65	0.69	0.72
011021 Samsung F & M Insurance Co, Ltd USB	63	78	108	126	163	78	73	68	58	72	0.80	1.07	1.58	2.19	2.28
018940 MAG Mutual Companies (G)	941	817	787	775	741	847	925	877	944	1,015	1.11	0.88	0.90	0.82	0.73
018392 The Gray Insurance Group (G)	209	210	186	175	168	152	133	128	119	113	1.38	1.58	1.46	1.47	1.49
000964 West Bend Mutual Insurance Company	1,814	1,672	1,577	1,498	1,423	1,401	1,231	1,138	1,041	947	1.30	1.36	1.39	1.44	1.50
000766 Penn National Insurance Companies (G)	1,061	1,041	1,056	1,043	1,007	718	664	591	587	624	1.48	1.57	1.79	1.78	1.61
018907 HDI/Talanx US PC Group (G)	728	521	252	37	36	246	227	216	188	139	2.97	2.30	1.17	0.19	0.26
018392 Gray Insurance Group (G)	214	189	178	172	182	133	128	119	113	105	1.61	1.48	1.50	1.52	1.73

	2020	2019	2018	2017	2016
(5): Premium Weighted Leverage Ratio	1.95	1.94	2.03	1.98	1.89
(6): Selected Leverage Ratio					1.96

Notes:
Source: A.M. Best's Global Insurance Database for all Massachusetts Workers' Compensation Group Companies.
(5): Premium Weighted Leverage Ratio use Direct Premiums Written from Section VII - J, Exhibit 5.
(6): Selected Leverage Ratio is equal to five year average.

VII 000087 STIP

Single Policy
 Determination of Selected Premium Flow From Premium Collection Special Call

Time Interval		Net Premium Ranges									Weighted Average Selected Collection Pattern (12)
		0 - 9,999			10,000 - 199,999			200,000 +			
		Actual Premium Collection Pattern		Weight (5)	Actual Premium Collection Pattern		Weight (8)	Actual Premium Collection Pattern		Weight (11)	
From (1)	To (2)	Actual (3)	Selected (4)		Actual (6)	Selected (7)		Actual (9)	Selected (10)		
07/01/21	09/30/21	0.0%	0.0%	23.9%	0.1%	0.0%	50.2%	0.0%	0.0%	25.9%	0.0%
10/01/21	12/31/21	0.0%	0.0%	23.9%	0.0%	0.0%	50.2%	0.2%	0.0%	25.9%	0.0%
01/01/22	03/31/22	0.1%	0.0%	23.9%	0.1%	0.0%	50.2%	0.0%	0.0%	25.9%	0.0%
04/01/22	06/30/22	11.2%	11.2%	23.9%	2.7%	2.7%	50.2%	1.1%	1.0%	25.9%	4.3%
07/01/22	09/30/22	38.1%	38.1%	23.9%	34.5%	34.5%	50.2%	37.8%	37.8%	25.9%	36.2%
10/01/22	12/31/22	22.6%	22.6%	23.9%	26.0%	26.0%	50.2%	22.4%	22.4%	25.9%	24.3%
01/01/23	03/31/23	15.4%	15.4%	23.9%	20.5%	20.5%	50.2%	20.1%	20.1%	25.9%	19.2%
04/01/23	06/30/23	4.0%	4.0%	23.9%	5.7%	5.7%	50.2%	7.4%	7.5%	25.9%	5.8%
07/01/23	09/30/23	2.2%	2.2%	23.9%	1.8%	1.8%	50.2%	3.1%	3.0%	25.9%	2.2%
10/01/23	12/31/23	2.8%	2.8%	23.9%	4.0%	4.0%	50.2%	5.6%	5.6%	25.9%	4.1%
01/01/24	03/31/24	1.9%	1.9%	23.9%	2.2%	2.2%	50.2%	1.9%	1.9%	25.9%	2.1%
04/01/24	06/30/24	1.1%	1.1%	23.9%	1.2%	1.5%	50.2%	0.2%	0.5%	25.9%	1.1%
07/01/24	09/30/24	0.1%	0.7%	23.9%	0.2%	1.1%	50.2%	0.0%	0.2%	25.9%	0.8%
10/01/24	12/31/24	0.0%	0.0%	23.9%	0.1%	0.0%	50.2%	0.1%	0.0%	25.9%	0.0%
01/01/25	03/31/25	0.0%	0.0%	23.9%	0.0%	0.0%	50.2%	0.1%	0.0%	25.9%	0.0%
04/01/25	06/30/25	0.0%	0.0%	23.9%	0.0%	0.0%	50.2%	0.0%	0.0%	25.9%	0.0%
07/01/25	09/30/25	0.2%	0.0%	23.9%	0.2%	0.0%	50.2%	0.0%	0.0%	25.9%	0.0%
10/01/25	12/31/25	0.2%	0.0%	23.9%	0.4%	0.0%	50.2%	0.0%	0.0%	25.9%	0.0%
01/01/26	03/31/26	0.1%	0.0%	23.9%	0.3%	0.0%	50.2%	0.0%	0.0%	25.9%	0.0%
Total											100.0%

Notes:

(5), (8), (11) are calculated using Unit Statistical Plan data for PY 2018.

(3), (6), (9) are from the premium collection special call.

(12) = [(4) x (5)] + [(7) x (8)] + [(10) x (11)]

VII 000088 STIP

VII 000089 STIP

Section VII - Profit
Subsection H - Expense Weights
7/1/2022

Section VII - H
Exhibit 1

Cash Flow Weights

Item of Expense Allowance (% of Standard Premium plus ARAP)	Policy Year		Average
	2017	2018	
(1) Expected Losses	60.80%	59.98%	60.39%
(2) Expected Loss Adjustment Expense (LAE):	11.36%	11.20%	11.28%
(a) Defense and Cost Containment Expense	5.17%	5.10%	5.14%
(b) Adjusting and Other Expense	6.18%	6.10%	6.14%
(3) Expected Losses + Expected LAE [= (1) + (2)]	72.15%	71.18%	71.67%
(4) Fixed Expenses	5.87%	5.83%	5.85%
(a) General Expenses	5.55%	5.52%	5.53%
(b) Miscellaneous and Other Taxes	0.32%	0.32%	0.32%
(5) Variable Expenses [= (5a) + (5b) + (5c)]	20.20%	20.20%	20.20%
(a) Total Acquisition	12.63%	12.63%	12.63%
(i) Commissions	9.36%	9.36%	9.36%
(ii) Other Acquisition	2.27%	2.27%	2.27%
(iii) Reinsurance Expenses	1.00%	1.00%	1.00%
(iv) Incidental Income and Earned but Uncollected Premium	0.00%	0.00%	0.00%
(b) Premium Tax	2.16%	2.16%	2.16%
(c) Premium Discount	5.42%	5.42%	5.42%
(6) Total Expenses [= (4) + (5)]	26.07%	26.03%	26.05%

Notes:

- (1): Policy Year 2017 and Policy Year 2018 Expected Losses are based on the loss ratios projected to the prospective policy period adjusted by the factor to remove the residual market subsidy associated with large deductible policies from Section I-B, Exhibit 1.
- (2): Expected LAE = Expected Losses x 0.187 where 0.187 is the LAE ratio calculated in VI-H, Exhibit 1.
- (2a), (2b): Loss Adjustment Expense split between DCC and AO is $0.455 = 0.085 / 0.187$ and $0.545 = 1 - 0.455$ where 0.085 is three year average ratio of DCC to loss from Section VI-H, Exhibit 1, line (4) and LAE ratio = 0.187 from Section VI-H, Exhibit 1, line (6).
- (4): Section VI-B, Exhibit 1 times the factor to reflect the impact of large deductible policies, from Section I-D, Exhibit 1, Page 1.
- (4a), (4b): Policy Year 2017 Fixed Expenses split between General Expenses and Other Taxes based on \$37,263,732 General Expenses and \$2,133,135 Other Taxes. Policy Year 2018 General Expenses split based on \$39,252,209 General Expenses and \$2,246,964 Other Taxes. See VI-B, Exhibit 1, columns (12) & (13).
- (5a): Section VI-G, Exhibit 1.
- (5b), (5c): Section VI-A, Exhibit 1.

VII 000090 STIP

Section VII - Profit
Subsection I - Loss & LAE Flow
7/1/2022

Section VII - I
Exhibit 1

Single Policy
Loss & Loss Adjustment Expense (LAE) Flow

Time Interval		Earned Premium (3)	Loss Flow (4)	DCC Flow (5) = (4)	AO Flow (6) = [(3) + (4)] / 2.0	Loss & LAE Payout (7)
From (1)	To (2)					
07/01/21	09/30/21	0.0000	0.0000	0.0000	0.0000	0.0000
10/01/21	12/31/21	0.0000	0.0000	0.0000	0.0000	0.0000
01/01/22	03/31/22	0.0000	0.0000	0.0000	0.0000	0.0000
04/01/22	06/30/22	0.0000	0.0000	0.0000	0.0000	0.0000
07/01/22	09/30/22	0.2500	0.0505	0.0505	0.1502	0.0590
10/01/22	12/31/22	0.2500	0.0505	0.0505	0.1502	0.0590
01/01/23	03/31/23	0.2500	0.0505	0.0505	0.1502	0.0590
04/01/23	06/30/23	0.2500	0.0505	0.0505	0.1502	0.0590
07/01/23	09/30/23	0.0000	0.0718	0.0718	0.0359	0.0688
10/01/23	12/31/23	0.0000	0.0718	0.0718	0.0359	0.0688
01/01/24	03/31/24	0.0000	0.0718	0.0718	0.0359	0.0688
04/01/24	06/30/24	0.0000	0.0718	0.0718	0.0359	0.0688
07/01/24	09/30/24	0.0000	0.0469	0.0469	0.0235	0.0449
10/01/24	12/31/24	0.0000	0.0469	0.0469	0.0235	0.0449
01/01/25	03/31/25	0.0000	0.0469	0.0469	0.0235	0.0449
04/01/25	06/30/25	0.0000	0.0469	0.0469	0.0235	0.0449
07/01/25	09/30/25	0.0000	0.0266	0.0266	0.0133	0.0254
10/01/25	12/31/25	0.0000	0.0266	0.0266	0.0133	0.0254
01/01/26	03/31/26	0.0000	0.0266	0.0266	0.0133	0.0254
04/01/26	06/30/26	0.0000	0.0266	0.0266	0.0133	0.0254
07/01/26	09/30/26	0.0000	0.0113	0.0113	0.0057	0.0108
10/01/26	12/31/26	0.0000	0.0113	0.0113	0.0057	0.0108
01/01/27	03/31/27	0.0000	0.0113	0.0113	0.0057	0.0108
04/01/27	06/30/27	0.0000	0.0113	0.0113	0.0057	0.0108
07/01/27	09/30/27	0.0000	0.0066	0.0066	0.0033	0.0063
10/01/27	12/31/27	0.0000	0.0066	0.0066	0.0033	0.0063
01/01/28	03/31/28	0.0000	0.0066	0.0066	0.0033	0.0063
04/01/28	06/30/28	0.0000	0.0066	0.0066	0.0033	0.0063
07/01/28	09/30/28	0.0000	0.0031	0.0031	0.0015	0.0029
10/01/28	12/31/28	0.0000	0.0031	0.0031	0.0015	0.0029
01/01/29	03/31/29	0.0000	0.0031	0.0031	0.0015	0.0029
04/01/29	06/30/29	0.0000	0.0031	0.0031	0.0015	0.0029
07/01/29	09/30/29	0.0000	0.0028	0.0028	0.0014	0.0027
10/01/29	12/31/29	0.0000	0.0028	0.0028	0.0014	0.0027
01/01/30	03/31/30	0.0000	0.0028	0.0028	0.0014	0.0027
04/01/30	06/30/30	0.0000	0.0028	0.0028	0.0014	0.0027
07/01/30	09/30/30	0.0000	0.0016	0.0016	0.0008	0.0015
10/01/30	12/31/30	0.0000	0.0016	0.0016	0.0008	0.0015
01/01/31	03/31/31	0.0000	0.0016	0.0016	0.0008	0.0015
04/01/31	06/30/31	0.0000	0.0016	0.0016	0.0008	0.0015
07/01/31	09/30/31	0.0000	0.0016	0.0016	0.0008	0.0016
10/01/31	12/31/31	0.0000	0.0016	0.0016	0.0008	0.0016
01/01/32	03/31/32	0.0000	0.0016	0.0016	0.0008	0.0016
04/01/32	06/30/32	0.0000	0.0016	0.0016	0.0008	0.0016
07/01/32	09/30/32	0.0000	0.0012	0.0012	0.0006	0.0011
10/01/32	12/31/32	0.0000	0.0012	0.0012	0.0006	0.0011
01/01/33	03/31/33	0.0000	0.0012	0.0012	0.0006	0.0011
04/01/33	06/30/33	0.0000	0.0012	0.0012	0.0006	0.0011
07/01/33	09/30/33	0.0000	0.0012	0.0012	0.0006	0.0011
10/01/33	12/31/33	0.0000	0.0012	0.0012	0.0006	0.0011
01/01/34	03/31/34	0.0000	0.0012	0.0012	0.0006	0.0011
04/01/34	06/30/34	0.0000	0.0012	0.0012	0.0006	0.0011
07/01/34	09/30/34	0.0000	0.0010	0.0010	0.0005	0.0010
10/01/34	12/31/34	0.0000	0.0010	0.0010	0.0005	0.0010
01/01/35	03/31/35	0.0000	0.0010	0.0010	0.0005	0.0010
04/01/35	06/30/35	0.0000	0.0010	0.0010	0.0005	0.0010
07/01/35	09/30/35	0.0000	0.0009	0.0009	0.0004	0.0009
10/01/35	12/31/35	0.0000	0.0009	0.0009	0.0004	0.0009
01/01/36	03/31/36	0.0000	0.0009	0.0009	0.0004	0.0009
04/01/36	06/30/36	0.0000	0.0009	0.0009	0.0004	0.0009
07/01/36	09/30/36	0.0000	0.0011	0.0011	0.0005	0.0010
10/01/36	12/31/36	0.0000	0.0011	0.0011	0.0005	0.0010
01/01/37	03/31/37	0.0000	0.0011	0.0011	0.0005	0.0010
04/01/37	06/30/37	0.0000	0.0011	0.0011	0.0005	0.0010
07/01/37	09/30/37	0.0000	0.0008	0.0008	0.0004	0.0007
10/01/37	12/31/37	0.0000	0.0008	0.0008	0.0004	0.0007
01/01/38	03/31/38	0.0000	0.0008	0.0008	0.0004	0.0007
04/01/38	06/30/38	0.0000	0.0008	0.0008	0.0004	0.0007
07/01/38	09/30/38	0.0000	0.0008	0.0008	0.0004	0.0007
10/01/38	12/31/38	0.0000	0.0008	0.0008	0.0004	0.0007
01/01/39	03/31/39	0.0000	0.0008	0.0008	0.0004	0.0007
04/01/39	06/30/39	0.0000	0.0008	0.0008	0.0004	0.0007
07/01/39	09/30/39	0.0000	0.0008	0.0008	0.0004	0.0008
10/01/39	12/31/39	0.0000	0.0008	0.0008	0.0004	0.0008
01/01/40	03/31/40	0.0000	0.0008	0.0008	0.0004	0.0008
04/01/40	06/30/40	0.0000	0.0008	0.0008	0.0004	0.0008
07/01/40	09/30/40	0.0000	0.0006	0.0006	0.0003	0.0005
10/01/40	12/31/40	0.0000	0.0006	0.0006	0.0003	0.0005

VII 000091 STIP

Section VII - Profit
Subsection I - Loss & LAE Flow
7/1/2022

Section VII - I
Exhibit 1

Single Policy Loss & Loss Adjustment Expense (LAE) Flow

Time Interval		Earned Premium (3)	Loss Flow (4)	DCC Flow (5) = (4)	AO Flow (6) = ((3) + (4)) / 2.0	Loss & LAE Payout (7)
From (1)	To (2)					
01/01/41	03/31/41	0.0000	0.0006	0.0006	0.0003	0.0005
04/01/41	06/30/41	0.0000	0.0006	0.0006	0.0003	0.0005
07/01/41	09/30/41	0.0000	0.0009	0.0009	0.0004	0.0008
10/01/41	12/31/41	0.0000	0.0009	0.0009	0.0004	0.0008
01/01/42	03/31/42	0.0000	0.0009	0.0009	0.0004	0.0008
04/01/42	06/30/42	0.0000	0.0009	0.0009	0.0004	0.0008
07/01/42	09/30/42	0.0000	0.0006	0.0006	0.0003	0.0005
10/01/42	12/31/42	0.0000	0.0006	0.0006	0.0003	0.0005
01/01/43	03/31/43	0.0000	0.0006	0.0006	0.0003	0.0005
04/01/43	06/30/43	0.0000	0.0006	0.0006	0.0003	0.0005
07/01/43	09/30/43	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/43	12/31/43	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/44	03/31/44	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/44	06/30/44	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/44	09/30/44	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/44	12/31/44	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/45	03/31/45	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/45	06/30/45	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/45	09/30/45	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/45	12/31/45	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/46	03/31/46	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/46	06/30/46	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/46	09/30/46	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/46	12/31/46	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/47	03/31/47	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/47	06/30/47	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/47	09/30/47	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/47	12/31/47	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/48	03/31/48	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/48	06/30/48	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/48	09/30/48	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/48	12/31/48	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/49	03/31/49	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/49	06/30/49	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/49	09/30/49	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/49	12/31/49	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/50	03/31/50	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/50	06/30/50	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/50	09/30/50	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/50	12/31/50	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/51	03/31/51	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/51	06/30/51	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/51	09/30/51	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/51	12/31/51	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/52	03/31/52	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/52	06/30/52	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/52	09/30/52	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/52	12/31/52	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/53	03/31/53	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/53	06/30/53	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/53	09/30/53	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/53	12/31/53	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/54	03/31/54	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/54	06/30/54	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/54	09/30/54	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/54	12/31/54	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/55	03/31/55	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/55	06/30/55	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/55	09/30/55	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/55	12/31/55	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/56	03/31/56	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/56	06/30/56	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/56	09/30/56	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/56	12/31/56	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/57	03/31/57	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/57	06/30/57	0.0000	0.0013	0.0013	0.0006	0.0012
(8) Relative Weights			1.0000	0.0851	0.1017	

Notes:

- (3): Single policy earned premium is earned uniformly through the one year policy term.
- (4): Exhibit 2, (8). Annual values divided by 4.0.
- (7): Loss & LAE Payout = (1.000 x (4) + 0.0851 x (5) + 0.1017 x (6)) / (1.000 + 0.0851 + 0.1017)
- (8): DCC relative weight = 1.000 x 0.187 x 0.455; AO relative weight = 1.000 x 0.187 x 0.545
where 0.187 is the LAE factor calculated in Section VI-H, Exhibit 1 and 0.455, 0.545 are the DCC and AO relative weights from Section VI-H, Exhibit 1.

VII 000092 STIP

Section VII - Profit
 Subsection I - Loss & LAE Flow
 7/1/2022

Section VII - I
 Exhibit 2

Loss Payment Pattern

Age In Months (1)	Indemnity Unadjusted LDF to Ult (2)	Indemnity % Paid =1.0 / (2) (3)	Indemnity Incremental % Paid (3) - 1st Diff (4)	Medical LDF to Ult (5)	Medical %Paid =1.0 / (5) (6)	Medical Incremental % Paid (6) - 1st Diff (7)	Indemnity & Medical Incremental % Paid (8)
12	7.337	13.63%	13.63%	2.996	33.38%	33.38%	20.18%
24	2.458	40.68%	27.05%	1.526	65.52%	32.14%	28.74%
36	1.564	63.93%	23.26%	1.329	75.22%	9.71%	18.76%
48	1.285	77.82%	13.88%	1.261	79.29%	4.07%	10.63%
60	1.196	83.59%	5.77%	1.230	81.33%	2.04%	4.53%
72	1.151	86.92%	3.33%	1.211	82.61%	1.28%	2.65%
84	1.131	88.41%	1.50%	1.201	83.29%	0.68%	1.23%
96	1.117	89.53%	1.12%	1.185	84.40%	1.11%	1.12%
108	1.110	90.09%	0.56%	1.173	85.22%	0.82%	0.65%
120	1.102	90.73%	0.64%	1.164	85.90%	0.67%	0.65%
132	1.096	91.21%	0.48%	1.158	86.38%	0.48%	0.48%
144	1.092	91.54%	0.33%	1.148	87.13%	0.75%	0.47%
156	1.090	91.75%	0.22%	1.137	87.93%	0.80%	0.41%
168	1.087	92.01%	0.26%	1.130	88.49%	0.56%	0.36%
180	1.083	92.32%	0.31%	1.121	89.17%	0.68%	0.43%
192	1.081	92.50%	0.18%	1.115	89.72%	0.56%	0.31%
204	1.079	92.67%	0.17%	1.107	90.33%	0.60%	0.31%
216	1.077	92.81%	0.14%	1.099	91.01%	0.68%	0.32%
228	1.077	92.84%	0.04%	1.092	91.61%	0.60%	0.22%
240	1.076	92.96%	0.11%	1.082	92.41%	0.80%	0.34%
252	1.074	93.08%	0.12%	1.077	92.83%	0.42%	0.22%
264			0.49%			0.51%	0.50%
276			0.49%			0.51%	0.50%
288			0.49%			0.51%	0.50%
300			0.49%			0.51%	0.50%
312			0.49%			0.51%	0.50%
324			0.49%			0.51%	0.50%
336			0.49%			0.51%	0.50%
348			0.49%			0.51%	0.50%
360			0.49%			0.51%	0.50%
372			0.49%			0.51%	0.50%
384			0.49%			0.51%	0.50%
396			0.49%			0.51%	0.50%
408			0.49%			0.51%	0.50%
420			0.49%			0.51%	0.50%
Total			100.00%			100.00%	100.00%

Notes:

(2), (5): Section II - E, Exhibit 1, Page 1.

(8) = (4) x 66.82% + (7) x 33.18%, where 66.82% and 33.18% are indemnity and medical estimated ultimate losses respectively, from Section II - A, Exhibit 1, Page 2.

VII 000093 STIP

Section VII - Profit
Subsection J - Portfolio Rate of Return
7/1/2022

Section VII - J
Exhibit 1
Page 1

Calculation of Portfolio Rate of Return

Asset Class (1)	Proportion (2)	Pre-tax Return (3)	Tax Rate (4)	After-tax Return (5)
Cash and Short-term Investments	5.45%	0.05%	21.00%	0.04%
Governments	10.85%	0.36%	21.00%	0.28%
States & Territories	6.50%	0.72%	5.25%	0.68%
Special Revenue	17.29%	0.87%	5.25%	0.82%
Industrials	38.60%	1.14%	21.00%	0.90%
Common Stocks	11.50%	18.08%	14.92%	15.38%
Real Estate	0.90%	6.89%	21.00%	5.44%
Mortgage Loans	1.87%	2.17%	21.00%	1.71%
Preferred Stocks	0.31%	4.61%	13.13%	4.01%
Other Invested Assets	6.73%	12.97%	13.13%	11.27%
(6) Total	100.00%	3.75%	14.93%	3.19%
(7) Investment Expenses		0.21%	21.00%	0.17%
(8) Portfolio Rate of Return		3.54%		3.02%

Notes:

(2): Page 2

(3): Pretax bond returns are from Exhibit 2, page 1.

Cash and short term investments: using short horizon CAPM with beta=0.00. Exhibit 2, Page 3, line (2).

Pretax return for Common Stock has been hardcoded to derive a rate change of -3.46% as stipulated.

The original calculated value as filed was 8.87%.

Pretax return for Real Estate is the WACC for the REIT sector as calculated using data on capital structure, beta, and cost of debt from Damodaran Online, where cost of equity capital = 10.51%, using CAPM three horizon methodology from Section VII-E, Exhibit 3, page 1 with beta = 1.21, as reported in Demodaran Online for REIT sector.

Pretax return for Mortgage Loans: calculated using data for 15-year fixed rate mortgages from FRED. Exhibit 2, Page 3, line (23).

Pretax return for Preferred Stocks: calculated using data from yahoo finance.

Pretax return for Other Invested Assets from Exhibit 2, Page 4.

(4): Governments and Other taxable bonds taxed at Federal Tax Rate of 0.21.

Tax rate for Tax Exempt Bonds = 0.25×0.21

Tax rate for Preferred stock = $(0.50 \times 0.21) + (0.50 \times 0.25 \times 0.21)$

Tax rate for Common Stocks from Exhibit 6, page 1.

Tax rate for Other Assets = Tax rate for Preferred stock = $(0.50 \times 0.21) + (0.50 \times 0.25 \times 0.21)$

(5) = (3) x [1.0 - (4)]

(7): Exhibit 5, page 1.

(8) = (6) - (7)

VII 000094 STIP

Section VII - Profit
Subsection J - Portfolio Rate of Return
7/1/2022

Section VII - J
Exhibit 1
Page 2

Asset Distribution for MA Workers' Compensation Group Companies

Asset Class (1)	Proportion (2)
Cash and Short Term Investments	5.45%
Bonds:	73.24%
Governments	10.85%
States & Territories	6.50%
Special Revenue	17.29%
Industrials	38.60%
Common Stocks	11.50%
Real Estate	0.90%
Mortgage Loans	1.87%
Preferred Stocks	0.31%
Other Invested Assets	6.73%

(3) Total 100.00%

Notes:

Proportion of each asset class is from page 3. The Bond share in total is 73.24%.

This is allocated to the following subcategories:

Governments, States & Territories, Special Revenue and Industrials
by multiplying 73.24% by the adjusted bond weights from Exhibit 3, page 1.

Asset Distribution for MA Workers' Compensation Group Companies

Companies	Bonds	Preferred Stocks	Common Stocks	Real Estate	Mortgage Loans	Cash and Short Term Investments	Other Invested Assets	Total Cash and Invested Assets	% Bonds	% Preferred Stocks	% Common Stocks	% Real Estate	% Mortgage Loans	% Cash and Short Term Investments	% Other Invested Assets
(1)	(\$000) (2)	(\$000) (3)	(\$000) (4)	(\$000) (5)	(\$000) (6)	(\$000) (7)	(\$000) (8)	(\$000) (9)	= (2) / (9) (10)	= (3) / (9) (11)	= (4) / (9) (12)	= (5) / (9) (13)	= (6) / (9) (14)	= (7) / (9) (15)	= (8) / (9) (16)
Travelers Group (G)	63,508	40	1,503	1,275	0	2,998	3,237	72,561	87.52%	0.05%	2.07%	1.76%	0.00%	4.13%	4.46%
A.I.M. Mutual Insurance Companies (G)	569	0	83	0	0	17	4	672	84.57%	0.00%	12.32%	0.00%	0.00%	2.50%	0.61%
Hartford Insurance Group (G)	31,007	209	642	316	3,157	1,111	4,533	40,975	75.67%	0.51%	1.57%	0.77%	7.71%	2.71%	11.06%
Liberty Mutual Insurance Companies (G)	50,991	4	10,056	193	2,223	2,999	11,091	77,558	65.75%	0.01%	12.97%	0.25%	2.87%	3.87%	14.30%
Chubb INA Group (G)	50,214	21	3,069	179	0	1,146	1,562	56,191	89.36%	0.04%	5.46%	0.32%	0.00%	2.04%	2.78%
American International Group (G)	40,328	7	821	0	5,695	1,437	6,156	54,445	74.07%	0.01%	1.51%	0.00%	10.46%	2.64%	11.31%
Zurich Insurance US PC Group (G)	17,270	0	1,079	1,294	0	586	1,435	21,664	79.72%	0.00%	4.98%	5.97%	0.00%	2.70%	6.62%
Berkshire Hathaway Insurance Group (G)	8,392	10,959	251,083	169	1	52,672	79,088	402,364	2.09%	2.72%	62.40%	0.04%	0.00%	13.09%	19.66%
Charter Insurance Group (G)	104	0	43	0	0	25	0	173	60.32%	0.00%	24.99%	0.00%	0.00%	14.69%	0.00%
Old Republic Insurance Group (G)	7,574	1	2,687	0	0	310	11	10,583	71.57%	0.01%	25.39%	0.00%	0.00%	2.93%	0.11%
W. R. Berkley Insurance Group (G)	11,059	178	1,982	488	54	2,477	2,394	18,631	59.36%	0.96%	10.64%	2.62%	0.29%	13.29%	12.85%
CNA Insurance Companies (G)	35,621	770	1,035	0	1,061	1,282	1,715	41,485	85.87%	1.86%	2.50%	0.00%	2.56%	3.87%	4.13%
AmTrust Group (G)	5,137	0	156	4	0	348	397	6,042	85.02%	0.00%	2.58%	0.07%	0.00%	5.77%	6.57%
Hanover Ins Group Prop & Cas Cos (G)	6,652	5	597	49	116	-55	680	8,043	82.70%	0.06%	7.42%	0.61%	1.44%	-0.68%	8.45%
MEMIC Group (G)	1,005	0	264	0	0	63	27	1,360	73.94%	0.00%	19.44%	0.00%	0.00%	4.64%	1.97%
Arbella Insurance Group (G)	1,317	0	212	0	0	41	3	1,572	83.77%	0.00%	13.46%	0.00%	0.00%	2.60%	0.17%
Utica National Insurance Group (G)	2,575	0	380	13	4	38	11	3,020	85.27%	0.00%	12.58%	0.42%	0.12%	1.26%	0.36%
Selective Insurance Group (G)	5,797	17	148	0	66	333	294	6,655	87.11%	0.25%	2.23%	0.00%	0.99%	5.01%	4.42%
QBE North America Insurance Group (G)	2,719	0	35	54	0	764	459	4,030	67.47%	0.00%	0.86%	1.34%	0.00%	18.95%	11.39%
Arch Insurance Group (G)	9,076	0	224	0	18	596	110	10,025	90.54%	0.00%	2.24%	0.00%	0.18%	5.95%	1.10%
Sentry Insurance Group (G)	7,789	0	2,053	164	0	139	1,414	11,559	67.38%	0.00%	17.76%	1.42%	0.00%	1.21%	12.23%
Ameritrust Group (G)	1,377	0	83	6	0	254	44	1,763	78.10%	0.00%	4.68%	0.36%	0.00%	14.38%	2.47%
Fairfax Financial (USA) Group (G)	7,817	47	4,027	425	722	5,667	2,428	21,133	36.99%	0.22%	19.05%	2.01%	3.42%	26.82%	11.49%
Federated Mutual Group (G)	4,629	44	1,574	61	0	179	350	6,837	67.71%	0.64%	23.03%	0.89%	0.00%	2.61%	5.12%
Starr International Group (G)	3,203	44	1,274	0	0	1,097	224	5,841	54.83%	0.74%	21.81%	0.00%	0.00%	18.78%	3.84%
Norfolk & Dedham Group Pool (G)	402	0	164	2	0	57	67	692	58.09%	0.00%	23.76%	0.31%	0.00%	8.22%	9.62%
AU Holding Company Group (G)	765	1	49	75	0	510	424	1,824	41.93%	0.07%	2.66%	4.11%	0.00%	27.98%	23.25%
Protective Insurance Corporation Group (SG)	836	0	58	26	11	48	7	986	84.74%	0.00%	5.90%	2.68%	1.09%	4.87%	0.71%
American National Prop & Cas Group (G)	2,527	0	388	14	0	154	6	3,089	81.82%	0.00%	12.56%	0.46%	0.00%	4.97%	0.19%
EMC Insurance Companies (G)	2,799	96	983	148	0	164	90	4,281	65.39%	2.25%	22.96%	3.46%	0.00%	3.82%	2.11%
Tokio Marine US PC Group (G)	20,217	225	1,252	134	3,247	840	616	26,531	76.20%	0.85%	4.72%	0.50%	12.24%	3.16%	2.32%
Arrow Mutual Liability Insurance Company	31	0	13	0	0	1	0	46	67.59%	0.00%	29.46%	0.04%	0.00%	0.35%	0.35%
Everest Re U.S. Group (G)	10,015	0	557	0	0	893	2,123	13,589	73.70%	0.00%	4.10%	0.00%	0.00%	6.57%	15.63%
American Family Insurance Group (G)	15,230	0	3,229	254	215	500	1,633	21,061	72.31%	0.00%	15.33%	1.20%	1.02%	2.38%	7.75%
Employers Insurance Group (G)	2,324	20	215	0	0	170	17	2,746	84.65%	0.73%	7.83%	0.00%	0.00%	6.19%	0.61%
Skyward Specialty Insurance Group (G)	328	0	72	0	25	292	61	778	42.13%	0.00%	9.19%	0.01%	3.26%	37.56%	7.85%
GE Capital PC Group (G)	700	0	21	17	0	18	4	760	92.08%	0.00%	2.75%	0.00%	0.00%	2.38%	0.51%
Markel Corporation Group (G)	6,782	0	3,151	14	0	1,958	411	12,316	55.07%	0.00%	25.58%	0.12%	0.00%	15.90%	3.34%
XL Reinsurance America Group (G)	8,797	0	9	0	67	1,734	697	11,304	77.82%	0.00%	0.08%	0.00%	0.59%	15.34%	6.16%
Service Insurance Group (G)	192	0	21	0	18	24	13	268	71.59%	0.09%	7.84%	0.00%	6.70%	8.78%	5.00%
Great American P & C Insurance Group (G)	8,189	350	437	76	539	1,673	939	12,203	67.10%	2.87%	3.58%	0.62%	4.42%	13.71%	7.69%
Merchants Insurance Group (G)	578	14	61	0	0	52	0	705	81.93%	2.00%	8.65%	0.00%	0.00%	0.03%	0.03%
Sompo Holdings US Group (G)	5,380	0	24	12	0	1,336	132	6,886	78.14%	0.00%	0.35%	0.18%	0.00%	19.41%	1.92%
Central Insurance Companies (G)	1,254	2	360	37	0	47	0	1,700	73.74%	0.15%	21.16%	2.17%	0.00%	2.78%	0.00%
ProSight Specialty Group (G)	2,198	7	0	0	0	14	103	2,322	94.68%	0.30%	0.00%	0.00%	0.00%	0.60%	4.42%
Argo Group (G)	2,815	1	161	0	0	252	224	3,454	81.50%	0.03%	4.67%	0.01%	0.00%	7.29%	6.50%
AF Group (G)	2,755	1	357	102	0	293	117	3,626	75.97%	0.04%	9.85%	2.81%	0.00%	8.09%	3.24%
Intact US Insurance Group (G)	1,663	0	601	0	2	159	23	2,447	67.93%	0.00%	24.56%	0.00%	0.07%	6.48%	0.96%
Work First Casualty Company	48	0	2	2	0	11	5	67	71.26%	0.00%	2.80%	2.32%	0.59%	15.76%	7.27%
The Cincinnati Insurance Companies (G)	7,540	287	5,064	8	0	675	331	13,906	54.22%	2.06%	36.42%	0.06%	0.00%	4.85%	2.38%
Benchmark Insurance Group (G)	388	0	2	6	0	113	0	509	76.28%	0.05%	0.30%	1.23%	0.00%	22.14%	0.00%
Nationwide Group (G)	20,099	32	7,106	438	1,988	1,380	5,331	36,374	55.26%	0.09%	19.53%	1.20%	5.47%	3.79%	14.66%
Church Mutual Insurance Group (G)	1,298	22	273	12	0	109	83	1,797	72.24%	1.21%	15.20%	0.65%	0.00%	6.05%	4.65%
Core Specialty Insurance Group (G)	841	5	1	0	0	119	0	965	87.09%	0.47%	0.10%	0.00%	0.00%	12.34%	0.00%
MS&AD US Insurance Group (G)	1,796	0	157	19	0	172	0	2,143	83.78%	0.00%	7.33%	0.88%	0.00%	8.01%	0.00%
State Auto Insurance Companies (G)	2,772	0	481	40	0	161	222	3,675	75.41%	0.00%	13.10%	1.08%	0.00%	4.37%	6.03%
Allianz US PC Insurance Companies (G)	9,049	0	141	0	590	532	529	10,842	83.46%	0.00%	1.30%	0.00%	5.45%	4.91%	4.88%

VII 000095 STTP

Asset Distribution for MA Workers' Compensation Group Companies

Companies	Bonds	Preferred Stocks	Common Stocks	Real Estate	Mortgage Loans	Cash and Short Term Investments	Other Invested Assets	Total Cash and Invested Assets	% Bonds	% Preferred Stocks	% Common Stocks	% Real Estate	% Mortgage Loans	% Cash and Short Term Investments	% Other Invested Assets
(1)	(\$000) (2)	(\$000) (3)	(\$000) (4)	(\$000) (5)	(\$000) (6)	(\$000) (7)	(\$000) (8)	(\$000) (9)	= (2) / (9) (10)	= (3) / (9) (11)	= (4) / (9) (12)	= (5) / (9) (13)	= (6) / (9) (14)	= (7) / (9) (15)	= (8) / (9) (16)
Pharmacists Mutual Insurance Group (G)	256	0	31	23	0	12	0	323	79.37%	0.00%	9.65%	7.04%	0.00%	3.79%	0.14%
Amerisure Companies (G)	2,045	24	210	13	0	110	248	2,648	77.20%	0.90%	7.91%	0.47%	0.00%	4.15%	9.37%
James River Group (G)	413	54	20	0	0	983	4	1,473	28.01%	3.63%	1.36%	0.00%	0.00%	66.71%	0.28%
GuideOne Insurance Companies (G)	891	0	53	12	44	115	60	1,176	75.79%	0.00%	4.51%	1.04%	3.77%	9.78%	5.11%
Premier Group Insurance Company	51	0	0	0	0	6	0	57	89.44%	0.00%	0.00%	0.00%	0.00%	10.56%	0.00%
Brotherhood Mutual Insurance Company	366	1	180	43	0	18	49	656	55.75%	0.10%	27.41%	6.51%	0.00%	2.73%	7.50%
Quincy Mutual Group (G)	693	7	581	18	0	74	406	1,779	38.98%	0.37%	32.68%	1.02%	0.00%	4.16%	22.80%
RLI Group (G)	1,999	0	808	31	0	60	51	2,949	67.79%	0.00%	27.39%	1.05%	0.00%	2.04%	1.73%
Cherokee Insurance Company	251	77	179	0	0	32	90	629	39.82%	12.30%	28.50%	0.00%	0.00%	5.12%	14.26%
ICW Pool (G)	2,452	21	608	32	10	227	23	3,372	72.71%	0.63%	18.03%	0.95%	0.28%	6.73%	0.67%
AMERISAFE Insurance Group (G)	965	0	32	5	0	74	0	1,076	89.73%	0.00%	2.97%	0.43%	0.00%	6.88%	0.00%
ProAssurance Group (G)	3,369	7	333	0	0	345	341	4,397	76.63%	0.17%	7.58%	0.00%	0.00%	7.86%	7.77%
WCF Insurance Group (G)	1,656	0	236	92	138	47	116	2,285	72.48%	0.00%	10.34%	4.03%	6.02%	2.05%	5.08%
Petroleum Casualty Company	0	0	0	0	0	18	0	18	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
American Contractors Insurance Group (G)	322	0	69	0	0	10	117	518	62.15%	0.00%	13.27%	0.00%	0.00%	1.92%	22.66%
State Farm Group (G)	108,724	281	88,956	378	331	5,442	8,676	212,787	51.10%	0.13%	41.81%	0.18%	0.16%	2.56%	4.08%
Samsung F & M Insurance Co, Ltd USB	87	0	0	0	0	12	0	100	87.50%	0.00%	0.00%	0.00%	0.00%	12.50%	0.00%
MAG Mutual Companies (G)	1,213	0	356	0	0	275	86	1,930	62.87%	0.00%	18.44%	0.00%	0.00%	14.23%	4.46%
The Gray Insurance Group (G)	112	0	155	17	0	5	42	331	33.87%	0.00%	46.79%	5.26%	0.00%	1.42%	12.66%
West Bend Mutual Insurance Company	2,021	20	309	55	0	249	296	2,951	68.49%	0.68%	10.47%	1.87%	0.00%	8.44%	10.04%
Penn National Insurance Companies (G)	1,355	1	188	0	15	55	0	1,615	83.92%	0.05%	11.67%	0.00%	0.92%	3.44%	0.00%
HDI/Talanx US PC Group (G)	788	0	11	1	0	77	0	877	89.89%	0.00%	1.28%	0.06%	0.00%	8.75%	0.02%

	% Bonds	% Preferred Stocks	% Common Stocks	% Real Estate	% Mortgage Loans	% Cash and Short Term Investments	% Other Invested Assets
(17): Premium Weighted Asset Distribution	73.24%	0.31%	11.50%	0.90%	1.87%	5.45%	6.73%

Notes:
 Source: A.M. Best's Global Insurance Database for all Massachusetts Workers' Compensation Group Companies, 2020 Exhibit of Assets.
 (5): Real estate is the sum of: properties occupied by the company, properties held for the production of income and properties held for sale.
 (6): Mortgage Loans is the sum of: mortgage loans first liens and mortgage loans other than first.
 (9) = (2) + (3) + (4) + (5) + (6) + (7) + (8)
 (17): Premium Weighted Asset Distribution use Direct Premiums Written from Exhibit 5, page 2.

VII 000096 STIP

VII 000097 STIP

Calculation of Pretax Returns on Bonds

% of Bonds (adjusted for removal of Other Bonds category) by Class, by Maturity				
Term to Maturity in years	Governments	States and Territories	Special Revenue	Industrials
0.5	8.03%	0.78%	3.35%	6.20%
3	4.59%	2.80%	9.43%	24.96%
7	1.42%	2.15%	5.61%	17.47%
15	0.35%	2.92%	3.37%	2.55%
25	0.42%	0.23%	1.84%	1.52%
Total	14.82%	8.88%	23.61%	52.70%

As of	Term to Maturity in years	Yield Data			
		Governments	States and Territories	Special Revenue	Industrials
Jul-21	0.5	0.05%	0.08%	0.05%	0.13%
	3	0.40%	0.30%	0.41%	0.70%
	7	1.07%	0.76%	1.11%	1.67%
	15	1.60%	1.10%	1.69%	2.56%
	25	1.91%	1.33%	2.07%	2.89%
Aug-21	0.5	0.06%	0.07%	0.04%	0.14%
	3	0.42%	0.32%	0.43%	0.74%
	7	1.06%	0.79%	1.11%	1.69%
	15	1.56%	1.12%	1.68%	2.55%
	25	1.88%	1.38%	2.11%	2.89%
Sep-21	0.5	0.05%	0.08%	0.05%	0.14%
	3	0.47%	0.38%	0.49%	0.78%
	7	1.16%	0.89%	1.22%	1.79%
	15	1.62%	1.20%	1.76%	2.59%
	25	1.91%	1.47%	2.14%	2.88%
Jul-21	All	Weighted Yields			
		0.35%	0.68%	0.84%	1.11%
		0.35%	0.70%	0.84%	1.13%
		0.38%	0.78%	0.91%	1.19%
		0.36%	0.72%	0.87%	1.14%

Notes:

% of Bonds by Class and by Maturity for MA WC Group Companies are from Exhibit 3, page 1.
 Yield Data are from Page 2.

Example of Weighted Yield calculation for Jul-21, States and Territories:

$$0.68 = (0.08 \times 0.78 + 0.3 \times 2.8 + 0.76 \times 2.15 + 1.1 \times 2.92 + 1.33 \times 0.23) / 8.88$$

VII 000098 STIP

Section VII - Profit
 Subsection J - Portfolio Rate of Return
 7/1/2022

Section VII - J
 Exhibit 2
 Page 2

Calculation of Yield Data

Term to Maturity in Years	Jul-21	Aug-21	Sep-21	Formulas used to derive the yields (reference to data on page 3)
Governments				
0.5	0.05%	0.06%	0.05%	=(4)
3	0.40%	0.42%	0.47%	=(7)
7	1.07%	1.06%	1.16%	=(9)
10	1.32%	1.28%	1.37%	=(10)
20	1.87%	1.83%	1.87%	=(11)
30	1.94%	1.92%	1.94%	=(12)
States and Territories				
0.5	0.08%	0.07%	0.08%	=(4) + 9.5/9.0 x [(20) - (5)] - 0.5/9.0 x [(21) - (10)]
3	0.30%	0.32%	0.38%	=(7) + 7.0/9.0 x [(20) - (5)] + 2.0/9.0 x [(21) - (10)]
7	0.76%	0.79%	0.89%	=(9) + 1.0/3.0 x [(20) - (5)] + 2.0/3.0 x [(21) - (10)]
10	0.86%	0.88%	0.96%	=(21)
20	1.33%	1.37%	1.44%	=(11) + 0.5 x [(21) - (10)] + 0.5 x [(22) - (12)]
30	1.33%	1.40%	1.50%	=(22)
Special Revenue				
0.5	0.05%	0.04%	0.05%	=(4) + 29.5/29.0 x [(20) - (5)] - 0.5/29.0 x [(19) - (12)]
3	0.41%	0.43%	0.49%	=(7) + 27.0/29.0 x [(20) - (5)] + 2.0/29.0 x [(19) - (12)]
7	1.11%	1.11%	1.22%	=(9) + 23.0/29.0 x [(20) - (5)] + 6.0/29.0 x [(19) - (12)]
10	1.38%	1.36%	1.46%	=(10) + 20.0/29.0 x [(20) - (5)] + 9.0/29.0 x [(19) - (12)]
20	2.00%	2.01%	2.06%	=(11) + 10.0/29.0 x [(20) - (5)] + 19.0/29.0 x [(19) - (12)]
30	2.14%	2.20%	2.23%	=(19)
Industrial				
0.5	0.13%	0.14%	0.14%	=(4) + 18.0/21.0 x [(1) - (3)] + 3.0/21.0 x [(14) - (6)]
3	0.70%	0.74%	0.78%	=(7) + 2.0/3.0 x [(14) - (6)] + 1.0/3.0 x [(15) - (8)]
7	1.67%	1.69%	1.79%	=(9) + 3.0/5.0 x [(15) - (8)] + 2.0/5.0 x [(16) - (10)]
10	2.27%	2.26%	2.34%	=(16)
20	2.84%	2.83%	2.85%	=(11) + 1.0/2.0 x [(16) - (10)] + 1.0/2.0 x [(17) - (12)]
30	2.93%	2.94%	2.92%	=(17)

VII 000099 STIP

Section VII - Profit
 Subsection J - Portfolio Rate of Return
 7/1/2022

Section VII - J
 Exhibit 2
 Page 3

Yield Data

	Jul-21	Aug-21	Sep-21	Average
FEDERAL RESERVE STATISTICAL RELEASE				
Commercial Paper				
(1) 1-month	0.08%	0.08%	0.08%	0.08%
(1) 3-month	0.10%	0.10%	0.10%	0.10%
U.S. Govt Securities - Secondary Market				
Treasury Constant Maturities				
(2) 1-month	0.05%	0.04%	0.05%	0.05%
(3) 3-month	0.05%	0.05%	0.04%	0.05%
(4) 6-month	0.05%	0.06%	0.05%	0.05%
(5) 1-year	0.08%	0.07%	0.08%	0.08%
(6) 2-year	0.22%	0.22%	0.24%	0.23%
(7) 3-year	0.40%	0.42%	0.47%	0.43%
(8) 5-year	0.76%	0.77%	0.86%	0.80%
(9) 7-year	1.07%	1.06%	1.16%	1.10%
(10) 10-year	1.32%	1.28%	1.37%	1.32%
(11) 20-year	1.87%	1.83%	1.87%	1.86%
(12) 30-year	1.94%	1.92%	1.94%	1.93%
YAHOO				
(13) Preferred Stock	4.60%	4.63%	4.61%	4.61%
US DEPARTMENT OF THE TREASURY				
HQM Corporate Bond Yield Curve Par Yields				
(14) 2-year	0.48%	0.50%	0.51%	0.50%
(15) 5-year	1.13%	1.17%	1.26%	1.19%
(16) 10-year	2.27%	2.26%	2.34%	2.29%
(17) 30-year	2.93%	2.94%	2.92%	2.93%
VALUE LINE INVESTMENT SURVEY (Part II)				
Bond Buyer Indexes				
(18) 20-Bond Index (GOs)	2.06%	2.10%	2.15%	2.10%
(19) Calculated 30-Bond Index (= (18) x [(12) / (11)])	2.14%	2.20%	2.23%	2.19%
General Obligation Bonds (GOs)				
(20) 1-year Aaa	0.08%	0.06%	0.09%	0.07%
(21) 10-year Aaa	0.86%	0.88%	0.96%	0.90%
(22) 25/30-year Aaa	1.33%	1.40%	1.50%	1.41%
FEDERAL RESERVE ECONOMIC DATA				
(23) 15-Year Fixed Rate Mortgage	2.18%	2.15%	2.18%	2.17%

Note:

Sources: Federal Reserve Statistical Release, H.15 ,Yahoo Finance, US Department of the Treasury, FRED and various issues of Value Line Investment Survey, Part II.

VII 000100 STIP

Section VII - Profit
Subsection J - Portfolio Rate of Return
7/1/2022

Section VII - J
Exhibit 2
Page 4

Calculation of Pretax Return on Other Assets

Other Asset Type (1)	Allocation by Other Asset Type (2)	Investment Categories				Subtotal (7)
		Hedge Fund (3)	Private Equity (4)	Fixed Income (5)	Real Estate (6)	
Joint Venture, LLCs: Other	2.745690%	1				
Joint Venture, LLCs: Common Stock	1.189460%		1			
Other Assets	1.122650%					
Joint Venture, LLCs: Real Estate	0.945823%				1	
Noncollateral Loans	0.293147%			1		
Collateral Loans	0.278198%			1		
Joint Venture, LLCs: Fixed Income, NAIC Designation Not Assigned by SVO	0.114598%			1		
Surplus Debentures	0.081542%			1		
Nonguaranteed Federal Low-Income Housing Tax Credit	0.045082%				1	
Joint Venture, LLCs: Mortgage Loans	0.033648%			1		
Non-Registered Private Funds: Other Fixed Income	0.032661%			1		
Non-Registered Private Funds: Bonds, NAIC Designation Not Assigned by SVO	0.029367%			1		
Joint Venture, LLCs: Fixed Income, NAIC Designation Assigned by SVO	0.027536%			1		
Non-Registered Private Funds: Mortgage Loans	0.019187%			1		
Non-Guaranteed State Low-Income Housing Tax Credit	0.014044%				1	
Long-term Bond, Issuer Obligations	0.009370%			1		
Oil and Gas Production	0.004640%		1			
Non-Registered Private Funds: Bonds, NAIC Designation Assigned by SVO	0.004610%			1		
Mineral Rights	0.000407%		1			
Common Stock	0.000398%		1			
Other Low-Income Housing Tax Credit	0.000158%				1	
Uncategorized	0.000041%					
Guaranteed Federal Low-Income Housing Tax Credit	0.000019%				1	
Transportation Equipment	0.000014%		1			
Guaranteed State Low-Income Housing Tax Credit	0.000001%				1	
Total	6.99%	2.75%	1.19%	0.92%	1.01%	5.87%
(8) Adjusted Total (remove Other Assets and Uncategorized)		3.27%	1.42%	1.10%	1.20%	6.99%
(9) Allocation by Category		46.78%	20.36%	15.74%	17.12%	100.00%
(10) Projected Return		14.98%	21.36%	2.73%	6.89%	
(11) Pretax Return on Other Assets						12.97%

Notes:

- (1): Source SNL Financial. List of Schedule BA investments held by Massachusetts Workers Compensation underwriters.
(2): Direct Premium Written weighted average asset allocation for each of the investment types covered by Schedule BA.
(3) - (6): Used the NAIC assignments and classified the various investment types into 4 major categories.
(8): Investment Category Allocation, Total x (2), Total x (7), Total
(9) = (8) / (8), Total
(10): Hedge Fund (HF) return is equal to equity market return plus spread between Credit Suisse Hedge Fund Index and S&P 500 total return from 12/31/1993 to 9/30/2021.
HF = 14.98% = 18.08% + (7.37% - 10.47%), where 18.08% is the Common Stock pretax return from Section VII-J, Exhibit 1, page 1,
7.37% is the Credit Suisse Hedge Fund average return and 10.47% is the S&P 500 total return from Yahoo Finance.
Private Equity (PE) return is equal to equity market return plus spread between US Private Equity Index and S&P 500 total return from 12/31/1994 to 6/31/2021.
PE = 21.36% = 18.08% + (14.19% - 10.91%), where 18.08% is the Common Stock pretax return from Section VII-J, Exhibit 1, page 1,
14.19% is the US Private Equity Index average return from Cambridge Associates and 10.91% is the S&P 500 total return from Yahoo Finance.
Fixed Income (FI) return is the three month average yield on the high yield corporate bond ETF, the investment grade bond ETF and the 30 yr mortgage rate.
FI = 2.73% = average (3.86% , 2.17% , 2.17%), where 3.86% , is the three month (July-Sep 2021) average return of High Yield Corporate Bond ETF (HYG),
2.17% is the Investment Grade Corporate Bond ETF (LQD) from Yahoo Finance and 2.17% is the 15-Year Fixed Rate Mortgage, 3 month average from FRED.
Real Estate (RE) return is the WACC for the REIT sector as calculated using data on capital structure, beta, and cost of debt from Damodaran Online,
and cost of equity capital = 10.51%, using CAPM three horizon methodology from Section VII-E, Exhibit 3, page 1 with beta = 1.21,
as reported in Demodaran Online for REIT sector.
(11) = Sum [(9) x (10)]

VII 000101 STIP

Section VII - Profit
 Subsection J - Portfolio Rate of Return
 7/1/2022

Section VII - J
 Exhibit 3
 Page 1

Premium Weighted Bond Distribution for MA Workers' Compensation Group Companies by Class and by Maturity

Term to Maturity in Years	Governments	States & Territories	Special Revenue	Industrials	Other Bonds	Total Bonds
0.5	7.95%	0.77%	3.32%	6.14%	0.32%	18.50%
3	4.54%	2.77%	9.34%	24.72%	0.43%	41.80%
7.5	1.41%	2.13%	5.55%	17.30%	0.08%	26.46%
15	0.35%	2.89%	3.34%	2.52%	0.01%	9.12%
25	0.41%	0.23%	1.82%	1.50%	0.15%	4.12%
Total	14.67%	8.79%	23.37%	52.17%	1.00%	100.00%

% of Bonds (adjusted for removal of Other Bonds category) by Class, by Maturity

Term to Maturity in Years	Governments	States & Territories	Special Revenue	Industrials	Total Bonds
0.5	8.03%	0.78%	3.35%	6.20%	18.37%
3	4.59%	2.80%	9.43%	24.96%	41.78%
7.5	1.42%	2.15%	5.61%	17.47%	26.65%
15	0.35%	2.92%	3.37%	2.55%	9.19%
25	0.42%	0.23%	1.84%	1.52%	4.01%
Total	14.82%	8.88%	23.61%	52.70%	100.00%

Notes:

- Bond Distribution from pages 2 and 3.
- Premium Weighted Bond Distribution use Direct Premiums Written from Exhibit 5, page 2.

Bond Distribution for MA Workers' Compensation Group Companies by Class and by Maturity

Companies (1)	Governments					States & Territories					Special Revenue				
	0.5	3	7.5	15	25	0.5	3	7.5	15	25	0.5	3	7.5	15	25
	(2)					(3)					(4)				
Travelers Group (G)	1.99%	2.79%	0.95%	0.17%	0.00%	0.89%	3.37%	5.58%	20.16%	0.39%	1.40%	3.18%	3.81%	10.95%	1.72%
A.I.M. Mutual Insurance Companies (G)	0.10%	1.07%	0.57%	0.30%	0.00%	0.95%	1.78%	0.76%	0.94%	0.00%	9.16%	19.48%	6.37%	1.62%	0.90%
Hartford Insurance Group (G)	1.03%	4.31%	1.47%	0.71%	1.20%	0.14%	0.29%	0.38%	0.92%	0.80%	1.14%	3.56%	3.29%	5.17%	9.84%
Liberty Mutual Insurance Companies (G)	1.71%	9.07%	3.15%	0.30%	0.42%	0.25%	2.49%	6.30%	0.65%	0.14%	1.58%	6.91%	7.94%	2.63%	0.61%
Chubb INA Group (G)	2.20%	2.43%	1.12%	1.04%	0.67%	1.69%	4.05%	0.35%	0.16%	0.15%	5.39%	18.57%	9.06%	2.68%	1.06%
American International Group (G)	1.06%	1.48%	0.85%	0.22%	0.72%	1.14%	2.49%	0.56%	0.41%	0.03%	3.91%	10.54%	3.03%	0.96%	0.39%
Zurich Insurance US PC Group (G)	5.81%	17.55%	4.72%	0.56%	2.14%	0.06%	1.59%	1.81%	0.26%	0.46%	1.58%	6.46%	6.25%	3.33%	4.33%
Berkshire Hathaway Insurance Group (G)	88.90%	1.55%	0.04%	0.03%	0.07%	0.04%	0.03%	0.00%	0.00%	0.00%	0.08%	0.15%	0.05%	0.02%	0.00%
Charter Insurance Group (G)	13.87%	0.00%	0.45%	0.00%	0.00%	3.63%	13.16%	1.85%	0.92%	0.61%	3.35%	10.38%	3.19%	1.92%	0.54%
Old Republic Insurance Group (G)	0.99%	8.10%	2.61%	0.00%	0.00%	0.20%	6.02%	1.80%	0.00%	0.00%	1.03%	5.15%	3.00%	0.00%	0.00%
W. R. Berkley Insurance Group (G)	0.70%	6.57%	0.33%	0.05%	0.00%	0.49%	2.33%	1.96%	0.50%	0.00%	5.09%	13.17%	8.53%	1.60%	0.71%
CNA Insurance Companies (G)	2.96%	1.17%	0.32%	0.00%	0.09%	0.72%	1.98%	2.48%	1.58%	0.89%	3.28%	10.87%	8.87%	2.69%	0.99%
AmTrust Group (G)	2.79%	3.82%	0.28%	0.00%	0.00%	0.06%	0.60%	0.44%	0.00%	0.00%	3.02%	6.90%	2.63%	0.61%	0.02%
Hanover Ins Group Prop & Cas Cos (G)	0.29%	1.17%	1.48%	0.19%	0.26%	0.59%	1.18%	1.25%	2.33%	0.00%	3.57%	7.68%	6.21%	6.18%	1.73%
MEMIC Group (G)	0.66%	1.66%	1.37%	0.53%	0.00%	0.99%	1.58%	4.96%	1.74%	0.41%	8.69%	12.00%	8.81%	2.76%	2.88%
Arbella Insurance Group (G)	0.16%	3.50%	1.05%	0.34%	0.00%	0.11%	0.66%	7.01%	1.41%	0.00%	2.40%	13.03%	19.23%	2.88%	0.00%
Utica National Insurance Group (G)	0.39%	2.22%	0.66%	0.12%	0.14%	0.31%	0.47%	0.38%	0.04%	0.00%	4.94%	14.61%	6.63%	1.24%	0.07%
Selective Insurance Group (G)	0.93%	0.72%	0.31%	0.03%	0.09%	0.66%	2.90%	0.68%	0.03%	0.10%	4.71%	16.14%	11.45%	0.99%	0.32%
QBE North America Insurance Group (G)	20.21%	4.17%	0.25%	0.00%	0.00%	0.24%	1.83%	1.17%	0.00%	0.00%	1.87%	1.75%	1.06%	0.24%	0.00%
Arch Insurance Group (G)	2.02%	25.82%	1.26%	0.04%	0.00%	0.01%	0.17%	0.33%	0.01%	0.00%	0.51%	1.83%	2.63%	0.34%	0.04%
Sentry Insurance Group (G)	0.92%	4.19%	3.95%	4.59%	0.46%	0.21%	2.01%	3.04%	0.34%	0.00%	1.18%	8.04%	11.92%	6.51%	0.88%
AmeriTrust Group (G)	1.89%	0.67%	0.02%	0.00%	0.00%	0.39%	0.74%	0.00%	0.00%	0.00%	1.63%	3.50%	0.83%	0.18%	0.00%
Fairfax Financial (USA) Group (G)	49.73%	5.41%	0.30%	0.07%	0.05%	0.00%	0.44%	0.00%	0.00%	0.00%	0.00%	0.61%	0.01%	1.07%	0.02%
Federated Mutual Group (G)	0.31%	1.32%	0.68%	0.16%	0.00%	2.34%	8.14%	2.82%	0.05%	0.00%	2.36%	13.77%	4.91%	0.91%	0.07%
Starr International Group (G)	15.20%	2.08%	1.21%	0.00%	0.00%	1.73%	5.36%	0.48%	0.25%	0.00%	2.37%	12.85%	2.91%	0.00%	0.00%
Norfolk & Dedham Group Pool (G)	0.48%	2.24%	0.53%	0.00%	0.00%	0.00%	1.52%	0.00%	0.00%	0.00%	5.55%	28.58%	21.26%	2.15%	0.03%
AU Holding Company Group (G)	77.11%	4.58%	0.00%	0.00%	0.00%	0.03%	0.18%	0.13%	0.03%	0.02%	1.69%	9.47%	3.78%	1.39%	0.05%
Protective Insurance Corporation Group (SG)	8.47%	10.29%	5.97%	0.00%	0.00%	0.94%	0.96%	0.33%	0.00%	0.00%	2.10%	8.24%	3.93%	0.76%	0.08%
American National Prop & Cas Group (G)	0.36%	0.26%	0.00%	0.00%	0.20%	0.40%	8.64%	8.47%	1.08%	0.00%	0.22%	3.01%	3.15%	0.55%	0.00%
EMC Insurance Companies (G)	1.57%	3.52%	2.38%	0.95%	0.57%	0.29%	5.96%	2.28%	0.32%	0.00%	7.69%	6.06%	8.64%	12.61%	0.44%
Tokio Marine US PC Group (G)	0.40%	1.09%	0.82%	0.79%	0.24%	0.59%	2.78%	2.64%	2.60%	0.89%	3.73%	12.02%	11.44%	7.32%	5.78%
Arrow Mutual Liability Insurance Company	25.58%	35.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Everest Re U.S. Group (G)	6.85%	7.64%	4.23%	0.33%	0.01%	0.01%	0.23%	0.20%	0.35%	0.03%	1.74%	6.31%	2.74%	2.45%	1.26%
American Family Insurance Group (G)	1.91%	5.75%	2.34%	0.05%	0.01%	1.20%	4.74%	4.50%	0.30%	0.00%	4.55%	20.78%	15.15%	1.29%	0.21%
Employers Insurance Group (G)	0.84%	2.56%	0.97%	0.43%	0.00%	0.33%	4.63%	1.71%	0.12%	0.00%	5.10%	17.98%	6.13%	1.27%	1.26%
Skyward Specialty Insurance Group (G)	8.00%	15.45%	1.35%	0.38%	0.03%	0.34%	0.72%	2.29%	1.18%	0.00%	2.94%	8.40%	8.07%	3.45%	0.18%
GE Capital PC Group (G)	2.99%	3.89%	1.03%	0.00%	0.00%	0.33%	0.03%	0.00%	0.00%	0.00%	1.67%	2.07%	1.25%	0.23%	0.02%
Markel Corporation Group (G)	7.37%	7.06%	6.35%	0.35%	0.00%	1.33%	15.29%	9.92%	3.22%	0.00%	1.47%	17.66%	14.99%	5.01%	0.85%
XL Reinsurance America Group (G)	10.61%	12.42%	3.87%	0.46%	4.54%	0.01%	0.40%	1.06%	1.59%	0.12%	0.10%	11.47%	6.10%	9.87%	1.76%
Service Insurance Group (G)	2.54%	6.99%	1.15%	0.00%	0.00%	0.15%	0.11%	1.76%	0.00%	0.00%	1.27%	5.66%	9.84%	0.31%	0.01%
Great American P & C Insurance Group (G)	0.59%	4.25%	0.02%	0.01%	0.01%	0.55%	1.68%	0.30%	0.00%	0.00%	2.53%	8.93%	9.94%	0.93%	2.20%
Merchants Insurance Group (G)	0.84%	4.56%	0.70%	0.05%	0.00%	0.97%	3.50%	1.87%	2.66%	1.18%	7.53%	16.63%	5.73%	6.32%	7.37%
Sompo Holdings US Group (G)	5.43%	12.23%	3.16%	0.14%	0.01%	0.00%	0.89%	0.08%	0.05%	0.05%	4.41%	12.31%	5.91%	1.42%	0.18%
Central Insurance Companies (G)	0.41%	2.73%	0.76%	0.05%	1.27%	0.99%	5.53%	2.73%	0.97%	0.00%	2.64%	9.53%	5.94%	1.92%	1.06%

VII 000102 STTP

Bond Distribution for MA Workers' Compensation Group Companies by Class and by Maturity

Companies (1)	Governments					States & Territories					Special Revenue				
	0.5	3	7.5	15	25	0.5	3	7.5	15	25	0.5	3	7.5	15	25
	(2)					(3)					(4)				
ProSight Specialty Group (G)	0.83%	2.15%	0.50%	0.09%	0.19%	0.00%	0.38%	0.61%	0.91%	0.21%	1.88%	3.73%	3.44%	3.43%	2.51%
Argo Group (G)	5.06%	4.56%	4.03%	0.24%	0.10%	0.35%	1.00%	0.27%	0.00%	0.00%	2.96%	9.25%	3.34%	0.90%	0.10%
AF Group (G)	3.99%	15.18%	6.75%	0.98%	5.56%	0.00%	0.00%	0.00%	0.00%	0.00%	4.66%	10.14%	6.80%	3.71%	1.73%
Intact US Insurance Group (G)	6.18%	10.32%	11.10%	2.25%	0.54%	0.00%	0.00%	0.00%	0.00%	0.00%	1.07%	4.03%	4.19%	0.50%	0.04%
Work First Casualty Company	0.02%	4.49%	0.00%	0.00%	0.52%	0.34%	0.00%	4.58%	0.00%	1.28%	0.19%	1.10%	3.29%	1.66%	0.00%
The Cincinnati Insurance Companies (G)	0.16%	0.81%	0.05%	0.00%	0.00%	2.00%	16.20%	13.56%	0.07%	0.00%	0.78%	8.87%	13.75%	0.32%	0.07%
Benchmark Insurance Group (G)	5.26%	2.56%	0.17%	0.01%	0.00%	1.13%	4.18%	2.48%	1.59%	0.44%	5.63%	14.80%	12.56%	6.54%	2.33%
Nationwide Group (G)	0.59%	4.32%	7.78%	0.29%	2.28%	0.64%	1.04%	1.72%	0.44%	0.00%	1.62%	4.94%	6.31%	3.41%	0.44%
Church Mutual Insurance Group (G)	5.44%	7.27%	2.31%	0.25%	0.17%	0.23%	2.72%	3.72%	0.49%	0.00%	4.30%	13.28%	12.34%	4.14%	1.05%
Core Specialty Insurance Group (G)	2.32%	21.52%	4.92%	1.14%	0.16%	0.00%	0.15%	0.12%	0.00%	0.00%	2.68%	7.66%	3.61%	0.98%	0.13%
MS&AD US Insurance Group (G)	6.15%	12.84%	7.47%	0.39%	0.00%	0.03%	1.30%	1.68%	0.02%	0.00%	1.79%	5.06%	6.24%	1.88%	1.02%
State Auto Insurance Companies (G)	3.24%	7.70%	4.43%	2.31%	1.04%	0.11%	2.93%	3.60%	0.00%	0.00%	7.01%	24.86%	9.55%	4.81%	2.54%
Allianz US PC Insurance Companies (G)	2.32%	11.26%	4.55%	0.21%	1.10%	0.41%	0.77%	0.09%	0.07%	0.02%	4.13%	7.53%	3.30%	1.92%	2.12%
Pharmacists Mutual Insurance Group (G)	0.65%	6.75%	2.25%	2.05%	0.02%	0.88%	2.23%	4.38%	0.00%	0.00%	3.78%	15.08%	22.82%	3.73%	0.02%
Amerisure Companies (G)	2.46%	6.58%	3.00%	1.57%	3.79%	0.00%	2.63%	1.50%	0.72%	0.00%	2.92%	7.87%	4.87%	1.58%	0.05%
James River Group (G)	3.97%	7.77%	0.19%	0.01%	0.00%	0.14%	1.94%	4.06%	0.05%	0.00%	3.86%	10.26%	11.42%	3.41%	0.41%
GuideOne Insurance Companies (G)	1.48%	1.27%	1.63%	0.14%	0.00%	1.02%	2.58%	8.01%	0.43%	0.00%	2.97%	7.47%	7.67%	0.43%	0.07%
Premier Group Insurance Company	5.12%	7.15%	11.66%	0.00%	0.00%	0.00%	2.74%	1.43%	0.00%	0.00%	2.56%	7.78%	2.89%	0.26%	0.00%
Brotherhood Mutual Insurance Company	0.87%	0.41%	0.00%	0.00%	0.00%	0.62%	14.52%	7.49%	0.00%	0.00%	2.82%	20.73%	22.73%	1.46%	0.10%
Quincy Mutual Group (G)	1.02%	4.30%	3.41%	0.03%	4.39%	0.29%	0.70%	0.77%	0.00%	0.20%	5.30%	12.74%	11.81%	0.90%	0.53%
RLI Group (G)	2.56%	5.24%	4.47%	1.72%	0.00%	0.70%	2.69%	0.18%	0.00%	0.00%	4.43%	9.60%	10.40%	5.88%	2.43%
Cherokee Insurance Company	0.41%	3.31%	1.66%	0.00%	0.00%	0.79%	1.97%	1.02%	1.31%	0.04%	9.56%	19.85%	13.34%	7.68%	8.96%
ICW Pool (G)	5.15%	33.97%	6.05%	0.38%	0.00%	0.66%	9.06%	8.67%	1.50%	0.29%	0.06%	0.42%	1.26%	0.38%	0.10%
AMERISAFE Insurance Group (G)	5.38%	2.35%	0.57%	0.19%	0.02%	3.19%	12.47%	9.61%	1.47%	0.06%	3.22%	17.15%	24.85%	3.91%	0.00%
ProAssurance Group (G)	1.03%	3.80%	2.98%	0.17%	0.09%	0.29%	1.04%	1.40%	0.04%	0.00%	4.34%	12.33%	7.70%	1.38%	0.07%
WCF Insurance Group (G)	4.18%	10.55%	4.90%	2.51%	0.43%	0.83%	3.91%	5.77%	5.82%	0.00%	2.78%	5.86%	8.76%	6.17%	0.00%
Petroleum Casualty Company	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
American Contractors Insurance Group (G)	1.25%	5.65%	0.51%	0.02%	0.00%	1.16%	1.91%	1.11%	0.00%	0.00%	5.78%	14.79%	12.50%	0.85%	0.02%
State Farm Group (G)	2.25%	8.56%	2.85%	0.40%	0.03%	1.60%	15.53%	15.36%	1.11%	0.01%	1.19%	10.23%	15.02%	0.66%	0.09%
Samsung F & M Insurance Co, Ltd USB	10.88%	16.51%	1.27%	0.00%	0.00%	0.02%	0.10%	0.00%	0.00%	0.00%	0.67%	2.82%	0.55%	0.00%	0.00%
MAG Mutual Companies (G)	15.34%	12.30%	2.05%	0.22%	0.07%	0.12%	1.42%	1.08%	0.28%	0.00%	1.18%	5.63%	3.70%	2.15%	1.37%
The Gray Insurance Group (G)	65.31%	6.77%	0.28%	0.00%	0.00%	0.00%	3.50%	0.00%	0.00%	0.00%	0.04%	5.06%	0.00%	0.00%	0.00%
West Bend Mutual Insurance Company	2.81%	3.08%	3.52%	0.37%	0.86%	0.25%	1.15%	1.65%	0.25%	0.00%	2.04%	8.77%	8.85%	1.78%	0.63%
Penn National Insurance Companies (G)	0.18%	1.04%	0.27%	0.00%	0.00%	0.00%	0.79%	1.22%	0.43%	0.00%	5.61%	9.07%	6.43%	2.37%	0.87%
HDI/Talanx US PC Group (G)	1.62%	11.12%	1.25%	0.05%	0.00%	0.02%	0.22%	1.34%	0.59%	0.10%	0.78%	3.45%	2.59%	2.06%	1.64%

VII 000103 STIP

Notes:
 Source: A.M. Best's Global Insurance Database for all Massachusetts Workers' Compensation Group Companies, 2020 Schedule D, Part 1A.

Bond Distribution for MA Workers' Compensation Group Companies by Class and by Maturity

Companies (1)	Industrials					Other Bonds				
	0.5	3	7.5	15	25	0.5	3	7.5	15	25
	(2)					(3)				
Travelers Group (G)	8.55%	16.88%	16.21%	0.77%	0.23%	0.00%	0.00%	0.00%	0.00%	0.00%
A.I.M. Mutual Insurance Companies (G)	1.85%	27.08%	23.72%	2.27%	1.09%	0.00%	0.00%	0.00%	0.00%	0.00%
Hartford Insurance Group (G)	10.98%	26.65%	17.67%	5.66%	4.02%	0.00%	0.00%	0.03%	0.00%	0.74%
Liberty Mutual Insurance Companies (G)	2.90%	28.32%	19.58%	3.47%	1.59%	0.00%	0.00%	0.00%	0.00%	0.00%
Chubb INA Group (G)	5.26%	22.42%	17.38%	2.18%	2.05%	0.00%	0.00%	0.00%	0.00%	0.11%
American International Group (G)	10.95%	34.43%	15.41%	3.05%	3.53%	0.89%	3.72%	0.09%	0.05%	0.07%
Zurich Insurance US PC Group (G)	4.09%	20.60%	15.03%	2.60%	0.67%	0.00%	0.00%	0.00%	0.06%	0.05%
Berkshire Hathaway Insurance Group (G)	0.52%	1.14%	0.31%	0.47%	0.05%	4.76%	1.77%	0.00%	0.00%	0.01%
Charter Insurance Group (G)	9.43%	23.18%	12.21%	0.91%	0.00%	0.00%	0.00%	0.00%	0.00%	0.38%
Old Republic Insurance Group (G)	8.13%	37.73%	23.79%	1.28%	0.00%	0.00%	0.19%	0.00%	0.00%	0.00%
W. R. Berkley Insurance Group (G)	15.37%	26.49%	10.83%	2.05%	0.14%	0.40%	0.87%	0.39%	0.00%	1.42%
CNA Insurance Companies (G)	2.77%	18.35%	22.93%	9.05%	6.65%	0.03%	0.34%	0.65%	0.27%	0.06%
AmTrust Group (G)	4.09%	48.45%	24.16%	0.71%	0.13%	0.00%	0.79%	0.30%	0.00%	0.19%
Hanover Ins Group Prop & Cas Cos (G)	4.18%	24.70%	33.87%	2.51%	0.60%	0.00%	0.00%	0.00%	0.00%	0.02%
MEMIC Group (G)	2.30%	21.49%	18.64%	4.41%	3.92%	0.00%	0.00%	0.00%	0.00%	0.20%
Arbella Insurance Group (G)	7.31%	23.58%	17.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Utica National Insurance Group (G)	5.43%	29.93%	25.28%	3.64%	3.39%	0.00%	0.00%	0.11%	0.00%	0.00%
Selective Insurance Group (G)	7.05%	29.38%	16.84%	2.88%	1.96%	0.01%	0.95%	0.44%	0.01%	0.41%
QBE North America Insurance Group (G)	8.30%	53.19%	5.69%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%
Arch Insurance Group (G)	4.78%	36.69%	22.06%	1.22%	0.22%	0.00%	0.00%	0.00%	0.00%	0.00%
Sentry Insurance Group (G)	3.77%	27.77%	17.18%	2.43%	0.61%	0.00%	0.00%	0.00%	0.00%	0.00%
AmeriTrust Group (G)	9.27%	45.71%	31.76%	2.64%	0.79%	0.00%	0.00%	0.00%	0.00%	0.00%
Fairfax Financial (USA) Group (G)	3.78%	29.04%	2.53%	0.74%	3.03%	0.00%	0.96%	2.21%	0.00%	0.00%
Federated Mutual Group (G)	4.57%	21.30%	17.21%	17.17%	1.90%	0.00%	0.00%	0.00%	0.00%	0.00%
Starr International Group (G)	4.83%	14.07%	34.64%	1.10%	0.04%	0.06%	0.57%	0.13%	0.00%	0.12%
Norfolk & Dedham Group Pool (G)	4.46%	21.77%	11.07%	0.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
AU Holding Company Group (G)	0.21%	0.78%	0.28%	0.05%	0.07%	0.00%	0.09%	0.04%	0.00%	0.01%
Protective Insurance Corporation Group (SG)	6.80%	32.88%	16.67%	1.15%	0.43%	0.00%	0.00%	0.00%	0.00%	0.00%
American National Prop & Cas Group (G)	7.20%	32.65%	30.61%	2.35%	0.85%	0.00%	0.00%	0.00%	0.00%	0.00%
EMC Insurance Companies (G)	5.70%	25.29%	13.15%	2.37%	0.07%	0.00%	0.03%	0.11%	0.00%	0.00%

VII 000104 STIP

Bond Distribution for MA Workers' Compensation Group Companies by Class and by Maturity

Companies (1)	Industrials					Other Bonds				
	0.5	3	7.5	15	25	0.5	3	7.5	15	25
	(2)					(3)				
Tokio Marine US PC Group (G)	2.90%	18.96%	14.87%	3.69%	5.37%	0.09%	0.59%	0.21%	0.09%	0.09%
Arrow Mutual Liability Insurance Company	5.85%	27.04%	6.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Everest Re U.S. Group (G)	5.30%	22.93%	28.01%	5.34%	0.88%	0.00%	0.01%	3.03%	0.00%	0.12%
American Family Insurance Group (G)	4.15%	19.69%	10.60%	2.08%	0.68%	0.00%	0.00%	0.03%	0.01%	0.00%
Employers Insurance Group (G)	5.75%	23.61%	24.75%	1.44%	1.12%	0.00%	0.00%	0.00%	0.00%	0.00%
Skyward Specialty Insurance Group (G)	5.80%	29.86%	10.79%	0.49%	0.29%	0.00%	0.00%	0.00%	0.00%	0.00%
GE Capital PC Group (G)	7.39%	57.30%	20.99%	0.47%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%
Markel Corporation Group (G)	0.47%	3.12%	4.50%	0.98%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%
XL Reinsurance America Group (G)	4.27%	17.11%	11.63%	2.24%	0.38%	0.00%	0.00%	0.00%	0.01%	0.00%
Service Insurance Group (G)	7.05%	37.95%	23.87%	0.96%	0.13%	0.00%	0.00%	0.27%	0.00%	0.00%
Great American P & C Insurance Group (G)	14.07%	38.92%	10.13%	3.59%	1.22%	0.00%	0.06%	0.00%	0.00%	0.08%
Merchants Insurance Group (G)	3.14%	12.18%	11.93%	0.85%	8.75%	0.00%	1.98%	1.26%	0.00%	0.00%
Sompo Holdings US Group (G)	7.20%	33.15%	11.70%	1.00%	0.64%	0.00%	0.01%	0.01%	0.00%	0.01%
Central Insurance Companies (G)	3.78%	26.05%	25.26%	1.05%	7.30%	0.00%	0.01%	0.04%	0.00%	0.00%
ProSight Specialty Group (G)	6.54%	33.16%	30.93%	2.59%	4.90%	0.05%	0.69%	0.24%	0.00%	0.02%
Argo Group (G)	9.03%	40.46%	17.39%	0.49%	0.47%	0.00%	0.00%	0.00%	0.00%	0.00%
AF Group (G)	5.33%	14.52%	11.45%	3.61%	5.61%	0.00%	0.00%	0.00%	0.00%	0.00%
Intact US Insurance Group (G)	4.00%	27.04%	13.95%	10.88%	3.91%	0.00%	0.00%	0.00%	0.00%	0.00%
Work First Casualty Company	9.11%	25.53%	27.34%	12.20%	8.35%	0.00%	0.00%	0.00%	0.00%	0.00%
The Cincinnati Insurance Companies (G)	5.00%	23.79%	14.06%	0.45%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%
Benchmark Insurance Group (G)	5.37%	26.03%	8.46%	0.00%	0.37%	0.06%	0.03%	0.00%	0.00%	0.00%
Nationwide Group (G)	7.57%	30.69%	21.04%	3.21%	1.64%	0.00%	0.00%	0.00%	0.00%	0.01%
Church Mutual Insurance Group (G)	5.03%	20.22%	13.97%	2.41%	0.66%	0.00%	0.00%	0.00%	0.00%	0.00%
Core Specialty Insurance Group (G)	2.12%	28.94%	22.37%	1.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
MS&AD US Insurance Group (G)	2.28%	24.69%	25.82%	0.05%	1.29%	0.00%	0.00%	0.00%	0.00%	0.00%
State Auto Insurance Companies (G)	2.94%	18.20%	4.40%	0.30%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%
Allianz US PC Insurance Companies (G)	6.81%	27.06%	21.46%	2.09%	2.77%	0.00%	0.00%	0.00%	0.00%	0.00%
Pharmacists Mutual Insurance Group (G)	1.58%	9.82%	16.39%	4.11%	3.48%	0.00%	0.00%	0.00%	0.00%	0.00%
Amerisure Companies (G)	5.90%	28.13%	14.56%	9.27%	2.62%	0.00%	0.00%	0.00%	0.00%	0.00%
James River Group (G)	3.47%	21.20%	23.99%	0.23%	0.88%	0.23%	1.37%	0.00%	0.00%	1.13%

VII 000105 STIP

Bond Distribution for MA Workers' Compensation Group Companies by Class and by Maturity

Companies (1)	Industrials					Other Bonds				
	0.5	3	7.5	15	25	0.5	3	7.5	15	25
	(2)					(3)				
GuideOne Insurance Companies (G)	12.40%	34.64%	15.97%	1.49%	0.33%	0.00%	0.00%	0.00%	0.00%	0.00%
Premier Group Insurance Company	14.77%	31.33%	11.94%	0.19%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%
Brotherhood Mutual Insurance Company	2.22%	14.52%	10.99%	0.40%	0.08%	0.00%	0.06%	0.00%	0.00%	0.00%
Quincy Mutual Group (G)	4.72%	29.08%	16.30%	1.10%	2.27%	0.14%	0.00%	0.00%	0.00%	0.00%
RLI Group (G)	4.23%	20.28%	17.70%	5.02%	2.47%	0.00%	0.00%	0.00%	0.00%	0.00%
Cherokee Insurance Company	0.99%	24.25%	1.94%	2.18%	0.75%	0.00%	0.00%	0.00%	0.00%	0.00%
ICW Pool (G)	2.95%	14.13%	8.80%	1.22%	2.54%	1.27%	0.51%	0.30%	0.00%	0.33%
AMERISAFE Insurance Group (G)	5.27%	8.94%	1.23%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
ProAssurance Group (G)	8.52%	32.74%	19.21%	2.09%	0.59%	0.00%	0.02%	0.00%	0.06%	0.12%
WCF Insurance Group (G)	2.17%	14.80%	13.63%	2.97%	3.96%	0.00%	0.00%	0.00%	0.00%	0.00%
Petroleum Casualty Company	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
American Contractors Insurance Group (G)	12.49%	26.27%	14.97%	0.60%	0.00%	0.00%	0.00%	0.13%	0.00%	0.00%
State Farm Group (G)	1.28%	8.76%	14.51%	0.55%	0.00%	0.00%	0.01%	0.00%	0.00%	0.01%
Samsung F & M Insurance Co, Ltd USB	2.49%	32.69%	29.66%	1.95%	0.38%	0.00%	0.00%	0.00%	0.00%	0.00%
MAG Mutual Companies (G)	7.64%	26.20%	15.81%	2.69%	0.74%	0.00%	0.00%	0.00%	0.00%	0.00%
The Gray Insurance Group (G)	2.86%	6.13%	0.00%	0.00%	10.03%	0.00%	0.00%	0.00%	0.00%	0.00%
West Bend Mutual Insurance Company	11.32%	29.60%	20.50%	2.23%	0.34%	0.00%	0.00%	0.00%	0.00%	0.00%
Penn National Insurance Companies (G)	5.23%	30.52%	28.66%	4.38%	2.85%	0.07%	0.00%	0.00%	0.00%	0.00%
HDI/Talanx US PC Group (G)	4.17%	25.78%	32.62%	7.34%	2.53%	0.00%	0.20%	0.33%	0.00%	0.23%

Notes:

Source: A.M. Best's Global Insurance Database for all Massachusetts Workers' Compensation Group Companies, 2020 Schedule D, Part 1A.

VII 000106 STIP

Market Risk Premium

Year (1)	Large Company Stocks Total Returns (2)	Long-Term Government Bonds Income Returns (3)	Intermediate-Term Government Bonds Income Returns (4)	Short-Term Total Returns (5)	Long-Term Market Risk Premium = (2) - (3) (6)	Intermediate-Term Market Risk Premium = (2) - (4) (7)	Short-Term Market Risk Premium = (2) - (5) (8)
1926	11.62	3.73	3.78	3.27	7.89	7.84	8.35
1927	37.49	3.41	3.49	3.12	34.08	34.00	34.37
1928	43.61	3.22	3.64	3.56	40.39	39.97	40.05
1929	-8.42	3.47	4.07	4.75	-11.89	-12.49	-13.17
1930	-24.90	3.32	3.30	2.41	-28.22	-28.20	-27.31
1931	-43.34	3.33	3.16	1.07	-46.67	-46.50	-44.41
1932	-8.19	3.69	3.63	0.96	-11.88	-11.82	-9.15
1933	53.99	3.12	2.83	0.30	50.87	51.16	53.69
1934	-1.44	3.18	2.93	0.16	-4.62	-4.37	-1.60
1935	47.67	2.81	2.02	0.17	44.86	45.65	47.50
1936	33.92	2.77	1.44	0.18	31.15	32.48	33.74
1937	-35.03	2.66	1.48	0.31	-37.69	-36.51	-35.34
1938	31.12	2.64	1.82	-0.02	28.48	29.30	31.14
1939	-0.41	2.40	1.31	0.02	-2.81	-1.72	-0.43
1940	-9.78	2.23	0.90	0.00	-12.01	-10.68	-9.78
1941	-11.59	1.94	0.67	0.06	-13.53	-12.26	-11.65
1942	20.34	2.46	0.76	0.27	17.88	19.58	20.07
1943	25.90	2.44	1.56	0.35	23.46	24.34	25.55
1944	19.75	2.46	1.44	0.33	17.29	18.31	19.42
1945	36.44	2.34	1.19	0.33	34.10	35.25	36.11
1946	-8.07	2.04	1.08	0.35	-10.11	-9.15	-8.42
1947	5.71	2.13	1.21	0.50	3.58	4.50	5.21
1948	5.50	2.40	1.56	0.81	3.10	3.94	4.69
1949	18.79	2.25	1.36	1.10	16.54	17.43	17.69
1950	31.71	2.12	1.39	1.20	29.59	30.32	30.51
1951	24.02	2.38	1.98	1.49	21.64	22.04	22.53
1952	18.37	2.66	2.19	1.66	15.71	16.18	16.71
1953	-0.99	2.84	2.55	1.82	-3.83	-3.54	-2.81
1954	52.62	2.79	1.60	0.86	49.83	51.02	51.76
1955	31.56	2.75	2.45	1.57	28.81	29.11	29.99
1956	6.56	2.99	3.05	2.46	3.57	3.51	4.10
1957	-10.78	3.44	3.59	3.14	-14.22	-14.37	-13.92
1958	43.36	3.27	2.93	1.54	40.09	40.43	41.82
1959	11.96	4.01	4.18	2.95	7.95	7.78	9.01
1960	0.47	4.26	4.15	2.66	-3.79	-3.68	-2.19
1961	26.89	3.83	3.54	2.13	23.06	23.35	24.76
1962	-8.73	4.00	3.73	2.73	-12.73	-12.46	-11.46
1963	22.80	3.89	3.71	3.12	18.91	19.09	19.68
1964	16.48	4.15	4.00	3.54	12.33	12.48	12.94
1965	12.45	4.19	4.15	3.93	8.26	8.30	8.52
1966	-10.06	4.49	4.93	4.76	-14.55	-14.99	-14.82
1967	23.98	4.59	4.88	4.21	19.39	19.10	19.77
1968	11.06	5.50	5.49	5.21	5.56	5.57	5.85
1969	-8.50	5.95	6.65	6.58	-14.45	-15.15	-15.08
1970	3.86	6.74	7.49	6.52	-2.88	-3.63	-2.66
1971	14.30	6.32	5.75	4.39	7.98	8.55	9.91
1972	19.00	5.87	5.75	3.84	13.13	13.25	15.16
1973	-14.69	6.51	6.58	6.93	-21.20	-21.27	-21.62
1974	-26.47	7.27	7.24	8.00	-33.74	-33.71	-34.47
1975	37.23	7.99	7.35	5.80	29.24	29.88	31.43
1976	23.93	7.89	7.10	5.08	16.04	16.83	18.85

VII 000107 STIP

Market Risk Premium

Year (1)	Large Company Stocks Total Returns (2)	Long-Term Government Bonds Income Returns (3)	Intermediate-Term Government Bonds Income Returns (4)	Short-Term Total Returns (5)	Long-Term Market Risk Premium = (2) - (3) (6)	Intermediate-Term Market Risk Premium = (2) - (4) (7)	Short-Term Market Risk Premium = (2) - (5) (8)
1977	-7.16	7.14	6.49	5.12	-14.30	-13.65	-12.28
1978	6.57	7.90	7.83	7.18	-1.33	-1.26	-0.61
1979	18.61	8.86	9.04	10.38	9.75	9.57	8.23
1980	32.50	9.97	10.55	11.24	22.53	21.95	21.26
1981	-4.92	11.55	12.97	14.71	-16.47	-17.89	-19.63
1982	21.55	13.50	12.81	10.54	8.05	8.74	11.01
1983	22.56	10.38	10.35	8.80	12.18	12.21	13.76
1984	6.27	11.74	11.68	9.85	-5.47	-5.41	-3.58
1985	31.73	11.25	10.29	7.72	20.48	21.44	24.01
1986	18.67	8.98	7.72	6.16	9.69	10.95	12.51
1987	5.25	7.92	7.47	5.47	-2.67	-2.22	-0.22
1988	16.61	8.97	8.24	6.35	7.64	8.37	10.26
1989	31.69	8.81	8.46	8.37	22.88	23.23	23.32
1990	-3.10	8.19	8.15	7.81	-11.29	-11.25	-10.91
1991	30.47	8.22	7.43	5.60	22.25	23.04	24.87
1992	7.62	7.26	6.27	3.51	0.36	1.35	4.11
1993	10.08	7.17	5.53	2.90	2.91	4.55	7.18
1994	1.32	6.59	6.07	3.90	-5.27	-4.75	-2.58
1995	37.58	7.60	6.69	5.60	29.98	30.89	31.98
1996	22.96	6.18	5.82	5.21	16.78	17.14	17.75
1997	33.36	6.64	6.14	5.26	26.72	27.22	28.10
1998	28.58	5.83	5.29	4.86	22.75	23.29	23.72
1999	21.04	5.57	5.30	4.68	15.47	15.74	16.36
2000	-9.10	6.50	6.19	5.89	-15.60	-15.29	-14.99
2001	-11.89	5.53	4.27	3.83	-17.42	-16.16	-15.72
2002	-22.10	5.59	3.98	1.65	-27.69	-26.08	-23.75
2003	28.68	4.80	2.85	1.02	23.88	25.83	27.66
2004	10.88	5.02	3.28	1.20	5.86	7.60	9.68
2005	4.91	4.69	3.92	2.98	0.22	0.99	1.93
2006	15.79	4.68	4.54	4.80	11.11	11.25	10.99
2007	5.49	4.86	4.44	4.66	0.63	1.05	0.83
2008	-37.00	4.45	2.96	1.60	-41.45	-39.96	-38.60
2009	26.46	3.47	2.01	0.10	22.99	24.45	26.36
2010	15.06	4.25	1.92	0.12	10.81	13.14	14.94
2011	2.11	3.82	1.64	0.04	-1.71	0.47	2.07
2012	16.00	2.46	0.73	0.06	13.54	15.27	15.94
2013	32.39	2.88	1.02	0.02	29.51	31.37	32.37
2014	13.69	3.41	1.63	0.02	10.28	12.06	13.67
2015	1.38	2.47	1.51	0.02	-1.09	-0.13	1.36
2016	11.96	2.30	1.36	0.20	9.66	10.60	11.76
2017	21.83	2.67	1.93	0.80	19.16	19.90	21.03
2018	-4.38	2.82	2.65	1.81	-7.20	-7.03	-6.19
2019	31.49	2.55	2.08	2.14	28.94	29.41	29.35
2020	18.40	1.42	0.66	0.44	16.98	17.74	17.96
Average	12.16	4.91	4.33	3.34	7.25	7.83	8.82

Notes:

Source: 2021 SBBI Yearbook.

(2): Appendix A-1: Large-Capitalization Stocks, Total Returns.

(3): Appendix A-7: Long Term Government Bonds: Income Returns.

(4): Appendix A-11: Intermediate Term Government Bonds: Income Returns.

(5): Appendix A-14: U.S. Treasury Bills, Total Returns.

VII 000108 STIP

Investment Expense to Invested Assets Ratio

Companies	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Travelers Group (G)	0.22%	0.22%	0.23%	0.22%	0.22%	0.23%	0.22%	0.23%	0.20%	0.21%
A.I.M. Mutual Insurance Companies (G)	0.14%	0.14%	0.14%	0.13%	0.14%	0.15%	0.16%	0.16%	0.16%	0.23%
Hartford Insurance Group (G)	0.20%	0.24%	0.25%	0.24%	0.20%	0.19%	0.19%	0.18%	0.19%	0.19%
Liberty Mutual Insurance Companies (G)	0.30%	0.31%	0.29%	0.27%	0.25%	0.26%	0.26%	0.26%	0.25%	0.31%
Chubb INA Group (G)	0.14%	0.14%	0.13%	0.13%	0.16%	0.16%	0.18%	0.17%	0.14%	0.15%
American International Group (G)	0.17%	0.16%	0.17%	0.19%	0.15%	0.16%	0.13%	0.15%	0.16%	0.16%
Zurich Insurance US PC Group (G)	0.40%	0.40%	0.30%	0.25%	0.24%	0.14%	0.15%	0.09%	0.09%	0.10%
Berkshire Hathaway Insurance Group (G)	0.10%	0.11%	0.13%	0.09%	0.12%	0.12%	0.12%	0.06%	0.08%	0.08%
Charter Insurance Group (G)	0.31%	0.30%	0.28%	0.27%	0.24%	0.26%	0.25%	0.25%	0.26%	0.22%
Old Republic Insurance Group (G)	0.07%	0.08%	0.08%	0.07%	0.09%	0.12%	0.12%	0.13%	0.15%	0.18%
W. R. Berkley Insurance Group (G)	0.28%	0.25%	0.23%	0.25%	0.29%	0.30%	0.26%	0.26%	0.28%	0.30%
CNA Insurance Companies (G)	0.15%	0.15%	0.14%	0.14%	0.15%	0.23%	0.20%	0.19%	0.20%	0.19%
AmTrust Group (G)	0.05%	0.08%	0.11%	0.25%	0.18%	0.16%	0.16%	0.18%	0.22%	0.25%
Hanover Ins Group Prop & Cas Cos (G)	0.20%	0.20%	0.21%	0.24%	0.25%	0.26%	0.15%	0.15%	0.16%	0.14%
MEMIC Group (G)	0.18%	0.18%	0.18%	0.19%	0.19%	0.19%	0.22%	0.22%	0.23%	0.23%
Arbella Insurance Group (G)	0.11%	0.11%	0.11%	0.11%	0.11%	0.10%	0.11%	0.24%	0.23%	0.21%
Utica National Insurance Group (G)	0.23%	0.26%	0.27%	0.27%	0.26%	0.29%	0.30%	0.28%	0.30%	0.29%
Selective Insurance Group (G)	0.23%	0.21%	0.20%	0.22%	0.18%	0.19%	0.19%	0.18%	0.20%	0.19%
QBE North America Insurance Group (G)	0.25%	0.27%	0.28%	0.29%	0.25%	0.33%	0.29%	0.29%	0.30%	0.32%
Arch Insurance Group (G)	0.22%	0.22%	0.22%	0.21%	0.15%	0.14%	0.11%	0.10%	0.11%	0.10%
Sentry Insurance Group (G)	0.32%	0.33%	0.29%	0.25%	0.25%	0.25%	0.25%	0.25%	0.27%	0.26%
AmeriTrust Group (G)	0.24%	0.26%	0.29%	0.12%	0.14%	0.16%	0.13%	0.12%	0.11%	0.12%
Fairfax Financial (USA) Group (G)	0.47%	0.50%	0.46%	0.40%	0.62%	0.62%	0.77%	0.97%	1.10%	0.97%
Federated Mutual Group (G)	0.22%	0.23%	0.23%	0.21%	0.20%	0.18%	0.18%	0.20%	0.19%	0.18%
Starr International Group (G)	0.09%	0.11%	0.12%	0.14%	0.13%	0.13%	0.11%	0.10%	0.14%	0.48%
Norfolk & Dedham Group Pool (G)	0.55%	0.57%	0.63%	0.58%	0.60%	0.58%	0.61%	0.50%	0.54%	0.52%
AU Holding Company Group (G)	0.08%	0.03%	0.02%	0.02%	0.01%	0.01%	0.02%	0.02%	0.10%	0.06%
Protective Insurance Corporation Group (SG)	0.41%	0.48%	0.53%	0.51%	0.56%	0.62%	0.54%	0.46%	0.29%	0.27%
American National Prop & Cas Group (G)	0.11%	0.13%	0.13%	0.14%	0.15%	0.13%	0.13%	0.15%	0.13%	0.14%
EMC Insurance Companies (G)	0.64%	0.82%	0.79%	0.67%	0.69%	0.63%	0.58%	0.56%	0.52%	0.51%
Tokio Marine US PC Group (G)	0.45%	0.40%	0.40%	0.40%	0.29%	0.25%	0.19%	0.17%	0.16%	0.17%
Arrow Mutual Liability Insurance Company	0.35%	0.20%	0.31%	0.33%	0.31%	0.31%	0.41%	0.32%	0.31%	0.36%
Everest Re U.S. Group (G)	0.13%	0.12%	0.09%	0.11%	0.10%	0.09%	0.10%	0.11%	0.09%	0.07%

VII 000109 STIP

Investment Expense to Invested Assets Ratio

Companies	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
American Family Insurance Group (G)	0.49%	0.56%	0.56%	0.54%	0.49%	0.48%	0.46%	0.46%	0.59%	0.63%
Employers Insurance Group (G)	0.15%	0.16%	0.10%	0.10%	0.10%	0.10%	0.10%	0.11%	0.11%	0.12%
Skyward Specialty Insurance Group (G)	0.36%	0.48%	0.66%	0.39%	0.24%	0.17%	0.13%	0.19%	0.24%	0.16%
GE Capital PC Group (G)	0.43%	0.41%	0.42%	0.43%	0.37%	0.36%	0.35%	0.34%	0.33%	0.30%
Markel Corporation Group (G)	0.38%	0.43%	0.47%	0.43%	0.42%	0.43%	0.39%	0.37%	0.36%	0.31%
XL Reinsurance America Group (G)	0.23%	0.25%	0.22%	0.24%	0.23%	0.25%	0.25%	0.25%	0.25%	0.25%
Service Insurance Group (G)	0.49%	0.78%	0.59%	0.38%	0.50%	0.42%	0.41%	0.39%	0.43%	0.38%
Great American P & C Insurance Group (G)	0.20%	0.28%	0.30%	0.29%	0.32%	0.32%	0.34%	0.41%	0.39%	0.40%
Merchants Insurance Group (G)	0.15%	0.16%	0.15%	0.12%	0.12%	0.14%	0.14%	0.13%	0.15%	0.16%
Sompo Holdings US Group (G)	0.14%	0.10%	0.12%	0.12%	0.14%	0.17%	0.15%	0.17%	0.17%	0.17%
Central Insurance Companies (G)	0.36%	0.43%	0.38%	0.28%	0.26%	0.27%	0.28%	0.29%	0.28%	0.28%
ProSight Specialty Group (G)	0.12%	0.11%	0.12%	0.12%	0.14%	0.14%	0.14%	0.16%	0.13%	0.11%
Argo Group (G)	0.31%	0.42%	0.51%	0.49%	0.39%	0.41%	0.42%	0.37%	0.36%	0.34%
AF Group (G)	0.19%	0.15%	0.20%	0.12%	0.12%	0.15%	0.13%	0.12%	0.12%	0.16%
Intact US Insurance Group (G)	0.22%	0.39%	0.32%	0.18%	0.19%	0.20%	0.38%	0.38%	0.04%	0.14%
Work First Casualty Company	0.41%	0.41%	0.48%	0.54%	0.82%	0.42%	0.44%	0.53%	0.57%	0.65%
The Cincinnati Insurance Companies (G)	0.06%	0.06%	0.06%	0.06%	0.05%	0.07%	0.06%	0.07%	0.06%	0.06%
Benchmark Insurance Group (G)	0.84%	0.94%	0.92%	0.54%	0.64%	0.75%	0.82%	0.76%	0.68%	0.43%
Nationwide Group (G)	0.30%	0.36%	0.37%	0.35%	0.35%	0.25%	0.35%	0.37%	0.33%	0.41%
Church Mutual Insurance Group (G)	0.24%	0.25%	0.27%	0.31%	0.32%	0.28%	0.29%	0.30%	0.33%	0.36%
Core Specialty Insurance Group (G)	0.43%	0.49%	0.22%	0.30%	0.21%	0.17%	0.28%	0.69%	0.65%	0.84%
MS&AD US Insurance Group (G)	0.36%	0.24%	0.35%	0.35%	0.41%	0.36%	0.36%	0.35%	0.35%	0.37%
State Auto Insurance Companies (G)	0.40%	0.38%	0.40%	0.40%	0.42%	0.49%	0.48%	0.49%	0.73%	0.74%
Allianz US PC Insurance Companies (G)	0.07%	0.06%	0.08%	0.09%	0.09%	0.06%	0.07%	0.06%	0.06%	0.08%
Pharmacists Mutual Insurance Group (G)	0.58%	0.71%	0.52%	0.52%	0.45%	0.54%	0.66%	0.66%	0.61%	0.62%
Amerisure Companies (G)	0.18%	0.16%	0.14%	0.15%	0.15%	0.14%	0.16%	0.17%	0.19%	0.18%
James River Group (G)	0.11%	0.09%	0.30%	0.31%	0.37%	0.41%	0.39%	0.36%	0.33%	0.29%
GuideOne Insurance Companies (G)	0.65%	0.76%	0.69%	0.63%	0.56%	0.53%	0.53%	0.49%	0.55%	0.56%
Premier Group Insurance Company	0.22%	0.24%	0.26%	0.29%	0.29%	0.29%	0.32%	0.26%	0.31%	0.31%
Brotherhood Mutual Insurance Company	0.63%	0.69%	0.77%	0.78%	0.83%	0.90%	0.98%	0.82%	0.86%	0.93%
Quincy Mutual Group (G)	0.74%	0.55%	0.44%	0.91%	0.70%	0.39%	0.54%	0.43%	0.41%	0.40%
RLI Group (G)	0.30%	0.30%	0.30%	0.31%	0.32%	0.32%	0.33%	0.32%	0.32%	0.22%
Cherokee Insurance Company	0.06%	0.07%	0.07%	0.07%	0.07%	0.08%	0.09%	0.08%	0.11%	0.11%

VII 000110 STTP

Investment Expense to Invested Assets Ratio

Companies	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
ICW Pool (G)	0.68%	0.63%	0.50%	0.80%	0.65%	0.69%	0.30%	0.24%	0.37%	0.35%
AMERISAFE Insurance Group (G)	0.15%	0.15%	0.14%	0.14%	0.16%	0.16%	0.19%	0.20%	0.21%	0.24%
ProAssurance Group (G)	0.28%	0.35%	0.32%	0.37%	0.31%	0.29%	0.35%	0.34%	0.34%	0.28%
WCF Insurance Group (G)	0.33%	0.34%	0.31%	0.31%	0.30%	0.27%	0.28%	0.26%	0.24%	0.31%
Petroleum Casualty Company	0.13%	0.09%	0.07%	0.08%	0.08%	0.09%	0.11%	0.10%	0.10%	0.11%
American Contractors Insurance Group (G)	0.22%	0.21%	0.22%	0.27%	0.29%	0.33%	0.33%	0.33%	0.44%	0.41%
State Farm Group (G)	0.13%	0.13%	0.14%	0.15%	0.20%	0.28%	0.19%	0.24%	0.28%	0.27%
Samsung F & M Insurance Co, Ltd USB	0.13%	0.13%	0.33%	0.57%	0.18%	0.31%	0.25%	0.34%	0.39%	0.49%
MAG Mutual Companies (G)	0.21%	0.26%	0.29%	0.29%	0.32%	0.32%	0.37%	0.35%	0.35%	0.37%
The Gray Insurance Group (G)	0.42%	0.56%	0.53%	0.53%	0.44%	0.46%	0.37%	0.11%	0.11%	0.10%
West Bend Mutual Insurance Company	0.47%	0.57%	0.55%	0.60%	0.60%	0.65%	0.72%	0.81%	0.80%	0.67%
Penn National Insurance Companies (G)	0.23%	0.16%	0.19%	0.18%	0.17%	0.18%	0.20%	0.21%	0.19%	0.18%
HDI/Talanx US PC Group (G)	0.13%	0.15%	0.10%	0.12%	0.14%	0.11%	0.12%	0.13%	0.09%	0.10%

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Premium Weighted Investment Expense to Asset Ratio	0.22%	0.22%	0.22%	0.21%	0.20%	0.20%	0.20%	0.20%	0.20%	0.22%

Selected Ratio	0.21%
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Notes:

Source: A.M. Best's Global Insurance Database for all Massachusetts Workers' Compensation Group Companies.

- Investment Expenses is the sum of Total Investment Expenses Incurred and Investment Tax, Licences & Fees and Aggregate Write Ins, from Exhibit of Net Investment Income.
- Total Cash and Invested Assets from Exhibit of Assets.
- Premium Weighted Investment Expense to Asset Ratio use Direct Premiums Written from page 2.
- Selected Ratio is equal to ten year average.

VII 000111 STIP

Direct Premiums Written for MA Workers' Compensation Group Companies

Companies	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Travelers Group (G)	143,085	155,681	165,699	165,917	170,238	159,479	151,076	142,948	124,857	106,025
A.I.M. Mutual Insurance Companies (G)	141,670	158,738	155,688	158,179	156,921	149,530	144,469	138,172	122,474	104,109
Hartford Insurance Group (G)	107,771	122,647	116,964	115,136	106,794	100,625	95,680	93,792	92,384	86,307
Liberty Mutual Insurance Companies (G)	96,008	103,593	106,490	100,744	93,621	96,358	93,316	108,341	109,499	105,520
Chubb INA Group (G)	91,942	95,010	93,797	88,015	85,214	70,148	62,298	56,332	43,831	64,397
American International Group (G)	84,792	103,726	93,630	84,054	91,871	106,329	105,983	99,753	192,817	155,996
Zurich Insurance US PC Group (G)	70,523	60,369	61,930	60,851	63,002	61,220	53,484	43,096	39,237	32,940
Berkshire Hathaway Insurance Group (G)	62,947	70,797	70,331	64,812	63,215	54,174	41,941	28,225	27,891	24,354
Charter Insurance Group (G)	57,464	60,082	60,790	64,004	61,617	58,394	57,349	53,707	48,975	43,363
Old Republic Insurance Group (G)	35,383	29,096	25,785	26,755	21,483	19,474	21,366	20,020	13,221	9,924
W. R. Berkley Insurance Group (G)	34,183	33,269	42,470	46,425	41,191	35,083	33,183	30,140	33,958	27,722
CNA Insurance Companies (G)	24,741	21,232	21,127	20,840	18,238	16,003	15,858	15,740	16,328	19,077
AmTrust Group (G)	23,632	25,794	32,669	36,819	40,042	36,955	30,874	28,174	23,387	21,076
Hanover Ins Group Prop & Cas Cos (G)	22,909	20,803	21,394	20,360	17,429	16,309	12,945	12,871	12,258	11,761
MEMIC Group (G)	16,705	15,237	11,239	9,658	8,147	6,500	6,470	6,535	6,472	6,273
Arbella Insurance Group (G)	14,155	14,180	14,367	15,091	14,935	13,905	13,389	13,312	10,894	10,856
Utica National Insurance Group (G)	11,936	12,186	11,778	10,704	9,921	9,731	9,239	8,962	7,759	7,410
Selective Insurance Group (G)	10,335	9,480	8,189	7,060	6,254	5,646	5,225	4,938	5,061	3,777
QBE North America Insurance Group (G)	9,753	4,219	4,218	6,333	5,862	3,483	2,990	2,924	1,987	1,445
Arch Insurance Group (G)	9,698	6,883	6,148	5,889	6,417	4,136	5,364	5,021	4,588	2,717
Sentry Insurance Group (G)	8,949	9,080	8,263	7,293	7,197	5,974	7,166	7,496	7,191	6,979
AmeriTrust Group (G)	8,928	7,021	7,717	9,674	12,187	9,267	9,227	12,037	12,170	7,452
Fairfax Financial (USA) Group (G)	8,287	11,917	12,424	11,527	10,596	9,840	7,808	5,967	7,094	5,561
Federated Mutual Group (G)	8,170	6,820	6,117	5,898	5,082	3,335	3,071	2,381	2,182	2,125
Starr International Group (G)	7,945	7,043	7,458	4,833	4,455	4,196	2,914	1,759	102	0
Norfolk & Dedham Group Pool (G)	7,445	9,599	8,552	8,692	8,848	7,859	7,323	7,235	7,207	6,888
AU Holding Company Group (G)	7,343	7,096	9,344	12,208	12,165	12,229	11,285	10,812	9,070	6,622
Protective Insurance Corporation Group (SG)	5,922	5,560	3,499	3,560	2,387	2,337	2,074	1,341	1,493	1,266
American National Prop & Cas Group (G)	5,854	6,093	6,612	6,545	6,400	6,034	5,677	5,296	5,299	5,384
EMC Insurance Companies (G)	5,832	6,209	6,326	4,285	4,012	3,246	1,095	593	495	237

VII 000112 STTP

Direct Premiums Written for MA Workers' Compensation Group Companies

Companies	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Tokio Marine US PC Group (G)	5,798	4,928	5,089	4,708	4,273	3,783	2,686	2,518	2,395	1,950
Arrow Mutual Liability Insurance Company	5,525	6,211	6,671	5,757	5,180	5,589	5,414	5,419	4,588	4,999
Everest Re U.S. Group (G)	5,279	3,240	1,727	1,759	616	489	799	709	422	345
American Family Insurance Group (G)	5,194	6,214	6,426	6,652	7,607	6,649	5,855	5,874	5,970	5,614
Employers Insurance Group (G)	4,285	4,757	3,125	1,583	110	0	0	0	0	0
Skyward Specialty Insurance Group (G)	4,263	2,208	634	195	34	41	62	11	3	41
GE Capital PC Group (G)	3,805	3,289	4,451	3,278	4,408	4,164	3,850	4,097	4,240	4,131
Markel Corporation Group (G)	3,694	6,312	7,294	5,507	1,455	1,319	1,314	1,074	1,734	2,126
XL Reinsurance America Group (G)	3,311	3,802	3,765	4,457	3,265	1,356	1,304	2,650	1,178	1,520
Service Insurance Group (G)	3,157	6	0	0	0	0	0	0	0	0
Great American P & C Insurance Group (G)	3,050	5,850	4,819	5,786	4,303	3,896	3,493	2,674	3,247	3,825
Merchants Insurance Group (G)	2,767	2,709	2,603	2,602	2,345	2,058	1,946	1,560	1,460	1,248
Sompo Holdings US Group (G)	2,493	2,171	2,301	1,406	899	585	579	415	578	555
Central Insurance Companies (G)	2,422	1,856	2,116	1,914	2,029	2,334	2,006	1,819	2,009	2,630
ProSight Specialty Group (G)	2,170	3,646	2,976	2,056	1,681	1,047	730	387	171	63
Argo Group (G)	1,984	1,808	2,766	2,854	2,870	2,732	3,120	3,328	3,107	5,286
AF Group (G)	1,574	2,781	980	421	361	179	111	139	161	132
Intact US Insurance Group (G)	1,441	1,431	1,298	1,306	1,352	1,515	1,632	1,903	226	0
Work First Casualty Company	1,414	1,984	1,414	900	0	0	0	0	0	0
The Cincinnati Insurance Companies (G)	1,406	619	367	252	227	294	313	279	271	170
Benchmark Insurance Group (G)	1,350	302	26	92	31	0	0	0	0	0
Nationwide Group (G)	1,348	1,564	2,072	2,462	2,506	3,402	3,282	3,222	2,304	2,138
Church Mutual Insurance Group (G)	1,318	1,419	1,363	1,287	1,175	1,006	925	919	806	660
Core Specialty Insurance Group (G)	1,044	1,135	997	641	0	0	0	0	0	0
MS&AD US Insurance Group (G)	998	1,063	1,284	1,315	2,075	1,706	1,628	1,999	1,860	1,157
State Auto Insurance Companies (G)	985	791	612	663	623	505	321	198	195	32
Allianz US PC Insurance Companies (G)	734	816	1,065	1,034	581	397	457	446	1,210	1,623
Pharmacists Mutual Insurance Group (G)	616	549	650	573	536	342	409	364	570	549
Amerisure Companies (G)	457	503	804	708	777	1,059	550	306	494	245
James River Group (G)	394	257	126	4	0	0	0	0	0	0

VII 000113 STTP

Direct Premiums Written for MA Workers' Compensation Group Companies

Companies	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
GuideOne Insurance Companies (G)	386	385	477	557	509	316	59	49	51	58
Premier Group Insurance Company	360	356	367	382	347	322	317	384	341	358
Brotherhood Mutual Insurance Company	178	180	139	66	36	5	0	0	0	0
Quincy Mutual Group (G)	172	668	690	731	735	785	770	810	765	756
RLI Group (G)	151	137	114	111	88	62	45	19	0	0
Cherokee Insurance Company	135	118	109	118	117	99	81	79	91	81
ICW Pool (G)	133	145	44	329	490	65	2	0	0	0
AMERISAFE Insurance Group (G)	100	176	60	103	125	45	50	111	91	53
ProAssurance Group (G)	64	321	12	0	0	0	0	0	0	0
WCF Insurance Group (G)	48	56	55	65	30	25	18	18	23	88
Petroleum Casualty Company	42	4	6	4	-24	21	3	3	-8	5
American Contractors Insurance Group (G)	30	55	187	80	47	3	-10	-12	63	30
State Farm Group (G)	19	32	35	35	24	50	19	30	43	41
Samsung F & M Insurance Co, Ltd USB	11	12	16	36	31	42	17	14	0	0
MAG Mutual Companies (G)	8	0	0	0	0	0	0	0	0	0
The Gray Insurance Group (G)	6	1	1	0	0	0	0	0	0	0
West Bend Mutual Insurance Company	4	0	0	0	0	0	0	0	0	0
Penn National Insurance Companies (G)	3	2	2	3	1	6	3	2	1	7
HDI/Talanx US PC Group (G)	1	1,481	2,716	5,579	8,710	6,821	5,300	4,242	2,161	1,099

Notes:

Source: A.M. Best's Global Insurance Database for all Massachusetts Workers' Compensation Group Companies.

VII 000114 STIP

VII 000115 STIP

Calculation of Common Stock Total Return Tax Rate

Year (1)	Income Returns (2)	Capital Appreciation Returns (3)
1926	5.41	5.72
1927	5.71	30.91
1928	4.81	37.88
1929	3.98	-11.91
1930	4.57	-28.48
1931	5.35	-47.07
1932	6.16	-15.15
1933	6.39	46.59
1934	4.46	-5.94
1935	4.95	41.37
1936	5.36	27.92
1937	4.66	-38.59
1938	4.83	25.21
1939	4.69	-5.45
1940	5.36	-15.29
1941	6.71	-17.86
1942	6.79	12.43
1943	6.24	19.45
1944	5.48	13.80
1945	4.97	30.72
1946	4.09	-11.87
1947	5.49	0.00
1948	6.08	-0.65
1949	7.50	10.26
1950	8.77	21.78
1951	6.91	16.46
1952	5.93	11.78
1953	5.46	-6.62
1954	6.21	45.02
1955	4.56	26.40
1956	3.83	2.62
1957	3.84	-14.31
1958	4.38	38.06
1959	3.31	8.48
1960	3.26	-2.97
1961	3.48	23.13
1962	2.98	-11.81
1963	3.61	18.89
1964	3.33	12.97
1965	3.21	9.06
1966	3.11	-13.09
1967	3.64	20.09
1968	3.18	7.66
1969	2.98	-11.36
1970	3.33	0.10
1971	3.49	10.63
1972	2.95	15.79
1973	2.86	-17.37
1974	3.69	-29.72
1975	5.37	31.55
1976	4.49	19.15
1977	4.35	-11.50
1978	5.33	1.06
1979	5.88	12.31
1980	5.74	25.77
1981	4.88	-9.73
1982	5.61	14.76
1983	5.04	17.27
1984	4.57	1.40
1985	4.72	26.33
1986	3.92	14.62
1987	3.64	2.03
1988	3.99	12.40

VII 000116 STIP

Calculation of Common Stock Total Return Tax Rate

Year (1)	Income Returns (2)	Capital Appreciation Returns (3)
1989	4.03	27.25
1990	3.43	-6.56
1991	3.76	26.31
1992	2.98	4.46
1993	2.91	7.06
1994	2.83	-1.54
1995	3.04	34.11
1996	2.43	20.26
1997	2.10	31.01
1998	1.67	26.67
1999	1.36	19.53
2000	1.11	-10.14
2001	1.18	-13.04
2002	1.39	-23.37
2003	1.99	26.38
2004	1.76	8.99
2005	1.84	3.00
2006	2.01	13.62
2007	1.96	3.53
2008	1.92	-38.49
2009	2.48	23.45
2010	2.02	12.78
2011	2.13	0.00
2012	2.50	13.41
2013	2.47	29.60
2014	2.16	11.39
2015	2.10	-0.73
2016	2.26	9.54
2017	2.21	19.42
2018	2.01	-6.24
2019	2.34	28.88
2020	1.80	16.26
Average	3.92	8.00

	Dividend	Capital Gains
(4) Weights	32.87%	67.13%
(5) Tax Rate	13.13%	15.79%
(6) Common Stock Tax Rate		14.92%

Notes:

Source: 2021 SBBI Yearbook.

(2):Appendix A-2: Large-Capitalization Stocks, Income Returns.

(3):Appendix A-3: Large-Capitalization Stocks, Capital Appreciation Returns.

(5) = Dividend Tax Rate = $0.5 \times 0.21 + 0.5 \times 0.21 \times 0.25$

Capital Gains Tax Rate is from page 2.

Calculation of Capital Gains Tax Rate

(1) Turnover Rate	36.00%
(2) Weighted Average Cost of Capital	7.14%
(3) Marginal Tax Rate	21.00%
(4) Annual Expected Capital Gains Rate	8.00%

Year (5)	Investment Basis (6) _{t-1} x [1.0 - (1)] (6)	Investment Value		Investment Sold (8) x (1) (9)	Realized Capital Gains [(8) - (6)] x (1) (10)	Taxes Paid (10) x (3) (11)	Present Value of the Taxes (12)
		Beg of Year (8) _{t-1} - (9) _{t-1} (7)	End of Year (7) x [1.0 + (4)] (8)				
0	1,000,000.00	1,000,000.00	1,079,988.42	388,795.83	28,795.83	6,047.12	5,842.24
1	640,000.00	691,192.59	746,479.99	268,732.80	38,332.80	8,049.89	7,259.06
2	409,600.00	477,747.20	515,961.44	185,746.12	38,290.12	8,040.92	6,767.94
3	262,144.00	330,215.32	356,628.72	128,386.34	34,014.50	7,143.05	5,611.70
4	167,772.16	228,242.38	246,499.13	88,739.69	28,341.71	5,951.76	4,364.32
5	107,374.18	157,759.44	170,378.37	61,336.21	22,681.51	4,763.12	3,260.04
6	68,719.48	109,042.16	117,764.27	42,395.14	17,656.13	3,707.79	2,368.68
7	43,980.47	75,369.13	81,397.79	29,303.20	13,470.24	2,828.75	1,686.73
8	28,147.50	52,094.59	56,261.55	20,254.16	10,121.06	2,125.42	1,182.92
9	18,014.40	36,007.39	38,887.57	13,999.52	7,514.34	1,578.01	819.75
10	11,529.22	24,888.04	26,878.80	9,676.37	5,525.85	1,160.43	562.67
11	7,378.70	17,202.43	18,578.43	6,688.23	4,031.90	846.70	383.20
12	4,722.37	11,890.19	12,841.27	4,622.86	2,922.81	613.79	259.28
13	3,022.31	8,218.41	8,875.79	3,195.28	2,107.25	442.52	174.48
14	1,934.28	5,680.51	6,134.88	2,208.56	1,512.22	317.57	116.87
15	1,237.94	3,926.32	4,240.38	1,526.54	1,080.88	226.98	77.97
16	792.28	2,713.85	2,930.92	1,055.13	769.91	161.68	51.84
17	507.06	1,875.79	2,025.83	729.30	546.76	114.82	34.36
18	324.52	1,296.53	1,400.24	504.09	387.26	81.32	22.72
19	207.69	896.15	967.84	348.42	273.65	57.47	14.98
20	132.92	619.41	668.96	668.96	536.04	112.57	27.39
Total					258,912.75	54,371.68	40,889.13

(13) Implied Tax Rate on Capital Gains 15.79%

Notes:

- (1): Turnover Rate is based on AIB Stock Turnover Study of 1988 transactions. (2001 AIB Profit Filing, R2000-10, 100H-3, Exhibits 15 and 16)
- (2): Interest Rate is the weighted average cost of capital, Section VII - E, Exhibit 1.
- (4): Page 1.
- (10) Year 20 : All remaining capital gains are assumed realized in year 20.
- (12) = (11) x { [1.0 + (2)]ⁿ - [(5) + 0.5] }
- (13) = (12) Total / (10) Total

VII 000117 STIP

Calculation of Common Stock Tax Rate for Different Discount Rates and Turnover Rates

		Discount Rate											
		4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%
Turnover Rate	0.10	12.36%	11.39%	10.57%	9.87%	9.28%	8.76%	8.32%	7.94%	7.61%	7.32%	7.07%	6.84%
	0.15	13.35%	12.49%	11.75%	11.10%	10.53%	10.04%	9.60%	9.21%	8.86%	8.55%	8.28%	8.03%
	0.20	14.27%	13.53%	12.87%	12.29%	11.76%	11.29%	10.87%	10.49%	10.14%	9.83%	9.54%	9.28%
	0.25	15.05%	14.42%	13.84%	13.32%	12.85%	12.41%	12.02%	11.65%	11.32%	11.01%	10.73%	10.46%
	0.30	15.67%	15.13%	14.63%	14.17%	13.75%	13.35%	12.99%	12.65%	12.34%	12.04%	11.77%	11.51%
	0.35	16.15%	15.68%	15.25%	14.85%	14.47%	14.12%	13.79%	13.48%	13.19%	12.92%	12.66%	12.41%
	0.40	16.52%	16.12%	15.75%	15.39%	15.06%	14.74%	14.45%	14.17%	13.90%	13.65%	13.41%	13.18%
	0.45	16.81%	16.47%	16.14%	15.83%	15.54%	15.26%	14.99%	14.74%	14.50%	14.27%	14.05%	13.84%
	0.50	17.05%	16.75%	16.47%	16.19%	15.93%	15.69%	15.45%	15.22%	15.00%	14.79%	14.59%	14.40%
	0.55	17.25%	16.99%	16.74%	16.50%	16.27%	16.05%	15.83%	15.63%	15.43%	15.25%	15.06%	14.89%
	0.60	17.41%	17.18%	16.96%	16.75%	16.55%	16.36%	16.17%	15.99%	15.81%	15.64%	15.48%	15.32%
	0.65	17.55%	17.35%	17.16%	16.98%	16.80%	16.62%	16.46%	16.30%	16.14%	15.99%	15.84%	15.70%
	0.70	17.67%	17.50%	17.33%	17.17%	17.01%	16.86%	16.71%	16.57%	16.43%	16.29%	16.16%	16.03%

VII 000118 STIP

VIII 000009 STIP

Section VIII - F-Class Recommendation
Subsection A - Indicated Rate Change
7/1/2022

Section VIII-A
Exhibit 1

F-Class Rate Review Overall Indicated Rate Change

(1)	5-Year Adjusted Standard Plus ARAP Earned Premium	6,847,551
(2)	5-Year Adjusted Losses, LAE, and LBA	3,413,256
(3)	5-Year Adjusted Loss, LAE, and LBA Ratio = (2) / (1)	49.8%
(4)	Fixed Expense Ratio	5.9%
(5)	Factor to Remove the Large Deductible Contribution to the Residual Market Subsidy	0.999
(6)	Indicated Policy Year 7/1/2022 Loss, LAE, Fixed Expense Ratio = [(3) + (4)] x (5)	55.6%
(7)	Variable Expense Ratio	20.2%
(8)	Profit and Contingencies	-0.5%
(9)	Permissible Loss, LAE, LBA, and Fixed Expense Ratio = 1.000 - [(7) + (8)]	80.3%
(10)	Indicated Average Rate Change = [(6) / (9)] - 1.000	-30.7%
(11)	Rate Changed based on Trended On-Level Expected Loss Ratio	-3.8%
(12)	5-Year Total Claim Count	154
(13)	Credibility of the Indicated Average Rate Change = [(12) / 4,000] ^{0.5}	19.6%
(14)	Credibility Weighted Average Rate Change = [(10) x (13)] + { (11) x [100% - (13)] }	-9.1%

Notes:

- (1): Section VIII-B, Exhibit 1.
- (2): Section VIII-C, Exhibit 1, Page 2 and 4.
- (4), (7): Section VI-A, Exhibit 1.
- (5): Section I-E, Exhibit 1, Page 1.
- (8): Section VII-A, Exhibit 1.
- (11): Exhibit 2.
- (12): Unit Statistical Plan Data.

VIII 000010 STIP

Section VIII - F-Class Recommendation
 Subsection A - Indicated Rate Change
 7/1/2022

Section VIII-A
 Exhibit 2

F-Class Rate Review Complement of Credibility based on Trended On-Level Expected Loss Ratio

(1)	State Class Expected Loss and LAE Ratio from Prior Revision		75.7%
(2)	Loss Adjustment Expense Ratio from Prior Revision		0.187
(3)	Special Fund Assessment Rate as a % of Federal Indemnity Losses from Prior Revision		12.0%
		<u>Indemnity</u>	<u>Medical</u>
(4)	Federal Indemnity/Medical Losses as % of Total Federal Losses	52.9%	47.1%
(5)	F-Class Expected Loss Ratio from Prior Revision		60.5%
	= (1) / {(4) for Indemnity x [1.000 + (2) + (3)] + (4) for Medical x [1.000 + (2)] }		
(6)	Benefit Level Change Factor	1.006	1.000
(7)	Net Indemnity/Medical Trend	-2.9%	-2.9%
(8)	Years since Prior Revision	2.0	2.0
(9)	Trended On-Level Loss Ratio	30.4%	26.9%
	= (4) x (5) x (6) x [1.000 + (7)] ^ (8)		
(10)	Special Fund Assessment Rate as a % of Federal Indemnity Losses		11.3%
(11)	Loss Adjustment Expense Factor		1.187
(12)	Trended Loss, LAE and LBA Ratio		71.4%
	= [(9) for indemnity x (10)] + [(9) Total x (11)]		
(13)	Fixed Expense Ratio		5.9%
(14)	Trended Loss, LAE and Fixed Expense Ratio		77.2%
	= (12) + (13)		
(15)	Variable Expense Ratio		20.2%
(16)	Underwriting Profit Provision		-0.5%
(17)	Permissible Loss, LAE, LBA, and Fixed Expense Ratio		80.3%
	= 1.000 - [(15) + (16)]		
(18)	Rate Changed based on Trended On-Level Expected Loss Ratio from Prior Revision		-3.8%
	= [(14) / (17)] - 1.000		

Notes:

- (1): Section VI-J, Exhibit 1 of 07/01/2020 Stipulation.
 (2), (3), (4): Section VIII-J, Exhibit 1 of 07/01/2020 Stipulation.
 (6): Section VIII-F, Exhibit 2.
 (7): Section V-A, Exhibit 1.
 (10): Section VIII-E, Exhibit 1, Page 2.
 (11), (15),(16): Section VI-J, Exhibit 1.
 (13): Section VI-A, Exhibit 1.

VIII 000011 STIP

Section VIII - F-Class Recommendation
Subsection B - Adjusted Premium
7/1/2022

Section VIII-B
Exhibit 1

5 Year Adjusted Standard Plus ARAP Earned Premium

Policy Year (1)	Manual Premium (2)	Premium Development Factor (3)	Experience & Merit Rating Adjustment (4)	ARAP Adjustment (5)	Total Adj Standard Plus ARAP Premium (6)
2014	1,204,911	1.000	0.997	1.053	1,264,965
2015	1,467,580	1.000	0.997	1.053	1,540,334
2016	1,391,495	1.000	0.997	1.053	1,460,392
2017	1,218,812	1.000	0.997	1.053	1,278,921
2018	1,240,410	1.001	0.997	1.053	1,302,939
Total	6,523,207				6,847,551

Notes:

(2): Section VIII-F, Exhibit 1, Page 3.

(3): Section V-E, Exhibit 1.

(4): The offset for Merit Rating and Average Experience Modification from the 07/01/2020 Stipulation.

(5): The offset for ARAP from the 07/01/2020 Stipulation.

(6) = (2) x (3) x (4) x (5)

VIII 00012 STIP

Section VIII - F-Class Recommendation
 Subsection C - Adjusted Losses
 7/1/2022

Section VIII-C
 Exhibit 1
 Page 1

Calculation of Adjusted Indemnity and Medical Losses Federal Losses

(A). Unit Statistical Plan Limited Reported Losses

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	442,169	198,279	275,158	4,957	6,897
Temporary Total	63,404	124,666	22,205	69,150	103,697
Medical					
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	169,276	117,974	75,852	6,272	1,974
Temporary Total	105,758	184,015	61,332	45,649	77,550
Medical Only	26,300	21,360	28,610	17,445	8,377

(B). Unit Statistical Plan Converted Unlimited Losses

Converted unlimited Losses are Limited Losses after the application of Primary, Excess and Secondary Conversion Factors.

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	562,465	300,144	406,069	8,530	17,139
Temporary Total	83,720	178,525	33,593	126,128	288,530
Medical					
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	245,796	208,149	126,669	9,656	4,053
Temporary Total	138,398	274,128	85,301	78,018	152,753
Medical Only	29,796	24,612	35,185	22,441	11,914

Note:

(B): Section VIII-G.

VIII 00013 STIP

Section VIII - F-Class Recommendation
 Subsection C - Adjusted Losses
 7/1/2022

Section VIII-C
 Exhibit 1
 Page 2

Calculation of Adjusted Indemnity and Medical Losses Federal Losses

(C). Investment Income Offset Factor

The impact from this factor needs to be removed from the Federal Conversion Factors.

Indemnity	Investment Income Offset Factor
Fatal	0.954
Permanent Total	0.940
Permanent Partial	1.010
Temporary Total	1.012
Medical	
Fatal	1.000
Permanent Total	0.942
Permanent Partial	1.012
Temporary Total	1.014
Medical Only	1.000

(D). Adjusted Losses

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	556,770	297,105	401,957	8,443	16,965
Temporary Total	82,706	176,363	33,186	124,600	285,034
Medical					
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	242,954	205,743	125,205	9,545	4,006
Temporary Total	136,523	270,414	84,145	76,961	150,683
Medical Only	29,796	24,612	35,185	22,441	11,914
Adjusted Losses, LAE, LBA	3,413,256				

Notes:

(C): Section IX-B, Exhibit 4.

(D) = (B) / (C)

VIII 00014 STIP

Section VIII - F-Class Recommendation
 Subsection C - Adjusted Losses
 7/1/2022

Section VIII-C
 Exhibit 1
 Page 3

Calculation of Adjusted Indemnity and Medical Losses State Losses

(A). Unit Statistical Plan Limited Reported Losses

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	0	0	0	0
Temporary Total	0	0	0	0	0
Medical					
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	0	0	0	0
Temporary Total	0	0	0	0	0
Medical Only	0	0	0	0	0

(B). Unit Statistical Plan Converted Unlimited Losses

Unlimited Losses are Limited Losses after the application of Primary, Excess and Secondary Conversion Factors.

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	0	0	0	0
Temporary Total	0	0	0	0	0
Medical					
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	0	0	0	0
Temporary Total	0	0	0	0	0
Medical Only	0	0	0	0	0

Notes:

(B): Section VIII-G.

VIII 00015 STIP

Section VIII - F-Class Recommendation
 Subsection C - Adjusted Losses
 7/1/2022

Section VIII-C
 Exhibit 1
 Page 4

Calculation of Adjusted Indemnity and Medical Losses State Losses

(C). Investment Income Offset Factor

The impact from this factor needs to be removed from the State Conversion Factors.

Indemnity	Investment Income Offset Factor
Fatal	0.954
Permanent Total	0.940
Permanent Partial	1.010
Temporary Total	1.012
Medical	
Fatal	1.000
Permanent Total	0.942
Permanent Partial	1.012
Temporary Total	1.014
Medical Only	1.000

(D). Adjusted Losses

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	0	0	0	0
Temporary Total	0	0	0	0	0
Medical					
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	0	0	0	0
Temporary Total	0	0	0	0	0
Medical Only	0	0	0	0	0
Adjusted Losses, LAE	0				

Notes:

(C): Section IX-B, Exhibit 4.

(D) = (B) / (C)

VIII 000016 STIP

Section VIII - F-Class Recommendation
Subsection D - Proposed Rates
7/1/2022

Section VIII-D
Exhibit 1

Proposed Rates and Rating Values to be Effective 7/1/2022

Class Code (1)	Manual Rate (2)	Minimum Premium (3)	Loss Constant (4)	Expected Loss Rate (5)	D-Ratio (6)
6801	6.01	460	0	2.57	0.18
6824	8.28	500	0	3.40	0.20
6826	4.97	333	0	2.13	0.18
6843	10.91	500	0	4.38	0.18
6872	15.28	500	0	6.13	0.19
6874	16.69	500	0	6.70	0.18
7309	10.27	500	0	4.12	0.19
7313	13.84	500	0	5.55	0.15
7317	17.32	500	0	6.95	0.19
7327	22.53	500	0	9.04	0.19
7350	17.07	500	0	7.01	0.17
8709	5.35	346	0	2.15	0.19
8726	3.94	297	0	1.69	0.20
9077	5.91	457	0	2.75	0.23

Notes:

(2),(3): Calculated as per Section VIII-I, Exhibit 4.

(4): F-Classes have no loss constant.

(5),(6): Calculated as per Section X.

VIII 000017 STIP

Section VIII - F-Class Recommendation
 Subsection E - Conversion/Excess Loss Factors
 7/1/2022

Section VIII-E
 Exhibit 1
 Page 1

Calculation of Indemnity and Medical Conversion Factors Federal Losses

(A). Benefit Level Adjustment Factors

The following factors are used to bring MA Unit Statistical Plan losses to the benefit level of the proposed effective policy year period.

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
Fatal	1.043	1.039	1.035	1.030	1.025
Permanent Total	1.034	1.031	1.028	1.024	1.020
Permanent Partial	1.016	1.015	1.014	1.012	1.010
Temporary Total	1.034	1.031	1.028	1.024	1.020
Medical					
All Injury Types	1.000	1.000	1.000	1.000	1.000

(B). Loss Development Factors

The following factors are used to bring MA Unit Statistical Plan losses from first through fifth report to an ultimate basis.

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
Likely	1.088	1.113	1.281	1.481	2.325
Not Likely	1.040	1.054	1.109	1.254	1.810
Medical					
Likely	1.134	1.176	1.250	1.316	1.527
Not Likely	1.024	1.023	1.024	1.060	1.135

(C). Trend Factors

The following factors trend the MA Unit Statistical Plan losses from the reported period to the proposed effective period for new rates.

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
All Injury Types	0.749	0.812	0.845	0.846	0.875
Medical					
Lost Time Medical	0.755	0.842	0.866	0.862	0.886
Medical Only	0.710	0.742	0.785	0.778	0.802

(D). Primary Conversion Factors (PCF)

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
Fatal - LD	0.850	0.939	1.120	1.290	2.084
Fatal - NLD	0.813	0.889	0.969	1.092	1.622
Permanent Total	0.843	0.931	1.112	1.282	2.074
Permanent Partial - LD	0.828	0.916	1.097	1.267	2.053
Permanent Partial - NLD	0.792	0.868	0.949	1.073	1.599
Temporary Total - LD	0.843	0.931	1.112	1.282	2.074
Temporary Total - NLD	0.806	0.882	0.963	1.086	1.614
Medical					
Lost Time Medical -LD	0.856	0.990	1.082	1.134	1.353
Lost Time Medical -NLD	0.773	0.861	0.887	0.913	1.006
Medical - NLD	0.727	0.759	0.804	0.825	0.911

Notes:

- (A): Section IV-F, Exhibit 1.
- (B): NCCI.
- (C): Section IX-B, Exhibit 1, Page 1.
- (D) = (A) x (B) x (C)

VIII 00018 STIP

Section VIII - F-Class Recommendation
 Subsection E - Conversion/Excess Loss Factors
 7/1/2022

Section VIII-E
 Exhibit 1
 Page 2

Calculation of Indemnity and Medical Conversion Factors Federal Losses

(A). Loss Adjustment Expense Factor

The following factor is applied to include the proposed loss adjustment expense.

	Indemnity	Medical
Loss Adjustment Expense Factor	1.187	1.187

(B). Loss Based Assessments (Special Fund Assessment)

	Indemnity	Medical
Loss Based Assessments	0.113	0.000

(C). Investment Income Offset Factor

The following factor is applied to adjust for investment income.

	Investment Income Offset Factor
Indemnity	
Fatal	0.954
Permanent Total	0.940
Permanent Partial	1.010
Temporary Total	1.012
Medical	
Fatal	1.000
Permanent Total	0.942
Permanent Partial	1.012
Temporary Total	1.014
Medical Only	1.000

(D). Secondary Conversion Factors (SCF)

Indemnity	
Fatal	1.240
Permanent Total	1.222
Permanent Partial	1.313
Temporary Total	1.316
Medical	
Fatal	1.187
Permanent Total	1.117
Permanent Partial	1.201
Temporary Total	1.203
Medical Only	1.187

Notes:

(A): 1.000 + Loss Adjustment Expense (as a percent of losses) from Section VI-A, Exhibit 1.

(B): NCCI Tax and Assessment Directory.

(C): Section IX-B, Exhibit 4.

(D) = [(A) + (B)] x (C)

VIII 00019 STIP

Section VIII - F-Class Recommendation
 Subsection E - Conversion/Excess Loss Factors
 7/1/2022

Section VIII-E
 Exhibit 1
 Page 3

Calculation of Indemnity and Medical Conversion Factors State Losses

The MA Indicated Pure Premium Relativities are calculated from exposure and loss data for the latest available 5 policy years of Unit Statistical Plan data.

Below are adjustment factors used to put the losses at the level proposed in this filing.

(A). Primary State Conversion Factors

Remainder of Industry	Policy Year				
	2014	2015	2016	2017	2018
Indemnity					
Fatal - LD	0.818	0.889	0.974	1.101	1.710
Fatal - NLD	0.812	0.889	0.967	1.082	1.505
Permanent Total	0.822	0.899	0.983	1.111	1.722
Permanent Partial - LD	0.854	0.930	1.014	1.141	1.761
Permanent Partial - NLD	0.849	0.929	1.007	1.121	1.550
Temporary Total - LD	0.804	0.881	0.966	1.094	1.700
Temporary Total - NLD	0.798	0.880	0.959	1.075	1.497
Medical					
Lost Time Medical - LD	0.705	0.779	0.804	0.822	0.894
Lost Time Medical - NLD	0.750	0.833	0.861	0.857	0.899
Medical - NLD	0.705	0.735	0.780	0.774	0.814

(B). Secondary State Conversion Factors

Indemnity	
Fatal	1.132
Permanent Total	1.116
Permanent Partial	1.199
Temporary Total	1.202
Medical	
Fatal	1.187
Permanent Total	1.118
Permanent Partial	1.201
Temporary Total	1.203
Medical Only	1.187

Notes:

(A): Section IX-B, Exhibit 1, Page 2.

(B): Section IX-B, Exhibit 1, Page 3.

Calculation of Converted Limited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 Federal Industry Group
 All Classes

Policy Year (1)	Injury Type (2)	Limited Losses					Converted Limited Losses				
		Indemnity		Medical		Total (7)	Indemnity		Medical		Total (12)
		Likely (3)	Not Likely (4)	Likely (5)	Not Likely (6)		Likely (8)	Not Likely (9)	Likely (10)	Not Likely (11)	
2014	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	9	0	442,169	0	169,276	611,445	0	350,085	0	130,914	480,999
	5	16,736	46,668	23,125	82,633	169,162	14,112	37,616	19,805	63,906	135,439
	6	0	0	0	26,300	26,300	0	0	0	19,117	19,117
2015	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	9	55,426	142,853	19,430	98,544	316,253	50,797	123,983	19,230	84,843	278,853
	5	22,912	101,754	30,115	153,900	308,681	21,334	89,724	29,806	132,502	273,366
	6	0	0	0	21,360	21,360	0	0	0	16,215	16,215
2016	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	9	0	275,158	0	75,852	351,010	0	261,225	0	67,255	328,480
	5	0	22,205	0	61,332	83,537	0	21,375	0	54,380	75,755
	6	0	0	0	28,610	28,610	0	0	0	22,995	22,995
2017	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	9	0	4,957	0	6,272	11,229	0	5,320	0	5,729	11,049
	5	0	69,150	0	45,649	114,799	0	75,091	0	41,699	116,790
	6	0	0	0	17,445	17,445	0	0	0	14,393	14,393
2018	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	9	0	6,897	0	1,974	8,871	0	11,025	0	1,985	13,010
	5	0	103,697	0	77,550	181,247	0	167,408	0	77,996	245,404
	6	0	0	0	8,377	8,377	0	0	0	7,628	7,628
All Years, All Injury		95,074	1,215,508	72,670	875,074	2,258,326	86,243	1,142,852	68,841	741,557	2,039,493

Notes:
 (3),(4),(5),(6): Unit Statistical Plan data, excluding Large Deductibles.
 (8), (9), (10), (11): Limited Incurred Losses x Primary Conversion Factors from Section VIII-E, Exhibit 1, Page 1.
 (12) = (8) + (9) + (10) + (11)

VIII 000020 STIP

Calculation of Converted Unlimited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 Federal Industry Group
 All Classes

Policy Year (1)	Injury Type (2)	Adjusted Excess Losses					Converted Unlimited Losses					Exposure (13)
		Indemnity		Medical		Total	Indemnity		Medical		Total	
		Likely (3)	Not Likely (4)	Likely (5)	Not Likely (6)	(7)	Likely (8)	Not Likely (9)	Likely (10)	Not Likely (11)	(12)	
2014	1	0	0	0	0	0	0	0	0	0	0	166,923
	2	0	0	0	0	0	0	0	0	0	0	
	9	0	78,269	0	73,801	152,070	0	562,465	0	245,796	808,261	
	5	2,594	9,307	6,313	25,010	43,224	21,982	61,738	31,423	106,974	222,117	
	6	0	0	0	5,989	5,989	0	0	0	29,796	29,796	
2015	1	0	0	0	0	0	0	0	0	0	0	196,085
	2	0	0	0	0	0	0	0	0	0	0	
	9	9,338	44,461	9,053	60,235	123,087	78,963	221,181	33,959	174,191	508,294	
	5	5,410	19,217	18,539	47,006	90,172	35,188	143,337	58,163	215,965	452,653	
	6	0	0	0	4,523	4,523	0	0	0	24,612	24,612	
2016	1	0	0	0	0	0	0	0	0	0	0	193,244
	2	0	0	0	0	0	0	0	0	0	0	
	9	0	48,023	0	38,244	86,267	0	406,069	0	126,669	532,738	
	5	0	4,157	0	16,521	20,678	0	33,593	0	85,301	118,894	
	6	0	0	0	6,653	6,653	0	0	0	35,185	35,185	
2017	1	0	0	0	0	0	0	0	0	0	0	171,747
	2	0	0	0	0	0	0	0	0	0	0	
	9	0	1,176	0	2,313	3,489	0	8,530	0	9,656	18,186	
	5	0	20,770	0	23,149	43,919	0	126,128	0	78,018	204,146	
	6	0	0	0	4,516	4,516	0	0	0	22,441	22,441	
2018	1	0	0	0	0	0	0	0	0	0	0	178,410
	2	0	0	0	0	0	0	0	0	0	0	
	9	0	2,027	0	1,390	3,417	0	17,139	0	4,053	21,192	
	5	0	51,885	0	48,971	100,856	0	288,530	0	152,753	441,283	
	6	0	0	0	2,410	2,410	0	0	0	11,914	11,914	
(14) All Years and Injury Types		17,342	279,292	33,905	360,731	691,270	136,133	1,868,710	123,545	1,323,324	3,451,712	906,409
(15) Pure Premium							0.150	2.062	0.136	1.460	3.808	

Notes:

- (3), (4) = 0.7 x [Excess Factor - 1.0] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Indemnity Converted Limited Losses from Page 1, Columns (8) and (9)
 (5), (6) = [Excess Factor - 1.0] x Medical Converted Limited Losses + 0.3 x [Excess Factor - 1.0] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Medical Converted Limited Losses from Page 1, Columns (10) and (11).
 (7) = (3) + (4) + (5) + (6)
 (8), (9), (10), (11): (Converted Limited Losses from Page 1 + Adjusted Excess Losses) x Secondary Conversion Factors from Section VIII-E, Exhibit 1, Page 2.
 (12) = (8) + (9) + (10) + (11)
 (13): From Page 3.
 (15): Pure Premium calculated as the All Years, All Injury Types Adjusted Converted Losses divided by the All Years, All Injury Types Exposure.

VIII 000021 STIP

Calculation of Manual Premium by Extension of Exposures
 Federal Industry Group
 All Classes

Class Code (1)	Exposure By Policy Year						Current Rate (8)	Manual Premium					
	2014	2015	2016	2017	2018	Total		2014	2015	2016	2017	2018	Total
	(2)	(3)	(4)	(5)	(6)	(7)		= (2) x (8) (9)	= (3) x (8) (10)	= (4) x (8) (11)	= (5) x (8) (12)	= (6) x (8) (13)	= (7) x (8) (14)
6801	0	0	0	0	0	0	6.81	0	0	0	0	0	0
6824	51,022	52,497	45,902	36,701	34,164	220,286	10.30	525,527	540,719	472,791	378,020	351,889	2,268,946
6826	100	0	19,475	0	3	19,578	5.74	574	0	111,787	0	17	112,378
6843	100	18,335	6,497	7,410	2,665	35,007	10.05	1,005	184,267	65,295	74,471	26,783	351,820
6872	7,107	7,445	8,885	11,081	11,281	45,799	14.08	100,067	104,826	125,101	156,020	158,836	644,850
6874	94	10	10	0	0	114	15.39	1,447	154	154	0	0	1,754
7309	7,342	12,589	13,523	11,775	20,945	66,174	10.52	77,238	132,436	142,262	123,873	220,341	696,150
7313	0	0	0	0	0	0	12.75	0	0	0	0	0	0
7317	5,260	4,441	4,059	3,162	655	17,577	16.69	87,789	74,120	67,745	52,774	10,932	293,360
7327	126	88	157	91	494	956	23.78	2,996	2,093	3,733	2,164	11,747	22,734
7350	0	0	0	0	0	0	19.75	0	0	0	0	0	0
8709	1,820	1,581	0	0	0	3,401	4.93	8,973	7,794	0	0	0	16,767
8726	93,952	99,099	94,736	101,527	108,203	497,517	4.25	399,296	421,171	402,628	431,490	459,863	2,114,447
9077	0	0	0	0	0	0	5.45	0	0	0	0	0	0
Total	166,923	196,085	193,244	171,747	178,410	906,409		1,204,911	1,467,580	1,391,495	1,218,812	1,240,410	6,523,207

Notes:
 (2) - (7): Unit Statistical Plan data.
 (8): Section VIII-D, Exhibit 1 of the 7/1/2020 Stipulation.

Calculation of Pure Premium Underlying Present Rate Factor

Industry Group (1)	Injury Type (2)	Uncapped Rate Level Factor (3)	Industry Group Pure Premium From Previous Revision (4)	Percent of Pure Premium = $(4) / [\text{Total of (4)}]$ (5)	Expected Loss and LAE Ratio (6)	Loss Based Assessment Change Factor (7)	Federal Losses as a % of Total Losses (8)	Benefit Level Change Factor (9)	Trend (10)	Pure Premium Underlying Present Rate Factor = $(3) \times (5) \times (6) \times (7) \times (9) \times (10)$ (11)
Federal	Indemnity	7.672	2.386	0.537	0.757	1.000	1.000	1.006	0.942	2.957
	Medical	7.672	2.054	0.463	0.757	1.000	1.000	1.000	0.943	2.532
	Total		4.440							

Notes:

- (3): Section VIII-H, Exhibit 1 of the 7/1/2020 Stipulation.
- (4): Section VIII-G of the 7/1/2020 Stipulation.
- (6): Section VI-J, Exhibit 1 of the 7/1/2020 Stipulation.
- (7): Change in load from Section VIII-K, Exhibit 1 and the 7/1/2020 Stipulation.
- (8): Based on ratio of Federal losses to sum of Federal and State losses from Section VIII-C, Exhibit 1, Pages 1 & 3.
- (9): Weighted average of Section IV-A, Exhibit 1 and Section IV-F, Exhibit 1, using weights from Column (8).
- (10): Section V-A, Exhibit 1.

VIII 00024 STIP

Section VIII - F-Class Recommendation
 Subsection F - Proposed Pure Premium Relativities
 7/1/2022

Section VIII-F
 Exhibit 3

Calculation of Pure Premiums Underlying Present Rate Federal Industry Group

Class Code	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity	Medical	Indemnity	Medical	Total = (4) + (5)
(1)	(2)	(3)	(4)	(5)	(6)
6801	1.224	0.733	3.621	1.856	5.477
6824	1.325	1.515	3.918	3.836	7.753
6826	0.881	0.680	2.604	1.723	4.327
6843	1.610	1.112	4.761	2.815	7.576
6872	2.202	1.619	6.513	4.100	10.612
6874	2.653	1.482	7.846	3.753	11.599
7309	1.688	1.160	4.992	2.936	7.928
7313	2.514	0.863	7.434	2.184	9.618
7317	2.838	1.933	8.391	4.895	13.286
7327	3.696	2.759	10.930	6.985	17.915
7350	3.627	1.719	10.726	4.352	15.078
8709	0.750	0.592	2.216	1.499	3.716
8726	0.531	0.643	1.570	1.628	3.198
9077	0.889	1.874	2.629	4.744	7.373

Notes:

(2), (3): Section VIII-H, Exhibit 2 of the 07/01/2020 Stipulation.

(4), (5) = (2),(3) x Pure Premium Underlying Present Rate Factors from Exhibit 2.

VIII 00025 STIP

Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2022

Section VIII - G
 Exhibit 1

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Federal Class Codes		
6801 BOAT BUILDING - WOOD - NOC & DRIVERS: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	0	0	0	0	0	0	0	0			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.000	0.000	.
(15) Countrywide Pure Premium:	0.438	0.239	0.676
(16) Countrywide Indicated Relativity:	0.205	0.167	.
(17) Countrywide Credibility:	0.120	0.130	.
(18) Countrywide Lost-Time Claims:	6.000	.	.
(19) Pure Premium Underlying Present Rate:	3.621	1.856	5.477
(20) Relativity to Underlying Present Rate:	1.235	0.742	.
(21) Credibility to Underlying Relativity:	0.880	0.870	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	1.112	0.667	.
(24) Balanced Formula Relativity:	1.065	0.632	0.884

Class(es):		Effective: 7/1/2022							Federal Class Codes		
6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	51.022	0	7	0	456.169	0	212.864	669.033	8.941	4.172	13.113
2015	52.497	0	7	0	95.422	0	120.658	216.080	1.818	2.298	4.116
2016	45.902	0	5	0	3.483	0	21.529	25.012	0.076	0.469	0.545
2017	36.701	0	7	0	57.909	0	62.631	120.540	1.578	1.706	3.284
2018	34.164	0	9	0	41.146	0	17.753	58.899	1.204	0.520	1.724
MA Total:	220.287	0	35	0	654.128	0	435.435	1,089.564	2.969	1.977	4.946

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.343	1.238	.
(14) Massachusetts Credibility:	0.250	0.440	.
(15) Countrywide Pure Premium:	1.863	2.125	3.988
(16) Countrywide Indicated Relativity:	0.872	1.489	.
(17) Countrywide Credibility:	0.310	0.280	.
(18) Countrywide Lost-Time Claims:	61.000	.	.
(19) Pure Premium Underlying Present Rate:	3.918	3.836	7.753
(20) Relativity to Underlying Present Rate:	1.337	1.533	.
(21) Credibility to Underlying Relativity:	0.440	0.280	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	1.194	1.391	.
(24) Balanced Formula Relativity:	1.144	1.318	1.217

VIII 00026 STIP

Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2022

Section VIII - G
 Exhibit 2

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Federal Class Codes		
6826 MARINA & DRIVERS: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	100	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	19.475	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	3	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	19.578	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.080	0.120	.
(15) Countrywide Pure Premium:	2.397	1.181	3.578
(16) Countrywide Indicated Relativity:	1.122	0.827	.
(17) Countrywide Credibility:	0.190	0.200	.
(18) Countrywide Lost-Time Claims:	17.000	.	.
(19) Pure Premium Underlying Present Rate:	2.604	1.723	4.327
(20) Relativity to Underlying Present Rate:	0.888	0.689	.
(21) Credibility to Underlying Relativity:	0.730	0.680	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	0.862	0.634	.
(24) Balanced Formula Relativity:	0.826	0.600	0.731

Class(es):		Effective: 7/1/2022							Federal Class Codes		
6843 SHIP BUILDING-IRON OR STEEL-NOC & DRIVERS: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	100	0	9	0	37.936	0	15.649	53.585	379.36	156.49	535.85
2015	18.335	1	3	13.561	4.668	56.245	2.527	77.001	0.994	3.205	4.200
2016	6.497	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	7.410	0	3	0	0	0	808	808	0.000	0.109	0.109
2018	2.665	0	2	0	178.852	0	54.826	233.678	67.119	20.575	87.693
MA Total:	35.007	1	17	13.561	221.456	56.245	73.809	365.071	6.713	3.715	10.429

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.035	2.327	.
(14) Massachusetts Credibility:	0.130	0.190	.
(15) Countrywide Pure Premium:	8.074	3.729	11.803
(16) Countrywide Indicated Relativity:	3.779	2.613	.
(17) Countrywide Credibility:	0.410	0.410	.
(18) Countrywide Lost-Time Claims:	122.00	.	.
(19) Pure Premium Underlying Present Rate:	4.761	2.815	7.576
(20) Relativity to Underlying Present Rate:	1.624	1.125	.
(21) Credibility to Underlying Relativity:	0.460	0.400	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	2.691	1.964	.
(24) Balanced Formula Relativity:	2.579	1.860	2.277

VIII 00027 STIP

Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2022

Section VIII - G
 Exhibit 3

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Federal Class Codes		
6872 SHIP REPAIR CONVERSION- ALL OP & DR: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	7,107	0	4	0	10,408	0	18,190	28,598	1,464	2,559	4,024
2015	7,445	0	1	0	0	0	257	257	0,000	0,034	0,034
2016	8,885	0	1	0	641	0	885	1,527	0,072	0,100	0,172
2017	11,081	0	2	0	53,058	0	19,678	72,737	4,788	1,776	6,564
2018	11,281	0	1	0	0	0	937	937	0,000	0,083	0,083
MA Total:	45,798	0	9	0	64,107	0	39,947	104,054	1,400	0,872	2,272

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.633	0.546	.
(14) Massachusetts Credibility:	0.160	0.240	.
(15) Countrywide Pure Premium:	7.931	5.273	13.205
(16) Countrywide Indicated Relativity:	3.712	3.696	.
(17) Countrywide Credibility:	0.420	0.380	.
(18) Countrywide Lost-Time Claims:	193.00	.	.
(19) Pure Premium Underlying Present Rate:	6.513	4.100	10.612
(20) Relativity to Underlying Present Rate:	2.222	1.639	.
(21) Credibility to Underlying Relativity:	0.420	0.380	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	2.593	2.158	.
(24) Balanced Formula Relativity:	2.485	2.044	2.300

Class(es):		Effective: 7/1/2022							Federal Class Codes		
6874 PAINTING: SHIP HULLS - US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	94	0	0	0	0	0	0	0	0,000	0,000	0,000
2015	10	0	0	0	0	0	0	0	0,000	0,000	0,000
2016	10	0	0	0	0	0	0	0	0,000	0,000	0,000
2017	0	0	0	0	0	0	0	0	0,000	0,000	0,000
2018	0	0	0	0	0	0	0	0	0,000	0,000	0,000
MA Total:	114	0	0	0	0	0	0	0	0,000	0,000	0,000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.020	0.020	.
(15) Countrywide Pure Premium:	11.104	6.152	17.256
(16) Countrywide Indicated Relativity:	5.197	4.311	.
(17) Countrywide Credibility:	0.180	0.190	.
(18) Countrywide Lost-Time Claims:	16.000	.	.
(19) Pure Premium Underlying Present Rate:	7.846	3.753	11.599
(20) Relativity to Underlying Present Rate:	2.677	1.500	.
(21) Credibility to Underlying Relativity:	0.800	0.790	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	3.077	2.004	.
(24) Balanced Formula Relativity:	2.948	1.898	2.508

VIII 00028 STIP

Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2022

Section VIII - G
 Exhibit 4

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Federal Class Codes		
7309 STEVEDORING: NOC - US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	7,342	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	12,589	0	2	0	42,509	0	27,655	70,164	3,377	2,197	5,573
2016	13,523	0	1	0	692	0	1,535	2,227	0,051	0,114	0,165
2017	11,775	0	1	0	0	0	688	688	0.000	0.058	0.058
2018	20,945	0	1	0	0	0	84	84	0.000	0.004	0.004
MA Total:	66,174	0	5	0	43,201	0	29,962	73,163	0.653	0.453	1.106

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.295	0.284	.
(14) Massachusetts Credibility:	0.170	0.250	.
(15) Countrywide Pure Premium:	5.140	3.198	8.338
(16) Countrywide Indicated Relativity:	2.405	2.241	.
(17) Countrywide Credibility:	0.400	0.380	.
(18) Countrywide Lost-Time Claims:	117.00	.	.
(19) Pure Premium Underlying Present Rate:	4.992	2.936	7.928
(20) Relativity to Underlying Present Rate:	1.703	1.174	.
(21) Credibility to Underlying Relativity:	0.430	0.370	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	1.745	1.357	.
(24) Balanced Formula Relativity:	1.672	1.285	1.510

Class(es):		Effective: 7/1/2022							Federal Class Codes		
7313 COAL DOCK OPERATION & STEVEDORING: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	0	0	0	0	0	0	0	0			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.000	0.000	.
(15) Countrywide Pure Premium:	114.03	12.148	126.18
(16) Countrywide Indicated Relativity:	53.365	8.513	.
(17) Countrywide Credibility:	0.250	0.270	.
(18) Countrywide Lost-Time Claims:	37.000	.	.
(19) Pure Premium Underlying Present Rate:	7.434	2.184	9.618
(20) Relativity to Underlying Present Rate:	2.536	0.873	.
(21) Credibility to Underlying Relativity:	0.750	0.730	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	15.243	2.936	.
(24) Balanced Formula Relativity:	14.607	2.781	9.650

VIII 00029 STIP

Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2022

Section VIII - G
 Exhibit 5

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Federal Class Codes		
7317 STEVEDORING: BY HAND OR HAND TRUCKS: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	5,260	0	1	0	3,667	0	4,414	8,081	0.697	0.839	1,536
2015	4,441	0	1	0	154,562	0	117,233	271,795	34.802	26.397	61.199
2016	4,059	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	3,162	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	655	0	1	0	4,837	0	4,274	9,111	7.389	6.528	13.917
MA Total:	17,577	0	3	0	163,066	0	125,921	288,986	9.277	7.164	16.442

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.194	4.488	.
(14) Massachusetts Credibility:	0.120	0.180	.
(15) Countrywide Pure Premium:	5.401	2.519	7.920
(16) Countrywide Indicated Relativity:	2.528	1.765	.
(17) Countrywide Credibility:	0.350	0.370	.
(18) Countrywide Lost-Time Claims:	82.000	.	.
(19) Pure Premium Underlying Present Rate:	8.391	4.895	13.286
(20) Relativity to Underlying Present Rate:	2.862	1.957	.
(21) Credibility to Underlying Relativity:	0.530	0.450	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	2.905	2.342	.
(24) Balanced Formula Relativity:	2.784	2.218	2.547

Class(es):		Effective: 7/1/2022							Federal Class Codes		
7327 STEVEDORING: CONTAINERIZED FREIGHT & DRIVERS: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	126	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	88	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	157	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	91	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	494	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	956	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.040	0.060	.
(15) Countrywide Pure Premium:	13.365	8.459	21.823
(16) Countrywide Indicated Relativity:	6.255	5.928	.
(17) Countrywide Credibility:	0.100	0.110	.
(18) Countrywide Lost-Time Claims:	4.000	.	.
(19) Pure Premium Underlying Present Rate:	10.930	6.985	17.915
(20) Relativity to Underlying Present Rate:	3.729	2.792	.
(21) Credibility to Underlying Relativity:	0.860	0.830	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	3.832	2.970	.
(24) Balanced Formula Relativity:	3.672	2.813	3.312

VIII 000030 STIP

Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2022

Section VIII - G
 Exhibit 6

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Federal Class Codes		
7350 FREIGHT HANDLING NOC: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	0	0	0	0	0	0	0	0			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.000	0.000	.
(15) Countrywide Pure Premium:	4.907	2.603	7.510
(16) Countrywide Indicated Relativity:	2.296	1.824	.
(17) Countrywide Credibility:	0.300	0.320	.
(18) Countrywide Lost-Time Claims:	59.000	.	.
(19) Pure Premium Underlying Present Rate:	10.726	4.352	15.078
(20) Relativity to Underlying Present Rate:	3.659	1.740	.
(21) Credibility to Underlying Relativity:	0.700	0.680	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	3.250	1.767	.
(24) Balanced Formula Relativity:	3.115	1.673	2.510

Class(es):		Effective: 7/1/2022							Federal Class Codes		
8709 STEVEDORING:TALLIERS & CHECKING CLERKS: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1.820	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	1.581	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	3.401	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.040	0.060	.
(15) Countrywide Pure Premium:	3.785	2.134	5.919
(16) Countrywide Indicated Relativity:	1.771	1.495	.
(17) Countrywide Credibility:	0.170	0.180	.
(18) Countrywide Lost-Time Claims:	14.000	.	.
(19) Pure Premium Underlying Present Rate:	2.216	1.499	3.716
(20) Relativity to Underlying Present Rate:	0.756	0.599	.
(21) Credibility to Underlying Relativity:	0.790	0.760	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	0.898	0.725	.
(24) Balanced Formula Relativity:	0.861	0.686	0.788

VIII 00031 STIP

Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2022

Section VIII - G
 Exhibit 7

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Federal Class Codes		
8726 STEAMSHIP LINE OR AGENCY-PORT EMP: SPRVSR, CAPTNS, ENGRS, STWR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	93.952	1	24	21.982	116.023	31.423	131.450	300.878	1.469	1.734	3.202
2015	99.099	2	17	100.591	67.358	35.876	146.438	350.263	1.695	1.840	3.534
2016	94.736	0	14	0	434.846	0	223.206	658.052	4.590	2.356	6.946
2017	101.527	0	12	0	23.690	0	26.310	50.001	0.233	0.259	0.492
2018	108.203	0	14	0	80.834	0	90.846	171.680	0.747	0.840	1.587
MA Total:	497.518	3	81	122.573	722.751	67.300	618.250	1,530.873	1.699	1.378	3.077

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.768	0.863	.
(14) Massachusetts Credibility:	0.240	0.440	.
(15) Countrywide Pure Premium:	0.747	0.318	1.065
(16) Countrywide Indicated Relativity:	0.350	0.223	.
(17) Countrywide Credibility:	0.160	0.170	.
(18) Countrywide Lost-Time Claims:	12.000	.	.
(19) Pure Premium Underlying Present Rate:	1.570	1.628	3.198
(20) Relativity to Underlying Present Rate:	0.536	0.651	.
(21) Credibility to Underlying Relativity:	0.600	0.390	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	0.562	0.671	.
(24) Balanced Formula Relativity:	0.538	0.636	0.579

Class(es):		Effective: 7/1/2022							Federal Class Codes		
9077 UNITED STATES ARMED SERVICE RISK-ALL EMPLOYEES & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	0	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.000	0.000	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.897	1.896	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.629	4.744	7.373
(20) Relativity to Underlying Present Rate:	0.897	1.896	.
(21) Credibility to Underlying Relativity:	1.000	1.000	.
(22) Industry Group Converted Pure Premium:	2.212	1.596	3.808
(23) Formula Relativity:	0.897	1.896	.
(24) Balanced Formula Relativity:	0.859	1.796	1.252

VIII 000032 STIP

Section VIII - F-Class Recommendation
Subsection H - Proposed Rates
7/1/2022

Section VIII-H
Exhibit 1

Calculation of Federal Industry Group Rate Change and Limits

(1) Industry Group Differential	1.000
(2) Experience and Benefit Level Change - Overall	-9.1%
(3) Target Rate Change = (1) x [1.000 + (2)] - 1.000	-9.1%
(4) Maximum Rate Change = (3) + 16.5%	7.4%
(5) Minimum Rate Change = (3) - 16.5%	-25.6%
(6) Present Average Rate	7.594
(7) Uncapped Rate Level Factor = [1.000 + (3)] x (6)	6.903
(8) Capped Rate Level Factor	7.107

In addition, the WCRIBMA is limiting the increase in average rates for any class to \$15 and no average rate shall exceed \$90 per \$100 of payroll.

Notes:

- (1): Federal Industry Group is the only group being evaluated.
- (2): Selected Rate Change, from Section VIII-A, Exhibit 1.
- (6): Rates by class consistent with the 07/01/20 stipulation, weighted by five years of exposure.
- (8): Proposed average uncapped rates are capped by an iterative process using rate levels to determine if the required change is achieved.

VIII 00033 STIP

Section VIII - F-Class Recommendation
 Subsection H - Proposed Rates
 7/1/2022

Section VIII-H
 Exhibit 2

Calculation of Average Uncapped Rates

Class Code	Balanced Formula Relativity			Uncapped Rate Level Factor	Proposed Average Uncapped Rate = (4) x (5)
	Indemnity	Medical	Total		
(1)	(2)	(3)	(4)	(5)	(6)
6801	1.065	0.632	0.884	6.903	6.10
6824	1.144	1.318	1.217	6.903	8.40
6826	0.826	0.600	0.731	6.903	5.05
6843	2.579	1.860	2.277	6.903	15.72
6872	2.485	2.044	2.300	6.903	15.88
6874	2.948	1.898	2.508	6.903	17.31
7309	1.672	1.285	1.510	6.903	10.42
7313	14.607	2.781	9.650	6.903	66.61
7317	2.784	2.218	2.547	6.903	17.58
7327	3.672	2.813	3.312	6.903	22.86
7350	3.115	1.673	2.510	6.903	17.33
8709	0.861	0.686	0.788	6.903	5.44
8726	0.538	0.636	0.579	6.903	4.00
9077	0.859	1.796	1.252	6.903	8.64

Notes:

(2),(3),(4): Section VIII-G.

(5): Exhibit 1.

VIII 00034 STIP

Section VIII - F-Class Recommendation
Subsection H - Proposed Rates
7/1/2022

Section VIII-H
Exhibit 3

Comparison of Average Rates

Class Code (1)	Present Average Capped Rate (2)	Proposed Average Uncapped Rate (3)	Proposed Average Capped Rate (4)
6801	7.19	6.10	6.28
6824	10.87	8.40	8.65
6826	6.06	5.05	5.20
6843	10.61	15.72	11.40
6872	14.87	15.88	15.97
6874	16.24	17.31	17.44
7309	11.10	10.42	10.73
7313	13.46	66.61	14.46
7317	17.61	17.58	18.10
7327	25.10	22.86	23.54
7350	20.85	17.33	17.84
8709	5.21	5.44	5.59
8726	4.48	4.00	4.12
9077	5.75	8.64	6.18

Notes:

(2): from Section VIII-H, Exhibit 3 of the 07/01/20 Stipulation.

(3): Exhibit 2.

(4) = Total Balanced Formula Relativity (Section VIII-G) x Capped Rate Level Factor Subject to maximum and minimum caps (Exhibit 1).

VIII 00035 STIP

Section VIII - F-Class Recommendation
Subsection H - Proposed Rates
7/1/2022

Section VIII-H
Exhibit 4

Summary of Proposed Premium Change

Industry Group (1)	Present Premium (2)	Proposed Premium (3)	Proposed Change (4)	Target Change (5)	Capped Rate Level Factor (6)
Federal	6,883,109	6,256,745	-9.1%	-9.1%	7.11

Notes:

(2): Exposure x Present Average Rates, from Exhibit 3.

(3): Exposure x Proposed Average Rates, from Exhibit 3.

(4) = [(3) - (2)] / (2)

(5), (6): Exhibit 1.

VIII 00036 STIP

Section VIII - F-Class Recommendation
Subsection H - Proposed Rates
7/1/2022

Section VIII-H
Exhibit 5

Calculation of Pure Premium Underlying Proposed Rate Factor

Industry Group (1)	Injury Type (2)	Uncapped Rate Level Factor (3)	Industry Group Pure Premium (4)	Percent of Pure Premium =(4) / [Total of (4)] (5)	Expected Loss and LAE Ratio (6)	Pure Premium Underlying Proposed Rate Factor = (3) x (5) x (6) (7)
Federal	Indemnity	6.903	2.212	0.581	0.742	2.976
	Medical	6.903	1.596	0.419	0.742	2.148
	Total		3.808			

Notes:

(3): Section VIII - H, Exhibit 1.

(4): Section VIII - F, Exhibit 1, page 2.

(6): Section VI - J, Exhibit 1.

VIII 000037 STIP

Pricing Example for Class 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT

Calculation of MA Indicated Relativity:

		(A). Federal Benefits - Limited Losses (Unit Statistical Plan data, Excluding Large Deductibles)							
Policy Year		Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2014	0	0	0	0	357,084	0	2,218	
	2015	0	0	0	0	0	0	67,358	
	2016	0	0	0	0	0	0	2,252	
	2017	0	0	0	0	4,957	0	28,304	
	2018	0	0	0	0	0	0	15,864	
Medical	2014	0	0	0	0	142,916	0	2,059	2,965
	2015	0	0	0	0	0	0	81,594	2,263
	2016	0	0	0	0	0	0	2,322	14,360
	2017	0	0	0	0	6,272	0	27,059	8,028
	2018	0	0	0	0	0	0	7,423	2,121

		(B). Federal Benefits Primary Conversion Factors (Section VIII-E, Exhibit 1, Page 1)							
Policy Year		Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2014	0.850	0.813	0.843	0.828	0.792	0.843	0.806	
	2015	0.939	0.889	0.931	0.916	0.868	0.931	0.882	
	2016	1.120	0.969	1.112	1.097	0.949	1.112	0.963	
	2017	1.290	1.092	1.282	1.267	1.073	1.282	1.086	
	2018	2.084	1.622	2.074	2.053	1.599	2.074	1.614	
Medical	2014	0.856	0.773	0.856	0.856	0.773	0.856	0.773	0.727
	2015	0.990	0.861	0.990	0.990	0.861	0.990	0.861	0.759
	2016	1.082	0.887	1.082	1.082	0.887	1.082	0.887	0.804
	2017	1.134	0.913	1.134	1.134	0.913	1.134	0.913	0.825
	2018	1.353	1.006	1.353	1.353	1.006	1.353	1.006	0.911

		(C). Federal Converted Limited Losses [(A) x (B)]							
Policy Year		Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2014	0	0	0	0	282,719	0	1,788	
	2015	0	0	0	0	0	0	59,395	
	2016	0	0	0	0	0	0	2,168	
	2017	0	0	0	0	5,320	0	30,736	
	2018	0	0	0	0	0	0	25,611	
Medical	2014	0	0	0	0	110,528	0	1,592	2,155
	2015	0	0	0	0	0	0	70,250	1,718
	2016	0	0	0	0	0	0	2,059	11,542
	2017	0	0	0	0	5,729	0	24,718	6,623
	2018	0	0	0	0	0	0	7,466	1,931

VIII 00038 STIP

Section VIII - F-Class Recommendation
 Subsection I - Pricing Example
 7/1/2022

Section VIII-I
 Exhibit 1
 Page 2

Pricing Example for Class 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT

Calculation of MA Indicated Relativity (cont.):

		(D). Federal Unadjusted Excess Losses [(Excess Factor - 1.0) x (C)]							
Policy Year		Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2014	0	0	0	0	89,280	0	565	
	2015	0	0	0	0	0	0	18,756	
	2016	0	0	0	0	0	0	685	
	2017	0	0	0	0	1,680	0	9,706	
	2018	0	0	0	0	0	0	8,088	
Medical	2014	0	0	0	0	34,903	0	503	681
	2015	0	0	0	0	0	0	22,184	542
	2016	0	0	0	0	0	0	650	3,645
	2017	0	0	0	0	1,809	0	7,806	2,092
	2018	0	0	0	0	0	0	2,358	610

		(E). Federal Adjusted Excess Losses							
Policy Year		Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2014	0	0	0	0	62,496	0	395	
	2015	0	0	0	0	0	0	13,129	
	2016	0	0	0	0	0	0	479	
	2017	0	0	0	0	1,176	0	6,794	
	2018	0	0	0	0	0	0	5,661	
Medical	2014	0	0	0	0	61,687	0	672	681
	2015	0	0	0	0	0	0	27,811	542
	2016	0	0	0	0	0	0	856	3,645
	2017	0	0	0	0	2,313	0	10,717	2,092
	2018	0	0	0	0	0	0	4,784	610

		(F). Federal Secondary Conversion Factors				
		Fatal	Permanent Total	Permanent Partial	Temporary Total	Medical Only
		Indemnity	1.240	1.222	1.313	1.316
Medical	1.187	1.117	1.201	1.203	1.187	

		(G). Federal Converted Unlimited Losses							
Policy Year		Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2014	0	0	0	0	453,297	0	2,872	
	2015	0	0	0	0	0	0	95,422	
	2016	0	0	0	0	0	0	3,483	
	2017	0	0	0	0	8,530	0	49,379	
	2018	0	0	0	0	0	0	41,146	
Medical	2014	0	0	0	0	206,774	0	2,725	3,366
	2015	0	0	0	0	0	0	117,976	2,683
	2016	0	0	0	0	0	0	3,506	18,023
	2017	0	0	0	0	9,656	0	42,632	10,343
	2018	0	0	0	0	0	0	14,737	3,016

		(H). Total Federal Converted Unlimited Losses			
Policy Year		Indemnity		Medical	
		LD	NLD	LD	NLD
2014		0	456,169	0	212,864
2015		0	95,422	0	120,658
2016		0	3,483	0	21,529
2017		0	57,909	0	62,631
2018		0	41,146	0	17,753
Total		0	654,128	0	435,436

Notes:

(E): Indemnity Adjusted Excess Losses = Indemnity Unadjusted Excess Losses x 0.7

Medical Adjusted Excess Losses = Medical Unadjusted Excess Losses + 0.3 x Indemnity Unadjusted Excess Losses

(F): Section VIII-E, Exhibit 1, Page 2.

(G) = [(C) + (E)] x (F)

VIII 000040 STIP

Section VIII - F-Class Recommendation
 Subsection I - Pricing Example
 7/1/2022

Section VIII-I
 Exhibit 1
 Page 4

Pricing Example for Class 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT

Calculation of MA Indicated Relativity (cont.):

(D). State Unadjusted Excess Losses [(Excess Factor -1.0) x (C)]									
Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only	
	LD	NLD		LD	NLD	LD	NLD		
Indemnity	2014	0	0	0	0	0	0		
	2015	0	0	0	0	0	0		
	2016	0	0	0	0	0	0		
	2017	0	0	0	0	0	0		
	2018	0	0	0	0	0	0		
Medical	2014	0	0	0	0	0	0	0	
	2015	0	0	0	0	0	0	0	
	2016	0	0	0	0	0	0	0	
	2017	0	0	0	0	0	0	0	
	2018	0	0	0	0	0	0	0	

(E). State Adjusted Excess Losses									
Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only	
	LD	NLD		LD	NLD	LD	NLD		
Indemnity	2014	0	0	0	0	0	0		
	2015	0	0	0	0	0	0		
	2016	0	0	0	0	0	0		
	2017	0	0	0	0	0	0		
	2018	0	0	0	0	0	0		
Medical	2014	0	0	0	0	0	0	0	
	2015	0	0	0	0	0	0	0	
	2016	0	0	0	0	0	0	0	
	2017	0	0	0	0	0	0	0	
	2018	0	0	0	0	0	0	0	

(F). State Secondary Conversion Factors					
	Fatal	Permanent Total	Permanent Partial	Temporary Total	Medical Only
Indemnity	1.132	1.116	1.199	1.202	
Medical	1.187	1.118	1.201	1.203	1.187

(G). State Converted Unlimited Losses									
Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only	
	LD	NLD		LD	NLD	LD	NLD		
Indemnity	2014	0	0	0	0	0	0		
	2015	0	0	0	0	0	0		
	2016	0	0	0	0	0	0		
	2017	0	0	0	0	0	0		
	2018	0	0	0	0	0	0		
Medical	2014	0	0	0	0	0	0	0	
	2015	0	0	0	0	0	0	0	
	2016	0	0	0	0	0	0	0	
	2017	0	0	0	0	0	0	0	
	2018	0	0	0	0	0	0	0	

(H). Total State Converted Unlimited Losses				
Policy Year	Indemnity		Medical	
	LD	NLD	LD	NLD
2014	0	0	0	0
2015	0	0	0	0
2016	0	0	0	0
2017	0	0	0	0
2018	0	0	0	0
Total	0	0	0	0

Notes:

(E): Indemnity Adjusted Excess Losses = Indemnity Unadjusted Excess Losses x 0.7

Medical Adjusted Excess Losses = Medical Unadjusted Excess Losses + 0.3 x Indemnity Unadjusted Excess Losses

(F): Section IX-B, Exhibit 1, Page 3.

(G) = [(C) + (E)] x (F)

VIII 000041 STIP

Section VIII - F-Class Recommendation
Subsection I - Pricing Example
7/1/2022

Section VIII-I
Exhibit 1
Page 5

Pricing Example for Class 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT

Calculation of MA Indicated Relativity (cont.):

Exposure, Converted Unlimited Losses (Both Federal & State)			
Policy Year (1)	Exposure (2)	Indemnity (3)	Medical (4)
2014	51,022	456,169	212,864
2015	52,497	95,422	120,658
2016	45,902	3,483	21,529
2017	36,701	57,909	62,631
2018	34,164	41,146	17,753
Total	220,286	654,128	435,436
(5)	Indicated Pure Premium	2.969	1.977
(6)	Federal Class Codes Industry Group Pure Premium	2.212	1.596
(7)	MA Indicated Relativity	1.343	1.238

Notes:

- (2): Unit Statistical Plan data, excluding Large Deductibles
- (3), (4): Converted Unlimited Losses from Pages 2 & 4.
- (5): Totals of (3) and (4), divided by Total of (2), respectively.
- (6): Section VIII-F, Exhibit 1, Page 2.
- (7) = (5) / (6)

VIII 00042 STIP

Pricing Example for Class 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT

Calculation of Countrywide Relativity

State (1)	State Code (2)	Losses				Lost-Time Claims		Payroll (9)
		Indemnity		Medical		Likely (7)	Not Likely (8)	
		Likely (3)	Not Likely (4)	Likely (5)	Not Likely (6)			
Alabama	1	0	5,233	0	11,173	0	1	3,306,634
Arizona	2	0	0	0	0	0	0	41,404
Arkansas	3	0	0	0	0	0	0	21,360
Colorado	5	0	0	0	0	0	0	4,829
Connecticut	6	0	37,959	0	47,140	0	1	1,199,942
D.C.	8	0	0	0	0	0	0	0
Florida	9	52,035	57,537	60,583	238,500	2	7	12,119,387
Georgia	10	0	0	0	0	0	0	434,437
Idaho	11	0	0	0	0	0	0	1,506
Illinois	12	0	0	0	1,960	0	0	809,993
Indiana	13	0	0	0	0	0	0	6,672
Iowa	14	0	8,138	0	12,986	0	1	1,173,072
Kansas	15	0	0	0	0	0	0	0
Kentucky	16	0	0	0	882	0	0	633,691
Louisiana	17	0	41,949	0	184,577	0	5	5,931,615
Maine	18	0	18,787	0	54,160	0	7	13,837,677
Maryland	19	0	0	0	1,382	0	0	570,315
Michigan	21	0	0	0	0	0	0	0
Minnesota	22	0	0	0	0	0	0	0
Mississippi	23	0	76,791	0	488,343	0	8	22,040,063
Missouri	24	0	0	0	0	0	0	66,877
Montana	25	0	0	0	0	0	0	0
Nebraska	26	0	0	0	0	0	0	819
Nevada	27	0	0	0	0	0	0	0
New Hampshire	28	0	33,942	0	88,628	0	1	1,585,557
New Mexico	30	0	0	0	0	0	0	0
North Carolina	32	47,790	96,835	20,072	166,179	1	2	6,367,960
Oklahoma	35	16,786	0	3,589	586	1	0	619,885
Oregon	36	423,494	61,889	249,761	79,168	1	6	6,743,740
Rhode Island	38	0	42,989	0	38,166	0	2	4,078,677
South Carolina	39	0	61,242	0	92,485	0	2	1,616,184
South Dakota	40	0	0	0	0	0	0	0
Tennessee	41	0	0	0	896	0	0	433,962
Utah	43	0	0	0	0	0	0	0
Vermont	44	0	0	0	0	0	0	0
Virginia	45	0	50,336	0	174,408	0	1	12,597,004
West Virginia	47	0	0	0	0	0	0	0
Wisconsin	48	0	0	0	0	0	0	0
Hawaii	52	0	0	0	587	0	0	2,399,030
Alaska	54	0	68,064	0	295,131	0	12	11,846,632
Total		540,105	661,691	334,005	1,977,337	5	56	110,488,924

Notes:

(3) - (9): Data are total for latest three policy years. See Section IX-D, Exhibit 3.
 (7), (8): Used in calculating countrywide credibilities.

VIII 00043 STIP

Pricing Example for Class 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT

Calculation of Countrywide Relativity

State (1)	State Code (2)	Federal Class Codes Pitch Factors		Pure Premiums, on MA Level		Total (7)
		Indemnity (3)	Medical (4)	Indemnity (5)	Medical (6)	
Alabama	1	3.698	1.678	0.585	0.567	
Arizona	2	0.000	0.000	0.000	0.000	
Arkansas	3	5.207	0.974	0.000	0.000	
Colorado	5	0.000	0.000	0.000	0.000	
Connecticut	6	1.218	0.673	3.852	2.645	
D.C.	8	0.000	0.000	0.000	0.000	
Florida	9	2.077	0.902	1.878	2.226	
Georgia	10	0.093	0.071	0.000	0.000	
Idaho	11	0.000	0.000	0.000	0.000	
Illinois	12	3.483	1.208	0.000	0.292	
Indiana	13	1.656	0.676	0.000	0.000	
Iowa	14	4.689	1.378	3.253	1.525	
Kansas	15	0.000	0.000	0.000	0.000	
Kentucky	16	8.093	2.628	0.000	0.366	
Louisiana	17	2.215	0.963	1.567	2.996	
Maine	18	5.527	3.352	0.750	1.312	
Maryland	19	2.261	2.771	0.000	0.671	
Michigan	21	0.000	0.000	0.000	0.000	
Minnesota	22	0.000	0.000	0.000	0.000	
Mississippi	23	5.228	1.008	1.822	2.234	
Missouri	24	1.101	1.204	0.000	0.000	
Montana	25	0.000	0.000	0.000	0.000	
Nebraska	26	0.000	0.000	0.000	0.000	
Nevada	27	0.000	0.000	0.000	0.000	
New Hampshire	28	1.387	0.353	2.969	1.971	
New Mexico	30	0.000	0.000	0.000	0.000	
North Carolina	32	1.453	0.811	3.299	2.371	
Oklahoma	35	1.374	2.153	3.721	1.450	
Oregon	36	0.949	0.896	6.829	4.371	
Rhode Island	38	0.760	0.449	0.801	0.420	
South Carolina	39	0.803	0.397	3.042	2.271	
South Dakota	40	0.000	0.000	0.000	0.000	
Tennessee	41	3.099	2.017	0.000	0.416	
Utah	43	0.000	0.000	0.000	0.000	
Vermont	44	0.000	0.000	0.000	0.000	
Virginia	45	3.188	2.202	1.274	3.049	
West Virginia	47	280.030	21.357	0.000	0.000	
Wisconsin	48	0.000	0.000	0.000	0.000	
Hawaii	52	1.117	0.051	0.000	0.001	
Alaska	54	2.139	0.759	1.229	1.892	
(8)	Average of (5), (6) weighted by Payroll from Page 1, respectively			1.863	2.125	3.988
(9)	CW Federal Class Codes Pure Premium			2.137	1.427	3.564
(10)	CW Relativity = (8) / (9)			0.872	1.489	1.119
(11)	CW Relativity, balanced to unity			0.872	1.489	

Notes:

(3), (4) = (MA Total Federal Class Code Limited Losses) / [(Federal Class Code Pure Premium by State) x (MA Total Federal Class Code Exposure)].

(5) = 100 x [State Indemnity Losses / State Payroll] x (3), where State Indemnity Losses and State Payroll from page 1.

(6) = 100 x [State Medical Losses / State Payroll] x (4), where State Medical Losses and State Payroll from page 1.

(9) = (8) weighted by MA five year Federal Class Codes Exposure

(11): Relativities balanced to unity (weighted by MA exposure) over Federal Class Codes Industry Group.

VIII 000044 STIP

Section VIII - F-Class Recommendation
 Subsection I - Pricing Example
 7/1/2022

Section VIII-I
 Exhibit 3

Pricing Example for Class 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT

Calculation of Credibility and Balanced Formula Relativity:

- (1) MA Indicated Relativity
- (2) Countrywide Indicated Relativity
- (3) Relativity to Underlying Present Rate

Injury Type	
Indemnity	Medical
1.343	1.238
0.872	1.489
1.337	1.533

Calculation of MA Credibility:

The MA Credibilities are calculated using the formula $Z=(E / F)^{0.4}$ where E are expected losses for that injury type.

- (4) Adopted Relativity
- (5) Industry Group Pure Premium Underlying Present Rate Factor
- (6) Pure Premium Underlying Present Rate = (4) x (5)
- (7) Expected Losses = (6) x [(Total Exposure from Exhibit 1, Page 5)]
- (8) Full Credibility Standards
- (9) MA Credibility = Minimum of {100%, [(7) / (8)]^{0.4}}

Injury Type	
Indemnity	Medical
1.325	1.515
2.957	2.532
3.918	3.836
863,022	844,960
28,050,000	6,400,000
25%	44%

Calculation of Countrywide Credibility

The Countrywide Credibilities are calculated using the formula $Z=(E / F)^{0.4}$ where E are the countrywide claim counts for that injury type. The countrywide credibility is limited to no more than half of the complement of the credibility assigned to the Massachusetts data.

- (10) Countrywide Lost-Time Claims
- (11) Countrywide Claim Count Standard
- (12) Countrywide Credibility = Minimum of { [(10) / (11)]^{0.4}, 0.5 x [100% - (9)] }
- (13) Credibility to Underlying = 100% - (9) - (12)
- (14) Formula Relativity = [(1) x (9)] + [(2) x (12)] + [(3) x (13)]
- (15) Off Balance Factor

Injury Type	
Indemnity	Medical
61	61
1,150	1,000
31%	28%
44%	28%
1.194	1.391
1.044	1.056

- (16) Balanced Formula Relativity

Injury Type		
Indemnity	Medical	Total
1.144	1.318	1.217

Notes:

- (1): Exhibit 1, Page 5.
- (2): Exhibit 2, Page 2.
- (3): Relativity of (6) to Industry Group average, using 5 year Schedule Z exposure as weights.
- (4): Section VIII-F, Exhibit 3.
- (5): Section VIII-F, Exhibit 2.
- (8), (11): Section IX-D, Exhibit 1, Page 1.
- (10): Exhibit 2, Page 1.
- (15): Factor to balance Formula relativities across industry group to unity using 5 year Schedule Z exposure by injury type.
- (16) = (14) / (15), Total Balanced Formula Relativity is the weighted average of Partial Relativities using the MA Industry Group Pure Premium as weights.

VIII 00045 STIP

Section VIII - F-Class Recommendation
Subsection I - Pricing Example
7/1/2022

Section VIII-I
Exhibit 4

Pricing Example for Class 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT

Calculation of Proposed Average Rate and Proposed Manual Rate:

(1) Present Average Rate	10.87
(2) Total Balanced Formula Relativity	1.217
(3) Capped Rate Level Factor	7.107
(4) Maximum Average Rate	11.67
(5) Minimum Average Rate	8.09
(6) Proposed Average Capped Rate = (2) x (3), Subject to Caps (4), (5)	8.65
(7) Offset for Merit Rating	0.997
(8) Offset for ARAP	1.054
(9) Offset for Construction Classification Premium Adjustment Program	1.000
(10) Provision for Insolvency Fund Assessment Recoupment	0.0056
(11) Proposed Manual Rate = { (6) / [(7) x (8) x (9)] } x { 1.000 / [1.000 - (10)] }	8.28
(12) Minimum Premium	500
(13) Loss Constant	0
(14) Expected Loss Rate	3.40
(15) D-Ratio	0.20

Notes:

(1): Section VIII-H, Exhibit 3.

(2): Exhibit 3.

(3): Section VIII-H, Exhibit 1. Proposed average uncapped rates are capped by an iterative process using rate levels to determine if the required change is achieved. Class 6824 is in the Federal Class Codes Industry Group.

(4): Multiple caps apply including the maximum increase for any class within the industry group, a maximum absolute dollar change of \$15, and a maximum absolute average rate of \$90.

(5): Based on the minimum decrease for any class within the industry group.

(7), (8), (9), (10): Section IX - K, Exhibit 1. Class 6824 is not eligible for the Construction Credit prog

(12) = { [(11) x 35.0] + (13) + Expense Constant } subject to a maximum of \$500

Where Expense Constant = 159 if (11) x 35 + (13) < 200,

= 250 if (11) x 35 + (13) >= 200 and < 1000

or = 338 if (11) x 35 + (13) >= 1000.

(13): No loss constant for Federal classes.

(14) = (6) x Ratio of Experience Rating ELR to Average Rate, from Section X-C, Exhibit 1.

Class 6824 is in Hazard Group F.

(15): See text of Section X for an explanation of the calculation of D-Ratios.

VIII 000046 STIP

Section VIII - F-Class Recommendation
Subsection J - U.S.L.H. & H.W. Coverage Percentage
7/1/2022

Section VIII-J
Exhibit 1

Calculation of USLH & HW Compensation Coverage Percentage

(1)	Benefits Differential Underlying Current USLH & HW Coverage Percentage	1.162
(2)	State Benefit Level Adjustments Since Last Approval	1.016
(3)	Federal Benefit Level Adjustments Since Last Approval	1.004
(4)	Revised Benefits Differential = (1) x [(3) / (2)]	1.148
(5)	Federal Indemnity Losses as % of Total Federal Losses	58.0%
(6)	Expected Loss Ratio for State Classes	62.5%
(7)	Fixed Expense Ratio	5.9%
(8)	Special Fund Assessment Rate as % of Federal Indemnity Losses	0.113
(9)	Loss Adjustment Expense Factor (Applies to Losses)	1.187
(10)	USLH & HW Coverage Percentage for Manual Rates	1.196
(11)	USLH & HW Coverage Percentage for Expected Loss Rates	1.137

Notes:

(1): Section VIII-J, Exhibit 1 of 7/1/2018 Stipulation.

(2): Total Benefit Level Changes from Prior Effective Period to Prospective Period from Section IV-A, Exhibit 1

(3): Total Benefit Level Changes from Prior Effective Period to Prospective Period from Section IV-F, Exhibit 1

(5): Based on ratio of indemnity losses to total losses from Section VIII-C, Exhibit 1, Page 1.

(6): Section VI-J, Exhibit 1.

(7): Average of Fixed Expense Ratios for 2 PYs from Section VI-B, Exhibit 1.

(8): NCCI's Tax & Assessment Directory.

(9): Section VIII-E, Exhibit 1, Page 2.

(10) = { [(6) x (4) x (9)] + [(6) x (4) x (5) x (8)] + (7) } / { [(6) x (9)] + (7) }

(11) = { [(6) x (4) x (9)] + (7) } / { [(6) x (9)] + (7) }

VIII 000047 STIP

Section VIII - F-Class Recommendation
Subsection K - Federal Tax Multiplier
7/1/2022

Section VIII-K
Exhibit 1

Calculation of Federal Tax Multiplier

(1)	State Tax Multiplier	1.036
(2)	Loading for Taxes and Residual Market Subsidy = $1.0 - [1.0 / (1)]$	3.4%
(3)	Expected Loss Ratio (no LAE)	61.7%
(4)	Federal Special Funds Assessment	11.3%
(5)	Federal Indemnity Losses as % of Total Losses	58.0%
(6)	Loading for Federal Funds Assessment = $(3) \times (4) \times (5)$	4.0%
(7)	Federal Tax Multiplier = $1.0 / [1.0 - (2) - (6)]$	1.081

Notes:

(1),(3): Section XII-A, Exhibit 4.

(4): NCCI Tax and Assessment Directory.

(5): Based on ratio of federal indemnity losses to state and federal total losses from Section VIII-C, Exhibit 1, Pages 1 and 3.

IX 00016 STIP

MASSACHUSETTS WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE MANUAL **RATES**

Draft Proposed Effective July 1, 2022 Page RA-1

RATES

LEGEND

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (a) Rate for each individual risk must be obtained by Home Office from the MA Bureau.
D Supplement Disease Loading. Refer to Section IV of the Manual Supplement - - Treatment of Disease Coverage. | F Rate provides for coverage under the United States Longshore and Harbor Workers' Compensation Act.
M Risks are subject to Admiralty Law or Federal Employers Liability Act (FELA). |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

CLASS CODE	RATE	MIN PREM	LOSS CONST	CLASS CODE	RATE	MIN PREM	LOSS CONST	CLASS CODE	RATE	MIN PREM	LOSS CONST	CLASS CODE	RATE	MIN PREM	LOSS CONST
0005	2.11	253.	20.	1924	1.92	226.	--	2501	1.86	224.	--	3082D	4.10	303.	--
0008	2.07	251.	20.	1925	5.55	353.	--	2503	0.93	192.	--	3085D	3.99	299.	--
0016	2.99	284.	20.	2003	3.13	269.	--	2570	3.65	287.	--	3110	7.47	500.	--
0034	2.58	269.	20.	2014	3.38	277.	--	2576	1.83	223.	--	3111	1.76	221.	--
0035	1.41	228.	20.	2021	2.24	237.	--	2585	2.37	242.	--	3113	1.45	210.	--
0036	2.58	269.	20.	2039	3.19	271.	--	2586	1.82	223.	--	3114	2.44	244.	--
0042	2.88	280.	20.	2041	1.98	228.	--	2587	2.11	253.	20.	3118	1.37	207.	--
0046	2.04	250.	20.	2070	2.86	259.	--	2623	4.07	301.	--	3119	0.72	184.	--
0050	3.70	339.	50.	2081	2.27	238.	--	2651	1.33	206.	--	3120	1.05	196.	--
0059D	0.22	.	.	2089	2.27	238.	--	2660	1.78	221.	--	3122	1.93	227.	--
0065D	0.10	.	.	2095	2.34	241.	--	2683	1.89	225.	--	3127	1.13	199.	--
0066D	0.08	.	.	2101	2.27	238.	--	2688	1.52	212.	--	3131	1.10	198.	--
0067D	0.08	.	.	2105	(a)	(a)	(a)	2702	11.35	500.	20.	3132	2.01	229.	--
0079	2.01	249.	20.	2111	1.87	224.	--	2710	5.36	347.	--	3145	1.37	207.	--
0083	3.08	287.	20.	2114	2.27	238.	--	2731	2.47	245.	--	3146	1.81	222.	--
0106	8.37	500.	20.	2115	4.86	329.	--	2747	4.67	322.	--	3169	2.23	237.	--
0113	2.58	269.	20.	2121	1.23	202.	--	2790	1.57	214.	--	3179	0.94	192.	--
0170	2.58	269.	20.	2130	1.26	203.	--	2802	3.14	269.	--	3180	2.09	232.	--
0771b	0.56	.	.	2131	2.58	249.	--	2835	1.40	208.	--	3188	2.03	230.	--
0908	73.00	137.	--	2143	2.08	232.	--	2836	1.94	227.	--	3200	1.84	223.	--
0909	163.00	227.	--	2150	3.19	271.	--	2841	3.17	270.	--	3220	2.47	245.	--
0912	325.00	389.	--	2156	3.39	278.	--	2883	2.78	256.	--	3223	(a)	(a)	(a)
0913	146.00	210.	--	2157	3.59	285.	--	2923	1.27	203.	--	3255	1.62	216.	--
0917	2.02	250.	20.	2172	1.49	211.	--	2942	1.41	208.	--	3257	2.07	231.	--
0918	0.37	192.	20.	2211	4.88	330.	--	3018	2.09	232.	--	3270	1.86	224.	--
1430	4.31	310.	--	2220	2.12	233.	--	3022	2.91	261.	--	3300	2.70	254.	--
1438	2.85	259.	--	2260	4.41	313.	--	3027	3.34	276.	--	3305	(a)	(a)	(a)
1463	10.40	500.	--	2288	3.24	272.	--	3028	2.28	239.	--	3315	2.51	247.	--
1624D	3.35	296.	20.	2305	2.64	251.	--	3030	4.68	323.	--	3336	2.38	242.	--
1655	2.19	256.	20.	2362	1.53	213.	--	3040	4.41	313.	--	3365	4.19	356.	50.
1701	1.93	227.	--	2380	1.66	217.	--	3041	2.35	241.	--	3372	1.78	221.	--
1710D	3.35	296.	20.	2402	1.91	226.	--	3042	3.70	289.	--	3373	3.10	268.	--
1747	2.30	240.	--	2413	2.92	261.	--	3066	2.01	229.	--	3381	1.59	215.	--
1748	2.77	256.	--	2416	1.96	228.	--	3076	1.88	225.	--	3383	1.30	205.	--
1853	1.10	198.	--	2417	1.78	221.	--	3081D	4.10	303.	--	3385	0.64	181.	--

Non-Ratable Code and Rate to be used with the following classifications:

b 4771

IX 00017 STIP

Section IX - Classification Pricing
 Subsection A - Summary
 7/1/2022

Section IX - A
 Exhibit 1
 Page 2

MASSACHUSETTS WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE MANUAL **RATES**

Draft

Proposed Effective July 1, 2022

Page RA-2

RATES															
CLASS CODE	RATE	MIN PREM	LOSS CONST	CLASS CODE	RATE	MIN PREM	LOSS CONST	CLASS CODE	RATE	MIN PREM	LOSS CONST	CLASS CODE	RATE	MIN PREM	LOSS CONST
3400	2.23	237.	--	4150	0.69	183.	--	4771c	3.72	309.	--	5507	4.99	475.	50.
3507	2.34	241.	--	4239	1.96	228.	--	4777	2.17	235.	--	5508D	3.84	343.	50.
3515	2.28	239.	--	4243	2.31	240.	--	4825	0.36	172.	--	5509	4.53	459.	50.
3558	0.64	181.	--	4244	2.38	242.	--	4828	0.76	186.	--	5538	3.77	341.	50.
3571	0.57	179.	--	4250	1.63	216.	--	4829	0.76	186.	--	5545	41.21	500.	50.
3574	1.41	208.	--	4251	1.87	224.	--	4902	1.41	208.	--	5547	10.07	500.	50.
3612	1.10	198.	--	4273	2.64	251.	--	4923	0.51	177.	--	5606	1.16	250.	50.
3620	3.08	267.	--	4279	1.92	226.	--	5020	3.85	344.	50.	5610	4.17	355.	50.
3629	1.41	208.	--	4283	1.35	206.	--	5022	9.14	500.	50.	5645	6.09	500.	50.
3632	1.41	208.	--	4299	1.50	212.	--	5037	14.14	500.	50.	5701	18.51	500.	50.
3634	1.26	203.	--	4304	3.86	294.	--	5040	18.99	500.	50.	5703	10.17	500.	50.
3635	2.29	239.	--	4307	1.38	207.	--	5057	18.45	500.	50.	5705	8.54	500.	50.
3638	1.41	208.	--	4308	1.53	213.	--	5059	19.81	500.	50.	6003	6.94	500.	50.
3642	0.87	189.	--	4351	0.76	186.	--	5102	5.72	500.	50.	6005	3.84	343.	50.
3643	1.32	205.	--	4352	1.01	194.	--	5146	6.13	500.	50.	6204	4.80	468.	50.
3647	1.98	228.	--	4360	0.51	177.	--	5160	2.48	296.	50.	6217	3.98	348.	50.
3648	1.01	194.	--	4361	0.52	197.	20.	5183	2.84	308.	50.	6229	3.52	332.	50.
3681	0.53	178.	--	4362	0.42	194.	20.	5188	3.53	333.	50.	6233	1.93	277.	50.
3685	0.50	177.	--	4410	2.68	253.	--	5190	2.17	285.	50.	6251D	3.94	347.	50.
3724	4.05	351.	50.	4432	0.59	180.	--	5191	0.67	202.	20.	6252D	5.39	489.	50.
3726	5.47	491.	50.	4439	3.94	297.	--	5192	2.39	263.	20.	6306	7.34	500.	50.
3807	2.23	237.	--	4452	2.25	238.	--	5213	10.30	500.	50.	6319	2.51	297.	50.
3808	2.80	257.	--	4459	2.47	245.	--	5215	3.83	343.	50.	6325	2.35	291.	50.
3821	4.24	327.	20.	4470	1.71	219.	--	5221	5.99	500.	50.	6400	4.37	453.	50.
3826	3.73	290.	--	4484	1.76	221.	--	5222	8.31	500.	50.	6504	2.27	238.	--
3830	1.41	208.	--	4493	1.63	216.	--	5223	3.71	339.	50.	6702M	(a)	.	--
3841	1.30	205.	--	4511	0.26	188.	20.	5348	4.21	356.	50.	6703M	(a)	.	--
4000	4.92	351.	20.	4512	0.08	182.	20.	5402	5.96	500.	50.	6704M	(a)	.	--
4021	2.79	257.	--	4557	1.55	213.	--	5403	8.17	500.	50.	6801F	6.01	460.	--
4024	3.08	267.	--	4558	1.34	206.	--	5437	3.38	327.	50.	6811	5.03	355.	20.
4034	5.12	338.	--	4583	2.17	235.	--	5443	3.24	322.	50.	6824F	8.28	500.	--
4036	1.61	215.	--	4611	0.71	184.	--	5445	5.80	500.	50.	6826F	4.97	333.	--
4038	2.36	242.	--	4635	4.24	307.	--	5462	5.04	476.	50.	6834	1.92	246.	20.
4053	2.07	231.	--	4653	1.61	215.	--	5472	7.02	500.	50.	6836	2.72	274.	20.
4062	1.65	217.	--	4665	8.17	500.	--	5473	8.19	500.	50.	6843F	10.91	500.	--
4112	0.32	170.	--	4692	0.44	174.	--	5474	3.69	338.	50.	6854	9.12	500.	20.
4113	2.07	231.	--	4693	0.69	183.	--	5478	3.19	321.	50.	6872F	15.28	500.	--
4114	2.35	241.	--	4720	1.39	208.	--	5479	4.98	474.	50.	6874F	16.69	500.	--
4130	2.77	256.	--	4740	0.74	185.	--	5480	4.21	356.	50.	6882	12.78	500.	20.
4133	1.34	206.	--	4741	1.99	229.	--	5506	4.73	466.	50.	6884	13.95	500.	20.

For Non-Ratable portion of Rate, refer to:

c 0771

IX 00018 STIP

Section IX - Classification Pricing
 Subsection A - Summary
 7/1/2022

Section IX - A
 Exhibit 1
 Page 3

MASSACHUSETTS WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE MANUAL **RATES**

Draft Proposed Effective July 1, 2022 Page RA-3

RATES

CLASS CODE	RATE	MIN PREM	LOSS CONST	CLASS CODE	RATE	MIN PREM	LOSS CONST	CLASS CODE	RATE	MIN PREM	LOSS CONST	CLASS CODE	RATE	MIN PREM	LOSS CONST
7016M	1.88	.	--	7502	1.48	231.	20.	8232	4.77	346.	20.	8829	2.05	251.	20.
7024M	2.35	.	--	7515	2.74	275.	20.	8233	4.79	347.	20.	8831	0.91	211.	20.
7038M	3.55	.	--	7520	2.56	269.	20.	8235	3.52	302.	20.	8832	0.24	187.	20.
7046M	5.06	.	--	7538	5.13	480.	50.	8263	4.35	331.	20.	8833	0.95	212.	20.
7047M	2.95	.	--	7539	1.20	221.	20.	8264	4.31	330.	20.	8835	1.54	233.	20.
7050M	5.57	.	--	7580	2.96	283.	20.	8265	4.79	347.	20.	8837	(a)	(a)	(a)
7090M	4.44	.	--	7590	4.19	326.	20.	8279	3.27	293.	20.	8868	0.64	201.	20.
7098M	5.95	.	--	7600	3.26	293.	20.	8291	2.98	283.	20.	8901	0.06	181.	20.
7099M	7.46	.	--	7601	4.73	466.	50.	8292	2.92	281.	20.	9014	1.85	244.	20.
7133	(a)	(a)	(a)	7610	0.28	189.	20.	8293	6.66	500.	20.	9015	2.59	270.	20.
7151M	8.26	.	--	7704	2.90	281.	20.	8350	5.88	476.	20.	9016	1.51	232.	20.
7152M	12.95	.	--	7720	1.30	225.	20.	8380	2.25	258.	20.	9019	2.38	262.	20.
7153M	10.33	.	--	7855	2.94	312.	50.	8381	1.46	230.	20.	9033	2.09	252.	20.
7219	6.66	500.	20.	8001	1.44	229.	20.	8385	3.02	285.	20.	9040	2.69	273.	20.
7230	7.61	500.	20.	8002	1.62	236.	20.	8392	1.45	230.	20.	9044	1.14	219.	20.
7231	10.18	500.	20.	8006	1.03	215.	20.	8393	1.07	216.	20.	9052	1.27	223.	20.
7309F	10.27	500.	--	8008	0.68	203.	20.	8500	4.79	347.	20.	9058	1.28	224.	20.
7313F	13.84	500.	--	8010	1.43	229.	20.	8601	0.17	185.	20.	9060	0.88	210.	20.
7317F	17.32	500.	--	8013	0.32	190.	20.	8709F	5.35	346.	--	9061	0.88	210.	20.
7327F	22.53	500.	--	8017	0.85	209.	20.	8710	2.38	262.	20.	9062	0.88	210.	20.
7333M	7.53	.	--	8018	3.15	289.	20.	8719	2.38	262.	20.	9063	0.53	198.	20.
7335M	8.85	.	--	8021	2.96	283.	20.	8720	0.72	204.	20.	9077F	5.91	457.	--
7337M	11.10	.	--	8031	1.45	230.	20.	8721	0.20	186.	20.	9079	0.86	209.	20.
7350F	17.07	500.	--	8032	1.12	218.	20.	8726F	3.94	297.	--	9089	0.62	201.	20.
7360	3.71	309.	20.	8033	1.24	222.	20.	8734M	0.44	.	--	9093	0.95	212.	20.
7370	3.35	296.	20.	8034	2.59	270.	20.	8737M	0.35	.	--	9101	3.24	292.	20.
7380	5.25	454.	20.	8039	1.16	220.	20.	8738M	0.55	.	--	9102	1.79	242.	20.
7382	3.31	295.	20.	8044	2.38	262.	20.	8742	0.09	182.	20.	9154	1.36	227.	20.
7394M	9.68	.	--	8046	1.94	247.	20.	8745	5.33	457.	20.	9156	1.67	237.	20.
7395M	12.37	.	--	8048	2.12	253.	20.	8747	0.63	201.	20.	9178	11.72	500.	20.
7398M	15.51	.	--	8058	1.98	248.	20.	8748	0.59	200.	20.	9179	34.14	500.	20.
7403	3.06	286.	20.	8103	2.31	260.	20.	8800	0.87	209.	20.	9180	3.97	318.	20.
7405d	0.77	215.	20.	8105	6.59	500.	20.	8803	0.04	180.	20.	9182	2.56	269.	20.
7420	7.63	500.	20.	8106	4.49	336.	20.	8805M	0.18	.	--	9186	3.97	318.	20.
7421	0.95	212.	20.	8107	2.63	271.	20.	8810	0.06	181.	20.	9220	3.13	289.	20.
7422	0.95	212.	20.	8111	2.36	262.	20.	8814M	0.14	.	--	9402	3.43	299.	20.
7425	2.30	260.	20.	8203	5.32	456.	20.	8815M	0.23	.	--	9403	8.60	500.	20.
7431e	0.71	212.	20.	8204	5.37	458.	20.	8820	0.06	181.	20.	9410	3.12	288.	20.
7445f	0.25	.	.	8215	2.79	277.	20.	8824	1.78	241.	20.	9501	1.77	221.	--
7453g	0.24	.	.	8227	4.66	463.	50.	8826	1.34	226.	20.	9505	1.77	221.	--

For Non-Ratable portion of Rate, refer to:

d 7445

e 7453

Non-Ratable Code and Rate to be used with:

f 7405

g 7431

IX 000019 STIP

Section IX - Classification Pricing
 Subsection A - Summary
 7/1/2022

Section IX - A
 Exhibit 1
 Page 4

**MASSACHUSETTS WORKERS COMPENSATION
 AND EMPLOYERS LIABILITY INSURANCE MANUAL**

RATES

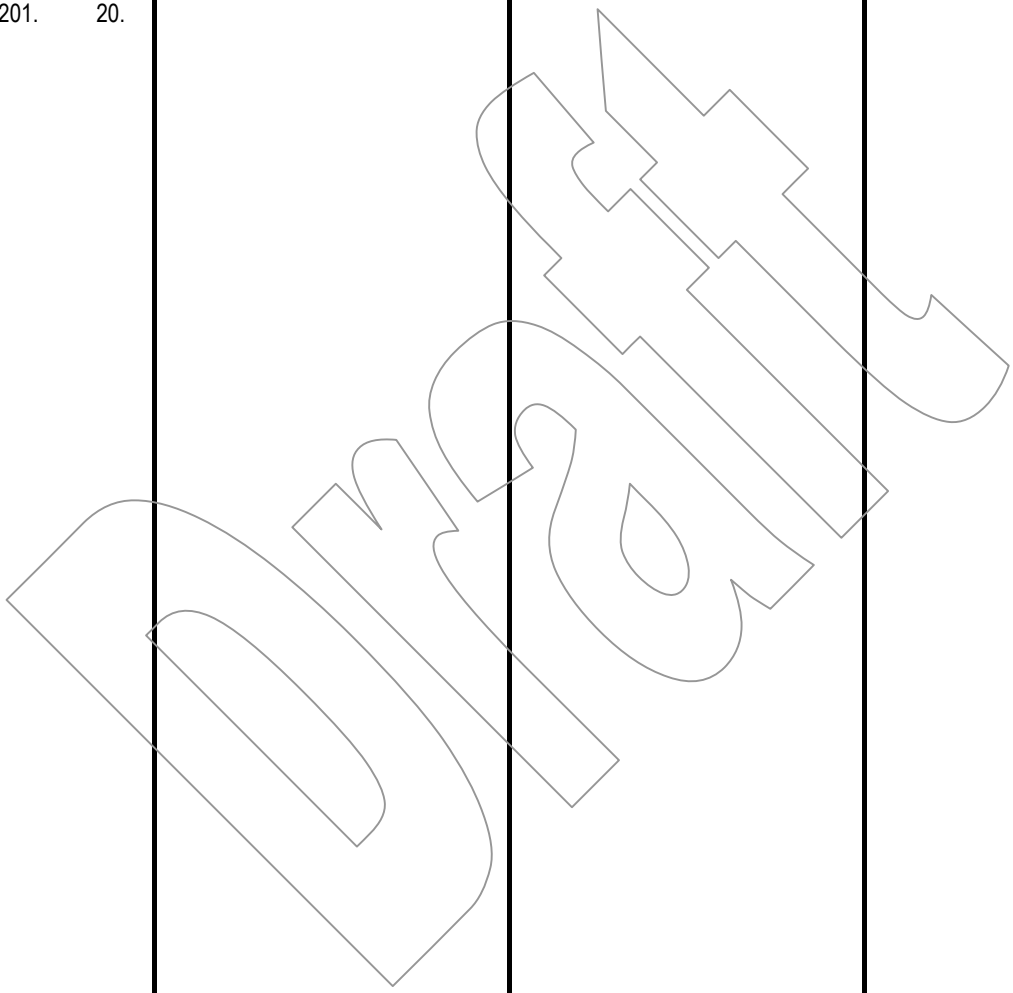
Draft

Proposed Effective July 1, 2022

Page RA-4

RATES

CLASS CODE	RATE	MIN PREM	LOSS CONST	CLASS CODE	RATE	MIN PREM	LOSS CONST	CLASS CODE	RATE	MIN PREM	LOSS CONST	CLASS CODE	RATE	MIN PREM	LOSS CONST
9519	2.18	255.	20.												
9521	2.60	250.	--												
9522	1.39	208.	--												
9533	13.73	500.	50.												
9534	4.87	470.	50.												
9549	3.50	332.	50.												
9552	6.11	500.	50.												
9586	0.28	189.	20.												
9620	0.64	201.	20.												



Calculation of Pure Premium Underlying Proposed Rate Factor

Industry Group (1)	Injury Type (2)	Uncapped Rate Level Factor (3)	Industry Group Pure Premium (4)	Percent of Pure Premium =(4) / [Total of (4)] (5)	Expected Loss and LAE Ratio (6)	Pure Premium Underlying Proposed Rate Factor = (3) x (5) x (6) (7)
Manufacturing	Indemnity	1.672	0.919	0.656	0.742	0.814
	Medical	1.672	0.482	0.344	0.742	0.427
	Total		1.400			
Construction	Indemnity	4.241	2.428	0.685	0.742	2.155
	Medical	4.241	1.118	0.315	0.742	0.992
	Total		3.546			
Office and Clerical	Indemnity	0.124	0.065	0.625	0.742	0.057
	Medical	0.124	0.039	0.375	0.742	0.034
	Total		0.104			
Goods and Services	Indemnity	1.426	0.765	0.643	0.742	0.680
	Medical	1.426	0.425	0.357	0.742	0.378
	Total		1.190			
Miscellaneous	Indemnity	4.041	2.226	0.659	0.742	1.977
	Medical	4.041	1.151	0.341	0.742	1.022
	Total		3.377			

Notes:

- (3): Section IX - H, Exhibit 1.
- (4): Section IX - C, Exhibits 1-5, page 2.
- (6): Section VI - J, Exhibit 1.

IX 000020 STIP

IX 00021 STIP

Section IX - Classification Pricing
 Subsection B - Conversion/Excess Loss Factors
 7/1/2022

Section IX - B
 Exhibit 1
 Page 1

Calculation of Indemnity and Medical Conversion Factors

(A). Benefit Level Adjustment Factors

The following factors are used to bring MA Unit Statistical Plan losses to the benefit level of the proposed effective policy year period.

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
Fatal	1.063	1.051	1.045	1.039	1.032
Permanent Total	1.069	1.063	1.056	1.048	1.039
Permanent Partial	1.111	1.100	1.088	1.076	1.063
Temporary Total	1.045	1.041	1.037	1.032	1.026
Medical					
All Injury Types	1.000	1.000	1.000	1.000	1.000

(B). Loss Development Factors

The following factors are used to bring MA Unit Statistical Plan losses from first through fifth report to an ultimate basis.

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
Likely	1.027	1.042	1.103	1.254	1.895
Not Likely	1.020	1.041	1.095	1.232	1.668
Medical					
Likely	0.933	0.926	0.929	0.954	1.009
Not Likely	0.993	0.990	0.994	0.995	1.014

(C). Trend Factors

The following factors trend the reported pure premiums from the reported period to the proposed effective period for new rates.

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
All Injury Types	0.749	0.812	0.845	0.846	0.875
Medical					
Lost Time Medical	0.755	0.842	0.866	0.862	0.886
Medical Only	0.710	0.742	0.785	0.778	0.802

Notes:

- (A): Section IV - A, Exhibit 1.
- (B): Development to 10th report (Exhibit 2, Page 1) x Development from 10th to ultimate. The 10th to ultimate development factor was calculated using data from Financial Aggregate Policy Year Call (Call 2) and Large Loss & Catastrophe Call (Call 7).
- (C): Exhibit 3. Frequency x Severity Trends / Wage Trends

IX 00022 STIP

Section IX - Classification Pricing
Subsection B - Conversion/Excess Loss Factors
7/1/2022

Section IX - B
Exhibit 1
Page 2

Calculation of Indemnity and Medical Conversion Factors

(D). Primary Conversion Factors (PCF)

Indemnity	Policy Year				
	2014	2015	2016	2017	2018
Fatal - LD	0.818	0.889	0.974	1.101	1.710
Fatal - NLD	0.812	0.889	0.967	1.082	1.505
Permanent Total	0.822	0.899	0.983	1.111	1.722
Permanent Partial - LD	0.854	0.930	1.014	1.141	1.761
Permanent Partial - NLD	0.849	0.929	1.007	1.121	1.550
Temporary Total - LD	0.804	0.881	0.966	1.094	1.700
Temporary Total - NLD	0.798	0.880	0.959	1.075	1.497
Medical					
Lost Time Medical -LD	0.705	0.779	0.804	0.822	0.894
Lost Time Medical -NLD	0.750	0.833	0.861	0.857	0.899
Medical - NLD	0.705	0.735	0.780	0.774	0.814

Notes:

$$(D) = (A) \times (B) \times (C)$$

IX 00023 STIP

Section IX - Classification Pricing
Subsection B - Conversion/Excess Loss Factors
7/1/2022

Section IX - B
Exhibit 1
Page 3

Calculation of Indemnity and Medical Conversion Factors

(A). Loss Adjustment Expense Factor

The following factor is applied to include the proposed loss adjustment expense.

	Indemnity	Medical
Loss Adjustment Expense	1.187	1.187

(B). Investment Income Offset Factor

The following factor is applied to adjust for investment income.

	Investment Income Offset Factor
Indemnity	
Fatal	0.954
Permanent Total	0.940
Permanent Partial	1.010
Temporary Total	1.012
Medical	
Fatal	1.000
Permanent Total	0.942
Permanent Partial	1.012
Temporary Total	1.014
Medical Only	1.000

(C). Secondary Conversion Factors

The factors above are combined multiplicatively, resulting in the following conversion factors.

Indemnity	
Fatal	1.132
Permanent Total	1.116
Permanent Partial	1.199
Temporary Total	1.202
Medical	
Fatal	1.187
Permanent Total	1.118
Permanent Partial	1.201
Temporary Total	1.203
Medical Only	1.187

Notes:

(A): 1.000 + Loss Adjustment Expense (as a percent of losses) from Section VI-A, Exhibit 1.

(B): Exhibit 4.

(C) = (A) x (B)

IX 00024 STIP

Section IX - Classification Pricing
 Subsection B - Conversion/Excess Loss Factors
 7/1/2022

Section IX - B
 Exhibit 2
 Page 1

Summary of Development Factors

		Likely to Develop								
		Development Factors From:								
		18-30	30-42	42-54	54-66	66-78	78-90	90-102	102-114	114-126
		<u>(1) Indemnity Losses</u>								
5Yr Weighted Average		1.511	1.137	1.058	1.015	1.003	1.000	1.001	1.003	1.001
Cumulative		1.860	1.231	1.083	1.023	1.008	1.005	1.005	1.004	1.001
		<u>(2) Medical Losses</u>								
5Yr Weighted Average		1.057	1.027	1.004	0.992	0.990	0.997	0.989	0.997	0.992
Cumulative		1.044	0.988	0.962	0.958	0.966	0.976	0.978	0.989	0.992
		<u>(3) Claim Counts</u>								
2Yr Weighted Average		1.017	1.009	1.007	1.002	1.000	0.999	1.000	1.001	1.001
Cumulative		1.036	1.019	1.010	1.003	1.001	1.001	1.001	1.001	1.001
		Not-Likely to Develop								
		Development Factors From:								
		18-30	30-42	42-54	54-66	66-78	78-90	90-102	102-114	114-126
		<u>(4) Indemnity Losses</u>								
5Yr Weighted Average		1.354	1.125	1.052	1.021	1.010	1.001	1.003	1.000	1.001
Cumulative		1.661	1.227	1.091	1.037	1.015	1.005	1.004	1.001	1.001
		<u>(5) Medical Losses</u>								
5Yr Weighted Average		1.020	1.001	1.004	0.997	0.998	1.000	1.001	1.000	1.000
Cumulative		1.020	1.000	0.999	0.995	0.998	1.000	1.000	1.000	1.000
		<u>(6) Claim Counts</u>								
2Yr Weighted Average		1.016	1.005	1.002	1.001	1.000	1.000	1.000	1.000	1.000
Cumulative		1.026	1.009	1.004	1.002	1.001	1.001	1.001	1.000	1.000

Notes:

(1), (2), (3): Page 3.
 (4), (5), (6): Page 5.

IX 00025 STIP

Section IX - Classification Pricing
 Subsection B - Conversion/Excess Loss Factors
 7/1/2022

Section IX - B
 Exhibit 2
 Page 2

Calculation of Likely to Develop Development Factors

Policy Year	Likely to Develop								
	Indemnity Losses			Medical Losses			Claim Counts		
	Evaluated at month	Link	Ratio	Evaluated at month	Link	Ratio	Evaluated at month	Link	Ratio
18	30	18		30	18		30		
2013	69,395,059	102,482,934	1.477	42,850,230	44,918,953	1.048	1,539	1,560	1.014
2014	80,776,937	119,950,871	1.485	53,764,229	54,964,549	1.022	1,620	1,654	1.021
2015	77,532,903	116,291,031	1.500	47,965,661	50,974,268	1.063	1,535	1,552	1.011
2016	73,444,071	112,026,490	1.525	45,138,590	48,563,086	1.076	1,483	1,506	1.016
2017	72,853,633	114,452,403	1.571	45,840,193	49,542,862	1.081	1,478	1,506	1.019
	5yr Weighted Average		1.511	5yr Weighted Average		1.057	2yr Weighted Average		1.017
	30	42		30	42		30	42	
2012	109,712,587	124,748,693	1.137	51,647,591	51,984,464	1.007	1,664	1,664	1.000
2013	109,319,306	122,512,998	1.121	46,898,791	48,026,579	1.024	1,618	1,634	1.010
2014	128,448,947	147,327,335	1.147	58,212,585	59,061,999	1.015	1,736	1,742	1.003
2015	121,919,728	139,263,557	1.142	52,644,878	55,170,109	1.048	1,597	1,619	1.014
2016	119,544,840	135,711,039	1.135	52,033,095	54,361,525	1.045	1,567	1,574	1.004
	5yr Weighted Average		1.137	5yr Weighted Average		1.027	2yr Weighted Average		1.009
	42	54		42	54		42	54	
2011	129,128,028	138,664,860	1.074	56,202,854	56,711,673	1.009	1,715	1,726	1.006
2012	131,885,814	139,717,949	1.059	54,594,224	55,322,683	1.013	1,699	1,710	1.006
2013	128,500,349	136,320,902	1.061	49,727,789	49,385,518	0.993	1,667	1,674	1.004
2014	154,123,554	161,611,104	1.049	61,358,737	61,157,408	0.997	1,776	1,787	1.006
2015	146,351,908	153,950,243	1.052	57,456,023	57,770,757	1.005	1,654	1,667	1.008
	5yr Weighted Average		1.058	5yr Weighted Average		1.004	2yr Weighted Average		1.007
	54	66		54	66		54	66	
2010	129,763,719	133,092,438	1.026	53,078,984	52,083,814	0.981	1,799	1,800	1.001
2011	144,613,263	146,048,125	1.010	59,349,989	58,426,002	0.984	1,752	1,759	1.004
2012	147,318,198	150,624,523	1.022	57,367,286	57,178,424	0.997	1,741	1,745	1.002
2013	142,992,234	143,983,819	1.007	51,101,408	51,403,034	1.006	1,698	1,703	1.003
2014	169,409,356	171,282,558	1.011	63,012,087	62,483,170	0.992	1,821	1,823	1.001
	5yr Weighted Average		1.015	5yr Weighted Average		0.992	2yr Weighted Average		1.002
	66	78		66	78		66	78	
2009	134,236,802	134,838,824	1.004	53,505,760	52,582,284	0.983	1,583	1,583	1.000
2010	135,030,721	133,799,745	0.991	52,602,292	52,799,047	1.004	1,807	1,812	1.003
2011	149,003,220	150,422,717	1.010	59,845,765	61,370,525	1.025	1,773	1,778	1.003
2012	157,173,495	158,447,712	1.008	58,821,523	56,083,601	0.953	1,770	1,771	1.001
2013	146,962,150	147,001,788	1.000	52,692,415	51,906,609	0.985	1,719	1,718	0.999
	5yr Weighted Average		1.003	5yr Weighted Average		0.990	2yr Weighted Average		1.000
	78	90		78	90		78	90	
2008	138,835,094	138,685,765	0.999	53,762,704	53,561,084	0.996	1,727	1,723	0.998
2009	136,120,158	135,722,335	0.997	52,939,050	53,232,001	1.006	1,593	1,594	1.001
2010	135,865,364	135,811,786	1.000	53,309,903	53,565,219	1.005	1,821	1,823	1.001
2011	151,939,320	152,898,644	1.006	61,656,783	60,513,265	0.981	1,784	1,781	0.998
2012	159,504,044	159,447,346	1.000	56,354,310	56,416,003	1.001	1,775	1,776	1.001
	5yr Weighted Average		1.000	5yr Weighted Average		0.997	2yr Weighted Average		0.999
	90	102		90	102		90	102	
2007	153,063,595	153,045,131	1.000	61,011,756	60,583,473	0.993	2,005	2,008	1.001
2008	139,337,626	139,310,614	1.000	53,948,922	52,857,869	0.980	1,728	1,728	1.000
2009	139,082,347	139,127,415	1.000	53,957,497	53,611,739	0.994	1,606	1,604	0.999
2010	135,628,472	135,866,120	1.002	53,258,998	53,114,241	0.997	1,823	1,822	0.999
2011	154,081,821	154,563,658	1.003	60,939,387	59,953,191	0.984	1,785	1,785	1.000
	5yr Weighted Average		1.001	5yr Weighted Average		0.989	2yr Weighted Average		1.000
	102	114		102	114		102	114	
2006	163,972,076	164,512,037	1.003	68,346,050	68,909,481	1.008	2,243	2,250	1.003
2007	153,382,793	154,002,727	1.004	60,604,380	60,393,949	0.997	2,009	2,019	1.005
2008	138,950,462	139,328,204	1.003	52,583,369	52,082,398	0.990	1,728	1,731	1.002
2009	139,030,456	139,386,310	1.003	53,498,539	52,535,693	0.982	1,604	1,606	1.001
2010	136,080,119	136,114,497	1.000	53,448,710	53,561,894	1.002	1,823	1,824	1.001
	5yr Weighted Average		1.003	5yr Weighted Average		0.997	2yr Weighted Average		1.001
	114	126		114	126		114	126	
2005	166,308,356	166,306,920	1.000	71,088,329	71,335,711	1.003	2,443	2,444	1.000
2006	163,781,853	164,071,230	1.002	68,677,665	67,780,098	0.987	2,248	2,249	1.000
2007	154,002,727	154,130,843	1.001	60,393,949	59,952,045	0.993	2,019	2,017	0.999
2008	139,588,204	140,044,115	1.003	52,107,398	52,137,270	1.001	1,732	1,736	1.002
2009	139,691,954	139,700,500	1.000	52,811,210	51,519,611	0.976	1,611	1,609	0.999
	5yr Weighted Average		1.001	5yr Weighted Average		0.992	2yr Weighted Average		1.001

Note:
 Unit Statistical Plan data, excluding Large Deductibles.

IX 00026 STIP

Section IX - Classification Pricing
 Subsection B - Conversion/Excess Loss Factors
 7/1/2022

Section IX - B
 Exhibit 2
 Page 3

Calculation of Not-Likely to Develop Development Factors

Policy Year	Not-Likely to Develop								
	Indemnity Losses			Medical Losses			Claim Counts		
	Evaluated at month	Link Ratio		Evaluated at month	Link Ratio		Evaluated at month	Link Ratio	
	18	30		18	30		18	30	
2013	147,927,521	193,419,487	1.308	134,224,262	136,573,948	1.018	12,885	13,125	1.019
2014	154,934,455	208,243,673	1.344	138,996,820	141,380,696	1.017	13,191	13,428	1.018
2015	161,619,622	216,568,008	1.340	136,894,235	140,273,511	1.025	13,325	13,526	1.015
2016	160,180,291	219,618,559	1.371	141,054,935	144,443,844	1.024	13,163	13,356	1.015
2017	175,872,901	246,033,216	1.399	148,259,106	150,485,789	1.015	13,797	14,044	1.018
	5yr Weighted Average		1.354	5yr Weighted Average		1.020	2yr Weighted Average		1.016
	30	42		30	42		30	42	
2012	177,309,777	199,552,082	1.125	129,705,461	130,418,701	1.005	12,805	12,875	1.005
2013	186,583,116	209,245,430	1.121	134,594,109	133,647,446	0.993	13,067	13,127	1.005
2014	199,745,598	225,131,216	1.127	138,132,659	138,509,142	1.003	13,346	13,425	1.006
2015	210,939,311	236,313,363	1.120	138,602,901	138,975,144	1.003	13,481	13,537	1.004
2016	212,100,209	239,516,008	1.129	140,973,835	141,167,476	1.001	13,295	13,373	1.006
	5yr Weighted Average		1.125	5yr Weighted Average		1.001	2yr Weighted Average		1.005
	42	54		42	54		42	54	
2011	199,360,806	209,244,649	1.050	130,200,251	131,185,992	1.008	13,079	13,108	1.002
2012	192,414,961	202,477,648	1.052	127,808,941	128,041,207	1.002	12,840	12,859	1.001
2013	203,258,079	213,682,743	1.051	131,946,236	132,518,726	1.004	13,094	13,137	1.003
2014	218,334,997	228,898,710	1.048	136,212,404	136,627,294	1.003	13,391	13,419	1.002
2015	229,225,012	242,133,289	1.056	136,689,230	136,851,679	1.001	13,502	13,531	1.002
	5yr Weighted Average		1.052	5yr Weighted Average		1.004	2yr Weighted Average		1.002
	54	66		54	66		54	66	
2010	191,845,637	195,732,167	1.020	124,804,712	124,596,283	0.998	12,985	13,010	1.002
2011	203,296,246	208,149,136	1.024	128,547,676	128,186,307	0.997	13,082	13,110	1.002
2012	194,877,399	200,005,935	1.026	125,996,604	123,975,350	0.984	12,828	12,849	1.002
2013	207,011,411	211,109,918	1.020	130,802,836	131,044,623	1.002	13,113	13,129	1.001
2014	221,100,458	224,781,264	1.017	134,772,615	135,324,537	1.004	13,385	13,401	1.001
	5yr Weighted Average		1.021	5yr Weighted Average		0.997	2yr Weighted Average		1.001
	66	78		66	78		66	78	
2009	175,572,879	178,488,356	1.017	117,646,994	117,935,088	1.002	11,739	11,749	1.001
2010	193,747,834	195,944,102	1.011	124,019,272	123,478,124	0.996	13,002	13,013	1.001
2011	205,194,041	206,092,563	1.004	126,766,544	126,217,580	0.996	13,096	13,104	1.001
2012	193,456,964	195,938,243	1.013	122,332,250	122,156,601	0.999	12,824	12,826	1.000
2013	208,131,586	209,534,754	1.007	129,755,243	129,555,465	0.998	13,113	13,118	1.000
	5yr Weighted Average		1.010	5yr Weighted Average		0.998	2yr Weighted Average		1.000
	78	90		78	90		78	90	
2008	184,076,164	183,908,795	0.999	115,264,394	115,497,299	1.002	12,646	12,652	1.000
2009	177,207,023	178,140,232	1.005	117,578,321	117,362,627	0.998	11,739	11,745	1.001
2010	193,878,483	193,191,523	0.996	122,967,268	122,753,340	0.998	13,004	13,006	1.000
2011	204,575,959	205,537,573	1.005	125,931,323	125,986,870	1.000	13,098	13,101	1.000
2012	194,881,910	194,619,638	0.999	121,885,893	121,878,997	1.000	12,822	12,827	1.000
	5yr Weighted Average		1.001	5yr Weighted Average		1.000	2yr Weighted Average		1.000
	90	102		90	102		90	102	
2007	175,104,763	175,894,499	1.005	118,976,624	119,090,351	1.001	13,737	13,741	1.000
2008	183,256,934	183,491,033	1.001	115,109,461	114,634,132	0.996	12,647	12,654	1.001
2009	174,780,219	174,972,871	1.001	116,637,132	116,741,194	1.001	11,733	11,737	1.000
2010	193,374,837	194,177,059	1.004	123,059,561	123,050,373	1.000	13,006	13,006	1.000
2011	204,354,396	205,260,543	1.004	125,560,748	126,147,233	1.005	13,097	13,101	1.000
	5yr Weighted Average		1.003	5yr Weighted Average		1.001	2yr Weighted Average		1.000
	102	114		102	114		102	114	
2006	166,240,416	166,222,192	1.000	111,253,276	111,384,351	1.001	13,713	13,725	1.001
2007	175,556,837	175,638,522	1.000	119,069,444	118,748,284	0.997	13,740	13,742	1.000
2008	183,851,185	184,177,810	1.002	114,908,632	115,152,372	1.002	12,654	12,658	1.000
2009	175,069,830	174,903,346	0.999	116,854,394	116,840,606	1.000	11,737	11,745	1.001
2010	193,963,060	193,684,962	0.999	122,715,904	122,478,283	0.998	13,005	13,004	1.000
	5yr Weighted Average		1.000	5yr Weighted Average		1.000	2yr Weighted Average		1.000
	114	126		114	126		114	126	
2005	169,866,675	170,008,512	1.001	111,960,222	112,084,942	1.001	14,807	14,813	1.000
2006	166,952,376	167,607,085	1.004	111,616,167	111,537,875	0.999	13,727	13,732	1.000
2007	175,638,522	176,056,330	1.002	118,748,284	118,649,937	0.999	13,742	13,748	1.000
2008	183,917,810	184,034,222	1.001	115,127,372	115,122,644	1.000	12,657	12,659	1.000
2009	174,597,702	174,406,360	0.999	116,565,089	116,675,643	1.001	11,740	11,741	1.000
	5yr Weighted Average		1.001	5yr Weighted Average		1.000	2yr Weighted Average		1.000

Note:
 Unit Statistical Plan data, excluding Large Deductibles.

IX 00027 STIP

Section IX - Classification Pricing
 Subsection B - Conversion/Excess Loss Factors
 7/1/2022

Section IX - B
 Exhibit 3

Trend Factors

Policy Year	Statewide Average Weekly Wage	Indemnity Severity	Lost Time Medical Severity	Medical Only Severity	Lost Time Claim Frequency	Medical Only Claim Frequency
(1) Historical Values						
2014	1,265.09	30,366	11,766	848	176.63	336.14
2015	1,303.66	30,090	11,333	887	169.58	316.86
2016	1,349.36	30,384	11,575	902	167.04	304.86
2017	1,395.56	30,639	11,745	929	171.07	308.70
2018	1,445.94	31,748	12,237	950	165.43	303.46

(2) Trend to PY 2018						
2014	1.143	1.046	1.040	1.120	0.937	0.903
2015	1.109	1.055	1.080	1.071	0.976	0.958
2016	1.072	1.045	1.057	1.053	0.990	0.995
2017	1.036	1.036	1.042	1.022	0.967	0.983
2018	1.000	1.000	1.000	1.000	1.000	1.000

(3) Projected Trend from PY 2018 to Prospective Effective Period						
Selected Annual Trend	3.6%	2.0%	2.3%	2.8%	-1.5%	-4.0%
Trend Factor	1.171	1.094	1.108	1.131	0.936	0.831

(4) Trend Factors from PY 2018 to Prospective Effective Period						
Policy Year	Statewide Average Weekly Wage	Indemnity Severity	Lost Time Medical Severity	Medical Only Severity	Lost Time Claim Frequency	Medical Only Claim Frequency
2014	1.338	1.143	1.152	1.267	0.877	0.750
2015	1.298	1.154	1.197	1.211	0.913	0.795
2016	1.254	1.143	1.171	1.191	0.927	0.827
2017	1.213	1.133	1.155	1.156	0.905	0.816
2018	1.171	1.094	1.108	1.131	0.936	0.831

Notes:

- (1): Weekly Wage from Section V-G, Exhibit 2.
 Indemnity Severity from Section V-C, Exhibit 1, Page 1.
 Lost Time Medical Severity from Section V-D, Exhibit 1, Page 1.
 Medical Only Severity from Section V-D, Exhibit 2, Page 1.
 Lost Time Claim Frequency from Section V-B, Exhibit 1, Page 1.
 Medical Only Claim Frequency from Section V-B, Exhibit 2, Page 1.
- (2) = (1) / (1) for Policy Year 2018
- (3): Selected Annual Trend from Section I-D, Exhibit 1, Page 1.
 Trend Factor = (1.0 + Selected Annual Trend) ^ Trend Period, where Trend Period extends from the midpoint of PY 2018 to midpoint of policy effective period 7/1/2022 - 6/30/2023, which is 4.5 years.
- (4) = (2) x (3)

IX 00028 STIP

Section IX - Classification Pricing
 Subsection B - Conversion/Excess Loss Factors
 7/1/2022

Section IX - B
 Exhibit 4

Calculation of Investment Income Offset Factor

Indemnity

Injury Type (1)	Loss Flow Discounted at 0.31% Post-Chapter 398 (2)	Injury Type Weights At Ultimate (3)	Investment Income Offset Factor (4)
Fatal	0.938	1.44%	0.954
Permanent Total	0.924	9.18%	0.940
Permanent Partial	0.993	37.77%	1.010
Temporary Total	0.995	18.67%	1.012
Total Indemnity			0.983

Medical

Injury Type (5)	Loss Flow Discounted at 0.31% Post-Chapter 398 (6)	Injury Type Weights At Ultimate (7)	Investment Income Offset Factor (8)
Fatal	0.938	0.13%	1.000
Permanent Total	0.924	5.14%	0.942
Permanent Partial	0.993	12.59%	1.012
Temporary Total	0.995	11.13%	1.014
Medical Only		3.95%	1.000
Total Medical			0.982

Notes:

(2), (6): Loss Flows are from the 8/1/99 rate filing, Section VIII - E, Exhibits 12 and 16. The discount rate is calculated by multiplying the pre-tax rate of return on governments (Section VII-J, Exhibit 1, Page 1) times the complement of the federal tax rate on investment income (Section VII-J, Exhibit 1, Page 1) $[0.36\% \times (1.000 - 14.93\%)] = 0.31\%$

(3): Section IV - E, Exhibit 2, Page 1.

(4)= (2) / 0.983, which is the weighted average of (2) and (3).

(7): Section IV - E, Exhibit 2, Page 2.

(8)= (6) / 0.982, which is the weighted average of (6) and (7). This weighted average excludes Fatal and Medical Only injury types as it is assumed that they generate no investment income.

IX 000029 STIP

Section IX - Classification Pricing
Subsection B - Conversion/Excess Loss Factors
7/1/2022

Section IX - B
Exhibit 5

Calculation of Excess Loss Factors

Hazard Group (1)	Excess Ratio (2)	Excess Factor (3) = [1.0 / (1.0 - (2))]
A	0.104	1.116
B	0.120	1.136
C	0.147	1.172
D	0.189	1.233
E	0.208	1.263
F	0.240	1.316
G	0.354	1.548

Note:

(2) = Excess Ratio for Accident Limit of \$500,000 x 0.985, where Excess Ratio from Section XII-F, Exhibit 3, Page 1 and 0.985 is the factor to convert the per occurrence claims to per claim basis.

Calculation of Converted Limited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 Manufacturing Industry Group, Industry Code 1
 All Classes

Policy Year (1)	Injury Type (2)	Limited Losses					Converted Limited Losses				
		Indemnity		Medical		Total (7)	Indemnity		Medical		Total (12)
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)			Likely (8)	Not-Likely (9)	Likely (10)	
2014	Fatal	0	0	0	0	0	0	0	0	0	0
	Permanent Total	6,911,532	0	2,772,818	0	9,684,350	5,682,799	0	1,954,483	0	7,637,282
	Permanent Partial	8,494,725	14,606,419	3,192,280	5,509,362	31,802,786	7,257,653	12,395,853	2,250,150	4,131,941	26,035,597
	Temporary Total	5,717,075	12,983,644	1,591,196	9,579,742	29,871,657	4,594,297	10,364,004	1,121,590	7,184,666	23,264,557
	Medical Only	0	0	0	3,132,016	3,132,016	0	0	0	2,207,789	2,207,789
2015	Fatal	0	445,271	0	54,729	500,000	0	395,647	0	45,612	441,259
	Permanent Total	5,774,748	0	1,434,732	0	7,209,480	5,188,771	0	1,117,670	0	6,306,441
	Permanent Partial	9,264,980	16,008,746	2,559,726	6,094,397	33,927,849	8,614,336	14,877,714	1,994,051	5,079,147	30,565,248
	Temporary Total	3,931,208	14,910,257	1,455,067	9,932,579	30,229,111	3,461,467	13,122,629	1,133,511	8,277,937	25,995,544
	Medical Only	0	0	0	3,148,627	3,148,627	0	0	0	2,313,685	2,313,685
2016	Fatal	6,206	432,322	22,920	0	461,448	6,042	418,013	18,436	0	442,491
	Permanent Total	4,798,394	0	1,097,349	0	5,895,743	4,717,930	0	882,668	0	5,600,598
	Permanent Partial	5,665,291	17,302,614	2,153,071	7,076,282	32,197,258	5,742,434	17,418,777	1,731,853	6,089,181	30,982,245
	Temporary Total	4,119,922	13,232,824	2,330,535	8,677,560	28,360,841	3,979,167	12,693,690	1,874,599	7,467,090	26,014,546
	Medical Only	0	0	0	2,962,843	2,962,843	0	0	0	2,311,104	2,311,104
2017	Fatal	75,000	658,225	5,000	30,871	769,096	82,610	712,388	4,112	26,466	825,576
	Permanent Total	1,234,928	0	13,297	0	1,248,225	1,371,937	0	10,937	0	1,382,874
	Permanent Partial	5,290,379	14,872,777	2,692,738	5,787,102	28,642,996	6,034,780	16,669,975	2,214,765	4,961,356	29,880,876
	Temporary Total	3,627,089	11,736,366	1,761,002	8,333,537	25,457,994	3,968,214	12,616,497	1,448,416	7,144,447	25,177,574
	Medical Only	0	0	0	2,937,283	2,937,283	0	0	0	2,274,342	2,274,342
2018	Fatal	0	183,404	0	12,996	196,400	0	276,032	0	11,681	287,713
	Permanent Total	530,458	0	33,275	0	563,733	913,423	0	29,744	0	943,167
	Permanent Partial	3,521,634	8,513,463	2,453,079	5,361,429	19,849,605	6,200,876	13,196,388	2,192,745	4,819,124	26,409,133
	Temporary Total	3,781,353	12,854,395	2,542,013	10,587,766	29,765,527	6,429,575	19,240,958	2,272,241	9,516,819	37,459,593
	Medical Only	0	0	0	3,177,620	3,177,620	0	0	0	2,586,104	2,586,104
(13) All Years, All Injury Types		72,744,922	138,740,727	28,110,098	92,396,741	331,992,488	74,246,311	144,398,565	22,251,971	76,448,491	317,345,338

Notes:
 (3), (4), (5), (6): From Unit Statistical Plan data, excluding Large Deductibles.
 (7)= (3) + (4) + (5) + (6)
 (8)= (3) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (9)= (4) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (10)= (5) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (11)= (6) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (12)= (8) + (9) + (10) +(11)

IX 000030 STIP

Calculation of Converted Unlimited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 Manufacturing Industry Group, Industry Code 1
 All Classes

Policy Year (1)	Injury Type (2)	Adjusted Excess Losses					Converted Unlimited Losses					Exposure (13)
		Indemnity		Medical			Indemnity		Medical			
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Total (7)	Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)	Total (12)	
2014	Fatal	0	0	0	0	0	0	0	0	0	0	61,796,541
	Permanent Total	693,132	0	663,308	0	1,356,440	7,115,969	0	2,925,877	0	10,041,846	
	Permanent Partial	974,084	1,604,182	859,713	1,446,677	4,884,656	9,871,019	16,788,024	3,734,585	6,699,276	37,092,904	
	Temporary Total	556,878	1,299,721	438,956	1,865,056	4,160,611	6,189,428	14,014,625	1,877,810	10,889,557	32,971,420	
	Medical Only	0	0	0	392,602	392,602	0	0	0	3,086,664	3,086,664	
2015	Fatal	0	64,543	0	38,291	102,834	0	520,993	0	99,592	620,585	64,406,383
	Permanent Total	672,531	0	476,987	0	1,149,518	6,541,608	0	1,782,331	0	8,323,939	
	Permanent Partial	1,046,209	1,998,615	789,198	1,877,098	5,711,120	11,584,361	20,237,108	3,342,360	8,353,647	43,517,476	
	Temporary Total	418,251	1,605,440	370,251	2,165,788	4,559,730	4,661,700	17,696,608	1,809,481	12,566,966	36,734,755	
	Medical Only	0	0	0	407,326	407,326	0	0	0	3,229,840	3,229,840	
2016	Fatal	729	39,901	3,489	17,101	61,220	7,665	518,417	26,026	20,298	572,406	64,130,325
	Permanent Total	617,483	0	419,892	0	1,037,375	5,954,681	0	1,455,858	0	7,410,539	
	Permanent Partial	780,797	2,187,278	706,611	2,065,241	5,739,927	7,822,277	23,510,435	2,928,314	9,792,518	44,053,544	
	Temporary Total	479,292	1,616,335	535,266	2,066,942	4,697,835	5,357,091	17,194,304	2,899,797	11,472,329	36,923,521	
	Medical Only	0	0	0	419,143	419,143	0	0	0	3,240,802	3,240,802	
2017	Fatal	13,476	81,713	6,734	38,785	140,708	108,782	899,023	12,875	77,453	1,098,133	63,705,437
	Permanent Total	160,723	0	70,916	0	231,639	1,710,551	0	91,486	0	1,802,037	
	Permanent Partial	752,371	2,191,445	735,164	1,898,035	5,577,015	8,138,756	22,617,514	3,542,525	8,237,337	42,536,132	
	Temporary Total	497,580	1,617,592	469,505	1,975,642	4,560,319	5,365,904	17,103,062	2,307,840	10,974,229	35,751,035	
	Medical Only	0	0	0	405,876	405,876	0	0	0	3,181,419	3,181,419	
2018	Fatal	0	33,753	0	16,479	50,232	0	350,716	0	33,426	384,142	66,285,929
	Permanent Total	162,074	0	76,465	0	238,539	1,200,327	0	118,708	0	1,319,035	
	Permanent Partial	807,179	1,752,646	777,059	1,655,767	4,992,651	8,403,650	17,926,008	3,566,392	7,775,595	37,671,645	
	Temporary Total	843,397	2,490,378	772,321	2,842,807	6,948,903	8,738,887	26,111,429	3,663,530	14,872,374	53,386,220	
	Medical Only	0	0	0	470,808	470,808	0	0	0	3,628,554	3,628,554	
(14) All Years, All Injury Types		9,476,186	18,583,542	8,171,835	22,065,464	58,297,027	98,772,656	195,488,266	36,085,795	118,231,876	448,578,593	320,324,615
(15) Pure Premium							0.308	0.610	0.113	0.369	1.400	

Notes:
 (3) , (4) = 0.7 x [Excess Factor - 1.0] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Indemnity Converted Limited Losses from Page 1, Columns (8) and (9).
 (5), (6) = [Excess Factor - 1.0] x Medical Converted Limited Losses + 0.3 x [Excess Factor - 1.0] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Medical Converted Limited Losses from Page 1, Columns (10) and (11).
 (7) = (3) + (4) + (5) + (6)
 (8), (9), (10), (11): (Converted Limited Losses from Page 1 + Adjusted Excess Losses) x Secondary Conversion Factors from Section IX - B, Exhibit 1, Page 3.
 (12) = (8) + (9) + (10) + (11)
 (13): Unit Statistical Plan data, excluding Large Deductibles.
 (15): Pure Premium calculated as the All Years, All Injury Types Converted Unlimited Losses divided by the All Years, All Injury Types Exposure.

IX 000031 STIP

Calculation of Converted Limited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 Construction Industry Group, Industry Code 2
 All Classes

Policy Year (1)	Injury Type (2)	Limited Losses					Converted Limited Losses				
		Indemnity		Medical		Total (7)	Indemnity		Medical		Total (12)
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)			Likely (8)	Not-Likely (9)	Likely (10)	
2014	Fatal	1,712,931	463,733	201,480	56,018	2,434,162	1,400,573	376,634	142,018	42,013	1,961,238
	Permanent Total	22,953,371	0	8,635,653	0	31,589,024	18,872,718	0	6,087,032	0	24,959,750
	Permanent Partial	29,864,247	48,358,226	9,481,617	13,876,146	101,580,236	25,515,167	41,039,590	6,683,329	10,406,906	83,644,992
	Temporary Total	8,896,765	19,976,841	3,164,752	12,031,625	44,069,983	7,149,527	15,946,221	2,230,746	9,023,543	34,350,037
	Medical Only	0	0	0	3,791,520	3,791,520	0	0	0	2,672,680	2,672,680
2015	Fatal	601,928	6,125,619	42,564	358,022	7,128,133	535,089	5,442,935	33,158	298,380	6,309,562
	Permanent Total	17,692,085	0	6,853,670	0	24,545,755	15,896,828	0	5,339,073	0	21,235,901
	Permanent Partial	29,397,695	46,074,815	8,454,744	12,661,387	96,588,641	27,333,207	42,819,587	6,586,325	10,552,160	87,291,279
	Temporary Total	9,410,252	24,087,560	4,140,831	15,268,536	52,907,179	8,285,818	21,199,642	3,225,746	12,724,991	45,436,197
	Medical Only	0	0	0	3,587,928	3,587,928	0	0	0	2,636,494	2,636,494
2016	Fatal	277,094	4,003,014	0	190,768	4,470,876	269,760	3,870,522	0	164,157	4,304,439
	Permanent Total	13,375,054	0	5,416,932	0	18,791,986	13,150,768	0	4,357,186	0	17,507,954
	Permanent Partial	26,306,037	48,041,204	9,164,775	14,403,459	97,915,475	26,664,239	48,363,732	7,371,816	12,394,259	94,794,046
	Temporary Total	9,483,584	26,495,880	4,033,165	15,350,668	55,363,297	9,159,582	25,416,380	3,244,134	13,209,338	51,029,434
	Medical Only	0	0	0	3,589,187	3,589,187	0	0	0	2,799,670	2,799,670
2017	Fatal	232,015	3,148,535	33,283	493,305	3,907,138	255,558	3,407,614	27,375	422,917	4,113,464
	Permanent Total	9,577,846	0	4,166,732	0	13,744,578	10,640,456	0	3,427,119	0	14,067,575
	Permanent Partial	23,060,559	44,925,491	9,996,035	14,296,411	92,278,496	26,305,375	50,354,204	8,221,695	12,256,494	97,137,768
	Temporary Total	12,966,900	31,127,741	5,263,267	18,311,703	67,669,611	14,186,429	33,462,066	4,329,014	15,698,855	67,676,364
	Medical Only	0	0	0	3,704,554	3,704,554	0	0	0	2,868,440	2,868,440
2018	Fatal	0	1,423,507	0	125,146	1,548,653	0	2,142,446	0	112,488	2,254,934
	Permanent Total	907,477	0	560,488	0	1,467,965	1,562,632	0	501,006	0	2,063,638
	Permanent Partial	9,879,615	22,667,578	7,125,992	13,292,812	52,965,997	17,395,978	35,136,133	6,369,744	11,948,251	70,850,106
	Temporary Total	11,841,146	31,632,785	8,410,018	21,730,997	73,614,946	20,133,941	47,349,183	7,517,502	19,532,918	94,533,544
	Medical Only	0	0	0	4,081,935	4,081,935	0	0	0	3,322,080	3,322,080
(13) All Years, All Injury Types		238,436,601	358,552,529	95,145,998	171,202,127	863,337,255	244,713,645	376,326,889	75,694,018	143,087,034	839,821,586

Notes:

(3), (4), (5), (6): From Unit Statistical Plan data, excluding Large Deductibles.

(7)= (3) + (4) + (5) + (6)

(8)= (3) x Primary Conversion Factors from Section IX - B, Exhibit 1

(9)= (4) x Primary Conversion Factors from Section IX - B, Exhibit 1

(10)= (5) x Primary Conversion Factors from Section IX - B, Exhibit 1

(11)= (6) x Primary Conversion Factors from Section IX - B, Exhibit 1

(12)= (8) + (9) + (10) +(11)

IX 000032 STIP

Calculation of Converted Unlimited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 Construction Industry Group, Industry Code 2
 All Classes

Policy Year (1)	Injury Type (2)	Adjusted Excess Losses					Converted Unlimited Losses					Exposure (13)
		Indemnity		Medical		Total (7)	Indemnity		Medical		Total (12)	
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)			Likely (8)	Not-Likely (9)	Likely (10)		Not-Likely (11)
2014	Fatal	363,440	76,196	200,608	45,591	685,835	1,997,087	512,662	406,697	103,985	3,020,431	63,078,999
	Permanent Total	4,304,729	0	3,934,394	0	8,239,123	25,867,594	0	11,200,844	0	37,068,438	
	Permanent Partial	5,752,577	9,063,365	4,640,349	7,192,072	26,648,363	37,494,453	60,080,537	13,598,429	21,134,340	132,307,759	
	Temporary Total	1,564,422	3,455,963	1,460,763	4,325,381	10,806,529	10,470,303	23,312,821	4,442,003	16,062,799	54,287,926	
	Medical Only	0	0	0	822,169	822,169	0	0	0	4,148,386	4,148,386	
2015	Fatal	182,843	1,297,557	87,070	651,927	2,219,397	812,791	7,631,091	142,710	1,128,015	9,714,607	70,029,781
	Permanent Total	3,783,698	0	3,646,260	0	7,429,958	21,964,794	0	10,042,814	0	32,007,608	
	Permanent Partial	6,416,419	9,650,665	5,099,491	7,494,660	28,661,235	40,470,579	62,919,262	14,033,316	21,672,147	139,095,304	
	Temporary Total	1,853,682	4,672,648	1,879,808	5,928,574	14,334,712	12,183,182	31,087,019	6,143,529	22,445,889	71,859,619	
	Medical Only	0	0	0	802,094	802,094	0	0	0	4,081,604	4,081,604	
2016	Fatal	55,814	1,001,473	23,920	501,879	1,583,086	368,591	5,515,715	28,393	790,584	6,703,283	73,951,895
	Permanent Total	2,974,843	0	2,766,335	0	5,741,178	17,997,270	0	7,961,886	0	25,959,156	
	Permanent Partial	5,928,572	10,972,488	4,917,786	8,722,963	30,541,809	39,083,395	71,152,530	14,758,393	25,359,345	150,353,663	
	Temporary Total	2,023,150	5,592,215	1,884,306	6,596,030	16,095,701	13,436,685	37,258,579	6,171,067	23,831,857	80,698,188	
	Medical Only	0	0	0	853,747	853,747	0	0	0	4,336,606	4,336,606	
2017	Fatal	56,492	762,550	32,856	456,616	1,308,514	353,280	4,721,154	71,494	1,044,005	6,189,933	79,827,937
	Permanent Total	2,216,022	0	1,960,605	0	4,176,627	14,348,695	0	6,021,803	0	20,370,498	
	Permanent Partial	6,001,045	11,635,134	5,191,859	9,032,770	31,860,808	38,739,971	74,333,992	16,108,130	25,565,947	154,748,040	
	Temporary Total	3,176,577	7,232,983	2,860,993	7,902,530	21,173,083	20,862,633	48,897,402	8,651,756	28,399,616	106,811,407	
	Medical Only	0	0	0	872,112	872,112	0	0	0	4,440,036	4,440,036	
2018	Fatal	0	600,818	0	289,769	890,587	0	3,105,722	0	477,478	3,583,200	86,183,968
	Permanent Total	565,363	0	494,206	0	1,059,569	2,374,986	0	1,112,338	0	3,487,324	
	Permanent Partial	4,190,892	8,131,153	3,972,680	7,603,187	23,897,912	25,885,713	51,883,602	12,420,056	23,479,019	113,668,390	
	Temporary Total	4,321,857	10,383,455	4,127,026	10,583,502	29,415,840	29,385,023	69,369,028	14,011,895	36,239,178	149,005,124	
	Medical Only	0	0	0	1,014,870	1,014,870	0	0	0	5,147,960	5,147,960	
(14) All Years, All Injury Types		55,732,437	84,528,663	49,181,315	81,692,443	271,134,858	354,097,025	551,781,116	147,327,553	269,888,796	1,323,094,490	373,072,580
(15) Pure Premium							0.949	1.479	0.395	0.723	3.546	

Notes:
 (3) , (4) = 0.7 x [Excess Factor - 1.0] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Indemnity Converted Limited Losses from Page 1, Columns (8) and (9).
 (5), (6) = [Excess Factor - 1.0] x Medical Converted Limited Losses + 0.3 x [Excess Factor - 1.0] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Medical Converted Limited Losses from Page 1, Columns (10) and (11).
 (7) = (3) + (4) + (5) + (6)
 (8), (9), (10), (11): (Converted Limited Losses from Page 1 + Adjusted Excess Losses) x Secondary Conversion Factors from Section IX - B, Exhibit 1, Page 3.
 (12) = (8) + (9) + (10) + (11)
 (13): Unit Statistical Plan data, excluding Large Deductibles.
 (15): Pure Premium calculated as the All Years, All Injury Types Converted Unlimited Losses divided by the All Years, All Injury Types Exposure.

IX 000033 STIP

Calculation of Converted Limited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 Office and Clerical Industry Group, Industry Code 3
 All Classes

Policy Year (1)	Injury Type (2)	Limited Losses					Converted Limited Losses				
		Indemnity		Medical		Total (7)	Indemnity		Medical		Total (12)
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)			Likely (8)	Not-Likely (9)	Likely (10)	
2014	Fatal	53,753	614,405	41,145	2,244	711,547	43,951	499,007	29,002	1,683	573,643
	Permanent Total	3,803,767	0	881,123	0	4,684,890	3,127,533	0	621,079	0	3,748,612
	Permanent Partial	10,544,379	13,960,015	3,732,251	6,267,052	34,503,697	9,008,819	11,847,277	2,630,760	4,700,197	28,187,053
	Temporary Total	6,006,334	10,950,631	3,071,995	8,925,711	28,954,671	4,826,748	8,741,181	2,165,364	6,694,153	22,427,446
	Medical Only	0	0	0	5,869,759	5,869,759	0	0	0	4,137,651	4,137,651
2015	Fatal	250,000	373,188	0	51,261	674,449	222,240	331,597	0	42,722	596,559
	Permanent Total	3,993,562	0	1,339,783	0	5,333,345	3,588,326	0	1,043,704	0	4,632,030
	Permanent Partial	8,822,387	13,200,631	3,355,767	5,279,422	30,658,207	8,202,824	12,267,995	2,614,174	4,399,937	27,484,930
	Temporary Total	4,404,518	10,820,671	2,423,723	8,457,686	26,106,598	3,878,221	9,523,354	1,888,103	7,048,742	22,338,420
	Medical Only	0	0	0	5,532,857	5,532,857	0	0	0	4,065,673	4,065,673
2016	Fatal	0	961,837	0	7,346	969,183	0	930,002	0	6,321	936,323
	Permanent Total	2,075,736	0	1,012,741	0	3,088,477	2,040,928	0	814,612	0	2,855,540
	Permanent Partial	7,963,137	12,799,255	2,415,560	4,728,155	27,906,107	8,071,569	12,885,184	1,942,990	4,068,604	26,968,347
	Temporary Total	8,005,836	11,031,275	3,375,509	8,525,207	30,937,827	7,732,321	10,581,837	2,715,139	7,335,989	28,365,286
	Medical Only	0	0	0	5,720,648	5,720,648	0	0	0	4,462,271	4,462,271
2017	Fatal	0	581,826	0	139,204	721,030	0	629,702	0	119,342	749,044
	Permanent Total	1,246,352	0	411,968	0	1,658,320	1,384,628	0	338,842	0	1,723,470
	Permanent Partial	5,658,030	11,122,373	2,154,154	4,127,762	23,062,319	6,454,163	12,466,380	1,771,782	3,538,783	24,231,108
	Temporary Total	7,552,090	12,509,518	2,861,285	10,343,936	33,266,829	8,262,359	13,447,629	2,353,394	8,867,987	32,931,369
	Medical Only	0	0	0	6,659,454	6,659,454	0	0	0	5,156,423	5,156,423
2018	Fatal	0	448,183	0	51,817	500,000	0	674,536	0	46,576	721,112
	Permanent Total	164,964	0	355,458	0	520,422	284,060	0	317,735	0	601,795
	Permanent Partial	4,342,142	4,982,436	1,601,814	2,867,181	13,793,573	7,645,623	7,723,081	1,431,821	2,577,167	19,377,692
	Temporary Total	6,511,048	12,091,947	3,785,482	11,139,577	33,528,054	11,070,977	18,099,696	3,383,746	10,012,815	42,567,234
	Medical Only	0	0	0	6,613,491	6,613,491	0	0	0	5,382,385	5,382,385
(13) All Years, All Injury Types		81,398,035	116,448,191	32,819,758	101,309,770	331,975,754	85,845,290	120,648,458	26,062,247	82,665,421	315,221,416

Notes:
 (3), (4), (5), (6): From Unit Statistical Plan data, excluding Large Deductibles.
 (7)= (3) + (4) + (5) + (6)
 (8)= (3) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (9)= (4) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (10)= (5) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (11)= (6) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (12)= (8) + (9) + (10) + (11)

IX 000034 STIP

Calculation of Converted Unlimited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 Office and Clerical Industry Group, Industry Code 3
 All Classes

Policy Year (1)	Injury Type (2)	Adjusted Excess Losses					Converted Unlimited Losses					Exposure (13)
		Indemnity		Medical		Total	Indemnity		Medical		Total	
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	(7)	Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)	(12)	
2014	Fatal	4,195	54,964	5,753	23,998	88,910	54,508	627,166	41,254	30,483	753,411	769,787,978
	Permanent Total	412,388	0	282,056	0	694,444	3,950,791	0	1,009,425	0	4,960,216	
	Permanent Partial	1,163,668	1,588,916	1,030,084	1,560,014	5,342,682	12,198,253	16,111,898	4,396,251	7,517,790	40,224,192	
	Temporary Total	642,033	1,074,702	668,247	1,619,534	4,004,516	6,571,050	11,794,339	3,409,692	10,003,884	31,778,965	
	Medical Only	0	0	0	725,450	725,450	0	0	0	5,772,502	5,772,502	
2015	Fatal	26,809	37,436	11,490	21,870	97,605	281,955	417,792	13,638	76,670	790,055	823,908,604
	Permanent Total	476,323	0	393,678	0	870,001	4,536,422	0	1,606,546	0	6,142,968	
	Permanent Partial	998,296	1,609,598	894,340	1,534,673	5,036,907	11,033,446	16,641,198	4,213,320	7,126,781	39,014,745	
	Temporary Total	481,051	1,204,240	544,693	1,724,843	3,954,827	5,237,911	12,889,810	2,927,391	10,557,282	31,612,394	
	Medical Only	0	0	0	716,179	716,179	0	0	0	5,676,059	5,676,059	
2016	Fatal	0	151,758	0	66,129	217,887	0	1,224,690	0	85,998	1,310,688	851,828,701
	Permanent Total	268,013	0	255,942	0	523,955	2,576,934	0	1,196,547	0	3,773,481	
	Permanent Partial	930,689	1,641,115	707,471	1,443,186	4,722,461	10,794,982	17,419,089	3,182,897	6,619,024	38,015,992	
	Temporary Total	962,637	1,327,206	887,943	1,831,778	5,009,564	10,447,483	14,309,388	4,335,599	11,031,602	40,124,072	
	Medical Only	0	0	0	787,053	787,053	0	0	0	6,230,948	6,230,948	
2017	Fatal	0	102,724	0	71,837	174,561	0	829,199	0	226,929	1,056,128	895,361,805
	Permanent Total	164,103	0	128,792	0	292,895	1,728,488	0	522,670	0	2,251,158	
	Permanent Partial	760,722	1,415,571	648,833	1,186,863	4,011,989	8,651,668	16,646,425	2,906,879	5,674,954	33,879,926	
	Temporary Total	1,009,814	1,676,675	841,540	2,253,028	5,781,057	11,141,040	18,172,707	3,844,475	13,381,950	46,540,172	
	Medical Only	0	0	0	913,886	913,886	0	0	0	7,205,457	7,205,457	
2018	Fatal	0	81,371	0	42,900	124,271	0	855,783	0	106,208	961,991	937,263,848
	Permanent Total	34,267	0	69,442	0	103,709	355,275	0	432,743	0	788,018	
	Permanent Partial	985,821	941,570	668,475	869,691	3,465,557	10,350,323	10,390,143	2,522,213	4,139,279	27,401,958	
	Temporary Total	1,368,420	2,152,871	1,189,837	2,651,914	7,363,042	14,946,638	24,334,604	5,503,407	15,239,506	60,024,155	
	Medical Only	0	0	0	934,856	934,856	0	0	0	7,498,565	7,498,565	
(14) All Years, All Injury Types		10,689,249	15,060,717	9,228,616	20,979,682	55,958,264	114,857,167	162,664,231	42,064,947	124,201,871	443,788,216	4,278,150,937
(15) Pure Premium							0.027	0.038	0.010	0.029	0.104	

Notes:
 (3), (4) = 0.7 x [Excess Factor - 1.0] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Indemnity Converted Limited Losses from Page 1, Columns (8) and (9).
 (5), (6) = [Excess Factor - 1.0] x Medical Converted Limited Losses + 0.3 x [Excess Factor - 1.0] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Medical Converted Limited Losses from Page 1, Columns (10) and (11).
 (7) = (3) + (4) + (5) + (6)
 (8), (9), (10), (11): (Converted Limited Losses from Page 1 + Adjusted Excess Losses) x Secondary Conversion Factors from Section IX - B, Exhibit 1, Page 3.
 (12) = (8) + (9) + (10) + (11)
 (13): Unit Statistical Plan data, excluding Large Deductibles.
 (15): Pure Premium calculated as the All Years, All Injury Types Converted Unlimited Losses divided by the All Years, All Injury Types Exposure.

IX 000035 STIP

Calculation of Converted Limited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 Goods and Services Industry Group, Industry Code 9
 All Classes

Policy Year (1)	Injury Type (2)	Limited Losses					Converted Limited Losses				
		Indemnity		Medical		Total (7)	Indemnity		Medical		Total (12)
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)			Likely (8)	Not-Likely (9)	Likely (10)	
2014	Fatal	1,122,230	613,372	356,382	13,192	2,105,176	917,589	498,168	251,204	9,894	1,676,855
	Permanent Total	10,791,065	0	3,495,296	0	14,286,361	8,872,628	0	2,463,738	0	11,336,366
	Permanent Partial	23,534,041	40,695,369	9,411,330	16,752,208	90,392,948	20,106,819	34,536,446	6,633,785	12,563,911	73,840,961
	Temporary Total	13,944,168	30,451,514	6,181,012	23,082,239	73,658,933	11,205,669	24,307,475	4,356,824	17,311,341	57,181,309
	Medical Only	0	0	0	9,646,893	9,646,893	0	0	0	6,800,191	6,800,191
2015	Fatal	3,076	740,873	0	6,638	750,587	2,734	658,305	0	5,532	666,571
	Permanent Total	10,154,283	0	3,343,241	0	13,497,524	9,123,904	0	2,604,416	0	11,728,320
	Permanent Partial	23,975,250	41,335,625	9,489,972	15,368,669	90,169,516	22,291,560	38,415,226	7,392,777	12,808,443	80,908,006
	Temporary Total	13,921,749	29,619,098	6,387,553	22,286,675	72,215,075	12,258,235	26,067,990	4,975,964	18,573,997	61,876,186
	Medical Only	0	0	0	10,075,160	10,075,160	0	0	0	7,403,464	7,403,464
2016	Fatal	0	1,899,767	0	207,374	2,107,141	0	1,836,888	0	178,446	2,015,334
	Permanent Total	6,781,678	0	1,539,189	0	8,320,867	6,667,956	0	1,238,069	0	7,906,025
	Permanent Partial	20,566,029	34,177,417	7,119,333	14,519,666	76,382,445	20,846,071	34,406,870	5,726,536	12,494,255	73,473,732
	Temporary Total	12,640,574	30,755,527	6,100,620	24,653,334	74,150,055	12,208,715	29,502,480	4,907,121	21,214,335	67,832,651
	Medical Only	0	0	0	9,777,463	9,777,463	0	0	0	7,626,705	7,626,705
2017	Fatal	35,000	1,002,797	0	9,520	1,047,317	38,552	1,085,312	0	8,162	1,132,026
	Permanent Total	3,725,754	0	1,551,131	0	5,276,885	4,139,107	0	1,275,798	0	5,414,905
	Permanent Partial	19,137,544	37,155,256	7,927,393	17,215,912	81,436,105	21,830,359	41,645,028	6,520,246	14,759,419	84,755,052
	Temporary Total	13,912,893	34,275,669	6,974,243	25,645,975	80,808,780	15,221,392	36,846,062	5,736,284	21,986,619	79,790,357
	Medical Only	0	0	0	10,180,406	10,180,406	0	0	0	7,882,700	7,882,700
2018	Fatal	0	1,387,534	0	185,933	1,573,467	0	2,088,304	0	167,126	2,255,430
	Permanent Total	722,190	0	469,847	0	1,192,037	1,243,577	0	419,984	0	1,663,561
	Permanent Partial	10,244,105	20,669,991	4,011,403	10,794,596	45,720,095	18,037,770	32,039,751	3,585,691	9,702,728	63,365,940
	Temporary Total	11,729,587	34,134,443	7,581,528	29,874,610	83,320,168	19,944,253	51,093,761	6,776,936	26,852,809	104,667,759
	Medical Only	0	0	0	10,316,006	10,316,006	0	0	0	8,395,674	8,395,674
(13) All Years, All Injury Types		196,941,216	338,914,252	81,939,473	250,612,469	868,407,410	204,956,890	355,028,066	64,865,373	206,745,751	831,596,080

Notes:
 (3), (4), (5), (6): From Unit Statistical Plan data, excluding Large Deductibles.
 (7)= (3) + (4) + (5) + (6)
 (8)= (3) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (9)= (4) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (10)= (5) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (11)= (6) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (12)= (8) + (9) + (10) +(11)

IX 000036 STIP

Calculation of Converted Unlimited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 Goods and Services Industry Group, Industry Code 9
 All Classes

Policy Year (1)	Injury Type (2)	Indemnity		Adjusted Excess Losses Medical		Total (7)	Indemnity		Converted Unlimited Losses Medical		Total (12)	Exposure (13)
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)		Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)		
2014	Fatal	135,426	60,096	101,330	27,460	324,312	1,192,147	632,025	418,458	44,339	2,286,969	178,769,248
	Permanent Total	1,224,611	0	985,187	0	2,209,798	11,269,199	0	3,854,827	0	15,124,026	
	Permanent Partial	2,522,937	4,292,892	2,230,669	4,043,853	13,090,351	27,136,282	46,561,874	10,645,186	19,944,006	104,287,348	
	Temporary Total	1,395,513	3,134,019	1,360,559	4,441,194	10,331,285	15,141,032	32,972,507	6,879,744	26,174,891	81,168,174	
	Medical Only	0	0	0	1,126,415	1,126,415	0	0	0	9,408,881	9,408,881	
2015	Fatal	446	72,730	191	32,073	105,440	3,601	827,624	227	44,637	876,089	188,147,177
	Permanent Total	1,276,592	0	1,087,497	0	2,364,089	11,607,655	0	4,126,413	0	15,734,068	
	Permanent Partial	2,955,673	4,812,850	2,649,399	4,321,066	14,738,988	30,275,007	51,836,583	12,059,493	20,570,562	114,741,645	
	Temporary Total	1,658,495	3,215,247	1,578,598	4,622,922	11,075,262	16,721,738	35,185,465	7,887,124	27,912,921	87,707,248	
	Medical Only	0	0	0	1,228,763	1,228,763	0	0	0	10,246,453	10,246,453	
2016	Fatal	0	244,067	0	139,574	383,641	0	2,355,905	0	377,490	2,733,395	194,586,533
	Permanent Total	1,033,626	0	725,139	0	1,758,765	8,595,485	0	2,194,257	0	10,789,742	
	Permanent Partial	2,735,680	4,339,518	2,240,240	4,113,083	13,428,521	28,277,859	46,462,406	9,567,178	19,943,495	104,250,938	
	Temporary Total	1,461,882	3,550,578	1,507,812	5,174,723	11,694,995	16,425,995	39,715,118	7,719,107	31,754,031	95,614,251	
	Medical Only	0	0	0	1,285,503	1,285,503	0	0	0	10,578,791	10,578,791	
2017	Fatal	3,132	153,426	1,342	67,647	225,547	47,191	1,402,409	1,593	89,985	1,541,178	206,536,532
	Permanent Total	562,846	0	521,897	0	1,084,743	5,247,697	0	2,009,265	0	7,256,962	
	Permanent Partial	2,753,602	5,282,614	2,346,118	4,913,951	15,296,285	29,479,649	56,272,887	10,647,479	23,625,446	120,025,461	
	Temporary Total	1,867,358	4,529,385	1,832,028	5,815,486	14,044,257	20,533,099	49,714,939	9,106,972	33,454,355	112,809,365	
	Medical Only	0	0	0	1,316,280	1,316,280	0	0	0	10,919,189	10,919,189	
2018	Fatal	0	233,222	0	124,078	357,300	0	2,628,262	0	345,660	2,973,922	217,282,139
	Permanent Total	159,347	0	141,362	0	300,709	1,565,758	0	627,410	0	2,193,168	
	Permanent Partial	2,325,721	4,025,046	1,668,742	3,482,767	11,502,276	24,418,709	43,246,797	6,309,968	15,834,257	89,809,731	
	Temporary Total	2,435,254	6,478,018	2,223,270	7,524,198	18,660,740	26,890,243	69,175,747	10,829,973	41,365,955	148,261,918	
	Medical Only	0	0	0	1,397,404	1,397,404	0	0	0	11,624,384	11,624,384	
(14) All Years, All Injury Types		26,508,141	44,423,708	23,201,380	55,198,440	149,331,669	274,828,346	478,990,548	104,884,674	314,259,728	1,172,963,296	985,321,450
(15) Pure Premium							0.279	0.486	0.106	0.319	1.190	

Notes:
 (3) , (4) = 0.7 x [Excess Factor - 1.0] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Indemnity Converted Limited Losses from Page 1, Columns (8) and (9).
 (5), (6) = [Excess Factor - 1.0] x Medical Converted Limited Losses + 0.3 x [Excess Factor - 1.0] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Medical Converted Limited Losses from Page 1, Columns (10) and (11).
 (7) = (3) + (4) + (5) + (6)
 (8), (9), (10), (11): (Converted Limited Losses from Page 1 + Adjusted Excess Losses) x Secondary Conversion Factors from Section IX - B, Exhibit 1, Page 3.
 (12) = (8) + (9) + (10) + (11)
 (13): Unit Statistical Plan data, excluding Large Deductibles.
 (15): Pure Premium calculated as the All Years, All Injury Types Converted Unlimited Losses divided by the All Years, All Injury Types Exposure.

IX 000037 STIP

Calculation of Converted Limited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 Miscellaneous Industry Group, Industry Code 0
 All Classes

Policy Year (1)	Injury Type (2)	Limited Losses					Converted Limited Losses				
		Indemnity		Medical		Total	Indemnity		Medical		Total
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	(7)	Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)	(12)
2014	Fatal	103,800	512,777	152,618	125,247	894,442	84,872	416,467	107,576	93,933	702,848
	Permanent Total	5,413,495	0	1,732,718	0	7,146,213	4,451,083	0	1,221,345	0	5,672,428
	Permanent Partial	10,079,153	15,841,305	3,543,723	5,605,818	35,069,999	8,611,343	13,443,848	2,497,872	4,204,282	28,757,345
	Temporary Total	4,865,235	10,471,516	1,954,695	6,835,835	24,127,281	3,909,750	8,358,734	1,377,810	5,126,776	18,773,070
	Medical Only	0	0	0	2,631,021	2,631,021	0	0	0	1,854,633	1,854,633
2015	Fatal	287,617	2,345,934	137,161	346,005	3,116,717	255,680	2,084,486	106,850	288,365	2,735,381
	Permanent Total	5,202,202	0	2,033,821	0	7,236,023	4,674,322	0	1,584,366	0	6,258,688
	Permanent Partial	10,269,458	17,005,526	4,824,636	5,919,566	38,019,186	9,548,273	15,804,070	3,758,437	4,933,441	34,044,221
	Temporary Total	5,055,967	10,122,942	1,886,691	6,615,156	23,680,756	4,451,828	8,909,277	1,469,750	5,513,155	20,344,010
	Medical Only	0	0	0	2,898,552	2,898,552	0	0	0	2,129,924	2,129,924
2016	Fatal	0	557,162	0	2,188	559,350	0	538,721	0	1,883	540,604
	Permanent Total	2,740,719	0	2,264,055	0	5,004,774	2,694,760	0	1,821,125	0	4,515,885
	Permanent Partial	10,584,424	12,508,746	4,499,216	6,038,602	33,630,988	10,728,549	12,592,724	3,619,008	5,196,252	32,136,533
	Temporary Total	9,266,154	15,670,720	4,270,150	9,004,461	38,211,485	8,949,581	15,032,261	3,434,755	7,748,390	35,164,987
	Medical Only	0	0	0	2,866,334	2,866,334	0	0	0	2,235,824	2,235,824
2017	Fatal	0	581,554	0	6,029	587,583	0	629,408	0	5,169	634,577
	Permanent Total	2,660,258	0	835,096	0	3,495,354	2,955,399	0	686,863	0	3,642,262
	Permanent Partial	7,077,668	13,227,205	2,423,243	5,527,358	28,255,474	8,073,556	14,825,555	1,993,107	4,738,674	29,630,892
	Temporary Total	9,238,573	16,867,271	3,787,745	10,064,009	39,957,598	10,107,455	18,132,178	3,115,404	8,628,002	39,983,039
	Medical Only	0	0	0	3,035,420	3,035,420	0	0	0	2,350,329	2,350,329
2018	Fatal	0	1,000,199	0	4,802	1,005,001	0	1,505,347	0	4,317	1,509,664
	Permanent Total	377,334	0	374,782	0	752,116	649,751	0	335,008	0	984,759
	Permanent Partial	5,388,809	8,126,420	3,293,292	4,920,474	21,728,995	9,488,589	12,596,448	2,943,790	4,422,771	29,451,598
	Temporary Total	6,219,116	15,533,413	3,605,855	11,334,559	36,692,943	10,574,594	23,251,017	3,223,182	10,188,074	47,236,867
	Medical Only	0	0	0	3,064,021	3,064,021	0	0	0	2,493,651	2,493,651
(13) All Years, All Injury Types		94,829,982	140,372,690	41,619,497	86,845,457	363,667,626	100,209,385	148,120,541	33,296,248	72,157,845	353,784,019

Notes:
 (3), (4), (5), (6): From Unit Statistical Plan data, excluding Large Deductibles.
 (7)= (3) + (4) + (5) + (6)
 (8)= (3) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (9)= (4) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (10)= (5) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (11)= (6) x Primary Conversion Factors from Section IX - B, Exhibit 1
 (12)= (8) + (9) + (10) +(11)

IX 000038 STIP

Calculation of Converted Unlimited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 Miscellaneous Industry Group, Industry Code 0
 All Classes

Policy Year (1)	Injury Type (2)	Adjusted Excess Losses					Converted Unlimited Losses					Exposure (13)
		Indemnity		Medical		Total	Indemnity		Medical		Total	
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	(7)	Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)	(12)	
2014	Fatal	15,724	73,392	37,389	53,720	180,225	113,888	554,582	172,074	175,265	1,015,809	28,298,494
	Permanent Total	780,400	0	630,464	0	1,410,864	5,838,689	0	2,069,747	0	7,908,436	
	Permanent Partial	1,597,336	2,446,940	1,343,757	2,148,270	7,536,303	12,241,652	19,055,305	4,613,353	7,628,681	43,538,991	
	Temporary Total	667,395	1,491,583	602,794	1,933,395	4,695,167	5,499,699	11,835,713	2,383,267	8,495,525	28,214,204	
	Medical Only	0	0	0	395,162	395,162	0	0	0	2,670,506	2,670,506	
2015	Fatal	36,577	425,937	40,577	270,006	773,097	330,872	2,842,117	174,995	662,787	4,010,771	30,890,848
	Permanent Total	851,343	0	772,563	0	1,623,906	6,167,015	0	2,634,315	0	8,801,330	
	Permanent Partial	1,728,474	2,820,155	1,656,331	2,489,415	8,694,375	13,522,417	22,333,083	6,502,510	8,913,994	51,272,004	
	Temporary Total	857,924	1,596,849	763,524	2,083,524	5,301,821	6,379,968	12,623,705	2,687,305	9,141,106	30,832,084	
	Medical Only	0	0	0	453,054	453,054	0	0	0	3,065,995	3,065,995	
2016	Fatal	0	85,590	0	37,006	122,596	0	706,800	0	46,161	752,961	31,911,307
	Permanent Total	547,656	0	772,911	0	1,320,567	3,618,754	0	2,899,328	0	6,518,082	
	Permanent Partial	1,831,913	2,282,528	1,737,441	2,312,565	8,164,447	15,061,773	17,837,533	6,432,477	9,017,222	48,349,005	
	Temporary Total	1,621,943	2,648,831	1,588,339	3,042,456	8,901,569	12,702,285	21,244,831	6,044,305	12,984,657	52,976,078	
	Medical Only	0	0	0	458,483	458,483	0	0	0	3,198,142	3,198,142	
2017	Fatal	0	163,428	0	71,626	235,054	0	897,590	0	91,156	988,746	33,822,770
	Permanent Total	535,220	0	427,802	0	963,022	3,895,767	0	1,245,849	0	5,141,616	
	Permanent Partial	1,388,679	2,634,777	1,091,075	2,313,651	7,428,182	11,346,559	20,937,411	3,703,746	8,469,028	44,456,744	
	Temporary Total	1,882,049	3,203,666	1,627,774	3,548,416	10,261,905	14,406,067	25,636,222	5,707,480	14,651,920	60,401,689	
	Medical Only	0	0	0	491,861	491,861	0	0	0	3,373,680	3,373,680	
2018	Fatal	0	332,761	0	143,975	476,736	0	2,080,971	0	176,022	2,256,993	32,129,713
	Permanent Total	94,032	0	100,108	0	194,140	830,113	0	486,325	0	1,316,438	
	Permanent Partial	1,592,377	2,280,571	1,449,411	2,145,509	7,467,868	13,287,647	17,839,652	5,275,727	7,887,745	44,290,771	
	Temporary Total	1,916,337	4,165,151	1,628,587	4,432,249	12,142,324	15,008,560	32,942,075	5,838,149	17,592,678	71,381,462	
	Medical Only	0	0	0	538,124	538,124	0	0	0	3,598,717	3,598,717	
(14) All Years, All Injury Types		17,945,379	26,652,159	16,270,847	29,362,467	90,230,852	140,251,725	209,367,590	58,870,952	121,840,987	530,331,254	157,053,132
(15) Pure Premium							0.893	1.333	0.375	0.776	3.377	

Notes:
 (3) , (4) = 0.7 x [Excess Factor - 1.0] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Indemnity Converted Limited Losses from Page 1, Columns (8) and (9).
 (5), (6) = [Excess Factor - 1.0] x Medical Converted Limited Losses + 0.3 x [Excess Factor - 1.0] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Medical Converted Limited Losses from Page 1, Columns (10) and (11).
 (7) = (3) + (4) + (5) + (6)
 (8), (9), (10), (11): (Converted Limited Losses from Page 1 + Adjusted Excess Losses) x Secondary Conversion Factors from Section IX - B, Exhibit 1, Page 3.
 (12) = (8) + (9) + (10) + (11)
 (13): Unit Statistical Plan data, excluding Large Deductibles.
 (15): Pure Premium calculated as the All Years, All Injury Types Converted Unlimited Losses divided by the All Years, All Injury Types Exposure.

IX 000039 STIP

Calculation of Converted Limited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 All Industry Groups
 All Classes

Policy Year (1)	Injury Type (2)	Limited Losses					Converted Limited Losses				
		Indemnity		Medical		Total (7)	Indemnity		Medical		Total (12)
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)			Likely (8)	Not-Likely (9)	Likely (10)	
2014	Fatal	2,992,714	2,204,287	751,625	196,701	6,145,327	2,446,985	1,790,276	529,800	147,523	4,914,584
	Permanent Total	49,873,230	0	17,517,608	0	67,390,838	41,006,761	0	12,347,677	0	53,354,438
	Permanent Partial	82,516,545	133,461,334	29,361,201	48,010,586	293,349,666	70,499,801	113,263,014	20,695,896	36,007,237	240,465,948
	Temporary Total	39,429,577	84,834,146	15,963,650	60,455,152	200,682,525	31,685,991	67,717,615	11,252,334	45,340,479	155,996,419
	Medical Only	0	0	0	25,071,209	25,071,209	0	0	0	17,672,944	17,672,944
2015	Fatal	1,142,621	10,030,885	179,725	816,655	12,169,886	1,015,743	8,912,970	140,008	680,611	10,749,332
	Permanent Total	42,816,880	0	15,005,247	0	57,822,127	38,472,151	0	11,689,229	0	50,161,380
	Permanent Partial	81,729,770	133,625,343	28,684,845	45,323,441	289,363,399	75,990,200	124,184,592	22,345,764	37,773,128	260,293,684
	Temporary Total	36,723,694	89,560,528	16,293,865	62,560,632	205,138,719	32,335,569	78,822,892	12,693,074	52,138,822	175,990,357
	Medical Only	0	0	0	25,243,124	25,243,124	0	0	0	18,549,240	18,549,240
2016	Fatal	283,300	7,854,102	22,920	407,676	8,567,998	275,802	7,594,146	18,436	350,807	8,239,191
	Permanent Total	29,771,581	0	11,330,266	0	41,101,847	29,272,342	0	9,113,660	0	38,386,002
	Permanent Partial	71,084,918	124,829,236	25,351,955	46,766,164	268,032,273	72,052,862	125,667,287	20,392,203	40,242,551	258,354,903
	Temporary Total	43,516,070	97,186,226	20,109,979	66,211,230	227,023,505	42,029,366	93,226,648	16,175,748	56,975,142	208,406,904
	Medical Only	0	0	0	24,916,475	24,916,475	0	0	0	19,435,574	19,435,574
2017	Fatal	342,015	5,972,937	38,283	678,929	7,032,164	376,720	6,464,424	31,487	582,056	7,454,687
	Permanent Total	18,445,138	0	6,978,224	0	25,423,362	20,491,527	0	5,739,559	0	26,231,086
	Permanent Partial	60,224,180	121,303,102	25,193,563	46,954,545	253,675,390	68,698,233	135,961,142	20,721,595	40,254,726	265,635,696
	Temporary Total	47,297,545	106,516,565	20,647,542	72,699,160	247,160,812	51,745,849	114,504,432	16,982,512	62,325,910	245,558,703
	Medical Only	0	0	0	26,517,117	26,517,117	0	0	0	20,532,234	20,532,234
2018	Fatal	0	4,442,827	0	380,694	4,823,521	0	6,686,665	0	342,188	7,028,853
	Permanent Total	2,702,423	0	1,793,850	0	4,496,273	4,653,443	0	1,603,477	0	6,256,920
	Permanent Partial	33,376,305	64,959,888	18,485,580	37,236,492	154,058,265	58,768,836	100,691,801	16,523,791	33,470,041	209,454,469
	Temporary Total	40,082,250	106,246,983	25,924,896	84,667,509	256,921,638	68,153,340	159,034,615	23,173,607	76,103,435	326,464,997
	Medical Only	0	0	0	27,253,073	27,253,073	0	0	0	22,179,894	22,179,894
(13) All Years, All Injury Types		684,350,756	1,093,028,389	279,634,824	702,366,564	2,759,380,533	709,971,521	1,144,522,519	222,169,857	581,104,542	2,657,768,439

Notes:
 (3) - (12): Total of Section IX - C, Page 1 of Exhibits 1 through 5.

IX 000040 STIP

Calculation of Converted Unlimited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely
 All Industry Groups
 All Classes

Policy Year (1)	Injury Type (2)	Adjusted Excess Losses				Converted Unlimited Losses						Exposure (13)
		Indemnity		Medical		Indemnity		Medical		Total		
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Total (7)	Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)	Total (12)	
2014	Fatal	518,785	264,648	345,080	150,769	1,279,282	3,357,630	2,326,435	1,038,483	354,072	7,076,620	1,101,731,261
	Permanent Total	7,415,260	0	6,495,409	0	13,910,669	54,042,242	0	21,060,720	0	75,102,962	
	Permanent Partial	12,010,602	18,996,295	10,104,572	16,390,886	57,502,355	98,941,659	158,597,638	36,987,804	62,924,093	357,451,194	
	Temporary Total	4,826,241	10,455,988	4,531,319	14,184,560	33,998,108	43,871,512	93,930,005	18,992,516	71,626,656	228,420,689	
	Medical Only	0	0	0	3,461,798	3,461,798	0	0	0	25,086,939	25,086,939	
2015	Fatal	246,675	1,898,203	139,328	1,014,167	3,298,373	1,429,219	12,239,617	331,570	2,011,701	16,012,107	1,177,382,794
	Permanent Total	7,060,487	0	6,376,985	0	13,437,472	50,817,494	0	20,192,419	0	71,009,913	
	Permanent Partial	13,145,071	20,891,883	11,088,759	17,716,912	62,842,625	106,885,810	173,967,234	40,150,999	66,637,131	387,641,174	
	Temporary Total	5,269,403	12,294,424	5,136,874	16,525,651	39,226,352	45,184,499	109,482,607	21,454,830	82,624,164	258,746,100	
	Medical Only	0	0	0	3,607,416	3,607,416	0	0	0	26,299,951	26,299,951	
2016	Fatal	56,543	1,522,789	27,409	761,689	2,368,430	376,256	10,321,527	54,419	1,320,531	12,072,733	1,216,408,581
	Permanent Total	5,441,621	0	4,940,219	0	10,381,840	38,743,124	0	15,707,876	0	54,451,000	
	Permanent Partial	12,207,651	21,422,927	10,309,549	18,657,038	62,597,165	101,040,286	176,381,993	36,869,259	70,731,604	385,023,142	
	Temporary Total	6,548,904	14,735,165	6,403,666	18,711,929	46,399,664	58,369,539	129,722,220	27,169,875	91,074,476	306,336,110	
	Medical Only	0	0	0	3,803,929	3,803,929	0	0	0	27,585,289	27,585,289	
2017	Fatal	73,100	1,263,841	40,932	706,511	2,084,384	509,253	8,749,375	85,962	1,529,528	10,874,118	1,279,254,481
	Permanent Total	3,638,914	0	3,110,012	0	6,748,926	26,931,198	0	9,891,073	0	36,822,271	
	Permanent Partial	11,656,419	23,159,541	10,013,049	19,345,270	64,174,279	96,356,603	190,808,229	36,908,759	71,572,712	395,646,303	
	Temporary Total	8,433,378	18,260,301	7,631,840	21,495,102	55,820,621	72,308,743	159,524,332	29,618,523	100,862,070	362,313,668	
	Medical Only	0	0	0	4,000,015	4,000,015	0	0	0	29,119,781	29,119,781	
2018	Fatal	0	1,281,925	0	617,201	1,899,126	0	9,021,454	0	1,138,794	10,160,248	1,339,145,597
	Permanent Total	1,015,083	0	881,583	0	1,896,666	6,326,459	0	2,777,524	0	9,103,983	
	Permanent Partial	9,901,990	17,130,986	8,536,367	15,756,921	51,326,264	82,346,042	141,286,202	30,094,356	59,115,895	312,842,495	
	Temporary Total	10,885,265	25,669,873	9,941,041	28,034,670	74,530,849	94,969,351	221,932,883	39,846,954	125,309,691	482,058,879	
	Medical Only	0	0	0	4,356,062	4,356,062	0	0	0	31,498,180	31,498,180	
(14) All Years, All Injury Types		120,351,392	189,248,789	106,053,993	209,298,496	624,952,670	982,806,919	1,598,291,751	389,233,921	948,423,258	3,918,755,849	6,113,922,714
(15) Pure Premium							0.161	0.261	0.064	0.155	0.641	

Notes:
 (3) - (13): Total of Section IX - C, Page 2 of Exhibits 1 through 5.
 (15): Pure Premium calculated as the All Years, All Injury Types Converted Unlimited Losses divided by the All Years, All Injury Types Exposure.

IX 000041 STIP

IX 000042 STIP

Section IX - Classification Pricing
Subsection D - Credibility/Countrywide Data
7/1/2022

Section IX - D
Exhibit 1
Page 1

MA Full Credibility Standard and Partial Credibility

		Indemnity	Medical
(1)	Average Claim Cost (See Page 2)	33,000	16,000
(2)	Claims	850	400
(3)	Full Credibility Standard =(1) x (2)	28,050,000	6,400,000

Partial Credibility Z is given in terms of E, the expected losses and F, the criterion for full credibility by the formula:

$$Z=(E / F)^{0.4}$$

Credibility of Countrywide Data

		Indemnity	Medical
(4)	Number of Countrywide Claims	1,150	1,000

Notes:

Partial Credibility is determined from the full credibility standard and the observed number of countrywide claims using the same formula as is done for the Massachusetts data.

(2),(4): From the paper "Class Ratemaking for Workers Compensation: NCCI's New Methodology" by Tom Daley.

IX 000043 STIP

Section IX - Classification Pricing
 Subsection D - Credibility/Countrywide Data
 7/1/2022

Section IX - D
 Exhibit 1
 Page 2

Selection of Average Massachusetts Claim Costs

Policy Year 2018

	Injury Type				
	1	2	9	5	6
	Indemnity				
(1) Losses Developed to Ultimate	10,996,706	10,760,854	193,829,231	274,354,619	
(2) On-Level Factor	1.032	1.039	1.063	1.026	
(3) On-Level Ultimate Losses = (1) x (2)	11,347,410	11,183,857	205,992,778	281,560,165	
	Medical				
(4) Losses Developed to Ultimate	748,629	9,428,264	75,471,931	126,223,071	29,121,609
(5) On-Level Factor	1.000	1.000	1.000	1.000	1.000
(6) On-Level Ultimate Losses = (4) x (5)	748,629	9,428,264	75,471,931	126,223,071	29,121,609
	Claim Count				
(7) Claim Count Developed to Fifth Report	23	23	1,898	13,507	
Summary:					
(8) Ultimate Losses			Indemnity 510,084,210		
(9) Ultimate Claim Count			15,450		
(10) Average Claim Cost = (8) / (9)			33,015		
(11) Selected Average Claim Cost			33,000		
(12) Ultimate Losses			Medical 240,993,504		
(13) Ultimate Claim Count			15,450		
(14) Average Claim Cost = (12) / (13)			15,598		
(15) Selected Average Claim Cost			16,000		

Notes:

- (1), (4) : Unit Statistical Plan Data, developed to Ultimate using development factors from Section X-A, Exhibit 5, Pages 2 and 5.
- (2), (5): Section IV-A, Exhibit 1.
- (7) : Unit Statistical Plan Data, developed to fifth report using development factors from Section IX-B, Exhibit 2, Page 1.
- (8) = Sum of (3)
- (9), (13) = Sum of (7)
- (12) = Sum of (6)

IX 00044 STIP

Section IX - Classification Pricing
 Subsection D - Credibility/Countrywide Data
 7/1/2022

Section IX - D
 Exhibit 2

Countrywide Classification Experience: Pitch Factors

State (1)	State Code (2)	Industry Group (3)	Industry Code (4)	Indemnity (5)	Medical (6)
Alabama	1	Manufacturing	1	2.483	0.636
		Construction	2	2.690	0.527
		Office and Clerical	3	1.562	0.408
		Goods and Services	9	2.265	0.491
		Miscellaneous	0	2.664	0.646
Arizona	2	Manufacturing	1	3.236	0.435
		Construction	2	3.222	0.499
		Office and Clerical	3	2.799	0.446
		Goods and Services	9	3.283	0.506
		Miscellaneous	0	3.221	0.636
Arkansas	3	Manufacturing	1	3.273	1.060
		Construction	2	3.543	1.060
		Office and Clerical	3	2.508	1.011
		Goods and Services	9	3.331	1.123
		Miscellaneous	0	3.566	1.146
Colorado	5	Manufacturing	1	2.071	0.628
		Construction	2	1.990	0.661
		Office and Clerical	3	1.689	0.588
		Goods and Services	9	1.621	0.557
		Miscellaneous	0	1.917	0.769
Connecticut	6	Manufacturing	1	0.938	0.504
		Construction	2	0.945	0.485
		Office and Clerical	3	0.571	0.421
		Goods and Services	9	0.759	0.424
		Miscellaneous	0	0.930	0.495
D.C.	8	Manufacturing	1	0.780	0.429
		Construction	2	1.688	0.828
		Office and Clerical	3	0.770	0.513
		Goods and Services	9	1.506	0.952
		Miscellaneous	0	0.731	0.482
Florida	9	Manufacturing	1	2.059	0.454
		Construction	2	1.760	0.380
		Office and Clerical	3	1.271	0.332
		Goods and Services	9	1.576	0.397
		Miscellaneous	0	1.710	0.525
Georgia	10	Manufacturing	1	1.364	0.710
		Construction	2	0.779	0.399
		Office and Clerical	3	1.323	0.715
		Goods and Services	9	1.090	0.621
		Miscellaneous	0	1.195	0.727
Idaho	11	Manufacturing	1	1.454	0.411
		Construction	2	1.423	0.433
		Office and Clerical	3	0.774	0.238
		Goods and Services	9	1.169	0.376
		Miscellaneous	0	1.754	0.619

IX 00045 STIP

Section IX - Classification Pricing
 Subsection D - Credibility/Countrywide Data
 7/1/2022

Section IX - D
 Exhibit 2

Countrywide Classification Experience: Pitch Factors

State (1)	State Code (2)	Industry Group (3)	Industry Code (4)	Indemnity (5)	Medical (6)
Illinois	12	Manufacturing	1	1.028	0.476
		Construction	2	0.990	0.544
		Office and Clerical	3	0.955	0.592
		Goods and Services	9	1.069	0.511
		Miscellaneous	0	1.039	0.602
Indiana	13	Manufacturing	1	3.601	0.737
		Construction	2	5.071	1.015
		Office and Clerical	3	1.548	0.394
		Goods and Services	9	3.681	0.682
		Miscellaneous	0	3.878	0.920
Iowa	14	Manufacturing	1	1.388	0.444
		Construction	2	1.646	0.546
		Office and Clerical	3	0.804	0.344
		Goods and Services	9	1.359	0.461
		Miscellaneous	0	1.679	0.622
Kansas	15	Manufacturing	1	2.382	0.573
		Construction	2	3.227	0.724
		Office and Clerical	3	2.356	0.641
		Goods and Services	9	2.723	0.624
		Miscellaneous	0	2.985	0.743
Kentucky	16	Manufacturing	1	2.058	0.900
		Construction	2	2.059	0.839
		Office and Clerical	3	1.077	0.488
		Goods and Services	9	2.029	0.915
		Miscellaneous	0	1.998	0.950
Louisiana	17	Manufacturing	1	1.663	0.566
		Construction	2	1.788	0.566
		Office and Clerical	3	1.008	0.331
		Goods and Services	9	1.534	0.487
		Miscellaneous	0	1.577	0.555
Maine	18	Manufacturing	1	1.068	0.509
		Construction	2	1.169	0.577
		Office and Clerical	3	0.490	0.243
		Goods and Services	9	0.983	0.497
		Miscellaneous	0	0.478	0.598
Maryland	19	Manufacturing	1	1.574	0.795
		Construction	2	1.808	0.755
		Office and Clerical	3	1.492	0.918
		Goods and Services	9	1.654	0.839
		Miscellaneous	0	1.259	0.808
Michigan	21	Manufacturing	1	2.261	0.813
		Construction	2	2.732	1.130
		Office and Clerical	3	2.687	0.947
		Goods and Services	9	2.353	0.853
		Miscellaneous	0	2.342	1.118
Minnesota	22	Manufacturing	1	1.519	0.715
		Construction	2	1.826	0.827
		Office and Clerical	3	1.526	0.681
		Goods and Services	9	1.585	0.695
		Miscellaneous	0	1.557	0.821

IX 00046 STIP

Section IX - Classification Pricing
 Subsection D - Credibility/Countrywide Data
 7/1/2022

Section IX - D
 Exhibit 2

Countrywide Classification Experience: Pitch Factors

State (1)	State Code (2)	Industry Group (3)	Industry Code (4)	Indemnity (5)	Medical (6)
Mississippi	23	Manufacturing	1	1.719	0.684
		Construction	2	2.069	0.648
		Office and Clerical	3	0.985	0.371
		Goods and Services	9	1.753	0.600
		Miscellaneous	0	1.975	0.810
Missouri	24	Manufacturing	1	1.442	0.496
		Construction	2	1.744	0.568
		Office and Clerical	3	0.753	0.330
		Goods and Services	9	1.409	0.461
		Miscellaneous	0	1.568	0.582
Montana	25	Manufacturing	1	1.305	0.371
		Construction	2	1.666	0.501
		Office and Clerical	3	0.544	0.233
		Goods and Services	9	1.457	0.424
		Miscellaneous	0	2.025	0.629
Nebraska	26	Manufacturing	1	1.728	0.495
		Construction	2	2.059	0.611
		Office and Clerical	3	0.998	0.270
		Goods and Services	9	1.827	0.521
		Miscellaneous	0	2.153	0.702
Nevada	27	Manufacturing	1	0.803	0.468
		Construction	2	1.358	0.633
		Office and Clerical	3	0.525	0.263
		Goods and Services	9	1.281	0.580
		Miscellaneous	0	1.008	0.589
New Hampshire	28	Manufacturing	1	1.850	0.409
		Construction	2	1.516	0.451
		Office and Clerical	3	1.966	0.474
		Goods and Services	9	1.708	0.419
		Miscellaneous	0	1.851	0.633
New Mexico	30	Manufacturing	1	0.532	0.277
		Construction	2	1.751	0.575
		Office and Clerical	3	0.581	0.254
		Goods and Services	9	1.554	0.529
		Miscellaneous	0	1.947	0.655
North Carolina	32	Manufacturing	1	1.785	1.069
		Construction	2	1.440	0.694
		Office and Clerical	3	0.979	0.602
		Goods and Services	9	1.586	0.847
		Miscellaneous	0	1.377	0.892
Oklahoma	35	Manufacturing	1	1.269	0.579
		Construction	2	1.431	0.610
		Office and Clerical	3	0.405	0.306
		Goods and Services	9	1.032	0.483
		Miscellaneous	0	1.452	0.643
Oregon	36	Manufacturing	1	2.090	0.848
		Construction	2	2.171	0.925
		Office and Clerical	3	1.647	0.595
		Goods and Services	9	1.731	0.690
		Miscellaneous	0	1.927	0.949

IX 00047 STIP

Section IX - Classification Pricing
 Subsection D - Credibility/Countrywide Data
 7/1/2022

Section IX - D
 Exhibit 2

Countrywide Classification Experience: Pitch Factors

State (1)	State Code (2)	Industry Group (3)	Industry Code (4)	Indemnity (5)	Medical (6)
Rhode Island	38	Manufacturing	1	0.717	0.701
		Construction	2	1.040	1.054
		Office and Clerical	3	0.293	0.596
		Goods and Services	9	0.693	0.699
		Miscellaneous	0	0.977	1.012
South Carolina	39	Manufacturing	1	0.831	0.608
		Construction	2	1.011	0.528
		Office and Clerical	3	0.566	0.497
		Goods and Services	9	0.999	0.652
		Miscellaneous	0	1.077	0.682
South Dakota	40	Manufacturing	1	3.118	0.581
		Construction	2	2.489	0.611
		Office and Clerical	3	0.894	0.252
		Goods and Services	9	2.252	0.544
		Miscellaneous	0	3.545	0.863
Tennessee	41	Manufacturing	1	3.127	0.773
		Construction	2	3.286	0.674
		Office and Clerical	3	1.789	0.551
		Goods and Services	9	3.202	0.786
		Miscellaneous	0	2.996	0.801
Utah	43	Manufacturing	1	4.460	0.924
		Construction	2	3.605	0.667
		Office and Clerical	3	1.725	0.651
		Goods and Services	9	3.998	0.763
		Miscellaneous	0	2.874	0.799
Vermont	44	Manufacturing	1	1.048	0.457
		Construction	2	1.146	0.490
		Office and Clerical	3	0.722	0.337
		Goods and Services	9	0.837	0.437
		Miscellaneous	0	0.962	0.575
Virginia	45	Manufacturing	1	2.553	0.554
		Construction	2	2.566	0.509
		Office and Clerical	3	2.546	0.600
		Goods and Services	9	2.391	0.532
		Miscellaneous	0	2.401	0.637
West Virginia	47	Manufacturing	1	2.551	1.135
		Construction	2	3.148	1.126
		Office and Clerical	3	1.770	0.732
		Goods and Services	9	2.439	0.883
		Miscellaneous	0	3.107	1.540
Wisconsin	48	Manufacturing	1	2.058	0.416
		Construction	2	1.679	0.399
		Office and Clerical	3	1.208	0.295
		Goods and Services	9	1.554	0.354
		Miscellaneous	0	1.745	0.459
Hawaii	52	Manufacturing	1	0.854	0.386
		Construction	2	1.674	0.824
		Office and Clerical	3	0.427	0.244
		Goods and Services	9	0.913	0.448
		Miscellaneous	0	1.035	0.515

IX 000048 STIP

Section IX - Classification Pricing
Subsection D - Credibility/Countrywide Data
7/1/2022

Section IX - D
Exhibit 2

Countrywide Classification Experience: Pitch Factors

State (1)	State Code (2)	Industry Group (3)	Industry Code (4)	Indemnity (5)	Medical (6)
Alaska	54	Manufacturing	1	1.017	0.165
		Construction	2	2.367	0.477
		Office and Clerical	3	0.981	0.178
		Goods and Services	9	2.062	0.354
		Miscellaneous	0	3.405	0.564

Notes:

Factors to adjust countrywide data to the same payroll distribution and loss level as MA.

Pitch Factor = (MA Unlimited Losses) / [(State Pure Premium) x (MA Exposure)]

For a sample countrywide pure premium calculation, see Section IX - L, Exhibit 2, Page 2.

IX 00049 STIP

Section IX - Classification Pricing
 Subsection D - Credibility/Countrywide Data
 7/1/2022

Section IX - D
 Exhibit 3

Countrywide Classification Experience: Database

State (1)	State Code (2)	Experience Data					
		First Report (3)		Second Report (4)		Third Report (5)	
Alabama	1	5/1/2016	- 4/30/2017	5/1/2015	- 4/30/2016	5/1/2014	- 4/30/2015
Arizona	2	3/1/2016	- 2/28/2017	3/1/2015	- 2/29/2016	3/1/2014	- 2/28/2015
Arkansas	3	2/1/2017	- 1/31/2018	2/1/2016	- 1/31/2017	2/1/2015	- 1/31/2016
Colorado	5	3/1/2016	- 2/28/2017	3/1/2015	- 2/29/2016	3/1/2014	- 2/28/2015
Connecticut	6	8/1/2016	- 7/31/2017	8/1/2015	- 7/31/2016	8/1/2014	- 7/31/2015
D.C.	8	2/1/2016	- 1/31/2017	2/1/2015	- 1/31/2016	2/1/2014	- 1/31/2015
Florida	9	1/1/2016	- 12/31/2016	1/1/2015	- 12/31/2015	1/1/2014	- 12/31/2014
Georgia	10	7/1/2016	- 6/30/2017	7/1/2015	- 6/30/2016	7/1/2014	- 6/30/2015
Idaho	11	7/1/2016	- 6/30/2017	7/1/2015	- 6/30/2016	7/1/2014	- 6/30/2015
Illinois	12	4/1/2016	- 3/31/2017	4/1/2015	- 3/31/2016	4/1/2014	- 3/31/2015
Indiana	13	7/1/2016	- 6/30/2017	7/1/2015	- 6/30/2016	7/1/2014	- 6/30/2015
Iowa	14	3/1/2016	- 2/28/2017	3/1/2015	- 2/29/2016	3/1/2014	- 2/28/2015
Kansas	15	7/1/2016	- 6/30/2017	7/1/2015	- 6/30/2016	7/1/2014	- 6/30/2015
Kentucky	16	5/1/2016	- 4/30/2017	5/1/2015	- 4/30/2016	5/1/2014	- 4/30/2015
Louisiana	17	9/1/2016	- 8/31/2017	9/1/2015	- 8/31/2016	9/1/2014	- 8/31/2015
Maine	18	6/1/2016	- 5/31/2017	6/1/2015	- 5/31/2016	6/1/2014	- 5/31/2015
Maryland	19	4/1/2016	- 3/31/2017	4/1/2015	- 3/31/2016	4/1/2014	- 3/31/2015
Michigan	21	4/1/2017	- 3/31/2018	4/1/2016	- 3/31/2017	4/1/2015	- 3/31/2016
Minnesota	22	1/1/2017	- 12/31/2017	1/1/2016	- 12/31/2016	1/1/2015	- 12/31/2015
Mississippi	23	9/1/2016	- 8/31/2017	9/1/2015	- 8/31/2016	9/1/2014	- 8/31/2015
Missouri	24	7/1/2016	- 6/30/2017	7/1/2015	- 6/30/2016	7/1/2014	- 6/30/2015
Montana	25	1/1/2017	- 12/31/2017	1/1/2016	- 12/31/2016	1/1/2015	- 12/31/2015
Nebraska	26	8/1/2016	- 7/31/2017	8/1/2015	- 7/31/2016	8/1/2014	- 7/31/2015
Nevada	27	1/1/2016	- 12/31/2016	1/1/2015	- 12/31/2015	1/1/2014	- 12/31/2014
New Hampshire	28	4/1/2016	- 3/31/2017	4/1/2015	- 3/31/2016	4/1/2014	- 3/31/2015
New Mexico	30	7/1/2016	- 6/30/2017	7/1/2015	- 6/30/2016	7/1/2014	- 6/30/2015
North Carolina	32	1/1/2016	- 12/31/2016	1/1/2015	- 12/31/2015	1/1/2014	- 12/31/2014
Oklahoma	35	6/1/2016	- 5/31/2017	6/1/2015	- 5/31/2016	6/1/2014	- 5/31/2015
Oregon	36	1/1/2016	- 12/31/2016	1/1/2015	- 12/31/2015	1/1/2014	- 12/31/2014
Rhode Island	38	1/1/2016	- 12/31/2016	1/1/2015	- 12/31/2015	1/1/2014	- 12/31/2014
South Carolina	39	5/1/2016	- 4/30/2017	5/1/2015	- 4/30/2016	5/1/2014	- 4/30/2015
South Dakota	40	1/1/2017	- 12/31/2017	1/1/2016	- 12/31/2016	1/1/2015	- 12/31/2015
Tennessee	41	6/1/2016	- 5/31/2017	6/1/2015	- 5/31/2016	6/1/2014	- 5/31/2015
Utah	43	7/1/2016	- 6/30/2017	7/1/2015	- 6/30/2016	7/1/2014	- 6/30/2015
Vermont	44	7/1/2016	- 6/30/2017	7/1/2015	- 6/30/2016	7/1/2014	- 6/30/2015
Virginia	45	2/1/2016	- 1/31/2017	2/1/2015	- 1/31/2016	2/1/2014	- 1/31/2015
West Virginia	47	7/1/2016	- 6/30/2017	7/1/2015	- 6/30/2016	7/1/2014	- 6/30/2015
Wisconsin	48	1/1/2017	- 12/31/2017	1/1/2016	- 12/31/2016	1/1/2015	- 12/31/2015
Hawaii	52	6/1/2016	- 5/31/2017	6/1/2015	- 5/31/2016	6/1/2014	- 5/31/2015
Alaska	54	4/1/2016	- 3/31/2017	4/1/2015	- 3/31/2016	4/1/2014	- 3/31/2015

Calculation of Pure Premium Underlying Present Rate Factor

Industry Group (1)	Injury Type (2)	Uncapped Rate Level Factor (3)	Industry Group Pure Premium From Previous Revision (4)	Percent of Pure Premium =(4) / [Total of (4)] (5)	Expected Loss and LAE Ratio (6)	Benefit Level Change Factor (7)	Trend Factor (8)	Pure Premium Underlying Present Rate Factor = (3) x (5) x (6) x (7) x (8) (9)
Manufacturing	Indemnity	1.707	0.971	0.655	0.757	1.024	0.942	0.816
	Medical	1.707	0.512	0.345	0.757	1.000	0.943	0.421
	Total		1.483					
Construction	Indemnity	4.370	2.604	0.687	0.757	1.024	0.942	2.193
	Medical	4.370	1.187	0.313	0.757	1.000	0.943	0.976
	Total		3.791					
Office and Clerical	Indemnity	0.130	0.069	0.616	0.757	1.024	0.942	0.059
	Medical	0.130	0.043	0.384	0.757	1.000	0.943	0.036
	Total		0.112					
Goods and Services	Indemnity	1.492	0.825	0.639	0.757	1.024	0.942	0.696
	Medical	1.492	0.466	0.361	0.757	1.000	0.943	0.384
	Total		1.291					
Miscellaneous	Indemnity	4.201	2.408	0.660	0.757	1.024	0.942	2.025
	Medical	4.201	1.241	0.340	0.757	1.000	0.943	1.020
	Total		3.649					

Notes:

- (3): Section IX - H, Exhibit 1 of 07/01/20 stipulation.
- (4): Section IX - G of 07/01/20 stipulation.
- (6): Section VI - J, Exhibit 1 of 07/01/20 stipulation.
- (7): Section IV - A, Exhibit 1.
- (8): Net Indemnity and Medical Trends from Section V - A, Exhibit 1.

IX 000050 STIP

IX 00051 STIP

Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2022

Section IX - F
 Exhibit 1

Calculation of Pure Premiums Underlying Present Rate Manufacturing Industry Group, Industry Code 1

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)
1430	2.267	2.009	1.850	0.846	2.696
1438	1.838	1.652	1.500	0.695	2.195
1463	5.131	7.806	4.187	3.286	7.473
1701	1.234	1.132	1.007	0.477	1.484
1747	1.508	1.625	1.231	0.684	1.915
1748	1.388	2.092	1.133	0.881	2.013
1853	0.832	0.470	0.679	0.198	0.876
1924	1.242	1.110	1.014	0.467	1.481
1925	2.180	26.831	1.779	11.296	13.075
2003	2.017	1.781	1.646	0.750	2.396
2014	2.105	1.834	1.718	0.772	2.490
2021	1.267	1.237	1.034	0.521	1.555
2039	1.908	1.922	1.557	0.809	2.366
2041	1.356	1.159	1.106	0.488	1.594
2070	2.015	1.671	1.644	0.704	2.347
2081	1.302	1.713	1.063	0.721	1.784
2089	1.528	1.220	1.247	0.514	1.761
2095	1.711	1.326	1.396	0.558	1.955
2101	1.528	1.220	1.247	0.514	1.761
2111	1.147	1.154	0.936	0.486	1.422
2114	1.528	1.220	1.247	0.514	1.761
2115	3.184	2.486	2.598	1.047	3.645
2121	0.758	0.734	0.619	0.309	0.928
2130	0.779	0.757	0.636	0.319	0.954
2131	1.541	1.517	1.257	0.639	1.896
2143	1.297	1.067	1.058	0.449	1.507
2150	2.046	2.059	1.669	0.867	2.536
2156	2.240	2.368	1.827	0.997	2.824
2157	2.277	1.762	1.858	0.742	2.600
2172	1.043	0.709	0.851	0.298	1.149
2211	3.112	3.212	2.539	1.352	3.891
2220	1.185	1.195	0.967	0.503	1.470
2260	3.045	2.481	2.485	1.045	3.530
2288	1.839	1.808	1.500	0.761	2.262
2305	2.049	1.742	1.672	0.733	2.405
2362	0.740	1.084	0.604	0.456	1.060
2380	1.109	1.140	0.905	0.480	1.385
2402	1.155	1.228	0.943	0.517	1.460
2413	1.748	1.757	1.426	0.740	2.166
2416	1.335	1.275	1.089	0.537	1.626
2417	1.101	0.818	0.898	0.344	1.242
2501	1.051	1.026	0.858	0.432	1.290
2503	0.689	0.512	0.562	0.215	0.778
2570	2.199	1.720	1.794	0.724	2.518
2576	1.062	1.181	0.866	0.497	1.364
2585	1.419	1.557	1.158	0.655	1.813
2586	0.978	1.094	0.798	0.461	1.259
2623	2.589	2.580	2.112	1.086	3.199

IX 00052 STIP

Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2022

Section IX - F
 Exhibit 1

Calculation of Pure Premiums Underlying Present Rate Manufacturing Industry Group, Industry Code 1

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)
2651	0.792	0.854	0.646	0.359	1.006
2660	1.089	1.175	0.889	0.495	1.383
2683	1.063	1.260	0.868	0.530	1.398
2688	0.933	1.094	0.761	0.461	1.222
2710	3.107	3.431	2.535	1.445	3.980
2731	1.505	1.765	1.228	0.743	1.971
2747	3.005	2.761	2.452	1.162	3.614
2790	0.897	0.843	0.732	0.355	1.087
2802	1.919	1.974	1.566	0.831	2.397
2835	0.732	0.808	0.597	0.340	0.937
2836	1.114	1.038	0.909	0.437	1.346
2841	1.853	2.281	1.512	0.960	2.473
2883	1.787	1.651	1.458	0.695	2.154
2923	0.865	0.834	0.706	0.351	1.057
2942	0.863	0.975	0.705	0.410	1.115
3018	1.381	1.251	1.127	0.527	1.654
3022	1.783	1.951	1.455	0.821	2.276
3027	1.616	2.125	1.319	0.895	2.214
3028	1.459	1.601	1.190	0.674	1.864
3030	3.201	3.053	2.612	1.285	3.897
3040	2.747	1.951	2.242	0.821	3.063
3041	1.420	1.452	1.159	0.611	1.770
3042	2.350	2.321	1.917	0.977	2.895
3066	1.181	1.260	0.964	0.530	1.494
3076	1.117	1.049	0.912	0.442	1.353
3081	2.349	3.135	1.917	1.320	3.237
3082	2.349	3.135	1.917	1.320	3.237
3085	2.416	2.278	1.971	0.959	2.930
3110	4.180	4.387	3.411	1.847	5.258
3111	1.006	0.943	0.821	0.397	1.218
3113	0.827	0.852	0.675	0.359	1.033
3114	1.666	1.629	1.360	0.686	2.045
3118	0.935	0.753	0.763	0.317	1.080
3119	0.370	0.459	0.302	0.193	0.495
3120	0.719	0.592	0.586	0.249	0.836
3122	1.163	1.326	0.949	0.558	1.507
3127	0.951	0.987	0.776	0.416	1.192
3131	0.715	0.800	0.583	0.337	0.920
3132	1.285	1.475	1.049	0.621	1.670
3145	0.876	0.827	0.715	0.348	1.063
3146	1.134	1.256	0.926	0.529	1.454
3169	1.252	1.776	1.021	0.748	1.769
3179	0.642	0.540	0.524	0.227	0.751
3180	1.220	1.115	0.996	0.470	1.465
3188	1.271	1.215	1.037	0.512	1.548
3200	1.068	1.088	0.871	0.458	1.329
3220	1.593	1.532	1.300	0.645	1.944
3255	1.036	1.028	0.845	0.433	1.278

IX 00053 STIP

Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2022

Section IX - F
 Exhibit 1

Calculation of Pure Premiums Underlying Present Rate Manufacturing Industry Group, Industry Code 1

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)
3257	1.152	1.225	0.940	0.516	1.456
3270	1.255	1.184	1.024	0.499	1.523
3300	1.478	2.012	1.206	0.847	2.053
3315	1.524	1.478	1.243	0.622	1.866
3336	1.734	1.352	1.415	0.569	1.984
3372	1.050	1.112	0.857	0.468	1.325
3373	2.103	1.579	1.716	0.665	2.381
3381	1.096	1.019	0.895	0.429	1.324
3383	0.810	0.975	0.661	0.410	1.071
3385	0.349	0.380	0.285	0.160	0.445
3400	1.252	1.776	1.021	0.748	1.769
3507	1.490	1.275	1.216	0.537	1.753
3515	1.468	1.512	1.198	0.637	1.834
3558	0.344	0.563	0.281	0.237	0.518
3571	0.393	0.357	0.321	0.150	0.471
3574	0.864	0.869	0.705	0.366	1.071
3612	0.698	0.788	0.570	0.332	0.902
3620	1.704	2.042	1.391	0.860	2.250
3629	0.864	0.869	0.705	0.366	1.071
3632	0.864	0.869	0.705	0.366	1.071
3634	0.777	0.657	0.634	0.276	0.911
3635	1.414	1.787	1.154	0.752	1.906
3638	0.864	0.869	0.705	0.366	1.071
3642	0.586	0.568	0.478	0.239	0.717
3643	0.806	0.775	0.657	0.326	0.984
3647	1.140	1.072	0.930	0.451	1.382
3648	0.597	0.691	0.487	0.291	0.778
3681	0.376	0.317	0.307	0.133	0.440
3685	0.359	0.296	0.293	0.125	0.418
3807	1.252	1.776	1.021	0.748	1.769
3808	1.704	1.793	1.390	0.755	2.145
3826	2.529	3.387	2.064	1.426	3.490
3830	0.864	0.869	0.705	0.366	1.071
3841	0.725	0.739	0.592	0.311	0.903
4021	1.858	1.917	1.516	0.807	2.323
4024	1.776	1.629	1.449	0.686	2.135
4034	2.805	3.080	2.289	1.297	3.586
4036	1.049	1.099	0.856	0.463	1.318
4038	1.864	1.066	1.521	0.449	1.970
4053	1.150	1.224	0.938	0.515	1.453
4062	0.959	0.948	0.783	0.399	1.182
4112	0.209	0.220	0.170	0.093	0.263
4113	1.150	1.224	0.938	0.515	1.453
4114	1.461	1.046	1.192	0.440	1.632
4130	1.607	1.443	1.311	0.608	1.919
4133	0.789	0.690	0.644	0.290	0.934
4150	0.446	0.334	0.364	0.141	0.504
4239	1.105	1.081	0.902	0.455	1.357

IX 00054 STIP

Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2022

Section IX - F
 Exhibit 1

Calculation of Pure Premiums Underlying Present Rate Manufacturing Industry Group, Industry Code 1

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)
4243	1.616	1.337	1.319	0.563	1.882
4244	1.427	1.153	1.165	0.485	1.650
4250	0.916	0.909	0.748	0.383	1.130
4251	1.200	0.843	0.979	0.355	1.334
4273	1.622	1.499	1.324	0.631	1.955
4279	1.155	1.051	0.942	0.443	1.385
4283	0.954	0.821	0.778	0.346	1.124
4299	0.927	0.948	0.757	0.399	1.156
4304	2.323	2.390	1.896	1.006	2.902
4307	0.777	0.870	0.634	0.366	1.000
4308	1.544	0.384	1.260	0.161	1.421
4351	0.471	0.469	0.384	0.197	0.582
4352	0.736	0.565	0.601	0.238	0.839
4360	0.324	0.300	0.265	0.126	0.391
4410	1.391	1.872	1.135	0.788	1.923
4432	0.346	0.445	0.283	0.187	0.470
4439	2.565	3.384	2.093	1.425	3.518
4452	1.445	1.320	1.179	0.556	1.735
4459	1.452	1.389	1.185	0.585	1.770
4470	1.082	1.055	0.883	0.444	1.327
4484	0.996	1.165	0.813	0.490	1.303
4493	1.006	0.981	0.821	0.413	1.234
4557	0.926	0.814	0.756	0.343	1.099
4558	0.747	0.863	0.609	0.363	0.973
4583	1.433	1.272	1.169	0.535	1.705
4611	0.388	0.384	0.317	0.162	0.478
4635	2.326	3.028	1.898	1.275	3.173
4653	0.950	0.819	0.775	0.345	1.120
4665	4.697	4.414	3.833	1.858	5.691
4692	0.277	0.239	0.226	0.101	0.327
4693	0.425	0.473	0.346	0.199	0.546
4720	0.917	0.898	0.748	0.378	1.126
4740	0.486	0.455	0.396	0.191	0.588
4741	1.201	0.946	0.980	0.398	1.378
4771	1.787	1.063	1.458	0.448	1.906
4777	1.433	1.272	1.169	0.535	1.705
4825	0.259	0.219	0.212	0.092	0.304
4828	0.508	0.474	0.414	0.200	0.614
4829	0.508	0.474	0.414	0.200	0.614
4902	0.863	0.975	0.705	0.410	1.115
4923	0.324	0.300	0.265	0.126	0.391
6504	1.528	1.220	1.247	0.514	1.761
9501	1.086	1.137	0.886	0.479	1.365
9505	1.086	1.137	0.886	0.479	1.365
9521	1.611	1.585	1.315	0.667	1.982
9522	0.887	0.827	0.724	0.348	1.072

IX 000055 STIP

Section IX - Classification Pricing
Subsection F - Underlying Pure Premiums
7/1/2022

Section IX - F
Exhibit 1

Calculation of Pure Premiums Underlying Present Rate Manufacturing Industry Group, Industry Code 1

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)

Notes:

(2), (3): Section IX - I, Exhibit 1 of 07/01/2020 stipulation.

(4) = (2) x Pure Premium Underlying Present Rate Factors from Section IX - E, Exhibit 1

(5) = (3) x Pure Premium Underlying Present Rate Factors from Section IX - E, Exhibit 1
(Indemnity = 0.816, Medical = 0.421).

IX 00056 STIP

Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2022

Section IX - F
 Exhibit 2

Calculation of Pure Premiums Underlying Present Rate Construction Industry Group, Industry Code 2

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)
0050	0.882	0.864	1.935	0.843	2.778
3365	0.997	1.119	2.187	1.092	3.279
3724	1.076	1.072	2.360	1.047	3.406
3726	0.915	0.669	2.007	0.653	2.659
5020	1.021	0.787	2.239	0.768	3.007
5022	2.128	1.995	4.666	1.947	6.613
5037	3.772	3.163	8.273	3.087	11.360
5040	4.915	4.030	10.779	3.933	14.712
5057	4.168	6.500	9.141	6.344	15.485
5059	5.037	5.636	11.045	5.500	16.546
5102	1.555	1.154	3.410	1.126	4.536
5146	1.524	1.504	3.343	1.468	4.811
5160	0.538	0.516	1.180	0.504	1.684
5183	0.667	0.640	1.462	0.625	2.087
5188	0.934	0.677	2.047	0.661	2.708
5190	0.464	0.511	1.018	0.499	1.517
5213	2.505	2.280	5.494	2.225	7.718
5215	0.914	0.800	2.003	0.780	2.784
5221	1.517	1.239	3.326	1.209	4.535
5222	2.340	1.741	5.132	1.699	6.831
5223	0.853	0.855	1.870	0.835	2.705
5348	0.970	0.748	2.127	0.730	2.857
5402	1.286	1.269	2.819	1.239	4.058
5403	1.854	1.730	4.066	1.689	5.755
5437	0.914	0.863	2.004	0.842	2.847
5443	0.777	0.750	1.703	0.732	2.435
5445	1.408	1.091	3.088	1.065	4.152
5462	1.270	1.083	2.786	1.057	3.843
5472	1.862	1.513	4.084	1.477	5.561
5473	2.141	2.247	4.695	2.193	6.889
5474	0.879	0.840	1.927	0.819	2.747
5478	0.927	0.674	2.033	0.657	2.690
5479	1.204	1.020	2.641	0.996	3.637
5480	1.121	0.950	2.458	0.927	3.385
5506	1.050	0.927	2.303	0.904	3.208
5507	1.304	1.020	2.860	0.996	3.855
5508	0.882	0.864	1.935	0.843	2.778
5509	1.000	1.154	2.193	1.127	3.320
5538	0.909	0.911	1.994	0.889	2.883
5545	7.564	11.544	16.588	11.267	27.855
5547	2.113	2.829	4.634	2.761	7.395
5606	0.265	0.330	0.582	0.322	0.904
5610	1.014	0.712	2.223	0.695	2.918
5645	1.374	1.728	3.012	1.686	4.698
5701	3.929	5.281	8.617	5.155	13.772
5703	2.365	2.116	5.186	2.065	7.250
5705	2.229	2.175	4.889	2.123	7.012
6003	1.912	1.639	4.193	1.600	5.792

IX 00057 STIP

Section IX - Classification Pricing
Subsection F - Underlying Pure Premiums
7/1/2022

Section IX - F
Exhibit 2

Calculation of Pure Premiums Underlying Present Rate Construction Industry Group, Industry Code 2

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)
6005	0.882	0.864	1.935	0.843	2.778
6204	1.163	1.022	2.550	0.998	3.548
6217	0.941	0.891	2.064	0.870	2.933
6229	0.845	0.804	1.852	0.784	2.637
6233	0.520	0.397	1.140	0.388	1.528
6251	1.100	0.665	2.412	0.649	3.062
6252	1.179	0.941	2.585	0.919	3.504
6306	1.627	1.439	3.569	1.405	4.973
6319	0.673	0.621	1.477	0.606	2.083
6325	0.609	0.574	1.335	0.560	1.895
6400	0.981	1.142	2.152	1.115	3.266
7538	1.359	1.372	2.980	1.339	4.319
7601	1.153	1.391	2.529	1.358	3.887
7855	0.796	0.690	1.745	0.674	2.419
8227	0.952	1.094	2.087	1.068	3.155
9533	2.926	2.954	6.416	2.883	9.299
9534	1.211	1.057	2.656	1.031	3.687
9549	1.018	0.756	2.233	0.738	2.971
9552	1.475	1.910	3.234	1.864	5.099

Notes:

(2), (3): Section IX - I, Exhibit 1 of 07/01/2020 stipulation.

(4) = (2) x Pure Premium Underlying Present Rate Factors from Section IX - E, Exhibit 1

(5) = (3) x Pure Premium Underlying Present Rate Factors from Section IX - E, Exhibit 1
(Indemnity = 2.193, Medical = 0.976).

IX 00058 STIP

Section IX - Classification Pricing
Subsection F - Underlying Pure Premiums
7/1/2022

Section IX - F
Exhibit 3

Calculation of Pure Premiums Underlying Present Rate Office and Clerical Industry Group, Industry Code 3

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)
4361	4.539	5.657	0.268	0.204	0.471
7610	4.420	2.789	0.261	0.100	0.361
8601	1.562	1.434	0.092	0.052	0.144
8721	1.903	2.108	0.112	0.076	0.188
8742	0.738	0.816	0.044	0.029	0.073
8748	4.960	4.374	0.293	0.157	0.450
8800	7.707	6.528	0.455	0.235	0.690
8803	0.312	0.311	0.018	0.011	0.030
8810	0.461	0.490	0.027	0.018	0.045
8820	0.565	0.532	0.033	0.019	0.052
8832	2.140	1.871	0.126	0.067	0.194
8833	9.023	6.582	0.532	0.237	0.769
8868	4.884	5.460	0.288	0.197	0.485
8901	0.461	0.490	0.027	0.018	0.045
9156	11.155	14.856	0.658	0.535	1.193

Notes:

(2), (3): Section IX - I, Exhibit 1 of 07/01/2020 stipulation.

(4) = (2) x Pure Premium Underlying Present Rate Factors from Section IX - E, Exhibit 1

(5) = (3) x Pure Premium Underlying Present Rate Factors from Section IX - E, Exhibit 1
(Indemnity = 0.059, Medical = 0.036).

IX 00059 STIP

Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2022

Section IX - F
 Exhibit 4

Calculation of Pure Premiums Underlying Present Rate Goods and Services Industry Group, Industry Code 9

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)
0005	1.474	1.411	1.026	0.542	1.568
0008	1.471	1.835	1.024	0.704	1.728
0016	2.162	2.245	1.505	0.862	2.367
0034	1.782	2.176	1.240	0.836	2.076
0035	1.114	1.241	0.775	0.477	1.252
0036	1.782	2.176	1.240	0.836	2.076
0042	2.146	2.362	1.494	0.907	2.401
0046	1.540	2.131	1.072	0.818	1.890
0079	1.328	2.003	0.924	0.769	1.694
0083	2.153	2.202	1.499	0.845	2.344
0113	1.782	2.176	1.240	0.836	2.076
0170	1.782	2.176	1.240	0.836	2.076
0908	106.933	87.456	74.425	33.583	108.008
0909	177.779	318.470	123.734	122.292	246.026
0912	177.779	318.470	123.734	122.292	246.026
0913	106.933	87.456	74.425	33.583	108.008
0917	1.729	1.321	1.203	0.507	1.710
0918	0.345	0.212	0.240	0.081	0.322
2587	1.584	1.193	1.103	0.458	1.561
3821	2.961	3.436	2.061	1.319	3.380
4362	0.327	0.300	0.228	0.115	0.343
4511	0.177	0.162	0.123	0.062	0.185
4512	0.059	0.055	0.041	0.021	0.062
5191	0.513	0.463	0.357	0.178	0.535
5192	1.680	1.596	1.170	0.613	1.782
8001	0.942	1.215	0.656	0.467	1.123
8002	0.974	1.573	0.678	0.604	1.282
8006	0.701	0.882	0.488	0.339	0.826
8008	0.451	0.468	0.314	0.180	0.494
8010	1.008	1.128	0.702	0.433	1.135
8013	0.199	0.263	0.138	0.101	0.239
8017	0.563	0.652	0.392	0.251	0.643
8018	2.358	2.018	1.641	0.775	2.416
8021	2.264	1.896	1.576	0.728	2.304
8031	1.053	1.170	0.733	0.449	1.182
8032	0.754	0.789	0.525	0.303	0.828
8033	0.986	0.908	0.686	0.349	1.035
8034	2.019	1.562	1.405	0.600	2.005
8039	0.699	0.987	0.486	0.379	0.865
8044	1.813	1.753	1.262	0.673	1.935
8046	1.202	1.385	0.836	0.532	1.368
8048	1.666	1.575	1.160	0.605	1.764
8058	1.232	1.733	0.858	0.666	1.523
8103	1.572	1.544	1.094	0.593	1.687
8105	11.829	7.719	8.233	2.964	11.197
8106	3.301	3.925	2.297	1.507	3.805

IX 000060 STIP

Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2022

Section IX - F
 Exhibit 4

Calculation of Pure Premiums Underlying Present Rate Goods and Services Industry Group, Industry Code 9

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)
8107	1.701	1.813	1.184	0.696	1.880
8111	1.694	1.932	1.179	0.742	1.921
8203	3.991	3.702	2.778	1.421	4.199
8204	3.759	5.234	2.616	2.010	4.626
8215	2.178	2.388	1.516	0.917	2.433
8232	3.635	3.558	2.530	1.366	3.896
8233	3.455	3.701	2.404	1.421	3.826
8235	2.572	2.431	1.790	0.934	2.723
8263	2.726	2.994	1.897	1.150	3.047
8264	3.019	3.092	2.102	1.187	3.289
8265	3.455	3.701	2.404	1.421	3.826
8279	2.259	2.949	1.572	1.132	2.704
8291	2.407	2.464	1.675	0.946	2.622
8292	2.236	2.246	1.556	0.862	2.419
8293	5.085	4.994	3.539	1.918	5.457
8350	4.367	3.706	3.039	1.423	4.463
8380	1.692	1.574	1.177	0.604	1.782
8381	1.084	1.235	0.755	0.474	1.229
8385	1.989	1.897	1.384	0.728	2.112
8392	0.852	1.091	0.593	0.419	1.012
8393	0.866	0.676	0.603	0.259	0.862
8500	3.455	3.701	2.404	1.421	3.826
8710	2.176	1.652	1.514	0.634	2.149
8719	2.176	1.652	1.514	0.634	2.149
8720	0.527	0.459	0.367	0.176	0.543
8745	3.355	4.785	2.335	1.837	4.172
8747	0.557	0.353	0.388	0.136	0.523
8824	1.119	1.210	0.779	0.465	1.243
8826	0.929	0.894	0.646	0.343	0.990
8829	1.437	1.225	1.000	0.470	1.471
8831	0.462	0.929	0.322	0.357	0.678
8835	1.268	0.959	0.882	0.368	1.251
9014	1.392	1.343	0.969	0.516	1.484
9015	1.949	1.835	1.356	0.705	2.061
9016	1.011	1.345	0.704	0.516	1.220
9033	1.661	1.440	1.156	0.553	1.709
9040	1.736	1.948	1.208	0.748	1.957
9052	0.988	0.856	0.688	0.329	1.016
9058	0.885	0.894	0.616	0.343	0.960
9060	0.534	0.814	0.372	0.313	0.684
9061	0.562	0.679	0.391	0.261	0.652
9063	0.307	0.496	0.214	0.190	0.404
9079	0.605	0.725	0.421	0.278	0.700
9089	0.472	0.602	0.329	0.231	0.560
9093	0.603	0.924	0.420	0.355	0.775
9101	2.071	2.458	1.442	0.944	2.386

IX 000061 STIP

Section IX - Classification Pricing
Subsection F - Underlying Pure Premiums
7/1/2022

Section IX - F
Exhibit 4

Calculation of Pure Premiums Underlying Present Rate Goods and Services Industry Group, Industry Code 9

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)
9220	2.054	1.977	1.430	0.759	2.189
9410	2.161	2.590	1.504	0.994	2.498
9519	1.765	1.357	1.228	0.521	1.749
9586	0.206	0.173	0.144	0.066	0.210
9620	0.461	0.517	0.321	0.199	0.519

Notes:

(2), (3): Section IX - I, Exhibit 1 of 07/01/2020 stipulation.

(4) = (2) x Pure Premium Underlying Present Rate Factors from Section IX - E, Exhibit 1

(5) = (3) x Pure Premium Underlying Present Rate Factors from Section IX - E, Exhibit 1
(Indemnity = 0.696, Medical = 0.384).

IX 00062 STIP

Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2022

Section IX - F
 Exhibit 5

Calculation of Pure Premiums Underlying Present Rate Miscellaneous Industry Group, Industry Code 0

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)
0106	1.863	2.763	3.772	2.818	6.590
1624	0.787	0.883	1.594	0.901	2.495
1655	0.567	0.543	1.148	0.554	1.702
1710	0.787	0.883	1.594	0.901	2.495
2702	2.753	2.689	5.575	2.743	8.318
4000	1.130	1.139	2.289	1.162	3.451
6834	0.490	0.656	0.993	0.669	1.663
6836	0.708	0.990	1.433	1.010	2.443
7219	1.984	1.699	4.019	1.733	5.751
7230	2.246	1.839	4.548	1.876	6.424
7231	2.545	2.779	5.153	2.835	7.988
7360	0.872	0.864	1.766	0.881	2.647
7370	0.812	0.992	1.644	1.011	2.656
7380	1.342	1.294	2.717	1.320	4.037
7382	0.795	0.842	1.609	0.859	2.468
7403	0.828	0.996	1.677	1.016	2.693
7405	0.273	0.257	0.553	0.262	0.815
7420	3.154	3.493	6.386	3.563	9.949
7421	0.288	0.239	0.584	0.244	0.828
7422	0.288	0.239	0.584	0.244	0.828
7425	0.623	0.386	1.262	0.393	1.655
7431	0.288	0.239	0.584	0.244	0.828
7502	0.390	0.363	0.789	0.371	1.160
7515	0.503	1.494	1.019	1.524	2.543
7520	0.660	0.654	1.337	0.667	2.004
7539	0.261	0.298	0.528	0.304	0.833
7580	0.755	0.646	1.529	0.659	2.188
7590	1.159	1.339	2.348	1.365	3.713
7600	0.863	0.655	1.748	0.668	2.417
7704	0.868	1.148	1.757	1.171	2.928
7720	0.308	0.343	0.624	0.350	0.974
9019	0.842	0.662	1.705	0.675	2.380
9102	0.470	0.563	0.953	0.575	1.527
9154	0.286	0.393	0.579	0.401	0.980
9178	1.444	6.234	2.925	6.358	9.283
9179	7.859	17.298	15.915	17.644	33.560
9180	0.752	1.474	1.523	1.504	3.027
9182	0.585	0.952	1.185	0.971	2.156
9186	0.752	1.474	1.523	1.504	3.027
9402	0.926	0.848	1.876	0.865	2.741
9403	2.276	2.011	4.610	2.051	6.661

Notes:

- (2), (3): Section IX - I, Exhibit 1 of 07/01/2020 stipulation.
- (4) = (2) x Pure Premium Underlying Present Rate Factors from Section IX - E, Exhibit 1
- (5) = (3) x Pure Premium Underlying Present Rate Factors from Section IX - E, Exhibit 1
 (Indemnity = 2.025, Medical = 1.02).

IX 00063 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G

A-Sheet Table of Contents

Class	To find the A-Sheet for: Description	Class	Look at the A-Sheet for: Exhibit
0005	FARM: NURSERY EMP & DRIVERS	0005	Section IX - G, Exhibit 1
0008	FARM: GARDENING-MARKET OR TRUCK & DRIVERS	0008	Section IX - G, Exhibit 1
0016	FARM: ORCHARDS & DRIVERS	0016	Section IX - G, Exhibit 2
0034	FARM: POULTRY OR EGG PRODUCERS & DRIVERS	0034	Section IX - G, Exhibit 2
0035	FARM: FLORIST & DRIVERS	0035	Section IX - G, Exhibit 3
0036	FARM: DAIRY & DRIVERS	0034	Section IX - G, Exhibit 2
0042	LANDSCAPE GARDENING & DRIVERS	0042	Section IX - G, Exhibit 3
0046	FERTILIZER OR PESTICIDE APPLICATION-COMM OR DOMESTIC, DRIVERS	0046	Section IX - G, Exhibit 4
0050	FARM MACHINERY OPERATION-BY CONTRACTOR & DRIVERS	0050	Section IX - G, Exhibit 4
0079	FARM: BERRY OR VINEYARD & DRIVERS	0079	Section IX - G, Exhibit 5
0083	FARM: CATTLE OR LIVESTOCK RAISING NOC & DRIVERS	0083	Section IX - G, Exhibit 5
0106	TREE PRUNING, SPRAYING, REPAIRING & DRIVERS	0106	Section IX - G, Exhibit 6
0113	FARM: FISH HATCHERY & DRIVERS	0034	Section IX - G, Exhibit 2
0170	FARM: ANIMAL RAISING & DRIVERS	0034	Section IX - G, Exhibit 2
0908	DOMESTIC WORKERS-INSIDE-OCCASIONAL-NOC	0908	Section IX - G, Exhibit 6
0909	DOMESTIC WORKERS-OUTSIDE-OCCASIONAL-INCL OCCASNL PRIV CHAUFF	0909	Section IX - G, Exhibit 7
0912	DOMESTIC WORKERS-OUTSIDE-INCL PRIVATE CHAUFFERS	0909	Section IX - G, Exhibit 7
0913	DOMESTIC WORKERS-INSIDE-NOC	0908	Section IX - G, Exhibit 6
0917	DOMESTIC SERVICE CONTRACTOR-INSIDE	0917	Section IX - G, Exhibit 7
0918	DOMESTIC WORKERS-INSIDE-PHYSICAL ASSISTANCE	0918	Section IX - G, Exhibit 8
1430	SMELTING, SINTERING OR REFINING-LEAD & DRIVERS	1430	Section IX - G, Exhibit 8
1438	SMELTING, SINTERING OR REFINING-METALS-NOT IRON OR LEAD-NOC & D	1438	Section IX - G, Exhibit 9
1463	ASPHALT WORKS & DRIVERS	1463	Section IX - G, Exhibit 9
1624	QUARRY NOC & DRIVERS	1624	Section IX - G, Exhibit 10
1655	LIME MFG-QUARRY-SURFACE & DRIVERS	1655	Section IX - G, Exhibit 10
1701	CEMENT MFG	1701	Section IX - G, Exhibit 11
1710	STONE CRUSHING & DRIVERS	1624	Section IX - G, Exhibit 10
1747	EMERY WORKS & DRIVERS	1747	Section IX - G, Exhibit 11
1748	ABRASIVE WHEEL MFG & DRIVERS	1748	Section IX - G, Exhibit 12
1853	MICA GOODS MFG & MICA PREPARING	1853	Section IX - G, Exhibit 12
1924	WIRE DRAWING OR CABLE MFG-NOT IRON OR STEEL	1924	Section IX - G, Exhibit 13
1925	DIE CASTING MFG	1925	Section IX - G, Exhibit 13
2003	BAKERY & DRIVERS, ROUTE SUPERVISORS	2003	Section IX - G, Exhibit 14
2014	GRAIN MILLING	2014	Section IX - G, Exhibit 14
2021	SUGAR REFINING-ALL OPERATIONS & DRIVERS	2021	Section IX - G, Exhibit 15
2039	ICE CREAM MFG & DRIVERS	2039	Section IX - G, Exhibit 15
2041	CONFECTION MFG	2041	Section IX - G, Exhibit 16
2070	CREAMERY OR DAIRY & ROUTE SUPERVISORS, DRIVERS	2070	Section IX - G, Exhibit 16
2081	BUTCHERING	2081	Section IX - G, Exhibit 17
2089	PACKING HOUSE- ALL OPERATIONS	2089	Section IX - G, Exhibit 17
2095	MEAT PRODUCTS MFG-NOC	2095	Section IX - G, Exhibit 18
2101	FISH CURING	2089	Section IX - G, Exhibit 17
2111	CANNERY NOC	2111	Section IX - G, Exhibit 18
2114	OYSTERMEN	2089	Section IX - G, Exhibit 17
2115	SEAFOOD PRODUCTS MFG-NOC	2115	Section IX - G, Exhibit 19
2121	BREWERY & DRIVERS	2121	Section IX - G, Exhibit 19
2130	SPIRITUOUS LIQUOR DISTILLERY	2130	Section IX - G, Exhibit 20
2131	SPIRITUOUS LIQUOR BOTTLING	2131	Section IX - G, Exhibit 20
2143	FRUIT JUICE MFG	2143	Section IX - G, Exhibit 21
2150	ICE MFG	2150	Section IX - G, Exhibit 21
2156	BOTTLING-NOT CARBONATED LIQUIDS OR SPIRIT LIQRS & RTE SUP,DR	2156	Section IX - G, Exhibit 22
2157	BOTTLING NOC & ROUTE SUPERVISORS, DRIVERS	2157	Section IX - G, Exhibit 22
2172	CIGARETTE MFG	2172	Section IX - G, Exhibit 23
2211	COTTON BATTING,WADDING OR WASTE MFG	2211	Section IX - G, Exhibit 23
2220	YARN OR THREAD MFG-COTTON	2220	Section IX - G, Exhibit 24
2260	WOOL COMBING OR SCOURING	2260	Section IX - G, Exhibit 24
2288	FELTING MFG	2288	Section IX - G, Exhibit 25
2305	TEXTILE FIBER MFG-SYNTHETIC	2305	Section IX - G, Exhibit 25
2362	KNIT GOODS MFG NOC	2362	Section IX - G, Exhibit 26
2380	WEBBING MFG	2380	Section IX - G, Exhibit 26
2402	CARPET OR RUG MFG NOC	2402	Section IX - G, Exhibit 27
2413	TEXTILE - BLEACHING, DYEING, MERCERZNG, FINISH	2413	Section IX - G, Exhibit 27
2416	YARN OR THREAD DYEING OR FINISHING	2416	Section IX - G, Exhibit 28
2417	CLOTH PRINTING	2417	Section IX - G, Exhibit 28
2501	CLOTHING MFG	2501	Section IX - G, Exhibit 29
2503	DRESSMAKING OR TAILORING-CUSTOM EXCLUSIVELY	2503	Section IX - G, Exhibit 29
2570	MATTRESS OR BOX SPRING MFG	2570	Section IX - G, Exhibit 30

IX 000064 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G

A-Sheet Table of Contents

To find the A-Sheet for:		Look at the A-Sheet for:	
Class	Description	Class	Exhibit
2576	CANVAS GOODS MFG NOC-SHOP	2576	Section IX - G, Exhibit 30
2585	LAUNDRY NOC & ROUTE SUPERVISORS, DRIVERS	2585	Section IX - G, Exhibit 31
2586	CLEANING OR DYEING & ROUTE SUPERVISORS, DRIVERS	2586	Section IX - G, Exhibit 31
2587	TOWEL OR TOILET SUPPLY CO & RTE SUPERVISORS, DR	2587	Section IX - G, Exhibit 32
2623	TANNING	2623	Section IX - G, Exhibit 32
2651	SHOE STOCK MFG	2651	Section IX - G, Exhibit 33
2660	BOOT OR SHOE MFG NOC	2660	Section IX - G, Exhibit 33
2683	LUGGAGE MFG	2683	Section IX - G, Exhibit 34
2688	LEATHER GOODS MFG NOC	2688	Section IX - G, Exhibit 34
2702	LOGGING OR LUMBERING & DRIVERS	2702	Section IX - G, Exhibit 35
2710	SAWMILLS	2710	Section IX - G, Exhibit 35
2731	PLANING OR MOLDING MILL	2731	Section IX - G, Exhibit 36
2747	COOPERAGE ASSEMBLY	2747	Section IX - G, Exhibit 36
2790	PATTERN MAKING NOC	2790	Section IX - G, Exhibit 37
2802	CARPENTRY-SHOP ONLY & DRIVERS	2802	Section IX - G, Exhibit 37
2835	BRUSH OR BROOM ASSEMBLY	2835	Section IX - G, Exhibit 38
2836	BRUSH OR BROOM MFG NOC	2836	Section IX - G, Exhibit 38
2841	WOODENWARE MFG NOC	2841	Section IX - G, Exhibit 39
2883	FURNITURE MFG-WOOD-NOC	2883	Section IX - G, Exhibit 39
2923	PIANO MFG	2923	Section IX - G, Exhibit 40
2942	PENCIL, PENHOLDER OR CRAYON MFG	2942	Section IX - G, Exhibit 40
3018	IRON OR STEEL: MFG: ROLLING MILL & DRIVERS	3018	Section IX - G, Exhibit 41
3022	PIPE OR TUBE MFG NOC & DRIVERS	3022	Section IX - G, Exhibit 41
3027	ROLLING MILL NOC & DRIVERS	3027	Section IX - G, Exhibit 42
3028	PIPE OR TUBE MFG - IRON OR STEEL & DRIVERS	3028	Section IX - G, Exhibit 42
3030	IRON OR STEEL: FABRICATION: IRON/STEEL WORK-SHOP-STRUCT & DR	3030	Section IX - G, Exhibit 43
3040	IRON OR STEEL: FABRICATION: IRON WORKS-SHOP-ORNAMENTAL & DR	3040	Section IX - G, Exhibit 43
3041	IRON OR STEEL: FABRICATION: IRON WORKS-SHP-DEC/ART &FNDRS,DR	3041	Section IX - G, Exhibit 44
3042	ELEVATOR OR ESCALATOR MFG	3042	Section IX - G, Exhibit 44
3066	SHEET METAL WORK - SHOP	3066	Section IX - G, Exhibit 45
3076	FIREPROOF EQUIPMENT MFG	3076	Section IX - G, Exhibit 45
3081	FOUNDRY-FERROUS-NOC	3081	Section IX - G, Exhibit 46
3082	FOUNDRY-STEEL CASTINGS	3081	Section IX - G, Exhibit 46
3085	FOUNDRY-NON FERROUS	3085	Section IX - G, Exhibit 46
3110	FORGING WORK - DROP OR MACHINE	3110	Section IX - G, Exhibit 47
3111	BLACKSMITH	3111	Section IX - G, Exhibit 47
3113	TOOL MFG-NOT DROP OR MACHINE FORGED-NOC	3113	Section IX - G, Exhibit 48
3114	TOOL MFG-DROP OR MACHINE FORGED-NOC: MACHINING OR FINISHING	3114	Section IX - G, Exhibit 48
3118	SAW MFG	3118	Section IX - G, Exhibit 49
3119	NEEDLE MFG	3119	Section IX - G, Exhibit 49
3120	RAZOR MFG-SAFETY	3120	Section IX - G, Exhibit 50
3122	CUTLERY MFG-NOC	3122	Section IX - G, Exhibit 50
3127	PRECISION MEASURING TOOL MFG-NOC	3127	Section IX - G, Exhibit 51
3131	BUTTON OR FASTENER MFG-METAL	3131	Section IX - G, Exhibit 51
3132	NUT OR BOLT MFG	3132	Section IX - G, Exhibit 52
3145	SCREW MFG	3145	Section IX - G, Exhibit 52
3146	HARDWARE MFG-NOC	3146	Section IX - G, Exhibit 53
3169	STOVE MFG	3169	Section IX - G, Exhibit 53
3179	ELECTRICAL APPARATUS MFG-NOC	3179	Section IX - G, Exhibit 54
3180	ELECTRIC OR GAS LIGHTING FIXTURES MFG	3180	Section IX - G, Exhibit 54
3188	PLUMBERS SUPPLIES MFG-NOC	3188	Section IX - G, Exhibit 55
3200	ARMS MFG-SMALL	3200	Section IX - G, Exhibit 55
3220	CAN MFG	3220	Section IX - G, Exhibit 56
3255	WIRE CLOTH MFG	3255	Section IX - G, Exhibit 56
3257	WIRE GOODS MFG - NOC	3257	Section IX - G, Exhibit 57
3270	EYELET MFG	3270	Section IX - G, Exhibit 57
3300	BED SPRING OR WIRE MATTRESS MFG	3300	Section IX - G, Exhibit 58
3315	BRASS OR COPPER GOODS MFG	3315	Section IX - G, Exhibit 58
3336	TYPE FOUNDRY	3336	Section IX - G, Exhibit 59
3365	WELDING OR CUTTING - NOC & DRIVERS	3365	Section IX - G, Exhibit 59
3372	ELECTROPLATING	3372	Section IX - G, Exhibit 60
3373	GALVANIZING OR TINNING - NOT ELECTROLYTIC	3373	Section IX - G, Exhibit 60
3381	SILVERWARE MFG	3381	Section IX - G, Exhibit 61
3383	JEWELRY MFG	3383	Section IX - G, Exhibit 61
3385	WATCH MFG	3385	Section IX - G, Exhibit 62
3400	METAL GOODS MFG-NOC	3169	Section IX - G, Exhibit 53
3507	CONSTRUCTION OR AGRICULTURAL MACHINERY MFG	3507	Section IX - G, Exhibit 62

IX 00065 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G

A-Sheet Table of Contents

Class	To find the A-Sheet for: Description	Class	Look at the A-Sheet for: Exhibit
3515	TEXTILE MACHINERY MFG	3515	Section IX - G, Exhibit 63
3558	BOOT OR SHOE MACHINERY MFG	3558	Section IX - G, Exhibit 63
3571	STEAM OR AIR PRESSURE GAUGE MFG	3571	Section IX - G, Exhibit 64
3574	CASH REGISTER MFG	3574	Section IX - G, Exhibit 64
3612	PUMP MFG	3612	Section IX - G, Exhibit 65
3620	BOILERMAKING	3620	Section IX - G, Exhibit 65
3629	PRECISION MACHINED PARTS MFG-NOC	3574	Section IX - G, Exhibit 64
3632	MACHINE SHOP-NOC	3574	Section IX - G, Exhibit 64
3634	VALVE MFG	3634	Section IX - G, Exhibit 66
3635	GEAR MFG OR GRINDING	3635	Section IX - G, Exhibit 66
3638	BALL OR ROLLER BEARING MFG	3574	Section IX - G, Exhibit 64
3642	BATTERY MFG-DRY	3642	Section IX - G, Exhibit 67
3643	ELECTRIC POWER OR TRANSMISSION EQUIP MFG	3643	Section IX - G, Exhibit 67
3647	BATTERY MFG-STORAGE	3647	Section IX - G, Exhibit 68
3648	AUTOMOTIVE LIGHTING, IGNITION APPARATUS MFG NOC	3648	Section IX - G, Exhibit 68
3681	TELEVISION, RADIO, TELEPHONE OR TELECOMMUNCTN DEVICE MFG NOC	3681	Section IX - G, Exhibit 69
3685	INSTRUMENT MFG NOC	3685	Section IX - G, Exhibit 69
3724	MACHINERY OR EQUIPMENT ERECT OR REPAIR NOC &DR	3724	Section IX - G, Exhibit 70
3726	BOILER INSTALLATION OR REPAIR-STEAM	3726	Section IX - G, Exhibit 70
3807	AUTOMOBILE RADIATOR MFG	3169	Section IX - G, Exhibit 53
3808	AUTOMOBILE MFG OR ASSEMBLY	3808	Section IX - G, Exhibit 71
3821	AUTOMOBILE DISMANTLING & DRIVERS	3821	Section IX - G, Exhibit 71
3826	AIRCRAFT ENGINE MFG	3826	Section IX - G, Exhibit 72
3830	AIRPLANE MFG	3574	Section IX - G, Exhibit 64
3841	TUBULAR METAL PRODUCTS MFG OR ASSEMBLY	3841	Section IX - G, Exhibit 72
4000	SAND OR GRAVEL DIGGING & DRIVERS	4000	Section IX - G, Exhibit 73
4021	BRICK OR CLAY PRODUCTS MFG NOC & DRIVERS	4021	Section IX - G, Exhibit 73
4024	REFRACTORY PRODUCTS MFG & DRIVERS	4024	Section IX - G, Exhibit 74
4034	CONCRETE PRODUCTS MFG & DRIVERS	4034	Section IX - G, Exhibit 74
4036	PLASTERBOARD OR PLASTER BLOCK MFG & DRIVERS	4036	Section IX - G, Exhibit 75
4038	PLASTER STATUARY OR ORNAMENT MFG	4038	Section IX - G, Exhibit 75
4053	POTTERY MFG: CHINA OR TABLEWARE	4053	Section IX - G, Exhibit 76
4062	POTTERY MFG: PORCELAIN WARE-MECHANICAL PRESS FORMING	4062	Section IX - G, Exhibit 76
4112	INCANDESCENT LAMP MFG	4112	Section IX - G, Exhibit 77
4113	GLASS MFG-CUT	4053	Section IX - G, Exhibit 76
4114	GLASSWARE MFG-NOC	4114	Section IX - G, Exhibit 77
4130	GLASS MERCHANT	4130	Section IX - G, Exhibit 78
4133	CATHEDRAL OR ART GLASS WINDOW MFG	4133	Section IX - G, Exhibit 78
4150	OPTICAL GOODS MFG-NOC	4150	Section IX - G, Exhibit 79
4239	PAPER MFG	4239	Section IX - G, Exhibit 79
4243	BOX MFG-FOLDING PAPER-NOC	4243	Section IX - G, Exhibit 80
4244	CORRUGATED OR FIBERBOARD CONTAINER MFG	4244	Section IX - G, Exhibit 80
4250	PAPER COATING	4250	Section IX - G, Exhibit 81
4251	STATIONERY MFG	4251	Section IX - G, Exhibit 81
4273	BAG MFG-PAPER OR PLASTIC	4273	Section IX - G, Exhibit 82
4279	PAPER GOODS MFG NOC	4279	Section IX - G, Exhibit 82
4283	BUILDING OR ROOFING PAPER OR FELT PREPARATION-NO INSTALLATION	4283	Section IX - G, Exhibit 83
4299	PRINTING	4299	Section IX - G, Exhibit 83
4304	NEWSPAPER PUBLISHING	4304	Section IX - G, Exhibit 84
4307	BOOKBINDING	4307	Section IX - G, Exhibit 84
4308	LINOTYPE OR HAND COMPOSITION	4308	Section IX - G, Exhibit 85
4351	PHOTOENGRAVING	4351	Section IX - G, Exhibit 85
4352	ENGRAVING	4352	Section IX - G, Exhibit 86
4360	MOTION PICTURE: DEVLPMNT OF NEGATIVES, PRINTING & ALL SUB OP	4360	Section IX - G, Exhibit 86
4361	PHOTOGRAPHER - ALL EMP & CLERICAL, SALES, DRIVERS	4361	Section IX - G, Exhibit 87
4362	MOTION PICTURE: FILM EXCH & PROJECTION RMS, CL	4362	Section IX - G, Exhibit 87
4410	RUBBER GOODS MFG NOC	4410	Section IX - G, Exhibit 88
4432	FOUNTAIN PEN MFG	4432	Section IX - G, Exhibit 88
4439	LACQUER OR SPIRIT VARNISH MFG	4439	Section IX - G, Exhibit 89
4452	PLASTICS MFG: FABRICATED PRODUCTS NOC	4452	Section IX - G, Exhibit 89
4459	PLASTICS MFG: SHEETS, RODS OR TUBES	4459	Section IX - G, Exhibit 90
4470	CABLE MFG - INSULATED ELECTRICAL	4470	Section IX - G, Exhibit 90
4484	PLASTICS MFG: MOLDED PRODUCTS NOC	4484	Section IX - G, Exhibit 91
4493	FABRIC COATING OR IMPREGNATING NOC	4493	Section IX - G, Exhibit 91
4511	ANALYTICAL CHEMIST	4511	Section IX - G, Exhibit 92
4512	BIOMEDICAL RESEARCH LABS-INCL OUTSIDE OPERATNS	4512	Section IX - G, Exhibit 92
4557	INK MFG	4557	Section IX - G, Exhibit 93

IX 00066 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G

A-Sheet Table of Contents

Class	To find the A-Sheet for: Description	Class	Look at the A-Sheet for: Exhibit
4558	PAINT MFG	4558	Section IX - G, Exhibit 93
4583	FERTILIZER MFG & DRIVERS	4583	Section IX - G, Exhibit 94
4611	DRUG MEDICINE OR PHARMACEUTICAL PREP-NO MFG OF INGREDIENTS	4611	Section IX - G, Exhibit 94
4635	OXYGEN OR HYDROGEN MFG & DRIVERS	4635	Section IX - G, Exhibit 95
4653	GLUE MFG & DRIVERS	4653	Section IX - G, Exhibit 95
4665	RENDERING WORKS NOC & DR	4665	Section IX - G, Exhibit 96
4692	DENTAL LABORATORY	4692	Section IX - G, Exhibit 96
4693	PHARMACEUTICAL OR SURGICAL GOODS MFG NOC	4693	Section IX - G, Exhibit 97
4720	SOAP OR SYNTHETIC DETERGENT MFG	4720	Section IX - G, Exhibit 97
4740	OIL REFINING - PETROLEUM & DRIVERS	4740	Section IX - G, Exhibit 98
4741	ASPHALT OR TAR DISTILLING OR REFINING & DRIVERS	4741	Section IX - G, Exhibit 98
4771	EXPLOSIVES OR AMMUNITION MFG: NOC - & DRIVERS	4771	Section IX - G, Exhibit 99
4777	EXPLOSIVES DISTRIBUTORS & DRIVERS	4583	Section IX - G, Exhibit 94
4825	DRUG, MEDICINE OR PHARM PREP MFG & INCIDENTL MFG INGREDIENTS	4825	Section IX - G, Exhibit 99
4828	CHEMICAL BLENDING OR MIXING NOC- ALL OPERS & DR	4828	Section IX - G, Exhibit 100
4829	CHEMICAL MFG NOC-ALL OPERATIONS & DRIVERS	4828	Section IX - G, Exhibit 100
4902	SPORTING GOODS MFG NOC	2942	Section IX - G, Exhibit 40
4923	PHOTOGRAPHIC SUPPLIES MFG	4360	Section IX - G, Exhibit 86
5020	CEILING INSTALLATION-SUSPENDE ACOUSTICAL GRID	5020	Section IX - G, Exhibit 100
5022	MASONRY NOC	5022	Section IX - G, Exhibit 101
5037	PAINTING: METAL STRUCTURES-OVER 2 STORIES IN HEIGHT & DRIVERS	5037	Section IX - G, Exhibit 101
5040	IRON OR STEEL: ERECTION: ERECTION-FRAME STRUCTURES	5040	Section IX - G, Exhibit 102
5057	IRON OR STEEL: ERECTION-NOC	5057	Section IX - G, Exhibit 102
5059	IRON OR STEEL: ERECTION: FRAME STRUCT NOT OVER 2 STRS IN HGT	5059	Section IX - G, Exhibit 103
5102	DOOR, DOOR FRAME OR SASH ERECTION - METAL OR METAL COVERED	5102	Section IX - G, Exhibit 103
5146	FURNITURE OR FIXTURES INSTALLATION - PORTABLE - NOC	5146	Section IX - G, Exhibit 104
5160	ELEVATOR ERECTION OR REPAIR	5160	Section IX - G, Exhibit 104
5183	PLUMBING NOC & DRIVERS	5183	Section IX - G, Exhibit 105
5188	AUTOMATIC SPRINKLER INSTALLATION & DRIVERS	5188	Section IX - G, Exhibit 105
5190	ELECTRICAL WIRING - WITHIN BUILDINGS & DRIVERS	5190	Section IX - G, Exhibit 106
5191	OFFICE MACHICE OR APPLIANCE INSTALL, INSP, ADJSTMT OR REPAIR	5191	Section IX - G, Exhibit 106
5192	VENDING OR COIN OPERTD MACHINES-INSTALL, SRVC OR RPR & SALES, DR	5192	Section IX - G, Exhibit 107
5213	CONCRETE CONSTRUCTION-NOC	5213	Section IX - G, Exhibit 107
5215	CONCRETE WORK - INCIDENTAL TO CONSTRUCTION OF PRIVATE RES	5215	Section IX - G, Exhibit 108
5221	CONCRETE OR CEMENT WORK-FLOORS DRIVEWYS YRDS OR SIDEWLKS & DR	5221	Section IX - G, Exhibit 108
5222	CONCRETE CONSTRUCTION IN CONNECTION WITH BRIDGES OR CULVERTS	5222	Section IX - G, Exhibit 109
5223	SWIMMING POOL CONSTRUCTN-NOT IRON OR STEEL & DR	5223	Section IX - G, Exhibit 109
5348	STONE, MOSAIC, TERRAZZO OR CERAMIC TILE WORK - INSIDE	5348	Section IX - G, Exhibit 110
5402	HOTHOUSE ERECTION - ALL OPERATIONS	5402	Section IX - G, Exhibit 110
5403	CARPENTRY NOC	5403	Section IX - G, Exhibit 111
5437	CARPENTRY-INSTALL OF CABINET WORK OR INT TRIM	5437	Section IX - G, Exhibit 111
5443	LATHING & DRIVERS	5443	Section IX - G, Exhibit 112
5445	WALLBOARD INSTALLATION WITHIN BUILDINGS & DR	5445	Section IX - G, Exhibit 112
5462	GLAZIER-AWAY FROM SHOP & DRIVERS	5462	Section IX - G, Exhibit 113
5472	ASBESTOS REMOVAL OP: ASBESTOS CONTR-PIPE&BOILR WORK EXCL & DR	5472	Section IX - G, Exhibit 113
5473	ASBESTOS REMOVAL OP: ASBESTOS CONTRCTR-NOC & DR	5473	Section IX - G, Exhibit 114
5474	PAINTING OR PAPERHANGING NOC & SHOP OPERS, DR	5474	Section IX - G, Exhibit 114
5478	CARPET, LINOLEUM, VINYL, ASPHALT OR RUBBER FLOOR TILE INSTAL	5478	Section IX - G, Exhibit 115
5479	INSULATION WORK NOC & DRIVERS	5479	Section IX - G, Exhibit 115
5480	PLASTERING NOC & DRIVERS	5480	Section IX - G, Exhibit 116
5506	STREET OR ROAD CONSTRUCTION: PAVING OR REPAVING & DRIVERS	5506	Section IX - G, Exhibit 116
5507	STREET OR ROAD CONSTRUCTION: SUB-SURFACE WORK & DRIVERS	5507	Section IX - G, Exhibit 117
5508	STREET OR ROAD CONSTRUCTION: ROCK EXCAVATION & DRIVERS	0050	Section IX - G, Exhibit 4
5509	STREET OR ROAD MAINTENANCE BY COUNTY OR MUNICIPAL EMP & DR	5509	Section IX - G, Exhibit 117
5538	SHEET METAL WORK-SHOP & OUTSIDE-NOC & DRIVERS	5538	Section IX - G, Exhibit 118
5545	ROOFING NOC & YARD EMP, DRIVERS	5545	Section IX - G, Exhibit 118
5547	ROOFING-BUILT UP - YARD EMP & DRIVERS	5547	Section IX - G, Exhibit 119
5606	CONTRACTOR-EXECUTIVE SUPERVISOR OR CONSTRUCT SUPERINTENDENT	5606	Section IX - G, Exhibit 119
5610	CLEANER - DEBRIS REMOVAL	5610	Section IX - G, Exhibit 120
5645	CARPENTRY-DETACHED ONE OR TWO FAMILY DWELLINGS	5645	Section IX - G, Exhibit 120
5701	WRECKING: BUILDING OR STRUCTURES-NOT MARINE- ALL OPERATIONS	5701	Section IX - G, Exhibit 121
5703	BUILDING RAISING OR MOVING & DRIVERS	5703	Section IX - G, Exhibit 121
5705	SALVAGE OPERATION - NO WRECKING OR ANY STRUCTURAL OPERATIONS	5705	Section IX - G, Exhibit 122
6003	PILE DRIVING & DRIVERS	6003	Section IX - G, Exhibit 122
6005	JETTY OR BREAKWATER CONSTRUCTION-ALL OPER TO COMPLETION & DR	0050	Section IX - G, Exhibit 4
6204	DRILLING NOC & DRIVERS	6204	Section IX - G, Exhibit 123
6217	EXCAVATION & DRIVERS	6217	Section IX - G, Exhibit 123

IX 00067 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G

A-Sheet Table of Contents

To find the A-Sheet for:		Look at the A-Sheet for:	
Class	Description	Class	Exhibit
6229	IRRIGATION OR DRAINAGE SYSTEM CONSTRUCTION &DR	6229	Section IX - G, Exhibit 124
6233	OIL OR GAS PIPELINE CONSTRUCTION & DRIVERS	6233	Section IX - G, Exhibit 124
6251	TUNNELING - NOT PNEUMATIC - ALL OPERATIONS	6251	Section IX - G, Exhibit 125
6252	SHAFT SINKING - ALL OPERATIONS	6252	Section IX - G, Exhibit 125
6306	SEWER CONSTRUCTION - ALL OPERATIONS & DRIVERS	6306	Section IX - G, Exhibit 126
6319	GAS MAIN OR CONNECTION CONSTRUCTION & DRIVERS	6319	Section IX - G, Exhibit 126
6325	CONDUIT CONSTRUCTION - FOR CABLES OR WIRES & DR	6325	Section IX - G, Exhibit 127
6400	FENCE ERECTION - ALL TYPES	6400	Section IX - G, Exhibit 127
6504	FOOD SUNDRIES MFG NOC - NO CEREAL MILLING	2089	Section IX - G, Exhibit 17
6834	BOAT BUILDING OR REPAIRING & DRIVERS: MA ACT	6834	Section IX - G, Exhibit 128
6836	MARINA & DRIVERS: MA ACT	6836	Section IX - G, Exhibit 128
7219	TRUCKING: NOC - ALL EMP & DRIVERS	7219	Section IX - G, Exhibit 129
7230	TRUCKING: PARCEL OR PACKAGE DELIVERY- ALL EMP & DRIVERS	7230	Section IX - G, Exhibit 129
7231	TRUCKING: MAIL, PARCEL OR PACKAGE DELIVERY-ALL EMP & DRIVERS	7231	Section IX - G, Exhibit 130
7360	FREIGHT HANDLING NOC: MA ACT	7360	Section IX - G, Exhibit 130
7370	TAXICAB CO: ALL OTHER EMP & DRIVERS	7370	Section IX - G, Exhibit 131
7380	DRIVERS, CHAUFFEURS AND HELPERS-NOC-COMMERCIAL	7380	Section IX - G, Exhibit 131
7382	BUS CO: ALL OTHER EMPLOYEES & DRIVERS	7382	Section IX - G, Exhibit 132
7403	AIRCRAFT OR HELICOP OP: AIR CARRIER-SCHD/ SUPPL: A/O EMP &DR	7403	Section IX - G, Exhibit 132
7405	AIRCRAFT OR HELICOP OP: AIR CARRIER-SCHD/ SUPPL: FLYING CREW	7405	Section IX - G, Exhibit 133
7420	AIRCRAFT OR HELICOP OP: PUBLIC EXHIB STUNT FLYING: FLY CREW	7420	Section IX - G, Exhibit 133
7421	AIRCRAFT OR HELICOP OP: TRANSPORT PERS IN EMPLR BUS: FLY CRW	7421	Section IX - G, Exhibit 134
7422	AIRCRAFT OR HELICOP OP: NOC-OTHR THAN HELICOP: FLYING CREW	7421	Section IX - G, Exhibit 134
7425	AIRCRAFT OR HELICOP OP: NOC- HELICOPTERS: FLYING CREW	7425	Section IX - G, Exhibit 134
7431	AIRCRAFT OR HELICOP OP: AIR CARRIER-COMMUTER: FLYING CREW	7421	Section IX - G, Exhibit 134
7502	GAS COMPANY: GAS CO-NATURAL GAS-LOCAL DISTRIBUTION & DR	7502	Section IX - G, Exhibit 135
7515	OIL OR GAS PIPELINE OPERATION & DRIVERS	7515	Section IX - G, Exhibit 135
7520	WATERWORKS OPERATION & DRIVERS	7520	Section IX - G, Exhibit 136
7538	ELECTRIC LIGHT OR POWER LINE CONSTRUCTION & DRIVERS	7538	Section IX - G, Exhibit 136
7539	ELECTRIC LIGHT OR POWER CO NOC-ALL EMP & DRIVERS	7539	Section IX - G, Exhibit 137
7580	SEWAGE DISPOSAL PLANT OPERATION & DRIVERS	7580	Section IX - G, Exhibit 137
7590	GARBAGE WORKS	7590	Section IX - G, Exhibit 138
7600	TELEPHONE OR TELEGRAPH CO: ALL OTHER EMP & DR	7600	Section IX - G, Exhibit 138
7601	TELEPHONE, TELEGRAPH OR FIRE ALARM LINE CONSTRUCTION & DR	7601	Section IX - G, Exhibit 139
7610	RADIO OR TV BROADCAST STATION-ALL EMP & CL, DR	7610	Section IX - G, Exhibit 139
7704	FIREFIGHTERS & DRIVERS	7704	Section IX - G, Exhibit 140
7720	POLICE OFFICERS & DRIVERS	7720	Section IX - G, Exhibit 140
7855	RAILROAD CONSTR: LAYING/RELAYING TRACK OR MAINT BY CONTR &DR	7855	Section IX - G, Exhibit 141
8001	STORE: FLORISTS & DRIVERS	8001	Section IX - G, Exhibit 141
8002	AUTOMOBILE RENTAL CO: ALL OTHER EMP & COUNTER PERSONNEL, DR	8002	Section IX - G, Exhibit 142
8006	STORE: GROCERY STORES-RETAIL-NO HANDLING OF FRESH MEATS	8006	Section IX - G, Exhibit 142
8008	STORE: CLOTHING, WEARING APPAREL OR DRY GOODS - RETAIL	8008	Section IX - G, Exhibit 143
8010	STORE: HARDWARE	8010	Section IX - G, Exhibit 143
8013	STORE: JEWELRY STORES	8013	Section IX - G, Exhibit 144
8017	STORE: RETAIL NOC	8017	Section IX - G, Exhibit 144
8018	STORE: WHOLESALE NOC	8018	Section IX - G, Exhibit 145
8021	STORE: MEAT, FISH OR POULTRY DEALER- WHOLESALE	8021	Section IX - G, Exhibit 145
8031	STORE: MEAT, FISH OR POULTRY - RETAIL	8031	Section IX - G, Exhibit 146
8032	STORE: CLOTHING, WEARING APPAREL OR DRY GOODS - WHOLESALE	8032	Section IX - G, Exhibit 146
8033	STORE: MEAT, GROCERY & PROVISION COMBINED RETAIL-NOC	8033	Section IX - G, Exhibit 147
8034	STORE: GROCERY STORES - WHOLESALE	8034	Section IX - G, Exhibit 147
8039	STORE: DEPARTMENT - RETAIL	8039	Section IX - G, Exhibit 148
8044	STORE: FURNITURE & DRIVERS	8044	Section IX - G, Exhibit 148
8046	STORE: AUTOMOBILE ACCESSORIES-RETAIL-NOC & DR	8046	Section IX - G, Exhibit 149
8048	STORE: FRUIT OR VEGETABLE -WHOLESALE	8048	Section IX - G, Exhibit 149
8058	BUILDING MATERIAL DEALER-NEW MATERIALS ONLY-STORE EMP	8058	Section IX - G, Exhibit 150
8103	WOOL MERCHANT	8103	Section IX - G, Exhibit 150
8105	STORE: HIDE OR LEATHER DEALERS OR STORES	8105	Section IX - G, Exhibit 151
8106	IRON OR STEEL MERCHANT & DRIVERS	8106	Section IX - G, Exhibit 151
8107	MACHINERY DEALER- NOC- STORE OR YARD & DRIVERS	8107	Section IX - G, Exhibit 152
8111	PLUMBERS SUPPLIES DEALERS & DRIVERS	8111	Section IX - G, Exhibit 152
8203	ICE DEALER & DRIVERS	8203	Section IX - G, Exhibit 153
8204	BUILDING MATERIAL YARD & LOCAL MANAGERS, DRIVERS	8204	Section IX - G, Exhibit 153
8215	HAY, GRAIN OR FEED DEALER & LOCAL MANAGERS, DR	8215	Section IX - G, Exhibit 154
8227	CONTRACTORS PERMANENT YARD	8227	Section IX - G, Exhibit 154
8232	LUMBER YARD-NEW MATERIALS ONLY: A/O EMP INCL YRD & WHSE & DR	8232	Section IX - G, Exhibit 155
8233	COAL MERCHANT & LOCAL MANAGERS & DRIVERS	8233	Section IX - G, Exhibit 155

IX 00068 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G

A-Sheet Table of Contents

Class	To find the A-Sheet for:		Class	Look at the A-Sheet for:	
	Description			Exhibit	
8235	SASH, DOOR OR ASSEMBLED MILLWORK DEALER & DR		8235	Section IX - G, Exhibit 156	
8263	JUNK DEALERS & DRIVERS		8263	Section IX - G, Exhibit 156	
8264	BOTTLE DEALER-USED & DRIVERS		8264	Section IX - G, Exhibit 157	
8265	IRON OR STEEL SCRAP DEALERS & DRIVERS		8233	Section IX - G, Exhibit 155	
8279	STABLE OR BREEDING FARM & DRIVERS		8279	Section IX - G, Exhibit 157	
8291	STORAGE WAREHOUSE-COLD		8291	Section IX - G, Exhibit 158	
8292	STORAGE WAREHOUSE NOC		8292	Section IX - G, Exhibit 158	
8293	STORAGE WAREHOUSE-FURNITURE & DRIVERS		8293	Section IX - G, Exhibit 159	
8350	GASOLINE OR OIL DEALER & DRIVERS		8350	Section IX - G, Exhibit 159	
8380	AUTOMOBILE SERVICE OR REPAIR CENTER & DRIVERS		8380	Section IX - G, Exhibit 160	
8381	GASOLINE STATION-RETAIL-SELF SERVICE		8381	Section IX - G, Exhibit 160	
8385	BUS CO: GARAGE EMPLOYEES		8385	Section IX - G, Exhibit 161	
8392	AUTOMOBILE STORAGE GARAGE OR PARKING STATION & DRIVERS		8392	Section IX - G, Exhibit 161	
8393	AUTOMOBILE BODY REPAIR		8393	Section IX - G, Exhibit 162	
8500	METAL SCRAP DEALER & DRIVERS		8233	Section IX - G, Exhibit 155	
8601	ARCHITECT OR ENGINEER-CONSULTING		8601	Section IX - G, Exhibit 162	
8710	FIELD BONDED WAREHOUSING - ALL EMP & CLERICAL		8710	Section IX - G, Exhibit 163	
8719	STEVEDORING:TALLIERS & CHECKING CLERKS: MA ACT		8710	Section IX - G, Exhibit 163	
8720	INSPECTION OF RISKS FOR INSURANCE OR VALUATION PURPOSES NOC		8720	Section IX - G, Exhibit 163	
8721	REAL ESTATE APPRAISAL CO - OUTSIDE EMPLOYEES		8721	Section IX - G, Exhibit 164	
8742	SALESPERSONS, COLLECTORS OR MESSENGERS-OUTSIDE		8742	Section IX - G, Exhibit 164	
8745	NEWS AGENT OR DISTRIB OF MAGAZINE-NOT RETAIL & SALES,DR		8745	Section IX - G, Exhibit 165	
8747	DISPLAY SHOWROOMS - ALL TYPES		8747	Section IX - G, Exhibit 165	
8748	AUTOMOBILE SALESPERSONS		8748	Section IX - G, Exhibit 166	
8800	MAILING OR ADDRESSING CO & CLERICAL		8800	Section IX - G, Exhibit 166	
8803	AUDITORS, ACCOUNTANT OR FACTORY COST OR OFF SYSTEMZTR-TRAV		8803	Section IX - G, Exhibit 167	
8810	CLERICAL OFFICE EMPLOYEES NOC		8810	Section IX - G, Exhibit 167	
8820	ATTORNEY-ALL EMP & CLERICAL, MESSENGERS, DR		8820	Section IX - G, Exhibit 168	
8824	ASSISTED LIVING RESIDENCES: PERSONAL CARE EMPLOYEES		8824	Section IX - G, Exhibit 168	
8826	ASSISTED LIVING RESIDENCES: ALL OTHER EMPLOYEES, SALESPERSONS &		8826	Section IX - G, Exhibit 169	
8829	CONVALESCENT OR NURSING HOME-ALL EMPLOYEES		8829	Section IX - G, Exhibit 169	
8831	PET GROOMING & DRIVERS		8831	Section IX - G, Exhibit 170	
8832	PHYSICIAN & CLERICAL		8832	Section IX - G, Exhibit 170	
8833	HOSPITAL: PROFESSIONAL EMPLOYEES		8833	Section IX - G, Exhibit 171	
8835	NURSING-HOME HEALTH, PUBLIC & TRAVELING-ALL EMPLOYEES		8835	Section IX - G, Exhibit 171	
8868	COLLEGE: PROFESSIONAL EMPLOYEES & CLERICAL		8868	Section IX - G, Exhibit 172	
8901	TELEPHONE OR TELEGRAPH CO: OFF OR EXCH EMP & CL		8810	Section IX - G, Exhibit 167	
9014	BUILDINGS - OPERATION BY CONTRACTORS		9014	Section IX - G, Exhibit 172	
9015	BUILDINGS-OPERATION BY OWNER OR LESSEE		9015	Section IX - G, Exhibit 173	
9016	AMUSEMENT PARK OR EXHIBITION OPERATION & DR		9016	Section IX - G, Exhibit 173	
9019	BRIDGE OR VEHICULAR TUNNEL OPERATION & DRIVERS		9019	Section IX - G, Exhibit 174	
9033	HOUSING AUTHORITY & CLERICAL, SALES, DRIVERS		9033	Section IX - G, Exhibit 174	
9040	HOSPITAL: ALL OTHER EMPLOYEES		9040	Section IX - G, Exhibit 175	
9052	HOTEL: ALL OTHER EMPLOYEES & SALES, DRIVERS		9052	Section IX - G, Exhibit 175	
9058	HOTEL: RESTAURANT EMPLOYEES		9058	Section IX - G, Exhibit 176	
9060	CLUB-COUNTRY, GOLF, FISHING OR YACHT & CLERICAL		9060	Section IX - G, Exhibit 176	
9061	CLUB NOC & CLERICAL		9061	Section IX - G, Exhibit 177	
9063	YMCA, YWCA, YMHA OR YWHA, INSTITUTION-ALL EMPLOYEES & CLERICAL		9063	Section IX - G, Exhibit 177	
9079	RESTAURANT NOC		9079	Section IX - G, Exhibit 178	
9089	BILLIARD HALL		9089	Section IX - G, Exhibit 178	
9093	BOWLING LANE		9093	Section IX - G, Exhibit 179	
9101	COLLEGE: ALL OTHER EMPLOYEES		9101	Section IX - G, Exhibit 179	
9102	PARK NOC- ALL EMPLOYEES & DRIVERS		9102	Section IX - G, Exhibit 180	
9154	THEATER NOC: ALL OTHER EMPLOYEES		9154	Section IX - G, Exhibit 180	
9156	THEATER NOC: PLAYERS, ENTERTAINERS OR MUSICIANS		9156	Section IX - G, Exhibit 181	
9178	ATHLETIC TEAM OR PARK: NON-CONTACT SPORTS		9178	Section IX - G, Exhibit 181	
9179	ATHLETIC TEAM OR PARK: CONTACT SPORTS		9179	Section IX - G, Exhibit 182	
9180	AMUSEMENT DEVICE OPERATION NOC-NOT TRAV & DR		9180	Section IX - G, Exhibit 182	
9182	ATHLETIC TEAM OR PARK: OPERATIONS & DRIVERS		9182	Section IX - G, Exhibit 183	
9186	CARNIVAL, CIRCUS OR AMUSEMENT DEVICE OP-TRAV-ALL EMP & DR		9180	Section IX - G, Exhibit 182	
9220	CEMETERY OPERATION & DRIVERS		9220	Section IX - G, Exhibit 183	
9402	STREET CLEANING & DRIVERS		9402	Section IX - G, Exhibit 184	
9403	GARBAGE, ASHES OR REFUSE COLLECTION & DRIVERS		9403	Section IX - G, Exhibit 184	
9410	MUNICIPAL, TOWN, COUNTY OR STATE EMP NOC		9410	Section IX - G, Exhibit 185	
9501	SIGN PAINTING OR LETTERING-INSIDE & DRIVERS		9501	Section IX - G, Exhibit 185	
9505	PAINTING: AUTO OR CARRIAGE BODIES		9501	Section IX - G, Exhibit 185	
9519	HOUSEHOLD APPLIANCES-ELECTRICAL-INSTALL, SERV OR REPAIR & DR		9519	Section IX - G, Exhibit 186	

IX 000069 STIP

Section IX - Classification Pricing
Subsection G - Class Relativities
7/1/2022

Section IX - G

A-Sheet Table of Contents

To find the A-Sheet for:		Look at the A-Sheet for:	
Class	Description	Class	Exhibit
9521	HOUSE FURNISHINGS INSTALLATION-NOC	9521	Section IX - G, Exhibit 186
9522	UPHOLSTERING	9522	Section IX - G, Exhibit 187
9533	SCAFFOLDING: SCAFFOLD INST, RPR OR REMOVAL- BUILT UP FROM GROUN	9533	Section IX - G, Exhibit 187
9534	MOBILE CRANE & HOIST SERV CONTR-NOC-ALL OP -INCL YRD EMP &DR	9534	Section IX - G, Exhibit 188
9549	ADVERTISING CO & DRIVERS	9549	Section IX - G, Exhibit 188
9552	SIGN MFG-ERECTION, REPAIR OR MAINT & SHOP, DR	9552	Section IX - G, Exhibit 189
9586	BARBER SHOP, BEAUTY PARLOR, HAIR STYLING SALON	9586	Section IX - G, Exhibit 189
9620	FUNERAL DIRECTOR & DRIVERS	9620	Section IX - G, Exhibit 190

IX 000070 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 1

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
0005 FARM: NURSERY EMP & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	111.959	1	18	12.498	6.917	4.199	15.694	39.308	0.173	0.178	0.351
2015	117.774	0	18	0	324.313	0	99.790	424.102	2.754	0.847	3.601
2016	119.731	2	28	70.438	5.102	63.054	37.707	176.301	0.631	0.842	1.472
2017	133.117	0	28	0	15.933	0	33.445	49.378	0.120	0.251	0.371
2018	133.342	0	14	0	102.845	0	50.274	153.118	0.771	0.377	1.148
MA Total:	615.922	3	106	82.936	455.109	67.253	236.910	842.208	0.874	0.494	1.367

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.142	1.161	.
(14) Massachusetts Credibility:	0.220	0.310	.
(15) Countrywide Pure Premium:	1.445	0.791	2.236
(16) Countrywide Indicated Relativity:	1.922	1.871	.
(17) Countrywide Credibility:	0.390	0.350	.
(18) Countrywide Lost-Time Claims:	1802.0	.	.
(19) Pure Premium Underlying Present Rate:	1.026	0.542	1.568
(20) Relativity to Underlying Present Rate:	1.481	1.418	.
(21) Credibility to Underlying Relativity:	0.390	0.340	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.578	1.497	.
(24) Balanced Formula Relativity:	1.569	1.498	1.543

Class(es):		Effective: 7/1/2022							Goods and Services		
0008 FARM: GARDENING-MARKET OR TRUCK & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	323.952	0	47	0	119.029	0	193.483	312.512	0.367	0.597	0.965
2015	355.510	1	48	31.770	343.295	2.525	146.641	524.230	1.055	0.420	1.475
2016	460.969	2	65	96.038	359.467	27.817	508.880	992.202	0.988	1.164	2.152
2017	540.655	1	59	27.972	365.588	49.182	270.934	713.675	0.728	0.592	1.320
2018	569.896	0	63	0	176.347	0	174.869	351.216	0.309	0.307	0.616
MA Total:	2,250.982	4	282	155.780	1,363.726	79.524	1,294.806	2,893.836	0.675	0.611	1.286

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.882	1.435	.
(14) Massachusetts Credibility:	0.370	0.570	.
(15) Countrywide Pure Premium:	1.540	0.859	2.399
(16) Countrywide Indicated Relativity:	2.048	2.031	.
(17) Countrywide Credibility:	0.320	0.220	.
(18) Countrywide Lost-Time Claims:	4759.0	.	.
(19) Pure Premium Underlying Present Rate:	1.024	0.704	1.728
(20) Relativity to Underlying Present Rate:	1.479	1.843	.
(21) Credibility to Underlying Relativity:	0.310	0.210	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.440	1.652	.
(24) Balanced Formula Relativity:	1.432	1.653	1.511

IX 00071 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 2

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
0016 FARM: ORCHARDS & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	76.680	0	7	0	828	0	6.533	7.361	0.011	0.085	0.096
2015	77.633	0	12	0	3.795	0	22.915	26.709	0.049	0.295	0.344
2016	73.234	1	8	63.262	783	9.952	5.508	79.505	0.875	0.211	1.086
2017	76.542	0	5	0	63.161	0	65.860	129.022	0.825	0.860	1.686
2018	83.745	1	6	110.312	1.899	16.519	18.530	147.261	1.340	0.419	1.758
MA Total:	387.833	2	38	173.574	70.466	26.471	119.347	389.857	0.629	0.376	1.005

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.822	0.884	.
(14) Massachusetts Credibility:	0.210	0.310	.
(15) Countrywide Pure Premium:	2.208	1.392	3.600
(16) Countrywide Indicated Relativity:	2.937	3.290	.
(17) Countrywide Credibility:	0.400	0.350	.
(18) Countrywide Lost-Time Claims:	964.00	.	.
(19) Pure Premium Underlying Present Rate:	1.505	0.862	2.367
(20) Relativity to Underlying Present Rate:	2.174	2.256	.
(21) Credibility to Underlying Relativity:	0.390	0.340	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.195	2.193	.
(24) Balanced Formula Relativity:	2.182	2.194	2.186

Class(es):		Effective: 7/1/2022							Goods and Services		
0034 FARM: POULTRY OR EGG PRODUCERS & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	96.359	0	20	0	6.681	0	36.830	43.511	0.069	0.382	0.452
2015	104.310	1	24	27.603	58.314	80.200	117.318	283.435	0.824	1.894	2.717
2016	104.089	1	16	27.858	1.399	13.216	25.614	68.087	0.281	0.373	0.654
2017	102.311	0	19	0	57.035	0	70.671	127.706	0.557	0.691	1.248
2018	115.173	0	20	0	76.449	0	125.470	201.919	0.664	1.089	1.753
MA Total:	522.242	2	99	55.461	199.877	93.416	375.902	724.657	0.489	0.899	1.388

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.639	2.113	.
(14) Massachusetts Credibility:	0.220	0.340	.
(15) Countrywide Pure Premium:	1.748	0.911	2.659
(16) Countrywide Indicated Relativity:	2.326	2.153	.
(17) Countrywide Credibility:	0.390	0.330	.
(18) Countrywide Lost-Time Claims:	3674.0	.	.
(19) Pure Premium Underlying Present Rate:	1.240	0.836	2.076
(20) Relativity to Underlying Present Rate:	1.792	2.187	.
(21) Credibility to Underlying Relativity:	0.390	0.330	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.746	2.150	.
(24) Balanced Formula Relativity:	1.735	2.152	1.884

IX 00072 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 3

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
0035 FARM: FLORIST & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	381,340	0	41	0	222,504	0	173,710	396,213	0.583	0.456	1.039
2015	381,802	1	61	5,998	246,990	8,312	145,169	406,469	0.663	0.402	1.065
2016	415,202	1	40	4,270	250,041	7,356	150,843	412,510	0.613	0.381	0.994
2017	485,829	0	43	0	73,080	0	90,070	163,150	0.150	0.185	0.336
2018	796,995	1	80	52,407	534,272	31,295	275,209	893,182	0.736	0.385	1.121
MA Total:	2,461,167	3	265	62,675	1,326,887	46,963	835,000	2,271,525	0.565	0.358	0.923

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.738	0.842	.
(14) Massachusetts Credibility:	0.340	0.510	.
(15) Countrywide Pure Premium:	0.896	0.593	1.489
(16) Countrywide Indicated Relativity:	1.192	1.402	.
(17) Countrywide Credibility:	0.330	0.250	.
(18) Countrywide Lost-Time Claims:	1396.0	.	.
(19) Pure Premium Underlying Present Rate:	0.775	0.477	1.252
(20) Relativity to Underlying Present Rate:	1.120	1.247	.
(21) Credibility to Underlying Relativity:	0.330	0.240	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.014	1.079	.
(24) Balanced Formula Relativity:	1.008	1.080	1.033

Class(es):		Effective: 7/1/2022							Goods and Services		
0042 LANDSCAPE GARDENING & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	5,036,348	31	757	3,399,747	5,369,275	1,209,328	3,595,937	13,574,288	1.741	0.954	2.695
2015	5,615,705	27	706	2,880,194	3,998,428	1,062,821	3,783,975	11,725,418	1.225	0.863	2.088
2016	5,990,222	25	714	3,458,550	4,869,866	1,412,675	5,202,326	14,943,415	1.390	1.104	2.495
2017	6,387,338	37	720	4,996,057	6,610,210	1,321,418	4,872,053	17,799,738	1.817	0.970	2.787
2018	6,959,223	29	784	3,978,949	7,050,027	1,343,072	5,014,583	17,386,631	1.585	0.914	2.498
MA Total:	29,988,837	149	3,681	18,713,497	27,897,806	6,349,315	22,468,873	75,429,490	1.554	0.961	2.515

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.032	2.259	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.272	1.253	3.526
(16) Countrywide Indicated Relativity:	3.023	2.962	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	7558.0	.	.
(19) Pure Premium Underlying Present Rate:	1.494	0.907	2.401
(20) Relativity to Underlying Present Rate:	2.158	2.374	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.032	2.259	.
(24) Balanced Formula Relativity:	2.019	2.260	2.105

IX 000073 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 4

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
0046 FERTILIZER OR PESTICIDE APPLICATION-COMM OR DOMESTIC, DRIVERS											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	133,322	0	21	0	19,514	0	24,550	44,064	0.146	0.184	0.331
2015	128,180	0	15	0	194,554	0	118,900	313,454	1.518	0.928	2.445
2016	144,205	2	17	498,381	70,619	281,603	98,147	948,751	3.946	2.633	6.579
2017	168,314	2	23	320,759	280,148	347,135	199,282	1,147,324	3.570	3.246	6.817
2018	192,482	0	23	0	94,799	0	71,071	165,870	0.493	0.369	0.862
MA Total:	766,502	4	99	819,140	659,635	628,738	511,950	2,619,463	1.929	1.488	3.417

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.522	3.498	.
(14) Massachusetts Credibility:	0.240	0.390	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.534	2.123	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.072	0.818	1.890
(20) Relativity to Underlying Present Rate:	1.548	2.141	.
(21) Credibility to Underlying Relativity:	0.760	0.610	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.782	2.671	.
(24) Balanced Formula Relativity:	1.771	2.672	2.093

Class(es):		Effective: 7/1/2022							Construction		
0050 FARM MACHINERY OPERATION-BY CONTRACTOR & DRIVERS											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	22,996	0	1	0	0	0	1,442	1,442	0.000	0.063	0.063
2015	19,519	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	17,940	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	16,971	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	15,552	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	92,978	0	1	0	0	0	1,442	1,442	0.000	0.016	0.016

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.014	.
(14) Massachusetts Credibility:	0.130	0.170	.
(15) Countrywide Pure Premium:	2.761	1.461	4.222
(16) Countrywide Indicated Relativity:	1.155	1.343	.
(17) Countrywide Credibility:	0.440	0.420	.
(18) Countrywide Lost-Time Claims:	850.00	.	.
(19) Pure Premium Underlying Present Rate:	1.935	0.843	2.778
(20) Relativity to Underlying Present Rate:	0.884	0.866	.
(21) Credibility to Underlying Relativity:	0.430	0.410	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.888	0.921	.
(24) Balanced Formula Relativity:	0.897	0.921	0.904

IX 00074 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 5

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
0079 FARM: BERRY OR VINEYARD & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	151,607	0	18	0	42,246	0	69,315	111,561	0.279	0.457	0.736
2015	159,411	0	24	0	66,831	0	97,842	164,673	0.419	0.614	1.033
2016	162,612	0	18	0	100,077	0	65,201	165,278	0.615	0.401	1.016
2017	155,835	0	13	0	97,093	0	122,737	219,829	0.623	0.788	1.411
2018	174,134	1	10	54,178	104,315	44,353	90,885	293,731	0.910	0.777	1.687
MA Total:	803,600	1	83	54,178	410,561	44,353	445,979	955,071	0.578	0.610	1.188

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.756	1.434	.
(14) Massachusetts Credibility:	0.230	0.390	.
(15) Countrywide Pure Premium:	1.202	0.758	1.961
(16) Countrywide Indicated Relativity:	1.600	1.792	.
(17) Countrywide Credibility:	0.390	0.310	.
(18) Countrywide Lost-Time Claims:	283.00	.	.
(19) Pure Premium Underlying Present Rate:	0.924	0.769	1.694
(20) Relativity to Underlying Present Rate:	1.335	2.013	.
(21) Credibility to Underlying Relativity:	0.380	0.300	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.305	1.719	.
(24) Balanced Formula Relativity:	1.297	1.720	1.448

Class(es):		Effective: 7/1/2022							Goods and Services		
0083 FARM: CATTLE OR LIVESTOCK RAISING NOC & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	55,904	0	8	0	0	0	5,981	5,981	0.000	0.107	0.107
2015	61,471	0	10	0	38,953	0	6,352	45,305	0.634	0.103	0.737
2016	55,705	0	10	0	535	0	26,048	26,583	0.010	0.468	0.477
2017	76,331	1	4	209,136	2,294	47,620	7,116	266,166	2.770	0.717	3.487
2018	71,854	0	8	0	57,714	0	100,136	157,850	0.803	1.394	2.197
MA Total:	321,265	1	40	209,136	99,495	47,620	145,633	501,884	0.961	0.602	1.562

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.256	1.414	.
(14) Massachusetts Credibility:	0.200	0.280	.
(15) Countrywide Pure Premium:	2.178	1.226	3.403
(16) Countrywide Indicated Relativity:	2.897	2.897	.
(17) Countrywide Credibility:	0.400	0.360	.
(18) Countrywide Lost-Time Claims:	2869.0	.	.
(19) Pure Premium Underlying Present Rate:	1.499	0.845	2.344
(20) Relativity to Underlying Present Rate:	2.165	2.212	.
(21) Credibility to Underlying Relativity:	0.400	0.360	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.276	2.235	.
(24) Balanced Formula Relativity:	2.262	2.236	2.253

IX 00075 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 6

Calculation of Class Relativities

Class(es): 0106 TREE PRUNING, SPRAYING, REPAIRING & DRIVERS									Effective: 7/1/2022			Miscellaneous		
Converted Unlimited Losses														
Amount														
		Claim Count		Indemnity		Medical				MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)			
2014	412,803	6	90	117,085	1,134,709	394,265	873,914	2,519,972	3,032	3,072	6,105			
2015	446,651	8	89	861,208	1,303,639	480,115	722,484	3,367,446	4,847	2,692	7,539			
2016	464,731	5	96	1,148,165	770,032	626,014	742,633	3,286,843	4,128	2,945	7,073			
2017	586,715	2	96	617,442	948,438	605,814	947,846	3,119,540	2,669	2,648	5,317			
2018	659,579	3	114	734,656	3,508,794	426,423	1,749,974	6,419,847	6,434	3,300	9,733			
MA Total:	2,570,479	24	485	3,478,556	7,665,612	2,532,630	5,036,851	18,713,649	4,335	2,945	7,280			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.948	2.559	.
(14) Massachusetts Credibility:	0.650	1.000	.
(15) Countrywide Pure Premium:	4.317	2.714	7.031
(16) Countrywide Indicated Relativity:	2.034	2.516	.
(17) Countrywide Credibility:	0.180	0.000	.
(18) Countrywide Lost-Time Claims:	3142.0	.	.
(19) Pure Premium Underlying Present Rate:	3.772	2.818	6.590
(20) Relativity to Underlying Present Rate:	1.858	2.745	.
(21) Credibility to Underlying Relativity:	0.170	0.000	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	1.948	2.559	.
(24) Balanced Formula Relativity:	1.944	2.576	2.159

Class(es): 0908 DOMESTIC WORKERS-INSIDE-OCCASIONAL-NOC									Effective: 7/1/2022			Goods and Services		
Converted Unlimited Losses														
Amount														
		Claim Count		Indemnity		Medical				MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)			
2014	3,338	1	21	81,155	527,241	3,749	185,787	797,933	182.27	56,784	239.06			
2015	3,429	0	21	0	70,258	0	119,982	190,240	20,490	34,991	55,481			
2016	3,528	2	14	79,866	241,921	17,019	162,723	501,529	91,199	50,941	142.14			
2017	3,513	1	16	667	27,321	1,535	58,085	87,609	7,967	16,970	24,937			
2018	3,478	1	18	73,035	179,170	41,771	85,626	379,601	72,517	36,630	109.15			
MA Total:	17,286	5	90	234,724	1,045,911	64,074	612,203	1,956,911	74,084	39,122	113.21			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	96.835	91.968	.
(14) Massachusetts Credibility:	0.310	0.400	.
(15) Countrywide Pure Premium:	147.57	63.884	211.45
(16) Countrywide Indicated Relativity:	119.95	98.072	.
(17) Countrywide Credibility:	0.350	0.300	.
(18) Countrywide Lost-Time Claims:	463.00	.	.
(19) Pure Premium Underlying Present Rate:	83.779	37.804	121.58
(20) Relativity to Underlying Present Rate:	121.02	98.915	.
(21) Credibility to Underlying Relativity:	0.340	0.300	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	113.15	95.883	.
(24) Balanced Formula Relativity:	112.45	95.933	106.55

IX 000076 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 7

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
0909 DOMESTIC WORKERS-OUTSIDE-OCCASIONAL-INCL OCCASNL PRIV CHAUFF											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	338	0	5	0	47.057	0	92.626	139.683	139.28	274.16	413.45
2015	336	0	4	0	0	0	2.902	2.902	0.000	8.627	8.627
2016	342	1	3	2.131	1.803	15.338	3.475	22.747	11.502	55.010	66.512
2017	299	0	2	0	0	0	30.136	30.136	0.000	100.84	100.84
2018	294	0	4	0	418	0	9.424	9.842	1.419	32.029	33.448
MA Total:	1,609	1	18	2,131	49,277	15,338	138,564	205,310	31,943	95,630	127.57

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	41.753	224.81	.
(14) Massachusetts Credibility:	0.150	0.270	.
(15) Countrywide Pure Premium:	147.46	91.219	238.68
(16) Countrywide Indicated Relativity:	208.29	373.01	.
(17) Countrywide Credibility:	0.140	0.140	.
(18) Countrywide Lost-Time Claims:	8.000	.	.
(19) Pure Premium Underlying Present Rate:	145.48	143.79	289.27
(20) Relativity to Underlying Present Rate:	210.15	376.22	.
(21) Credibility to Underlying Relativity:	0.710	0.590	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	184.63	334.89	.
(24) Balanced Formula Relativity:	183.49	335.06	237.65

Class(es):		Effective: 7/1/2022							Goods and Services		
0917 DOMESTIC SERVICE CONTRACTOR-INSIDE											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	372.616	2	47	804	158.249	1.700	73.439	234.192	0.427	0.202	0.629
2015	414.630	2	51	155.665	76.866	9.585	162.802	404.917	0.561	0.416	0.977
2016	446.746	2	59	114.633	255.977	24.930	126.956	522.495	0.830	0.340	1.170
2017	497.224	3	38	238.663	212.593	70.910	134.948	657.114	0.908	0.414	1.322
2018	638.553	3	52	145.744	694.574	44.160	276.800	1,161.279	1.316	0.503	1.819
MA Total:	2,369.770	12	247	655.509	1,398.259	151.284	774.945	2,979.997	0.867	0.391	1.258

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.133	0.919	.
(14) Massachusetts Credibility:	0.400	0.510	.
(15) Countrywide Pure Premium:	1.506	0.883	2.390
(16) Countrywide Indicated Relativity:	2.004	2.088	.
(17) Countrywide Credibility:	0.300	0.250	.
(18) Countrywide Lost-Time Claims:	890.00	.	.
(19) Pure Premium Underlying Present Rate:	1.203	0.507	1.710
(20) Relativity to Underlying Present Rate:	1.738	1.327	.
(21) Credibility to Underlying Relativity:	0.300	0.240	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.576	1.309	.
(24) Balanced Formula Relativity:	1.566	1.310	1.474

IX 00077 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 8

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
0918 DOMESTIC WORKERS-INSIDE-PHYSICAL ASSISTANCE											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6,713,372	10	62	425,599	409,884	145,564	146,697	1,127,743	0.124	0.044	0.168
2015	7,313,039	9	80	500,827	807,436	89,180	434,584	1,832,027	0.179	0.072	0.251
2016	6,494,666	7	78	512,262	676,574	109,078	221,017	1,518,931	0.183	0.051	0.234
2017	8,654,614	14	82	661,487	1,638,472	110,010	732,328	3,142,296	0.266	0.097	0.363
2018	8,914,428	10	94	1,081,192	1,547,170	253,107	419,344	3,300,813	0.295	0.075	0.370
MA Total:	38,090,118	50	396	3,181,367	5,079,534	706,938	1,953,970	10,921,809	0.217	0.070	0.287

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.283	0.164	.
(14) Massachusetts Credibility:	0.640	0.750	.
(15) Countrywide Pure Premium:	0.334	0.124	0.458
(16) Countrywide Indicated Relativity:	0.444	0.293	.
(17) Countrywide Credibility:	0.180	0.130	.
(18) Countrywide Lost-Time Claims:	53.000	.	.
(19) Pure Premium Underlying Present Rate:	0.240	0.081	0.322
(20) Relativity to Underlying Present Rate:	0.347	0.213	.
(21) Credibility to Underlying Relativity:	0.180	0.120	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.324	0.187	.
(24) Balanced Formula Relativity:	0.322	0.187	0.274

Class(es):		Effective: 7/1/2022							Manufacturing		
1430 SMELTING, SINTERING OR REFINING-LEAD & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	92	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	92	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.010	0.010	.
(15) Countrywide Pure Premium:	1.202	0.813	2.016
(16) Countrywide Indicated Relativity:	1.434	1.862	.
(17) Countrywide Credibility:	0.320	0.340	.
(18) Countrywide Lost-Time Claims:	68.000	.	.
(19) Pure Premium Underlying Present Rate:	1.850	0.846	2.696
(20) Relativity to Underlying Present Rate:	2.266	2.012	.
(21) Credibility to Underlying Relativity:	0.670	0.650	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.977	1.941	.
(24) Balanced Formula Relativity:	1.969	1.926	1.954

IX 00078 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 9

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
1438 SMELTING, SINTERING OR REFINING-METALS-NOT IRON OR LEAD-NOC & D											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums		
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	141.023	1	19	82.867	56.472	6.675	111.957	257.971	0.988	0.841	1.829
2015	135.407	0	18	0	29.982	0	37.722	67.703	0.221	0.279	0.500
2016	128.957	0	13	0	5.941	0	30.929	36.869	0.046	0.240	0.286
2017	144.211	0	16	0	104.528	0	72.052	176.580	0.725	0.500	1.224
2018	156.408	0	23	0	48.743	0	86.447	135.190	0.312	0.553	0.864
MA Total:	706.007	1	89	82,867	245,665	6,675	339,106	674,313	0.465	0.490	0.955

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.507	1.017	.
(14) Massachusetts Credibility:	0.270	0.360	.
(15) Countrywide Pure Premium:	2.375	1.051	3.426
(16) Countrywide Indicated Relativity:	2.832	2.405	.
(17) Countrywide Credibility:	0.370	0.320	.
(18) Countrywide Lost-Time Claims:	704.00	.	.
(19) Pure Premium Underlying Present Rate:	1.500	0.695	2.195
(20) Relativity to Underlying Present Rate:	1.837	1.654	.
(21) Credibility to Underlying Relativity:	0.360	0.320	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.846	1.665	.
(24) Balanced Formula Relativity:	1.839	1.653	1.775

Class(es):		Effective: 7/1/2022							Manufacturing		
1463 ASPHALT WORKS & DRIVERS											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums		
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	137.912	4	25	915.694	193.477	573.728	151.980	1,834.879	8.043	5.262	13.305
2015	81.397	1	12	238.225	141.373	36.960	234.440	650.999	4.664	3.334	7.998
2016	89.008	2	24	517.220	444.389	631.239	395.975	1,988.822	10.804	11.541	22.344
2017	103.477	2	21	133.332	502.745	45.624	206.122	887.823	6.147	2.433	8.580
2018	97.814	0	26	0	822.230	0	391.942	1,214.173	8.406	4.007	12.413
MA Total:	509.608	9	108	1,804,471	2,104,215	1,287,551	1,380,459	6,576,696	7.670	5.235	12.905

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	8.349	10.867	.
(14) Massachusetts Credibility:	0.360	0.580	.
(15) Countrywide Pure Premium:	3.669	1.841	5.510
(16) Countrywide Indicated Relativity:	4.375	4.214	.
(17) Countrywide Credibility:	0.320	0.210	.
(18) Countrywide Lost-Time Claims:	598.00	.	.
(19) Pure Premium Underlying Present Rate:	4.187	3.286	7.473
(20) Relativity to Underlying Present Rate:	5.127	7.816	.
(21) Credibility to Underlying Relativity:	0.320	0.210	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	6.046	8.829	.
(24) Balanced Formula Relativity:	6.023	8.765	6.966

IX 000079 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 10

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
1624 QUARRY NOC & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums		
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	492,709	3	62	400,335	364,183	201,958	379,219	1,345,695	1,552	1,180	2,731
2015	500,603	1	78	16,908	246,195	4,086	386,005	653,195	0,526	0,779	1,305
2016	496,311	2	63	577,096	900,570	145,934	463,559	2,087,159	2,977	1,228	4,205
2017	514,950	3	68	248,409	524,976	74,403	311,004	1,158,792	1,502	0,748	2,250
2018	550,723	1	66	445,048	1,338,166	251,511	834,131	2,868,857	3,238	1,971	5,209
MA Total:	2,555,296	10	337	1,687,797	3,374,092	677,892	2,373,918	8,113,698	1,981	1,194	3,175

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.890	1.038	.
(14) Massachusetts Credibility:	0.460	0.660	.
(15) Countrywide Pure Premium:	1.529	0.769	2.298
(16) Countrywide Indicated Relativity:	0.720	0.713	.
(17) Countrywide Credibility:	0.270	0.170	.
(18) Countrywide Lost-Time Claims:	1173.0	.	.
(19) Pure Premium Underlying Present Rate:	1.594	0.901	2.495
(20) Relativity to Underlying Present Rate:	0.785	0.878	.
(21) Credibility to Underlying Relativity:	0.270	0.170	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.816	0.955	.
(24) Balanced Formula Relativity:	0.814	0.962	0.864

Class(es):		Effective: 7/1/2022							Miscellaneous		
1655 LIME MFG-QUARRY-SURFACE & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums		
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,780	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	6,197	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	3,319	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	2,018	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	462	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	15,776	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.050	0.070	.
(15) Countrywide Pure Premium:	0.800	0.392	1.192
(16) Countrywide Indicated Relativity:	0.377	0.363	.
(17) Countrywide Credibility:	0.170	0.180	.
(18) Countrywide Lost-Time Claims:	13.000	.	.
(19) Pure Premium Underlying Present Rate:	1.148	0.554	1.702
(20) Relativity to Underlying Present Rate:	0.566	0.540	.
(21) Credibility to Underlying Relativity:	0.780	0.750	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.505	0.470	.
(24) Balanced Formula Relativity:	0.504	0.473	0.494

IX 00080 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 11

Calculation of Class Relativities

Class(es): 1701 CEMENT MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	8,079	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	6,989	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	1,876	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	422	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	710	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	18,076	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.050	0.070	.
(15) Countrywide Pure Premium:	1.134	0.604	1.738
(16) Countrywide Indicated Relativity:	1.352	1.382	.
(17) Countrywide Credibility:	0.480	0.470	.
(18) Countrywide Lost-Time Claims:	460.00	.	.
(19) Pure Premium Underlying Present Rate:	1.007	0.477	1.484
(20) Relativity to Underlying Present Rate:	1.233	1.134	.
(21) Credibility to Underlying Relativity:	0.470	0.460	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.229	1.171	.
(24) Balanced Formula Relativity:	1.224	1.163	1.203

Class(es): 1747 EMERY WORKS & DRIVERS		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	46,843	2	6	179,516	23,989	202,259	18,567	424,330	4,344	4,714	9,059
2015	47,083	0	9	0	15,104	0	16,801	31,905	0.321	0.357	0.678
2016	46,528	0	9	0	12,997	0	14,729	27,725	0.279	0.317	0.596
2017	52,458	0	3	0	596	0	969	1,565	0.011	0.018	0.030
2018	53,351	0	3	0	11,128	0	1,380	12,507	0.209	0.026	0.234
MA Total:	246,263	2	30	179,516	63,814	202,259	52,445	498,033	0.988	1.034	2.022

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.076	2.147	.
(14) Massachusetts Credibility:	0.160	0.230	.
(15) Countrywide Pure Premium:	0.885	0.387	1.272
(16) Countrywide Indicated Relativity:	1.056	0.885	.
(17) Countrywide Credibility:	0.300	0.320	.
(18) Countrywide Lost-Time Claims:	56.000	.	.
(19) Pure Premium Underlying Present Rate:	1.231	0.684	1.915
(20) Relativity to Underlying Present Rate:	1.507	1.628	.
(21) Credibility to Underlying Relativity:	0.540	0.450	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.303	1.509	.
(24) Balanced Formula Relativity:	1.298	1.498	1.367

IX 00081 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 12

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
1748 ABRASIVE WHEEL MFG & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	40,371	0	14	0	3,834	0	18,445	22,280	0.095	0.457	0.552
2015	38,198	0	9	0	25,353	0	51,113	76,466	0.664	1.338	2.002
2016	43,459	1	8	154,252	3,140	54,249	16,108	227,748	3.622	1.619	5.241
2017	50,469	0	12	0	23,325	0	14,695	38,021	0.462	0.291	0.753
2018	51,014	0	7	0	0	0	6,759	6,759	0.000	0.132	0.132
MA Total:	223,511	1	50	154,252	55,653	54,249	107,120	371,274	0.939	0.722	1.661

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.022	1.499	.
(14) Massachusetts Credibility:	0.150	0.250	.
(15) Countrywide Pure Premium:	1.618	1.244	2.862
(16) Countrywide Indicated Relativity:	1.929	2.846	.
(17) Countrywide Credibility:	0.300	0.320	.
(18) Countrywide Lost-Time Claims:	58.000	.	.
(19) Pure Premium Underlying Present Rate:	1.133	0.881	2.013
(20) Relativity to Underlying Present Rate:	1.387	2.094	.
(21) Credibility to Underlying Relativity:	0.550	0.430	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.495	2.186	.
(24) Balanced Formula Relativity:	1.489	2.170	1.723

Class(es):		Effective: 7/1/2022							Manufacturing		
1853 MICA GOODS MFG & MICA PREPARING											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,611	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	1,161	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	840	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	957	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	957	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	5,525	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.030	0.030	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.821	0.465	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.679	0.198	0.876
(20) Relativity to Underlying Present Rate:	0.831	0.471	.
(21) Credibility to Underlying Relativity:	0.970	0.970	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.806	0.456	.
(24) Balanced Formula Relativity:	0.803	0.453	0.683

IX 00082 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 13

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
1924 WIRE DRAWING OR CABLE MFG-NOT IRON OR STEEL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	142,738	0	20	0	120,644	0	47,321	167,965	0.845	0.332	1.177
2015	152,446	0	23	0	26,375	0	39,507	65,882	0.173	0.259	0.432
2016	149,172	1	19	87,214	298,354	8,898	161,548	556,014	2.585	1.143	3.727
2017	126,667	0	22	0	33,597	0	55,734	89,331	0.265	0.440	0.705
2018	138,111	1	16	81,616	186,028	33,849	115,467	416,959	1.938	1.081	3.019
MA Total:	709,134	2	100	168,830	664,997	42,747	419,577	1,296,151	1.176	0.652	1.828

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.280	1.353	.
(14) Massachusetts Credibility:	0.230	0.310	.
(15) Countrywide Pure Premium:	0.919	0.512	1.431
(16) Countrywide Indicated Relativity:	1.095	1.172	.
(17) Countrywide Credibility:	0.390	0.350	.
(18) Countrywide Lost-Time Claims:	499.00	.	.
(19) Pure Premium Underlying Present Rate:	1.014	0.467	1.481
(20) Relativity to Underlying Present Rate:	1.241	1.111	.
(21) Credibility to Underlying Relativity:	0.380	0.340	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.193	1.207	.
(24) Balanced Formula Relativity:	1.189	1.199	1.192

Class(es):		Effective: 7/1/2022							Manufacturing		
1925 DIE CASTING MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,090	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	240	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	185	0	1	0	253	0	623	876	1.368	3.363	4.731
2017	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	3,515	0	1	0	253	0	623	876	0.072	0.177	0.249

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.078	0.368	.
(14) Massachusetts Credibility:	0.030	0.130	.
(15) Countrywide Pure Premium:	1.515	0.960	2.475
(16) Countrywide Indicated Relativity:	1.806	2.197	.
(17) Countrywide Credibility:	0.490	0.440	.
(18) Countrywide Lost-Time Claims:	704.00	.	.
(19) Pure Premium Underlying Present Rate:	1.779	11.296	13.075
(20) Relativity to Underlying Present Rate:	2.178	26.865	.
(21) Credibility to Underlying Relativity:	0.480	0.430	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.933	12.567	.
(24) Balanced Formula Relativity:	1.926	12.474	5.555

IX 00083 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 14

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
2003 BAKERY & DRIVERS, ROUTE SUPERVISORS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,017,733	16	298	1,798,814	3,167,042	689,509	1,603,149	7,258,514	2,461	1,136	3,597
2015	2,132,914	9	325	781,952	2,429,845	167,159	1,603,917	4,982,873	1,506	0,830	2,336
2016	2,279,377	10	291	1,198,211	3,109,286	348,939	1,478,931	6,135,367	1,890	0,802	2,692
2017	2,509,327	10	336	933,404	3,456,688	238,513	1,628,996	6,257,602	1,750	0,744	2,494
2018	2,686,597	11	340	1,279,663	3,960,420	289,580	1,899,652	7,429,314	1,950	0,815	2,765
MA Total:	11,625,948	56	1,590	5,992,044	16,123,281	1,733,699	8,214,645	32,063,669	1,902	0,856	2,758

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.071	1.776	.
(14) Massachusetts Credibility:	0.860	1.000	.
(15) Countrywide Pure Premium:	1.527	0.711	2.238
(16) Countrywide Indicated Relativity:	1.820	1.627	.
(17) Countrywide Credibility:	0.070	0.000	.
(18) Countrywide Lost-Time Claims:	6356.0	.	.
(19) Pure Premium Underlying Present Rate:	1.646	0.750	2.396
(20) Relativity to Underlying Present Rate:	2.016	1.784	.
(21) Credibility to Underlying Relativity:	0.070	0.000	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.049	1.776	.
(24) Balanced Formula Relativity:	2.041	1.763	1.946

Class(es):		Effective: 7/1/2022							Manufacturing		
2014 GRAIN MILLING											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,984	0	1	0	0	0	106	106	0.000	0.053	0.053
2015	1,861	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	2,168	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	2,351	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	1,740	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	10,105	0	1	0	0	0	106	106	0.000	0.010	0.010

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.022	.
(14) Massachusetts Credibility:	0.050	0.070	.
(15) Countrywide Pure Premium:	2.018	1.120	3.138
(16) Countrywide Indicated Relativity:	2.406	2.563	.
(17) Countrywide Credibility:	0.480	0.470	.
(18) Countrywide Lost-Time Claims:	1270.0	.	.
(19) Pure Premium Underlying Present Rate:	1.718	0.772	2.490
(20) Relativity to Underlying Present Rate:	2.103	1.836	.
(21) Credibility to Underlying Relativity:	0.470	0.460	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.144	2.051	.
(24) Balanced Formula Relativity:	2.135	2.036	2.101

IX 00084 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 15

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
2021 SUGAR REFINING-ALL OPERATIONS & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,850	0	1	0	0	0	474	474	0.000	0.256	0.256
2015	4,600	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	4,223	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	2,135	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	1,410	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	14,219	0	1	0	0	0	474	474	0.000	0.033	0.033

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.069	.
(14) Massachusetts Credibility:	0.050	0.070	.
(15) Countrywide Pure Premium:	1.410	0.836	2.245
(16) Countrywide Indicated Relativity:	1.681	1.912	.
(17) Countrywide Credibility:	0.480	0.470	.
(18) Countrywide Lost-Time Claims:	292.00	.	.
(19) Pure Premium Underlying Present Rate:	1.034	0.521	1.555
(20) Relativity to Underlying Present Rate:	1.266	1.239	.
(21) Credibility to Underlying Relativity:	0.470	0.460	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.402	1.473	.
(24) Balanced Formula Relativity:	1.397	1.463	1.419

Class(es):		Effective: 7/1/2022							Manufacturing		
2039 ICE CREAM MFG & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	160,530	3	35	385,536	94,499	135,846	143,955	759,836	2,990	1,743	4,733
2015	173,109	3	33	310,852	127,480	70,142	113,512	621,986	2,532	1,061	3,593
2016	132,001	2	22	243,855	304,895	19,434	110,123	678,306	4,157	0,981	5,139
2017	59,707	0	7	2,850	2,850	0	4,705	7,554	0,048	0,079	0,127
2018	59,489	0	41	0	174,612	0	146,621	321,233	2,935	2,465	5,400
MA Total:	584,835	8	138	940,242	704,336	225,422	518,915	2,388,915	2,812	1,273	4,085

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.061	2.642	.
(14) Massachusetts Credibility:	0.250	0.350	.
(15) Countrywide Pure Premium:	1.211	0.537	1.748
(16) Countrywide Indicated Relativity:	1.444	1.229	.
(17) Countrywide Credibility:	0.380	0.330	.
(18) Countrywide Lost-Time Claims:	398.00	.	.
(19) Pure Premium Underlying Present Rate:	1.557	0.809	2.366
(20) Relativity to Underlying Present Rate:	1.906	1.924	.
(21) Credibility to Underlying Relativity:	0.370	0.320	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.019	1.946	.
(24) Balanced Formula Relativity:	2.012	1.932	1.984

IX 00085 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 16

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
2041 CONFECTION MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	216,574	4	16	221,301	325,813	17,573	172,165	736,852	2,526	0,876	3,402
2015	235,757	0	16	0	30,213	0	45,449	75,662	0,128	0,193	0,321
2016	217,288	0	17	0	250,556	0	155,924	406,480	1,153	0,718	1,871
2017	175,099	0	21	0	26,155	0	46,249	72,404	0,149	0,264	0,414
2018	103,393	0	7	0	25,847	0	12,541	38,388	0,250	0,121	0,371
MA Total:	948,111	4	77	221,301	658,584	17,573	432,328	1,329,787	0,928	0,475	1,403

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.010	0.985	.
(14) Massachusetts Credibility:	0.270	0.350	.
(15) Countrywide Pure Premium:	1.212	0.543	1.755
(16) Countrywide Indicated Relativity:	1.446	1.242	.
(17) Countrywide Credibility:	0.370	0.330	.
(18) Countrywide Lost-Time Claims:	1023.0	.	.
(19) Pure Premium Underlying Present Rate:	1.106	0.488	1.594
(20) Relativity to Underlying Present Rate:	1.355	1.160	.
(21) Credibility to Underlying Relativity:	0.360	0.320	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.295	1.126	.
(24) Balanced Formula Relativity:	1.290	1.118	1.231

Class(es):		Effective: 7/1/2022							Manufacturing		
2070 CREAMERY OR DAIRY & ROUTE SUPERVISORS, DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	298,686	4	31	431,671	204,827	199,041	116,934	952,473	2,131	1,058	3,189
2015	297,353	1	28	253,385	40,427	58,098	124,140	476,051	0,988	0,613	1,601
2016	148,130	0	13	0	167,575	0	63,133	230,708	1,131	0,426	1,557
2017	150,023	1	14	925	62,670	623	60,717	124,935	0,424	0,409	0,833
2018	151,559	1	17	25,185	62,507	13,773	41,380	142,844	0,579	0,364	0,942
MA Total:	1,045,751	7	103	711,166	538,006	271,535	406,304	1,927,011	1,195	0,648	1,843

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.300	1.345	.
(14) Massachusetts Credibility:	0.330	0.420	.
(15) Countrywide Pure Premium:	1.948	0.820	2.768
(16) Countrywide Indicated Relativity:	2.323	1.876	.
(17) Countrywide Credibility:	0.340	0.290	.
(18) Countrywide Lost-Time Claims:	3449.0	.	.
(19) Pure Premium Underlying Present Rate:	1.644	0.704	2.347
(20) Relativity to Underlying Present Rate:	2.013	1.673	.
(21) Credibility to Underlying Relativity:	0.330	0.290	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.883	1.594	.
(24) Balanced Formula Relativity:	1.876	1.583	1.775

IX 00086 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 17

Calculation of Class Relativities

Class(es): 2081 BUTCHERING		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	18,882	0	10	0	38	0	5,565	5,602	0.002	0.295	0.297
2015	21,751	0	7	0	3,239	0	5,741	8,980	0.149	0.264	0.413
2016	25,569	0	5	0	5,978	0	9,363	15,341	0.234	0.366	0.600
2017	27,808	0	16	0	23,435	0	31,175	54,610	0.843	1.121	1.964
2018	32,556	1	19	36,632	30,861	14,302	61,983	143,778	2.073	2.343	4.416
MA Total:	126,565	1	57	36,632	63,550	14,302	113,827	228,311	0.792	1.012	1.804

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.862	2.101	.
(14) Massachusetts Credibility:	0.120	0.180	.
(15) Countrywide Pure Premium:	1.087	0.717	1.803
(16) Countrywide Indicated Relativity:	1.296	1.641	.
(17) Countrywide Credibility:	0.440	0.410	.
(18) Countrywide Lost-Time Claims:	922.00	.	.
(19) Pure Premium Underlying Present Rate:	1.063	0.721	1.784
(20) Relativity to Underlying Present Rate:	1.301	1.715	.
(21) Credibility to Underlying Relativity:	0.440	0.410	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.246	1.754	.
(24) Balanced Formula Relativity:	1.241	1.741	1.413

Class(es): 2089 PACKING HOUSE- ALL OPERATIONS		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,419,367	7	216	679,430	635,415	233,738	407,352	1,955,934	0.926	0.452	1.378
2015	1,658,375	14	222	1,797,478	1,428,169	436,933	838,015	4,500,594	1.945	0.769	2.714
2016	1,732,079	5	244	648,490	983,325	113,403	589,243	2,334,461	0.942	0.406	1.348
2017	1,971,416	8	271	612,825	2,396,422	102,115	1,020,572	4,131,935	1.526	0.569	2.096
2018	2,112,369	5	327	750,004	2,415,021	602,617	1,063,029	4,830,670	1.498	0.789	2.287
MA Total:	8,893,607	39	1,280	4,488,227	7,858,351	1,488,806	3,918,210	17,753,595	1.388	0.608	1.996

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.511	1.262	.
(14) Massachusetts Credibility:	0.690	0.870	.
(15) Countrywide Pure Premium:	1.157	0.619	1.776
(16) Countrywide Indicated Relativity:	1.380	1.417	.
(17) Countrywide Credibility:	0.160	0.070	.
(18) Countrywide Lost-Time Claims:	10764	.	.
(19) Pure Premium Underlying Present Rate:	1.247	0.514	1.761
(20) Relativity to Underlying Present Rate:	1.527	1.222	.
(21) Credibility to Underlying Relativity:	0.150	0.060	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.493	1.270	.
(24) Balanced Formula Relativity:	1.487	1.261	1.409

IX 00087 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 18

Calculation of Class Relativities

Class(es): 2095 MEAT PRODUCTS MFG-NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	398,697	1	59	21,209	227,687	1,399	132,165	382,460	0.624	0.335	0.959
2015	406,845	4	60	567,168	414,886	109,578	161,215	1,252,847	2.414	0.666	3.079
2016	473,075	1	72	2,186	284,100	5,479	150,553	442,319	0.605	0.330	0.935
2017	493,673	2	78	223,293	436,093	71,105	243,539	974,030	1.336	0.637	1.973
2018	573,447	2	79	78,452	256,118	61,503	171,033	567,106	0.583	0.406	0.989
MA Total:	2,345,736	10	348	892,308	1,618,884	249,064	858,506	3,618,762	1.071	0.472	1.543

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.165	0.980	.
(14) Massachusetts Credibility:	0.420	0.530	.
(15) Countrywide Pure Premium:	1.514	0.858	2.372
(16) Countrywide Indicated Relativity:	1.805	1.963	.
(17) Countrywide Credibility:	0.290	0.240	.
(18) Countrywide Lost-Time Claims:	3887.0	.	.
(19) Pure Premium Underlying Present Rate:	1.396	0.558	1.955
(20) Relativity to Underlying Present Rate:	1.710	1.328	.
(21) Credibility to Underlying Relativity:	0.290	0.230	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.509	1.296	.
(24) Balanced Formula Relativity:	1.503	1.286	1.429

Class(es): 2111 CANNERY NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	7,438	0	1	0	1,532	0	1,506	3,038	0.206	0.203	0.408
2015	9,343	0	1	0	0	0	281	281	0.000	0.030	0.030
2016	10,683	0	2	0	45,189	0	22,526	67,715	4.230	2.109	6.339
2017	4,054	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	17,365	0	4	0	1,958	0	3,762	5,721	0.113	0.217	0.329
MA Total:	48,882	0	8	0	48,679	0	28,075	76,754	0.996	0.574	1.570

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.084	1.192	.
(14) Massachusetts Credibility:	0.080	0.110	.
(15) Countrywide Pure Premium:	0.971	0.548	1.519
(16) Countrywide Indicated Relativity:	1.158	1.254	.
(17) Countrywide Credibility:	0.460	0.450	.
(18) Countrywide Lost-Time Claims:	1032.0	.	.
(19) Pure Premium Underlying Present Rate:	0.936	0.486	1.422
(20) Relativity to Underlying Present Rate:	1.146	1.156	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.146	1.204	.
(24) Balanced Formula Relativity:	1.142	1.195	1.160

IX 00088 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 19

Calculation of Class Relativities

Class(es): 2115 SEAFOOD PRODUCTS MFG-NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	178,880	2	28	678,603	284,268	64,343	100,468	1,127,682	5,383	0,921	6,304
2015	173,410	2	47	513,926	489,124	78,716	308,978	1,390,744	5,784	2,236	8,020
2016	69,585	0	21	0	62,694	0	97,955	160,650	0,901	1,408	2,309
2017	71,351	0	18	0	17,395	0	29,046	46,441	0,244	0,407	0,651
2018	63,005	1	13	10,123	215,184	4,741	219,775	449,824	3,576	3,563	7,139
MA Total:	556,231	5	127	1,202,653	1,068,666	147,800	756,222	3,175,341	4,083	1,625	5,709

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.445	3.374	.
(14) Massachusetts Credibility:	0.310	0.380	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	3.142	2.460	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.598	1.047	3.645
(20) Relativity to Underlying Present Rate:	3.182	2.490	.
(21) Credibility to Underlying Relativity:	0.690	0.620	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	3.573	2.826	.
(24) Balanced Formula Relativity:	3.560	2.805	3.300

Class(es): 2121 BREWERY & DRIVERS		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	114,534	0	15	0	2,882	0	9,847	12,729	0,025	0,086	0,111
2015	159,804	0	22	0	149,591	0	56,084	205,674	0,936	0,351	1,287
2016	211,012	0	45	0	498,474	0	267,004	765,477	2,362	1,265	3,628
2017	307,327	1	38	45,869	26,015	11,637	43,397	126,919	0,234	0,179	0,413
2018	348,508	0	36	0	48,007	0	52,946	100,953	0,138	0,152	0,290
MA Total:	1,141,184	1	156	45,869	724,968	11,637	429,278	1,211,752	0,675	0,386	1,062

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.735	0.802	.
(14) Massachusetts Credibility:	0.230	0.310	.
(15) Countrywide Pure Premium:	0.657	0.355	1.012
(16) Countrywide Indicated Relativity:	0.783	0.812	.
(17) Countrywide Credibility:	0.390	0.350	.
(18) Countrywide Lost-Time Claims:	608.00	.	.
(19) Pure Premium Underlying Present Rate:	0.619	0.309	0.928
(20) Relativity to Underlying Present Rate:	0.758	0.735	.
(21) Credibility to Underlying Relativity:	0.380	0.340	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.762	0.783	.
(24) Balanced Formula Relativity:	0.759	0.777	0.765

IX 00089 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 20

Calculation of Class Relativities

Class(es): 2130 SPIRITUOUS LIQUOR DISTILLERY		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	4,230	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	13,861	0	1	0	0	0	1,193	1,193	0.000	0.086	0.086
2016	9,836	0	1	0	0	0	873	873	0.000	0.089	0.089
2017	9,182	0	1	0	0	0	981	981	0.000	0.107	0.107
2018	14,640	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	51,750	0	3	0	0	0	3,047	3,047	0.000	0.059	0.059

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.122	.
(14) Massachusetts Credibility:	0.070	0.090	.
(15) Countrywide Pure Premium:	0.750	0.434	1.185
(16) Countrywide Indicated Relativity:	0.895	0.994	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	279.00	.	.
(19) Pure Premium Underlying Present Rate:	0.636	0.319	0.954
(20) Relativity to Underlying Present Rate:	0.778	0.758	.
(21) Credibility to Underlying Relativity:	0.460	0.450	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.779	0.809	.
(24) Balanced Formula Relativity:	0.776	0.804	0.785

Class(es): 2131 SPIRITUOUS LIQUOR BOTTLING		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	64,419	0	18	0	306,376	0	136,361	442,737	4,756	2,117	6,873
2015	56,368	0	18	0	18,058	0	21,293	39,351	0.320	0.378	0.698
2016	58,005	0	26	0	389,867	0	102,809	492,676	6,721	1,772	8,494
2017	64,821	0	19	0	22,945	0	50,354	73,300	0.354	0.777	1.131
2018	62,202	0	25	0	236,956	0	168,917	405,873	3,809	2,716	6,525
MA Total:	305,816	0	106	0	974,202	0	479,735	1,453,937	3.186	1.569	4.754

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.468	3.256	.
(14) Massachusetts Credibility:	0.180	0.250	.
(15) Countrywide Pure Premium:	0.642	0.374	1.015
(16) Countrywide Indicated Relativity:	0.765	0.855	.
(17) Countrywide Credibility:	0.410	0.380	.
(18) Countrywide Lost-Time Claims:	153.00	.	.
(19) Pure Premium Underlying Present Rate:	1.257	0.639	1.896
(20) Relativity to Underlying Present Rate:	1.540	1.519	.
(21) Credibility to Underlying Relativity:	0.410	0.370	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.569	1.701	.
(24) Balanced Formula Relativity:	1.563	1.689	1.606

IX 000090 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 21

Calculation of Class Relativities

Class(es): 2143 FRUIT JUICE MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	46,627	0	8	0	168	0	7,276	7,444	0.004	0.156	0.160
2015	57,914	1	18	177,189	65,212	33,842	63,604	339,848	4.186	1.683	5.868
2016	62,149	0	11	0	8,162	0	7,399	15,560	0.131	0.119	0.250
2017	71,778	1	8	571,293	7,935	25,533	2,778	607,539	8.070	0.394	8.464
2018	74,426	0	14	0	9,033	0	17,726	26,760	0.121	0.238	0.360
MA Total:	312,894	2	59	748,482	90,510	59,375	98,783	997,150	2.681	0.505	3.187

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.919	1.049	.
(14) Massachusetts Credibility:	0.170	0.220	.
(15) Countrywide Pure Premium:	1.044	0.505	1.550
(16) Countrywide Indicated Relativity:	1.245	1.157	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	287.00	.	.
(19) Pure Premium Underlying Present Rate:	1.058	0.449	1.507
(20) Relativity to Underlying Present Rate:	1.296	1.068	.
(21) Credibility to Underlying Relativity:	0.410	0.390	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.551	1.099	.
(24) Balanced Formula Relativity:	1.545	1.091	1.388

Class(es): 2150 ICE MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6,795	0	2	0	2,266	0	2,209	4,475	0.333	0.325	0.659
2015	7,338	0	1	0	3,138	0	1,486	4,624	0.428	0.203	0.630
2016	11,932	0	2	0	0	0	1,528	1,528	0.000	0.128	0.128
2017	11,783	0	3	0	50,106	0	42,639	92,745	4.252	3.619	7.871
2018	11,938	0	2	0	0	0	1,291	1,291	0.000	0.108	0.108
MA Total:	49,785	0	10	0	55,510	0	49,153	104,663	1.115	0.987	2.102

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.214	2.049	.
(14) Massachusetts Credibility:	0.100	0.140	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	2.019	2.037	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.669	0.867	2.536
(20) Relativity to Underlying Present Rate:	2.044	2.062	.
(21) Credibility to Underlying Relativity:	0.900	0.860	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.961	2.060	.
(24) Balanced Formula Relativity:	1.954	2.045	1.985

IX 00091 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 22

Calculation of Class Relativities

Class(es): 2156 BOTTLING-NOT CARBONATED LIQUIDS OR SPIRIT LIQRS & RTE SUP,DR									Effective: 7/1/2022 Manufacturing		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	77,369	0	14	0	25,002	0	55,210	80,212	0.323	0.714	1.037
2015	89,808	1	11	29,143	108,646	71,159	34,144	243,092	1.534	1.173	2.707
2016	92,127	1	9	89,652	43,770	26,344	49,911	209,677	1.448	0.828	2.276
2017	113,880	0	10	0	128,046	0	84,946	212,992	1.124	0.746	1.870
2018	115,290	0	17	0	17,421	0	33,812	51,233	0.151	0.293	0.444
MA Total:	488,473	2	61	118,795	322,884	97,503	258,023	797,206	0.904	0.728	1.632

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.984	1.511	.
(14) Massachusetts Credibility:	0.250	0.360	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	2.210	2.342	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.827	0.997	2.824
(20) Relativity to Underlying Present Rate:	2.238	2.371	.
(21) Credibility to Underlying Relativity:	0.750	0.640	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.924	2.061	.
(24) Balanced Formula Relativity:	1.917	2.046	1.961

Class(es): 2157 BOTTLING NOC & ROUTE SUPERVISORS, DRIVERS									Effective: 7/1/2022 Manufacturing		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	322,436	1	83	74,471	301,628	12,425	237,360	625,883	1.166	0.775	1.941
2015	344,869	1	89	235,182	505,349	32,337	310,472	1,083,341	2.147	0.994	3.141
2016	362,709	1	95	128,633	801,109	24,452	308,487	1,262,681	2.563	0.918	3.481
2017	404,074	2	119	595,196	669,871	159,097	288,845	1,713,008	3.131	1.109	4.239
2018	480,417	1	143	127,736	930,291	147,128	405,281	1,610,436	2.202	1.150	3.352
MA Total:	1,914,505	6	529	1,161,219	3,208,247	375,439	1,550,446	6,295,350	2.282	1.006	3.288

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.484	2.088	.
(14) Massachusetts Credibility:	0.440	0.550	.
(15) Countrywide Pure Premium:	1.993	0.776	2.769
(16) Countrywide Indicated Relativity:	2.377	1.776	.
(17) Countrywide Credibility:	0.280	0.230	.
(18) Countrywide Lost-Time Claims:	5768.0	.	.
(19) Pure Premium Underlying Present Rate:	1.858	0.742	2.600
(20) Relativity to Underlying Present Rate:	2.276	1.764	.
(21) Credibility to Underlying Relativity:	0.280	0.220	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.396	1.945	.
(24) Balanced Formula Relativity:	2.387	1.931	2.230

IX 00092 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 23

Calculation of Class Relativities

Class(es): 2172 CIGARETTE MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	1,669	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	1,669	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.020	0.020	.
(15) Countrywide Pure Premium:	0.881	0.366	1.247
(16) Countrywide Indicated Relativity:	1.051	0.838	.
(17) Countrywide Credibility:	0.490	0.490	.
(18) Countrywide Lost-Time Claims:	282.00	.	.
(19) Pure Premium Underlying Present Rate:	0.851	0.298	1.149
(20) Relativity to Underlying Present Rate:	1.042	0.710	.
(21) Credibility to Underlying Relativity:	0.490	0.490	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.025	0.758	.
(24) Balanced Formula Relativity:	1.021	0.753	0.929

Class(es): 2211 COTTON BATTING,WADDING OR WASTE MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	468	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	263	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	858	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	2,367	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	3,955	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.040	0.060	.
(15) Countrywide Pure Premium:	2.800	1.431	4.231
(16) Countrywide Indicated Relativity:	3.339	3.274	.
(17) Countrywide Credibility:	0.300	0.320	.
(18) Countrywide Lost-Time Claims:	58.000	.	.
(19) Pure Premium Underlying Present Rate:	2.539	1.352	3.891
(20) Relativity to Underlying Present Rate:	3.109	3.216	.
(21) Credibility to Underlying Relativity:	0.660	0.620	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	3.054	3.042	.
(24) Balanced Formula Relativity:	3.042	3.019	3.034

IX 00093 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 24

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
2220 YARN OR THREAD MFG-COTTON											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	94.001	0	25	0	53.998	0	52.217	106.216	0.574	0.555	1.130
2015	96.917	1	17	6.018	505	656	13.467	20.647	0.067	0.146	0.213
2016	105.665	2	24	227.206	130.554	61.533	38.150	457.443	3.386	0.943	4.329
2017	106.153	0	21	0	193.306	0	93.815	287.121	1.821	0.884	2.705
2018	103.224	0	23	0	394.539	0	328.196	722.735	3.822	3.179	7.002
MA Total:	505.960	3	110	233.225	772.902	62.189	525.845	1,594.161	1.989	1.162	3.151

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.165	2.412	.
(14) Massachusetts Credibility:	0.200	0.280	.
(15) Countrywide Pure Premium:	0.827	0.450	1.277
(16) Countrywide Indicated Relativity:	0.986	1.030	.
(17) Countrywide Credibility:	0.400	0.360	.
(18) Countrywide Lost-Time Claims:	811.00	.	.
(19) Pure Premium Underlying Present Rate:	0.967	0.503	1.470
(20) Relativity to Underlying Present Rate:	1.185	1.197	.
(21) Credibility to Underlying Relativity:	0.400	0.360	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.301	1.477	.
(24) Balanced Formula Relativity:	1.296	1.466	1.355

Class(es):		Effective: 7/1/2022							Manufacturing		
2260 WOOL COMBING OR SCOURING											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	488	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	522	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	522	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	534	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	324	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	2,390	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.030	0.040	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	3.005	2.455	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.485	1.045	3.530
(20) Relativity to Underlying Present Rate:	3.043	2.484	.
(21) Credibility to Underlying Relativity:	0.970	0.960	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.952	2.385	.
(24) Balanced Formula Relativity:	2.940	2.368	2.743

IX 00094 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 25

Calculation of Class Relativities

Class(es): 2288 FELTING MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	110.090	1	17	57,390	188,444	4,884	34,684	285,402	2,233	0,359	2,592
2015	117,630	0	26	0	335,934	0	77,409	413,343	2,856	0,658	3,514
2016	68,868	0	9	0	367,041	0	167,935	534,976	5,330	2,439	7,768
2017	31,564	0	7	0	93,050	0	49,349	142,398	2,948	1,563	4,511
2018	26,418	0	4	0	1,627	0	3,942	5,569	0,062	0,149	0,211
MA Total:	354,570	1	63	57,390	986,096	4,884	333,318	1,381,689	2,943	0,954	3,897

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.204	1.980	.
(14) Massachusetts Credibility:	0.200	0.280	.
(15) Countrywide Pure Premium:	1.396	0.942	2.339
(16) Countrywide Indicated Relativity:	1.665	2.157	.
(17) Countrywide Credibility:	0.400	0.360	.
(18) Countrywide Lost-Time Claims:	213.00	.	.
(19) Pure Premium Underlying Present Rate:	1.500	0.761	2.262
(20) Relativity to Underlying Present Rate:	1.837	1.811	.
(21) Credibility to Underlying Relativity:	0.400	0.360	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.042	1.983	.
(24) Balanced Formula Relativity:	2.034	1.968	2.011

Class(es): 2305 TEXTILE FIBER MFG-SYNTHETIC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,148	0	2	0	0	0	1,662	1,662	0,000	0,774	0,774
2015	3,525	0	2	0	1,910	0	1,925	3,836	0,542	0,546	1,088
2016	5,945	0	1	0	0	0	76	76	0,000	0,013	0,013
2017	4,509	0	3	0	5,988	0	5,568	11,557	1,328	1,235	2,563
2018	5,438	0	6	0	923	0	3,337	4,259	0,170	0,614	0,783
MA Total:	21,565	0	14	0	8,821	0	12,569	21,390	0,409	0,583	0,992

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.445	1.210	.
(14) Massachusetts Credibility:	0.070	0.090	.
(15) Countrywide Pure Premium:	0.911	0.518	1.429
(16) Countrywide Indicated Relativity:	1.087	1.185	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	698.00	.	.
(19) Pure Premium Underlying Present Rate:	1.672	0.733	2.405
(20) Relativity to Underlying Present Rate:	2.047	1.744	.
(21) Credibility to Underlying Relativity:	0.460	0.450	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.483	1.439	.
(24) Balanced Formula Relativity:	1.478	1.428	1.461

IX 00095 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 26

Calculation of Class Relativities

Class(es): 2362 KNIT GOODS MFG NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	13.641	0	1	0	0	0	2.833	2.833	0.000	0.208	0.208
2015	9.754	0	3	0	4.942	0	23.375	28.317	0.507	2.397	2.903
2016	10.080	0	6	0	7.080	0	12.842	19.921	0.702	1.274	1.976
2017	21.300	0	1	0	0	0	634	634	0.000	0.030	0.030
2018	16.826	0	5	0	0	0	1.723	1.723	0.000	0.102	0.102
MA Total:	71,601	0	16	0	12,021	0	41,406	53,427	0.168	0.578	0.746

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.183	1.200	.
(14) Massachusetts Credibility:	0.080	0.120	.
(15) Countrywide Pure Premium:	1.029	0.572	1.602
(16) Countrywide Indicated Relativity:	1.228	1.310	.
(17) Countrywide Credibility:	0.450	0.440	.
(18) Countrywide Lost-Time Claims:	155.00	.	.
(19) Pure Premium Underlying Present Rate:	0.604	0.456	1.060
(20) Relativity to Underlying Present Rate:	0.739	1.085	.
(21) Credibility to Underlying Relativity:	0.470	0.440	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.915	1.198	.
(24) Balanced Formula Relativity:	0.911	1.189	1.007

Class(es): 2380 WEBBING MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	70.637	0	5	0	5.514	0	8.919	14.432	0.078	0.126	0.204
2015	63.280	0	15	0	13.540	0	28.227	41.767	0.214	0.446	0.660
2016	62.937	0	6	0	4.474	0	6.935	11.409	0.071	0.110	0.181
2017	56.467	0	5	0	3.568	0	5.460	9.028	0.063	0.097	0.160
2018	45.089	0	2	0	280	0	1.400	1.681	0.006	0.031	0.037
MA Total:	298,411	0	33	0	27,376	0	50,941	78,317	0.092	0.171	0.262

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.100	0.354	.
(14) Massachusetts Credibility:	0.160	0.220	.
(15) Countrywide Pure Premium:	0.763	0.454	1.217
(16) Countrywide Indicated Relativity:	0.910	1.038	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	187.00	.	.
(19) Pure Premium Underlying Present Rate:	0.905	0.480	1.385
(20) Relativity to Underlying Present Rate:	1.108	1.142	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.863	0.928	.
(24) Balanced Formula Relativity:	0.860	0.921	0.881

IX 000096 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 27

Calculation of Class Relativities

Class(es): 2402 CARPET OR RUG MFG NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6.545	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	8.562	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	10.548	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	9.820	0	1	0	0	0	598	598	0.000	0.061	0.061
2018	8.583	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	44,058	0	1	0	0	0	598	598	0.000	0.014	0.014

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.028	.
(14) Massachusetts Credibility:	0.070	0.100	.
(15) Countrywide Pure Premium:	1.123	0.681	1.804
(16) Countrywide Indicated Relativity:	1.339	1.559	.
(17) Countrywide Credibility:	0.470	0.450	.
(18) Countrywide Lost-Time Claims:	491.00	.	.
(19) Pure Premium Underlying Present Rate:	0.943	0.517	1.460
(20) Relativity to Underlying Present Rate:	1.155	1.230	.
(21) Credibility to Underlying Relativity:	0.460	0.450	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.160	1.258	.
(24) Balanced Formula Relativity:	1.156	1.249	1.188

Class(es): 2413 TEXTILE - BLEACHING, DYEING, MERCERZNG, FINISH		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	328.027	2	42	177.092	316.641	37.283	212.044	743.060	1.505	0.760	2.265
2015	297.053	3	49	779.131	361.798	358.398	174.302	1,673.629	3.841	1.793	5.634
2016	248.924	1	26	121.307	400.140	14.115	162.211	697.773	2.095	0.708	2.803
2017	113.159	0	16	0	167.658	0	65.700	233.357	1.482	0.581	2.062
2018	85.106	1	7	177.177	31.627	97.207	21.103	327.115	2.453	1.390	3.844
MA Total:	1,072,269	7	140	1,254,707	1,277,864	507,003	635,360	3,674,935	2,362	1,065	3,427

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.571	2.211	.
(14) Massachusetts Credibility:	0.310	0.430	.
(15) Countrywide Pure Premium:	0.943	0.683	1.626
(16) Countrywide Indicated Relativity:	1.125	1.562	.
(17) Countrywide Credibility:	0.350	0.290	.
(18) Countrywide Lost-Time Claims:	241.00	.	.
(19) Pure Premium Underlying Present Rate:	1.426	0.740	2.166
(20) Relativity to Underlying Present Rate:	1.746	1.760	.
(21) Credibility to Underlying Relativity:	0.340	0.280	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.784	1.897	.
(24) Balanced Formula Relativity:	1.778	1.883	1.814

IX 000097 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 28

Calculation of Class Relativities

Class(es): 2416 YARN OR THREAD DYEING OR FINISHING		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	16,410	0	2	0	0	0	2,470	2,470	0.000	0.151	0.151
2015	14,775	1	3	662	408	7,479	15,711	24,259	0.072	1.570	1.642
2016	16,949	0	3	0	16,811	0	5,932	22,743	0.992	0.350	1.342
2017	20,981	0	7	0	0	0	6,130	6,130	0.000	0.292	0.292
2018	23,058	0	6	0	4,382	0	8,642	13,024	0.190	0.375	0.565
MA Total:	92,173	1	21	662	21,600	7,479	38,885	68,626	0.242	0.503	0.745

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.263	1.044	.
(14) Massachusetts Credibility:	0.110	0.140	.
(15) Countrywide Pure Premium:	0.887	0.755	1.642
(16) Countrywide Indicated Relativity:	1.057	1.728	.
(17) Countrywide Credibility:	0.250	0.270	.
(18) Countrywide Lost-Time Claims:	37.000	.	.
(19) Pure Premium Underlying Present Rate:	1.089	0.537	1.626
(20) Relativity to Underlying Present Rate:	1.334	1.276	.
(21) Credibility to Underlying Relativity:	0.640	0.590	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.147	1.366	.
(24) Balanced Formula Relativity:	1.142	1.356	1.216

Class(es): 2417 CLOTH PRINTING		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	54,295	0	2	0	71,245	0	14,925	86,170	1.312	0.275	1.587
2015	59,268	0	1	0	280	0	875	1,154	0.005	0.015	0.019
2016	18,910	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	2,061	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	11,784	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	146,319	0	3	0	71,525	0	15,800	87,324	0.489	0.108	0.597

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.532	0.224	.
(14) Massachusetts Credibility:	0.120	0.140	.
(15) Countrywide Pure Premium:	0.833	0.299	1.131
(16) Countrywide Indicated Relativity:	0.993	0.683	.
(17) Countrywide Credibility:	0.240	0.260	.
(18) Countrywide Lost-Time Claims:	34.000	.	.
(19) Pure Premium Underlying Present Rate:	0.898	0.344	1.242
(20) Relativity to Underlying Present Rate:	1.100	0.819	.
(21) Credibility to Underlying Relativity:	0.640	0.600	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.006	0.701	.
(24) Balanced Formula Relativity:	1.002	0.695	0.897

IX 000098 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 29

Calculation of Class Relativities

Class(es): 2501 CLOTHING MFG		Effective: 7/1/2022							Manufacturing		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	861.903	3	81	485.855	727.186	152.733	430.590	1.796.364	1.407	0.677	2.084
2015	913.151	2	110	350.049	790.408	29.235	329.166	1.498.858	1.249	0.392	1.641
2016	951.077	5	103	623.356	715.912	170.385	376.006	1.885.658	1.408	0.574	1.983
2017	969.529	1	100	87.631	473.178	15.178	293.481	869.468	0.578	0.318	0.897
2018	962.981	1	81	146.877	1.140.930	30.840	646.521	1.965.167	1.337	0.703	2.041
MA Total:	4,658,641	12	475	1,693,768	3,847,613	398,370	2,075,764	8,015,515	1.189	0.531	1.721

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.295	1.102	.
(14) Massachusetts Credibility:	0.460	0.630	.
(15) Countrywide Pure Premium:	0.964	0.555	1.519
(16) Countrywide Indicated Relativity:	1.150	1.270	.
(17) Countrywide Credibility:	0.270	0.190	.
(18) Countrywide Lost-Time Claims:	2629.0	.	.
(19) Pure Premium Underlying Present Rate:	0.858	0.432	1.290
(20) Relativity to Underlying Present Rate:	1.050	1.027	.
(21) Credibility to Underlying Relativity:	0.270	0.180	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.190	1.121	.
(24) Balanced Formula Relativity:	1.185	1.112	1.160

Class(es): 2503 DRESSMAKING OR TAILORING-CUSTOM EXCLUSIVELY		Effective: 7/1/2022							Manufacturing		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	62.087	0	2	0	3.677	0	1.505	5.182	0.059	0.024	0.083
2015	54.241	0	2	0	307.837	0	50.367	358.205	5.675	0.929	6.604
2016	49.561	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	41.958	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	36.099	0	1	0	0	0	1.144	1.144	0.000	0.032	0.032
MA Total:	243,946	0	5	0	311,515	0	53,016	364,531	1.277	0.217	1.494

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.390	0.451	.
(14) Massachusetts Credibility:	0.120	0.150	.
(15) Countrywide Pure Premium:	0.165	0.115	0.280
(16) Countrywide Indicated Relativity:	0.196	0.264	.
(17) Countrywide Credibility:	0.240	0.250	.
(18) Countrywide Lost-Time Claims:	31.000	.	.
(19) Pure Premium Underlying Present Rate:	0.562	0.215	0.778
(20) Relativity to Underlying Present Rate:	0.689	0.513	.
(21) Credibility to Underlying Relativity:	0.640	0.600	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.655	0.441	.
(24) Balanced Formula Relativity:	0.652	0.438	0.578

IX 000099 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 30

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
2570 MATTRESS OR BOX SPRING MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	33.050	0	4	0	0	0	3.161	3.161	0.000	0.096	0.096
2015	38.338	0	6	0	732	0	2.317	3.049	0.019	0.060	0.080
2016	40.003	0	1	0	0	0	139	139	0.000	0.003	0.003
2017	44.344	1	8	142.262	7.499	33.897	12.575	196.233	3.377	1.048	4.425
2018	51.633	0	5	0	47.868	0	22.481	70.349	0.927	0.435	1.362
MA Total:	207.368	1	24	142,262	56,100	33,897	40,673	272,931	0.957	0.360	1.316

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.041	0.746	.
(14) Massachusetts Credibility:	0.180	0.220	.
(15) Countrywide Pure Premium:	1.736	0.822	2.558
(16) Countrywide Indicated Relativity:	2.070	1.881	.
(17) Countrywide Credibility:	0.410	0.390	.
(18) Countrywide Lost-Time Claims:	559.00	.	.
(19) Pure Premium Underlying Present Rate:	1.794	0.724	2.518
(20) Relativity to Underlying Present Rate:	2.197	1.722	.
(21) Credibility to Underlying Relativity:	0.410	0.390	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.937	1.569	.
(24) Balanced Formula Relativity:	1.930	1.558	1.802

Class(es):		Effective: 7/1/2022							Manufacturing		
2576 CANVAS GOODS MFG NOC-SHOP											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	111.278	1	11	2.094	38.526	2.953	56.090	99.664	0.365	0.531	0.896
2015	117.479	0	11	0	316.713	0	89.014	405.727	2.696	0.758	3.454
2016	130.560	0	14	0	19.472	0	25.297	44.769	0.149	0.194	0.343
2017	128.065	2	13	143.081	292.424	77.674	57.454	570.633	3.401	1.055	4.456
2018	127.202	0	12	0	17.210	0	33.325	50.535	0.135	0.262	0.397
MA Total:	614.583	3	61	145,176	684,346	80,628	261,180	1,171,329	1.350	0.556	1.906

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.469	1.154	.
(14) Massachusetts Credibility:	0.200	0.300	.
(15) Countrywide Pure Premium:	0.656	0.680	1.336
(16) Countrywide Indicated Relativity:	0.783	1.556	.
(17) Countrywide Credibility:	0.160	0.170	.
(18) Countrywide Lost-Time Claims:	12.000	.	.
(19) Pure Premium Underlying Present Rate:	0.866	0.497	1.364
(20) Relativity to Underlying Present Rate:	1.061	1.183	.
(21) Credibility to Underlying Relativity:	0.640	0.530	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.098	1.238	.
(24) Balanced Formula Relativity:	1.094	1.229	1.140

IX 000100 STIP

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
2585 LAUNDRY NOC & ROUTE SUPERVISORS, DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	743.525	4	111	366.120	611.699	53.637	311.855	1,343.312	1.315	0.492	1.807
2015	782.259	6	115	726.772	287.370	612.400	257.172	1,883.714	1.296	1.112	2.408
2016	884.918	3	119	165.531	758.149	76.613	370.624	1,370.917	1.044	0.505	1.549
2017	854.185	5	120	403.330	769.825	292.918	579.655	2,045.729	1.373	1.022	2.395
2018	827.022	2	114	235.989	462.159	36.266	424.030	1,158.444	0.844	0.557	1.401
MA Total:	4,091,908	20	579	1,897,743	2,889,202	1,071,834	1,943,336	7,802,115	1.170	0.737	1.907

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.273	1.530	.
(14) Massachusetts Credibility:	0.490	0.710	.
(15) Countrywide Pure Premium:	1.493	0.711	2.204
(16) Countrywide Indicated Relativity:	1.781	1.627	.
(17) Countrywide Credibility:	0.260	0.150	.
(18) Countrywide Lost-Time Claims:	3468.0	.	.
(19) Pure Premium Underlying Present Rate:	1.158	0.655	1.813
(20) Relativity to Underlying Present Rate:	1.418	1.559	.
(21) Credibility to Underlying Relativity:	0.250	0.140	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.441	1.548	.
(24) Balanced Formula Relativity:	1.436	1.537	1.471

Class(es):		Effective: 7/1/2022							Manufacturing		
2586 CLEANING OR DYEING & ROUTE SUPERVISORS, DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	492.235	0	55	0	334.147	0	170.659	504.807	0.679	0.347	1.026
2015	532.720	2	49	70.448	139.458	36.690	69.788	316.384	0.394	0.200	0.594
2016	538.000	3	41	329.552	1,063.725	41.898	818.731	2,253.906	2.590	1.600	4.189
2017	491.949	0	21	0	172.977	0	33.920	206.897	0.352	0.069	0.421
2018	446.396	0	23	0	147.972	0	158.506	306.478	0.331	0.355	0.687
MA Total:	2,501,301	5	189	400.000	1,858,279	78.587	1,251,605	3,588,471	0.903	0.532	1.435

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.983	1.104	.
(14) Massachusetts Credibility:	0.350	0.500	.
(15) Countrywide Pure Premium:	1.144	0.637	1.780
(16) Countrywide Indicated Relativity:	1.364	1.457	.
(17) Countrywide Credibility:	0.330	0.250	.
(18) Countrywide Lost-Time Claims:	227.00	.	.
(19) Pure Premium Underlying Present Rate:	0.798	0.461	1.259
(20) Relativity to Underlying Present Rate:	0.977	1.096	.
(21) Credibility to Underlying Relativity:	0.320	0.250	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.107	1.190	.
(24) Balanced Formula Relativity:	1.102	1.181	1.130

IX 000101 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 32

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
2587 TOWEL OR TOILET SUPPLY CO & RTE SUPERVISORS, DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	28,700	1	2	55,723	912	29,002	1,086	86,724	1,973	1,048	3,022
2015	27,234	0	1	0	0	0	254	254	0,000	0,009	0,009
2016	50,527	0	5	0	2,591	0	4,781	7,372	0,051	0,095	0,146
2017	37,788	0	1	0	0	0	1,227	1,227	0,000	0,032	0,032
2018	63,628	0	5	0	6,845	0	6,500	13,344	0,108	0,102	0,210
MA Total:	207,878	1	14	55,723	10,347	29,002	13,848	108,921	0,318	0,206	0,524

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.415	0.485	.
(14) Massachusetts Credibility:	0.150	0.190	.
(15) Countrywide Pure Premium:	1.147	0.563	1.711
(16) Countrywide Indicated Relativity:	1.526	1.332	.
(17) Countrywide Credibility:	0.350	0.370	.
(18) Countrywide Lost-Time Claims:	86,000	.	.
(19) Pure Premium Underlying Present Rate:	1.103	0.458	1.561
(20) Relativity to Underlying Present Rate:	1.593	1.199	.
(21) Credibility to Underlying Relativity:	0.500	0.440	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.393	1.112	.
(24) Balanced Formula Relativity:	1.384	1.113	1.287

Class(es):		Effective: 7/1/2022							Manufacturing		
2623 TANNING											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,628	0	0	0	0	0	0	0	0,000	0,000	0,000
2015	2,528	0	0	0	0	0	0	0	0,000	0,000	0,000
2016	168	0	0	0	0	0	0	0	0,000	0,000	0,000
2017	205	0	0	0	0	0	0	0	0,000	0,000	0,000
2018	198	0	0	0	0	0	0	0	0,000	0,000	0,000
MA Total:	5,727	0	0	0	0	0	0	0	0,000	0,000	0,000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.050	0.060	.
(15) Countrywide Pure Premium:	2.293	1.326	3.619
(16) Countrywide Indicated Relativity:	2.734	3.035	.
(17) Countrywide Credibility:	0.360	0.390	.
(18) Countrywide Lost-Time Claims:	92,000	.	.
(19) Pure Premium Underlying Present Rate:	2.112	1.086	3.199
(20) Relativity to Underlying Present Rate:	2.587	2.584	.
(21) Credibility to Underlying Relativity:	0.590	0.550	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.510	2.605	.
(24) Balanced Formula Relativity:	2.501	2.586	2.530

IX 000102 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 33

Calculation of Class Relativities

Class(es): 2651 SHOE STOCK MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	61,617	0	4	0	1,370	0	5,962	7,332	0.022	0.097	0.119
2015	58,024	1	4	12,617	15,498	21,447	51,586	101,147	0.485	1.259	1.743
2016	55,673	0	2	0	5,917	0	14,047	19,963	0.106	0.252	0.359
2017	47,248	0	5	0	11,986	0	4,979	16,965	0.254	0.105	0.359
2018	47,245	0	4	0	1,436	0	6,713	8,149	0.030	0.142	0.172
MA Total:	269,807	1	19	12,617	36,207	21,447	83,287	153,557	0.181	0.388	0.569

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.197	0.806	.
(14) Massachusetts Credibility:	0.130	0.190	.
(15) Countrywide Pure Premium:	0.827	0.462	1.289
(16) Countrywide Indicated Relativity:	0.986	1.057	.
(17) Countrywide Credibility:	0.350	0.370	.
(18) Countrywide Lost-Time Claims:	86.000	.	.
(19) Pure Premium Underlying Present Rate:	0.646	0.359	1.006
(20) Relativity to Underlying Present Rate:	0.791	0.855	.
(21) Credibility to Underlying Relativity:	0.520	0.440	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.782	0.920	.
(24) Balanced Formula Relativity:	0.779	0.913	0.825

Class(es): 2660 BOOT OR SHOE MFG NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	46,156	1	2	3,732	0	1,856	310	5,898	0.081	0.047	0.128
2015	44,779	0	4	0	97,108	0	31,194	128,303	2.169	0.697	2.865
2016	37,929	0	7	0	539	0	3,273	3,812	0.014	0.086	0.101
2017	52,045	0	3	0	1,497	0	3,277	4,774	0.029	0.063	0.092
2018	53,397	0	5	0	66,847	0	14,800	81,647	1.252	0.277	1.529
MA Total:	234,306	1	21	3,732	165,992	1,856	52,855	224,434	0.724	0.234	0.958

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.789	0.485	.
(14) Massachusetts Credibility:	0.140	0.200	.
(15) Countrywide Pure Premium:	0.958	0.692	1.651
(16) Countrywide Indicated Relativity:	1.143	1.584	.
(17) Countrywide Credibility:	0.430	0.400	.
(18) Countrywide Lost-Time Claims:	297.00	.	.
(19) Pure Premium Underlying Present Rate:	0.889	0.495	1.383
(20) Relativity to Underlying Present Rate:	1.088	1.176	.
(21) Credibility to Underlying Relativity:	0.430	0.400	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.070	1.201	.
(24) Balanced Formula Relativity:	1.066	1.192	1.109

IX 000103 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 34

Calculation of Class Relativities

Class(es): 2683 LUGGAGE MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,056	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	2,504	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	2,320	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	2,131	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	2,201	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	10,211	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.040	0.060	.
(15) Countrywide Pure Premium:	1.185	0.779	1.964
(16) Countrywide Indicated Relativity:	1.413	1.783	.
(17) Countrywide Credibility:	0.250	0.270	.
(18) Countrywide Lost-Time Claims:	37.000	.	.
(19) Pure Premium Underlying Present Rate:	0.868	0.530	1.398
(20) Relativity to Underlying Present Rate:	1.062	1.261	.
(21) Credibility to Underlying Relativity:	0.710	0.670	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.108	1.327	.
(24) Balanced Formula Relativity:	1.103	1.317	1.177

Class(es): 2688 LEATHER GOODS MFG NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	81,800	1	7	52,457	78,999	2,276	49,830	183,562	1,607	0,637	2,244
2015	81,706	0	8	0	3,246	0	10,987	14,233	0,040	0,134	0,174
2016	78,560	1	2	124,958	2,886	42,473	1,081	171,399	1,627	0,554	2,182
2017	82,441	0	12	0	2,943	0	12,413	15,356	0,036	0,151	0,186
2018	80,590	0	2	0	195	0	2,670	2,865	0,002	0,033	0,036
MA Total:	405,096	2	31	177,415	88,270	44,749	76,980	387,414	0,656	0,300	0,956

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.714	0.624	.
(14) Massachusetts Credibility:	0.160	0.240	.
(15) Countrywide Pure Premium:	0.806	0.536	1.342
(16) Countrywide Indicated Relativity:	0.961	1.227	.
(17) Countrywide Credibility:	0.390	0.380	.
(18) Countrywide Lost-Time Claims:	112.00	.	.
(19) Pure Premium Underlying Present Rate:	0.761	0.461	1.222
(20) Relativity to Underlying Present Rate:	0.932	1.095	.
(21) Credibility to Underlying Relativity:	0.450	0.380	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.908	1.032	.
(24) Balanced Formula Relativity:	0.905	1.025	0.946

IX 000104 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 35

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
2702 LOGGING OR LUMBERING & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	33.107	0	6	0	40.114	0	63.525	103.639	1.212	1.919	3.130
2015	42.026	0	8	0	68.646	0	38.210	106.856	1.633	0.909	2.543
2016	48.865	0	3	0	6.243	0	3.262	9.505	0.128	0.067	0.195
2017	44.984	0	3	0	21.324	0	32.240	53.564	0.474	0.717	1.191
2018	50.315	0	9	0	456.771	0	678.320	1,135.090	9.078	13.481	22.560
MA Total:	219,298	0	29	0	593,098	0	815,556	1,408,655	2.705	3.719	6.423

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.215	3.232	.
(14) Massachusetts Credibility:	0.290	0.390	.
(15) Countrywide Pure Premium:	8.096	4.589	12.685
(16) Countrywide Indicated Relativity:	3.814	4.254	.
(17) Countrywide Credibility:	0.360	0.310	.
(18) Countrywide Lost-Time Claims:	1443.0	.	.
(19) Pure Premium Underlying Present Rate:	5.575	2.743	8.318
(20) Relativity to Underlying Present Rate:	2.746	2.671	.
(21) Credibility to Underlying Relativity:	0.350	0.300	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	2.686	3.381	.
(24) Balanced Formula Relativity:	2.681	3.402	2.927

Class(es):		Effective: 7/1/2022							Manufacturing		
2710 SAWMILLS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	30.445	1	8	2.144	15.149	3.058	17.294	37.645	0.568	0.668	1.237
2015	36.050	1	6	10.417	40.425	15.523	19.182	85.547	1.410	0.963	2.373
2016	32.162	0	9	0	115.900	0	69.563	185.463	3.604	2.163	5.766
2017	33.841	0	5	0	1.817	0	6.759	8.576	0.054	0.200	0.253
2018	26.758	0	1	0	204.458	0	23.079	227.536	7.641	0.863	8.504
MA Total:	159,255	2	29	12,562	377,749	18,581	135,878	544,769	2.451	0.970	3.421

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.668	2.013	.
(14) Massachusetts Credibility:	0.180	0.260	.
(15) Countrywide Pure Premium:	3.195	1.922	5.116
(16) Countrywide Indicated Relativity:	3.810	4.397	.
(17) Countrywide Credibility:	0.410	0.370	.
(18) Countrywide Lost-Time Claims:	2238.0	.	.
(19) Pure Premium Underlying Present Rate:	2.535	1.445	3.980
(20) Relativity to Underlying Present Rate:	3.104	3.436	.
(21) Credibility to Underlying Relativity:	0.410	0.370	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	3.315	3.422	.
(24) Balanced Formula Relativity:	3.302	3.397	3.335

IX 000105 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 36

Calculation of Class Relativities

Class(es): 2731 PLANING OR MOLDING MILL		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	37,484	0	7	0	16,655	0	29,481	46,135	0.444	0.786	1.231
2015	39,539	0	7	0	25,221	0	21,579	46,800	0.638	0.546	1.184
2016	41,077	0	6	0	783	0	5,442	6,225	0.019	0.132	0.152
2017	41,093	1	8	1,401	16,961	93	17,593	36,048	0.447	0.430	0.877
2018	50,870	0	11	0	19,486	0	22,116	41,601	0.383	0.435	0.818
MA Total:	210,062	1	39	1,401	79,106	93	96,210	176,809	0.383	0.458	0.842

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.417	0.952	.
(14) Massachusetts Credibility:	0.150	0.230	.
(15) Countrywide Pure Premium:	1.463	0.950	2.413
(16) Countrywide Indicated Relativity:	1.744	2.174	.
(17) Countrywide Credibility:	0.430	0.390	.
(18) Countrywide Lost-Time Claims:	1352.0	.	.
(19) Pure Premium Underlying Present Rate:	1.228	0.743	1.971
(20) Relativity to Underlying Present Rate:	1.504	1.767	.
(21) Credibility to Underlying Relativity:	0.420	0.380	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.444	1.738	.
(24) Balanced Formula Relativity:	1.439	1.725	1.537

Class(es): 2747 COOPERAGE ASSEMBLY		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	1	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	1	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.000	0.000	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	2.965	2.731	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.452	1.162	3.614
(20) Relativity to Underlying Present Rate:	3.002	2.764	.
(21) Credibility to Underlying Relativity:	1.000	1.000	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	3.002	2.764	.
(24) Balanced Formula Relativity:	2.991	2.744	2.906

IX 000106 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 37

Calculation of Class Relativities

Class(es): 2790 PATTERN MAKING NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	35,435	0	8	0	20,014	0	23,229	43,243	0.565	0.656	1.220
2015	39,867	0	3	0	1,069	0	4,332	5,401	0.027	0.109	0.135
2016	34,859	0	5	0	1,661	0	3,537	5,198	0.048	0.101	0.149
2017	49,425	0	11	0	194,373	0	88,937	283,309	3.933	1.799	5.732
2018	43,851	1	5	403,779	0	45,068	1,736	450,582	9.208	1.067	10.275
MA Total:	203,436	1	32	403,779	217,117	45,068	121,770	787,734	3.052	0.820	3.872

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.322	1.702	.
(14) Massachusetts Credibility:	0.120	0.170	.
(15) Countrywide Pure Premium:	0.804	0.458	1.262
(16) Countrywide Indicated Relativity:	0.959	1.048	.
(17) Countrywide Credibility:	0.440	0.420	.
(18) Countrywide Lost-Time Claims:	179.00	.	.
(19) Pure Premium Underlying Present Rate:	0.732	0.355	1.087
(20) Relativity to Underlying Present Rate:	0.896	0.844	.
(21) Credibility to Underlying Relativity:	0.440	0.410	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.215	1.076	.
(24) Balanced Formula Relativity:	1.210	1.068	1.161

Class(es): 2802 CARPENTRY-SHOP ONLY & DRIVERS		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,078,139	1	169	13,683	626,472	7,462	595,150	1,242,766	0.594	0.559	1.153
2015	1,138,051	6	169	431,849	1,835,709	187,528	873,946	3,329,032	1.992	0.933	2.925
2016	1,197,062	6	174	278,469	1,381,387	131,091	864,348	2,655,295	1.387	0.832	2.218
2017	1,236,771	6	162	466,353	2,746,439	649,028	1,150,861	5,012,680	2.598	1.455	4.053
2018	1,270,061	4	176	488,712	1,830,225	172,567	915,765	3,407,269	1.826	0.857	2.683
MA Total:	5,920,085	23	850	1,679,066	8,420,231	1,147,676	4,400,070	15,647,043	1.706	0.937	2.643

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.857	1.945	.
(14) Massachusetts Credibility:	0.640	0.900	.
(15) Countrywide Pure Premium:	1.961	1.129	3.090
(16) Countrywide Indicated Relativity:	2.338	2.584	.
(17) Countrywide Credibility:	0.180	0.050	.
(18) Countrywide Lost-Time Claims:	5951.0	.	.
(19) Pure Premium Underlying Present Rate:	1.566	0.831	2.397
(20) Relativity to Underlying Present Rate:	1.917	1.977	.
(21) Credibility to Underlying Relativity:	0.180	0.050	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.954	1.979	.
(24) Balanced Formula Relativity:	1.947	1.964	1.953

IX 000107 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 38

Calculation of Class Relativities

Class(es): 2835 BRUSH OR BROOM ASSEMBLY		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	46,309	0	5	0	185	0	5,318	5,503	0.004	0.115	0.119
2015	50,627	0	3	0	118	0	2,056	2,173	0.002	0.041	0.043
2016	49,397	1	4	3,237	0	22,379	2,344	27,960	0.066	0.500	0.566
2017	53,322	0	6	0	0	0	4,468	4,468	0.000	0.084	0.084
2018	65,105	0	14	0	291,746	0	26,347	318,093	4.481	0.405	4.886
MA Total:	264,761	1	32	3,237	292,049	22,379	40,533	358,198	1.115	0.238	1.353

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.214	0.493	.
(14) Massachusetts Credibility:	0.130	0.180	.
(15) Countrywide Pure Premium:	1.171	0.489	1.660
(16) Countrywide Indicated Relativity:	1.397	1.119	.
(17) Countrywide Credibility:	0.330	0.350	.
(18) Countrywide Lost-Time Claims:	70.000	.	.
(19) Pure Premium Underlying Present Rate:	0.597	0.340	0.937
(20) Relativity to Underlying Present Rate:	0.731	0.809	.
(21) Credibility to Underlying Relativity:	0.540	0.470	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.014	0.861	.
(24) Balanced Formula Relativity:	1.010	0.854	0.956

Class(es): 2836 BRUSH OR BROOM MFG NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	5,804	0	1	0	203	0	582	785	0.035	0.100	0.135
2015	6,979	0	1	0	0	0	83	83	0.000	0.012	0.012
2016	5,718	0	1	0	8,928	0	865	9,793	1.562	0.151	1.713
2017	7,209	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	7,632	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	33,341	0	3	0	9,131	0	1,529	10,660	0.274	0.046	0.320

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.298	0.095	.
(14) Massachusetts Credibility:	0.070	0.090	.
(15) Countrywide Pure Premium:	2.003	0.756	2.758
(16) Countrywide Indicated Relativity:	2.388	1.730	.
(17) Countrywide Credibility:	0.290	0.300	.
(18) Countrywide Lost-Time Claims:	51.000	.	.
(19) Pure Premium Underlying Present Rate:	0.909	0.437	1.346
(20) Relativity to Underlying Present Rate:	1.114	1.039	.
(21) Credibility to Underlying Relativity:	0.640	0.610	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.426	1.161	.
(24) Balanced Formula Relativity:	1.421	1.153	1.328

IX 000108 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 39

Calculation of Class Relativities

Class(es): 2841 WOODENWARE MFG NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	49,723	0	12	0	58,880	0	17,369	76,249	1.184	0.349	1.533
2015	42,775	0	6	0	22,705	0	25,409	48,114	0.531	0.594	1.125
2016	34,041	0	1	0	0	0	148	148	0.000	0.004	0.004
2017	32,136	1	0	231,263	0	190,921	0	422,184	7.196	5.941	13.137
2018	41,549	0	5	0	1,580	0	5,332	6,912	0.038	0.128	0.166
MA Total:	200,224	1	24	231,263	83,165	190,921	48,258	553,608	1.570	1.195	2.765

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.709	2.480	.
(14) Massachusetts Credibility:	0.160	0.250	.
(15) Countrywide Pure Premium:	1.451	1.049	2.500
(16) Countrywide Indicated Relativity:	1.730	2.401	.
(17) Countrywide Credibility:	0.420	0.380	.
(18) Countrywide Lost-Time Claims:	187.00	.	.
(19) Pure Premium Underlying Present Rate:	1.512	0.960	2.473
(20) Relativity to Underlying Present Rate:	1.852	2.284	.
(21) Credibility to Underlying Relativity:	0.420	0.370	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.778	2.377	.
(24) Balanced Formula Relativity:	1.771	2.360	1.974

Class(es): 2883 FURNITURE MFG-WOOD-NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	509,563	5	68	753,423	605,790	69,135	308,297	1,736,645	2.667	0.741	3.408
2015	546,445	3	67	394,033	233,550	73,345	297,265	998,193	1.148	0.678	1.827
2016	555,315	2	103	461,105	400,242	105,616	235,739	1,202,703	1.551	0.615	2.166
2017	537,621	4	83	827,420	460,508	368,113	284,770	1,940,812	2.396	1.214	3.610
2018	509,975	0	67	0	574,970	0	293,540	868,510	1.127	0.576	1.703
MA Total:	2,658,920	14	388	2,435,981	2,275,060	616,210	1,419,611	6,746,862	1.772	0.766	2.537

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.929	1.589	.
(14) Massachusetts Credibility:	0.450	0.610	.
(15) Countrywide Pure Premium:	1.336	0.760	2.096
(16) Countrywide Indicated Relativity:	1.593	1.738	.
(17) Countrywide Credibility:	0.280	0.200	.
(18) Countrywide Lost-Time Claims:	5136.0	.	.
(19) Pure Premium Underlying Present Rate:	1.458	0.695	2.154
(20) Relativity to Underlying Present Rate:	1.786	1.653	.
(21) Credibility to Underlying Relativity:	0.270	0.190	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.796	1.631	.
(24) Balanced Formula Relativity:	1.789	1.619	1.731

IX 000109 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 40

Calculation of Class Relativities

Class(es): 2923 PIANO MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	52,592	0	2	0	0	0	1,963	1,963	0.000	0.037	0.037
2015	51,404	1	2	182,386	0	67,056	598	250,040	3,548	1,316	4,864
2016	58,472	0	1	0	0	0	400	400	0.000	0.007	0.007
2017	58,733	0	4	0	0	0	1,302	1,302	0.000	0.022	0.022
2018	62,085	0	5	0	6,783	0	20,953	27,737	0.109	0.337	0.447
MA Total:	283,287	1	14	182,386	6,783	67,056	25,217	281,443	0.668	0.326	0.993

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.727	0.676	.
(14) Massachusetts Credibility:	0.140	0.190	.
(15) Countrywide Pure Premium:	0.534	0.331	0.865
(16) Countrywide Indicated Relativity:	0.636	0.758	.
(17) Countrywide Credibility:	0.340	0.360	.
(18) Countrywide Lost-Time Claims:	76.000	.	.
(19) Pure Premium Underlying Present Rate:	0.706	0.351	1.057
(20) Relativity to Underlying Present Rate:	0.864	0.835	.
(21) Credibility to Underlying Relativity:	0.520	0.450	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.767	0.777	.
(24) Balanced Formula Relativity:	0.764	0.771	0.767

Class(es): 2942 PENCIL, PENHOLDER OR CRAYON MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	145,227	0	8	0	15,704	0	16,390	32,095	0.108	0.113	0.221
2015	140,412	0	9	0	0	0	6,527	6,527	0.000	0.046	0.046
2016	134,148	0	12	0	183,946	0	60,897	244,843	1.371	0.454	1.825
2017	160,530	0	18	0	191,119	0	77,716	268,835	1.191	0.484	1.675
2018	188,079	0	16	0	11,727	0	18,958	30,685	0.062	0.101	0.163
MA Total:	768,396	0	63	0	402,495	0	180,489	582,985	0.524	0.235	0.759

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.570	0.488	.
(14) Massachusetts Credibility:	0.210	0.300	.
(15) Countrywide Pure Premium:	0.857	0.521	1.377
(16) Countrywide Indicated Relativity:	1.021	1.191	.
(17) Countrywide Credibility:	0.400	0.350	.
(18) Countrywide Lost-Time Claims:	440.00	.	.
(19) Pure Premium Underlying Present Rate:	0.705	0.410	1.115
(20) Relativity to Underlying Present Rate:	0.863	0.976	.
(21) Credibility to Underlying Relativity:	0.390	0.350	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.865	0.905	.
(24) Balanced Formula Relativity:	0.861	0.898	0.874

IX 000110 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 41

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
3018 IRON OR STEEL: MFG: ROLLING MILL & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	185.303	1	17	1.633	110.533	10.404	53.073	175.643	0.605	0.343	0.948
2015	171.105	0	6	0	169.962	0	50.587	220.549	0.993	0.296	1.289
2016	209.784	1	31	78.227	301.957	16.606	170.843	567.634	1.812	0.894	2.706
2017	218.380	1	18	86.229	102.940	10.834	86.884	286.887	0.866	0.447	1.314
2018	228.390	3	22	148.638	205.454	76.510	106.337	536.938	1.550	0.801	2.351
MA Total:	1,012,962	6	94	314,727	890,845	114,354	467,724	1,787,650	1.190	0.575	1.765

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.296	1.193	.
(14) Massachusetts Credibility:	0.280	0.370	.
(15) Countrywide Pure Premium:	1.123	0.552	1.675
(16) Countrywide Indicated Relativity:	1.339	1.264	.
(17) Countrywide Credibility:	0.360	0.320	.
(18) Countrywide Lost-Time Claims:	455.00	.	.
(19) Pure Premium Underlying Present Rate:	1.127	0.527	1.654
(20) Relativity to Underlying Present Rate:	1.380	1.253	.
(21) Credibility to Underlying Relativity:	0.360	0.310	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.342	1.234	.
(24) Balanced Formula Relativity:	1.337	1.225	1.298

Class(es):		Effective: 7/1/2022							Manufacturing		
3022 PIPE OR TUBE MFG NOC & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	17.051	1	4	14.831	15.026	31.107	25.749	86.712	1.751	3.334	5.085
2015	18.656	0	6	0	18.569	0	13.706	32.275	0.995	0.735	1.730
2016	8.139	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	5.211	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	6.360	0	1	0	7.241	0	1.977	9.217	1.138	0.311	1.449
MA Total:	55,418	1	11	14,831	40,835	31,107	41,432	128,205	1.004	1.309	2.313

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.093	2.717	.
(14) Massachusetts Credibility:	0.100	0.140	.
(15) Countrywide Pure Premium:	1.545	0.751	2.296
(16) Countrywide Indicated Relativity:	1.842	1.719	.
(17) Countrywide Credibility:	0.450	0.430	.
(18) Countrywide Lost-Time Claims:	438.00	.	.
(19) Pure Premium Underlying Present Rate:	1.455	0.821	2.276
(20) Relativity to Underlying Present Rate:	1.781	1.954	.
(21) Credibility to Underlying Relativity:	0.450	0.430	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.740	1.960	.
(24) Balanced Formula Relativity:	1.733	1.945	1.806

IX 000111 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 42

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
3027 ROLLING MILL NOC & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,641	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	10,658	1	3	25,686	4,344	4,515	9,925	44,470	2,817	1,355	4,172
2016	9,601	0	1	0	0	0	615	615	0.000	0.064	0.064
2017	7,162	0	1	0	0	0	418	418	0.000	0.058	0.058
2018	188	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	31,251	1	5	25,686	4,344	4,515	10,958	45,502	0.961	0.495	1.456

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.046	1.028	.
(14) Massachusetts Credibility:	0.070	0.110	.
(15) Countrywide Pure Premium:	0.871	0.457	1.328
(16) Countrywide Indicated Relativity:	1.038	1.046	.
(17) Countrywide Credibility:	0.470	0.450	.
(18) Countrywide Lost-Time Claims:	389.00	.	.
(19) Pure Premium Underlying Present Rate:	1.319	0.895	2.214
(20) Relativity to Underlying Present Rate:	1.615	2.128	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.304	1.520	.
(24) Balanced Formula Relativity:	1.299	1.509	1.371

Class(es):		Effective: 7/1/2022							Manufacturing		
3028 PIPE OR TUBE MFG - IRON OR STEEL & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	5,315	0	1	0	7,317	0	8,091	15,408	1,377	1,522	2,899
2015	24,770	0	9	0	7,044	0	14,180	21,224	0.284	0.572	0.857
2016	6,253	0	5	0	7,769	0	5,162	12,931	1,242	0.825	2,068
2017	5,763	0	3	0	9,648	0	4,877	14,525	1,674	0.846	2,521
2018	5,715	0	2	0	0	0	1,062	1,062	0.000	0.186	0.186
MA Total:	47,816	0	20	0	31,778	0	33,373	65,151	0.665	0.698	1.363

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.723	1.449	.
(14) Massachusetts Credibility:	0.080	0.120	.
(15) Countrywide Pure Premium:	1.179	0.628	1.807
(16) Countrywide Indicated Relativity:	1.406	1.436	.
(17) Countrywide Credibility:	0.460	0.440	.
(18) Countrywide Lost-Time Claims:	1049.0	.	.
(19) Pure Premium Underlying Present Rate:	1.190	0.674	1.864
(20) Relativity to Underlying Present Rate:	1.458	1.603	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.375	1.511	.
(24) Balanced Formula Relativity:	1.370	1.500	1.415

IX 000112 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 43

Calculation of Class Relativities

Class(es): 3030 IRON OR STEEL: FABRICATION: IRON/STEEL WORK-SHOP-STRUCT & DR									Effective: 7/1/2022 Manufacturing		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	117.891	0	11	0	12.174	0	16.973	29.147	0.103	0.144	0.247
2015	124.152	0	25	0	208.851	0	175.928	384.779	1.682	1.417	3.099
2016	125.621	1	21	137.112	35.129	207.143	107.079	486.463	1.371	2.501	3.872
2017	120.391	1	20	16.580	436.509	28.202	145.338	626.630	3.763	1.441	5.205
2018	132.412	1	19	93.108	129.367	91.086	79.734	393.295	1.680	1.290	2.970
MA Total:	620.467	3	96	246.800	822.030	326.431	525.052	1,920.314	1.723	1.372	3.095

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.875	2.849	.
(14) Massachusetts Credibility:	0.320	0.430	.
(15) Countrywide Pure Premium:	2.143	1.104	3.247
(16) Countrywide Indicated Relativity:	2.555	2.526	.
(17) Countrywide Credibility:	0.340	0.290	.
(18) Countrywide Lost-Time Claims:	2542.0	.	.
(19) Pure Premium Underlying Present Rate:	2.612	1.285	3.897
(20) Relativity to Underlying Present Rate:	3.198	3.057	.
(21) Credibility to Underlying Relativity:	0.340	0.280	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.556	2.814	.
(24) Balanced Formula Relativity:	2.546	2.793	2.631

Class(es): 3040 IRON OR STEEL: FABRICATION: IRON WORKS-SHOP-ORNAMENTAL & DR									Effective: 7/1/2022 Manufacturing		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	184.645	1	31	222.181	92.781	24.492	48.688	388.143	1.706	0.396	2.102
2015	196.068	2	21	646.061	633.054	75.381	138.338	1,492.834	6.524	1.090	7.614
2016	217.526	2	40	679.835	121.716	86.571	164.554	1,052.675	3.685	1.154	4.839
2017	239.716	0	39	0	316.988	0	160.539	477.527	1.322	0.670	1.992
2018	253.533	1	45	386.156	890.688	127.929	377.547	1,782.320	5.036	1.994	7.030
MA Total:	1,091.488	6	176	1,934.232	2,055.228	314.372	889.667	5,193.499	3.655	1.103	4.758

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.979	2.290	.
(14) Massachusetts Credibility:	0.380	0.460	.
(15) Countrywide Pure Premium:	2.266	1.166	3.432
(16) Countrywide Indicated Relativity:	2.702	2.669	.
(17) Countrywide Credibility:	0.310	0.270	.
(18) Countrywide Lost-Time Claims:	1530.0	.	.
(19) Pure Premium Underlying Present Rate:	2.242	0.821	3.063
(20) Relativity to Underlying Present Rate:	2.745	1.954	.
(21) Credibility to Underlying Relativity:	0.310	0.270	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	3.201	2.301	.
(24) Balanced Formula Relativity:	3.188	2.285	2.877

IX 000113 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 44

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing			
3041 IRON OR STEEL: FABRICATION: IRON WORKS-SHP-DEC/ART &FNDRS,DR												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	50,510	0	4	0	0	0	2,358	2,358	0.000	0.047	0.047	
2015	40,557	0	3	0	0	0	1,262	1,262	0.000	0.031	0.031	
2016	43,286	0	2	0	4,315	0	2,494	6,809	0.100	0.058	0.157	
2017	50,813	0	6	0	931	0	5,790	6,721	0.018	0.114	0.132	
2018	55,058	0	0	0	0	0	0	0	0.000	0.000	0.000	
MA Total:	240,224	0	15	0	5,246	0	11,904	17,150	0.022	0.050	0.071	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.024	0.103	.
(14) Massachusetts Credibility:	0.160	0.220	.
(15) Countrywide Pure Premium:	1.823	0.792	2.615
(16) Countrywide Indicated Relativity:	2.174	1.813	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	204.00	.	.
(19) Pure Premium Underlying Present Rate:	1.159	0.611	1.770
(20) Relativity to Underlying Present Rate:	1.419	1.453	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.513	1.296	.
(24) Balanced Formula Relativity:	1.507	1.287	1.431

Class(es):		Effective: 7/1/2022							Manufacturing			
3042 ELEVATOR OR ESCALATOR MFG												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	6,749	0	2	0	0	0	709	709	0.000	0.105	0.105	
2015	7,198	0	2	0	0	0	1,772	1,772	0.000	0.246	0.246	
2016	7,941	0	0	0	0	0	0	0	0.000	0.000	0.000	
2017	8,752	0	2	0	0	0	2,850	2,850	0.000	0.326	0.326	
2018	14,292	0	0	0	0	0	0	0	0.000	0.000	0.000	
MA Total:	44,932	0	6	0	0	0	5,331	5,331	0.000	0.119	0.119	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.246	.
(14) Massachusetts Credibility:	0.100	0.140	.
(15) Countrywide Pure Premium:	1.739	1.018	2.757
(16) Countrywide Indicated Relativity:	2.074	2.330	.
(17) Countrywide Credibility:	0.450	0.430	.
(18) Countrywide Lost-Time Claims:	209.00	.	.
(19) Pure Premium Underlying Present Rate:	1.917	0.977	2.895
(20) Relativity to Underlying Present Rate:	2.348	2.324	.
(21) Credibility to Underlying Relativity:	0.450	0.430	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.990	2.035	.
(24) Balanced Formula Relativity:	1.982	2.021	1.995

IX 000114 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 45

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
3066 SHEET METAL WORK - SHOP											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	920.719	4	139	157.298	546.648	40.306	413.517	1.157.769	0.765	0.493	1.257
2015	950.801	3	149	173.600	489.080	47.860	354.761	1.065.301	0.697	0.423	1.120
2016	942.065	2	135	190.966	603.039	91.883	426.143	1.312.030	0.843	0.550	1.393
2017	988.826	2	130	464.615	973.393	87.468	588.543	2.114.019	1.454	0.684	2.138
2018	1.034.565	3	109	530.852	498.679	227.780	413.296	1.670.606	0.995	0.620	1.615
MA Total:	4.836.976	14	662	1,517,330	3,110,838	495,297	2,196,260	7,319,725	0.957	0.556	1.513

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.042	1.155	.
(14) Massachusetts Credibility:	0.490	0.690	.
(15) Countrywide Pure Premium:	1.435	0.749	2.184
(16) Countrywide Indicated Relativity:	1.711	1.715	.
(17) Countrywide Credibility:	0.260	0.160	.
(18) Countrywide Lost-Time Claims:	996.00	.	.
(19) Pure Premium Underlying Present Rate:	0.964	0.530	1.494
(20) Relativity to Underlying Present Rate:	1.180	1.262	.
(21) Credibility to Underlying Relativity:	0.250	0.150	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.250	1.261	.
(24) Balanced Formula Relativity:	1.245	1.251	1.248

Class(es):		Effective: 7/1/2022							Manufacturing		
3076 FIREPROOF EQUIPMENT MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	364.179	0	34	0	18.840	0	52.087	70.927	0.052	0.143	0.195
2015	281.707	4	46	357.885	236.689	136.177	106.557	837.308	2.111	0.862	2.972
2016	270.095	0	27	0	193.665	0	89.495	283.160	0.717	0.331	1.048
2017	291.169	2	31	73.578	17.841	17.955	39.527	148.900	0.314	0.197	0.511
2018	311.984	2	45	116.153	254.123	42.494	190.496	603.267	1.187	0.747	1.934
MA Total:	1,519.134	8	183	547.616	721.159	196.626	478.161	1,943.562	0.835	0.444	1.279

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.909	0.922	.
(14) Massachusetts Credibility:	0.300	0.410	.
(15) Countrywide Pure Premium:	1.239	0.694	1.933
(16) Countrywide Indicated Relativity:	1.478	1.587	.
(17) Countrywide Credibility:	0.350	0.300	.
(18) Countrywide Lost-Time Claims:	8741.0	.	.
(19) Pure Premium Underlying Present Rate:	0.912	0.442	1.353
(20) Relativity to Underlying Present Rate:	1.116	1.051	.
(21) Credibility to Underlying Relativity:	0.350	0.290	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.181	1.159	.
(24) Balanced Formula Relativity:	1.176	1.150	1.167

IX 000115 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 46

Calculation of Class Relativities

Class(es): 3081 FOUNDRY-FERROUS-NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	18,779	2	4	136,537	49	47,005	3,127	186,718	7,273	2,670	9,943
2015	15,003	0	4	0	6,474	0	34,478	40,951	0,431	2,298	2,730
2016	16,294	0	2	0	0	0	399	399	0,000	0,024	0,024
2017	19,902	1	4	12,145	1,324	7,045	3,268	23,782	0,677	0,518	1,195
2018	18,143	0	5	0	72,607	0	35,570	108,177	4,002	1,961	5,962
MA Total:	88,121	3	19	148,682	80,454	54,050	76,841	360,027	2,600	1,485	4,086

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.831	3.083	.
(14) Massachusetts Credibility:	0.130	0.200	.
(15) Countrywide Pure Premium:	2.058	0.979	3.038
(16) Countrywide Indicated Relativity:	2.455	2.241	.
(17) Countrywide Credibility:	0.440	0.400	.
(18) Countrywide Lost-Time Claims:	1837.0	.	.
(19) Pure Premium Underlying Present Rate:	1.917	1.320	3.237
(20) Relativity to Underlying Present Rate:	2.347	3.140	.
(21) Credibility to Underlying Relativity:	0.430	0.400	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.457	2.769	.
(24) Balanced Formula Relativity:	2.448	2.749	2.551

Class(es): 3085 FOUNDRY-NON FERROUS		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	116,847	0	23	0	130,857	0	58,296	189,153	1,120	0,499	1,619
2015	112,511	2	10	477,006	183,071	243,121	53,312	956,509	5,867	2,635	8,501
2016	109,493	0	18	0	14,681	0	38,705	53,386	0,134	0,353	0,488
2017	134,230	0	31	0	199,757	0	106,033	305,790	1,488	0,790	2,278
2018	120,913	0	32	0	583,519	0	374,574	958,093	4,826	3,098	7,924
MA Total:	593,995	2	114	477,006	1,111,884	243,121	630,920	2,462,931	2,675	1,471	4,146

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.912	3.054	.
(14) Massachusetts Credibility:	0.280	0.380	.
(15) Countrywide Pure Premium:	1.741	1.042	2.783
(16) Countrywide Indicated Relativity:	2.077	2.383	.
(17) Countrywide Credibility:	0.360	0.310	.
(18) Countrywide Lost-Time Claims:	858.00	.	.
(19) Pure Premium Underlying Present Rate:	1.971	0.959	2.930
(20) Relativity to Underlying Present Rate:	2.414	2.281	.
(21) Credibility to Underlying Relativity:	0.360	0.310	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.432	2.607	.
(24) Balanced Formula Relativity:	2.423	2.587	2.479

IX 000116 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 47

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
3110 FORGING WORK - DROP OR MACHINE											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	14,155	0	5	0	25,856	0	10,417	36,273	1,827	0,736	2,563
2015	11,186	0	6	0	469,530	0	95,262	564,792	41,976	8,516	50,493
2016	20,193	1	12	147,661	151,150	33,600	65,801	398,212	14,798	4,923	19,721
2017	17,397	0	9	0	114,790	0	42,251	157,040	6,598	2,429	9,027
2018	15,634	1	3	63,511	2,264	17,366	3,796	86,938	4,207	1,354	5,561
MA Total:	78,564	2	35	211,172	763,590	50,966	217,528	1,243,256	12,407	3,418	15,825

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	13.506	7.094	.
(14) Massachusetts Credibility:	0.160	0.220	.
(15) Countrywide Pure Premium:	2.057	0.960	3.017
(16) Countrywide Indicated Relativity:	2.453	2.196	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	398.00	.	.
(19) Pure Premium Underlying Present Rate:	3.411	1.847	5.258
(20) Relativity to Underlying Present Rate:	4.177	4.393	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	4.946	4.130	.
(24) Balanced Formula Relativity:	4.927	4.100	4.642

Class(es):		Effective: 7/1/2022							Manufacturing		
3111 BLACKSMITH											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	66,537	2	12	146,609	13,842	29,285	18,380	208,116	2,411	0,716	3,128
2015	71,625	0	9	0	6,657	0	31,717	38,374	0,093	0,443	0,536
2016	79,120	0	7	0	6,511	0	24,678	31,189	0,082	0,312	0,394
2017	81,346	0	7	0	134,700	0	40,454	175,154	1,656	0,497	2,153
2018	130,223	0	16	0	160,258	0	106,918	267,176	1,231	0,821	2,052
MA Total:	428,852	2	51	146,609	321,967	29,285	222,148	720,009	1,093	0,586	1,679

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.189	1.217	.
(14) Massachusetts Credibility:	0.170	0.230	.
(15) Countrywide Pure Premium:	1.066	0.432	1.499
(16) Countrywide Indicated Relativity:	1.271	0.990	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	225.00	.	.
(19) Pure Premium Underlying Present Rate:	0.821	0.397	1.218
(20) Relativity to Underlying Present Rate:	1.005	0.944	.
(21) Credibility to Underlying Relativity:	0.410	0.380	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.148	1.025	.
(24) Balanced Formula Relativity:	1.144	1.017	1.100

IX 000117 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 48

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
3113 TOOL MFG-NOT DROP OR MACHINE FORGED-NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	848.311	5	65	636.037	133.127	127.822	160.472	1,057.458	0.907	0.340	1.247
2015	882.440	5	69	625.730	578.973	227.768	363.920	1,796.392	1.365	0.671	2.036
2016	805.080	1	87	78.901	365.006	19.771	211.973	675.650	0.551	0.288	0.839
2017	751.772	2	65	104.683	512.602	73.368	349.124	1,039.776	0.821	0.562	1.383
2018	754.877	2	66	283.947	289.061	169.350	241.157	983.515	0.759	0.544	1.303
MA Total:	4,042.480	15	352	1,729,299	1,878,769	618,079	1,326,645	5,552,791	0.893	0.481	1.374

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.972	0.999	.
(14) Massachusetts Credibility:	0.390	0.550	.
(15) Countrywide Pure Premium:	0.720	0.379	1.099
(16) Countrywide Indicated Relativity:	0.858	0.868	.
(17) Countrywide Credibility:	0.310	0.230	.
(18) Countrywide Lost-Time Claims:	1539.0	.	.
(19) Pure Premium Underlying Present Rate:	0.675	0.359	1.033
(20) Relativity to Underlying Present Rate:	0.826	0.854	.
(21) Credibility to Underlying Relativity:	0.300	0.220	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.893	0.937	.
(24) Balanced Formula Relativity:	0.889	0.930	0.903

Class(es):		Effective: 7/1/2022							Manufacturing		
3114 TOOL MFG-DROP OR MACHINE FORGED-NOC: MACHINING OR FINISHING											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	34.349	1	7	15.204	126.950	18.299	46.957	207.409	4.139	1.900	6.038
2015	38.343	0	13	0	3.235	0	11.588	14.823	0.084	0.302	0.387
2016	41.619	1	9	77.416	314	9.869	6.085	93.684	1.868	0.383	2.251
2017	30.261	0	9	0	1.049	0	7.315	8.364	0.035	0.242	0.276
2018	51.565	0	12	0	14.030	0	14.658	28.687	0.272	0.284	0.556
MA Total:	196.137	2	50	92.621	145.578	28.167	86.603	352.968	1.214	0.585	1.800

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.322	1.215	.
(14) Massachusetts Credibility:	0.160	0.210	.
(15) Countrywide Pure Premium:	1.298	0.609	1.908
(16) Countrywide Indicated Relativity:	1.548	1.394	.
(17) Countrywide Credibility:	0.420	0.400	.
(18) Countrywide Lost-Time Claims:	256.00	.	.
(19) Pure Premium Underlying Present Rate:	1.360	0.686	2.045
(20) Relativity to Underlying Present Rate:	1.665	1.631	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.561	1.449	.
(24) Balanced Formula Relativity:	1.555	1.438	1.515

IX 000118 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 49

Calculation of Class Relativities

Class(es): 3118 SAW MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	329.012	1	20	366.533	281.262	39.512	67.761	755.068	1.969	0.326	2.295
2015	332.270	0	15	0	245.162	0	192.430	437.592	0.738	0.579	1.317
2016	261.973	0	17	0	60.320	0	56.513	116.833	0.230	0.216	0.446
2017	90.032	0	9	0	75.018	0	118.348	193.367	0.833	1.315	2.148
2018	68.594	0	3	0	16.035	0	4.778	20.814	0.234	0.070	0.303
MA Total:	1,081,881	1	64	366,533	677,797	39,512	439,831	1,523,673	0.965	0.443	1.408

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.051	0.920	.
(14) Massachusetts Credibility:	0.240	0.310	.
(15) Countrywide Pure Premium:	0.592	0.337	0.929
(16) Countrywide Indicated Relativity:	0.706	0.770	.
(17) Countrywide Credibility:	0.380	0.350	.
(18) Countrywide Lost-Time Claims:	113.00	.	.
(19) Pure Premium Underlying Present Rate:	0.763	0.317	1.080
(20) Relativity to Underlying Present Rate:	0.934	0.754	.
(21) Credibility to Underlying Relativity:	0.380	0.340	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.875	0.811	.
(24) Balanced Formula Relativity:	0.872	0.805	0.849

Class(es): 3119 NEEDLE MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	57.363	1	7	44.972	3.367	12.587	12.260	73.187	0.843	0.433	1.276
2015	65.239	1	6	62.418	0	11.031	3.089	76.538	0.957	0.216	1.173
2016	57.898	0	6	0	53.867	0	45.610	99.478	0.930	0.788	1.718
2017	58.683	0	2	0	0	0	7.357	0.000	0.125	0.125	
2018	65.473	1	4	137.365	9.642	31.734	12.932	191.673	2.245	0.682	2.928
MA Total:	304,656	3	25	244,755	66,876	55,353	81,248	448,233	1.023	0.448	1.471

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.113	0.931	.
(14) Massachusetts Credibility:	0.100	0.150	.
(15) Countrywide Pure Premium:	0.799	0.325	1.124
(16) Countrywide Indicated Relativity:	0.952	0.744	.
(17) Countrywide Credibility:	0.180	0.190	.
(18) Countrywide Lost-Time Claims:	16.000	.	.
(19) Pure Premium Underlying Present Rate:	0.302	0.193	0.495
(20) Relativity to Underlying Present Rate:	0.370	0.460	.
(21) Credibility to Underlying Relativity:	0.720	0.660	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.549	0.585	.
(24) Balanced Formula Relativity:	0.547	0.580	0.558

IX 000119 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 50

Calculation of Class Relativities

Class(es): 3120 RAZOR MFG-SAFETY		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6,869	1	0	7,649	0	5,765	0	13,414	1,114	0,839	1,953
2015	34,123	1	1	11,439	0	369	2,133	13,941	0,335	0,073	0,409
2016	53,954	1	1	30,908	2,486	3,401	585	37,380	0,619	0,074	0,693
2017	60,462	1	4	13,743	44,698	5,587	14,382	78,410	0,967	0,330	1,297
2018	30,728	0	0	0	0	0	0	0	0,000	0,000	0,000
MA Total:	186,137	4	6	63,740	47,184	15,122	17,100	143,145	0,596	0,173	0,769

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.649	0.359	.
(14) Massachusetts Credibility:	0.110	0.140	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.709	0.586	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.586	0.249	0.836
(20) Relativity to Underlying Present Rate:	0.718	0.593	.
(21) Credibility to Underlying Relativity:	0.890	0.860	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.710	0.560	.
(24) Balanced Formula Relativity:	0.708	0.556	0.656

Class(es): 3122 CUTLERY MFG-NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	111,219	1	24	137,100	87,512	20,078	58,960	303,650	2,020	0,711	2,730
2015	122,922	1	39	98,596	53,690	3,687	49,419	205,392	1,239	0,432	1,671
2016	126,037	0	46	0	291,710	0	116,368	408,078	2,314	0,923	3,238
2017	127,683	0	39	0	13,770	0	35,813	49,584	0,108	0,280	0,388
2018	119,055	1	37	30,957	18,467	12,256	35,953	97,633	0,415	0,405	0,820
MA Total:	606,915	3	185	266,653	465,149	36,022	296,513	1,064,336	1,206	0,548	1,754

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.313	1.137	.
(14) Massachusetts Credibility:	0.210	0.310	.
(15) Countrywide Pure Premium:	0.954	0.549	1.503
(16) Countrywide Indicated Relativity:	1.137	1.257	.
(17) Countrywide Credibility:	0.400	0.350	.
(18) Countrywide Lost-Time Claims:	113.00	.	.
(19) Pure Premium Underlying Present Rate:	0.949	0.558	1.507
(20) Relativity to Underlying Present Rate:	1.162	1.328	.
(21) Credibility to Underlying Relativity:	0.390	0.340	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.184	1.244	.
(24) Balanced Formula Relativity:	1.179	1.235	1.198

IX 000120 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 51

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
3127 PRECISION MEASURING TOOL MFG-NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,665	0	1	0	93,028	0	22,436	115,465	55,888	13,479	69,366
2015	2,614	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	1,749	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	1,642	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	4,287	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	11,957	0	1	0	93,028	0	22,436	115,465	7,780	1,876	9,657

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	8.470	3.895	.
(14) Massachusetts Credibility:	0.040	0.060	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.939	0.976	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.776	0.416	1.192
(20) Relativity to Underlying Present Rate:	0.951	0.988	.
(21) Credibility to Underlying Relativity:	0.960	0.940	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.251	1.163	.
(24) Balanced Formula Relativity:	1.247	1.154	1.215

Class(es):		Effective: 7/1/2022							Manufacturing		
3131 BUTTON OR FASTENER MFG-METAL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	7,090	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	7,968	0	1	0	0	0	1,793	1,793	0.000	0.225	0.225
2016	8,520	0	1	0	0	0	219	219	0.000	0.026	0.026
2017	9,894	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	7,903	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	41,374	0	2	0	0	0	2,012	2,012	0.000	0.049	0.049

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.101	.
(14) Massachusetts Credibility:	0.060	0.090	.
(15) Countrywide Pure Premium:	0.511	0.401	0.912
(16) Countrywide Indicated Relativity:	0.610	0.917	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	265.00	.	.
(19) Pure Premium Underlying Present Rate:	0.583	0.337	0.920
(20) Relativity to Underlying Present Rate:	0.714	0.801	.
(21) Credibility to Underlying Relativity:	0.470	0.450	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.622	0.792	.
(24) Balanced Formula Relativity:	0.620	0.786	0.677

IX 000121 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 52

Calculation of Class Relativities

Class(es): 3132 NUT OR BOLT MFG		Effective: 7/1/2022							Manufacturing		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	10,358	0	4	0	75,669	0	27,730	103,399	7,305	2,677	9,983
2015	13,189	0	2	0	1,296	0	8,978	10,275	0,098	0,681	0,779
2016	15,158	0	2	0	0	0	2,453	2,453	0,000	0,162	0,162
2017	15,421	0	1	0	0	0	962	962	0,000	0,062	0,062
2018	28,384	0	7	0	17,722	0	17,886	35,609	0,624	0,630	1,255
MA Total:	82,511	0	16	0	94,688	0	58,010	152,697	1,148	0,703	1,851

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.249	1.459	.
(14) Massachusetts Credibility:	0.100	0.150	.
(15) Countrywide Pure Premium:	0.880	0.558	1.437
(16) Countrywide Indicated Relativity:	1.049	1.276	.
(17) Countrywide Credibility:	0.450	0.430	.
(18) Countrywide Lost-Time Claims:	302.00	.	.
(19) Pure Premium Underlying Present Rate:	1.049	0.621	1.670
(20) Relativity to Underlying Present Rate:	1.284	1.477	.
(21) Credibility to Underlying Relativity:	0.450	0.420	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.175	1.388	.
(24) Balanced Formula Relativity:	1.170	1.378	1.242

Class(es): 3145 SCREW MFG		Effective: 7/1/2022							Manufacturing		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	199,751	0	15	0	117,918	0	26,603	144,522	0,590	0,133	0,724
2015	205,780	1	25	207,029	35,000	14,285	56,176	312,490	1,176	0,342	1,519
2016	205,318	1	18	170,435	34,437	134,160	57,464	396,495	0,998	0,933	1,931
2017	344,237	0	15	0	127,258	0	114,425	241,683	0,370	0,332	0,702
2018	221,442	0	12	0	3,588	0	13,533	17,120	0,016	0,061	0,077
MA Total:	1,176,527	2	85	377,464	318,200	148,445	268,202	1,112,310	0,591	0,354	0,945

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.644	0.735	.
(14) Massachusetts Credibility:	0.250	0.330	.
(15) Countrywide Pure Premium:	0.808	0.460	1.268
(16) Countrywide Indicated Relativity:	0.964	1.052	.
(17) Countrywide Credibility:	0.380	0.340	.
(18) Countrywide Lost-Time Claims:	550.00	.	.
(19) Pure Premium Underlying Present Rate:	0.715	0.348	1.063
(20) Relativity to Underlying Present Rate:	0.876	0.828	.
(21) Credibility to Underlying Relativity:	0.370	0.330	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.851	0.874	.
(24) Balanced Formula Relativity:	0.848	0.867	0.855

IX 000122 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 53

Calculation of Class Relativities

Class(es): 3146 HARDWARE MFG-NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	105,273	0	11	0	214,297	0	26,152	240,449	2,036	0,248	2,284
2015	86,768	1	12	7,312	35,189	16,573	107,826	166,900	0,490	1,434	1,924
2016	89,198	1	11	53,563	691	48,162	9,771	112,187	0,608	0,649	1,258
2017	91,785	0	17	0	12,205	0	24,029	36,234	0,133	0,262	0,395
2018	91,813	0	14	0	4,023	0	15,837	19,860	0,044	0,172	0,216
MA Total:	464,838	2	65	60,875	266,405	64,735	183,614	575,629	0,704	0,534	1,238

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.766	1.109	.
(14) Massachusetts Credibility:	0.190	0.270	.
(15) Countrywide Pure Premium:	0.993	0.549	1.542
(16) Countrywide Indicated Relativity:	1.185	1.256	.
(17) Countrywide Credibility:	0.410	0.370	.
(18) Countrywide Lost-Time Claims:	1612.0	.	.
(19) Pure Premium Underlying Present Rate:	0.926	0.529	1.454
(20) Relativity to Underlying Present Rate:	1.133	1.257	.
(21) Credibility to Underlying Relativity:	0.400	0.360	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.085	1.217	.
(24) Balanced Formula Relativity:	1.080	1.208	1.124

Class(es): 3169 STOVE MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	437,178	1	51	35,169	234,170	15,476	511,506	796,321	0,616	1,205	1,822
2015	415,233	3	50	289,372	468,948	310,476	289,846	1,358,642	1,826	1,446	3,272
2016	420,303	0	52	0	451,713	0	458,911	910,624	1,075	1,092	2,167
2017	451,102	0	59	0	139,523	0	158,599	298,122	0,309	0,352	0,661
2018	503,174	0	62	0	390,559	0	197,813	588,372	0,776	0,393	1,169
MA Total:	2,226,990	4	274	324,541	1,684,913	325,952	1,616,676	3,952,081	0,902	0,872	1,775

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.982	1.811	.
(14) Massachusetts Credibility:	0.370	0.580	.
(15) Countrywide Pure Premium:	1.182	0.685	1.866
(16) Countrywide Indicated Relativity:	1.409	1.567	.
(17) Countrywide Credibility:	0.320	0.210	.
(18) Countrywide Lost-Time Claims:	6691.0	.	.
(19) Pure Premium Underlying Present Rate:	1.021	0.748	1.769
(20) Relativity to Underlying Present Rate:	1.251	1.778	.
(21) Credibility to Underlying Relativity:	0.310	0.210	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.202	1.753	.
(24) Balanced Formula Relativity:	1.197	1.740	1.384

IX 000123 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 54

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
3179 ELECTRICAL APPARATUS MFG-NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,236,577	3	85	244,157	84,288	47,698	83,564	459,706	0.266	0.106	0.372
2015	1,369,620	0	75	0	513,464	0	291,305	804,769	0.375	0.213	0.588
2016	1,330,715	1	82	24,454	519,376	43,139	336,212	923,180	0.409	0.285	0.694
2017	1,545,662	1	92	8,518	1,096,161	84,350	305,436	1,494,465	0.715	0.252	0.967
2018	1,906,198	3	76	127,615	207,961	126,026	159,043	620,644	0.176	0.150	0.326
MA Total:	7,388,773	8	410	404,744	2,421,250	301,212	1,175,559	4,302,765	0.382	0.200	0.582

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.416	0.415	.
(14) Massachusetts Credibility:	0.450	0.590	.
(15) Countrywide Pure Premium:	0.761	0.383	1.144
(16) Countrywide Indicated Relativity:	0.907	0.876	.
(17) Countrywide Credibility:	0.280	0.210	.
(18) Countrywide Lost-Time Claims:	3821.0	.	.
(19) Pure Premium Underlying Present Rate:	0.524	0.227	0.751
(20) Relativity to Underlying Present Rate:	0.641	0.541	.
(21) Credibility to Underlying Relativity:	0.270	0.200	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.614	0.537	.
(24) Balanced Formula Relativity:	0.612	0.533	0.585

Class(es):		Effective: 7/1/2022							Manufacturing		
3180 ELECTRIC OR GAS LIGHTING FIXTURES MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	120,495	0	30	0	112,125	0	57,803	169,928	0.931	0.480	1.410
2015	118,871	2	23	564,298	82,729	95,861	43,790	786,678	5.443	1.175	6.618
2016	124,574	1	19	29,679	4,399	7,319	14,091	55,488	0.274	0.172	0.445
2017	130,353	0	25	0	236,838	0	100,103	336,941	1.817	0.768	2.585
2018	121,517	1	17	80,934	404,664	23,500	50,123	559,222	3.996	0.606	4.602
MA Total:	615,810	4	114	674,911	840,756	126,680	265,911	1,908,258	2.461	0.638	3.099

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.679	1.323	.
(14) Massachusetts Credibility:	0.220	0.290	.
(15) Countrywide Pure Premium:	0.680	0.480	1.160
(16) Countrywide Indicated Relativity:	0.811	1.097	.
(17) Countrywide Credibility:	0.390	0.360	.
(18) Countrywide Lost-Time Claims:	332.00	.	.
(19) Pure Premium Underlying Present Rate:	0.996	0.470	1.465
(20) Relativity to Underlying Present Rate:	1.219	1.117	.
(21) Credibility to Underlying Relativity:	0.390	0.350	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.381	1.170	.
(24) Balanced Formula Relativity:	1.376	1.161	1.302

IX 000124 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 55

Calculation of Class Relativities

Class(es): 3188 PLUMBERS SUPPLIES MFG-NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	22,598	0	7	0	17,686	0	9,104	26,791	0.783	0.403	1.186
2015	21,597	0	5	0	253,480	0	58,688	312,169	11.737	2.717	14.454
2016	22,318	0	5	0	0	0	3,807	3,807	0.000	0.171	0.171
2017	21,811	0	4	0	8,034	0	13,137	21,171	0.368	0.602	0.971
2018	26,987	0	1	0	0	0	640	640	0.000	0.024	0.024
MA Total:	115,310	0	22	0	279,201	0	85,376	364,577	2.421	0.740	3.162

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.636	1.537	.
(14) Massachusetts Credibility:	0.110	0.150	.
(15) Countrywide Pure Premium:	0.830	0.489	1.319
(16) Countrywide Indicated Relativity:	0.990	1.118	.
(17) Countrywide Credibility:	0.450	0.430	.
(18) Countrywide Lost-Time Claims:	392.00	.	.
(19) Pure Premium Underlying Present Rate:	1.037	0.512	1.548
(20) Relativity to Underlying Present Rate:	1.270	1.217	.
(21) Credibility to Underlying Relativity:	0.440	0.420	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.294	1.222	.
(24) Balanced Formula Relativity:	1.289	1.213	1.263

Class(es): 3200 ARMS MFG-SMALL		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	69,092	1	13	47,520	45,628	7,602	28,721	129,470	1.348	0.526	1.874
2015	69,171	0	7	0	83,792	0	20,760	104,552	1.211	0.300	1.511
2016	106,226	0	9	0	105,176	0	108,348	213,525	0.990	1.020	2.010
2017	58,551	0	7	0	151,915	0	34,680	186,595	2.595	0.592	3.187
2018	20,249	0	6	0	13,504	0	27,914	41,418	0.667	1.379	2.045
MA Total:	323,290	1	42	47,520	400,015	7,602	220,423	675,560	1.384	0.705	2.090

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.507	1.464	.
(14) Massachusetts Credibility:	0.160	0.220	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.054	1.076	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.871	0.458	1.329
(20) Relativity to Underlying Present Rate:	1.067	1.089	.
(21) Credibility to Underlying Relativity:	0.840	0.780	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.137	1.172	.
(24) Balanced Formula Relativity:	1.133	1.163	1.143

IX 000125 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 56

Calculation of Class Relativities

Class(es): 3220 CAN MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	100.269	2	12	249.607	7.714	362.621	10.325	630.267	2.566	3.719	6.286
2015	98.802	1	10	446.517	0	33.311	14.992	494.820	4.519	0.489	5.008
2016	66.719	0	8	0	11.943	0	20.946	32.889	0.179	0.314	0.493
2017	101.274	0	5	0	173.727	0	40.667	214.394	1.715	0.402	2.117
2018	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	367.064	3	35	696.124	193.385	395.932	86.929	1,372.370	2.423	1.315	3.739

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.638	2.731	.
(14) Massachusetts Credibility:	0.200	0.270	.
(15) Countrywide Pure Premium:	0.762	0.343	1.104
(16) Countrywide Indicated Relativity:	0.908	0.784	.
(17) Countrywide Credibility:	0.400	0.370	.
(18) Countrywide Lost-Time Claims:	290.00	.	.
(19) Pure Premium Underlying Present Rate:	1.300	0.645	1.944
(20) Relativity to Underlying Present Rate:	1.592	1.534	.
(21) Credibility to Underlying Relativity:	0.400	0.360	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.527	1.580	.
(24) Balanced Formula Relativity:	1.522	1.568	1.538

Class(es): 3255 WIRE CLOTH MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1.620	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	1.937	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	968	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	1.331	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	1.155	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	7.011	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.030	0.050	.
(15) Countrywide Pure Premium:	0.887	0.524	1.411
(16) Countrywide Indicated Relativity:	1.058	1.199	.
(17) Countrywide Credibility:	0.230	0.250	.
(18) Countrywide Lost-Time Claims:	30.000	.	.
(19) Pure Premium Underlying Present Rate:	0.845	0.433	1.278
(20) Relativity to Underlying Present Rate:	1.035	1.029	.
(21) Credibility to Underlying Relativity:	0.740	0.700	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.009	1.020	.
(24) Balanced Formula Relativity:	1.006	1.012	1.008

IX 000126 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 57

Calculation of Class Relativities

Class(es): 3257 WIRE GOODS MFG - NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	210.922	1	44	29.168	140.953	5.096	83.667	258.884	0.807	0.421	1.227
2015	217.374	0	61	0	221.116	0	155.236	376.353	1.017	0.714	1.731
2016	239.664	2	48	648.572	15.371	226.828	36.545	927.316	2.770	1.099	3.869
2017	251.847	0	62	0	122.542	0	90.630	213.172	0.487	0.360	0.846
2018	264.351	0	28	0	174.931	0	454.882	629.813	0.662	1.721	2.382
MA Total:	1,184,157	3	243	677,740	674,913	231,924	820,961	2,405,538	1.142	0.889	2.031

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.243	1.846	.
(14) Massachusetts Credibility:	0.280	0.390	.
(15) Countrywide Pure Premium:	1.003	0.565	1.569
(16) Countrywide Indicated Relativity:	1.197	1.293	.
(17) Countrywide Credibility:	0.360	0.310	.
(18) Countrywide Lost-Time Claims:	939.00	.	.
(19) Pure Premium Underlying Present Rate:	0.940	0.516	1.456
(20) Relativity to Underlying Present Rate:	1.151	1.227	.
(21) Credibility to Underlying Relativity:	0.360	0.300	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.193	1.489	.
(24) Balanced Formula Relativity:	1.189	1.478	1.288

Class(es): 3270 EYELET MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6.237	0	1	0	0	0	544	544	0.000	0.087	0.087
2015	6.211	0	1	0	0	0	53	53	0.000	0.009	0.009
2016	6.087	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	5.750	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	9.623	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	33.908	0	2	0	0	0	598	598	0.000	0.018	0.018

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.037	.
(14) Massachusetts Credibility:	0.070	0.090	.
(15) Countrywide Pure Premium:	1.024	0.612	1.637
(16) Countrywide Indicated Relativity:	1.222	1.401	.
(17) Countrywide Credibility:	0.440	0.460	.
(18) Countrywide Lost-Time Claims:	149.00	.	.
(19) Pure Premium Underlying Present Rate:	1.024	0.499	1.523
(20) Relativity to Underlying Present Rate:	1.254	1.186	.
(21) Credibility to Underlying Relativity:	0.490	0.450	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.152	1.181	.
(24) Balanced Formula Relativity:	1.148	1.173	1.156

IX 000127 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 58

Calculation of Class Relativities

Class(es): 3300 BED SPRING OR WIRE MATTRESS MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	113	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	4,863	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	286	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	1,538	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	6,801	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.040	0.060	.
(15) Countrywide Pure Premium:	1.281	1.125	2.406
(16) Countrywide Indicated Relativity:	1.528	2.574	.
(17) Countrywide Credibility:	0.480	0.470	.
(18) Countrywide Lost-Time Claims:	369.00	.	.
(19) Pure Premium Underlying Present Rate:	1.206	0.847	2.053
(20) Relativity to Underlying Present Rate:	1.477	2.015	.
(21) Credibility to Underlying Relativity:	0.480	0.470	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.442	2.156	.
(24) Balanced Formula Relativity:	1.437	2.141	1.679

Class(es): 3315 BRASS OR COPPER GOODS MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	199,184	0	36	0	46,621	0	42,814	89,435	0.234	0.215	0.449
2015	212,728	0	47	0	149,993	0	187,697	337,690	0.705	0.882	1.587
2016	197,543	0	38	0	315,735	0	259,136	574,871	1.598	1.312	2.910
2017	217,137	0	34	0	560,538	0	244,343	804,881	2.581	1.125	3.707
2018	207,391	0	24	0	254,695	0	109,033	363,728	1.228	0.526	1.754
MA Total:	1,033,984	0	179	0	1,327,582	0	843,024	2,170,606	1.284	0.815	2.099

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.398	1.692	.
(14) Massachusetts Credibility:	0.290	0.400	.
(15) Countrywide Pure Premium:	1.562	0.548	2.111
(16) Countrywide Indicated Relativity:	1.863	1.255	.
(17) Countrywide Credibility:	0.360	0.300	.
(18) Countrywide Lost-Time Claims:	153.00	.	.
(19) Pure Premium Underlying Present Rate:	1.243	0.622	1.866
(20) Relativity to Underlying Present Rate:	1.522	1.480	.
(21) Credibility to Underlying Relativity:	0.350	0.300	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.609	1.498	.
(24) Balanced Formula Relativity:	1.603	1.487	1.563

IX 000128 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 59

Calculation of Class Relativities

Class(es): 3336 TYPE FOUNDRY		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	9,353	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	5,644	0	2	0	1,658	0	1,061	2,718	0.294	0.188	0.482
2016	4,317	0	4	0	696	0	2,106	2,802	0.161	0.488	0.649
2017	4,022	0	1	0	0	0	225	225	0.000	0.056	0.056
2018	6,990	0	5	0	28,303	0	7,194	35,497	4.049	1.029	5.078
MA Total:	30,326	0	12	0	30,657	0	10,586	41,242	1.011	0.349	1.360

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.100	0.725	.
(14) Massachusetts Credibility:	0.070	0.090	.
(15) Countrywide Pure Premium:	1.179	0.542	1.722
(16) Countrywide Indicated Relativity:	1.406	1.241	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	302.00	.	.
(19) Pure Premium Underlying Present Rate:	1.415	0.569	1.984
(20) Relativity to Underlying Present Rate:	1.733	1.354	.
(21) Credibility to Underlying Relativity:	0.460	0.450	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.535	1.246	.
(24) Balanced Formula Relativity:	1.529	1.236	1.428

Class(es): 3365 WELDING OR CUTTING - NOC & DRIVERS		Effective: 7/1/2022							Construction		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	139,860	2	31	12,815	40,950	9,037	84,494	147,297	0.384	0.669	1.053
2015	151,786	1	23	43,837	366,435	3,260	264,181	677,712	2.703	1.762	4.465
2016	157,538	0	28	0	143,633	0	166,300	309,933	0.912	1.056	1.967
2017	162,454	0	19	0	376,984	0	208,380	585,364	2.321	1.283	3.603
2018	140,942	1	20	53,517	300,710	49,276	457,801	861,304	2.513	3.598	6.111
MA Total:	752,579	4	121	110,169	1,228,712	61,573	1,181,156	2,581,610	1.779	1.651	3.430

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.733	1.477	.
(14) Massachusetts Credibility:	0.320	0.440	.
(15) Countrywide Pure Premium:	2.137	0.942	3.078
(16) Countrywide Indicated Relativity:	0.894	0.865	.
(17) Countrywide Credibility:	0.340	0.280	.
(18) Countrywide Lost-Time Claims:	954.00	.	.
(19) Pure Premium Underlying Present Rate:	2.187	1.092	3.279
(20) Relativity to Underlying Present Rate:	0.999	1.122	.
(21) Credibility to Underlying Relativity:	0.340	0.280	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.878	1.206	.
(24) Balanced Formula Relativity:	0.886	1.206	0.987

IX 000129 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 60

Calculation of Class Relativities

Class(es): 3372 ELECTROPLATING		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	542.333	0	76	0	421.487	0	190.186	611.674	0.777	0.351	1.128
2015	562.107	2	47	85.137	260.893	29.552	110.685	486.267	0.616	0.249	0.865
2016	570.001	1	49	32.286	572.556	2.266	253.867	860.975	1.061	0.449	1.510
2017	586.890	2	54	118.190	182.762	116.568	154.297	571.817	0.513	0.462	0.974
2018	608.214	5	71	460.313	376.485	198.525	263.783	1,299.106	1.376	0.760	2.136
MA Total:	2,869,546	10	297	695,926	1,814,183	346,912	972,818	3,829,838	0.875	0.460	1.335

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.952	0.955	.
(14) Massachusetts Credibility:	0.380	0.540	.
(15) Countrywide Pure Premium:	1.148	0.652	1.799
(16) Countrywide Indicated Relativity:	1.369	1.491	.
(17) Countrywide Credibility:	0.310	0.230	.
(18) Countrywide Lost-Time Claims:	970.00	.	.
(19) Pure Premium Underlying Present Rate:	0.857	0.468	1.325
(20) Relativity to Underlying Present Rate:	1.050	1.113	.
(21) Credibility to Underlying Relativity:	0.310	0.230	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.111	1.115	.
(24) Balanced Formula Relativity:	1.107	1.106	1.107

Class(es): 3373 GALVANIZING OR TINNING - NOT ELECTROLYTIC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	9.304	1	0	156.978	0	18.256	0	175.234	16.872	1.962	18.834
2015	7.823	0	2	0	0	0	736	736	0.000	0.094	0.094
2016	8.421	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	7.270	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	9.883	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	42.701	1	2	156,978	0	18,256	736	175,970	3.676	0.445	4.121

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.002	0.923	.
(14) Massachusetts Credibility:	0.090	0.110	.
(15) Countrywide Pure Premium:	1.439	0.803	2.242
(16) Countrywide Indicated Relativity:	1.716	1.838	.
(17) Countrywide Credibility:	0.440	0.450	.
(18) Countrywide Lost-Time Claims:	151.00	.	.
(19) Pure Premium Underlying Present Rate:	1.716	0.665	2.381
(20) Relativity to Underlying Present Rate:	2.102	1.581	.
(21) Credibility to Underlying Relativity:	0.470	0.440	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.103	1.624	.
(24) Balanced Formula Relativity:	2.095	1.613	1.929

IX 000130 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 61

Calculation of Class Relativities

Class(es): 3381 SILVERWARE MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	8,487	0	2	0	0	0	1,201	1,201	0.000	0.141	0.141
2015	8,683	0	2	0	0	0	1,518	1,518	0.000	0.175	0.175
2016	7,946	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	7,161	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	7,276	0	1	0	0	0	163	163	0.000	0.022	0.022
MA Total:	39,554	0	5	0	0	0	2,882	2,882	0.000	0.073	0.073

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.151	.
(14) Massachusetts Credibility:	0.070	0.090	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.082	1.008	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.895	0.429	1.324
(20) Relativity to Underlying Present Rate:	1.095	1.021	.
(21) Credibility to Underlying Relativity:	0.930	0.910	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.019	0.942	.
(24) Balanced Formula Relativity:	1.015	0.935	0.987

Class(es): 3383 JEWELRY MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	601,130	4	64	434,100	302,973	144,741	201,321	1,083,135	1,226	0.576	1,802
2015	630,897	2	50	45,952	442,028	25,654	219,000	732,634	0.773	0.388	1,161
2016	572,785	1	53	30,615	442,005	11,717	275,605	759,941	0.825	0.502	1,327
2017	521,522	0	40	0	111,880	0	107,160	219,040	0.215	0.205	0,420
2018	629,724	1	36	63,607	362,895	35,924	187,912	650,338	0.677	0.355	1,033
MA Total:	2,956,058	8	243	574,274	1,661,781	218,035	990,999	3,445,088	0.756	0.409	1,165

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.823	0.849	.
(14) Massachusetts Credibility:	0.340	0.510	.
(15) Countrywide Pure Premium:	0.646	0.304	0.950
(16) Countrywide Indicated Relativity:	0.770	0.696	.
(17) Countrywide Credibility:	0.330	0.250	.
(18) Countrywide Lost-Time Claims:	249.00	.	.
(19) Pure Premium Underlying Present Rate:	0.661	0.410	1.071
(20) Relativity to Underlying Present Rate:	0.809	0.976	.
(21) Credibility to Underlying Relativity:	0.330	0.240	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.801	0.841	.
(24) Balanced Formula Relativity:	0.798	0.835	0.811

IX 000131 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 62

Calculation of Class Relativities

Class(es): 3385 WATCH MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	27,218	0	2	0	0	0	494	494	0.000	0.018	0.018
2015	27,842	0	3	0	6,112	0	10,832	16,944	0.220	0.389	0.609
2016	24,624	0	2	0	0	0	2,042	2,042	0.000	0.083	0.083
2017	24,734	0	2	0	0	0	1,761	1,761	0.000	0.071	0.071
2018	19,496	0	2	0	0	0	1,879	1,879	0.000	0.096	0.096
MA Total:	123,915	0	11	0	6,112	0	17,009	23,120	0.049	0.137	0.187

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.054	0.285	.
(14) Massachusetts Credibility:	0.070	0.100	.
(15) Countrywide Pure Premium:	0.717	0.275	0.992
(16) Countrywide Indicated Relativity:	0.855	0.629	.
(17) Countrywide Credibility:	0.190	0.200	.
(18) Countrywide Lost-Time Claims:	18.000	.	.
(19) Pure Premium Underlying Present Rate:	0.285	0.160	0.445
(20) Relativity to Underlying Present Rate:	0.349	0.380	.
(21) Credibility to Underlying Relativity:	0.740	0.700	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.424	0.421	.
(24) Balanced Formula Relativity:	0.423	0.418	0.421

Class(es): 3507 CONSTRUCTION OR AGRICULTURAL MACHINERY MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	55,651	0	12	0	12,176	0	7,052	19,228	0.219	0.127	0.346
2015	35,050	0	7	0	5,323	0	22,577	27,901	0.152	0.644	0.796
2016	34,192	0	4	0	6,108	0	10,586	16,695	0.179	0.310	0.488
2017	26,520	0	5	0	327,737	0	83,875	411,612	12.358	3.163	15.521
2018	31,839	0	4	0	0	0	7,920	7,920	0.000	0.249	0.249
MA Total:	183,252	0	32	0	351,345	0	132,010	483,355	1.917	0.720	2.638

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.087	1.495	.
(14) Massachusetts Credibility:	0.140	0.190	.
(15) Countrywide Pure Premium:	1.140	0.595	1.735
(16) Countrywide Indicated Relativity:	1.360	1.362	.
(17) Countrywide Credibility:	0.430	0.410	.
(18) Countrywide Lost-Time Claims:	4568.0	.	.
(19) Pure Premium Underlying Present Rate:	1.216	0.537	1.753
(20) Relativity to Underlying Present Rate:	1.489	1.277	.
(21) Credibility to Underlying Relativity:	0.430	0.400	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.517	1.353	.
(24) Balanced Formula Relativity:	1.511	1.343	1.454

IX 000132 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 63

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
3515 TEXTILE MACHINERY MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	35,015	0	24	0	34,440	0	29,029	63,469	0.984	0.829	1.813
2015	43,110	1	18	75,211	26,463	10,372	22,567	134,612	2.358	0.764	3.123
2016	46,748	1	18	138,627	64,871	6,670	49,956	260,124	4.353	1.211	5.564
2017	53,464	0	12	0	35,329	0	21,233	56,562	0.661	0.397	1.058
2018	52,129	0	16	0	76,012	0	14,990	91,001	1.458	0.288	1.746
MA Total:	230,466	2	88	213,838	237,114	17,042	137,774	605,768	1.957	0.672	2.628

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.130	1.394	.
(14) Massachusetts Credibility:	0.160	0.220	.
(15) Countrywide Pure Premium:	0.817	0.514	1.331
(16) Countrywide Indicated Relativity:	0.974	1.176	.
(17) Countrywide Credibility:	0.270	0.290	.
(18) Countrywide Lost-Time Claims:	45.000	.	.
(19) Pure Premium Underlying Present Rate:	1.198	0.637	1.834
(20) Relativity to Underlying Present Rate:	1.467	1.514	.
(21) Credibility to Underlying Relativity:	0.570	0.490	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.440	1.390	.
(24) Balanced Formula Relativity:	1.434	1.379	1.415

Class(es):		Effective: 7/1/2022							Manufacturing		
3558 BOOT OR SHOE MACHINERY MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,251	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	2,313	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	2,390	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	2,374	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	2,557	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	11,885	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.030	0.050	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.340	0.557	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.281	0.237	0.518
(20) Relativity to Underlying Present Rate:	0.344	0.564	.
(21) Credibility to Underlying Relativity:	0.970	0.950	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.333	0.536	.
(24) Balanced Formula Relativity:	0.332	0.532	0.401

IX 000133 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 64

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
3571 STEAM OR AIR PRESSURE GAUGE MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	7.421	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	8.824	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	8.666	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	9.343	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	11.801	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	46,054	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.050	0.070	.
(15) Countrywide Pure Premium:	0.104	0.046	0.150
(16) Countrywide Indicated Relativity:	0.124	0.105	.
(17) Countrywide Credibility:	0.060	0.060	.
(18) Countrywide Lost-Time Claims:	1.000	.	.
(19) Pure Premium Underlying Present Rate:	0.321	0.150	0.471
(20) Relativity to Underlying Present Rate:	0.393	0.358	.
(21) Credibility to Underlying Relativity:	0.890	0.870	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.357	0.318	.
(24) Balanced Formula Relativity:	0.355	0.315	0.342

Class(es):		Effective: 7/1/2022							Manufacturing		
3574 CASH REGISTER MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6,011.026	14	522	1,662,839	2,871,189	1,004,212	1,884,005	7,422,246	0.754	0.480	1.235
2015	6,277.843	8	476	1,238,081	2,905,032	344,844	1,853,008	6,340,965	0.660	0.350	1.010
2016	6,117.980	13	461	1,836,741	4,341,829	453,731	1,995,863	8,628,163	1.010	0.400	1.410
2017	5,938.310	11	419	1,958,228	2,531,802	630,681	1,974,676	7,095,387	0.756	0.439	1.195
2018	6,412.676	8	410	1,448,043	4,188,371	319,728	2,362,704	8,318,847	0.879	0.418	1.297
MA Total:	30,757.834	54	2,288	8,143,932	16,838,222	2,753,196	10,070,257	37,805,608	0.812	0.417	1.229

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.884	0.865	.
(14) Massachusetts Credibility:	0.900	1.000	.
(15) Countrywide Pure Premium:	0.769	0.408	1.177
(16) Countrywide Indicated Relativity:	0.917	0.933	.
(17) Countrywide Credibility:	0.050	0.000	.
(18) Countrywide Lost-Time Claims:	17680	.	.
(19) Pure Premium Underlying Present Rate:	0.705	0.366	1.071
(20) Relativity to Underlying Present Rate:	0.863	0.870	.
(21) Credibility to Underlying Relativity:	0.050	0.000	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.885	0.865	.
(24) Balanced Formula Relativity:	0.881	0.859	0.874

IX 000134 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 65

Calculation of Class Relativities

Class(es): 3612 PUMP MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	293.375	0	22	0	13.274	0	22.897	36.172	0.045	0.078	0.123
2015	278.611	0	20	0	2.963	0	29.944	32.907	0.011	0.107	0.118
2016	284.610	0	21	0	47.371	0	154.594	201.965	0.166	0.543	0.710
2017	274.512	0	14	0	31.979	0	20.570	52.549	0.116	0.075	0.191
2018	236.794	0	14	0	280.497	0	60.427	340.924	1.185	0.255	1.440
MA Total:	1,367,903	0	91	0	376,084	0	288,433	664,517	0.275	0.211	0.486

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.299	0.438	.
(14) Massachusetts Credibility:	0.240	0.350	.
(15) Countrywide Pure Premium:	0.763	0.388	1.151
(16) Countrywide Indicated Relativity:	0.910	0.889	.
(17) Countrywide Credibility:	0.380	0.330	.
(18) Countrywide Lost-Time Claims:	1594.0	.	.
(19) Pure Premium Underlying Present Rate:	0.570	0.332	0.902
(20) Relativity to Underlying Present Rate:	0.698	0.790	.
(21) Credibility to Underlying Relativity:	0.380	0.320	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.683	0.699	.
(24) Balanced Formula Relativity:	0.680	0.694	0.685

Class(es): 3620 BOILERMAKING		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	161.029	0	24	0	38.527	0	63.456	101.983	0.239	0.394	0.633
2015	157.183	1	20	378.301	25.379	43.375	20.745	467.800	2.568	0.408	2.976
2016	139.554	0	15	0	429.562	0	72.119	501.681	3.078	0.517	3.595
2017	129.551	0	18	0	743.189	0	312.456	1,055.645	5.737	2.412	8.148
2018	127.865	0	16	0	135.927	0	187.251	323.178	1.063	1.464	2.527
MA Total:	715.183	1	93	378.301	1,372.584	43.375	656.026	2,450.286	2.448	0.978	3.426

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.665	2.030	.
(14) Massachusetts Credibility:	0.260	0.390	.
(15) Countrywide Pure Premium:	1.396	0.697	2.093
(16) Countrywide Indicated Relativity:	1.665	1.595	.
(17) Countrywide Credibility:	0.370	0.310	.
(18) Countrywide Lost-Time Claims:	1122.0	.	.
(19) Pure Premium Underlying Present Rate:	1.391	0.860	2.250
(20) Relativity to Underlying Present Rate:	1.703	2.045	.
(21) Credibility to Underlying Relativity:	0.370	0.300	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.939	1.899	.
(24) Balanced Formula Relativity:	1.932	1.886	1.916

IX 000135 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 66

Calculation of Class Relativities

Class(es): 3634 VALVE MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	322,852	2	35	146,513	181,590	22,367	150,884	501,353	1,016	0,537	1,553
2015	460,279	0	23	0	127,153	0	29,449	156,602	0,276	0,064	0,340
2016	295,587	0	19	0	412,689	0	64,293	476,982	1,396	0,218	1,614
2017	251,348	0	21	0	63,671	0	82,662	146,333	0,253	0,329	0,582
2018	368,076	2	17	62,993	439,401	38,090	191,906	732,390	1,365	0,625	1,990
MA Total:	1,698,142	4	115	209,506	1,224,504	60,457	519,193	2,013,659	0,844	0,341	1,186

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.919	0.709	.
(14) Massachusetts Credibility:	0.270	0.350	.
(15) Countrywide Pure Premium:	0.681	0.320	1.001
(16) Countrywide Indicated Relativity:	0.812	0.731	.
(17) Countrywide Credibility:	0.370	0.330	.
(18) Countrywide Lost-Time Claims:	851.00	.	.
(19) Pure Premium Underlying Present Rate:	0.634	0.276	0.911
(20) Relativity to Underlying Present Rate:	0.777	0.657	.
(21) Credibility to Underlying Relativity:	0.360	0.320	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.828	0.700	.
(24) Balanced Formula Relativity:	0.825	0.695	0.780

Class(es): 3635 GEAR MFG OR GRINDING		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	273,066	2	33	105,530	335,832	15,645	299,293	756,301	1,616	1,153	2,770
2015	302,157	0	40	0	90,891	0	87,041	177,932	0,301	0,288	0,589
2016	339,117	4	38	158,186	287,021	114,430	678,197	1,237,834	1,313	2,337	3,650
2017	55,670	0	5	0	2,270	0	2,786	5,055	0,041	0,050	0,091
2018	75,529	0	5	0	2,969	0	9,711	12,680	0,039	0,129	0,168
MA Total:	1,045,539	6	121	263,716	718,983	130,075	1,077,027	2,189,802	0,940	1,155	2,094

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.023	2.397	.
(14) Massachusetts Credibility:	0.280	0.430	.
(15) Countrywide Pure Premium:	0.806	0.430	1.236
(16) Countrywide Indicated Relativity:	0.961	0.983	.
(17) Countrywide Credibility:	0.360	0.290	.
(18) Countrywide Lost-Time Claims:	524.00	.	.
(19) Pure Premium Underlying Present Rate:	1.154	0.752	1.906
(20) Relativity to Underlying Present Rate:	1.413	1.790	.
(21) Credibility to Underlying Relativity:	0.360	0.280	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.141	1.817	.
(24) Balanced Formula Relativity:	1.137	1.803	1.366

IX 000136 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 67

Calculation of Class Relativities

Class(es): 3642 BATTERY MFG-DRY		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	196.131	0	14	0	168.551	0	62.272	230.823	0.859	0.318	1.177
2015	167.546	0	10	0	7.836	0	22.821	30.657	0.047	0.136	0.183
2016	41.867	0	2	0	0	0	3.039	3.039	0.000	0.073	0.073
2017	68.163	0	1	0	0	0	1.457	1.457	0.000	0.021	0.021
2018	79.481	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	553.187	0	27	0	176.387	0	89.589	265.976	0.319	0.162	0.481

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.347	0.336	.
(14) Massachusetts Credibility:	0.150	0.210	.
(15) Countrywide Pure Premium:	0.493	0.270	0.763
(16) Countrywide Indicated Relativity:	0.588	0.617	.
(17) Countrywide Credibility:	0.350	0.370	.
(18) Countrywide Lost-Time Claims:	84.000	.	.
(19) Pure Premium Underlying Present Rate:	0.478	0.239	0.717
(20) Relativity to Underlying Present Rate:	0.585	0.569	.
(21) Credibility to Underlying Relativity:	0.500	0.420	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.550	0.538	.
(24) Balanced Formula Relativity:	0.548	0.534	0.543

Class(es): 3643 ELECTRIC POWER OR TRANSMISSION EQUIP MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	917.874	2	65	13.186	145.546	5.013	146.794	310.539	0.173	0.165	0.338
2015	892.848	3	61	151.137	557.315	34.061	235.370	977.882	0.793	0.302	1.095
2016	1,013.186	4	35	396.205	554.305	285.399	148.308	1,384.217	0.938	0.428	1.366
2017	1,061.762	2	65	123.825	447.157	49.858	336.424	957.263	0.538	0.364	0.902
2018	1,093.376	5	57	394.233	559.021	181.053	296.053	1,430.360	0.872	0.436	1.308
MA Total:	4,979.047	16	283	1,078.587	2,263.343	555.383	1,162.949	5,060.262	0.671	0.345	1.016

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.731	0.716	.
(14) Massachusetts Credibility:	0.420	0.580	.
(15) Countrywide Pure Premium:	0.876	0.437	1.314
(16) Countrywide Indicated Relativity:	1.045	1.001	.
(17) Countrywide Credibility:	0.290	0.210	.
(18) Countrywide Lost-Time Claims:	2008.0	.	.
(19) Pure Premium Underlying Present Rate:	0.657	0.326	0.984
(20) Relativity to Underlying Present Rate:	0.805	0.776	.
(21) Credibility to Underlying Relativity:	0.290	0.210	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.843	0.789	.
(24) Balanced Formula Relativity:	0.840	0.783	0.820

IX 000137 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 68

Calculation of Class Relativities

Class(es): 3647 BATTERY MFG-STORAGE		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	791	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	860	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	2,400	0	1	0	0	0	1,589	1,589	0.000	0.662	0.662
2017	3,828	0	1	0	0	0	189	189	0.000	0.049	0.049
2018	2,071	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	9,949	0	2	0	0	0	1,778	1,778	0.000	0.179	0.179

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.371	.
(14) Massachusetts Credibility:	0.040	0.050	.
(15) Countrywide Pure Premium:	1.246	0.615	1.861
(16) Countrywide Indicated Relativity:	1.486	1.407	.
(17) Countrywide Credibility:	0.480	0.480	.
(18) Countrywide Lost-Time Claims:	399.00	.	.
(19) Pure Premium Underlying Present Rate:	0.930	0.451	1.382
(20) Relativity to Underlying Present Rate:	1.139	1.073	.
(21) Credibility to Underlying Relativity:	0.480	0.470	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.260	1.198	.
(24) Balanced Formula Relativity:	1.255	1.189	1.233

Class(es): 3648 AUTOMOTIVE LIGHTING, IGNITION APPARATUS MFG NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	933	0	1	0	0	0	283	283	0.000	0.304	0.304
2015	1,248	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	40,505	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	31,529	0	1	0	0	0	64	64	0.000	0.002	0.002
2018	36,729	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	110,943	0	2	0	0	0	347	347	0.000	0.003	0.003

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.006	.
(14) Massachusetts Credibility:	0.080	0.120	.
(15) Countrywide Pure Premium:	0.594	0.381	0.975
(16) Countrywide Indicated Relativity:	0.708	0.872	.
(17) Countrywide Credibility:	0.460	0.440	.
(18) Countrywide Lost-Time Claims:	551.00	.	.
(19) Pure Premium Underlying Present Rate:	0.487	0.291	0.778
(20) Relativity to Underlying Present Rate:	0.597	0.692	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.600	0.689	.
(24) Balanced Formula Relativity:	0.598	0.684	0.627

IX 000138 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 69

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
3681 TELEVISION, RADIO, TELEPHONE OR TELECOMMUNCTN DEVICE MFG NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	5,584,890	7	199	802,804	578,094	217,633	523,643	2,122,174	0.247	0.133	0.380
2015	5,277,890	2	191	64,895	1,197,373	5,399	778,176	2,045,843	0.239	0.148	0.388
2016	5,300,377	8	154	1,181,252	1,057,346	497,455	385,594	3,121,647	0.422	0.167	0.589
2017	5,713,910	6	187	528,698	1,290,640	438,337	634,234	2,891,909	0.318	0.188	0.506
2018	5,606,373	1	179	33,499	1,150,403	15,896	710,374	1,910,172	0.211	0.130	0.341
MA Total:	27,483,440	24	910	2,611,150	5,273,855	1,174,720	3,032,021	12,091,745	0.287	0.153	0.440

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.312	0.318	.
(14) Massachusetts Credibility:	0.620	0.800	.
(15) Countrywide Pure Premium:	0.278	0.156	0.435
(16) Countrywide Indicated Relativity:	0.332	0.358	.
(17) Countrywide Credibility:	0.190	0.100	.
(18) Countrywide Lost-Time Claims:	2767.0	.	.
(19) Pure Premium Underlying Present Rate:	0.307	0.133	0.440
(20) Relativity to Underlying Present Rate:	0.376	0.317	.
(21) Credibility to Underlying Relativity:	0.190	0.100	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.328	0.322	.
(24) Balanced Formula Relativity:	0.327	0.319	0.324

Class(es):		Effective: 7/1/2022							Manufacturing		
3685 INSTRUMENT MFG NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6,760,840	5	253	446,237	1,595,118	81,282	893,174	3,015,812	0.302	0.144	0.446
2015	7,268,251	7	250	770,318	2,014,122	93,868	907,067	3,785,375	0.383	0.138	0.521
2016	6,636,729	9	204	473,503	881,494	151,326	673,398	2,179,721	0.204	0.124	0.328
2017	6,500,544	4	229	694,187	521,577	70,760	533,799	1,820,324	0.187	0.093	0.280
2018	6,729,390	6	210	118,163	909,501	133,791	855,072	2,016,527	0.153	0.147	0.300
MA Total:	33,895,754	31	1,146	2,502,408	5,921,813	531,028	3,862,510	12,817,759	0.249	0.130	0.378

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.271	0.269	.
(14) Massachusetts Credibility:	0.660	0.850	.
(15) Countrywide Pure Premium:	0.379	0.202	0.581
(16) Countrywide Indicated Relativity:	0.452	0.461	.
(17) Countrywide Credibility:	0.170	0.080	.
(18) Countrywide Lost-Time Claims:	2057.0	.	.
(19) Pure Premium Underlying Present Rate:	0.293	0.125	0.418
(20) Relativity to Underlying Present Rate:	0.359	0.296	.
(21) Credibility to Underlying Relativity:	0.170	0.070	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.316	0.286	.
(24) Balanced Formula Relativity:	0.315	0.284	0.305

IX 000139 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 70

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction			
3724 MACHINERY OR EQUIPMENT ERECT OR REPAIR NOC &DR												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	2,736,936	24	311	3,534,516	5,121,674	1,477,929	2,576,070	12,710,189	3,163	1,481	4,644	
2015	3,238,900	19	401	4,876,026	4,444,844	1,104,221	3,262,128	13,687,220	2,878	1,348	4,226	
2016	3,528,829	14	371	2,135,043	4,857,033	615,272	2,922,805	10,530,154	1,981	1,003	2,984	
2017	3,532,968	15	371	3,350,831	5,221,302	764,897	2,834,232	12,171,261	2,426	1,019	3,445	
2018	4,081,178	11	372	1,530,751	4,053,662	500,991	2,388,750	8,474,153	1,368	0,708	2,076	
MA Total:	17,118,811	83	1,826	15,427,167	23,698,516	4,463,311	13,983,984	57,572,978	2,286	1,078	3,363	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.941	0.964	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.691	0.734	2.425
(16) Countrywide Indicated Relativity:	0.707	0.675	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	7875.0	.	.
(19) Pure Premium Underlying Present Rate:	2.360	1.047	3.406
(20) Relativity to Underlying Present Rate:	1.078	1.075	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.941	0.964	.
(24) Balanced Formula Relativity:	0.950	0.963	0.954

Class(es):		Effective: 7/1/2022							Construction			
3726 BOILER INSTALLATION OR REPAIR-STEAM												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	90,952	1	4	84,906	4,986	14,160	31,711	135,762	0.988	0.504	1.493	
2015	113,846	0	6	0	5,943	0	22,767	28,710	0.052	0.200	0.252	
2016	181,597	2	5	939,370	40,423	194,975	40,066	1,214,833	5.395	1.294	6.690	
2017	154,068	0	5	0	88,922	0	27,612	116,534	0.577	0.179	0.756	
2018	105,467	0	1	0	0	0	1,626	1,626	0.000	0.015	0.015	
MA Total:	645,930	3	21	1,024,276	140,275	209,134	123,780	1,497,465	1.803	0.515	2.318	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.742	0.461	.
(14) Massachusetts Credibility:	0.290	0.340	.
(15) Countrywide Pure Premium:	1.809	0.690	2.498
(16) Countrywide Indicated Relativity:	0.756	0.634	.
(17) Countrywide Credibility:	0.360	0.330	.
(18) Countrywide Lost-Time Claims:	531.00	.	.
(19) Pure Premium Underlying Present Rate:	2.007	0.653	2.659
(20) Relativity to Underlying Present Rate:	0.917	0.670	.
(21) Credibility to Underlying Relativity:	0.350	0.330	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.808	0.587	.
(24) Balanced Formula Relativity:	0.816	0.587	0.744

IX 000140 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 71

Calculation of Class Relativities

Class(es): 3808 AUTOMOBILE MFG OR ASSEMBLY		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	130.689	2	35	179.775	6.842	57.175	33.368	277.160	1.428	0.693	2.121
2015	155.929	0	49	0	122.753	0	134.684	257.436	0.787	0.864	1.651
2016	123.879	3	38	213.820	26.164	43.709	34.341	318.034	1.937	0.630	2.567
2017	280.125	0	61	0	642.227	0	415.224	1,057.450	2.293	1.482	3.775
2018	352.933	1	61	57.393	368.029	27.050	303.513	755.986	1.205	0.937	2.142
MA Total:	1,043,555	6	244	450,988	1,166,014	127,935	921,130	2,666,067	1.550	1.005	2.555

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.687	2.087	.
(14) Massachusetts Credibility:	0.310	0.430	.
(15) Countrywide Pure Premium:	1.448	0.661	2.109
(16) Countrywide Indicated Relativity:	1.727	1.512	.
(17) Countrywide Credibility:	0.350	0.290	.
(18) Countrywide Lost-Time Claims:	6170.0	.	.
(19) Pure Premium Underlying Present Rate:	1.390	0.755	2.145
(20) Relativity to Underlying Present Rate:	1.702	1.795	.
(21) Credibility to Underlying Relativity:	0.340	0.280	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.706	1.838	.
(24) Balanced Formula Relativity:	1.700	1.825	1.743

Class(es): 3821 AUTOMOBILE DISMANTLING & DRIVERS		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	160.662	3	27	384.213	22.318	198.342	84.284	689.158	2.530	1.759	4.289
2015	156.663	0	19	0	148.134	0	74.217	222.351	0.946	0.474	1.419
2016	156.778	1	27	125.396	611.302	65.575	281.580	1,083.853	4.699	2.214	6.913
2017	189.725	1	21	175.012	220.300	302.832	70.069	768.213	2.084	1.965	4.049
2018	182.727	0	16	0	79	0	14.198	14.277	0.000	0.078	0.078
MA Total:	846,555	5	110	684,621	1,002,134	566,750	524,348	2,777,853	1.992	1.289	3.281

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.604	3.030	.
(14) Massachusetts Credibility:	0.330	0.500	.
(15) Countrywide Pure Premium:	2.615	1.498	4.113
(16) Countrywide Indicated Relativity:	3.479	3.541	.
(17) Countrywide Credibility:	0.340	0.250	.
(18) Countrywide Lost-Time Claims:	921.00	.	.
(19) Pure Premium Underlying Present Rate:	2.061	1.319	3.380
(20) Relativity to Underlying Present Rate:	2.977	3.452	.
(21) Credibility to Underlying Relativity:	0.330	0.250	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	3.025	3.263	.
(24) Balanced Formula Relativity:	3.006	3.265	3.098

IX 000141 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 72

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
3826 AIRCRAFT ENGINE MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,729,388	16	250	1,413,771	1,733,892	582,256	2,492,533	6,222,452	1,820	1,778	3,598
2015	1,607,228	9	261	1,750,570	4,381,982	499,869	3,216,193	9,848,613	3,816	2,312	6,128
2016	2,272,901	13	187	1,658,392	2,147,093	971,537	1,878,321	6,655,343	1,674	1,254	2,928
2017	2,282,308	10	150	590,005	2,614,712	253,922	2,023,204	5,481,843	1,404	0,998	2,402
2018	2,291,202	8	144	788,867	3,085,401	276,937	1,688,364	5,839,568	1,691	0,858	2,549
MA Total:	10,183,027	56	992	6,201,605	13,963,079	2,584,520	11,298,615	34,047,820	1,980	1,363	3,344

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.156	2.830	.
(14) Massachusetts Credibility:	0.890	1.000	.
(15) Countrywide Pure Premium:	0.400	0.176	0.576
(16) Countrywide Indicated Relativity:	0.477	0.402	.
(17) Countrywide Credibility:	0.060	0.000	.
(18) Countrywide Lost-Time Claims:	423.00	.	.
(19) Pure Premium Underlying Present Rate:	2.064	1.426	3.490
(20) Relativity to Underlying Present Rate:	2.527	3.392	.
(21) Credibility to Underlying Relativity:	0.050	0.000	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.073	2.830	.
(24) Balanced Formula Relativity:	2.065	2.809	2.321

Class(es):		Effective: 7/1/2022							Manufacturing		
3841 TUBULAR METAL PRODUCTS MFG OR ASSEMBLY											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	57,808	0	5	0	33,442	0	44,485	77,926	0.578	0.770	1,348
2015	58,501	1	1	347,233	0	38,733	995	386,961	5.935	0.679	6,615
2016	64,013	0	3	0	0	0	1,501	1,501	0.000	0.023	0.023
2017	61,442	0	4	0	3,928	0	9,684	13,612	0.064	0.158	0.222
2018	64,393	0	6	0	6,919	0	4,274	11,193	0.107	0.066	0.174
MA Total:	306,157	1	19	347,233	44,289	38,733	60,939	491,194	1.279	0.326	1,604

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.392	0.676	.
(14) Massachusetts Credibility:	0.130	0.190	.
(15) Countrywide Pure Premium:	1.111	0.576	1.687
(16) Countrywide Indicated Relativity:	1.325	1.318	.
(17) Countrywide Credibility:	0.350	0.370	.
(18) Countrywide Lost-Time Claims:	86.000	.	.
(19) Pure Premium Underlying Present Rate:	0.592	0.311	0.903
(20) Relativity to Underlying Present Rate:	0.724	0.740	.
(21) Credibility to Underlying Relativity:	0.520	0.440	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.021	0.942	.
(24) Balanced Formula Relativity:	1.017	0.935	0.989

IX 000142 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 73

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
4000 SAND OR GRAVEL DIGGING & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	397,186	4	33	891,504	421,620	350,551	193,063	1,856,737	3,306	1,369	4,675
2015	445,165	4	49	884,769	896,572	253,560	272,069	2,306,970	4,002	1,181	5,182
2016	479,501	5	40	1,214,476	221,084	834,687	219,822	2,490,069	2,994	2,199	5,193
2017	496,267	0	41	0	501,306	0	596,432	1,097,738	1,010	1,202	2,212
2018	525,947	2	48	97,447	2,099,897	87,987	861,416	3,146,748	4,178	1,805	5,983
MA Total:	2,344,066	15	211	3,088,195	4,140,479	1,526,785	2,142,802	10,898,261	3,084	1,565	4,649

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.385	1.361	.
(14) Massachusetts Credibility:	0.520	0.710	.
(15) Countrywide Pure Premium:	2.394	1.139	3.532
(16) Countrywide Indicated Relativity:	1.128	1.056	.
(17) Countrywide Credibility:	0.240	0.150	.
(18) Countrywide Lost-Time Claims:	995.00	.	.
(19) Pure Premium Underlying Present Rate:	2.289	1.162	3.451
(20) Relativity to Underlying Present Rate:	1.128	1.132	.
(21) Credibility to Underlying Relativity:	0.240	0.140	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	1.262	1.283	.
(24) Balanced Formula Relativity:	1.259	1.291	1.270

Class(es):		Effective: 7/1/2022							Manufacturing		
4021 BRICK OR CLAY PRODUCTS MFG NOC & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	15,367	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	13,365	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	10,263	0	2	0	11,219	0	12,759	23,978	1,093	1,243	2,336
2017	7,427	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	11,696	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	58,118	0	2	0	11,219	0	12,759	23,978	0.193	0.220	0.413

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.210	0.456	.
(14) Massachusetts Credibility:	0.100	0.140	.
(15) Countrywide Pure Premium:	1.493	0.924	2.416
(16) Countrywide Indicated Relativity:	1.780	2.113	.
(17) Countrywide Credibility:	0.450	0.430	.
(18) Countrywide Lost-Time Claims:	262.00	.	.
(19) Pure Premium Underlying Present Rate:	1.516	0.807	2.323
(20) Relativity to Underlying Present Rate:	1.857	1.919	.
(21) Credibility to Underlying Relativity:	0.450	0.430	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.657	1.798	.
(24) Balanced Formula Relativity:	1.651	1.785	1.697

IX 000143 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 74

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4024 REFRACTORY PRODUCTS MFG & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	5,869	0	1	0	5,854	0	5,575	11,428	0.997	0.950	1.947
2015	42	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	49	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	1,593	0	1	0	0	0	1,573	1,573	0.000	0.987	0.987
MA Total:	7,555	0	2	0	5,854	0	7,148	13,002	0.775	0.946	1.721

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.843	1.964	.
(14) Massachusetts Credibility:	0.040	0.060	.
(15) Countrywide Pure Premium:	2.224	1.087	3.310
(16) Countrywide Indicated Relativity:	2.652	2.487	.
(17) Countrywide Credibility:	0.420	0.440	.
(18) Countrywide Lost-Time Claims:	132.00	.	.
(19) Pure Premium Underlying Present Rate:	1.449	0.686	2.135
(20) Relativity to Underlying Present Rate:	1.775	1.631	.
(21) Credibility to Underlying Relativity:	0.540	0.500	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.106	2.027	.
(24) Balanced Formula Relativity:	2.098	2.013	2.068

Class(es):		Effective: 7/1/2022							Manufacturing		
4034 CONCRETE PRODUCTS MFG & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	175,307	2	48	199,794	456,193	136,723	257,929	1,050,640	3.742	2.251	5.993
2015	198,757	0	38	0	379,792	0	209,874	589,666	1.911	1.056	2.967
2016	213,542	1	28	415,803	40,113	88,675	74,103	618,693	2.135	0.762	2.897
2017	204,441	0	36	0	434,170	0	219,898	654,067	2.124	1.076	3.199
2018	235,778	4	37	1,206,540	53,814	696,549	113,022	2,069,926	5.346	3.434	8.779
MA Total:	1,027,825	7	187	1,822,137	1,364,082	921,947	874,826	4,982,992	3.100	1.748	4.848

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.375	3.629	.
(14) Massachusetts Credibility:	0.370	0.530	.
(15) Countrywide Pure Premium:	2.572	1.365	3.937
(16) Countrywide Indicated Relativity:	3.067	3.124	.
(17) Countrywide Credibility:	0.320	0.240	.
(18) Countrywide Lost-Time Claims:	2788.0	.	.
(19) Pure Premium Underlying Present Rate:	2.289	1.297	3.586
(20) Relativity to Underlying Present Rate:	2.803	3.084	.
(21) Credibility to Underlying Relativity:	0.310	0.230	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	3.099	3.382	.
(24) Balanced Formula Relativity:	3.087	3.358	3.180

IX 000144 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 75

Calculation of Class Relativities

Class(es): 4036 PLASTERBOARD OR PLASTER BLOCK MFG & DRIVERS									Effective: 7/1/2022			Manufacturing		
Converted Unlimited Losses														
Amount														
Claim Count				Indemnity		Medical		MA Indicated Pure Premiums						
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)			
2014	10,463	0	2	0	11,513	0	16,717	28,230	1.100	1,598	2,698			
2015	10,394	0	1	0	608	0	4,532	5,140	0.059	0,436	0,495			
2016	12,550	0	0	0	0	0	0	0	0.000	0,000	0,000			
2017	11,931	0	0	0	0	0	0	0	0.000	0,000	0,000			
2018	11,361	0	1	0	0	0	1,048	1,048	0.000	0,092	0,092			
MA Total:	56,699	0	4	0	12,122	0	22,296	34,418	0.214	0.393	0.607			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.233	0.816	.
(14) Massachusetts Credibility:	0.080	0.110	.
(15) Countrywide Pure Premium:	0.880	0.455	1.336
(16) Countrywide Indicated Relativity:	1.050	1.042	.
(17) Countrywide Credibility:	0.460	0.450	.
(18) Countrywide Lost-Time Claims:	272.00	.	.
(19) Pure Premium Underlying Present Rate:	0.856	0.463	1.318
(20) Relativity to Underlying Present Rate:	1.048	1.100	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.984	1.043	.
(24) Balanced Formula Relativity:	0.980	1.035	0.999

Class(es): 4038 PLASTER STATUARY OR ORNAMENT MFG									Effective: 7/1/2022			Manufacturing		
Converted Unlimited Losses														
Amount														
Claim Count				Indemnity		Medical		MA Indicated Pure Premiums						
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)			
2014	15,837	0	0	0	0	0	0	0	0.000	0,000	0,000			
2015	15,537	0	0	0	0	0	0	0	0.000	0,000	0,000			
2016	13,856	0	0	0	0	0	0	0	0.000	0,000	0,000			
2017	14,182	0	0	0	0	0	0	0	0.000	0,000	0,000			
2018	14,055	0	0	0	0	0	0	0	0.000	0,000	0,000			
MA Total:	73,467	0	0	0	0	0	0	0	0.000	0.000	0.000			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.110	0.120	.
(15) Countrywide Pure Premium:	1.360	0.528	1.888
(16) Countrywide Indicated Relativity:	1.622	1.209	.
(17) Countrywide Credibility:	0.280	0.300	.
(18) Countrywide Lost-Time Claims:	48,000	.	.
(19) Pure Premium Underlying Present Rate:	1.521	0.449	1.970
(20) Relativity to Underlying Present Rate:	1.863	1.068	.
(21) Credibility to Underlying Relativity:	0.610	0.580	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.590	0.982	.
(24) Balanced Formula Relativity:	1.584	0.975	1.375

IX 000145 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 76

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4053 POTTERY MFG: CHINA OR TABLEWARE											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums		
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	71,577	3	6	468,908	0	123,557	3,478	595,944	6,551	1,775	8,326
2015	78,068	0	11	0	63,297	0	32,510	95,807	0,811	0,416	1,227
2016	81,111	0	5	0	5,723	0	11,601	17,324	0,071	0,143	0,214
2017	83,652	0	12	0	26,863	0	16,686	43,549	0,321	0,199	0,521
2018	87,442	0	18	0	134,104	0	119,629	253,733	1,534	1,368	2,902
MA Total:	401,849	3	52	468,908	229,987	123,557	183,904	1,006,357	1,739	0,765	2,504

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.893	1.588	.
(14) Massachusetts Credibility:	0.180	0.250	.
(15) Countrywide Pure Premium:	0.000	0.056	0.056
(16) Countrywide Indicated Relativity:	0.000	0.127	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.938	0.515	1.453
(20) Relativity to Underlying Present Rate:	1.149	1.226	.
(21) Credibility to Underlying Relativity:	0.820	0.750	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.283	1.316	.
(24) Balanced Formula Relativity:	1.278	1.307	1.288

Class(es):		Effective: 7/1/2022							Manufacturing		
4062 POTTERY MFG: PORCELAIN WARE-MECHANICAL PRESS FORMING											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums		
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	58,612	0	2	0	749	0	5,333	6,083	0,013	0,091	0,104
2015	69,316	0	1	0	0	0	214	214	0,000	0,003	0,003
2016	73,394	0	1	0	0	0	169	169	0,000	0,002	0,002
2017	84,799	0	3	0	54,492	0	50,122	104,615	0,643	0,591	1,234
2018	85,131	1	6	180,707	5,321	34,482	6,191	226,701	2,185	0,478	2,663
MA Total:	371,252	1	13	180,707	60,562	34,482	62,030	337,782	0,650	0,260	0,910

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.707	0.540	.
(14) Massachusetts Credibility:	0.160	0.220	.
(15) Countrywide Pure Premium:	1.088	0.539	1.627
(16) Countrywide Indicated Relativity:	1.297	1.234	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	308.00	.	.
(19) Pure Premium Underlying Present Rate:	0.783	0.399	1.182
(20) Relativity to Underlying Present Rate:	0.958	0.949	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.061	0.970	.
(24) Balanced Formula Relativity:	1.057	0.963	1.024

IX 000146 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 77

Calculation of Class Relativities

Class(es): 4112 INCANDESCENT LAMP MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	55,027	0	5	0	3,504	0	11,575	15,079	0.064	0.210	0.274
2015	54,906	0	8	0	2,465	0	5,865	8,330	0.045	0.107	0.152
2016	44,168	0	2	0	1,361	0	6,330	7,692	0.031	0.143	0.174
2017	62,700	0	2	0	355	0	2,536	2,891	0.006	0.040	0.046
2018	99,209	0	7	0	0	0	10,671	10,671	0.000	0.108	0.108
MA Total:	316,010	0	24	0	7,685	0	36,977	44,662	0.024	0.117	0.141

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.026	0.243	.
(14) Massachusetts Credibility:	0.080	0.120	.
(15) Countrywide Pure Premium:	0.147	0.094	0.241
(16) Countrywide Indicated Relativity:	0.175	0.215	.
(17) Countrywide Credibility:	0.130	0.140	.
(18) Countrywide Lost-Time Claims:	7.000	.	.
(19) Pure Premium Underlying Present Rate:	0.170	0.093	0.263
(20) Relativity to Underlying Present Rate:	0.209	0.220	.
(21) Credibility to Underlying Relativity:	0.790	0.740	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.190	0.222	.
(24) Balanced Formula Relativity:	0.189	0.221	0.200

Class(es): 4114 GLASSWARE MFG-NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	157,682	0	17	0	201,420	0	95,381	296,801	1.277	0.605	1.882
2015	188,417	0	22	0	57,851	0	42,092	99,944	0.307	0.223	0.530
2016	145,591	0	20	0	443,799	0	143,684	587,483	3.048	0.987	4.035
2017	39,083	1	10	124,426	102,862	75,328	13,105	315,721	5.816	2.263	8.078
2018	25,005	0	9	0	22,263	0	61,608	83,871	0.890	2.464	3.354
MA Total:	555,778	1	78	124,426	828,195	75,328	355,870	1,383,819	1.714	0.776	2.490

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.866	1.610	.
(14) Massachusetts Credibility:	0.220	0.270	.
(15) Countrywide Pure Premium:	1.269	0.535	1.804
(16) Countrywide Indicated Relativity:	1.514	1.224	.
(17) Countrywide Credibility:	0.390	0.370	.
(18) Countrywide Lost-Time Claims:	320.00	.	.
(19) Pure Premium Underlying Present Rate:	1.192	0.440	1.632
(20) Relativity to Underlying Present Rate:	1.460	1.047	.
(21) Credibility to Underlying Relativity:	0.390	0.360	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.570	1.265	.
(24) Balanced Formula Relativity:	1.564	1.255	1.458

IX 000147 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 78

Calculation of Class Relativities

Class(es): 4130 GLASS MERCHANT		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	217,144	1	30	219,629	18,794	100,490	42,413	381,326	1,098	0,658	1,756
2015	211,918	1	19	187,463	69,424	31,083	91,582	379,552	1,212	0,579	1,791
2016	256,142	1	42	393,254	302,175	257,434	109,903	1,062,765	2,715	1,434	4,149
2017	293,894	0	45	0	285,206	0	126,896	412,103	0,970	0,432	1,402
2018	294,747	4	33	741,696	820,016	237,406	517,114	2,316,232	5,298	2,560	7,858
MA Total:	1,273,845	7	169	1,542,041	1,495,615	626,414	887,909	4,551,978	2,385	1,189	3,573

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.596	2.468	.
(14) Massachusetts Credibility:	0.320	0.430	.
(15) Countrywide Pure Premium:	1.234	0.700	1.934
(16) Countrywide Indicated Relativity:	1.472	1.602	.
(17) Countrywide Credibility:	0.340	0.290	.
(18) Countrywide Lost-Time Claims:	935.00	.	.
(19) Pure Premium Underlying Present Rate:	1.311	0.608	1.919
(20) Relativity to Underlying Present Rate:	1.606	1.445	.
(21) Credibility to Underlying Relativity:	0.340	0.280	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.877	1.930	.
(24) Balanced Formula Relativity:	1.870	1.916	1.886

Class(es): 4133 CATHEDRAL OR ART GLASS WINDOW MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	14,947	0	1	0	0	0	1,137	1,137	0.000	0.076	0.076
2015	11,759	0	2	0	0	0	1,336	1,336	0.000	0.114	0.114
2016	11,922	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	11,462	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	10,877	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	60,967	0	3	0	0	0	2,473	2,473	0.000	0.041	0.041

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.084	.
(14) Massachusetts Credibility:	0.070	0.090	.
(15) Countrywide Pure Premium:	1.098	0.649	1.747
(16) Countrywide Indicated Relativity:	1.309	1.485	.
(17) Countrywide Credibility:	0.220	0.230	.
(18) Countrywide Lost-Time Claims:	26.000	.	.
(19) Pure Premium Underlying Present Rate:	0.644	0.290	0.934
(20) Relativity to Underlying Present Rate:	0.788	0.690	.
(21) Credibility to Underlying Relativity:	0.710	0.680	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.848	0.819	.
(24) Balanced Formula Relativity:	0.845	0.813	0.834

IX 000148 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 79

Calculation of Class Relativities

Class(es): 4150 OPTICAL GOODS MFG-NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,889,441	1	102	111,470	318,091	26,063	171,214	626,838	0.227	0.104	0.332
2015	2,135,133	2	102	214,619	313,593	37,870	193,918	760,000	0.247	0.109	0.356
2016	2,271,241	2	84	389,361	299,566	43,643	161,562	894,132	0.303	0.090	0.394
2017	1,724,522	3	71	248,644	518,411	64,504	147,509	979,068	0.445	0.123	0.568
2018	1,919,466	2	58	45,992	312,068	93,258	189,340	640,658	0.187	0.147	0.334
MA Total:	9,939,802	10	417	1,010,087	1,761,728	265,339	863,542	3,900,696	0.279	0.114	0.392

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.304	0.236	.
(14) Massachusetts Credibility:	0.440	0.540	.
(15) Countrywide Pure Premium:	0.829	0.329	1.158
(16) Countrywide Indicated Relativity:	0.988	0.753	.
(17) Countrywide Credibility:	0.280	0.230	.
(18) Countrywide Lost-Time Claims:	99,000	.	.
(19) Pure Premium Underlying Present Rate:	0.364	0.141	0.504
(20) Relativity to Underlying Present Rate:	0.445	0.334	.
(21) Credibility to Underlying Relativity:	0.280	0.230	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.535	0.377	.
(24) Balanced Formula Relativity:	0.533	0.375	0.478

Class(es): 4239 PAPER MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	171,243	1	43	49,771	64,299	5,400	88,823	208,294	0.666	0.550	1.216
2015	192,752	0	34	0	81,311	0	85,367	166,678	0.422	0.443	0.865
2016	163,690	0	26	0	124,220	0	74,848	199,067	0.759	0.457	1.216
2017	155,440	2	18	271,575	254,383	103,251	111,426	740,635	3.384	1.381	4.765
2018	143,099	1	34	374,941	297,173	133,418	93,147	898,680	4.697	1.583	6.280
MA Total:	826,224	4	155	696,287	821,387	242,069	453,611	2,213,354	1.837	0.842	2.679

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.000	1.748	.
(14) Massachusetts Credibility:	0.230	0.320	.
(15) Countrywide Pure Premium:	1.036	0.465	1.502
(16) Countrywide Indicated Relativity:	1.236	1.065	.
(17) Countrywide Credibility:	0.390	0.340	.
(18) Countrywide Lost-Time Claims:	1733.0	.	.
(19) Pure Premium Underlying Present Rate:	0.902	0.455	1.357
(20) Relativity to Underlying Present Rate:	1.105	1.083	.
(21) Credibility to Underlying Relativity:	0.380	0.340	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.362	1.289	.
(24) Balanced Formula Relativity:	1.356	1.280	1.330

IX 000149 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 80

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4243 BOX MFG-FOLDING PAPER-NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	243.323	1	27	179.891	279.656	21.392	129.647	610.586	1.889	0.621	2.509
2015	213.373	1	36	32.604	491.867	1.506	164.359	690.337	2.458	0.777	3.235
2016	254.426	0	40	0	604.436	0	297.273	901.710	2.376	1.168	3.544
2017	257.211	2	27	30.291	270.520	16.531	73.360	390.701	1.170	0.349	1.519
2018	325.489	0	37	0	206.742	0	188.333	395.075	0.635	0.579	1.214
MA Total:	1,293.822	4	167	242,786	1,853,222	39,429	852,972	2,988,409	1.620	0.690	2.310

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.764	1.432	.
(14) Massachusetts Credibility:	0.330	0.420	.
(15) Countrywide Pure Premium:	0.976	0.488	1.463
(16) Countrywide Indicated Relativity:	1.163	1.116	.
(17) Countrywide Credibility:	0.340	0.290	.
(18) Countrywide Lost-Time Claims:	959.00	.	.
(19) Pure Premium Underlying Present Rate:	1.319	0.563	1.882
(20) Relativity to Underlying Present Rate:	1.615	1.339	.
(21) Credibility to Underlying Relativity:	0.330	0.290	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.510	1.313	.
(24) Balanced Formula Relativity:	1.505	1.304	1.435

Class(es):		Effective: 7/1/2022							Manufacturing		
4244 CORRUGATED OR FIBERBOARD CONTAINER MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	325.214	5	37	217.307	312.863	66.661	149.559	746.390	1.630	0.665	2.295
2015	205.715	0	29	0	185.028	0	50.411	235.439	0.899	0.245	1.144
2016	211.914	2	27	116.525	542.541	80.420	144.367	883.853	3.110	1.061	4.171
2017	247.774	0	35	0	288.709	0	120.222	408.930	1.165	0.485	1.650
2018	273.166	2	41	131.876	718.933	49.238	633.495	1,533.542	3.115	2.499	5.614
MA Total:	1,263.783	9	169	465,708	2,048,074	196,319	1,098,054	3,808,155	1.989	1.024	3.013

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.165	2.126	.
(14) Massachusetts Credibility:	0.310	0.390	.
(15) Countrywide Pure Premium:	1.049	0.538	1.588
(16) Countrywide Indicated Relativity:	1.251	1.232	.
(17) Countrywide Credibility:	0.350	0.310	.
(18) Countrywide Lost-Time Claims:	1237.0	.	.
(19) Pure Premium Underlying Present Rate:	1.165	0.485	1.650
(20) Relativity to Underlying Present Rate:	1.426	1.154	.
(21) Credibility to Underlying Relativity:	0.340	0.300	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.594	1.557	.
(24) Balanced Formula Relativity:	1.588	1.546	1.573

IX 000150 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 81

Calculation of Class Relativities

Class(es): 4250 PAPER COATING		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	923,429	2	92	476,036	439,452	113,120	253,017	1,281,624	0.991	0.396	1.388
2015	945,444	0	78	0	547,118	0	272,064	819,181	0.579	0.288	0.866
2016	848,955	5	61	803,906	385,624	303,555	207,541	1,700,627	1.401	0.602	2.003
2017	677,713	2	55	207,639	461,654	79,476	261,989	1,010,758	0.988	0.504	1.491
2018	702,306	5	74	1,589,796	802,138	389,063	755,426	3,536,423	3.406	1.630	5.035
MA Total:	4,097,847	14	360	3,077,377	2,635,986	885,214	1,750,036	8,348,613	1.394	0.643	2.037

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.518	1.335	.
(14) Massachusetts Credibility:	0.410	0.570	.
(15) Countrywide Pure Premium:	0.762	0.441	1.202
(16) Countrywide Indicated Relativity:	0.908	1.008	.
(17) Countrywide Credibility:	0.300	0.220	.
(18) Countrywide Lost-Time Claims:	748.00	.	.
(19) Pure Premium Underlying Present Rate:	0.748	0.383	1.130
(20) Relativity to Underlying Present Rate:	0.915	0.910	.
(21) Credibility to Underlying Relativity:	0.290	0.210	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.160	1.174	.
(24) Balanced Formula Relativity:	1.156	1.165	1.159

Class(es): 4251 STATIONERY MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	109,254	0	3	0	497,585	0	56,687	554,272	4.554	0.519	5.073
2015	113,382	0	7	0	15,636	0	11,507	27,143	0.138	0.101	0.239
2016	108,686	0	10	0	29,355	0	34,010	63,366	0.270	0.313	0.583
2017	102,812	0	6	0	1,138	0	6,038	7,175	0.011	0.059	0.070
2018	92,536	0	4	0	115,135	0	32,887	148,022	1.244	0.355	1.600
MA Total:	526,669	0	30	0	658,849	0	141,129	799,978	1.251	0.268	1.519

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.362	0.556	.
(14) Massachusetts Credibility:	0.200	0.240	.
(15) Countrywide Pure Premium:	1.126	0.565	1.692
(16) Countrywide Indicated Relativity:	1.343	1.294	.
(17) Countrywide Credibility:	0.400	0.380	.
(18) Countrywide Lost-Time Claims:	299.00	.	.
(19) Pure Premium Underlying Present Rate:	0.979	0.355	1.334
(20) Relativity to Underlying Present Rate:	1.199	0.845	.
(21) Credibility to Underlying Relativity:	0.400	0.380	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.289	0.946	.
(24) Balanced Formula Relativity:	1.284	0.939	1.166

IX 000151 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 82

Calculation of Class Relativities

Class(es): 4273 BAG MFG-PAPER OR PLASTIC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	48,334	0	12	0	172,354	0	84,900	257,254	3,566	1,757	5,322
2015	46,720	2	15	233,154	24,725	23,780	27,975	309,634	5,520	1,108	6,627
2016	50,284	1	22	53,050	69,606	10,523	58,906	192,086	2,439	1,381	3,820
2017	52,552	0	8	0	124,823	0	27,988	152,811	2,375	0,533	2,908
2018	36,584	0	10	0	22,862	0	25,141	48,003	0,625	0,687	1,312
MA Total:	234,474	3	67	286,204	414,370	34,303	224,911	959,788	2,988	1,106	4,093

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.252	2.295	.
(14) Massachusetts Credibility:	0.170	0.220	.
(15) Countrywide Pure Premium:	0.969	0.512	1.481
(16) Countrywide Indicated Relativity:	1.156	1.172	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	705.00	.	.
(19) Pure Premium Underlying Present Rate:	1.324	0.631	1.955
(20) Relativity to Underlying Present Rate:	1.621	1.501	.
(21) Credibility to Underlying Relativity:	0.410	0.390	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.703	1.547	.
(24) Balanced Formula Relativity:	1.696	1.536	1.641

Class(es): 4279 PAPER GOODS MFG NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	407,010	3	74	65,331	173,395	47,580	153,160	439,466	0,587	0,493	1,080
2015	478,342	2	57	504,618	119,815	64,668	187,274	876,375	1,305	0,527	1,832
2016	423,740	1	44	233,598	653,189	30,957	299,370	1,217,114	2,093	0,780	2,872
2017	511,109	3	66	233,348	302,563	36,736	197,962	770,609	1,049	0,459	1,508
2018	600,635	1	55	16,867	569,944	35,581	407,943	1,030,334	0,977	0,738	1,715
MA Total:	2,420,836	10	296	1,053,761	1,818,906	215,523	1,245,708	4,333,898	1,187	0,604	1,790

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.292	1.253	.
(14) Massachusetts Credibility:	0.370	0.490	.
(15) Countrywide Pure Premium:	0.989	0.502	1.491
(16) Countrywide Indicated Relativity:	1.179	1.149	.
(17) Countrywide Credibility:	0.320	0.260	.
(18) Countrywide Lost-Time Claims:	1486.0	.	.
(19) Pure Premium Underlying Present Rate:	0.942	0.443	1.385
(20) Relativity to Underlying Present Rate:	1.154	1.053	.
(21) Credibility to Underlying Relativity:	0.310	0.250	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.213	1.176	.
(24) Balanced Formula Relativity:	1.208	1.167	1.194

IX 000152 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 83

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4283 BUILDING OR ROOFING PAPER OR FELT PREPARATION-NO INSTALLATION											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6.683	0	1	0	11,290	0	633	11,923	1,689	0.095	1,784
2015	10.701	0	2	0	45,175	0	10,916	56,091	4,222	1.020	5,242
2016	6.369	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	15.363	0	2	0	474	0	2,582	3,057	0.031	0.168	0.199
2018	22.803	0	6	0	0	0	7,633	7,633	0.000	0.335	0.335
MA Total:	61,919	0	11	0	56,939	0	21,765	78,704	0.920	0.352	1.271

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.001	0.730	.
(14) Massachusetts Credibility:	0.080	0.100	.
(15) Countrywide Pure Premium:	0.553	0.234	0.787
(16) Countrywide Indicated Relativity:	0.659	0.535	.
(17) Countrywide Credibility:	0.410	0.430	.
(18) Countrywide Lost-Time Claims:	124.00	.	.
(19) Pure Premium Underlying Present Rate:	0.778	0.346	1.124
(20) Relativity to Underlying Present Rate:	0.953	0.822	.
(21) Credibility to Underlying Relativity:	0.510	0.470	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.836	0.690	.
(24) Balanced Formula Relativity:	0.833	0.685	0.782

Class(es):		Effective: 7/1/2022							Manufacturing		
4299 PRINTING											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,209.793	14	190	1,412,674	651,204	233,339	496,355	2,793,572	0.934	0.330	1,264
2015	2,441.677	14	238	1,458,685	597,480	925,990	700,015	3,682,170	0.842	0.666	1,508
2016	2,216.317	5	179	460,124	1,699,046	68,370	672,410	2,899,950	0.974	0.334	1,308
2017	2,279.712	5	181	638,594	1,297,078	83,725	1,030,707	3,050,104	0.849	0.489	1,338
2018	2,106.049	6	164	732,710	763,226	437,113	508,467	2,441,516	0.710	0.449	1,159
MA Total:	11,253.549	44	952	4,702,787	5,008,035	1,748,537	3,407,953	14,867,311	0.863	0.458	1,321

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.939	0.951	.
(14) Massachusetts Credibility:	0.620	0.870	.
(15) Countrywide Pure Premium:	0.767	0.423	1.190
(16) Countrywide Indicated Relativity:	0.915	0.968	.
(17) Countrywide Credibility:	0.190	0.070	.
(18) Countrywide Lost-Time Claims:	4871.0	.	.
(19) Pure Premium Underlying Present Rate:	0.757	0.399	1.156
(20) Relativity to Underlying Present Rate:	0.927	0.949	.
(21) Credibility to Underlying Relativity:	0.190	0.060	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.932	0.952	.
(24) Balanced Formula Relativity:	0.929	0.945	0.934

IX 000153 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 84

Calculation of Class Relativities

Class(es): 4304 NEWSPAPER PUBLISHING		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	598.084	1	76	92.212	589.244	12.210	341.870	1,035.536	1.139	0.592	1.731
2015	694.569	5	68	481.273	811.551	104.491	557.006	1,954.320	1.861	0.952	2.814
2016	484.125	0	84	0	817.234	0	570.509	1,387.742	1.688	1.178	2.866
2017	333.639	4	49	525.071	923.724	231.280	402.784	2,082.859	4.342	1.900	6.243
2018	292.900	2	45	235.480	655.850	558.941	373.958	1,824.230	3.043	3.185	6.228
MA Total:	2,403,317	12	322	1,334,036	3,797,604	906,921	2,246,127	8,284,687	2.135	1.312	3.447

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.324	2.723	.
(14) Massachusetts Credibility:	0.480	0.680	.
(15) Countrywide Pure Premium:	1.888	1.040	2.929
(16) Countrywide Indicated Relativity:	2.252	2.380	.
(17) Countrywide Credibility:	0.260	0.160	.
(18) Countrywide Lost-Time Claims:	1139.0	.	.
(19) Pure Premium Underlying Present Rate:	1.896	1.006	2.902
(20) Relativity to Underlying Present Rate:	2.322	2.393	.
(21) Credibility to Underlying Relativity:	0.260	0.160	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.305	2.616	.
(24) Balanced Formula Relativity:	2.296	2.596	2.399

Class(es): 4307 BOOKBINDING		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	159.570	0	12	0	10.767	0	31.783	42.550	0.067	0.199	0.267
2015	156.716	1	13	83.177	2.277	18.679	17.337	121.469	0.545	0.230	0.775
2016	173.267	1	14	6.274	35.808	202	133.759	176.043	0.243	0.773	1.016
2017	156.740	0	10	0	30.785	0	45.247	76.032	0.196	0.289	0.485
2018	121.094	1	9	274.432	8.712	47.532	20.751	351.427	2.338	0.564	2.902
MA Total:	767,386	3	58	363,883	88,349	66,413	248,877	767,522	0.589	0.411	1.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.642	0.853	.
(14) Massachusetts Credibility:	0.200	0.290	.
(15) Countrywide Pure Premium:	0.841	0.426	1.266
(16) Countrywide Indicated Relativity:	1.002	0.974	.
(17) Countrywide Credibility:	0.400	0.360	.
(18) Countrywide Lost-Time Claims:	178.00	.	.
(19) Pure Premium Underlying Present Rate:	0.634	0.366	1.000
(20) Relativity to Underlying Present Rate:	0.776	0.871	.
(21) Credibility to Underlying Relativity:	0.400	0.350	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.840	0.903	.
(24) Balanced Formula Relativity:	0.837	0.896	0.857

IX 000154 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 85

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4308 LINOTYPE OR HAND COMPOSITION											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	105	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	106	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	104	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	323	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	118	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	756	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.020	0.010	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.524	0.379	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.260	0.161	1.421
(20) Relativity to Underlying Present Rate:	1.543	0.384	.
(21) Credibility to Underlying Relativity:	0.980	0.990	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.512	0.380	.
(24) Balanced Formula Relativity:	1.506	0.377	1.118

Class(es):		Effective: 7/1/2022							Manufacturing		
4351 PHOTOENGRAVING											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	270.241	1	29	127.174	34.714	5.876	46.676	214.440	0.599	0.194	0.794
2015	285.673	1	25	32.956	21.640	1.523	48.167	104.286	0.191	0.174	0.365
2016	305.322	0	38	0	82.092	0	79.572	161.664	0.269	0.261	0.529
2017	328.065	0	36	0	20.141	0	26.027	46.168	0.061	0.079	0.141
2018	345.870	0	44	0	233.893	0	74.667	308.559	0.676	0.216	0.892
MA Total:	1,535,170	2	172	160,130	392,479	7,398	275,109	835,117	0.360	0.184	0.544

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.392	0.382	.
(14) Massachusetts Credibility:	0.210	0.300	.
(15) Countrywide Pure Premium:	0.477	0.237	0.714
(16) Countrywide Indicated Relativity:	0.569	0.542	.
(17) Countrywide Credibility:	0.240	0.260	.
(18) Countrywide Lost-Time Claims:	34.000	.	.
(19) Pure Premium Underlying Present Rate:	0.384	0.197	0.582
(20) Relativity to Underlying Present Rate:	0.471	0.469	.
(21) Credibility to Underlying Relativity:	0.550	0.440	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.478	0.462	.
(24) Balanced Formula Relativity:	0.476	0.459	0.470

IX 000155 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 86

Calculation of Class Relativities

Class(es): 4352 ENGRAVING		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	50,295	0	2	0	0	0	531	531	0.000	0.011	0.011
2015	64,195	0	2	0	0	0	693	693	0.000	0.011	0.011
2016	63,939	0	3	0	1,048	0	1,676	2,724	0.016	0.026	0.043
2017	71,041	0	4	0	0	0	3,497	3,497	0.000	0.049	0.049
2018	65,726	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	315,197	0	11	0	1,048	0	6,396	7,444	0.003	0.020	0.024

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.004	0.042	.
(14) Massachusetts Credibility:	0.140	0.170	.
(15) Countrywide Pure Premium:	0.669	0.351	1.019
(16) Countrywide Indicated Relativity:	0.797	0.802	.
(17) Countrywide Credibility:	0.370	0.390	.
(18) Countrywide Lost-Time Claims:	95,000	.	.
(19) Pure Premium Underlying Present Rate:	0.601	0.238	0.839
(20) Relativity to Underlying Present Rate:	0.736	0.566	.
(21) Credibility to Underlying Relativity:	0.490	0.440	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.656	0.569	.
(24) Balanced Formula Relativity:	0.653	0.565	0.623

Class(es): 4360 MOTION PICTURE: DEVLPMNT OF NEGATIVES, PRINTING & ALL SUB OP		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	574,511	0	6	0	1,524	0	5,658	7,182	0.003	0.010	0.013
2015	573,042	0	1	0	0	0	261	261	0.000	0.000	0.000
2016	541,230	0	3	0	310	0	4,691	5,001	0.001	0.009	0.009
2017	576,657	0	1	0	0	0	204	204	0.000	0.000	0.000
2018	614,549	0	2	0	3,376	0	675	4,050	0.005	0.001	0.007
MA Total:	2,879,989	0	13	0	5,210	0	11,488	16,698	0.002	0.004	0.006

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.002	0.008	.
(14) Massachusetts Credibility:	0.240	0.320	.
(15) Countrywide Pure Premium:	0.463	0.245	0.707
(16) Countrywide Indicated Relativity:	0.552	0.560	.
(17) Countrywide Credibility:	0.380	0.340	.
(18) Countrywide Lost-Time Claims:	137.00	.	.
(19) Pure Premium Underlying Present Rate:	0.265	0.126	0.391
(20) Relativity to Underlying Present Rate:	0.324	0.300	.
(21) Credibility to Underlying Relativity:	0.380	0.340	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.333	0.295	.
(24) Balanced Formula Relativity:	0.332	0.293	0.319

IX 000156 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 87

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Office and Clerical		
4361 PHOTOGRAPHER - ALL EMP & CLERICAL, SALES, DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	610,340	0	24	0	43,116	0	88,580	131,696	0.071	0.145	0.216
2015	611,325	1	13	135,758	7,087	78,658	11,182	232,685	0.234	0.147	0.381
2016	633,866	3	21	190,133	8,109	92,878	32,498	323,617	0.313	0.198	0.511
2017	590,655	1	19	113,134	2,521	74,434	21,350	211,440	0.196	0.162	0.358
2018	623,696	0	20	0	132,795	0	89,546	222,341	0.213	0.144	0.356
MA Total:	3,069,882	5	97	439,025	193,628	245,970	243,155	1,121,778	0.206	0.159	0.365

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.177	4.100	.
(14) Massachusetts Credibility:	0.240	0.390	.
(15) Countrywide Pure Premium:	0.214	0.164	0.379
(16) Countrywide Indicated Relativity:	3.893	4.586	.
(17) Countrywide Credibility:	0.380	0.310	.
(18) Countrywide Lost-Time Claims:	447.00	.	.
(19) Pure Premium Underlying Present Rate:	0.268	0.204	0.471
(20) Relativity to Underlying Present Rate:	4.554	5.676	.
(21) Credibility to Underlying Relativity:	0.380	0.300	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	3.972	4.723	.
(24) Balanced Formula Relativity:	3.970	4.728	4.254

Class(es):		Effective: 7/1/2022							Goods and Services		
4362 MOTION PICTURE: FILM EXCH & PROJECTION RMS, CL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	5,625	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	4,486	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	1,769	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	2,697	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	4,317	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	18,893	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.030	0.040	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.326	0.299	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.228	0.115	0.343
(20) Relativity to Underlying Present Rate:	0.329	0.301	.
(21) Credibility to Underlying Relativity:	0.970	0.960	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.319	0.289	.
(24) Balanced Formula Relativity:	0.317	0.289	0.307

IX 000157 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 88

Calculation of Class Relativities

Class(es): 4410 RUBBER GOODS MFG NOC		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	482,606	5	68	525,060	751,118	310,013	391,127	1,977,318	2,644	1,453	4,097
2015	457,932	1	77	3,403	455,769	13,807	312,038	785,017	1,003	0,712	1,714
2016	387,605	0	49	0	705,959	0	974,333	1,680,292	1,821	2,514	4,335
2017	427,530	1	43	137,695	187,641	30,422	182,955	538,713	0,761	0,499	1,260
2018	455,267	0	58	0	616,720	0	228,413	845,133	1,355	0,502	1,856
MA Total:	2,210,941	7	295	666,158	2,717,208	354,243	2,088,865	5,826,473	1,530	1,105	2,635

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.666	2.294	.
(14) Massachusetts Credibility:	0.380	0.590	.
(15) Countrywide Pure Premium:	1.151	0.633	1.785
(16) Countrywide Indicated Relativity:	1.373	1.449	.
(17) Countrywide Credibility:	0.310	0.210	.
(18) Countrywide Lost-Time Claims:	2585.0	.	.
(19) Pure Premium Underlying Present Rate:	1.135	0.788	1.923
(20) Relativity to Underlying Present Rate:	1.390	1.875	.
(21) Credibility to Underlying Relativity:	0.310	0.200	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.490	2.033	.
(24) Balanced Formula Relativity:	1.484	2.018	1.667

Class(es): 4432 FOUNTAIN PEN MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	60,186	0	3	0	4,571	0	11,210	15,781	0,076	0,186	0,262
2015	73,496	0	4	0	8,453	0	1,516	9,970	0,115	0,021	0,136
2016	63,230	0	5	0	6,954	0	1,403	8,357	0,110	0,022	0,132
2017	63,484	0	10	0	2,607	0	5,076	7,683	0,041	0,080	0,121
2018	68,230	0	3	0	0	0	590	590	0,000	0,009	0,009
MA Total:	328,627	0	25	0	22,586	0	19,794	42,381	0,069	0,060	0,129

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.075	0.125	.
(14) Massachusetts Credibility:	0.100	0.160	.
(15) Countrywide Pure Premium:	0.347	0.253	0.600
(16) Countrywide Indicated Relativity:	0.414	0.578	.
(17) Countrywide Credibility:	0.260	0.270	.
(18) Countrywide Lost-Time Claims:	39,000	.	.
(19) Pure Premium Underlying Present Rate:	0.283	0.187	0.470
(20) Relativity to Underlying Present Rate:	0.346	0.446	.
(21) Credibility to Underlying Relativity:	0.640	0.570	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.337	0.430	.
(24) Balanced Formula Relativity:	0.335	0.427	0.367

IX 000158 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 89

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4439 LACQUER OR SPIRIT VARNISH MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	38,754	1	4	333,873	0	213,904	4,717	552,494	8,615	5,641	14,257
2015	41,771	0	10	0	447,038	0	236,656	683,694	10,702	5,666	16,368
2016	42,107	0	10	0	43,840	0	64,769	108,609	1,041	1,538	2,579
2017	44,734	0	6	0	30,547	0	12,950	43,497	0,683	0,289	0,972
2018	39,787	0	4	0	13,490	0	6,800	20,290	0,339	0,171	0,510
MA Total:	207,153	1	34	333,873	534,916	213,904	325,892	1,408,584	4,194	2,606	6,800

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.565	5.409	.
(14) Massachusetts Credibility:	0.190	0.290	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	2.531	3.348	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.093	1.425	3.518
(20) Relativity to Underlying Present Rate:	2.563	3.389	.
(21) Credibility to Underlying Relativity:	0.810	0.710	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.943	3.975	.
(24) Balanced Formula Relativity:	2.932	3.945	3.281

Class(es):		Effective: 7/1/2022							Manufacturing		
4452 PLASTICS MFG: FABRICATED PRODUCTS NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	697,898	4	87	264,245	494,895	163,380	220,655	1,143,174	1,088	0,550	1,638
2015	694,402	6	106	768,300	534,230	151,534	318,971	1,773,035	1,876	0,678	2,553
2016	777,658	2	91	182,036	859,123	146,129	341,052	1,528,340	1,339	0,626	1,965
2017	772,863	2	103	204,371	520,543	100,729	257,209	1,082,852	0,938	0,463	1,401
2018	867,990	2	117	321,809	1,661,094	51,748	549,406	2,584,057	2,284	0,693	2,977
MA Total:	3,810,811	16	504	1,740,761	4,069,885	613,519	1,687,292	8,111,457	1,525	0,604	2,129

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.660	1.253	.
(14) Massachusetts Credibility:	0.480	0.640	.
(15) Countrywide Pure Premium:	0.994	0.565	1.558
(16) Countrywide Indicated Relativity:	1.185	1.292	.
(17) Countrywide Credibility:	0.260	0.180	.
(18) Countrywide Lost-Time Claims:	2096.0	.	.
(19) Pure Premium Underlying Present Rate:	1.179	0.556	1.735
(20) Relativity to Underlying Present Rate:	1.444	1.322	.
(21) Credibility to Underlying Relativity:	0.260	0.180	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.480	1.273	.
(24) Balanced Formula Relativity:	1.474	1.263	1.402

IX 000159 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 90

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4459 PLASTICS MFG: SHEETS, RODS OR TUBES											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	658,725	2	118	176,636	575,892	39,758	336,572	1,128,858	1,142	0,571	1,714
2015	499,031	2	68	118,131	696,738	37,617	444,202	1,296,688	1,633	0,966	2,598
2016	553,511	0	83	0	762,667	0	347,770	1,110,437	1,378	0,628	2,006
2017	533,736	3	80	602,405	744,240	181,762	349,667	1,878,074	2,523	0,996	3,519
2018	657,597	5	75	356,753	881,699	112,861	591,529	1,942,842	1,883	1,071	2,954
MA Total:	2,902,600	12	424	1,253,925	3,661,235	371,998	2,069,741	7,356,898	1,693	0,841	2,535

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.843	1.746	.
(14) Massachusetts Credibility:	0.430	0.590	.
(15) Countrywide Pure Premium:	0.970	0.536	1.506
(16) Countrywide Indicated Relativity:	1.156	1.227	.
(17) Countrywide Credibility:	0.290	0.210	.
(18) Countrywide Lost-Time Claims:	2598.0	.	.
(19) Pure Premium Underlying Present Rate:	1.185	0.585	1.770
(20) Relativity to Underlying Present Rate:	1.451	1.391	.
(21) Credibility to Underlying Relativity:	0.280	0.200	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.534	1.566	.
(24) Balanced Formula Relativity:	1.528	1.555	1.537

Class(es):		Effective: 7/1/2022							Manufacturing		
4470 CABLE MFG - INSULATED ELECTRICAL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	423,595	4	51	718,015	313,942	484,392	158,926	1,675,275	2,436	1,519	3,955
2015	475,096	1	39	317,044	110,380	44,031	82,350	553,804	0,900	0,266	1,166
2016	480,077	0	44	0	228,090	0	79,954	308,044	0,475	0,167	0,642
2017	577,543	1	60	199,049	522,116	83,068	227,212	1,031,445	1,249	0,537	1,786
2018	652,433	1	52	73,754	340,579	26,587	165,420	606,339	0,635	0,294	0,929
MA Total:	2,608,744	7	246	1,307,862	1,515,106	638,078	713,861	4,174,907	1,082	0,518	1,600

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.178	1.076	.
(14) Massachusetts Credibility:	0.370	0.500	.
(15) Countrywide Pure Premium:	0.848	0.369	1.217
(16) Countrywide Indicated Relativity:	1.011	0.845	.
(17) Countrywide Credibility:	0.320	0.250	.
(18) Countrywide Lost-Time Claims:	389.00	.	.
(19) Pure Premium Underlying Present Rate:	0.883	0.444	1.327
(20) Relativity to Underlying Present Rate:	1.081	1.056	.
(21) Credibility to Underlying Relativity:	0.310	0.250	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.095	1.013	.
(24) Balanced Formula Relativity:	1.090	1.006	1.061

IX 000160 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 91

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4484 PLASTICS MFG: MOLDED PRODUCTS NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,005,823	11	221	1,184,611	660,844	746,411	606,084	3,197,950	0.920	0.674	1,594
2015	2,374,062	4	336	137,840	1,799,465	237,946	1,276,032	3,451,283	0.816	0.638	1,454
2016	2,207,444	11	274	659,924	1,797,632	512,441	1,051,360	4,021,356	1.113	0.708	1,822
2017	1,807,574	6	241	319,058	1,259,577	151,342	731,837	2,461,813	0.873	0.489	1,362
2018	2,083,549	6	253	606,733	1,346,548	149,729	768,868	2,871,878	0.937	0.441	1,378
MA Total:	10,478,452	38	1,325	2,908,166	6,864,065	1,797,869	4,434,181	16,004,280	0.933	0.595	1,527

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.015	1.235	.
(14) Massachusetts Credibility:	0.620	0.920	.
(15) Countrywide Pure Premium:	0.950	0.549	1.499
(16) Countrywide Indicated Relativity:	1.133	1.256	.
(17) Countrywide Credibility:	0.190	0.040	.
(18) Countrywide Lost-Time Claims:	9793.0	.	.
(19) Pure Premium Underlying Present Rate:	0.813	0.490	1.303
(20) Relativity to Underlying Present Rate:	0.995	1.166	.
(21) Credibility to Underlying Relativity:	0.190	0.040	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.034	1.233	.
(24) Balanced Formula Relativity:	1.030	1.224	1.097

Class(es):		Effective: 7/1/2022							Manufacturing		
4493 FABRIC COATING OR IMPREGNATING NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	402,658	1	61	218,648	428,357	18,974	388,924	1,054,904	1.607	1.013	2,620
2015	336,120	1	43	112,449	41,397	5,196	64,185	223,228	0.458	0.206	0,664
2016	294,171	0	36	0	123,487	0	70,734	194,221	0.420	0.240	0,660
2017	330,057	1	37	65,883	112,284	38,527	121,601	338,294	0.540	0.485	1,025
2018	313,226	0	33	0	106,940	0	96,284	203,225	0.341	0.307	0,649
MA Total:	1,676,232	3	210	396,980	812,466	62,697	741,728	2,013,872	0.722	0.480	1,201

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.785	0.996	.
(14) Massachusetts Credibility:	0.300	0.410	.
(15) Countrywide Pure Premium:	1.018	0.497	1.515
(16) Countrywide Indicated Relativity:	1.214	1.136	.
(17) Countrywide Credibility:	0.350	0.300	.
(18) Countrywide Lost-Time Claims:	187.00	.	.
(19) Pure Premium Underlying Present Rate:	0.821	0.413	1.234
(20) Relativity to Underlying Present Rate:	1.005	0.982	.
(21) Credibility to Underlying Relativity:	0.350	0.290	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.012	1.034	.
(24) Balanced Formula Relativity:	1.008	1.027	1.015

IX 000161 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 92

Calculation of Class Relativities

Class(es): 4511 ANALYTICAL CHEMIST		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6,578,399	4	100	572,400	146,171	90,823	297,843	1,107,237	0.109	0.059	0.168
2015	5,356,765	1	74	13,732	428,820	29,026	225,951	697,528	0.083	0.048	0.130
2016	5,592,906	3	92	364,478	287,299	85,451	380,140	1,117,367	0.117	0.083	0.200
2017	5,818,529	2	85	631,637	186,136	107,859	246,667	1,172,299	0.141	0.061	0.201
2018	5,849,931	3	89	271,467	1,085,578	205,984	410,199	1,973,228	0.232	0.105	0.337
MA Total:	29,196,531	13	440	1,853,714	2,134,004	519,142	1,560,799	6,067,660	0.137	0.071	0.208

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.179	0.167	.
(14) Massachusetts Credibility:	0.440	0.600	.
(15) Countrywide Pure Premium:	0.225	0.124	0.349
(16) Countrywide Indicated Relativity:	0.299	0.293	.
(17) Countrywide Credibility:	0.280	0.200	.
(18) Countrywide Lost-Time Claims:	1724.0	.	.
(19) Pure Premium Underlying Present Rate:	0.123	0.062	0.185
(20) Relativity to Underlying Present Rate:	0.178	0.163	.
(21) Credibility to Underlying Relativity:	0.280	0.200	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.212	0.192	.
(24) Balanced Formula Relativity:	0.211	0.192	0.204

Class(es): 4512 BIOMEDICAL RESEARCH LABS-INCL OUTSIDE OPERATNS		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	10,031,372	0	90	0	271,584	0	144,753	416,337	0.027	0.014	0.042
2015	12,206,041	2	121	223,555	258,344	27,180	309,696	818,775	0.039	0.028	0.067
2016	14,024,024	2	99	140,774	453,222	60,739	238,575	893,310	0.042	0.021	0.064
2017	15,409,103	1	116	76,644	1,113,473	3,541	332,847	1,526,505	0.077	0.022	0.099
2018	19,053,947	3	144	225,318	358,659	160,712	485,875	1,230,563	0.031	0.034	0.065
MA Total:	70,724,486	8	570	666,291	2,455,282	252,171	1,511,745	4,885,490	0.044	0.025	0.069

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.058	0.059	.
(14) Massachusetts Credibility:	0.400	0.560	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.059	0.055	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.041	0.021	0.062
(20) Relativity to Underlying Present Rate:	0.060	0.055	.
(21) Credibility to Underlying Relativity:	0.600	0.440	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.059	0.057	.
(24) Balanced Formula Relativity:	0.059	0.057	0.058

IX 000162 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 93

Calculation of Class Relativities

Class(es): 4557 INK MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	412,269	0	33	0	297,970	0	85,764	383,734	0.723	0.208	0.931
2015	832,698	1	52	210,335	264,426	43,193	140,361	658,314	0.570	0.220	0.791
2016	397,721	1	30	17,502	164,028	779	67,394	249,703	0.456	0.171	0.628
2017	459,827	3	23	441,676	380,295	151,196	98,712	1,071,879	1.788	0.543	2.331
2018	496,570	1	44	222,510	652,588	29,058	137,636	1,041,792	1.762	0.336	2.098
MA Total:	2,599,085	6	182	892,022	1,759,306	224,226	529,868	3,405,422	1.020	0.290	1.310

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.110	0.602	.
(14) Massachusetts Credibility:	0.350	0.450	.
(15) Countrywide Pure Premium:	0.967	0.444	1.411
(16) Countrywide Indicated Relativity:	1.153	1.017	.
(17) Countrywide Credibility:	0.330	0.280	.
(18) Countrywide Lost-Time Claims:	563.00	.	.
(19) Pure Premium Underlying Present Rate:	0.756	0.343	1.099
(20) Relativity to Underlying Present Rate:	0.925	0.816	.
(21) Credibility to Underlying Relativity:	0.320	0.270	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.065	0.776	.
(24) Balanced Formula Relativity:	1.061	0.770	0.961

Class(es): 4558 PAINT MFG		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	90,338	0	5	0	43,019	0	70,147	113,166	0.476	0.776	1.253
2015	79,244	1	7	123,852	132	62,152	3,764	189,899	1.565	0.832	2.396
2016	129,470	0	9	0	2,608	0	9,415	12,023	0.020	0.073	0.093
2017	149,941	1	12	95,482	14,521	51,850	27,119	188,972	0.734	0.527	1.260
2018	133,252	0	12	0	0	0	25,598	25,598	0.000	0.192	0.192
MA Total:	582,246	2	45	219,334	60,279	114,002	136,044	529,659	0.480	0.429	0.910

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.523	0.891	.
(14) Massachusetts Credibility:	0.170	0.260	.
(15) Countrywide Pure Premium:	0.825	0.395	1.221
(16) Countrywide Indicated Relativity:	0.984	0.905	.
(17) Countrywide Credibility:	0.420	0.370	.
(18) Countrywide Lost-Time Claims:	556.00	.	.
(19) Pure Premium Underlying Present Rate:	0.609	0.363	0.973
(20) Relativity to Underlying Present Rate:	0.746	0.864	.
(21) Credibility to Underlying Relativity:	0.410	0.370	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.808	0.886	.
(24) Balanced Formula Relativity:	0.805	0.880	0.831

IX 000163 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 94

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4583 FERTILIZER MFG & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	44,430	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	53,919	0	2	0	3,583	0	9,853	13,436	0.066	0.183	0.249
2016	55,189	0	2	0	2,400	0	1,621	4,021	0.043	0.029	0.073
2017	55,074	0	7	0	32,687	0	70,251	102,938	0.594	1.276	1.869
2018	51,235	0	10	0	81,379	0	34,533	115,912	1.588	0.674	2.262
MA Total:	259,848	0	21	0	120,049	0	116,258	236,307	0.462	0.447	0.909

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.503	0.929	.
(14) Massachusetts Credibility:	0.160	0.220	.
(15) Countrywide Pure Premium:	1.320	0.757	2.078
(16) Countrywide Indicated Relativity:	1.574	1.733	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	493.00	.	.
(19) Pure Premium Underlying Present Rate:	1.169	0.535	1.705
(20) Relativity to Underlying Present Rate:	1.432	1.273	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.343	1.377	.
(24) Balanced Formula Relativity:	1.338	1.367	1.348

Class(es):		Effective: 7/1/2022							Manufacturing		
4611 DRUG MEDICINE OR PHARMACEUTICAL PREP-NO MFG OF INGREDIENTS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	907,425	0	28	0	271,306	0	136,887	408,192	0.299	0.151	0.450
2015	1,129,420	3	43	259,433	211,391	115,683	69,430	655,938	0.417	0.164	0.581
2016	658,535	1	57	215,946	230,183	55,500	83,704	585,332	0.677	0.211	0.889
2017	575,535	2	32	78,236	417,723	23,633	114,087	633,679	0.862	0.239	1.101
2018	657,547	0	39	0	386,619	0	205,183	591,803	0.588	0.312	0.900
MA Total:	3,928,461	6	199	553,616	1,517,221	194,816	609,291	2,874,944	0.527	0.205	0.732

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.574	0.425	.
(14) Massachusetts Credibility:	0.290	0.400	.
(15) Countrywide Pure Premium:	0.368	0.220	0.588
(16) Countrywide Indicated Relativity:	0.438	0.504	.
(17) Countrywide Credibility:	0.360	0.300	.
(18) Countrywide Lost-Time Claims:	2102.0	.	.
(19) Pure Premium Underlying Present Rate:	0.317	0.162	0.478
(20) Relativity to Underlying Present Rate:	0.388	0.384	.
(21) Credibility to Underlying Relativity:	0.350	0.300	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.460	0.436	.
(24) Balanced Formula Relativity:	0.458	0.433	0.450

IX 000164 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 95

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4635 OXYGEN OR HYDROGEN MFG & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	159,756	0	25	0	221,408	0	173,609	395,017	1,386	1,087	2,473
2015	112,404	1	18	26,411	456,076	5,331	446,480	934,298	4,292	4,020	8,312
2016	163,269	1	24	96,743	261,023	36,448	285,313	679,526	2,191	1,971	4,162
2017	167,372	0	11	0	371,991	0	288,518	660,509	2,223	1,724	3,946
2018	157,648	1	20	25,102	573,339	44,714	429,781	1,072,936	3,796	3,010	6,806
MA Total:	760,449	3	98	148,255	1,883,837	86,492	1,623,701	3,742,286	2,672	2,249	4,921

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.909	4.668	.
(14) Massachusetts Credibility:	0.310	0.470	.
(15) Countrywide Pure Premium:	1.388	0.634	2.022
(16) Countrywide Indicated Relativity:	1.655	1.451	.
(17) Countrywide Credibility:	0.350	0.270	.
(18) Countrywide Lost-Time Claims:	694.00	.	.
(19) Pure Premium Underlying Present Rate:	1.898	1.275	3.173
(20) Relativity to Underlying Present Rate:	2.324	3.032	.
(21) Credibility to Underlying Relativity:	0.340	0.260	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	2.271	3.374	.
(24) Balanced Formula Relativity:	2.263	3.349	2.636

Class(es):		Effective: 7/1/2022							Manufacturing		
4653 GLUE MFG & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	39,196	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	43,331	0	8	0	269,873	0	82,346	352,219	6,228	1,900	8,129
2016	46,606	0	7	0	8,722	0	23,518	32,241	0.187	0.505	0.692
2017	46,048	0	5	0	149,161	0	53,356	202,517	3,239	1,159	4,398
2018	52,645	0	3	0	0	0	1,531	1,531	0.000	0.029	0.029
MA Total:	227,827	0	23	0	427,756	0	160,751	588,508	1,878	0,706	2,583

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.044	1.465	.
(14) Massachusetts Credibility:	0.130	0.170	.
(15) Countrywide Pure Premium:	0.870	0.334	1.203
(16) Countrywide Indicated Relativity:	1.037	0.764	.
(17) Countrywide Credibility:	0.340	0.360	.
(18) Countrywide Lost-Time Claims:	79.000	.	.
(19) Pure Premium Underlying Present Rate:	0.775	0.345	1.120
(20) Relativity to Underlying Present Rate:	0.949	0.820	.
(21) Credibility to Underlying Relativity:	0.530	0.470	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.122	0.909	.
(24) Balanced Formula Relativity:	1.117	0.903	1.043

IX 000165 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 96

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4665 RENDERING WORKS NOC & DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	51,440	2	17	379,228	449,060	111,604	173,288	1,113,179	16,102	5,538	21,640
2015	53,466	2	10	252,484	158,302	86,931	34,468	532,185	7,683	2,271	9,954
2016	55,468	1	11	462,345	44,886	141,455	65,477	714,163	9,145	3,731	12,875
2017	57,365	0	9	0	311,877	0	60,372	372,249	5,437	1,052	6,489
2018	61,497	1	18	1,084,603	61,891	101,650	84,248	1,332,392	18,643	3,023	21,666
MA Total:	279,235	6	65	2,178,660	1,026,015	441,639	417,853	4,064,168	11,477	3,078	14,555

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	12.493	6.389	.
(14) Massachusetts Credibility:	0.270	0.370	.
(15) Countrywide Pure Premium:	2.933	1.334	4.267
(16) Countrywide Indicated Relativity:	3.497	3.052	.
(17) Countrywide Credibility:	0.370	0.320	.
(18) Countrywide Lost-Time Claims:	423.00	.	.
(19) Pure Premium Underlying Present Rate:	3.833	1.858	5.691
(20) Relativity to Underlying Present Rate:	4.693	4.420	.
(21) Credibility to Underlying Relativity:	0.360	0.310	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	6.357	4.711	.
(24) Balanced Formula Relativity:	6.332	4.676	5.763

Class(es):		Effective: 7/1/2022							Manufacturing		
4692 DENTAL LABORATORY											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	274,992	0	4	0	10,772	0	15,757	26,528	0.039	0.057	0.096
2015	320,551	0	3	0	3,286	0	6,151	9,438	0.010	0.019	0.029
2016	414,821	0	7	0	46,562	0	19,227	65,789	0.112	0.046	0.159
2017	405,304	0	5	0	318	0	4,657	4,975	0.001	0.011	0.012
2018	397,799	3	6	67,135	40,797	38,129	53,166	199,228	0.271	0.230	0.501
MA Total:	1,813,467	3	25	67,135	101,735	38,129	98,958	305,958	0.093	0.076	0.169

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.101	0.157	.
(14) Massachusetts Credibility:	0.180	0.240	.
(15) Countrywide Pure Premium:	0.319	0.149	0.468
(16) Countrywide Indicated Relativity:	0.380	0.342	.
(17) Countrywide Credibility:	0.410	0.380	.
(18) Countrywide Lost-Time Claims:	204.00	.	.
(19) Pure Premium Underlying Present Rate:	0.226	0.101	0.327
(20) Relativity to Underlying Present Rate:	0.277	0.239	.
(21) Credibility to Underlying Relativity:	0.410	0.380	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.288	0.259	.
(24) Balanced Formula Relativity:	0.286	0.257	0.276

IX 000166 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 97

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4693 PHARMACEUTICAL OR SURGICAL GOODS MFG NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	835.735	2	27	72.905	27.811	13.098	56.279	170.093	0.121	0.083	0.204
2015	491.780	1	44	9.791	125.885	10.349	127.603	273.628	0.276	0.281	0.556
2016	492.297	1	42	77.125	152.794	37.881	100.160	367.959	0.467	0.280	0.747
2017	612.234	2	31	205.216	159.846	65.907	88.070	519.038	0.596	0.251	0.848
2018	548.286	2	21	59.353	65.236	61.309	84.719	270.617	0.227	0.266	0.494
MA Total:	2,980,332	8	165	424,390	531,571	188,544	456,831	1,601,336	0.321	0.217	0.537

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.349	0.449	.
(14) Massachusetts Credibility:	0.270	0.390	.
(15) Countrywide Pure Premium:	0.379	0.212	0.591
(16) Countrywide Indicated Relativity:	0.452	0.484	.
(17) Countrywide Credibility:	0.370	0.310	.
(18) Countrywide Lost-Time Claims:	737.00	.	.
(19) Pure Premium Underlying Present Rate:	0.346	0.199	0.546
(20) Relativity to Underlying Present Rate:	0.424	0.474	.
(21) Credibility to Underlying Relativity:	0.360	0.300	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.414	0.468	.
(24) Balanced Formula Relativity:	0.413	0.464	0.430

Class(es):		Effective: 7/1/2022							Manufacturing		
4720 SOAP OR SYNTHETIC DETERGENT MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	214.134	0	24	0	74.628	0	41.835	116.463	0.349	0.195	0.544
2015	224.363	1	12	110.446	89.262	21.013	66.997	287.718	0.890	0.392	1.282
2016	219.466	0	20	0	118.479	0	64.260	182.739	0.540	0.293	0.833
2017	250.194	1	14	25.936	19.936	10.091	39.247	95.210	0.183	0.197	0.381
2018	225.676	0	20	0	186.041	0	160.924	346.965	0.824	0.713	1.537
MA Total:	1,133,833	2	90	136,382	488,346	31,104	373,263	1,029,095	0.551	0.357	0.908

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.600	0.740	.
(14) Massachusetts Credibility:	0.250	0.340	.
(15) Countrywide Pure Premium:	0.803	0.454	1.257
(16) Countrywide Indicated Relativity:	0.957	1.039	.
(17) Countrywide Credibility:	0.380	0.330	.
(18) Countrywide Lost-Time Claims:	394.00	.	.
(19) Pure Premium Underlying Present Rate:	0.748	0.378	1.126
(20) Relativity to Underlying Present Rate:	0.916	0.899	.
(21) Credibility to Underlying Relativity:	0.370	0.330	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.853	0.891	.
(24) Balanced Formula Relativity:	0.849	0.885	0.862

IX 000167 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 98

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4740 OIL REFINING - PETROLEUM & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	20.625	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	19.582	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	16.503	0	2	0	203	0	1,800	2,004	0.012	0.109	0.121
2017	14.478	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	13.676	0	1	0	0	0	115	115	0.000	0.008	0.008
MA Total:	84,864	0	3	0	203	0	1,915	2,118	0.002	0.023	0.025

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.003	0.047	.
(14) Massachusetts Credibility:	0.070	0.090	.
(15) Countrywide Pure Premium:	0.348	0.154	0.501
(16) Countrywide Indicated Relativity:	0.414	0.352	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	502.00	.	.
(19) Pure Premium Underlying Present Rate:	0.396	0.191	0.588
(20) Relativity to Underlying Present Rate:	0.485	0.455	.
(21) Credibility to Underlying Relativity:	0.460	0.450	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.418	0.371	.
(24) Balanced Formula Relativity:	0.417	0.368	0.400

Class(es):		Effective: 7/1/2022							Manufacturing		
4741 ASPHALT OR TAR DISTILLING OR REFINING & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3.660	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	2.905	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	3.033	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	3.531	0	1	0	5,030	0	3,533	8,563	1.425	1.001	2,425
2018	77.043	1	0	296,659	0	137,913	0	434,572	3,851	1,790	5,641
MA Total:	90,172	1	1	296,659	5,030	137,913	3,533	443,135	3,346	1,569	4,914

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.642	3.256	.
(14) Massachusetts Credibility:	0.100	0.130	.
(15) Countrywide Pure Premium:	0.941	0.478	1.419
(16) Countrywide Indicated Relativity:	1.122	1.094	.
(17) Countrywide Credibility:	0.380	0.400	.
(18) Countrywide Lost-Time Claims:	103.00	.	.
(19) Pure Premium Underlying Present Rate:	0.980	0.398	1.378
(20) Relativity to Underlying Present Rate:	1.200	0.948	.
(21) Credibility to Underlying Relativity:	0.520	0.470	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.414	1.306	.
(24) Balanced Formula Relativity:	1.409	1.297	1.370

IX 000168 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 99

Calculation of Class Relativities

Class(es): 4771 EXPLOSIVES OR AMMUNITION MFG: NOC - & DRIVERS									Effective: 7/1/2022			Manufacturing		
Converted Unlimited Losses														
Amount														
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums						
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)			
2014	3,997	0	1	0	0	0	1,863	1,863	0.000	0.466	0.466			
2015	5,140	0	0	0	0	0	0	0	0.000	0.000	0.000			
2016	11,970	0	1	0	0	0	95	95	0.000	0.008	0.008			
2017	0	0	0	0	0	0	0	0	0.000	0.000	0.000			
2018	2,704	0	0	0	0	0	0	0	0.000	0.000	0.000			
MA Total:	23,811	0	2	0	0	0	1,957	1,957	0.000	0.082	0.082			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.171	.
(14) Massachusetts Credibility:	0.070	0.080	.
(15) Countrywide Pure Premium:	1.041	0.463	1.504
(16) Countrywide Indicated Relativity:	1.241	1.059	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	300.00	.	.
(19) Pure Premium Underlying Present Rate:	1.458	0.448	1.906
(20) Relativity to Underlying Present Rate:	1.786	1.065	.
(21) Credibility to Underlying Relativity:	0.460	0.460	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.405	0.991	.
(24) Balanced Formula Relativity:	1.399	0.983	1.256

Class(es): 4825 DRUG, MEDICINE OR PHARM PREP MFG & INCIDENTAL MFG INGREDIENTS									Effective: 7/1/2022			Manufacturing		
Converted Unlimited Losses														
Amount														
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums						
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)			
2014	2,606,420	2	33	12,961	514,034	28,432	140,008	695,434	0.202	0.065	0.267			
2015	2,587,699	0	34	0	18,514	0	35,370	53,883	0.007	0.014	0.021			
2016	3,803,048	3	51	415,587	285,622	110,707	153,668	965,584	0.184	0.070	0.254			
2017	3,383,372	0	51	0	174,453	0	101,243	275,696	0.052	0.030	0.081			
2018	3,785,747	2	61	351,560	151,632	136,332	204,524	844,048	0.133	0.090	0.223			
MA Total:	16,166,285	7	230	780,108	1,144,254	275,471	634,812	2,834,645	0.119	0.056	0.175			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.130	0.117	.
(14) Massachusetts Credibility:	0.430	0.560	.
(15) Countrywide Pure Premium:	0.319	0.170	0.489
(16) Countrywide Indicated Relativity:	0.380	0.389	.
(17) Countrywide Credibility:	0.290	0.220	.
(18) Countrywide Lost-Time Claims:	791.00	.	.
(19) Pure Premium Underlying Present Rate:	0.212	0.092	0.304
(20) Relativity to Underlying Present Rate:	0.259	0.219	.
(21) Credibility to Underlying Relativity:	0.280	0.220	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.239	0.199	.
(24) Balanced Formula Relativity:	0.238	0.198	0.224

IX 000169 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 100

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Manufacturing		
4828 CHEMICAL BLENDING OR MIXING NOC- ALL OPERS & DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	935,225	1	21	343,968	183,705	35,690	107,449	670,811	0.564	0.153	0.717
2015	1,034,967	2	29	246,880	427,925	24,610	395,591	1,095,006	0.652	0.406	1.058
2016	1,083,705	0	32	0	206,667	0	172,581	379,248	0.191	0.159	0.350
2017	1,155,740	0	23	0	92,828	0	106,332	199,160	0.080	0.092	0.172
2018	810,784	0	23	0	62,010	0	143,566	205,576	0.076	0.177	0.254
MA Total:	5,020,421	3	128	590,848	973,134	60,300	925,519	2,549,800	0.312	0.196	0.508

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.339	0.408	.
(14) Massachusetts Credibility:	0.350	0.480	.
(15) Countrywide Pure Premium:	0.502	0.254	0.756
(16) Countrywide Indicated Relativity:	0.599	0.581	.
(17) Countrywide Credibility:	0.330	0.260	.
(18) Countrywide Lost-Time Claims:	2226.0	.	.
(19) Pure Premium Underlying Present Rate:	0.414	0.200	0.614
(20) Relativity to Underlying Present Rate:	0.508	0.475	.
(21) Credibility to Underlying Relativity:	0.320	0.260	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.479	0.470	.
(24) Balanced Formula Relativity:	0.477	0.467	0.473

Class(es):		Effective: 7/1/2022							Construction		
5020 CEILING INSTALLATION-SUSPENDED ACOUSTICAL GRID											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	218,297	1	17	16,092	573,045	2,580	180,713	772,430	2.699	0.840	3.538
2015	210,962	2	17	480,293	416,429	178,659	113,629	1,189,010	4.251	1.386	5.636
2016	224,390	0	14	0	677,346	0	186,324	863,670	3.019	0.830	3.849
2017	242,102	0	14	0	34,070	0	27,128	61,198	0.141	0.112	0.253
2018	285,125	1	21	136,499	132,990	42,031	89,974	401,495	0.945	0.463	1.408
MA Total:	1,180,876	4	83	632,883	1,833,880	223,270	597,769	3,287,802	2.089	0.695	2.784

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.860	0.622	.
(14) Massachusetts Credibility:	0.390	0.460	.
(15) Countrywide Pure Premium:	2.466	1.072	3.538
(16) Countrywide Indicated Relativity:	1.031	0.985	.
(17) Countrywide Credibility:	0.310	0.270	.
(18) Countrywide Lost-Time Claims:	259.00	.	.
(19) Pure Premium Underlying Present Rate:	2.239	0.768	3.007
(20) Relativity to Underlying Present Rate:	1.023	0.789	.
(21) Credibility to Underlying Relativity:	0.300	0.270	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.962	0.765	.
(24) Balanced Formula Relativity:	0.971	0.765	0.906

IX 000170 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 101

Calculation of Class Relativities

Class(es): 5022 MASONRY NOC		Effective: 7/1/2022							Construction		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,163,398	15	111	3,422,051	3,027,417	1,223,204	1,607,981	9,280,653	5,544	2,434	7,977
2015	1,278,963	15	110	3,002,781	3,410,915	1,283,366	1,697,373	9,394,436	5,015	2,331	7,345
2016	1,374,214	12	120	1,927,462	5,557,399	1,181,841	1,454,042	10,120,744	5,447	1,918	7,365
2017	1,502,670	13	121	3,306,312	5,180,343	1,560,475	1,857,290	11,904,420	5,648	2,274	7,922
2018	1,675,209	7	109	2,898,846	5,629,142	1,312,042	2,554,797	12,394,828	5,091	2,308	7,399
MA Total:	6,994,454	62	571	14,557,453	22,805,217	6,560,928	9,171,483	53,095,081	5,342	2,249	7,591

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.200	2.011	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	3.654	1.525	5.179
(16) Countrywide Indicated Relativity:	1.528	1.401	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	5015.0	.	.
(19) Pure Premium Underlying Present Rate:	4.666	1.947	6.613
(20) Relativity to Underlying Present Rate:	2.131	2.000	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	2.200	2.011	.
(24) Balanced Formula Relativity:	2.221	2.011	2.155

Class(es): 5037 PAINTING: METAL STRUCTURES-OVER 2 STORIES IN HEIGHT & DRIVERS		Effective: 7/1/2022							Construction		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	105,650	2	11	136,840	958,157	21,047	342,389	1,458,433	10,364	3,440	13,804
2015	80,013	4	6	847,148	132,582	371,599	20,796	1,372,125	12,245	4,904	17,149
2016	61,101	0	5	0	0	0	5,051	5,051	0,000	0,083	0,083
2017	89,725	0	8	0	416,557	0	193,955	610,512	4,643	2,162	6,804
2018	66,499	2	8	885,326	168,152	493,879	61,335	1,608,691	15,842	8,349	24,191
MA Total:	402,987	8	38	1,869,314	1,675,448	886,525	623,526	5,054,813	8,796	3,747	12,543

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.623	3.351	.
(14) Massachusetts Credibility:	0.430	0.520	.
(15) Countrywide Pure Premium:	6.264	3.022	9.286
(16) Countrywide Indicated Relativity:	2.620	2.776	.
(17) Countrywide Credibility:	0.290	0.240	.
(18) Countrywide Lost-Time Claims:	94.000	.	.
(19) Pure Premium Underlying Present Rate:	8.273	3.087	11.360
(20) Relativity to Underlying Present Rate:	3.779	3.171	.
(21) Credibility to Underlying Relativity:	0.280	0.240	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	3.376	3.170	.
(24) Balanced Formula Relativity:	3.408	3.169	3.332

IX 000171 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 102

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction			
5040 IRON OR STEEL: ERECTION: ERECTION-FRAME STRUCTURES												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	282,222	7	63	2,015,519	1,434,825	586,582	733,609	4,770,535	12,226	4,678	16,903	
2015	255,712	3	60	1,038,207	2,692,300	888,629	852,391	5,471,527	14,589	6,809	21,397	
2016	243,004	1	46	432,908	2,736,540	77,958	991,512	4,238,918	13,043	4,401	17,444	
2017	302,183	6	56	1,643,935	2,503,295	432,432	885,341	5,465,002	13,724	4,361	18,085	
2018	259,680	3	34	675,694	1,265,050	442,085	492,289	2,875,119	7,474	3,598	11,072	
MA Total:	1,342,800	20	259	5,806,263	10,632,011	2,427,686	3,955,141	22,821,101	12,242	4,753	16,995	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.042	4.250	.
(14) Massachusetts Credibility:	0.770	0.930	.
(15) Countrywide Pure Premium:	3.369	1.344	4.712
(16) Countrywide Indicated Relativity:	1.409	1.235	.
(17) Countrywide Credibility:	0.120	0.040	.
(18) Countrywide Lost-Time Claims:	913.00	.	.
(19) Pure Premium Underlying Present Rate:	10.779	3.933	14.712
(20) Relativity to Underlying Present Rate:	4.924	4.040	.
(21) Credibility to Underlying Relativity:	0.110	0.030	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	4.593	4.123	.
(24) Balanced Formula Relativity:	4.637	4.122	4.474

Class(es):		Effective: 7/1/2022							Construction			
5057 IRON OR STEEL: ERECTION-NOC												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	11,700	0	8	0	202,433	0	86,902	289,335	17,302	7,427	24,729	
2015	20,352	0	2	0	396,781	0	159,143	555,924	19,495	7,819	27,315	
2016	21,372	1	7	182,028	357,557	607,450	76,336	1,223,371	25,247	31,995	57,242	
2017	32,070	0	8	0	101,433	0	58,329	159,762	3,163	1,819	4,982	
2018	23,087	0	5	0	89,507	0	23,550	113,057	3,877	1,020	4,897	
MA Total:	108,581	1	30	182,028	1,147,711	607,450	404,260	2,341,449	12,246	9,318	21,564	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.044	8.332	.
(14) Massachusetts Credibility:	0.260	0.410	.
(15) Countrywide Pure Premium:	2.349	0.896	3.245
(16) Countrywide Indicated Relativity:	0.982	0.823	.
(17) Countrywide Credibility:	0.370	0.300	.
(18) Countrywide Lost-Time Claims:	886.00	.	.
(19) Pure Premium Underlying Present Rate:	9.141	6.344	15.485
(20) Relativity to Underlying Present Rate:	4.176	6.517	.
(21) Credibility to Underlying Relativity:	0.370	0.290	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	3.220	5.553	.
(24) Balanced Formula Relativity:	3.251	5.551	3.976

IX 000172 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 103

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5059 IRON OR STEEL: ERECTION: FRAME STRUCT NOT OVER 2 STRS IN HGT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	67,619	1	15	501,865	106,996	161,291	73,419	843,571	9,004	3,471	12,475
2015	102,691	5	12	1,569,928	1,277,067	517,786	642,335	4,007,115	27,724	11,297	39,021
2016	126,683	1	16	511,900	1,319,359	236,265	581,525	2,649,049	14,455	6,455	20,911
2017	135,109	2	17	514,092	1,037,864	634,804	376,977	2,563,737	11,487	7,489	18,975
2018	151,869	6	24	1,934,840	985,155	507,093	1,743,325	5,170,413	19,227	14,818	34,045
MA Total:	583,971	15	84	5,032,624	4,726,442	2,057,239	3,417,580	15,233,885	16,712	9,375	26,087

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	6.882	8.383	.
(14) Massachusetts Credibility:	0.560	0.760	.
(15) Countrywide Pure Premium:	8.742	4.150	12.892
(16) Countrywide Indicated Relativity:	3.656	3.812	.
(17) Countrywide Credibility:	0.220	0.120	.
(18) Countrywide Lost-Time Claims:	407.00	.	.
(19) Pure Premium Underlying Present Rate:	11.045	5.500	16.546
(20) Relativity to Underlying Present Rate:	5.046	5.650	.
(21) Credibility to Underlying Relativity:	0.220	0.120	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	5.768	7.507	.
(24) Balanced Formula Relativity:	5.824	7.505	6.354

Class(es):		Effective: 7/1/2022							Construction		
5102 DOOR, DOOR FRAME OR SASH ERECTION - METAL OR METAL COVERED											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	688,510	8	68	1,520,561	1,542,631	340,426	591,371	3,994,990	4,449	1,353	5,802
2015	767,734	7	95	848,520	2,584,179	169,595	678,737	4,281,031	4,471	1,105	5,576
2016	787,109	4	65	893,416	1,402,079	221,809	633,658	3,150,962	2,916	1,087	4,003
2017	830,919	7	79	1,363,529	2,585,511	410,741	1,099,604	5,459,386	4,753	1,818	6,570
2018	891,637	2	88	27,441	1,239,073	16,224	776,296	2,059,035	1,420	0,889	2,309
MA Total:	3,965,909	28	395	4,653,468	9,353,473	1,158,796	3,779,666	18,945,403	3,532	1,245	4,777

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.455	1.113	.
(14) Massachusetts Credibility:	0.750	0.870	.
(15) Countrywide Pure Premium:	2.960	1.263	4.223
(16) Countrywide Indicated Relativity:	1.238	1.160	.
(17) Countrywide Credibility:	0.130	0.070	.
(18) Countrywide Lost-Time Claims:	2034.0	.	.
(19) Pure Premium Underlying Present Rate:	3.410	1.126	4.536
(20) Relativity to Underlying Present Rate:	1.557	1.157	.
(21) Credibility to Underlying Relativity:	0.120	0.060	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.439	1.119	.
(24) Balanced Formula Relativity:	1.452	1.119	1.347

IX 000173 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 104

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5146 FURNITURE OR FIXTURES INSTALLATION - PORTABLE - NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	611.666	6	110	1,352,755	1,555,897	257,509	592,125	3,758,286	4,755	1,389	6,144
2015	692,972	3	83	535,279	1,669,273	93,350	943,664	3,241,565	3,181	1,496	4,678
2016	681,527	4	103	341,686	2,080,099	63,951	747,789	3,233,526	3,553	1,191	4,745
2017	697,578	9	89	2,044,943	1,600,157	1,046,543	832,551	5,524,194	5,225	2,694	7,919
2018	651,501	2	74	645,221	817,248	152,126	377,787	1,992,382	2,245	0,813	3,058
MA Total:	3,335,243	24	459	4,919,885	7,722,674	1,613,479	3,493,915	17,749,952	3,791	1,531	5,322

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.561	1.369	.
(14) Massachusetts Credibility:	0.690	0.900	.
(15) Countrywide Pure Premium:	2.478	1.032	3.509
(16) Countrywide Indicated Relativity:	1.036	0.948	.
(17) Countrywide Credibility:	0.160	0.050	.
(18) Countrywide Lost-Time Claims:	1797.0	.	.
(19) Pure Premium Underlying Present Rate:	3.343	1.468	4.811
(20) Relativity to Underlying Present Rate:	1.527	1.508	.
(21) Credibility to Underlying Relativity:	0.150	0.050	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.472	1.355	.
(24) Balanced Formula Relativity:	1.486	1.355	1.445

Class(es):		Effective: 7/1/2022							Construction		
5160 ELEVATOR ERECTION OR REPAIR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	859,239	4	34	887,173	631,309	445,788	290,379	2,254,648	1,767	0,857	2,624
2015	901,781	5	48	621,910	812,500	200,048	428,784	2,063,241	1,591	0,697	2,288
2016	991,153	2	51	62,877	286,261	71,129	280,897	701,163	0,352	0,355	0,707
2017	1,071,737	6	48	1,921,435	1,143,899	529,374	466,877	4,061,585	2,860	0,930	3,790
2018	1,159,864	3	44	1,519,764	1,091,392	354,244	521,029	3,486,430	2,251	0,755	3,006
MA Total:	4,983,774	20	225	5,013,159	3,965,361	1,600,582	1,987,966	12,567,068	1,802	0,720	2,522

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.742	0.644	.
(14) Massachusetts Credibility:	0.540	0.690	.
(15) Countrywide Pure Premium:	1.180	0.418	1.598
(16) Countrywide Indicated Relativity:	0.494	0.384	.
(17) Countrywide Credibility:	0.230	0.160	.
(18) Countrywide Lost-Time Claims:	495.00	.	.
(19) Pure Premium Underlying Present Rate:	1.180	0.504	1.684
(20) Relativity to Underlying Present Rate:	0.539	0.517	.
(21) Credibility to Underlying Relativity:	0.230	0.150	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.638	0.583	.
(24) Balanced Formula Relativity:	0.644	0.583	0.625

IX 000174 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 105

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5183 PLUMBING NOC & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6,792,025	27	607	4,897,418	5,249,131	1,170,738	2,512,976	13,830,263	1,494	0,542	2,036
2015	7,447,701	30	627	4,969,483	7,904,304	1,882,068	3,376,437	18,132,292	1,729	0,706	2,435
2016	8,047,797	35	631	6,340,935	9,656,257	2,156,448	4,490,803	22,644,443	1,988	0,826	2,814
2017	8,707,603	26	699	4,061,902	9,593,912	1,820,757	4,649,290	20,125,860	1,568	0,743	2,311
2018	9,220,318	30	634	4,639,164	9,213,265	1,691,463	4,585,016	20,128,907	1,502	0,681	2,183
MA Total:	40,215,445	148	3,198	24,908,902	41,616,869	8,721,473	19,614,521	94,861,765	1,654	0,705	2,359

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.681	0.630	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.547	0.616	2.164
(16) Countrywide Indicated Relativity:	0.647	0.566	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	10872	.	.
(19) Pure Premium Underlying Present Rate:	1.462	0.625	2.087
(20) Relativity to Underlying Present Rate:	0.668	0.642	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.681	0.630	.
(24) Balanced Formula Relativity:	0.688	0.630	0.670

Class(es):		Effective: 7/1/2022							Construction		
5188 AUTOMATIC SPRINKLER INSTALLATION & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	877,910	8	66	2,050,775	1,118,312	648,658	466,001	4,283,746	3,610	1,270	4,879
2015	932,903	6	70	1,084,951	1,799,337	333,263	423,548	3,641,099	3,092	0,811	3,903
2016	959,116	2	84	525,120	970,395	523,312	408,788	2,427,615	1,559	0,972	2,531
2017	987,922	2	67	350,038	1,439,590	171,330	322,713	2,283,670	1,812	0,500	2,312
2018	1,053,476	3	76	201,507	1,339,405	160,296	517,756	2,218,964	1,463	0,644	2,106
MA Total:	4,811,327	21	363	4,212,390	6,667,039	1,836,859	2,138,806	14,855,095	2,261	0,826	3,088

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.931	0.739	.
(14) Massachusetts Credibility:	0.660	0.760	.
(15) Countrywide Pure Premium:	1.471	0.636	2.107
(16) Countrywide Indicated Relativity:	0.615	0.584	.
(17) Countrywide Credibility:	0.170	0.120	.
(18) Countrywide Lost-Time Claims:	1038.0	.	.
(19) Pure Premium Underlying Present Rate:	2.047	0.661	2.708
(20) Relativity to Underlying Present Rate:	0.935	0.679	.
(21) Credibility to Underlying Relativity:	0.170	0.120	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.878	0.713	.
(24) Balanced Formula Relativity:	0.887	0.713	0.832

IX 000175 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 106

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5190 ELECTRICAL WIRING - WITHIN BUILDINGS & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	8,121,662	23	637	3,587,461	5,735,785	1,997,557	3,164,444	14,485,247	1,148	0,636	1,784
2015	8,551,833	20	625	4,098,042	5,151,032	963,439	3,393,562	13,606,075	1,082	0,509	1,591
2016	9,200,049	30	599	5,874,153	5,777,294	2,153,831	3,502,953	17,308,232	1,266	0,615	1,881
2017	10,010,570	24	662	3,693,189	9,456,145	1,515,473	4,206,337	18,871,145	1,314	0,572	1,885
2018	10,927,421	24	691	5,640,039	6,797,511	3,250,275	4,390,150	20,077,976	1,138	0,699	1,837
MA Total:	46,811,536	121	3,214	22,892,884	32,917,767	9,880,575	18,657,447	84,348,674	1,192	0,610	1,802

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.491	0.545	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.370	0.616	1.986
(16) Countrywide Indicated Relativity:	0.573	0.566	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	11128	.	.
(19) Pure Premium Underlying Present Rate:	1.018	0.499	1.517
(20) Relativity to Underlying Present Rate:	0.465	0.513	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.491	0.545	.
(24) Balanced Formula Relativity:	0.496	0.545	0.511

Class(es):		Effective: 7/1/2022							Goods and Services		
5191 OFFICE MACHICE OR APPLIANCE INSTALL, INSP, ADJSTMT OR REPAIR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	4,630,329	7	158	985,989	853,946	407,093	532,921	2,779,949	0.397	0.203	0.600
2015	4,422,734	5	175	871,602	1,791,047	242,625	799,304	3,704,577	0.602	0.236	0.838
2016	4,414,102	5	120	346,867	1,076,135	118,062	1,099,869	2,640,934	0.322	0.276	0.598
2017	4,613,313	4	123	442,716	654,707	109,092	545,371	1,751,886	0.238	0.142	0.380
2018	4,840,562	2	131	96,404	958,421	36,228	862,314	1,953,367	0.218	0.186	0.404
MA Total:	22,921,040	23	707	2,743,578	5,334,255	913,100	3,839,780	12,830,713	0.352	0.207	0.560

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.461	0.487	.
(14) Massachusetts Credibility:	0.610	0.840	.
(15) Countrywide Pure Premium:	0.431	0.190	0.621
(16) Countrywide Indicated Relativity:	0.574	0.448	.
(17) Countrywide Credibility:	0.200	0.080	.
(18) Countrywide Lost-Time Claims:	3366.0	.	.
(19) Pure Premium Underlying Present Rate:	0.357	0.178	0.535
(20) Relativity to Underlying Present Rate:	0.516	0.466	.
(21) Credibility to Underlying Relativity:	0.190	0.080	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.494	0.483	.
(24) Balanced Formula Relativity:	0.491	0.483	0.488

IX 000176 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 107

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
5192 VENDING OR COIN OPERTD MACHINES-INSTALL, SRVC OR RPR &SALES, DR											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	376,378	5	49	819,962	438,820	248,377	230,553	1,737,712	3,344	1,272	4,617
2015	391,274	1	42	20,368	179,023	10,949	251,219	461,559	0,510	0,670	1,180
2016	383,815	2	33	33,127	78,479	52,784	48,203	212,594	0,291	0,263	0,554
2017	455,133	3	43	27,557	892,931	37,175	306,636	1,264,299	2,022	0,755	2,778
2018	402,028	6	50	221,416	327,541	79,962	339,617	968,537	1,365	1,044	2,409
MA Total:	2,008,628	17	217	1,122,430	1,916,794	429,248	1,176,228	4,644,700	1,513	0,799	2,312

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.978	1.879	.
(14) Massachusetts Credibility:	0.370	0.520	.
(15) Countrywide Pure Premium:	1.242	0.614	1.856
(16) Countrywide Indicated Relativity:	1.652	1.450	.
(17) Countrywide Credibility:	0.320	0.240	.
(18) Countrywide Lost-Time Claims:	1659.0	.	.
(19) Pure Premium Underlying Present Rate:	1.170	0.613	1.782
(20) Relativity to Underlying Present Rate:	1.689	1.604	.
(21) Credibility to Underlying Relativity:	0.310	0.240	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.784	1.710	.
(24) Balanced Formula Relativity:	1.773	1.711	1.751

Class(es):		Effective: 7/1/2022							Construction		
5213 CONCRETE CONSTRUCTION-NOC											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	557,158	9	135	3,351,194	2,796,241	1,217,132	965,852	8,330,420	11,034	3,918	14,952
2015	611,599	8	101	1,234,989	2,403,295	569,774	1,051,320	5,259,378	5,949	2,651	8,599
2016	749,509	7	108	952,384	2,621,048	279,209	1,038,842	4,891,483	4,768	1,759	6,526
2017	951,809	6	121	2,349,207	3,259,146	969,449	1,175,903	7,753,705	5,892	2,254	8,146
2018	786,359	4	113	614,615	3,353,891	167,135	1,781,416	5,917,057	5,047	2,478	7,525
MA Total:	3,656,433	34	578	8,502,390	14,433,621	3,202,700	6,013,333	32,152,044	6,273	2,520	8,793

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.583	2.254	.
(14) Massachusetts Credibility:	0.870	1.000	.
(15) Countrywide Pure Premium:	2.865	1.265	4.130
(16) Countrywide Indicated Relativity:	1.198	1.162	.
(17) Countrywide Credibility:	0.070	0.000	.
(18) Countrywide Lost-Time Claims:	5096.0	.	.
(19) Pure Premium Underlying Present Rate:	5.494	2.225	7.718
(20) Relativity to Underlying Present Rate:	2.509	2.285	.
(21) Credibility to Underlying Relativity:	0.060	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	2.482	2.254	.
(24) Balanced Formula Relativity:	2.506	2.253	2.426

IX 000177 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 108

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5215 CONCRETE WORK - INCIDENTAL TO CONSTRUCTION OF PRIVATE RES											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	265,067	1	26	95,213	185,000	13,009	105,095	398,318	1,057	0,446	1,503
2015	315,915	0	21	0	225,062	0	63,163	288,225	0,712	0,200	0,912
2016	339,385	1	21	339,340	565,835	152,927	248,131	1,306,232	2,667	1,182	3,849
2017	363,706	3	23	194,165	452,143	31,722	247,617	925,647	1,777	0,768	2,545
2018	364,972	1	35	164,706	534,170	25,131	596,182	1,320,189	1,915	1,702	3,617
MA Total:	1,649,045	6	126	793,425	1,962,209	222,789	1,260,187	4,238,611	1,671	0,899	2,570

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.688	0.804	.
(14) Massachusetts Credibility:	0.430	0.530	.
(15) Countrywide Pure Premium:	2.870	1.269	4.139
(16) Countrywide Indicated Relativity:	1.200	1.166	.
(17) Countrywide Credibility:	0.290	0.240	.
(18) Countrywide Lost-Time Claims:	1607.0	.	.
(19) Pure Premium Underlying Present Rate:	2.003	0.780	2.784
(20) Relativity to Underlying Present Rate:	0.915	0.802	.
(21) Credibility to Underlying Relativity:	0.280	0.230	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.900	0.890	.
(24) Balanced Formula Relativity:	0.909	0.890	0.903

Class(es):		Effective: 7/1/2022							Construction		
5221 CONCRETE OR CEMENT WORK-FLOORS DRIVEWAYS YRDS OR SIDEWALKS & DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,524,186	19	164	4,138,932	3,945,643	1,061,379	1,261,573	10,407,528	5,304	1,524	6,828
2015	1,826,243	10	151	2,556,453	2,045,148	1,031,992	973,266	6,606,858	2,520	1,098	3,618
2016	1,845,388	18	186	3,487,330	3,950,927	972,848	1,747,003	10,158,109	4,031	1,474	5,505
2017	2,094,173	22	153	5,354,538	2,427,735	2,008,531	1,254,756	11,045,560	3,716	1,558	5,274
2018	2,360,563	8	202	721,029	5,627,957	386,123	3,048,701	9,783,809	2,690	1,455	4,145
MA Total:	9,650,554	77	856	16,258,281	17,997,409	5,460,873	8,285,300	48,001,863	3,550	1,424	4,974

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.462	1.274	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.428	1.012	3.439
(16) Countrywide Indicated Relativity:	1.015	0.929	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	8330.0	.	.
(19) Pure Premium Underlying Present Rate:	3.326	1.209	4.535
(20) Relativity to Underlying Present Rate:	1.519	1.242	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.462	1.274	.
(24) Balanced Formula Relativity:	1.476	1.273	1.412

IX 000178 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 109

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction			
5222 CONCRETE CONSTRUCTION IN CONNECTION WITH BRIDGES OR CULVERTS												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	257,758	2	29	266,203	847,837	82,048	176,789	1,372,877	4,322	1,004	5,326	
2015	325,326	3	52	1,096,766	598,145	126,347	217,855	2,039,114	5,210	1,058	6,268	
2016	271,967	2	30	481,831	1,192,575	417,610	272,170	2,364,186	6,157	2,536	8,693	
2017	260,958	1	23	35,207	2,565,179	9,234	505,318	3,114,938	9,965	1,972	11,937	
2018	176,174	1	12	157,476	102,826	34,880	48,713	343,895	1,478	0,474	1,952	
MA Total:	1,292,183	9	146	2,037,483	5,306,563	670,120	1,220,844	9,235,011	5,683	1,463	7,147	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.341	1.309	.
(14) Massachusetts Credibility:	0.560	0.650	.
(15) Countrywide Pure Premium:	3.944	1.614	5.559
(16) Countrywide Indicated Relativity:	1.650	1.483	.
(17) Countrywide Credibility:	0.220	0.180	.
(18) Countrywide Lost-Time Claims:	1072.0	.	.
(19) Pure Premium Underlying Present Rate:	5.132	1.699	6.831
(20) Relativity to Underlying Present Rate:	2.344	1.746	.
(21) Credibility to Underlying Relativity:	0.220	0.170	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	2.189	1.414	.
(24) Balanced Formula Relativity:	2.210	1.414	1.959

Class(es):		Effective: 7/1/2022							Construction			
5223 SWIMMING POOL CONSTRUCTN-NOT IRON OR STEEL &DR												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	199,032	2	21	347,059	178,682	62,927	95,335	684,003	2,641	0,795	3,437	
2015	218,059	1	41	259,806	127,716	26,437	204,203	618,162	1,777	1,058	2,835	
2016	235,970	2	19	241,741	230,120	45,124	109,303	626,288	2,000	0,654	2,654	
2017	238,937	1	22	71,487	124,964	40,778	89,103	326,332	0,822	0,544	1,366	
2018	273,294	1	26	146,417	599,789	16,535	238,076	1,000,818	2,730	0,932	3,662	
MA Total:	1,165,291	7	129	1,066,510	1,261,272	191,801	736,020	3,255,603	1,998	0,796	2,794	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.823	0.712	.
(14) Massachusetts Credibility:	0.360	0.470	.
(15) Countrywide Pure Premium:	2.383	1.069	3.453
(16) Countrywide Indicated Relativity:	0.997	0.982	.
(17) Countrywide Credibility:	0.320	0.270	.
(18) Countrywide Lost-Time Claims:	727.00	.	.
(19) Pure Premium Underlying Present Rate:	1.870	0.835	2.705
(20) Relativity to Underlying Present Rate:	0.854	0.857	.
(21) Credibility to Underlying Relativity:	0.320	0.260	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.889	0.823	.
(24) Balanced Formula Relativity:	0.897	0.823	0.874

IX 000179 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 110

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5348 STONE, MOSAIC, TERRAZZO OR CERAMIC TILE WORK - INSIDE											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	722,384	7	65	1,028,874	831,916	338,717	260,982	2,460,490	2,576	0,830	3,406
2015	743,716	7	66	955,053	1,049,709	198,831	369,433	2,573,026	2,696	0,764	3,460
2016	810,337	8	59	490,632	1,188,353	91,295	417,581	2,187,861	2,072	0,628	2,700
2017	938,536	8	49	1,471,695	1,082,258	296,163	668,581	3,518,696	2,721	1,028	3,749
2018	1,199,844	6	76	1,749,399	3,114,981	443,947	1,051,525	6,359,851	4,054	1,246	5,301
MA Total:	4,414,817	36	315	5,695,653	7,267,217	1,368,953	2,768,101	17,099,925	2,936	0,937	3,873

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.209	0.838	.
(14) Massachusetts Credibility:	0.650	0.760	.
(15) Countrywide Pure Premium:	2.256	0.893	3.148
(16) Countrywide Indicated Relativity:	0.943	0.820	.
(17) Countrywide Credibility:	0.180	0.120	.
(18) Countrywide Lost-Time Claims:	1968.0	.	.
(19) Pure Premium Underlying Present Rate:	2.127	0.730	2.857
(20) Relativity to Underlying Present Rate:	0.971	0.750	.
(21) Credibility to Underlying Relativity:	0.170	0.120	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.121	0.825	.
(24) Balanced Formula Relativity:	1.132	0.825	1.035

Class(es):		Effective: 7/1/2022							Construction		
5402 HOTHOUSE ERECTION - ALL OPERATIONS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,571	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	4,016	0	2	0	0	0	3,531	3,531	0.000	0.879	0.879
2016	4,179	0	1	0	0	0	1,670	1,670	0.000	0.400	0.400
2017	6,876	0	1	0	9,078	0	8,208	17,286	1,320	1,194	2,514
2018	6,068	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	23,709	0	4	0	9,078	0	13,408	22,487	0,383	0,566	0,948

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.158	0.506	.
(14) Massachusetts Credibility:	0.090	0.120	.
(15) Countrywide Pure Premium:	5.718	1.913	7.631
(16) Countrywide Indicated Relativity:	2.392	1.758	.
(17) Countrywide Credibility:	0.230	0.240	.
(18) Countrywide Lost-Time Claims:	28.000	.	.
(19) Pure Premium Underlying Present Rate:	2.819	1.239	4.058
(20) Relativity to Underlying Present Rate:	1.288	1.273	.
(21) Credibility to Underlying Relativity:	0.680	0.640	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.440	1.297	.
(24) Balanced Formula Relativity:	1.454	1.297	1.404

IX 000180 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 111

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5403 CARPENTRY NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,563,166	21	221	2,062,150	4,102,939	649,542	1,742,458	8,557,089	3,944	1,530	5,474
2015	1,766,647	17	228	3,650,865	3,939,197	855,012	1,944,408	10,389,481	4,296	1,585	5,881
2016	2,018,759	25	257	6,842,074	8,029,319	2,930,905	3,145,118	20,947,416	7,367	3,010	10,376
2017	2,236,847	17	285	4,256,717	6,347,129	1,923,829	3,356,158	15,883,833	4,741	2,360	7,101
2018	2,362,336	17	281	3,385,982	5,286,052	663,587	2,321,328	11,656,948	3,671	1,264	4,935
MA Total:	9,947,754	97	1,272	20,197,787	27,704,636	7,022,874	12,509,469	67,434,767	4,815	1,963	6,779

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.983	1.756	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.909	1.410	4.318
(16) Countrywide Indicated Relativity:	1.216	1.295	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	7236.0	.	.
(19) Pure Premium Underlying Present Rate:	4.066	1.689	5.755
(20) Relativity to Underlying Present Rate:	1.857	1.735	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.983	1.756	.
(24) Balanced Formula Relativity:	2.002	1.755	1.924

Class(es):		Effective: 7/1/2022							Construction		
5437 CARPENTRY-INSTALL OF CABINET WORK OR INT TRIM											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,591,020	16	247	2,524,313	4,222,694	754,515	1,701,325	9,202,846	2,604	0,948	3,552
2015	2,828,533	10	233	1,432,386	4,291,641	466,391	2,142,414	8,332,833	2,024	0,922	2,946
2016	2,951,470	7	228	1,803,647	3,207,606	752,059	1,875,536	7,638,848	1,698	0,890	2,588
2017	3,171,563	17	277	3,099,376	4,524,405	823,966	2,252,388	10,700,135	2,404	0,970	3,374
2018	3,349,407	8	217	1,132,712	2,575,785	295,802	1,478,862	5,483,160	1,107	0,530	1,637
MA Total:	14,891,993	58	1,202	9,992,434	18,822,131	3,092,733	9,450,525	41,357,822	1,935	0,842	2,777

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.797	0.753	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	3.003	1.313	4.316
(16) Countrywide Indicated Relativity:	1.256	1.206	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	4979.0	.	.
(19) Pure Premium Underlying Present Rate:	2.004	0.842	2.847
(20) Relativity to Underlying Present Rate:	0.916	0.865	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.797	0.753	.
(24) Balanced Formula Relativity:	0.804	0.753	0.788

IX 000181 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 112

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5443 LATHING & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	977	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	431	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	133	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	671	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	567	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	2,779	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.030	0.040	.
(15) Countrywide Pure Premium:	1.979	0.817	2.796
(16) Countrywide Indicated Relativity:	0.827	0.751	.
(17) Countrywide Credibility:	0.420	0.440	.
(18) Countrywide Lost-Time Claims:	132.00	.	.
(19) Pure Premium Underlying Present Rate:	1.703	0.732	2.435
(20) Relativity to Underlying Present Rate:	0.778	0.752	.
(21) Credibility to Underlying Relativity:	0.550	0.520	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.775	0.721	.
(24) Balanced Formula Relativity:	0.783	0.721	0.763

Class(es):		Effective: 7/1/2022							Construction		
5445 WALLBOARD INSTALLATION WITHIN BUILDINGS & DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,480,893	14	231	2,761,856	5,623,053	899,995	2,263,582	11,548,487	3,380	1,275	4,655
2015	2,270,227	15	156	4,015,591	5,185,671	1,313,217	2,103,368	12,617,848	4,053	1,505	5,558
2016	2,105,057	9	159	2,593,690	4,301,390	1,012,988	1,742,217	9,650,284	3,275	1,309	4,584
2017	2,808,670	15	175	3,478,117	6,899,346	905,112	2,680,059	13,962,634	3,695	1,276	4,971
2018	3,112,195	4	194	1,596,112	8,703,172	759,256	2,668,643	13,727,183	3,309	1,101	4,411
MA Total:	12,777,043	57	915	14,445,366	30,712,633	4,890,569	11,457,869	61,506,436	3,534	1,280	4,814

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.456	1.144	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.883	1.175	4.058
(16) Countrywide Indicated Relativity:	1.206	1.080	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	4546.0	.	.
(19) Pure Premium Underlying Present Rate:	3.088	1.065	4.152
(20) Relativity to Underlying Present Rate:	1.410	1.094	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.456	1.144	.
(24) Balanced Formula Relativity:	1.469	1.144	1.367

IX 000182 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 113

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5462 GLAZIER-AWAY FROM SHOP & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	626,525	2	79	728,733	709,791	212,765	321,597	1,972,885	2,296	0,853	3,149
2015	647,221	5	91	1,284,803	1,430,920	357,313	516,310	3,589,346	4,196	1,350	5,546
2016	666,300	3	77	990,482	1,077,001	130,855	439,307	2,637,645	3,103	0,856	3,959
2017	726,425	5	88	950,492	1,274,902	311,365	839,770	3,376,529	3,063	1,585	4,648
2018	845,400	1	82	557,139	1,685,378	101,370	517,343	2,861,231	2,653	0,732	3,384
MA Total:	3,511,872	16	417	4,511,649	6,177,992	1,113,669	2,634,327	14,437,636	3,044	1,067	4,111

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.254	0.954	.
(14) Massachusetts Credibility:	0.660	0.800	.
(15) Countrywide Pure Premium:	3.089	1.347	4.436
(16) Countrywide Indicated Relativity:	1.292	1.237	.
(17) Countrywide Credibility:	0.170	0.100	.
(18) Countrywide Lost-Time Claims:	1593.0	.	.
(19) Pure Premium Underlying Present Rate:	2.786	1.057	3.843
(20) Relativity to Underlying Present Rate:	1.273	1.086	.
(21) Credibility to Underlying Relativity:	0.170	0.100	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.263	0.996	.
(24) Balanced Formula Relativity:	1.275	0.995	1.187

Class(es):		Effective: 7/1/2022							Construction		
5472 ASBESTOS REMOVAL OP: ASBESTOS CONTR-PIPE&BOILER WORK EXCL &DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	144,765	2	10	142,720	119,826	66,632	46,627	375,805	1,814	0,782	2,596
2015	158,535	2	15	489,474	581,816	119,749	120,203	1,311,242	6,757	1,514	8,271
2016	130,859	3	5	354,560	758,428	248,017	103,654	1,464,659	8,505	2,687	11,193
2017	135,187	0	6	0	375,812	0	158,849	534,661	2,780	1,175	3,955
2018	116,980	1	3	742,883	58,242	264,389	38,207	1,103,721	6,848	2,587	9,435
MA Total:	686,326	8	39	1,729,638	1,894,123	698,787	467,541	4,790,089	5,280	1,699	6,979

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.174	1.520	.
(14) Massachusetts Credibility:	0.400	0.480	.
(15) Countrywide Pure Premium:	2.666	1.080	3.746
(16) Countrywide Indicated Relativity:	1.115	0.992	.
(17) Countrywide Credibility:	0.300	0.260	.
(18) Countrywide Lost-Time Claims:	104.00	.	.
(19) Pure Premium Underlying Present Rate:	4.084	1.477	5.561
(20) Relativity to Underlying Present Rate:	1.866	1.517	.
(21) Credibility to Underlying Relativity:	0.300	0.260	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.764	1.382	.
(24) Balanced Formula Relativity:	1.781	1.381	1.655

IX 000183 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 114

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5473 ASBESTOS REMOVAL OP: ASBESTOS CONTRCTR-NOC &DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	307,431	4	21	478,227	491,807	153,273	183,854	1,307,162	3,155	1,097	4,252
2015	330,037	10	30	1,768,117	1,088,809	1,217,209	336,936	4,411,071	8,656	4,709	13,365
2016	371,681	1	19	471,549	622,456	74,399	363,677	1,532,081	2,943	1,179	4,122
2017	414,488	4	42	731,329	1,216,325	259,733	520,872	2,728,260	4,699	1,883	6,582
2018	365,344	2	23	229,588	1,136,122	49,947	589,767	2,005,424	3,738	1,751	5,489
MA Total:	1,788,981	21	135	3,678,812	4,555,520	1,754,561	1,995,106	11,983,998	4,603	2,096	6,699

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.896	1.874	.
(14) Massachusetts Credibility:	0.620	0.820	.
(15) Countrywide Pure Premium:	4.177	2.058	6.235
(16) Countrywide Indicated Relativity:	1.747	1.890	.
(17) Countrywide Credibility:	0.190	0.090	.
(18) Countrywide Lost-Time Claims:	467.00	.	.
(19) Pure Premium Underlying Present Rate:	4.695	2.193	6.889
(20) Relativity to Underlying Present Rate:	2.145	2.253	.
(21) Credibility to Underlying Relativity:	0.190	0.090	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.915	1.910	.
(24) Balanced Formula Relativity:	1.933	1.909	1.926

Class(es):		Effective: 7/1/2022							Construction		
5474 PAINTING OR PAPERHANGING NOC & SHOP OPERS, DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,220,069	18	163	2,028,007	4,398,605	929,514	2,172,746	9,528,872	1,996	0,963	2,959
2015	3,778,719	21	187	3,211,079	4,706,596	977,253	2,782,251	11,677,180	2,095	0,995	3,090
2016	3,779,556	22	146	3,551,071	3,724,314	1,694,767	1,602,278	10,572,429	1,925	0,872	2,797
2017	4,087,094	19	202	4,019,856	6,609,615	977,461	2,803,401	14,410,333	2,601	0,925	3,526
2018	4,394,158	21	176	3,405,664	4,843,396	1,581,870	2,966,137	12,797,067	1,877	1,035	2,912
MA Total:	19,259,596	101	874	16,215,676	24,282,527	6,160,865	12,326,813	58,985,881	2,103	0,960	3,063

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.866	0.858	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.776	1.272	4.048
(16) Countrywide Indicated Relativity:	1.161	1.169	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	5755.0	.	.
(19) Pure Premium Underlying Present Rate:	1.927	0.819	2.747
(20) Relativity to Underlying Present Rate:	0.880	0.842	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.866	0.858	.
(24) Balanced Formula Relativity:	0.874	0.858	0.869

IX 000184 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 115

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5478 CARPET, LINOLEUM, VINYL, ASPHALT OR RUBBER FLOOR TILE INSTAL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	713.435	6	58	661.618	655.331	217.794	282.438	1.817.181	1.846	0.701	2.547
2015	816.410	3	53	309.642	1.243.864	113.114	335.224	2.001.844	1.903	0.549	2.452
2016	765.897	4	62	319.779	1.951.538	154.443	557.274	2.983.033	2.966	0.929	3.895
2017	837.586	1	46	74.326	1.410.183	40.039	638.571	2.163.119	1.772	0.810	2.583
2018	1.045.096	3	58	122.840	883.733	22.770	443.959	1.473.303	0.963	0.447	1.410
MA Total:	4,178,423	17	277	1,488,206	6,144,648	548,161	2,257,465	10,438,480	1.827	0.671	2.498

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.752	0.600	.
(14) Massachusetts Credibility:	0.620	0.710	.
(15) Countrywide Pure Premium:	1.984	0.708	2.692
(16) Countrywide Indicated Relativity:	0.830	0.651	.
(17) Countrywide Credibility:	0.190	0.150	.
(18) Countrywide Lost-Time Claims:	1177.0	.	.
(19) Pure Premium Underlying Present Rate:	2.033	0.657	2.690
(20) Relativity to Underlying Present Rate:	0.929	0.675	.
(21) Credibility to Underlying Relativity:	0.190	0.140	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.801	0.618	.
(24) Balanced Formula Relativity:	0.808	0.618	0.748

Class(es):		Effective: 7/1/2022							Construction		
5479 INSULATION WORK NOC & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	489.797	8	101	1.286.910	449.058	312.660	270.799	2.319.427	3.544	1.191	4.735
2015	552.591	1	89	111.281	768.247	37.467	415.504	1.332.499	1.592	0.820	2.411
2016	535.612	2	66	199.279	1.453.284	79.467	412.370	2.144.400	3.085	0.918	4.004
2017	593.183	0	86	0	1.284.248	0	537.420	1.821.669	2.165	0.906	3.071
2018	704.445	9	93	978.137	1.255.160	1.000.145	805.030	4.038.472	3.170	2.563	5.733
MA Total:	2,875,629	20	435	2,575,607	5,209,998	1,429,739	2,441,123	11,656,467	2.707	1.346	4.054

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.115	1.204	.
(14) Massachusetts Credibility:	0.590	0.720	.
(15) Countrywide Pure Premium:	2.908	1.409	4.317
(16) Countrywide Indicated Relativity:	1.216	1.294	.
(17) Countrywide Credibility:	0.210	0.140	.
(18) Countrywide Lost-Time Claims:	1658.0	.	.
(19) Pure Premium Underlying Present Rate:	2.641	0.996	3.637
(20) Relativity to Underlying Present Rate:	1.206	1.023	.
(21) Credibility to Underlying Relativity:	0.200	0.140	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.155	1.191	.
(24) Balanced Formula Relativity:	1.166	1.191	1.173

IX 000185 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 116

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5480 PLASTERING NOC & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	422,667	3	19	285,368	99,691	61,753	56,542	503,355	0,911	0,280	1,191
2015	475,665	1	27	311,349	1,641,777	53,048	486,453	2,492,627	4,106	1,134	5,240
2016	549,716	1	27	233,004	1,203,205	43,227	470,666	1,950,102	2,613	0,935	3,547
2017	554,717	2	26	87,116	763,637	189,588	425,641	1,465,981	1,534	1,109	2,643
2018	578,392	1	24	37,420	683,411	31,213	229,064	981,107	1,246	0,450	1,696
MA Total:	2,581,157	8	123	954,257	4,391,721	378,829	1,668,366	7,393,173	2,071	0,793	2,864

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.853	0.709	.
(14) Massachusetts Credibility:	0.550	0.670	.
(15) Countrywide Pure Premium:	3.503	1.342	4.845
(16) Countrywide Indicated Relativity:	1.465	1.232	.
(17) Countrywide Credibility:	0.230	0.170	.
(18) Countrywide Lost-Time Claims:	149.00	.	.
(19) Pure Premium Underlying Present Rate:	2.458	0.927	3.385
(20) Relativity to Underlying Present Rate:	1.123	0.952	.
(21) Credibility to Underlying Relativity:	0.220	0.160	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.053	0.837	.
(24) Balanced Formula Relativity:	1.063	0.837	0.992

Class(es):		Effective: 7/1/2022							Construction		
5506 STREET OR ROAD CONSTRUCTION: PAVING OR REPAVING & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	603,616	5	47	862,993	459,746	175,035	500,795	1,998,569	2,191	1,120	3,311
2015	648,708	2	37	662,549	628,225	152,167	253,136	1,696,077	1,990	0,625	2,615
2016	668,156	3	32	1,038,780	1,113,469	275,590	491,080	2,918,918	3,221	1,147	4,369
2017	682,294	7	49	1,596,951	690,440	603,434	264,205	3,155,030	3,353	1,272	4,624
2018	694,347	5	40	2,396,058	1,661,675	1,152,869	557,589	5,768,191	5,844	2,463	8,307
MA Total:	3,297,120	22	205	6,557,330	4,553,556	2,359,094	2,066,805	15,536,785	3,370	1,342	4,712

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.388	1.200	.
(14) Massachusetts Credibility:	0.590	0.740	.
(15) Countrywide Pure Premium:	2.854	1.349	4.203
(16) Countrywide Indicated Relativity:	1.194	1.239	.
(17) Countrywide Credibility:	0.210	0.130	.
(18) Countrywide Lost-Time Claims:	4432.0	.	.
(19) Pure Premium Underlying Present Rate:	2.303	0.904	3.208
(20) Relativity to Underlying Present Rate:	1.052	0.929	.
(21) Credibility to Underlying Relativity:	0.200	0.130	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.280	1.170	.
(24) Balanced Formula Relativity:	1.292	1.170	1.254

IX 000186 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 117

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction			
5507 STREET OR ROAD CONSTRUCTION: SUB-SURFACE WORK & DRIVERS												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	238,372	0	19	0	594,248	0	99,016	693,264	2,493	0,415	2,908	
2015	286,570	0	20	0	413,958	0	162,085	576,043	1,445	0,566	2,010	
2016	185,186	0	14	0	1,668,319	0	496,268	2,164,587	9,009	2,680	11,689	
2017	211,419	2	20	733,484	129,085	379,010	146,285	1,387,864	4,080	2,485	6,565	
2018	180,905	0	17	0	206,665	0	101,759	308,424	1,142	0,563	1,705	
MA Total:	1,102,453	2	90	733,484	3,012,276	379,010	1,005,412	5,130,182	3,398	1,256	4,653	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.399	1.123	.
(14) Massachusetts Credibility:	0.420	0.490	.
(15) Countrywide Pure Premium:	2.203	0.927	3.130
(16) Countrywide Indicated Relativity:	0.921	0.852	.
(17) Countrywide Credibility:	0.290	0.260	.
(18) Countrywide Lost-Time Claims:	1422.0	.	.
(19) Pure Premium Underlying Present Rate:	2.860	0.996	3.855
(20) Relativity to Underlying Present Rate:	1.306	1.023	.
(21) Credibility to Underlying Relativity:	0.290	0.250	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.234	1.027	.
(24) Balanced Formula Relativity:	1.245	1.027	1.177

Class(es):		Effective: 7/1/2022							Construction			
5509 STREET OR ROAD MAINTENANCE BY COUNTY OR MUNICIPAL EMP & DR												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	62,924	0	8	0	9,335	0	16,318	25,653	0,148	0,259	0,408	
2015	62,088	1	17	8,999	252,446	16,320	151,403	429,168	4,211	2,701	6,912	
2016	69,565	0	17	0	314,230	0	79,779	394,009	4,517	1,147	5,664	
2017	52,477	1	6	264,690	429,692	352,965	143,159	1,190,505	13,232	9,454	22,686	
2018	39,799	0	8	0	1,557	0	3,617	5,174	0,039	0,091	0,130	
MA Total:	286,853	2	56	273,689	1,007,260	369,285	394,275	2,044,509	4,466	2,662	7,127	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.839	2.380	.
(14) Massachusetts Credibility:	0.220	0.300	.
(15) Countrywide Pure Premium:	2.297	1.421	3.719
(16) Countrywide Indicated Relativity:	0.961	1.306	.
(17) Countrywide Credibility:	0.390	0.350	.
(18) Countrywide Lost-Time Claims:	471.00	.	.
(19) Pure Premium Underlying Present Rate:	2.193	1.127	3.320
(20) Relativity to Underlying Present Rate:	1.002	1.157	.
(21) Credibility to Underlying Relativity:	0.390	0.350	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.170	1.576	.
(24) Balanced Formula Relativity:	1.181	1.576	1.306

IX 000187 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 118

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5538 SHEET METAL WORK-SHOP & OUTSIDE-NOC & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,228,226	17	284	2,920,055	2,452,574	1,066,701	1,734,063	8,173,393	2,411	1,257	3,668
2015	2,519,534	7	284	1,901,168	2,777,706	330,328	1,587,340	6,596,542	1,857	0,761	2,618
2016	2,629,911	9	250	2,083,864	3,797,022	518,313	1,829,136	8,228,335	2,236	0,893	3,129
2017	2,810,244	13	317	2,116,479	4,578,943	1,466,874	2,167,485	10,329,782	2,383	1,293	3,676
2018	3,171,352	8	316	1,926,833	3,364,447	1,293,738	1,688,279	8,273,297	1,668	0,940	2,609
MA Total:	13,359,267	54	1,451	10,948,399	16,970,692	4,675,954	9,006,304	41,601,349	2,090	1,024	3,114

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.861	0.916	.
(14) Massachusetts Credibility:	0.980	1.000	.
(15) Countrywide Pure Premium:	3.362	1.383	4.745
(16) Countrywide Indicated Relativity:	1.406	1.271	.
(17) Countrywide Credibility:	0.010	0.000	.
(18) Countrywide Lost-Time Claims:	292.00	.	.
(19) Pure Premium Underlying Present Rate:	1.994	0.889	2.883
(20) Relativity to Underlying Present Rate:	0.911	0.913	.
(21) Credibility to Underlying Relativity:	0.010	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.867	0.916	.
(24) Balanced Formula Relativity:	0.875	0.916	0.888

Class(es):		Effective: 7/1/2022							Construction		
5545 ROOFING NOC & YARD EMP, DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	140,274	11	42	2,207,399	1,060,322	1,877,487	763,484	5,908,692	23,295	18,827	42,123
2015	212,936	13	31	2,134,427	1,890,067	1,255,062	972,761	6,252,317	18,900	10,462	29,362
2016	212,391	9	50	2,281,626	2,531,760	2,005,605	1,724,336	8,543,327	22,663	17,562	40,224
2017	183,929	11	35	1,701,406	1,312,589	1,358,913	740,819	5,113,727	16,387	11,416	27,803
2018	200,624	5	58	981,613	5,827,111	483,864	3,350,852	10,643,439	33,938	19,114	53,052
MA Total:	950,155	49	216	9,306,471	12,621,848	6,980,931	7,552,252	36,461,502	23,079	15,296	38,374

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	9.505	13.677	.
(14) Massachusetts Credibility:	0.790	1.000	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	7.238	10.864	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	16.588	11.267	27.855
(20) Relativity to Underlying Present Rate:	7.577	11.574	.
(21) Credibility to Underlying Relativity:	0.210	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	9.100	13.677	.
(24) Balanced Formula Relativity:	9.187	13.673	10.602

IX 000188 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 119

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5547 ROOFING-BUILT UP - YARD EMP & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	613,151	13	64	2,728,998	538,714	1,724,428	440,090	5,432,230	5,329	3,530	8,860
2015	646,862	8	70	2,187,437	1,526,792	2,194,158	638,685	6,547,072	5,742	4,379	10,121
2016	662,932	9	66	1,533,212	3,001,108	761,850	1,896,129	7,192,299	6,840	4,009	10,849
2017	679,113	1	72	88,576	3,042,769	24,734	827,118	3,983,198	4,611	1,254	5,865
2018	749,605	0	76	0	3,485,578	0	1,581,925	5,067,503	4,650	2,110	6,760
MA Total:	3,351,664	31	348	6,538,223	11,594,961	4,705,171	5,383,947	28,222,301	5,410	3,010	8,420

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.228	2.692	.
(14) Massachusetts Credibility:	0.790	1.000	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	2.022	2.663	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	4.634	2.761	7.395
(20) Relativity to Underlying Present Rate:	2.117	2.837	.
(21) Credibility to Underlying Relativity:	0.210	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	2.205	2.692	.
(24) Balanced Formula Relativity:	2.226	2.691	2.372

Class(es):		Effective: 7/1/2022							Construction		
5606 CONTRACTOR-EXECUTIVE SUPERVISOR OR CONSTRUCT SUPERINTENDENT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6,622,213	10	181	1,959,646	1,859,031	877,373	1,133,715	5,829,765	0.577	0.304	0.880
2015	7,544,618	14	177	2,538,731	1,780,626	1,202,097	1,598,727	7,120,181	0.573	0.371	0.944
2016	8,108,505	14	131	2,461,253	2,851,437	892,190	1,547,928	7,752,808	0.655	0.301	0.956
2017	8,738,048	11	151	2,433,278	4,269,447	1,040,452	2,690,331	10,433,508	0.767	0.427	1.194
2018	8,953,921	4	190	421,383	4,436,281	192,271	2,458,865	7,508,800	0.543	0.296	0.839
MA Total:	39,967,306	53	830	9,814,291	15,196,823	4,204,383	9,429,565	38,645,062	0.626	0.341	0.967

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.258	0.305	.
(14) Massachusetts Credibility:	0.930	1.000	.
(15) Countrywide Pure Premium:	0.498	0.233	0.731
(16) Countrywide Indicated Relativity:	0.208	0.214	.
(17) Countrywide Credibility:	0.040	0.000	.
(18) Countrywide Lost-Time Claims:	3751.0	.	.
(19) Pure Premium Underlying Present Rate:	0.582	0.322	0.904
(20) Relativity to Underlying Present Rate:	0.266	0.331	.
(21) Credibility to Underlying Relativity:	0.030	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.256	0.305	.
(24) Balanced Formula Relativity:	0.258	0.305	0.273

IX 000189 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 120

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5610 CLEANER - DEBRIS REMOVAL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	503,061	4	43	779,546	672,158	94,706	234,679	1,781,088	2,886	0,655	3,541
2015	584,074	2	48	155,861	1,604,908	8,961	387,255	2,156,985	3,015	0,678	3,693
2016	653,024	6	38	1,179,753	141,800	409,829	141,254	1,872,636	2,024	0,844	2,868
2017	644,611	1	39	329,816	617,168	159,258	246,355	1,352,598	1,469	0,629	2,098
2018	642,257	1	44	11,448	3,280,813	6,834	998,790	4,297,884	5,126	1,566	6,692
MA Total:	3,027,028	14	212	2,456,424	6,316,848	679,587	2,008,333	11,461,192	2,898	0,888	3,786

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.194	0.794	.
(14) Massachusetts Credibility:	0.560	0.640	.
(15) Countrywide Pure Premium:	1.848	0.899	2.747
(16) Countrywide Indicated Relativity:	0.773	0.826	.
(17) Countrywide Credibility:	0.220	0.180	.
(18) Countrywide Lost-Time Claims:	476.00	.	.
(19) Pure Premium Underlying Present Rate:	2.223	0.695	2.918
(20) Relativity to Underlying Present Rate:	1.015	0.714	.
(21) Credibility to Underlying Relativity:	0.220	0.180	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.062	0.785	.
(24) Balanced Formula Relativity:	1.072	0.785	0.982

Class(es):		Effective: 7/1/2022							Construction		
5645 CARPENTRY-DETACHED ONE OR TWO FAMILY DWELLINGS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	5,446,345	50	669	7,727,035	10,712,702	4,061,013	6,757,104	29,257,855	3,386	1,986	5,372
2015	6,233,901	64	711	9,124,513	12,058,274	4,975,298	7,412,336	33,570,422	3,398	1,987	5,385
2016	6,636,015	39	677	5,458,743	13,810,505	2,605,757	9,323,987	31,198,992	2,904	1,798	4,701
2017	7,033,189	50	691	6,591,481	13,038,857	4,301,139	8,087,959	32,019,436	2,791	1,762	4,553
2018	7,584,024	51	697	6,986,010	17,169,525	5,830,336	10,601,965	40,587,836	3,185	2,167	5,352
MA Total:	32,933,474	254	3,445	35,887,782	66,789,863	21,773,543	42,183,352	166,634,540	3,118	1,942	5,060

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.284	1.737	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	5.247	2.630	7.877
(16) Countrywide Indicated Relativity:	2.194	2.416	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	13360	.	.
(19) Pure Premium Underlying Present Rate:	3.012	1.686	4.698
(20) Relativity to Underlying Present Rate:	1.376	1.732	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.284	1.737	.
(24) Balanced Formula Relativity:	1.296	1.736	1.435

IX 000190 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 121

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5701 WRECKING: BUILDING OR STRUCTURES-NOT MARINE- ALL OPERATIONS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	38.041	0	10	0	154,741	0	92,990	247,731	4,068	2,444	6,512
2015	62,379	3	4	950,652	422,538	737,561	120,086	2,230,837	22,014	13,749	35,762
2016	50,768	0	4	0	47,679	0	26,187	73,866	0,939	0,516	1,455
2017	49,330	0	6	0	774,705	0	181,021	955,726	15,705	3,670	19,374
2018	40,801	0	2	0	196,214	0	60,292	256,505	4,809	1,478	6,287
MA Total:	241,318	3	26	950,652	1,595,877	737,561	480,576	3,764,666	10,553	5,048	15,600

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.346	4.514	.
(14) Massachusetts Credibility:	0.350	0.520	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	3.760	4.970	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	8.617	5.155	13.772
(20) Relativity to Underlying Present Rate:	3.936	5.295	.
(21) Credibility to Underlying Relativity:	0.650	0.480	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	4.080	4.889	.
(24) Balanced Formula Relativity:	4.119	4.887	4.361

Class(es):		Effective: 7/1/2022							Construction		
5703 BUILDING RAISING OR MOVING & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	12,331	0	1	0	0	0	1,413	1,413	0.000	0.115	0.115
2015	11,512	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	15,821	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	14,884	0	1	0	9,633	0	6,388	16,021	0.647	0.429	1,076
2018	16,729	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	71,277	0	2	0	9,633	0	7,800	17,434	0.135	0.109	0.245

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.056	0.098	.
(14) Massachusetts Credibility:	0.180	0.220	.
(15) Countrywide Pure Premium:	10.790	4.762	15.552
(16) Countrywide Indicated Relativity:	4.513	4.374	.
(17) Countrywide Credibility:	0.230	0.250	.
(18) Countrywide Lost-Time Claims:	30.000	.	.
(19) Pure Premium Underlying Present Rate:	5.186	2.065	7.250
(20) Relativity to Underlying Present Rate:	2.369	2.121	.
(21) Credibility to Underlying Relativity:	0.590	0.530	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	2.445	2.239	.
(24) Balanced Formula Relativity:	2.469	2.239	2.396

IX 000191 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 122

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
5705 SALVAGE OPERATION - NO WRECKING OR ANY STRUCTURAL OPERATIONS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	242	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	1,927	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	1,952	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	247	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	270	0	1	0	0	0	945	945	0.000	3.501	3.501
MA Total:	4,638	0	1	0	0	0	945	945	0.000	0.204	0.204

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.182	.
(14) Massachusetts Credibility:	0.060	0.070	.
(15) Countrywide Pure Premium:	4.818	1.386	6.203
(16) Countrywide Indicated Relativity:	2.015	1.273	.
(17) Countrywide Credibility:	0.180	0.190	.
(18) Countrywide Lost-Time Claims:	16.000	.	.
(19) Pure Premium Underlying Present Rate:	4.889	2.123	7.012
(20) Relativity to Underlying Present Rate:	2.233	2.181	.
(21) Credibility to Underlying Relativity:	0.760	0.740	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	2.060	1.869	.
(24) Balanced Formula Relativity:	2.080	1.868	2.013

Class(es):		Effective: 7/1/2022							Construction		
6003 PILE DRIVING & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	67,323	1	9	436,620	41,117	126,670	13,160	617,567	7,096	2,077	9,173
2015	105,183	1	6	502,513	242,461	174,383	113,159	1,032,516	7,083	2,734	9,816
2016	89,447	2	10	563,255	44,693	131,794	66,872	806,613	6,797	2,221	9,018
2017	66,365	0	1	0	0	0	107	107	0.000	0.002	0.002
2018	95,002	0	6	0	58,552	0	17,704	76,256	0.616	0.186	0.803
MA Total:	423,321	4	32	1,502,388	386,823	432,847	211,001	2,533,058	4.463	1.521	5.984

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.838	1.360	.
(14) Massachusetts Credibility:	0.330	0.410	.
(15) Countrywide Pure Premium:	3.383	1.401	4.783
(16) Countrywide Indicated Relativity:	1.415	1.287	.
(17) Countrywide Credibility:	0.340	0.300	.
(18) Countrywide Lost-Time Claims:	115.00	.	.
(19) Pure Premium Underlying Present Rate:	4.193	1.600	5.792
(20) Relativity to Underlying Present Rate:	1.915	1.643	.
(21) Credibility to Underlying Relativity:	0.330	0.290	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.720	1.420	.
(24) Balanced Formula Relativity:	1.736	1.420	1.636

IX 000192 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 123

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
6204 DRILLING NOC & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	139,839	2	16	8,523	76,811	10,572	64,196	160,102	0,610	0,535	1,145
2015	195,434	2	21	91,554	1,064,528	52,067	429,541	1,637,690	5,915	2,464	8,380
2016	170,168	1	10	17,013	340,209	6,350	62,395	425,966	2,099	0,404	2,503
2017	194,706	0	10	0	70,278	0	40,716	110,994	0,361	0,209	0,570
2018	174,316	0	16	0	392,270	0	214,163	606,433	2,250	1,229	3,479
MA Total:	874,463	5	73	117,089	1,944,095	68,990	811,011	2,941,185	2,357	1,006	3,363

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.971	0.900	.
(14) Massachusetts Credibility:	0.360	0.450	.
(15) Countrywide Pure Premium:	3.225	1.475	4.701
(16) Countrywide Indicated Relativity:	1.349	1.355	.
(17) Countrywide Credibility:	0.320	0.280	.
(18) Countrywide Lost-Time Claims:	769.00	.	.
(19) Pure Premium Underlying Present Rate:	2.550	0.998	3.548
(20) Relativity to Underlying Present Rate:	1.165	1.025	.
(21) Credibility to Underlying Relativity:	0.320	0.270	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.154	1.061	.
(24) Balanced Formula Relativity:	1.165	1.061	1.132

Class(es):		Effective: 7/1/2022							Construction		
6217 EXCAVATION & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,613,062	25	257	4,137,942	3,735,243	1,570,295	1,950,182	11,393,662	2,179	0,974	3,153
2015	4,100,009	19	268	3,997,527	5,366,646	1,271,576	2,188,639	12,824,387	2,284	0,844	3,128
2016	4,213,076	26	223	4,902,395	6,229,685	1,947,370	2,951,174	16,030,624	2,642	1,163	3,805
2017	4,579,789	27	266	7,351,940	7,630,086	2,215,234	2,829,036	20,026,295	3,271	1,101	4,373
2018	5,126,668	16	207	3,907,716	4,095,974	1,273,178	2,002,961	11,279,829	1,561	0,639	2,200
MA Total:	21,632,603	113	1,221	24,297,520	27,057,633	8,277,653	11,921,991	71,554,797	2,374	0,934	3,308

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.978	0.835	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.096	0.902	2.998
(16) Countrywide Indicated Relativity:	0.877	0.829	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	6212.0	.	.
(19) Pure Premium Underlying Present Rate:	2.064	0.870	2.933
(20) Relativity to Underlying Present Rate:	0.943	0.893	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.978	0.835	.
(24) Balanced Formula Relativity:	0.987	0.835	0.939

IX 000193 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 124

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
6229 IRRIGATION OR DRAINAGE SYSTEM CONSTRUCTION &DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	338,517	4	22	594,704	309,123	154,817	235,571	1,294,214	2,670	1,153	3,823
2015	390,871	1	21	51,674	779,220	5,057	181,858	1,017,809	2,126	0,478	2,604
2016	415,897	2	15	215,446	196,876	193,834	119,455	725,611	0,991	0,753	1,745
2017	458,887	0	34	0	533,715	0	287,954	821,668	1,163	0,628	1,791
2018	473,397	2	42	209,056	984,624	78,367	504,594	1,776,642	2,522	1,231	3,753
MA Total:	2,077,569	9	134	1,070,880	2,803,558	432,076	1,329,431	5,635,945	1,865	0,848	2,713

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.768	0.758	.
(14) Massachusetts Credibility:	0.450	0.580	.
(15) Countrywide Pure Premium:	2.146	1.121	3.267
(16) Countrywide Indicated Relativity:	0.897	1.030	.
(17) Countrywide Credibility:	0.280	0.210	.
(18) Countrywide Lost-Time Claims:	627.00	.	.
(19) Pure Premium Underlying Present Rate:	1.852	0.784	2.637
(20) Relativity to Underlying Present Rate:	0.846	0.806	.
(21) Credibility to Underlying Relativity:	0.270	0.210	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.825	0.825	.
(24) Balanced Formula Relativity:	0.833	0.825	0.831

Class(es):		Effective: 7/1/2022							Construction		
6233 OIL OR GAS PIPELINE CONSTRUCTION & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	13,405	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	45,365	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	72,927	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	36,379	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	29,922	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	197,997	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.150	0.170	.
(15) Countrywide Pure Premium:	1.511	0.529	2.039
(16) Countrywide Indicated Relativity:	0.632	0.486	.
(17) Countrywide Credibility:	0.430	0.420	.
(18) Countrywide Lost-Time Claims:	527.00	.	.
(19) Pure Premium Underlying Present Rate:	1.140	0.388	1.528
(20) Relativity to Underlying Present Rate:	0.521	0.399	.
(21) Credibility to Underlying Relativity:	0.420	0.410	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.490	0.367	.
(24) Balanced Formula Relativity:	0.495	0.367	0.455

IX 000194 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 125

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
6251 TUNNELING - NOT PNEUMATIC - ALL OPERATIONS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	235	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	250	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	485	0	0	0	0	0	0	0	0.000	0.000	0.000

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.020	0.020	.
(15) Countrywide Pure Premium:	1.944	1.063	3.007
(16) Countrywide Indicated Relativity:	0.813	0.976	.
(17) Countrywide Credibility:	0.240	0.250	.
(18) Countrywide Lost-Time Claims:	31.000	.	.
(19) Pure Premium Underlying Present Rate:	2.412	0.649	3.062
(20) Relativity to Underlying Present Rate:	1.102	0.667	.
(21) Credibility to Underlying Relativity:	0.740	0.730	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.011	0.731	.
(24) Balanced Formula Relativity:	1.020	0.731	0.929

Class(es):		Effective: 7/1/2022							Construction		
6252 SHAFT SINKING - ALL OPERATIONS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	34.212	0	2	0	0	0	3.300	3.300	0.000	0.096	0.096
2015	26.212	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	80.775	1	6	14.539	141.912	1.811	114.142	272.403	1.937	1.435	3.372
2017	50.464	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	90.317	0	1	0	112.082	0	55.434	167.516	1.241	0.614	1.855
MA Total:	281.980	1	9	14.539	253.994	1.811	172.876	443.219	0.952	0.620	1.572

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.392	0.554	.
(14) Massachusetts Credibility:	0.230	0.280	.
(15) Countrywide Pure Premium:	2.213	0.541	2.753
(16) Countrywide Indicated Relativity:	0.925	0.497	.
(17) Countrywide Credibility:	0.310	0.320	.
(18) Countrywide Lost-Time Claims:	60.000	.	.
(19) Pure Premium Underlying Present Rate:	2.585	0.919	3.504
(20) Relativity to Underlying Present Rate:	1.181	0.944	.
(21) Credibility to Underlying Relativity:	0.460	0.400	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.920	0.692	.
(24) Balanced Formula Relativity:	0.929	0.691	0.854

IX 000195 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 126

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
6306 SEWER CONSTRUCTION - ALL OPERATIONS & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	245,910	3	30	582,558	508,293	359,577	242,075	1,692,503	4,436	2,447	6,883
2015	264,977	3	29	524,802	986,617	69,189	215,909	1,796,516	5,704	1,076	6,780
2016	276,051	6	26	1,801,874	902,143	353,236	209,685	3,266,939	9,795	2,039	11,835
2017	254,204	2	21	530,695	556,945	71,856	264,887	1,424,384	4,279	1,325	5,603
2018	268,633	2	29	812,687	1,149,175	694,324	359,874	3,016,060	7,303	3,924	11,227
MA Total:	1,309,775	16	135	4,252,617	4,103,173	1,548,181	1,292,430	11,196,401	6,380	2,169	8,548

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.627	1.939	.
(14) Massachusetts Credibility:	0.490	0.610	.
(15) Countrywide Pure Premium:	2.612	1.114	3.727
(16) Countrywide Indicated Relativity:	1.093	1.024	.
(17) Countrywide Credibility:	0.260	0.200	.
(18) Countrywide Lost-Time Claims:	1379.0	.	.
(19) Pure Premium Underlying Present Rate:	3.569	1.405	4.973
(20) Relativity to Underlying Present Rate:	1.630	1.443	.
(21) Credibility to Underlying Relativity:	0.250	0.190	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.979	1.662	.
(24) Balanced Formula Relativity:	1.998	1.661	1.892

Class(es):		Effective: 7/1/2022							Construction		
6319 GAS MAIN OR CONNECTION CONSTRUCTION & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	707,483	3	30	250,548	552,045	108,495	217,768	1,128,857	1,134	0,461	1,596
2015	833,223	3	35	641,671	1,428,822	344,079	528,580	2,943,153	2,485	1,047	3,532
2016	969,608	2	53	444,153	916,048	94,973	470,442	1,925,616	1,403	0,583	1,986
2017	910,626	2	23	354,553	858,175	36,815	461,925	1,711,469	1,332	0,548	1,879
2018	1,205,269	0	31	0	717,127	0	277,170	994,297	0,595	0,230	0,825
MA Total:	4,626,210	10	172	1,690,925	4,472,219	584,362	1,955,886	8,703,392	1,332	0,549	1,881

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.549	0.491	.
(14) Massachusetts Credibility:	0.570	0.720	.
(15) Countrywide Pure Premium:	1.685	0.763	2.449
(16) Countrywide Indicated Relativity:	0.705	0.701	.
(17) Countrywide Credibility:	0.220	0.140	.
(18) Countrywide Lost-Time Claims:	1474.0	.	.
(19) Pure Premium Underlying Present Rate:	1.477	0.606	2.083
(20) Relativity to Underlying Present Rate:	0.675	0.623	.
(21) Credibility to Underlying Relativity:	0.210	0.140	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.609	0.539	.
(24) Balanced Formula Relativity:	0.615	0.539	0.591

IX 000196 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 127

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
6325 CONDUIT CONSTRUCTION - FOR CABLES OR WIRES & DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	245,517	1	14	93,879	293,914	22,589	167,035	577,417	1,579	0,772	2,352
2015	263,217	0	10	0	599,319	0	280,067	879,386	2,277	1,064	3,341
2016	261,444	2	8	177,782	723	13,826	17,406	209,737	0,683	0,119	0,802
2017	281,605	0	12	0	42,264	0	72,100	114,364	0,150	0,256	0,406
2018	357,945	0	4	0	99,501	0	18,585	118,087	0,278	0,052	0,330
MA Total:	1,409,728	3	48	271,661	1,035,721	36,416	555,193	1,898,991	0,927	0,420	1,347

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.382	0.375	.
(14) Massachusetts Credibility:	0.340	0.430	.
(15) Countrywide Pure Premium:	1.641	0.794	2.435
(16) Countrywide Indicated Relativity:	0.686	0.729	.
(17) Countrywide Credibility:	0.330	0.290	.
(18) Countrywide Lost-Time Claims:	1311.0	.	.
(19) Pure Premium Underlying Present Rate:	1.335	0.560	1.895
(20) Relativity to Underlying Present Rate:	0.610	0.576	.
(21) Credibility to Underlying Relativity:	0.330	0.280	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.558	0.534	.
(24) Balanced Formula Relativity:	0.563	0.534	0.554

Class(es):		Effective: 7/1/2022							Construction		
6400 FENCE ERECTION - ALL TYPES											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	314,443	1	42	331,969	247,772	203,562	114,425	897,728	1,844	1,011	2,855
2015	356,043	3	39	605,468	276,393	205,394	257,993	1,345,248	2,477	1,301	3,778
2016	387,076	4	45	825,045	134,135	842,671	179,274	1,981,124	2,478	2,640	5,118
2017	430,680	2	60	77,333	1,003,590	13,738	323,523	1,418,183	2,510	0,783	3,293
2018	461,014	2	51	255,694	389,598	42,580	360,838	1,048,710	1,400	0,875	2,275
MA Total:	1,949,257	12	237	2,095,509	2,051,487	1,307,945	1,236,052	6,690,993	2,127	1,305	3,433

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.876	1.167	.
(14) Massachusetts Credibility:	0.470	0.650	.
(15) Countrywide Pure Premium:	2.616	1.231	3.848
(16) Countrywide Indicated Relativity:	1.094	1.131	.
(17) Countrywide Credibility:	0.270	0.180	.
(18) Countrywide Lost-Time Claims:	1024.0	.	.
(19) Pure Premium Underlying Present Rate:	2.152	1.115	3.266
(20) Relativity to Underlying Present Rate:	0.983	1.145	.
(21) Credibility to Underlying Relativity:	0.260	0.170	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.963	1.157	.
(24) Balanced Formula Relativity:	0.972	1.157	1.030

IX 000197 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 128

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous			
6834 BOAT BUILDING OR REPAIRING & DRIVERS: MA ACT												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	219,374	0	19	0	10,884	0	22,319	33,202	0.050	0.102	0.151	
2015	245,659	0	28	0	35,900	0	113,305	149,204	0.146	0.461	0.607	
2016	266,057	2	29	52,651	558,338	134,814	292,333	1,038,135	2.296	1.605	3.902	
2017	279,223	1	25	13,334	79,911	5,527	96,871	195,643	0.334	0.367	0.701	
2018	289,798	0	27	0	17,606	0	44,692	62,298	0.061	0.154	0.215	
MA Total:	1,300,111	3	128	65,985	702,638	140,341	569,519	1,478,482	0.591	0.546	1.137	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.266	0.475	.
(14) Massachusetts Credibility:	0.290	0.450	.
(15) Countrywide Pure Premium:	1.170	0.767	1.937
(16) Countrywide Indicated Relativity:	0.551	0.711	.
(17) Countrywide Credibility:	0.360	0.280	.
(18) Countrywide Lost-Time Claims:	948.00	.	.
(19) Pure Premium Underlying Present Rate:	0.993	0.669	1.663
(20) Relativity to Underlying Present Rate:	0.489	0.652	.
(21) Credibility to Underlying Relativity:	0.350	0.270	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.447	0.589	.
(24) Balanced Formula Relativity:	0.446	0.592	0.496

Class(es):		Effective: 7/1/2022							Miscellaneous			
6836 MARINA & DRIVERS: MA ACT												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	448,125	3	46	230,485	223,383	346,810	194,205	994,882	1.013	1.207	2.220	
2015	480,536	0	58	0	194,970	0	226,672	421,642	0.406	0.472	0.877	
2016	483,859	3	49	646,207	98,521	271,419	184,274	1,200,421	1.539	0.942	2.481	
2017	543,485	1	86	34,022	269,695	108,530	370,340	782,587	0.559	0.881	1.440	
2018	563,590	1	58	58,466	375,491	22,690	595,790	1,052,437	0.770	1.097	1.867	
MA Total:	2,519,595	8	297	969,180	1,162,060	749,449	1,571,281	4,451,970	0.846	0.921	1.767	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.380	0.800	.
(14) Massachusetts Credibility:	0.440	0.690	.
(15) Countrywide Pure Premium:	1.542	1.072	2.615
(16) Countrywide Indicated Relativity:	0.727	0.994	.
(17) Countrywide Credibility:	0.280	0.160	.
(18) Countrywide Lost-Time Claims:	656.00	.	.
(19) Pure Premium Underlying Present Rate:	1.433	1.010	2.443
(20) Relativity to Underlying Present Rate:	0.706	0.984	.
(21) Credibility to Underlying Relativity:	0.280	0.150	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.568	0.859	.
(24) Balanced Formula Relativity:	0.567	0.864	0.668

IX 000198 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 129

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
7219 TRUCKING: NOC - ALL EMP & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,841,923	34	462	4,479,228	7,382,624	1,178,290	3,554,952	16,595,094	4,174	1,666	5,839
2015	3,113,096	44	412	6,800,735	7,375,647	2,227,858	3,557,646	19,961,886	4,554	1,858	6,412
2016	3,106,943	32	366	4,220,571	7,063,561	3,098,227	3,691,237	18,073,596	3,632	2,185	5,817
2017	3,199,943	32	406	5,164,892	7,657,201	1,495,183	3,421,122	17,738,398	4,007	1,536	5,543
2018	3,026,301	29	303	4,429,154	6,364,649	1,709,066	3,799,035	16,301,904	3,567	1,820	5,387
MA Total:	15,288,206	171	1,949	25,094,580	35,843,683	9,708,624	18,023,990	88,670,877	3,986	1,814	5,800

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.791	1.577	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	3.877	1.596	5.473
(16) Countrywide Indicated Relativity:	1.826	1.479	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	51660	.	.
(19) Pure Premium Underlying Present Rate:	4.019	1.733	5.751
(20) Relativity to Underlying Present Rate:	1.980	1.687	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	1.791	1.577	.
(24) Balanced Formula Relativity:	1.787	1.587	1.719

Class(es):		Effective: 7/1/2022							Miscellaneous		
7230 TRUCKING: PARCEL OR PACKAGE DELIVERY- ALL EMP & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	53,922	1	11	42,678	276,965	26,205	47,840	393,688	5,928	1,373	7,301
2015	52,121	2	9	274,436	160,614	39,124	55,347	529,521	8,347	1,813	10,159
2016	73,897	2	11	59,099	140,987	13,709	117,575	331,370	2,708	1,777	4,484
2017	92,075	0	28	0	339,879	0	166,116	505,995	3,691	1,804	5,495
2018	110,087	1	34	45,407	465,461	35,096	211,279	757,242	4,641	2,238	6,879
MA Total:	382,102	6	93	421,620	1,383,906	114,134	598,156	2,517,816	4,725	1,864	6,589

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.123	1.620	.
(14) Massachusetts Credibility:	0.330	0.420	.
(15) Countrywide Pure Premium:	4.015	1.929	5.944
(16) Countrywide Indicated Relativity:	1.891	1.788	.
(17) Countrywide Credibility:	0.340	0.290	.
(18) Countrywide Lost-Time Claims:	576.00	.	.
(19) Pure Premium Underlying Present Rate:	4.548	1.876	6.424
(20) Relativity to Underlying Present Rate:	2.240	1.827	.
(21) Credibility to Underlying Relativity:	0.330	0.290	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	2.083	1.729	.
(24) Balanced Formula Relativity:	2.078	1.740	1.963

IX 000199 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 130

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
7231 TRUCKING: MAIL, PARCEL OR PACKAGE DELIVERY-ALL EMP & DRIVERS											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums		
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	484,082	18	95	1,438,895	1,226,820	397,490	539,626	3,602,830	5,507	1,936	7,443
2015	554,065	12	128	1,795,105	1,700,640	1,601,181	726,375	5,823,302	6,309	4,201	10,510
2016	668,100	26	125	3,396,901	2,003,544	1,452,572	1,056,413	7,909,429	8,083	3,755	11,839
2017	701,798	17	160	1,452,055	2,889,776	463,673	1,414,447	6,219,952	6,187	2,676	8,863
2018	901,235	19	193	1,598,174	2,923,879	753,284	1,248,280	6,523,618	5,018	2,221	7,239
MA Total:	3,309,279	92	701	9,681,130	10,744,660	4,668,200	4,985,141	30,079,131	6,172	2,917	9,089

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.773	2.535	.
(14) Massachusetts Credibility:	0.820	1.000	.
(15) Countrywide Pure Premium:	3.998	1.759	5.757
(16) Countrywide Indicated Relativity:	1.883	1.630	.
(17) Countrywide Credibility:	0.090	0.000	.
(18) Countrywide Lost-Time Claims:	5095.0	.	.
(19) Pure Premium Underlying Present Rate:	5.153	2.835	7.988
(20) Relativity to Underlying Present Rate:	2.539	2.761	.
(21) Credibility to Underlying Relativity:	0.090	0.000	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	2.672	2.535	.
(24) Balanced Formula Relativity:	2.666	2.551	2.627

Class(es):		Effective: 7/1/2022							Miscellaneous		
7360 FREIGHT HANDLING NOC: MA ACT											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums		
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	103,693	0	20	0	26,991	0	39,732	66,722	0.260	0.383	0.643
2015	114,101	0	13	0	19,882	0	12,547	32,429	0.174	0.110	0.284
2016	108,313	0	14	0	245,735	0	46,440	292,175	2.269	0.429	2.698
2017	116,769	2	18	62,024	505,556	17,268	150,734	735,582	4.861	1.439	6.299
2018	134,299	1	31	130,861	538,595	56,255	228,313	954,024	4.985	2.119	7.104
MA Total:	577,176	3	96	192,884	1,336,759	73,522	477,766	2,080,931	2.650	0.955	3.605

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.191	0.830	.
(14) Massachusetts Credibility:	0.270	0.360	.
(15) Countrywide Pure Premium:	2.058	1.038	3.096
(16) Countrywide Indicated Relativity:	0.969	0.962	.
(17) Countrywide Credibility:	0.370	0.320	.
(18) Countrywide Lost-Time Claims:	1548.0	.	.
(19) Pure Premium Underlying Present Rate:	1.766	0.881	2.647
(20) Relativity to Underlying Present Rate:	0.870	0.858	.
(21) Credibility to Underlying Relativity:	0.360	0.320	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.993	0.881	.
(24) Balanced Formula Relativity:	0.991	0.887	0.956

IX 000200 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 131

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
7370 TAXICAB CO: ALL OTHER EMP & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums		
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,346,353	12	387	206,257	1,049,212	175,950	1,008,094	2,439,512	0.932	0.879	1.812
2015	1,397,906	13	298	661,234	1,067,341	298,442	873,875	2,900,892	1.237	0.839	2.075
2016	1,477,483	22	446	2,021,592	2,050,674	867,517	1,454,805	6,394,589	2.756	1.572	4.328
2017	1,792,415	15	527	1,377,729	2,019,977	445,671	1,327,453	5,170,830	1.896	0.989	2.885
2018	1,827,016	15	498	869,884	2,598,352	378,779	1,827,583	5,674,598	1.898	1.208	3.106
MA Total:	7,841,173	77	2,156	5,136,695	8,785,556	2,166,360	6,491,810	22,580,422	1.776	1.104	2.880

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.798	0.960	.
(14) Massachusetts Credibility:	0.730	1.000	.
(15) Countrywide Pure Premium:	1.923	1.174	3.096
(16) Countrywide Indicated Relativity:	0.906	1.088	.
(17) Countrywide Credibility:	0.140	0.000	.
(18) Countrywide Lost-Time Claims:	2309.0	.	.
(19) Pure Premium Underlying Present Rate:	1.644	1.011	2.656
(20) Relativity to Underlying Present Rate:	0.810	0.985	.
(21) Credibility to Underlying Relativity:	0.130	0.000	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.814	0.960	.
(24) Balanced Formula Relativity:	0.813	0.966	0.865

Class(es):		Effective: 7/1/2022							Miscellaneous		
7380 DRIVERS, CHAUFFEURS AND HELPERS-NOC-COMMERCIAL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums		
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,945,618	53	815	6,459,417	5,812,323	2,093,979	3,553,305	17,919,023	3.110	1.431	4.541
2015	4,159,835	55	770	4,641,718	5,618,157	1,825,393	3,306,872	15,392,140	2.466	1.234	3.700
2016	4,100,698	55	744	4,979,612	7,509,456	2,248,243	4,828,272	19,565,583	3.046	1.726	4.771
2017	4,338,798	36	755	5,471,524	8,355,352	1,783,453	4,833,276	20,443,605	3.187	1.525	4.712
2018	4,334,122	42	761	6,792,451	8,005,011	2,544,687	4,707,381	22,049,530	3.414	1.673	5.087
MA Total:	20,879,072	241	3,845	28,344,721	35,300,299	10,495,754	21,229,106	95,369,881	3.048	1.519	4.568

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.369	1.321	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.556	1.251	3.807
(16) Countrywide Indicated Relativity:	1.204	1.160	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	27386	.	.
(19) Pure Premium Underlying Present Rate:	2.717	1.320	4.037
(20) Relativity to Underlying Present Rate:	1.339	1.285	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	1.369	1.321	.
(24) Balanced Formula Relativity:	1.366	1.329	1.354

IX 000201 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 132

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
7382 BUS CO: ALL OTHER EMPLOYEES & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums		
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,263,260	46	655	2,904,957	2,380,217	1,532,846	1,774,105	8,592,125	1,620	1,013	2,633
2015	3,574,756	32	632	2,625,696	3,794,744	848,971	2,129,591	9,399,002	1,796	0,833	2,629
2016	3,839,451	40	713	3,457,490	3,778,722	1,404,781	2,539,832	11,180,825	1,885	1,027	2,912
2017	3,875,344	42	616	2,275,398	4,672,905	838,144	2,565,052	10,351,500	1,793	0,878	2,671
2018	4,141,900	57	598	4,878,331	5,052,111	1,720,713	2,711,571	14,362,726	2,398	1,070	3,468
MA Total:	18,694,711	217	3,214	16,141,872	19,678,699	6,345,455	11,720,150	53,886,177	1,916	0,966	2,882

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.861	0.840	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.804	1.047	2.851
(16) Countrywide Indicated Relativity:	0.850	0.971	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	7589.0	.	.
(19) Pure Premium Underlying Present Rate:	1.609	0.859	2.468
(20) Relativity to Underlying Present Rate:	0.793	0.837	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.861	0.840	.
(24) Balanced Formula Relativity:	0.859	0.845	0.854

Class(es):		Effective: 7/1/2022							Miscellaneous		
7403 AIRCRAFT OR HELICOP OP: AIR CARRIER-SCHD/ SUPPL: A/O EMP & DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums		
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,314,032	11	247	1,267,032	1,685,994	842,813	1,210,022	5,005,861	2,247	1,562	3,810
2015	1,837,252	14	342	1,091,581	2,235,779	593,327	1,621,019	5,541,706	1,811	1,205	3,016
2016	1,793,979	5	255	365,354	1,376,644	135,370	1,330,190	3,207,560	0,971	0,817	1,788
2017	1,935,320	13	258	1,178,713	1,521,100	531,033	1,215,683	4,446,528	1,395	0,903	2,298
2018	1,444,009	5	198	457,283	1,153,753	158,587	653,311	2,422,935	1,116	0,562	1,678
MA Total:	8,324,592	48	1,300	4,359,964	7,973,271	2,261,130	6,030,225	20,624,590	1,482	0,996	2,478

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.666	0.866	.
(14) Massachusetts Credibility:	0.760	1.000	.
(15) Countrywide Pure Premium:	2.024	1.066	3.090
(16) Countrywide Indicated Relativity:	0.953	0.988	.
(17) Countrywide Credibility:	0.120	0.000	.
(18) Countrywide Lost-Time Claims:	17139	.	.
(19) Pure Premium Underlying Present Rate:	1.677	1.016	2.693
(20) Relativity to Underlying Present Rate:	0.826	0.990	.
(21) Credibility to Underlying Relativity:	0.120	0.000	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.719	0.866	.
(24) Balanced Formula Relativity:	0.718	0.871	0.770

IX 000202 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 133

Calculation of Class Relativities

Class(es):									Effective: 7/1/2022			Miscellaneous		
7405 AIRCRAFT OR HELICOP OP: AIR CARRIER-SCHD/ SUPPL: FLYING CREW														
Converted Unlimited Losses														
Amount														
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums						
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)			
2014	2,062,734	6	68	44,089	925,717	42,103	428,048	1,439,956	0.470	0.228	0.698			
2015	3,120,307	8	103	1,108,556	425,694	386,106	502,992	2,423,349	0.492	0.285	0.777			
2016	2,924,810	1	94	13,842	580,603	4,142	433,244	1,031,830	0.203	0.150	0.353			
2017	3,158,686	10	154	1,638,034	1,672,202	472,024	669,518	4,451,779	1.048	0.361	1.409			
2018	950,567	1	34	51,549	689,909	23,747	365,336	1,130,540	0.780	0.409	1.189			
MA Total:	12,217,103	26	453	2,856,068	4,294,126	928,122	2,399,138	10,477,453	0.585	0.272	0.858			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.263	0.237	.
(14) Massachusetts Credibility:	0.570	0.760	.
(15) Countrywide Pure Premium:	0.675	0.259	0.935
(16) Countrywide Indicated Relativity:	0.318	0.240	.
(17) Countrywide Credibility:	0.220	0.120	.
(18) Countrywide Lost-Time Claims:	5442.0	.	.
(19) Pure Premium Underlying Present Rate:	0.553	0.262	0.815
(20) Relativity to Underlying Present Rate:	0.272	0.255	.
(21) Credibility to Underlying Relativity:	0.210	0.120	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.277	0.239	.
(24) Balanced Formula Relativity:	0.276	0.241	0.264

Class(es):									Effective: 7/1/2022			Miscellaneous		
7420 AIRCRAFT OR HELICOP OP: PUBLIC EXHIB STUNT FLYING: FLY CREW														
Converted Unlimited Losses														
Amount														
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums						
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)			
2014	3,164	0	0	0	0	0	0	0	0.000	0.000	0.000			
2015	4,438	0	1	0	2,555	0	7,012	9,567	0.576	1.580	2.156			
2016	3,623	1	0	282,176	0	530,321	0	812,497	77,890	146.39	224.28			
2017	3,061	0	1	0	241,783	0	30,121	271,903	78,983	9,839	88,822			
2018	1,832	0	0	0	0	0	0	0	0.000	0.000	0.000			
MA Total:	16,117	1	2	282,176	244,337	530,321	37,133	1,093,967	32.667	35.207	67.875			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	14.675	30.598	.
(14) Massachusetts Credibility:	0.110	0.150	.
(15) Countrywide Pure Premium:	4.644	0.733	5.377
(16) Countrywide Indicated Relativity:	2.188	0.679	.
(17) Countrywide Credibility:	0.220	0.230	.
(18) Countrywide Lost-Time Claims:	25,000	.	.
(19) Pure Premium Underlying Present Rate:	6.386	3.563	9.949
(20) Relativity to Underlying Present Rate:	3.146	3.470	.
(21) Credibility to Underlying Relativity:	0.670	0.620	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	4.203	6.897	.
(24) Balanced Formula Relativity:	4.194	6.941	5.130

IX 000203 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 134

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
7421 AIRCRAFT OR HELICOP OP: TRANSPORT PERS IN EMPLR BUS: FLY CRW											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	271,060	0	3	0	0	0	4,109	4,109	0.000	0.015	0.015
2015	328,713	1	1	204,934	4,979	69,834	592	280,340	0.639	0.214	0.853
2016	380,964	0	3	0	233,893	0	35,157	269,051	0.614	0.092	0.706
2017	405,138	0	8	0	0	0	16,087	16,087	0.000	0.040	0.040
2018	460,095	1	4	393,014	38,940	46,767	15,801	494,522	0.939	0.136	1.075
MA Total:	1,845,970	2	19	597,948	277,812	116,601	71,748	1,064,109	0.474	0.102	0.576

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.213	0.089	.
(14) Massachusetts Credibility:	0.270	0.350	.
(15) Countrywide Pure Premium:	0.642	0.280	0.922
(16) Countrywide Indicated Relativity:	0.302	0.260	.
(17) Countrywide Credibility:	0.370	0.330	.
(18) Countrywide Lost-Time Claims:	427.00	.	.
(19) Pure Premium Underlying Present Rate:	0.584	0.244	0.828
(20) Relativity to Underlying Present Rate:	0.288	0.237	.
(21) Credibility to Underlying Relativity:	0.360	0.320	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.273	0.193	.
(24) Balanced Formula Relativity:	0.272	0.194	0.246

Class(es):		Effective: 7/1/2022							Miscellaneous		
7425 AIRCRAFT OR HELICOP OP: NOC- HELICOPTERS: FLYING CREW											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	70,934	0	2	0	1,968	0	2,813	4,781	0.028	0.040	0.067
2015	75,437	0	6	0	168,456	0	153,200	321,657	2.233	2.031	4.264
2016	83,601	0	3	0	0	0	3,308	3,308	0.000	0.040	0.040
2017	27,763	1	0	187,740	0	216,152	0	403,891	6.762	7.786	14.548
2018	33,732	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	291,466	1	11	187,740	170,424	216,152	159,321	733,637	1.229	1.288	2.517

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.552	1.120	.
(14) Massachusetts Credibility:	0.180	0.200	.
(15) Countrywide Pure Premium:	1.471	0.350	1.821
(16) Countrywide Indicated Relativity:	0.693	0.324	.
(17) Countrywide Credibility:	0.410	0.400	.
(18) Countrywide Lost-Time Claims:	156.00	.	.
(19) Pure Premium Underlying Present Rate:	1.262	0.393	1.655
(20) Relativity to Underlying Present Rate:	0.622	0.383	.
(21) Credibility to Underlying Relativity:	0.410	0.400	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.638	0.507	.
(24) Balanced Formula Relativity:	0.637	0.510	0.594

IX 000204 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 135

Calculation of Class Relativities

Class(es):									Effective: 7/1/2022			Miscellaneous		
7502 GAS COMPANY: GAS CO-NATURAL GAS-LOCAL DISTRIBUTION & DR														
Converted Unlimited Losses														
Amount														
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums						
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)			
2014	262,467	0	11	0	105,230	0	59,730	164,959	0.401	0.228	0.628			
2015	219,283	2	12	317,477	66,337	71,659	84,392	539,865	1.750	0.712	2.462			
2016	227,480	0	17	0	218,084	0	61,954	280,038	0.959	0.272	1.231			
2017	267,378	1	22	89,064	153,844	5,936	109,589	358,433	0.908	0.432	1.341			
2018	257,535	0	15	0	63,007	0	69,502	132,509	0.245	0.270	0.515			
MA Total:	1,234,143	3	77	406,540	606,502	77,595	385,167	1,475,804	0.821	0.375	1.196			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.369	0.326	.
(14) Massachusetts Credibility:	0.260	0.350	.
(15) Countrywide Pure Premium:	0.885	0.409	1.294
(16) Countrywide Indicated Relativity:	0.417	0.379	.
(17) Countrywide Credibility:	0.370	0.330	.
(18) Countrywide Lost-Time Claims:	377.00	.	.
(19) Pure Premium Underlying Present Rate:	0.789	0.371	1.160
(20) Relativity to Underlying Present Rate:	0.389	0.361	.
(21) Credibility to Underlying Relativity:	0.370	0.320	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.394	0.355	.
(24) Balanced Formula Relativity:	0.393	0.357	0.381

Class(es):									Effective: 7/1/2022			Miscellaneous		
7515 OIL OR GAS PIPELINE OPERATION & DRIVERS														
Converted Unlimited Losses														
Amount														
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums						
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)			
2014	7,723	2	11	173,333	24,336	246,169	46,571	490,409	25.595	37.905	63.500			
2015	8,561	0	0	0	0	0	0	0	0.000	0.000	0.000			
2016	9,407	0	1	0	0	0	1,297	1,297	0.000	0.138	0.138			
2017	4,220	0	0	0	0	0	0	0	0.000	0.000	0.000			
2018	5,649	0	1	0	0	0	245	245	0.000	0.043	0.043			
MA Total:	35,560	2	13	173,333	24,336	246,169	48,113	491,951	5.559	8.276	13.834			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.497	7.192	.
(14) Massachusetts Credibility:	0.070	0.150	.
(15) Countrywide Pure Premium:	0.610	0.252	0.861
(16) Countrywide Indicated Relativity:	0.287	0.233	.
(17) Countrywide Credibility:	0.470	0.430	.
(18) Countrywide Lost-Time Claims:	355.00	.	.
(19) Pure Premium Underlying Present Rate:	1.019	1.524	2.543
(20) Relativity to Underlying Present Rate:	0.502	1.484	.
(21) Credibility to Underlying Relativity:	0.460	0.420	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.541	1.803	.
(24) Balanced Formula Relativity:	0.539	1.814	0.974

IX 00205 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 136

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
7520 WATERWORKS OPERATION & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	193.082	1	25	2,866	24,511	24,650	50,610	102,638	0.142	0.390	0.532
2015	241.367	0	34	0	114,725	0	228,738	343,462	0.475	0.948	1,423
2016	263.036	2	30	212,117	108,658	24,314	113,271	458,360	1.220	0.523	1,743
2017	167.354	2	22	893,020	27,452	157,302	59,797	1,137,570	5.500	1.297	6,797
2018	159.320	0	26	0	120,285	0	123,247	243,532	0.755	0.774	1,529
MA Total:	1,024,157	5	137	1,108,003	395,631	206,265	575,663	2,285,562	1.468	0.763	2,232

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.660	0.664	.
(14) Massachusetts Credibility:	0.300	0.410	.
(15) Countrywide Pure Premium:	1.321	0.821	2,142
(16) Countrywide Indicated Relativity:	0.622	0.761	.
(17) Countrywide Credibility:	0.350	0.300	.
(18) Countrywide Lost-Time Claims:	1877.0	.	.
(19) Pure Premium Underlying Present Rate:	1.337	0.667	2,004
(20) Relativity to Underlying Present Rate:	0.659	0.650	.
(21) Credibility to Underlying Relativity:	0.350	0.290	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3,377
(23) Formula Relativity:	0.646	0.689	.
(24) Balanced Formula Relativity:	0.645	0.693	0.661

Class(es):		Effective: 7/1/2022							Construction		
7538 ELECTRIC LIGHT OR POWER LINE CONSTRUCTION & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	89.415	0	14	0	702,766	0	314,269	1,017,035	7,860	3,515	11,374
2015	123.894	1	13	169,046	1,032,832	47,897	368,325	1,618,100	9,701	3,359	13,060
2016	228.924	1	9	208,321	621,382	63,435	204,483	1,097,621	3,624	1,170	4,795
2017	237.828	0	9	0	30,551	0	17,211	47,761	0.128	0.072	0.201
2018	306.010	2	32	43,560	258,084	36,352	299,060	637,056	0.986	1.096	2,082
MA Total:	986,072	4	77	420,927	2,645,614	147,685	1,203,348	4,417,573	3.110	1.370	4,480

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.281	1.225	.
(14) Massachusetts Credibility:	0.410	0.530	.
(15) Countrywide Pure Premium:	2.022	0.882	2,904
(16) Countrywide Indicated Relativity:	0.846	0.810	.
(17) Countrywide Credibility:	0.300	0.240	.
(18) Countrywide Lost-Time Claims:	1282.0	.	.
(19) Pure Premium Underlying Present Rate:	2.980	1.339	4,319
(20) Relativity to Underlying Present Rate:	1.361	1.375	.
(21) Credibility to Underlying Relativity:	0.290	0.230	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3,546
(23) Formula Relativity:	1.174	1.160	.
(24) Balanced Formula Relativity:	1.185	1.160	1.177

IX 000206 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 137

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
7539 ELECTRIC LIGHT OR POWER CO NOC-ALL EMP & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,003,814	0	29	0	106,487	0	154,407	260,894	0.106	0.154	0.260
2015	1,128,567	2	40	189,457	514,761	225,364	184,736	1,114,318	0.624	0.363	0.987
2016	1,274,073	2	58	446,931	385,002	366,543	483,199	1,681,675	0.653	0.667	1.320
2017	1,128,701	2	41	109,686	324,180	54,893	228,363	717,122	0.384	0.251	0.635
2018	1,038,994	1	35	228,764	1,309,517	57,838	812,404	2,408,523	1.481	0.838	2.318
MA Total:	5,574,149	7	203	974,838	2,639,946	704,639	1,863,110	6,182,532	0.648	0.461	1.109

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.291	0.400	.
(14) Massachusetts Credibility:	0.410	0.590	.
(15) Countrywide Pure Premium:	0.751	0.401	1.152
(16) Countrywide Indicated Relativity:	0.354	0.371	.
(17) Countrywide Credibility:	0.300	0.210	.
(18) Countrywide Lost-Time Claims:	1193.0	.	.
(19) Pure Premium Underlying Present Rate:	0.528	0.304	0.833
(20) Relativity to Underlying Present Rate:	0.260	0.296	.
(21) Credibility to Underlying Relativity:	0.290	0.200	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.301	0.374	.
(24) Balanced Formula Relativity:	0.300	0.376	0.326

Class(es):		Effective: 7/1/2022							Miscellaneous		
7580 SEWAGE DISPOSAL PLANT OPERATION & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	296,448	4	23	249,579	74,560	64,958	44,755	433,852	1.093	0.370	1.464
2015	276,182	1	30	207,421	1,053,291	116,942	297,757	1,675,410	4.565	1.502	6.066
2016	221,081	2	25	469,588	80,215	56,089	82,403	688,295	2.487	0.626	3.113
2017	209,456	0	21	0	212,851	0	127,931	340,783	1.016	0.611	1.627
2018	188,385	1	11	506,600	65,468	43,893	34,039	650,000	3.037	0.414	3.450
MA Total:	1,191,551	8	110	1,433,188	1,486,385	281,882	586,885	3,788,341	2.450	0.729	3.179

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.101	0.634	.
(14) Massachusetts Credibility:	0.330	0.430	.
(15) Countrywide Pure Premium:	1.243	0.812	2.055
(16) Countrywide Indicated Relativity:	0.586	0.753	.
(17) Countrywide Credibility:	0.340	0.290	.
(18) Countrywide Lost-Time Claims:	747.00	.	.
(19) Pure Premium Underlying Present Rate:	1.529	0.659	2.188
(20) Relativity to Underlying Present Rate:	0.753	0.642	.
(21) Credibility to Underlying Relativity:	0.330	0.280	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.811	0.670	.
(24) Balanced Formula Relativity:	0.809	0.675	0.763

IX 000207 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 138

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
7590 GARBAGE WORKS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	29,485	1	8	24,376	23,185	7,782	17,059	72,402	1,613	0,842	2,456
2015	27,464	0	18	0	143,672	0	72,246	215,918	5,231	2,631	7,862
2016	26,800	4	21	255,088	446,702	169,516	353,152	1,224,458	26,187	19,503	45,689
2017	49,989	1	23	259,488	31,379	53,277	36,261	380,404	5,819	1,791	7,610
2018	39,609	0	6	0	203,124	0	102,033	305,156	5,128	2,576	7,704
MA Total:	173,346	6	76	538,952	848,061	230,575	580,750	2,198,338	8,001	4,680	12,682

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.594	4.068	.
(14) Massachusetts Credibility:	0.180	0.270	.
(15) Countrywide Pure Premium:	1.541	0.891	2.432
(16) Countrywide Indicated Relativity:	0.726	0.826	.
(17) Countrywide Credibility:	0.410	0.370	.
(18) Countrywide Lost-Time Claims:	487.00	.	.
(19) Pure Premium Underlying Present Rate:	2.348	1.365	3.713
(20) Relativity to Underlying Present Rate:	1.157	1.330	.
(21) Credibility to Underlying Relativity:	0.410	0.360	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	1.419	1.883	.
(24) Balanced Formula Relativity:	1.416	1.895	1.579

Class(es):		Effective: 7/1/2022							Miscellaneous		
7600 TELEPHONE OR TELEGRAPH CO: ALL OTHER EMP & DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,550,290	10	128	1,749,857	1,325,521	525,475	823,563	4,424,416	0,866	0,380	1,246
2015	3,070,547	16	165	2,062,715	3,434,180	730,264	1,490,930	7,718,087	1,790	0,723	2,514
2016	3,592,825	23	227	4,252,535	4,778,627	1,447,144	1,967,859	12,446,165	2,514	0,951	3,464
2017	3,738,832	19	266	3,568,166	5,344,610	981,443	2,524,825	12,419,044	2,384	0,938	3,322
2018	3,897,068	20	264	3,528,117	6,319,467	1,375,118	2,382,960	13,605,662	2,527	0,964	3,491
MA Total:	17,849,562	88	1,050	15,161,390	21,202,404	5,059,444	9,190,137	50,613,374	2,037	0,798	2,836

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.915	0.694	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.274	0.989	3.263
(16) Countrywide Indicated Relativity:	1.071	0.917	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	12295	.	.
(19) Pure Premium Underlying Present Rate:	1.748	0.668	2.417
(20) Relativity to Underlying Present Rate:	0.861	0.651	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.915	0.694	.
(24) Balanced Formula Relativity:	0.913	0.698	0.840

IX 000208 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 139

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction			
7601 TELEPHONE, TELEGRAPH OR FIRE ALARM LINE CONSTRUCTION & DR												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	271,376	0	22	0	298,046	0	119,532	417,578	1,098	0,440	1,539	
2015	236,265	5	27	703,480	202,967	878,710	88,729	1,873,885	3,837	4,095	7,931	
2016	272,846	0	13	0	20,113	0	122,523	142,636	0,074	0,449	0,523	
2017	268,280	1	9	144,753	21,263	48,287	17,435	231,738	0,619	0,245	0,864	
2018	252,633	1	11	344,765	45,264	65,714	41,551	497,294	1,544	0,425	1,968	
MA Total:	1,301,400	7	82	1,192,998	587,653	992,711	389,769	3,163,131	1,368	1,062	2,431	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.563	0.950	.
(14) Massachusetts Credibility:	0.420	0.600	.
(15) Countrywide Pure Premium:	4.606	2.051	6.658
(16) Countrywide Indicated Relativity:	1.927	1.884	.
(17) Countrywide Credibility:	0.190	0.200	.
(18) Countrywide Lost-Time Claims:	19.000	.	.
(19) Pure Premium Underlying Present Rate:	2.529	1.358	3.887
(20) Relativity to Underlying Present Rate:	1.155	1.395	.
(21) Credibility to Underlying Relativity:	0.390	0.200	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.053	1.226	.
(24) Balanced Formula Relativity:	1.063	1.225	1.114

Class(es):		Effective: 7/1/2022							Office and Clerical			
7610 RADIO OR TV BROADCAST STATION-ALL EMP & CL, DR												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	4,074,549	3	76	365,763	247,281	58,943	275,072	947,060	0.150	0.082	0.232	
2015	4,393,347	6	56	1,393,387	1,552,186	384,160	296,520	3,626,254	0.670	0.155	0.825	
2016	3,730,805	2	69	424,468	1,209,127	301,459	434,102	2,369,157	0.438	0.197	0.635	
2017	4,294,239	4	82	335,371	875,641	53,662	400,671	1,665,345	0.282	0.106	0.388	
2018	4,165,769	1	52	533,406	769,786	137,449	358,652	1,799,294	0.313	0.119	0.432	
MA Total:	20,658,709	16	335	3,052,395	4,654,022	935,674	1,765,017	10,407,109	0.373	0.131	0.504	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.751	3.364	.
(14) Massachusetts Credibility:	0.520	0.640	.
(15) Countrywide Pure Premium:	0.176	0.095	0.271
(16) Countrywide Indicated Relativity:	3.198	2.662	.
(17) Countrywide Credibility:	0.240	0.180	.
(18) Countrywide Lost-Time Claims:	1878.0	.	.
(19) Pure Premium Underlying Present Rate:	0.261	0.100	0.361
(20) Relativity to Underlying Present Rate:	4.435	2.799	.
(21) Credibility to Underlying Relativity:	0.240	0.180	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	4.822	3.136	.
(24) Balanced Formula Relativity:	4.820	3.139	4.190

IX 000209 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 140

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
7704 FIREFIGHTERS & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	15.028	0	4	0	2,771	0	6,956	9,727	0.184	0.463	0.647
2015	15.131	0	3	0	194,030	0	56,683	250,713	12.823	3.746	16.570
2016	15.648	0	2	0	280	0	2,497	2,777	0.018	0.160	0.177
2017	15.353	0	2	0	0	0	3,623	3,623	0.000	0.236	0.236
2018	20	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	61,179	0	11	0	197,081	0	69,759	266,840	3.221	1.140	4.362

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.447	0.991	.
(14) Massachusetts Credibility:	0.110	0.170	.
(15) Countrywide Pure Premium:	1.695	1.419	3.114
(16) Countrywide Indicated Relativity:	0.798	1.316	.
(17) Countrywide Credibility:	0.450	0.420	.
(18) Countrywide Lost-Time Claims:	881.00	.	.
(19) Pure Premium Underlying Present Rate:	1.757	1.171	2.928
(20) Relativity to Underlying Present Rate:	0.865	1.141	.
(21) Credibility to Underlying Relativity:	0.440	0.410	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.899	1.189	.
(24) Balanced Formula Relativity:	0.897	1.196	0.999

Class(es):		Effective: 7/1/2022							Miscellaneous		
7720 POLICE OFFICERS & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,667,253	4	133	146,550	367,480	116,704	281,646	912,380	0.308	0.239	0.547
2015	1,822,447	7	108	381,638	229,531	568,632	228,703	1,408,504	0.335	0.438	0.773
2016	1,811,493	8	101	670,521	330,217	425,983	361,470	1,788,191	0.552	0.435	0.987
2017	2,038,848	7	118	510,509	740,744	73,281	606,765	1,931,299	0.614	0.334	0.947
2018	2,310,854	5	117	263,218	959,909	130,535	661,548	2,015,210	0.529	0.343	0.872
MA Total:	9,650,896	31	577	1,972,437	2,627,881	1,315,135	2,140,131	8,055,584	0.477	0.358	0.835

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.214	0.311	.
(14) Massachusetts Credibility:	0.540	0.770	.
(15) Countrywide Pure Premium:	1.226	0.786	2.012
(16) Countrywide Indicated Relativity:	0.578	0.728	.
(17) Countrywide Credibility:	0.230	0.120	.
(18) Countrywide Lost-Time Claims:	11750	.	.
(19) Pure Premium Underlying Present Rate:	0.624	0.350	0.974
(20) Relativity to Underlying Present Rate:	0.308	0.341	.
(21) Credibility to Underlying Relativity:	0.230	0.110	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.319	0.364	.
(24) Balanced Formula Relativity:	0.319	0.367	0.335

IX 000210 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 141

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
7855 RAILROAD CONSTR: LAYING/RELAYING TRACK OR MAINT BY CONTR & DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	19,919	0	1	0	3,568	0	1,481	5,049	0.179	0.074	0.253
2015	60,790	0	6	0	92,253	0	22,795	115,048	1.518	0.375	1.893
2016	33,601	0	4	0	91,095	0	54,526	145,621	2.711	1.623	4.334
2017	55,224	0	1	0	0	0	13,774	13,774	0.000	0.249	0.249
2018	189,866	1	9	147,617	4,955	20,919	16,110	189,601	0.804	0.195	0.999
MA Total:	359,400	1	21	147,617	191,871	20,919	108,686	469,093	0.945	0.361	1.305

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.389	0.322	.
(14) Massachusetts Credibility:	0.220	0.270	.
(15) Countrywide Pure Premium:	2.035	0.772	2.807
(16) Countrywide Indicated Relativity:	0.851	0.709	.
(17) Countrywide Credibility:	0.390	0.370	.
(18) Countrywide Lost-Time Claims:	259.00	.	.
(19) Pure Premium Underlying Present Rate:	1.745	0.674	2.419
(20) Relativity to Underlying Present Rate:	0.797	0.692	.
(21) Credibility to Underlying Relativity:	0.390	0.360	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.728	0.599	.
(24) Balanced Formula Relativity:	0.735	0.599	0.692

Class(es):		Effective: 7/1/2022							Goods and Services		
8001 STORE: FLORISTS & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	624,081	5	52	496,682	216,262	380,679	103,805	1,197,428	1.142	0.776	1.919
2015	628,959	6	53	158,920	89,084	140,680	71,093	459,777	0.394	0.337	0.731
2016	654,573	6	83	145,872	350,885	102,788	284,993	884,538	0.759	0.592	1.351
2017	645,307	0	65	0	200,028	0	193,220	393,248	0.310	0.299	0.609
2018	632,809	1	69	1,858	316,809	3,492	288,005	610,164	0.504	0.461	0.964
MA Total:	3,185,728	18	322	803,331	1,173,068	627,638	941,116	3,545,154	0.620	0.492	1.113

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.811	1.158	.
(14) Massachusetts Credibility:	0.350	0.560	.
(15) Countrywide Pure Premium:	0.872	0.588	1.460
(16) Countrywide Indicated Relativity:	1.159	1.389	.
(17) Countrywide Credibility:	0.330	0.220	.
(18) Countrywide Lost-Time Claims:	1240.0	.	.
(19) Pure Premium Underlying Present Rate:	0.656	0.467	1.123
(20) Relativity to Underlying Present Rate:	0.948	1.221	.
(21) Credibility to Underlying Relativity:	0.320	0.220	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.970	1.223	.
(24) Balanced Formula Relativity:	0.964	1.223	1.056

IX 000211 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 142

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
8002 AUTOMOBILE RENTAL CO: ALL OTHER EMP & COUNTER PERSONNEL, DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	98.640	1	26	2.705	35.227	125	125.885	163.942	0.385	1.277	1.662
2015	81.010	1	17	112.780	4.986	155.640	12.523	285.929	1.454	2.076	3.530
2016	73.750	0	15	0	45.892	0	70.663	116.555	0.622	0.958	1.580
2017	86.443	0	12	0	141.439	0	110.754	252.193	1.636	1.281	2.917
2018	93.373	0	10	0	10.303	0	13.056	23.359	0.110	0.140	0.250
MA Total:	433.216	2	80	115.485	237.848	155.765	332.880	841.979	0.816	1.128	1.944

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.066	2.652	.
(14) Massachusetts Credibility:	0.160	0.280	.
(15) Countrywide Pure Premium:	0.795	0.572	1.367
(16) Countrywide Indicated Relativity:	1.058	1.351	.
(17) Countrywide Credibility:	0.420	0.360	.
(18) Countrywide Lost-Time Claims:	1883.0	.	.
(19) Pure Premium Underlying Present Rate:	0.678	0.604	1.282
(20) Relativity to Underlying Present Rate:	0.979	1.581	.
(21) Credibility to Underlying Relativity:	0.420	0.360	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.026	1.798	.
(24) Balanced Formula Relativity:	1.020	1.799	1.298

Class(es):		Effective: 7/1/2022							Goods and Services		
8006 STORE: GROCERY STORES-RETAIL-NO HANDLING OF FRESH MEATS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2.787.588	4	301	358.976	1,022.217	482.198	1,118.654	2,982.045	0.495	0.574	1.070
2015	3,015.638	9	269	418.026	1,094.392	410.474	1,032.297	2,955.189	0.502	0.478	0.980
2016	3,162.048	6	234	263.207	412.046	79.205	519.879	1,274.336	0.214	0.189	0.403
2017	3,370.263	10	274	585.118	801.561	144.203	940.744	2,471.627	0.411	0.322	0.733
2018	3,421.190	10	260	293.181	1,474.256	188.527	857.857	2,813.821	0.517	0.306	0.822
MA Total:	15,756.727	39	1,338	1,918.508	4,804.472	1,304.606	4,469.431	12,497.018	0.427	0.366	0.793

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.558	0.861	.
(14) Massachusetts Credibility:	0.600	0.930	.
(15) Countrywide Pure Premium:	0.825	0.476	1.301
(16) Countrywide Indicated Relativity:	1.097	1.125	.
(17) Countrywide Credibility:	0.200	0.040	.
(18) Countrywide Lost-Time Claims:	11630	.	.
(19) Pure Premium Underlying Present Rate:	0.488	0.339	0.826
(20) Relativity to Underlying Present Rate:	0.705	0.886	.
(21) Credibility to Underlying Relativity:	0.200	0.030	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.695	0.873	.
(24) Balanced Formula Relativity:	0.691	0.873	0.756

IX 000212 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 143

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
8008 STORE: CLOTHING, WEARING APPAREL OR DRY GOODS - RETAIL											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,472,316	13	227	595,433	780,155	598,170	482,301	2,456,059	0.396	0.311	0.707
2015	3,408,450	5	210	92,850	627,859	133,680	440,405	1,294,794	0.211	0.168	0.380
2016	3,319,676	5	178	414,537	861,466	177,259	609,015	2,062,278	0.384	0.237	0.621
2017	3,277,596	5	174	233,355	739,128	185,651	348,272	1,506,406	0.297	0.163	0.460
2018	3,607,837	6	159	410,962	805,349	91,725	686,838	1,994,873	0.337	0.216	0.553
MA Total:	17,085,874	34	948	1,747,137	3,813,957	1,186,485	2,566,831	9,314,410	0.325	0.220	0.545

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.425	0.516	.
(14) Massachusetts Credibility:	0.520	0.750	.
(15) Countrywide Pure Premium:	0.454	0.289	0.743
(16) Countrywide Indicated Relativity:	0.604	0.683	.
(17) Countrywide Credibility:	0.240	0.130	.
(18) Countrywide Lost-Time Claims:	8663.0	.	.
(19) Pure Premium Underlying Present Rate:	0.314	0.180	0.494
(20) Relativity to Underlying Present Rate:	0.454	0.471	.
(21) Credibility to Underlying Relativity:	0.240	0.120	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.475	0.533	.
(24) Balanced Formula Relativity:	0.472	0.533	0.494

Class(es):		Effective: 7/1/2022							Goods and Services		
8010 STORE: HARDWARE											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,944,579	7	176	1,399,754	922,184	502,182	662,159	3,486,278	1.194	0.599	1.793
2015	1,984,003	2	178	136,158	1,011,249	80,330	776,932	2,004,669	0.578	0.432	1.010
2016	1,986,255	8	180	765,562	877,324	413,191	883,571	2,939,648	0.827	0.653	1.480
2017	2,172,752	7	187	562,243	1,295,359	187,106	651,276	2,695,984	0.855	0.386	1.241
2018	2,177,222	3	142	223,809	1,084,629	40,051	677,450	2,025,940	0.601	0.330	0.931
MA Total:	10,264,811	27	863	3,087,526	5,190,745	1,222,860	3,651,388	13,152,519	0.806	0.475	1.281

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.054	1.116	.
(14) Massachusetts Credibility:	0.580	0.860	.
(15) Countrywide Pure Premium:	0.700	0.430	1.130
(16) Countrywide Indicated Relativity:	0.931	1.017	.
(17) Countrywide Credibility:	0.210	0.070	.
(18) Countrywide Lost-Time Claims:	5486.0	.	.
(19) Pure Premium Underlying Present Rate:	0.702	0.433	1.135
(20) Relativity to Underlying Present Rate:	1.014	1.133	.
(21) Credibility to Underlying Relativity:	0.210	0.070	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.020	1.111	.
(24) Balanced Formula Relativity:	1.013	1.111	1.048

IX 000213 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 144

Calculation of Class Relativities

Class(es): 8013 STORE: JEWELRY STORES		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,389,400	2	30	27,547	198,386	44,513	111,522	381,969	0.163	0.112	0.275
2015	1,429,703	0	9	0	831	0	5,324	6,155	0.001	0.004	0.004
2016	1,346,721	0	20	0	73,661	0	102,368	176,029	0.055	0.076	0.131
2017	1,380,473	2	17	299,781	17,086	624,077	60,957	1,001,901	0.230	0.496	0.726
2018	1,439,816	0	13	0	197,105	0	84,669	281,774	0.137	0.059	0.196
MA Total:	6,986,112	4	89	327,328	487,069	668,590	364,841	1,847,829	0.117	0.148	0.265

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.152	0.348	.
(14) Massachusetts Credibility:	0.260	0.410	.
(15) Countrywide Pure Premium:	0.190	0.086	0.276
(16) Countrywide Indicated Relativity:	0.252	0.204	.
(17) Countrywide Credibility:	0.370	0.300	.
(18) Countrywide Lost-Time Claims:	785.00	.	.
(19) Pure Premium Underlying Present Rate:	0.138	0.101	0.239
(20) Relativity to Underlying Present Rate:	0.200	0.264	.
(21) Credibility to Underlying Relativity:	0.370	0.290	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.207	0.280	.
(24) Balanced Formula Relativity:	0.206	0.280	0.232

Class(es): 8017 STORE: RETAIL NOC		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	13,397,505	35	1,128	1,984,880	3,128,267	1,129,731	2,710,514	8,953,392	0.382	0.287	0.668
2015	14,138,596	38	1,159	3,061,531	3,256,394	2,268,908	2,388,297	10,975,130	0.447	0.329	0.776
2016	11,568,547	16	784	1,223,140	3,270,856	482,176	2,566,683	7,542,855	0.388	0.264	0.652
2017	12,156,724	21	825	1,702,680	3,712,955	382,609	2,198,780	7,997,024	0.445	0.212	0.658
2018	14,674,715	33	1,079	2,493,721	5,479,753	899,926	4,402,899	13,276,299	0.543	0.361	0.905
MA Total:	65,936,086	143	4,975	10,465,952	18,848,224	5,163,351	14,267,173	48,744,700	0.445	0.295	0.739

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.581	0.693	.
(14) Massachusetts Credibility:	0.970	1.000	.
(15) Countrywide Pure Premium:	0.541	0.335	0.876
(16) Countrywide Indicated Relativity:	0.720	0.793	.
(17) Countrywide Credibility:	0.020	0.000	.
(18) Countrywide Lost-Time Claims:	28136	.	.
(19) Pure Premium Underlying Present Rate:	0.392	0.251	0.643
(20) Relativity to Underlying Present Rate:	0.566	0.656	.
(21) Credibility to Underlying Relativity:	0.010	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.584	0.693	.
(24) Balanced Formula Relativity:	0.580	0.693	0.620

IX 000214 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 145

Calculation of Class Relativities

Class(es): 8018 STORE: WHOLESALE NOC		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,353,450	16	673	1,869,736	4,233,223	521,103	2,421,517	9,045,579	1,820	0,877	2,697
2015	3,665,517	21	617	1,434,862	4,242,983	540,109	2,157,333	8,375,287	1,549	0,736	2,285
2016	3,935,244	23	710	2,938,132	5,544,087	895,167	3,076,261	12,453,648	2,155	1,009	3,165
2017	4,444,242	38	872	2,493,173	6,442,841	824,093	3,141,642	12,901,749	2,011	0,892	2,903
2018	4,689,366	49	691	3,211,197	5,785,409	872,045	2,590,400	12,459,051	1,919	0,738	2,657
MA Total:	20,087,819	147	3,563	11,947,100	26,248,544	3,652,517	13,387,154	55,235,315	1,901	0,848	2,750

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.485	1.994	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.234	0.621	1.855
(16) Countrywide Indicated Relativity:	1.641	1.468	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	26623	.	.
(19) Pure Premium Underlying Present Rate:	1.641	0.775	2.416
(20) Relativity to Underlying Present Rate:	2.371	2.027	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.485	1.994	.
(24) Balanced Formula Relativity:	2.470	1.995	2.300

Class(es): 8021 STORE: MEAT, FISH OR POULTRY DEALER- WHOLESALE		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	909,778	8	125	355,201	988,083	66,940	467,800	1,878,024	1,476	0,588	2,064
2015	964,794	7	144	547,939	1,386,172	358,947	588,152	2,881,209	2,005	0,982	2,986
2016	1,084,915	8	157	724,969	2,507,033	160,843	737,218	4,130,063	2,979	0,828	3,807
2017	1,084,462	8	131	622,051	1,496,187	197,861	912,580	3,228,679	1,953	1,024	2,977
2018	1,184,565	7	144	331,668	1,398,239	208,096	688,843	2,626,846	1,460	0,757	2,218
MA Total:	5,228,515	38	701	2,581,827	7,775,714	992,686	3,394,594	14,744,821	1,981	0,839	2,820

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.589	1.973	.
(14) Massachusetts Credibility:	0.610	0.810	.
(15) Countrywide Pure Premium:	1.127	0.688	1.816
(16) Countrywide Indicated Relativity:	1.499	1.627	.
(17) Countrywide Credibility:	0.200	0.100	.
(18) Countrywide Lost-Time Claims:	2998.0	.	.
(19) Pure Premium Underlying Present Rate:	1.576	0.728	2.304
(20) Relativity to Underlying Present Rate:	2.276	1.905	.
(21) Credibility to Underlying Relativity:	0.190	0.090	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.312	1.932	.
(24) Balanced Formula Relativity:	2.298	1.933	2.167

IX 000215 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 146

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
8031 STORE: MEAT, FISH OR POULTRY - RETAIL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	199,354	0	23	0	22,187	0	40,028	62,216	0.111	0.201	0.312
2015	206,367	1	16	297,407	28,385	72,788	42,188	440,768	1.579	0.557	2.136
2016	195,125	1	24	103,427	2,590	21,585	28,582	156,183	0.543	0.257	0.800
2017	218,153	0	17	0	6,008	0	16,416	22,425	0.028	0.075	0.103
2018	247,316	0	18	0	237,986	0	159,335	397,322	0.962	0.644	1.607
MA Total:	1,066,314	2	98	400,833	297,156	94,373	286,550	1,078,913	0.655	0.357	1.012

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.856	0.840	.
(14) Massachusetts Credibility:	0.240	0.350	.
(15) Countrywide Pure Premium:	0.873	0.531	1.404
(16) Countrywide Indicated Relativity:	1.161	1.255	.
(17) Countrywide Credibility:	0.380	0.330	.
(18) Countrywide Lost-Time Claims:	581.00	.	.
(19) Pure Premium Underlying Present Rate:	0.733	0.449	1.182
(20) Relativity to Underlying Present Rate:	1.059	1.176	.
(21) Credibility to Underlying Relativity:	0.380	0.320	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.049	1.084	.
(24) Balanced Formula Relativity:	1.043	1.085	1.058

Class(es):		Effective: 7/1/2022							Goods and Services		
8032 STORE: CLOTHING, WEARING APPAREL OR DRY GOODS - WHOLESALE											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	321,832	0	27	0	70,665	0	103,376	174,041	0.220	0.321	0.541
2015	255,498	0	29	0	14,550	0	38,556	53,106	0.057	0.151	0.208
2016	282,589	0	27	0	57,515	0	126,127	183,642	0.204	0.446	0.650
2017	283,334	1	15	85,258	33,002	8,449	80,813	207,521	0.417	0.315	0.732
2018	308,687	1	28	17,831	5,633	8,874	23,926	56,264	0.076	0.106	0.182
MA Total:	1,451,940	2	126	103,088	181,366	17,323	372,798	674,575	0.196	0.269	0.465

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.256	0.632	.
(14) Massachusetts Credibility:	0.240	0.340	.
(15) Countrywide Pure Premium:	0.897	0.500	1.397
(16) Countrywide Indicated Relativity:	1.193	1.182	.
(17) Countrywide Credibility:	0.380	0.330	.
(18) Countrywide Lost-Time Claims:	1379.0	.	.
(19) Pure Premium Underlying Present Rate:	0.525	0.303	0.828
(20) Relativity to Underlying Present Rate:	0.758	0.793	.
(21) Credibility to Underlying Relativity:	0.380	0.330	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.803	0.866	.
(24) Balanced Formula Relativity:	0.798	0.867	0.823

IX 000216 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 147

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services			
8033 STORE: MEAT, GROCERY & PROVISION COMBINED RETAIL-NOC												
Converted Unlimited Losses												
Amount												
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	893,772	2	122	85,951	875,596	40,128	329,503	1,331,179	1,076	0,414	1,489	
2015	878,415	3	113	191,683	287,602	27,844	233,868	740,998	0,546	0,298	0,844	
2016	748,645	3	67	133,989	286,485	27,371	218,178	666,023	0,562	0,328	0,890	
2017	795,289	1	58	38,264	326,370	14,299	176,661	555,594	0,458	0,240	0,699	
2018	845,270	2	62	53,597	320,319	22,590	204,502	601,008	0,442	0,269	0,711	
MA Total:	4,161,392	11	422	503,485	2,096,372	132,233	1,162,712	3,894,802	0.625	0.311	0.936	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.817	0.732	.
(14) Massachusetts Credibility:	0.400	0.550	.
(15) Countrywide Pure Premium:	0.784	0.480	1.264
(16) Countrywide Indicated Relativity:	1.042	1.135	.
(17) Countrywide Credibility:	0.300	0.230	.
(18) Countrywide Lost-Time Claims:	21505	.	.
(19) Pure Premium Underlying Present Rate:	0.686	0.349	1.035
(20) Relativity to Underlying Present Rate:	0.991	0.912	.
(21) Credibility to Underlying Relativity:	0.300	0.220	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.937	0.864	.
(24) Balanced Formula Relativity:	0.931	0.864	0.907

Class(es):		Effective: 7/1/2022							Goods and Services			
8034 STORE: GROCERY STORES - WHOLESALE												
Converted Unlimited Losses												
Amount												
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	648,976	5	97	333,439	778,117	31,123	400,301	1,542,980	1,713	0,665	2,378	
2015	535,081	8	61	796,061	758,116	187,358	373,106	2,114,642	2,905	1,047	3,952	
2016	355,404	1	45	88,909	256,584	9,102	209,383	563,978	0,972	0,615	1,587	
2017	443,606	0	70	0	498,484	0	168,357	666,842	1,124	0,380	1,503	
2018	368,301	0	33	0	653,251	0	123,820	777,070	1,774	0,336	2,110	
MA Total:	2,351,369	14	306	1,218,409	2,944,553	227,583	1,274,966	5,665,512	1.770	0.639	2.409	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.314	1.502	.
(14) Massachusetts Credibility:	0.430	0.550	.
(15) Countrywide Pure Premium:	1.519	0.510	2.029
(16) Countrywide Indicated Relativity:	2.021	1.206	.
(17) Countrywide Credibility:	0.290	0.230	.
(18) Countrywide Lost-Time Claims:	217.00	.	.
(19) Pure Premium Underlying Present Rate:	1.405	0.600	2.005
(20) Relativity to Underlying Present Rate:	2.030	1.569	.
(21) Credibility to Underlying Relativity:	0.280	0.220	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.149	1.449	.
(24) Balanced Formula Relativity:	2.136	1.450	1.891

IX 000217 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 148

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
8039 STORE: DEPARTMENT - RETAIL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	612.113	2	80	108.157	158.099	52.606	193.236	512.098	0.435	0.402	0.837
2015	617.977	2	72	74.963	292.156	42.593	226.781	636.493	0.594	0.436	1.030
2016	3.688.344	19	447	1.373.268	1.124.986	342.704	968.926	3.809.883	0.677	0.356	1.033
2017	3.343.672	10	419	634.906	1.483.212	315.666	1.217.190	3.650.974	0.633	0.458	1.092
2018	190.376	2	16	397.188	22.492	125.645	69.600	614.925	2.204	1.026	3.230
MA Total:	8.452.481	35	1.034	2.588.481	3.080.945	879.214	2.675.733	9.224.373	0.671	0.421	1.091

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.877	0.989	.
(14) Massachusetts Credibility:	0.460	0.760	.
(15) Countrywide Pure Premium:	0.516	0.400	0.916
(16) Countrywide Indicated Relativity:	0.686	0.946	.
(17) Countrywide Credibility:	0.270	0.120	.
(18) Countrywide Lost-Time Claims:	4361.0	.	.
(19) Pure Premium Underlying Present Rate:	0.486	0.379	0.865
(20) Relativity to Underlying Present Rate:	0.703	0.992	.
(21) Credibility to Underlying Relativity:	0.270	0.120	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.778	0.984	.
(24) Balanced Formula Relativity:	0.773	0.984	0.849

Class(es):		Effective: 7/1/2022							Goods and Services		
8044 STORE: FURNITURE & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	846.396	9	103	513.870	577.175	189.571	438.372	1.718.988	1.289	0.742	2.031
2015	875.763	6	127	679.664	607.713	388.955	522.192	2.198.524	1.470	1.040	2.510
2016	818.434	5	115	638.303	1.151.945	146.512	442.479	2.379.239	2.187	0.720	2.907
2017	1.222.162	7	121	790.215	920.436	390.302	598.958	2.699.912	1.400	0.809	2.209
2018	1.436.137	3	160	378.255	801.695	101.966	728.471	2.010.387	0.822	0.578	1.400
MA Total:	5.198.892	30	626	3.000.307	4.058.965	1.217.305	2.730.474	11.007.051	1.358	0.759	2.117

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.775	1.785	.
(14) Massachusetts Credibility:	0.560	0.790	.
(15) Countrywide Pure Premium:	1.207	0.606	1.814
(16) Countrywide Indicated Relativity:	1.606	1.433	.
(17) Countrywide Credibility:	0.220	0.110	.
(18) Countrywide Lost-Time Claims:	7006.0	.	.
(19) Pure Premium Underlying Present Rate:	1.262	0.673	1.935
(20) Relativity to Underlying Present Rate:	1.823	1.761	.
(21) Credibility to Underlying Relativity:	0.220	0.100	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.748	1.744	.
(24) Balanced Formula Relativity:	1.737	1.745	1.740

IX 000218 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 149

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services			
8046 STORE: AUTOMOBILE ACCESSORIES-RETAIL-NOC & DR												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	312,083	3	33	246,260	276,058	125,009	151,842	799,170	1,674	0,887	2,561	
2015	293,392	4	33	284,464	47,685	34,448	90,168	456,765	1,132	0,425	1,557	
2016	309,996	2	29	273,156	14,592	388,104	39,336	715,188	0,928	1,379	2,307	
2017	293,065	1	26	162,286	144,830	56,728	152,445	516,289	1,048	0,714	1,762	
2018	355,155	2	29	118,203	256,058	115,795	201,435	691,492	1,054	0,893	1,947	
MA Total:	1,563,690	12	150	1,084,369	739,222	720,085	635,227	3,178,903	1,166	0,867	2,033	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.524	2.038	.
(14) Massachusetts Credibility:	0.290	0.440	.
(15) Countrywide Pure Premium:	0.892	0.557	1.449
(16) Countrywide Indicated Relativity:	1.187	1.316	.
(17) Countrywide Credibility:	0.360	0.280	.
(18) Countrywide Lost-Time Claims:	6100.0	.	.
(19) Pure Premium Underlying Present Rate:	0.836	0.532	1.368
(20) Relativity to Underlying Present Rate:	1.208	1.391	.
(21) Credibility to Underlying Relativity:	0.350	0.280	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.292	1.655	.
(24) Balanced Formula Relativity:	1.284	1.656	1.417

Class(es):		Effective: 7/1/2022							Goods and Services			
8048 STORE: FRUIT OR VEGETABLE -WHOLESALE												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	362,325	2	48	53,564	42,667	39,569	43,236	179,036	0,266	0,229	0,494	
2015	417,111	2	47	231,374	1,258,270	141,125	621,078	2,251,847	3,571	1,827	5,399	
2016	478,144	2	54	343,205	250,483	110,919	178,462	883,069	1,242	0,605	1,847	
2017	525,899	3	73	177,851	278,252	51,663	299,611	807,377	0,867	0,668	1,535	
2018	540,838	1	72	71,400	651,790	13,039	326,817	1,063,046	1,337	0,628	1,966	
MA Total:	2,324,317	10	294	877,394	2,481,463	356,314	1,469,205	5,184,375	1,445	0,785	2,230	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.889	1.846	.
(14) Massachusetts Credibility:	0.390	0.550	.
(15) Countrywide Pure Premium:	0.600	0.404	1.005
(16) Countrywide Indicated Relativity:	0.799	0.956	.
(17) Countrywide Credibility:	0.250	0.230	.
(18) Countrywide Lost-Time Claims:	37,000	.	.
(19) Pure Premium Underlying Present Rate:	1.160	0.605	1.764
(20) Relativity to Underlying Present Rate:	1.675	1.583	.
(21) Credibility to Underlying Relativity:	0.360	0.220	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.539	1.583	.
(24) Balanced Formula Relativity:	1.530	1.584	1.549

IX 000219 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 150

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services			
8058 BUILDING MATERIAL DEALER-NEW MATERIALS ONLY-STORE EMP												
Converted Unlimited Losses												
Amount												
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	311,996	4	52	195,258	75,154	132,162	100,944	503,519	0.867	0.747	1.614	
2015	311,612	0	38	0	60,320	0	154,626	214,946	0.194	0.496	0.690	
2016	299,558	1	35	43,168	557,975	19,235	430,979	1,051,358	2.007	1.503	3.510	
2017	330,077	1	46	50,397	286,472	48,601	240,888	626,357	1.021	0.877	1.898	
2018	374,175	1	31	195,435	83,117	100,895	109,449	488,895	0.744	0.562	1.307	
MA Total:	1,627,418	7	202	484,257	1,063,038	300,893	1,036,887	2,885,075	0.951	0.822	1.773	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.243	1.932	.
(14) Massachusetts Credibility:	0.300	0.490	.
(15) Countrywide Pure Premium:	0.952	0.699	1.651
(16) Countrywide Indicated Relativity:	1.266	1.652	.
(17) Countrywide Credibility:	0.350	0.260	.
(18) Countrywide Lost-Time Claims:	5340.0	.	.
(19) Pure Premium Underlying Present Rate:	0.858	0.666	1.523
(20) Relativity to Underlying Present Rate:	1.239	1.741	.
(21) Credibility to Underlying Relativity:	0.350	0.250	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.250	1.812	.
(24) Balanced Formula Relativity:	1.242	1.813	1.446

Class(es):		Effective: 7/1/2022							Goods and Services			
8103 WOOL MERCHANT												
Converted Unlimited Losses												
Amount												
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	0	0	0	0	0	0	0	0	0.000	0.000	0.000	
2015	991	0	0	0	0	0	0	0	0.000	0.000	0.000	
2016	1,075	0	0	0	0	0	0	0	0.000	0.000	0.000	
2017	1,660	0	0	0	0	0	0	0	0.000	0.000	0.000	
2018	2,268	0	0	0	0	0	0	0	0.000	0.000	0.000	
MA Total:	5,993	0	0	0	0	0	0	0	0.000	0.000	0.000	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.040	0.050	.
(15) Countrywide Pure Premium:	1.539	1.115	2.654
(16) Countrywide Indicated Relativity:	2.048	2.635	.
(17) Countrywide Credibility:	0.270	0.290	.
(18) Countrywide Lost-Time Claims:	45.000	.	.
(19) Pure Premium Underlying Present Rate:	1.094	0.593	1.687
(20) Relativity to Underlying Present Rate:	1.581	1.551	.
(21) Credibility to Underlying Relativity:	0.690	0.660	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.644	1.788	.
(24) Balanced Formula Relativity:	1.634	1.789	1.689

IX 000220 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 151

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services			
8105 STORE: HIDE OR LEATHER DEALERS OR STORES												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	7.022	1	3	108,213	178,956	34,192	74,333	395,694	40,896	15,455	56,351	
2015	7.057	0	1	0	114	0	208	322	0,016	0,030	0,046	
2016	10.188	0	1	0	35,798	0	6,492	42,290	3,514	0,637	4,151	
2017	10.092	1	1	293,030	84,913	46,331	8,604	432,878	37,451	5,444	42,894	
2018	8.931	0	1	0	546	0	161	706	0,061	0,018	0,079	
MA Total:	43,289	2	7	401,243	300,326	80,523	89,798	871,890	16,207	3,935	20,141	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	21.184	9.249	.
(14) Massachusetts Credibility:	0.170	0.210	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	11.787	7.689	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	8.233	2.964	11.197
(20) Relativity to Underlying Present Rate:	11.892	7.756	.
(21) Credibility to Underlying Relativity:	0.830	0.790	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	13.472	8.069	.
(24) Balanced Formula Relativity:	13.388	8.073	11.489

Class(es):		Effective: 7/1/2022							Goods and Services			
8106 IRON OR STEEL MERCHANT & DRIVERS												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	168,963	3	44	654,786	171,494	148,127	132,599	1,107,006	4,890	1,661	6,552	
2015	153,954	1	43	352,509	340,739	117,709	288,600	1,099,557	4,503	2,639	7,142	
2016	162,483	0	42	0	294,080	0	183,290	477,370	1,810	1,128	2,938	
2017	152,996	1	34	141,566	201,739	87,707	228,587	659,599	2,244	2,067	4,311	
2018	170,213	1	31	22,996	98,647	8,309	91,541	221,494	0,715	0,587	1,301	
MA Total:	808,609	6	194	1,171,857	1,106,698	361,853	924,617	3,565,026	2,818	1,591	4,409	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.683	3.740	.
(14) Massachusetts Credibility:	0.340	0.520	.
(15) Countrywide Pure Premium:	1.913	1.050	2.963
(16) Countrywide Indicated Relativity:	2.545	2.481	.
(17) Countrywide Credibility:	0.330	0.240	.
(18) Countrywide Lost-Time Claims:	2448.0	.	.
(19) Pure Premium Underlying Present Rate:	2.297	1.507	3.805
(20) Relativity to Underlying Present Rate:	3.319	3.944	.
(21) Credibility to Underlying Relativity:	0.330	0.240	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	3.187	3.487	.
(24) Balanced Formula Relativity:	3.168	3.489	3.282

IX 00221 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 152

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
8107 MACHINERY DEALER- NOC- STORE OR YARD & DRIVERS											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	741.608	4	98	1,095.261	1,280.658	219.475	619.275	3,214.669	3.204	1.131	4.335
2015	830.069	1	114	216.951	869.162	19.820	731.413	1,837.346	1.308	0.905	2.213
2016	880.557	4	94	1,121.720	575.048	474.666	588.781	2,760.215	1.927	1.208	3.135
2017	954.873	1	74	40.650	498.316	85.725	421.917	1,046.608	0.564	0.532	1.096
2018	1,013.426	5	91	870.703	712.205	246.174	482.588	2,311.670	1.562	0.719	2.281
MA Total:	4,420.532	15	471	3,345.286	3,935.389	1,045.860	2,843.974	11,170.508	1.647	0.880	2.527

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.153	2.069	.
(14) Massachusetts Credibility:	0.510	0.750	.
(15) Countrywide Pure Premium:	1.238	0.592	1.830
(16) Countrywide Indicated Relativity:	1.647	1.400	.
(17) Countrywide Credibility:	0.250	0.130	.
(18) Countrywide Lost-Time Claims:	5451.0	.	.
(19) Pure Premium Underlying Present Rate:	1.184	0.696	1.880
(20) Relativity to Underlying Present Rate:	1.710	1.822	.
(21) Credibility to Underlying Relativity:	0.240	0.120	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.920	1.952	.
(24) Balanced Formula Relativity:	1.908	1.953	1.924

Class(es):		Effective: 7/1/2022							Goods and Services		
8111 PLUMBERS SUPPLIES DEALERS & DRIVERS											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	739.162	6	110	327.282	637.013	149.417	446.179	1,559.892	1.305	0.806	2.110
2015	811.891	5	122	537.648	1,055.593	247.612	854.776	2,695.629	1.962	1.358	3.320
2016	835.578	5	110	548.261	478.051	436.221	401.498	1,864.031	1.228	1.003	2.231
2017	1,003.914	3	126	467.131	994.652	151.096	577.089	2,189.968	1.456	0.725	2.181
2018	1,001.355	6	129	504.309	535.101	158.660	510.225	1,708.296	1.038	0.668	1.706
MA Total:	4,391.900	25	597	2,384.631	3,700.410	1,143.006	2,789.768	10,017.815	1.386	0.895	2.281

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.811	2.105	.
(14) Massachusetts Credibility:	0.510	0.760	.
(15) Countrywide Pure Premium:	0.808	0.439	1.247
(16) Countrywide Indicated Relativity:	1.075	1.037	.
(17) Countrywide Credibility:	0.250	0.120	.
(18) Countrywide Lost-Time Claims:	1304.0	.	.
(19) Pure Premium Underlying Present Rate:	1.179	0.742	1.921
(20) Relativity to Underlying Present Rate:	1.703	1.941	.
(21) Credibility to Underlying Relativity:	0.240	0.120	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.601	1.957	.
(24) Balanced Formula Relativity:	1.591	1.958	1.722

IX 000222 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 153

Calculation of Class Relativities

Class(es): 8203 ICE DEALER & DRIVERS		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	39,245	0	13	0	283,181	0	202,875	486,055	7,216	5,169	12,385
2015	42,651	1	10	232,715	199,262	37,682	118,468	588,127	10,128	3,661	13,789
2016	45,974	0	5	0	3,761	0	7,719	11,480	0,082	0,168	0,250
2017	44,402	0	14	0	153,897	0	37,391	191,288	3,466	0,842	4,308
2018	45,955	1	5	8,686	16,831	17,819	15,953	59,290	0,555	0,735	1,290
MA Total:	218,228	2	47	241,401	656,932	55,501	382,405	1,336,240	4,116	2,007	6,123

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.381	4.717	.
(14) Massachusetts Credibility:	0.220	0.300	.
(15) Countrywide Pure Premium:	2.487	1.142	3.629
(16) Countrywide Indicated Relativity:	3.308	2.700	.
(17) Countrywide Credibility:	0.390	0.350	.
(18) Countrywide Lost-Time Claims:	384.00	.	.
(19) Pure Premium Underlying Present Rate:	2.778	1.421	4.199
(20) Relativity to Underlying Present Rate:	4.013	3.719	.
(21) Credibility to Underlying Relativity:	0.390	0.350	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	4.039	3.662	.
(24) Balanced Formula Relativity:	4.014	3.664	3.889

Class(es): 8204 BUILDING MATERIAL YARD & LOCAL MANAGERS, DRIVERS		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	28,429	0	2	0	629	0	12,043	12,673	0,022	0,424	0,446
2015	56,005	5	8	958,585	60,946	582,464	61,193	1,663,189	18,204	11,493	29,697
2016	58,540	1	9	180,854	14,614	32,609	40,589	268,665	3,339	1,250	4,589
2017	63,555	1	7	21,994	14,542	13,915	8,254	58,705	0,575	0,349	0,924
2018	66,861	1	4	324,949	673	79,328	2,547	407,496	4,870	1,225	6,095
MA Total:	273,390	8	30	1,486,381	91,404	708,317	124,626	2,410,728	5,771	3,047	8,818

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	7.544	7.162	.
(14) Massachusetts Credibility:	0.230	0.370	.
(15) Countrywide Pure Premium:	2.230	0.961	3.191
(16) Countrywide Indicated Relativity:	2.966	2.272	.
(17) Countrywide Credibility:	0.390	0.320	.
(18) Countrywide Lost-Time Claims:	189.00	.	.
(19) Pure Premium Underlying Present Rate:	2.616	2.010	4.626
(20) Relativity to Underlying Present Rate:	3.779	5.259	.
(21) Credibility to Underlying Relativity:	0.380	0.310	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	4.328	5.007	.
(24) Balanced Formula Relativity:	4.301	5.010	4.554

IX 000223 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 154

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services			
8215 HAY, GRAIN OR FEED DEALER & LOCAL MANAGERS, DR												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	71,516	0	11	0	11,657	0	29,089	40,747	0.163	0.407	0.570	
2015	77,051	0	6	0	41,189	0	77,702	118,891	0.535	1.008	1.543	
2016	79,200	0	19	0	273,561	0	127,841	401,402	3.454	1.614	5.068	
2017	75,007	0	5	0	40,413	0	42,023	82,436	0.539	0.560	1.099	
2018	68,328	0	10	0	158,817	0	65,798	224,615	2.324	0.963	3.287	
MA Total:	371,102	0	51	0	525,637	0	342,454	868,091	1.416	0.923	2.339	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.851	2.169	.
(14) Massachusetts Credibility:	0.210	0.310	.
(15) Countrywide Pure Premium:	1.412	0.783	2.195
(16) Countrywide Indicated Relativity:	1.878	1.851	.
(17) Countrywide Credibility:	0.400	0.350	.
(18) Countrywide Lost-Time Claims:	1739.0	.	.
(19) Pure Premium Underlying Present Rate:	1.516	0.917	2.433
(20) Relativity to Underlying Present Rate:	2.189	2.399	.
(21) Credibility to Underlying Relativity:	0.390	0.340	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.994	2.136	.
(24) Balanced Formula Relativity:	1.981	2.137	2.037

Class(es):		Effective: 7/1/2022							Construction			
8227 CONTRACTORS PERMANENT YARD												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	1,080,540	6	96	1,722,393	1,114,540	1,065,961	641,300	4,544,193	2,625	1,580	4,205	
2015	1,213,527	9	75	1,399,423	1,027,518	768,835	450,018	3,645,793	2,000	1,004	3,004	
2016	1,247,134	2	75	749,276	1,097,132	190,363	551,799	2,588,571	1,481	0.595	2,076	
2017	1,319,605	6	91	1,391,693	3,812,893	780,746	2,473,206	8,458,538	3,944	2,466	6,410	
2018	1,364,404	4	96	1,778,851	2,063,230	1,281,281	1,460,123	6,583,485	2,816	2,009	4,825	
MA Total:	6,225,211	27	433	7,041,636	9,115,312	4,087,187	5,576,445	25,820,580	2,595	1,552	4,148	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.069	1.388	.
(14) Massachusetts Credibility:	0.740	1.000	.
(15) Countrywide Pure Premium:	1.650	0.786	2.437
(16) Countrywide Indicated Relativity:	0.690	0.722	.
(17) Countrywide Credibility:	0.130	0.000	.
(18) Countrywide Lost-Time Claims:	2850.0	.	.
(19) Pure Premium Underlying Present Rate:	2.087	1.068	3.155
(20) Relativity to Underlying Present Rate:	0.953	1.097	.
(21) Credibility to Underlying Relativity:	0.130	0.000	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.005	1.388	.
(24) Balanced Formula Relativity:	1.014	1.388	1.132

IX 000224 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 155

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
8232 LUMBER YARD-NEW MATERIALS ONLY: A/O EMP INCL YRD & WHSE & DR											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,292,201	12	222	1,713,101	2,206,869	610,912	1,485,534	6,016,416	3,034	1,622	4,656
2015	1,352,846	18	233	2,612,947	1,300,471	1,362,178	1,010,099	6,285,695	2,893	1,754	4,646
2016	1,395,745	7	232	2,202,290	3,294,553	606,319	1,506,396	7,609,558	3,938	1,514	5,452
2017	1,527,191	7	237	826,988	2,112,661	558,862	1,502,493	5,001,004	1,925	1,350	3,275
2018	1,702,179	5	233	1,024,107	2,570,888	396,729	1,715,796	5,707,521	2,112	1,241	3,353
MA Total:	7,270,162	49	1,157	8,379,433	11,485,443	3,535,000	7,220,319	30,620,195	2,732	1,479	4,212

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.572	3.478	.
(14) Massachusetts Credibility:	0.840	1.000	.
(15) Countrywide Pure Premium:	2.121	1.055	3.176
(16) Countrywide Indicated Relativity:	2.822	2.493	.
(17) Countrywide Credibility:	0.080	0.000	.
(18) Countrywide Lost-Time Claims:	10496	.	.
(19) Pure Premium Underlying Present Rate:	2.530	1.366	3.896
(20) Relativity to Underlying Present Rate:	3.654	3.575	.
(21) Credibility to Underlying Relativity:	0.080	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	3.518	3.478	.
(24) Balanced Formula Relativity:	3.496	3.480	3.490

Class(es):		Effective: 7/1/2022							Goods and Services		
8233 COAL MERCHANT & LOCAL MANAGERS & DRIVERS											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	275,466	1	19	558,465	367,527	45,045	140,407	1,111,443	3,362	0,673	4,035
2015	273,834	4	26	419,498	554,599	301,798	238,298	1,514,193	3,557	1,972	5,530
2016	276,760	3	23	263,197	122,994	593,524	88,176	1,067,891	1,395	2,463	3,859
2017	316,862	2	30	99,377	944,867	24,527	663,445	1,732,216	3,296	2,171	5,467
2018	363,388	1	28	11,825	741,876	5,138	449,016	1,207,855	2,074	1,250	3,324
MA Total:	1,506,309	11	126	1,352,361	2,731,863	970,031	1,579,342	6,633,597	2,711	1,692	4,404

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.544	3.979	.
(14) Massachusetts Credibility:	0.440	0.650	.
(15) Countrywide Pure Premium:	2.351	1.158	3.509
(16) Countrywide Indicated Relativity:	3.128	2.737	.
(17) Countrywide Credibility:	0.280	0.180	.
(18) Countrywide Lost-Time Claims:	1677.0	.	.
(19) Pure Premium Underlying Present Rate:	2.404	1.421	3.826
(20) Relativity to Underlying Present Rate:	3.473	3.719	.
(21) Credibility to Underlying Relativity:	0.280	0.170	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	3.408	3.711	.
(24) Balanced Formula Relativity:	3.387	3.713	3.503

IX 000225 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 156

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services			
8235 SASH, DOOR OR ASSEMBLED MILLWORK DEALER & DR												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	140,195	0	27	0	218,748	0	79,911	298,659	1,560	0,570	2,130	
2015	115,249	0	29	0	113,336	0	168,774	282,110	0,983	1,464	2,448	
2016	125,943	1	39	2,003	458,373	7,242	293,376	760,995	3,655	2,387	6,042	
2017	130,561	0	14	0	277,226	0	179,553	456,779	2,123	1,375	3,499	
2018	138,451	1	15	16,814	100,030	49,450	67,376	233,670	0,844	0,844	1,688	
MA Total:	650,399	2	124	18,817	1,167,713	56,692	788,990	2,032,212	1,824	1,300	3,125	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.385	3.057	.
(14) Massachusetts Credibility:	0.280	0.390	.
(15) Countrywide Pure Premium:	1.975	0.994	2.969
(16) Countrywide Indicated Relativity:	2.628	2.350	.
(17) Countrywide Credibility:	0.360	0.310	.
(18) Countrywide Lost-Time Claims:	592.00	.	.
(19) Pure Premium Underlying Present Rate:	1.790	0.934	2.723
(20) Relativity to Underlying Present Rate:	2.585	2.443	.
(21) Credibility to Underlying Relativity:	0.360	0.300	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.544	2.653	.
(24) Balanced Formula Relativity:	2.529	2.655	2.574

Class(es):		Effective: 7/1/2022							Goods and Services			
8263 JUNK DEALERS & DRIVERS												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	93,772	1	23	30,446	345,100	9,527	113,607	498,680	4,005	1,313	5,318	
2015	94,041	0	25	0	237,072	0	90,983	328,055	2,521	0,967	3,488	
2016	91,393	0	13	0	190,095	0	131,822	321,918	2,080	1,442	3,522	
2017	88,879	1	14	18,348	111,419	1,588	122,466	253,821	1,460	1,396	2,856	
2018	92,324	1	16	127,134	224,677	34,178	93,419	479,408	3,811	1,382	5,193	
MA Total:	460,409	3	91	175,928	1,108,363	45,293	552,297	1,881,881	2,789	1,298	4,087	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.646	3.051	.
(14) Massachusetts Credibility:	0.250	0.370	.
(15) Countrywide Pure Premium:	2.860	1.577	4.437
(16) Countrywide Indicated Relativity:	3.805	3.727	.
(17) Countrywide Credibility:	0.380	0.320	.
(18) Countrywide Lost-Time Claims:	193.00	.	.
(19) Pure Premium Underlying Present Rate:	1.897	1.150	3.047
(20) Relativity to Underlying Present Rate:	2.741	3.008	.
(21) Credibility to Underlying Relativity:	0.370	0.310	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	3.371	3.254	.
(24) Balanced Formula Relativity:	3.351	3.256	3.317

IX 000226 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 157

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
8264 BOTTLE DEALER-USED & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	271,367	4	45	349,082	205,466	195,996	202,332	952,877	2,044	1,468	3,511
2015	314,761	3	51	346,088	295,238	77,956	199,534	918,815	2,037	0,882	2,919
2016	344,271	3	66	559,665	503,837	274,162	334,251	1,671,915	3,089	1,767	4,856
2017	406,758	3	52	578,538	135,527	349,850	94,475	1,158,390	1,756	1,092	2,848
2018	417,139	2	67	334,131	1,368,405	150,816	715,893	2,569,244	4,081	2,078	6,159
MA Total:	1,754,297	15	281	2,167,505	2,508,473	1,048,779	1,546,484	7,271,241	2,665	1,479	4,145

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.484	3.478	.
(14) Massachusetts Credibility:	0.440	0.640	.
(15) Countrywide Pure Premium:	1.903	1.198	3.101
(16) Countrywide Indicated Relativity:	2.531	2.831	.
(17) Countrywide Credibility:	0.280	0.180	.
(18) Countrywide Lost-Time Claims:	1251.0	.	.
(19) Pure Premium Underlying Present Rate:	2.102	1.187	3.289
(20) Relativity to Underlying Present Rate:	3.036	3.107	.
(21) Credibility to Underlying Relativity:	0.280	0.180	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	3.092	3.295	.
(24) Balanced Formula Relativity:	3.073	3.296	3.153

Class(es):		Effective: 7/1/2022							Goods and Services		
8279 STABLE OR BREEDING FARM & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	170,754	1	14	80,760	75,140	18,668	115,737	290,306	0,913	0,787	1,700
2015	167,040	1	24	107,567	18,047	44,337	61,218	231,170	0,752	0,632	1,384
2016	178,452	1	27	61,193	111,360	7,949	239,635	420,137	0,967	1,387	2,354
2017	191,411	1	25	1,144	46,520	10,174	198,947	256,785	0,249	1,093	1,342
2018	198,464	0	24	0	359,094	0	157,724	516,819	1,809	0,795	2,604
MA Total:	906,122	4	114	250,665	610,162	81,128	773,262	1,715,216	0,950	0,943	1,893

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.242	2.217	.
(14) Massachusetts Credibility:	0.300	0.480	.
(15) Countrywide Pure Premium:	2.105	1.647	3.752
(16) Countrywide Indicated Relativity:	2.801	3.892	.
(17) Countrywide Credibility:	0.350	0.260	.
(18) Countrywide Lost-Time Claims:	939.00	.	.
(19) Pure Premium Underlying Present Rate:	1.572	1.132	2.704
(20) Relativity to Underlying Present Rate:	2.271	2.963	.
(21) Credibility to Underlying Relativity:	0.350	0.260	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.148	2.846	.
(24) Balanced Formula Relativity:	2.134	2.848	2.389

IX 000227 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 158

Calculation of Class Relativities

Class(es): 8291 STORAGE WAREHOUSE-COLD		Effective: 7/1/2022							Goods and Services		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	156.632	0	27	0	26.566	0	63.523	90.089	0.170	0.406	0.575
2015	156.003	1	29	18.902	92.711	8.718	107.062	227.392	0.715	0.742	1.458
2016	157.651	2	28	254.527	404.348	63.584	216.977	939.436	4.179	1.780	5.959
2017	187.322	1	32	69.995	299.550	122.350	381.710	873.605	1.973	2.691	4.664
2018	204.486	1	20	19.598	91.675	24.522	80.032	215.826	0.544	0.511	1.055
MA Total:	862.094	5	136	363.021	914.850	219.174	849.304	2,346.349	1.482	1.239	2.722

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.938	2.914	.
(14) Massachusetts Credibility:	0.310	0.440	.
(15) Countrywide Pure Premium:	1.292	0.749	2.040
(16) Countrywide Indicated Relativity:	1.718	1.769	.
(17) Countrywide Credibility:	0.350	0.280	.
(18) Countrywide Lost-Time Claims:	1011.0	.	.
(19) Pure Premium Underlying Present Rate:	1.675	0.946	2.622
(20) Relativity to Underlying Present Rate:	2.420	2.476	.
(21) Credibility to Underlying Relativity:	0.340	0.280	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.025	2.471	.
(24) Balanced Formula Relativity:	2.012	2.472	2.177

Class(es): 8292 STORAGE WAREHOUSE NOC		Effective: 7/1/2022							Goods and Services		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	689.589	4	107	276.034	1,149.447	60.959	683.769	2,170.208	2.067	1.080	3.147
2015	768.405	7	106	300.371	1,129.628	84.363	429.325	1,943.686	1.861	0.669	2.530
2016	711.629	6	125	571.610	529.647	312.046	456.613	1,869.916	1.548	1.080	2.628
2017	766.331	7	153	481.069	898.848	188.351	466.291	2,034.559	1.801	0.854	2.655
2018	871.993	3	111	364.018	850.309	80.801	496.831	1,791.960	1.393	0.662	2.055
MA Total:	3,807.947	27	602	1,993.102	4,557.879	726.519	2,532.829	9,810.329	1.720	0.856	2.576

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.249	2.012	.
(14) Massachusetts Credibility:	0.540	0.770	.
(15) Countrywide Pure Premium:	1.550	0.813	2.363
(16) Countrywide Indicated Relativity:	2.061	1.921	.
(17) Countrywide Credibility:	0.230	0.120	.
(18) Countrywide Lost-Time Claims:	7287.0	.	.
(19) Pure Premium Underlying Present Rate:	1.556	0.862	2.419
(20) Relativity to Underlying Present Rate:	2.248	2.256	.
(21) Credibility to Underlying Relativity:	0.230	0.110	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.206	2.028	.
(24) Balanced Formula Relativity:	2.192	2.029	2.134

IX 000228 STIP

Section IX - Classification Pricing
Subsection G - Class Relativities
7/1/2022

Section IX - G
Exhibit 159

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
8293 STORAGE WAREHOUSE-FURNITURE & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	578,115	13	149	861,099	2,046,281	331,833	1,365,004	4,604,216	5,029	2,935	7,964
2015	594,044	15	121	2,032,923	1,178,560	751,496	617,566	4,580,545	5,406	2,305	7,711
2016	737,773	13	165	1,605,316	955,476	786,136	597,383	3,944,311	3,471	1,875	5,346
2017	761,834	12	144	1,239,975	979,863	524,261	1,001,234	3,745,332	2,914	2,002	4,916
2018	773,664	2	181	64,181	1,838,307	88,223	939,807	2,930,519	2,459	1,329	3,788
MA Total:	3,445,429	55	760	5,803,493	6,998,488	2,481,949	4,520,993	19,804,923	3,716	2,033	5,748

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.857	4.778	.
(14) Massachusetts Credibility:	0.720	1.000	.
(15) Countrywide Pure Premium:	3.942	1.966	5.909
(16) Countrywide Indicated Relativity:	5.244	4.647	.
(17) Countrywide Credibility:	0.140	0.000	.
(18) Countrywide Lost-Time Claims:	4230.0	.	.
(19) Pure Premium Underlying Present Rate:	3.539	1.918	5.457
(20) Relativity to Underlying Present Rate:	5.112	5.018	.
(21) Credibility to Underlying Relativity:	0.140	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	4.947	4.778	.
(24) Balanced Formula Relativity:	4.916	4.781	4.868

Class(es):		Effective: 7/1/2022							Goods and Services		
8350 GASOLINE OR OIL DEALER & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,605,704	20	273	1,772,139	3,097,424	726,714	1,709,429	7,305,707	3,033	1,517	4,550
2015	1,581,981	16	211	3,814,453	3,287,376	1,384,222	1,511,702	9,997,753	4,489	1,831	6,320
2016	1,603,213	14	203	3,078,884	2,232,302	794,139	1,480,418	7,585,743	3,313	1,419	4,732
2017	1,610,610	11	226	1,520,345	4,120,390	778,637	1,870,840	8,290,211	3,502	1,645	5,147
2018	1,528,148	12	170	1,541,710	4,096,203	430,649	1,747,497	7,816,059	3,689	1,425	5,115
MA Total:	7,929,655	73	1,083	11,727,530	16,833,695	4,114,361	8,319,886	40,995,473	3,602	1,568	5,170

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.708	3.686	.
(14) Massachusetts Credibility:	0.940	1.000	.
(15) Countrywide Pure Premium:	2.858	1.161	4.019
(16) Countrywide Indicated Relativity:	3.802	2.744	.
(17) Countrywide Credibility:	0.030	0.000	.
(18) Countrywide Lost-Time Claims:	3786.0	.	.
(19) Pure Premium Underlying Present Rate:	3.039	1.423	4.463
(20) Relativity to Underlying Present Rate:	4.390	3.724	.
(21) Credibility to Underlying Relativity:	0.030	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	4.671	3.686	.
(24) Balanced Formula Relativity:	4.642	3.688	4.301

IX 000229 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 160

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
8380 AUTOMOBILE SERVICE OR REPAIR CENTER & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	8,080,581	36	999	3,498,737	5,561,980	1,221,092	3,798,012	14,079,821	1,121	0,621	1,742
2015	8,509,752	46	1,000	5,282,728	6,869,154	2,010,445	3,754,984	17,917,312	1,428	0,678	2,106
2016	8,598,379	27	931	4,042,876	6,154,270	1,690,467	3,942,325	15,829,939	1,186	0,655	1,841
2017	8,853,121	29	908	2,746,976	8,032,143	1,622,316	4,055,441	16,456,877	1,218	0,641	1,859
2018	9,297,159	38	883	4,086,160	9,784,484	1,478,175	5,391,562	20,740,381	1,492	0,739	2,231
MA Total:	43,338,992	176	4,721	19,657,477	36,402,032	8,022,495	20,942,325	85,024,329	1,294	0,668	1,962

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.691	1.571	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.112	0.549	1.661
(16) Countrywide Indicated Relativity:	1.480	1.297	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	26124	.	.
(19) Pure Premium Underlying Present Rate:	1.177	0.604	1.782
(20) Relativity to Underlying Present Rate:	1.701	1.581	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.691	1.571	.
(24) Balanced Formula Relativity:	1.680	1.572	1.642

Class(es):		Effective: 7/1/2022							Goods and Services		
8381 GASOLINE STATION-RETAIL-SELF SERVICE											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	200,391	1	18	28,743	26,036	10,156	35,683	100,618	0,273	0,229	0,502
2015	179,806	1	6	3,242	111,531	195	88,528	203,496	0,638	0,493	1,132
2016	190,054	2	14	19,161	46,146	7,158	75,184	147,648	0,344	0,433	0,777
2017	169,424	1	8	48,502	109,307	19,354	51,061	228,224	0,931	0,416	1,347
2018	205,325	2	8	109,670	97,467	152,198	148,229	507,564	1,009	1,463	2,472
MA Total:	945,001	7	54	209,318	390,487	189,060	398,685	1,187,550	0,635	0,622	1,257

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.830	1.462	.
(14) Massachusetts Credibility:	0.230	0.350	.
(15) Countrywide Pure Premium:	0.752	0.396	1.148
(16) Countrywide Indicated Relativity:	1.000	0.937	.
(17) Countrywide Credibility:	0.390	0.330	.
(18) Countrywide Lost-Time Claims:	475.00	.	.
(19) Pure Premium Underlying Present Rate:	0.755	0.474	1.229
(20) Relativity to Underlying Present Rate:	1.090	1.241	.
(21) Credibility to Underlying Relativity:	0.380	0.320	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.995	1.218	.
(24) Balanced Formula Relativity:	0.989	1.218	1.071

IX 000230 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 161

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
8385 BUS CO: GARAGE EMPLOYEES											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	419,724	3	78	228,914	1,114,833	180,982	400,894	1,925,624	3,202	1,386	4,588
2015	446,275	5	44	836,994	276,334	214,718	114,056	1,442,102	2,495	0,737	3,231
2016	472,893	1	58	93,254	759,842	16,697	443,063	1,312,856	1,804	0,972	2,776
2017	515,950	5	103	836,862	1,028,087	225,381	556,850	2,647,180	3,615	1,516	5,131
2018	554,695	3	100	150,089	993,989	29,713	617,823	1,791,615	2,063	1,167	3,230
MA Total:	2,409,537	17	383	2,146,113	4,173,086	667,491	2,132,686	9,119,376	2,623	1,162	3,785

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.428	2.732	.
(14) Massachusetts Credibility:	0.430	0.600	.
(15) Countrywide Pure Premium:	1.090	0.507	1.598
(16) Countrywide Indicated Relativity:	1.450	1.199	.
(17) Countrywide Credibility:	0.290	0.200	.
(18) Countrywide Lost-Time Claims:	1354.0	.	.
(19) Pure Premium Underlying Present Rate:	1.384	0.728	2.112
(20) Relativity to Underlying Present Rate:	1.999	1.906	.
(21) Credibility to Underlying Relativity:	0.280	0.200	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.454	2.260	.
(24) Balanced Formula Relativity:	2.439	2.261	2.376

Class(es):		Effective: 7/1/2022							Goods and Services		
8392 AUTOMOBILE STORAGE GARAGE OR PARKING STATION & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	575,119	1	47	62,832	92,399	442,336	211,540	809,107	0,270	1,137	1,407
2015	611,938	3	46	275,091	55,599	57,717	106,710	495,116	0,540	0,269	0,809
2016	517,861	1	35	101,264	188,950	60,161	289,794	640,168	0,560	0,676	1,236
2017	452,944	2	46	319,842	280,567	28,153	199,048	827,609	1,326	0,502	1,827
2018	446,856	2	33	216,140	316,824	44,192	199,689	776,844	1,193	0,546	1,738
MA Total:	2,604,718	9	207	975,168	934,338	632,558	1,006,780	3,548,844	0,733	0,629	1,362

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.958	1.480	.
(14) Massachusetts Credibility:	0.310	0.490	.
(15) Countrywide Pure Premium:	0.812	0.536	1.348
(16) Countrywide Indicated Relativity:	1.080	1.266	.
(17) Countrywide Credibility:	0.350	0.260	.
(18) Countrywide Lost-Time Claims:	1382.0	.	.
(19) Pure Premium Underlying Present Rate:	0.593	0.419	1.012
(20) Relativity to Underlying Present Rate:	0.856	1.096	.
(21) Credibility to Underlying Relativity:	0.340	0.250	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.966	1.328	.
(24) Balanced Formula Relativity:	0.960	1.329	1.092

IX 000231 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 162

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
8393 AUTOMOBILE BODY REPAIR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,193,528	7	175	669,743	676,773	76,940	529,588	1,953,044	0.614	0.277	0.890
2015	2,004,763	2	126	340,070	862,464	69,107	296,879	1,568,521	0.600	0.183	0.782
2016	2,020,089	4	113	160,256	769,968	86,810	569,217	1,586,252	0.460	0.325	0.785
2017	2,181,239	3	103	142,161	540,675	78,751	349,721	1,111,307	0.313	0.196	0.509
2018	2,251,211	4	100	829,689	1,111,142	198,233	526,460	2,665,524	0.862	0.322	1.184
MA Total:	10,650,829	20	617	2,141,920	3,961,023	509,841	2,271,866	8,884,649	0.573	0.261	0.834

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.749	0.614	.
(14) Massachusetts Credibility:	0.550	0.710	.
(15) Countrywide Pure Premium:	0.852	0.322	1.173
(16) Countrywide Indicated Relativity:	1.133	0.761	.
(17) Countrywide Credibility:	0.230	0.150	.
(18) Countrywide Lost-Time Claims:	2936.0	.	.
(19) Pure Premium Underlying Present Rate:	0.603	0.259	0.862
(20) Relativity to Underlying Present Rate:	0.871	0.679	.
(21) Credibility to Underlying Relativity:	0.220	0.140	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.864	0.645	.
(24) Balanced Formula Relativity:	0.859	0.645	0.782

Class(es):		Effective: 7/1/2022							Office and Clerical		
8601 ARCHITECT OR ENGINEER-CONSULTING											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	14,257,801	8	160	438,660	923,662	112,615	561,086	2,036,023	0.096	0.047	0.143
2015	15,141,353	6	157	450,325	1,048,766	202,157	814,532	2,515,779	0.099	0.067	0.166
2016	15,296,734	6	157	734,683	1,633,737	178,160	899,120	3,445,701	0.155	0.070	0.225
2017	15,730,238	5	176	237,561	392,996	85,453	432,029	1,148,039	0.040	0.033	0.073
2018	16,653,816	2	129	438,634	505,412	114,865	648,438	1,707,349	0.057	0.046	0.103
MA Total:	77,079,941	27	779	2,299,863	4,504,573	693,250	3,355,206	10,852,891	0.088	0.053	0.141

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.361	1.351	.
(14) Massachusetts Credibility:	0.580	0.830	.
(15) Countrywide Pure Premium:	0.100	0.056	0.156
(16) Countrywide Indicated Relativity:	1.815	1.574	.
(17) Countrywide Credibility:	0.210	0.090	.
(18) Countrywide Lost-Time Claims:	2026.0	.	.
(19) Pure Premium Underlying Present Rate:	0.092	0.052	0.144
(20) Relativity to Underlying Present Rate:	1.567	1.439	.
(21) Credibility to Underlying Relativity:	0.210	0.080	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	1.499	1.378	.
(24) Balanced Formula Relativity:	1.499	1.380	1.454

IX 000232 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 163

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
8710 FIELD BONDED WAREHOUSING - ALL EMP & CLERICAL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	7,314	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	2,259	0	1	0	6,760	0	2,039	8,798	2,992	0.902	3,894
2016	1,000	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	1,453	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	3,181	0	1	0	0	0	1,210	1,210	0.000	0.380	0.380
MA Total:	15,208	0	2	0	6,760	0	3,248	10,008	0.444	0.214	0.658

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.581	0.502	.
(14) Massachusetts Credibility:	0.060	0.070	.
(15) Countrywide Pure Premium:	0.716	0.391	1.108
(16) Countrywide Indicated Relativity:	0.953	0.925	.
(17) Countrywide Credibility:	0.190	0.200	.
(18) Countrywide Lost-Time Claims:	18.000	.	.
(19) Pure Premium Underlying Present Rate:	1.514	0.634	2.149
(20) Relativity to Underlying Present Rate:	2.188	1.660	.
(21) Credibility to Underlying Relativity:	0.750	0.730	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.857	1.432	.
(24) Balanced Formula Relativity:	1.845	1.433	1.698

Class(es):		Effective: 7/1/2022							Goods and Services		
8720 INSPECTION OF RISKS FOR INSURANCE OR VALUATION PURPOSES NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,789,738	2	42	102,336	118,585	7,376	142,432	370,730	0.123	0.084	0.207
2015	1,825,873	4	49	1,142,698	804,395	274,672	377,172	2,598,937	1.066	0.357	1.423
2016	1,811,281	2	44	215,919	212,689	35,705	208,775	673,088	0.237	0.135	0.372
2017	2,063,616	1	52	92,429	578,677	13,488	423,838	1,108,432	0.325	0.212	0.537
2018	2,068,704	2	52	86,434	285,579	57,251	401,686	830,950	0.180	0.222	0.402
MA Total:	9,559,212	11	239	1,639,815	1,999,926	388,493	1,553,904	5,582,137	0.381	0.203	0.584

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.498	0.478	.
(14) Massachusetts Credibility:	0.440	0.590	.
(15) Countrywide Pure Premium:	0.483	0.261	0.744
(16) Countrywide Indicated Relativity:	0.642	0.617	.
(17) Countrywide Credibility:	0.280	0.210	.
(18) Countrywide Lost-Time Claims:	1426.0	.	.
(19) Pure Premium Underlying Present Rate:	0.367	0.176	0.543
(20) Relativity to Underlying Present Rate:	0.530	0.462	.
(21) Credibility to Underlying Relativity:	0.280	0.200	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.547	0.504	.
(24) Balanced Formula Relativity:	0.544	0.504	0.530

IX 000233 STIP

Section IX - Classification Pricing
Subsection G - Class Relativities
7/1/2022

Section IX - G
Exhibit 164

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Office and Clerical		
8721 REAL ESTATE APPRAISAL CO - OUTSIDE EMPLOYEES											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	328,957	0	2	0	0	0	522	522	0.000	0.002	0.002
2015	284,195	0	1	0	0	0	42	42	0.000	0.000	0.000
2016	292,653	0	4	0	2,264	0	17,854	20,118	0.008	0.061	0.069
2017	325,926	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	335,638	0	1	0	0	0	122	122	0.000	0.000	0.000
MA Total:	1,567,368	0	8	0	2,264	0	18,540	20,804	0.001	0.012	0.013

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.022	0.304	.
(14) Massachusetts Credibility:	0.130	0.200	.
(15) Countrywide Pure Premium:	0.072	0.044	0.115
(16) Countrywide Indicated Relativity:	1.301	1.216	.
(17) Countrywide Credibility:	0.360	0.380	.
(18) Countrywide Lost-Time Claims:	87.000	.	.
(19) Pure Premium Underlying Present Rate:	0.112	0.076	0.188
(20) Relativity to Underlying Present Rate:	1.910	2.115	.
(21) Credibility to Underlying Relativity:	0.510	0.420	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	1.446	1.412	.
(24) Balanced Formula Relativity:	1.445	1.413	1.433

Class(es):		Effective: 7/1/2022							Office and Clerical		
8742 SALESPERSONS, COLLECTORS OR MESSENGERS-OUTSIDE											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	101,739,040	32	524	2,368,136	2,201,740	1,701,795	2,024,686	8,296,357	0.045	0.037	0.082
2015	107,244,305	19	570	1,151,974	3,810,766	815,961	2,968,365	8,747,067	0.046	0.035	0.082
2016	110,863,082	24	454	1,891,523	3,796,954	583,854	2,284,113	8,556,443	0.051	0.026	0.077
2017	115,944,896	18	531	1,268,761	1,838,295	1,020,553	2,345,631	6,473,239	0.027	0.029	0.056
2018	121,967,154	28	517	3,317,015	2,167,464	901,639	2,604,591	8,990,709	0.045	0.029	0.074
MA Total:	557,758,477	121	2,596	9,997,409	13,815,219	5,023,802	12,227,386	41,063,816	0.043	0.031	0.074

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.658	0.796	.
(14) Massachusetts Credibility:	0.940	1.000	.
(15) Countrywide Pure Premium:	0.093	0.053	0.146
(16) Countrywide Indicated Relativity:	1.686	1.492	.
(17) Countrywide Credibility:	0.030	0.000	.
(18) Countrywide Lost-Time Claims:	14660	.	.
(19) Pure Premium Underlying Present Rate:	0.044	0.029	0.073
(20) Relativity to Underlying Present Rate:	0.740	0.819	.
(21) Credibility to Underlying Relativity:	0.030	0.000	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	0.691	0.796	.
(24) Balanced Formula Relativity:	0.691	0.797	0.731

IX 000234 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 165

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services			
8745 NEWS AGENT OR DISTRIB OF MAGAZINE-NOT RETAIL & SALES,DR												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	124,555	4	21	300,851	93,757	491,029	133,008	1,018,645	3,168	5,010	8,178	
2015	129,116	1	30	11,690	825,513	704	290,233	1,128,140	6,484	2,253	8,737	
2016	113,391	1	15	46,842	102,363	7,156	41,087	197,448	1,316	0,425	1,741	
2017	81,736	0	12	0	797,893	0	126,711	924,604	9,762	1,550	11,312	
2018	61,447	1	14	134,434	152,517	21,576	230,191	538,719	4,670	4,097	8,767	
MA Total:	510,245	7	92	493,817	1,972,043	520,466	821,231	3,807,556	4,833	2,630	7,462	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	6.317	6.181	.
(14) Massachusetts Credibility:	0.280	0.460	.
(15) Countrywide Pure Premium:	1.315	0.719	2.034
(16) Countrywide Indicated Relativity:	1.749	1.699	.
(17) Countrywide Credibility:	0.360	0.270	.
(18) Countrywide Lost-Time Claims:	251.00	.	.
(19) Pure Premium Underlying Present Rate:	2.335	1.837	4.172
(20) Relativity to Underlying Present Rate:	3.373	4.807	.
(21) Credibility to Underlying Relativity:	0.360	0.270	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	3.613	4.600	.
(24) Balanced Formula Relativity:	3.590	4.603	3.952

Class(es):		Effective: 7/1/2022							Goods and Services			
8747 DISPLAY SHOWROOMS - ALL TYPES												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	143,668	0	0	0	0	0	0	0	0.000	0.000	0.000	
2015	137,365	0	2	0	2,542	0	12,855	15,397	0.019	0.094	0.112	
2016	147,459	0	2	0	6,313	0	4,701	11,015	0.043	0.032	0.075	
2017	178,727	0	1	0	0	0	136	136	0.000	0.001	0.001	
2018	192,211	0	5	0	196,445	0	85,522	281,967	1.022	0.445	1.467	
MA Total:	799,429	0	10	0	205,300	0	103,214	308,514	0.257	0.129	0.386	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.336	0.304	.
(14) Massachusetts Credibility:	0.160	0.200	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.555	0.352	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.388	0.136	0.523
(20) Relativity to Underlying Present Rate:	0.560	0.355	.
(21) Credibility to Underlying Relativity:	0.840	0.800	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.524	0.345	.
(24) Balanced Formula Relativity:	0.521	0.345	0.458

IX 000235 STIP

Section IX - Classification Pricing
Subsection G - Class Relativities
7/1/2022

Section IX - G
Exhibit 166

Calculation of Class Relativities

Class(es): 8748 AUTOMOBILE SALESPERSONS		Effective: 7/1/2022							Office and Clerical		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,099,126	10	93	1,321,550	739,815	308,506	572,002	2,941,873	0.665	0.284	0.949
2015	3,102,988	3	65	563,966	714,148	78,911	326,318	1,683,343	0.412	0.131	0.542
2016	3,131,553	1	61	95,628	577,006	36,002	312,916	1,021,551	0.215	0.111	0.326
2017	3,208,513	6	87	417,567	1,119,285	52,180	647,210	2,236,241	0.479	0.218	0.697
2018	3,315,375	6	61	640,730	584,385	206,157	274,774	1,706,046	0.370	0.145	0.515
MA Total:	15,857,554	26	367	3,039,441	3,734,638	681,756	2,133,220	9,589,054	0.427	0.178	0.605

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	6.585	4.568	.
(14) Massachusetts Credibility:	0.490	0.690	.
(15) Countrywide Pure Premium:	0.178	0.096	0.274
(16) Countrywide Indicated Relativity:	3.233	2.675	.
(17) Countrywide Credibility:	0.260	0.160	.
(18) Countrywide Lost-Time Claims:	1898.0	.	.
(19) Pure Premium Underlying Present Rate:	0.293	0.157	0.450
(20) Relativity to Underlying Present Rate:	4.977	4.389	.
(21) Credibility to Underlying Relativity:	0.250	0.150	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	5.312	4.238	.
(24) Balanced Formula Relativity:	5.309	4.242	4.909

Class(es): 8800 MAILING OR ADDRESSING CO & CLERICAL		Effective: 7/1/2022							Office and Clerical		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	370,892	0	14	0	43,575	0	30,230	73,804	0.117	0.082	0.199
2015	404,358	2	15	138,424	35,509	18,405	44,339	236,677	0.430	0.155	0.585
2016	389,109	0	6	0	4,005	0	24,951	28,957	0.010	0.064	0.074
2017	344,130	0	14	0	255,740	0	111,693	367,434	0.743	0.325	1.068
2018	447,535	0	9	0	203,309	0	109,939	313,248	0.454	0.246	0.700
MA Total:	1,956,024	2	58	138,424	542,139	18,405	321,152	1,020,120	0.348	0.174	0.522

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.364	4.467	.
(14) Massachusetts Credibility:	0.250	0.350	.
(15) Countrywide Pure Premium:	0.501	0.321	0.822
(16) Countrywide Indicated Relativity:	9.093	8.960	.
(17) Countrywide Credibility:	0.380	0.330	.
(18) Countrywide Lost-Time Claims:	745.00	.	.
(19) Pure Premium Underlying Present Rate:	0.455	0.235	0.690
(20) Relativity to Underlying Present Rate:	7.734	6.550	.
(21) Credibility to Underlying Relativity:	0.370	0.320	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	7.658	6.616	.
(24) Balanced Formula Relativity:	7.654	6.623	7.268

IX 000236 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 167

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Office and Clerical		
8803 AUDITORS, ACCOUNTANT OR FACTORY COST OR OFF SYSTEMZR-TRAV											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	30,897,285	4	46	877,966	298,618	395,342	234,016	1,805,941	0.038	0.020	0.058
2015	32,201,436	1	41	44,750	266,091	61,939	199,896	572,677	0.010	0.008	0.018
2016	30,800,724	0	48	0	388,680	0	382,349	771,029	0.013	0.012	0.025
2017	31,511,882	3	33	323,794	23,196	81,681	167,461	596,131	0.011	0.008	0.019
2018	36,513,306	5	63	1,254,853	362,345	372,225	348,870	2,338,294	0.044	0.020	0.064
MA Total:	161,924,633	13	231	2,501,362	1,338,930	911,187	1,332,592	6,084,072	0.024	0.014	0.038

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.366	0.357	.
(14) Massachusetts Credibility:	0.410	0.600	.
(15) Countrywide Pure Premium:	0.017	0.010	0.027
(16) Countrywide Indicated Relativity:	0.308	0.287	.
(17) Countrywide Credibility:	0.300	0.200	.
(18) Countrywide Lost-Time Claims:	843.00	.	.
(19) Pure Premium Underlying Present Rate:	0.018	0.011	0.030
(20) Relativity to Underlying Present Rate:	0.313	0.312	.
(21) Credibility to Underlying Relativity:	0.290	0.200	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	0.333	0.334	.
(24) Balanced Formula Relativity:	0.333	0.334	0.333

Class(es):		Effective: 7/1/2022							Office and Clerical		
8810 CLERICAL OFFICE EMPLOYEES NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	487,262,533	82	1,986	6,980,284	10,466,248	2,467,550	8,705,230	28,619,312	0.036	0.023	0.059
2015	529,753,955	78	1,722	7,651,677	7,612,790	3,094,479	6,826,596	25,185,542	0.029	0.019	0.048
2016	549,527,939	74	1,647	7,481,714	7,573,990	2,509,559	6,855,387	24,420,650	0.027	0.017	0.044
2017	581,527,732	71	1,825	6,280,210	10,707,623	2,338,786	8,826,809	28,153,427	0.029	0.019	0.048
2018	605,269,608	77	1,665	6,561,006	9,358,705	2,877,889	8,246,944	27,044,544	0.026	0.018	0.045
MA Total:	2,753,341,767	382	8,845	34,954,891	45,719,356	13,288,263	39,460,965	133,423,475	0.029	0.019	0.048

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.452	0.493	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.037	0.025	0.061
(16) Countrywide Indicated Relativity:	0.663	0.694	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	36120	.	.
(19) Pure Premium Underlying Present Rate:	0.027	0.018	0.045
(20) Relativity to Underlying Present Rate:	0.463	0.492	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	0.452	0.493	.
(24) Balanced Formula Relativity:	0.451	0.493	0.467

IX 000237 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 168

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Office and Clerical		
8820 ATTORNEY-ALL EMP & CLERICAL, MESSENGERS, DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	24,326,195	2	67	399,977	849,253	225,368	564,047	2,038,646	0.051	0.032	0.084
2015	24,386,482	6	65	611,957	224,123	236,605	412,935	1,485,621	0.034	0.027	0.061
2016	26,502,020	5	42	53,484	472,822	26,082	246,481	798,870	0.020	0.010	0.030
2017	27,648,035	5	55	26,586	671,808	39,467	218,830	956,690	0.025	0.009	0.035
2018	29,141,341	2	37	121,200	134,951	42,760	155,950	454,861	0.009	0.007	0.016
MA Total:	132,004,072	20	266	1,213,204	2,352,957	570,282	1,598,244	5,734,687	0.027	0.016	0.043

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.416	0.423	.
(14) Massachusetts Credibility:	0.480	0.690	.
(15) Countrywide Pure Premium:	0.035	0.022	0.057
(16) Countrywide Indicated Relativity:	0.641	0.613	.
(17) Countrywide Credibility:	0.260	0.160	.
(18) Countrywide Lost-Time Claims:	1441.0	.	.
(19) Pure Premium Underlying Present Rate:	0.033	0.019	0.052
(20) Relativity to Underlying Present Rate:	0.567	0.534	.
(21) Credibility to Underlying Relativity:	0.260	0.150	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	0.514	0.470	.
(24) Balanced Formula Relativity:	0.514	0.470	0.497

Class(es):		Effective: 7/1/2022							Goods and Services		
8824 ASSISTED LIVING RESIDENCES: PERSONAL CARE EMPLOYEES											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	825,467	4	171	121,758	395,551	39,319	241,022	797,651	0.627	0.340	0.966
2015	907,845	2	216	93,997	911,089	85,604	619,972	1,710,663	1.107	0.777	1.884
2016	1,015,694	5	189	95,615	592,234	93,938	389,316	1,171,103	0.677	0.476	1.153
2017	1,313,722	6	280	385,261	700,585	183,692	602,225	1,871,762	0.827	0.598	1.425
2018	1,434,509	7	277	910,946	1,849,566	239,589	633,810	3,633,912	1.924	0.609	2.533
MA Total:	5,497,236	24	1,133	1,607,577	4,449,024	642,142	2,486,346	9,185,090	1.102	0.569	1.671

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.440	1.338	.
(14) Massachusetts Credibility:	0.470	0.690	.
(15) Countrywide Pure Premium:	1.143	0.708	1.851
(16) Countrywide Indicated Relativity:	1.521	1.674	.
(17) Countrywide Credibility:	0.270	0.160	.
(18) Countrywide Lost-Time Claims:	10720	.	.
(19) Pure Premium Underlying Present Rate:	0.779	0.465	1.243
(20) Relativity to Underlying Present Rate:	1.125	1.216	.
(21) Credibility to Underlying Relativity:	0.260	0.150	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.380	1.373	.
(24) Balanced Formula Relativity:	1.371	1.374	1.372

IX 000238 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 169

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services			
8826 ASSISTED LIVING RESIDENCES: ALL OTHER EMPLOYEES, SALESPERSONS &												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	825.117	3	136	267.030	182.504	68.083	174.002	691.619	0.545	0.293	0.838	
2015	871.671	4	162	237.806	537.849	31.480	295.289	1.102.424	0.890	0.375	1.265	
2016	986.402	3	146	318.171	269.045	160.885	240.938	989.039	0.595	0.407	1.003	
2017	1.092.034	4	167	69.923	184.772	20.034	190.480	465.210	0.233	0.193	0.426	
2018	1.190.679	2	196	252.731	1.142.199	95.292	534.715	2.024.937	1.172	0.529	1.701	
MA Total:	4,965,903	16	807	1,145,661	2,316,370	375,774	1,435,424	5,273,229	0.697	0.365	1.062	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.911	0.857	.
(14) Massachusetts Credibility:	0.420	0.590	.
(15) Countrywide Pure Premium:	0.866	0.575	1.440
(16) Countrywide Indicated Relativity:	1.151	1.359	.
(17) Countrywide Credibility:	0.290	0.210	.
(18) Countrywide Lost-Time Claims:	3200.0	.	.
(19) Pure Premium Underlying Present Rate:	0.646	0.343	0.990
(20) Relativity to Underlying Present Rate:	0.934	0.899	.
(21) Credibility to Underlying Relativity:	0.290	0.200	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.987	0.971	.
(24) Balanced Formula Relativity:	0.981	0.971	0.978

Class(es):		Effective: 7/1/2022							Goods and Services			
8829 CONVALESCENT OR NURSING HOME-ALL EMPLOYEES												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	10.715.612	63	2.028	4.335.511	6.175.024	1.320.478	4.236.292	16.067.304	0.981	0.519	1.499	
2015	9.520.491	41	1.676	2.938.878	6.439.506	1.256.969	3.768.370	14.403.722	0.985	0.528	1.513	
2016	9.675.684	58	1.598	4.520.663	8.130.077	951.300	4.309.128	17.911.169	1.307	0.544	1.851	
2017	10.382.503	34	1.518	4.533.642	7.642.339	2.047.365	4.406.613	18.629.959	1.173	0.622	1.794	
2018	9.845.650	40	1.452	6.369.462	10.462.573	1.503.340	4.297.031	22.632.406	1.710	0.589	2.299	
MA Total:	50,139,940	236	8.272	22,698,156	38,849,518	7,079,452	21,017,435	89,644,561	1.228	0.560	1.788	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.604	1.317	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.847	0.497	1.344
(16) Countrywide Indicated Relativity:	1.126	1.175	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	19465	.	.
(19) Pure Premium Underlying Present Rate:	1.000	0.470	1.471
(20) Relativity to Underlying Present Rate:	1.445	1.231	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.604	1.317	.
(24) Balanced Formula Relativity:	1.595	1.318	1.496

IX 000239 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 170

Calculation of Class Relativities

Class(es): 8831 PET GROOMING & DRIVERS		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,861,655	2	601	71,248	488,264	89,335	1,035,609	1,684,456	0.196	0.393	0.589
2015	3,125,595	13	629	922,482	287,376	292,405	1,064,096	2,566,359	0.387	0.434	0.821
2016	3,124,172	5	566	266,141	524,290	662,201	1,053,912	2,506,544	0.253	0.549	0.802
2017	3,717,012	9	708	332,769	878,866	181,428	1,236,981	2,630,044	0.326	0.382	0.708
2018	3,947,233	9	704	672,114	1,380,231	262,655	1,382,604	3,697,604	0.520	0.417	0.937
MA Total:	16,775,666	38	3,208	2,264,754	3,559,028	1,488,025	5,773,201	13,085,008	0.347	0.433	0.780

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.454	1.018	.
(14) Massachusetts Credibility:	0.520	0.970	.
(15) Countrywide Pure Premium:	0.387	0.362	0.749
(16) Countrywide Indicated Relativity:	0.515	0.855	.
(17) Countrywide Credibility:	0.240	0.020	.
(18) Countrywide Lost-Time Claims:	4862.0	.	.
(19) Pure Premium Underlying Present Rate:	0.322	0.357	0.678
(20) Relativity to Underlying Present Rate:	0.465	0.933	.
(21) Credibility to Underlying Relativity:	0.240	0.010	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.471	1.013	.
(24) Balanced Formula Relativity:	0.468	1.014	0.663

Class(es): 8832 PHYSICIAN & CLERICAL		Effective: 7/1/2022							Office and Clerical		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	54,379,947	33	1,191	3,215,937	2,969,661	1,188,913	2,457,298	9,831,809	0.114	0.067	0.181
2015	55,175,170	25	1,176	3,313,319	4,604,409	1,703,968	2,873,546	12,495,241	0.144	0.083	0.226
2016	56,765,637	35	1,292	4,000,198	6,097,947	1,261,881	3,285,914	14,645,939	0.178	0.080	0.258
2017	58,142,612	31	1,327	4,319,227	3,964,707	980,594	2,691,429	11,955,958	0.142	0.063	0.206
2018	60,819,768	26	1,214	2,291,262	4,784,099	885,538	3,266,403	11,227,302	0.116	0.068	0.185
MA Total:	285,283,135	150	6,200	17,139,944	22,420,822	6,020,894	14,574,589	60,156,249	0.139	0.072	0.211

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.138	1.858	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.089	0.053	0.142
(16) Countrywide Indicated Relativity:	1.618	1.468	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	13651	.	.
(19) Pure Premium Underlying Present Rate:	0.126	0.067	0.194
(20) Relativity to Underlying Present Rate:	2.148	1.878	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	2.138	1.858	.
(24) Balanced Formula Relativity:	2.137	1.859	2.033

IX 000240 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 171

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Office and Clerical		
8833 HOSPITAL: PROFESSIONAL EMPLOYEES											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	8,554,257	21	890	1,405,733	3,202,271	334,271	1,522,944	6,465,219	0.539	0.217	0.756
2015	8,862,942	16	826	1,457,723	2,766,110	340,535	1,754,874	6,319,242	0.477	0.236	0.713
2016	9,957,396	27	945	2,495,777	3,687,097	1,095,806	2,252,146	9,530,826	0.621	0.336	0.957
2017	10,814,357	19	860	2,147,890	3,252,550	602,268	1,688,593	7,691,301	0.499	0.212	0.711
2018	11,425,406	21	946	2,146,276	5,793,524	518,270	2,618,761	11,076,831	0.695	0.275	0.969
MA Total:	49,614,357	104	4,467	9,653,398	18,701,553	2,891,150	9,837,318	41,083,419	0.572	0.257	0.828

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	8.810	6.601	.
(14) Massachusetts Credibility:	0.980	1.000	.
(15) Countrywide Pure Premium:	0.264	0.160	0.425
(16) Countrywide Indicated Relativity:	4.802	4.481	.
(17) Countrywide Credibility:	0.010	0.000	.
(18) Countrywide Lost-Time Claims:	17741	.	.
(19) Pure Premium Underlying Present Rate:	0.532	0.237	0.769
(20) Relativity to Underlying Present Rate:	9.054	6.604	.
(21) Credibility to Underlying Relativity:	0.010	0.000	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	8.772	6.601	.
(24) Balanced Formula Relativity:	8.768	6.608	7.959

Class(es):		Effective: 7/1/2022							Goods and Services		
8835 NURSING-HOME HEALTH, PUBLIC & TRAVELING-ALL EMPLOYEES											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	9,021,485	61	941	3,797,749	4,590,849	1,107,435	2,470,281	11,966,313	0.930	0.397	1.326
2015	10,618,857	58	965	4,164,655	5,880,235	1,719,596	3,159,623	14,924,110	0.946	0.459	1.405
2016	10,904,796	46	913	2,567,418	4,827,292	1,104,593	2,948,434	11,447,736	0.678	0.372	1.050
2017	10,401,774	46	849	4,498,292	6,432,455	1,008,094	2,811,600	14,750,441	1.051	0.367	1.418
2018	10,680,103	51	793	5,334,238	6,715,551	1,388,781	2,823,257	16,261,827	1.128	0.394	1.523
MA Total:	51,627,015	262	4,461	20,362,352	28,446,382	6,328,499	14,213,195	69,350,428	0.945	0.398	1.343

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.236	0.935	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.855	0.426	1.281
(16) Countrywide Indicated Relativity:	1.137	1.007	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	17131	.	.
(19) Pure Premium Underlying Present Rate:	0.882	0.368	1.251
(20) Relativity to Underlying Present Rate:	1.274	0.964	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.236	0.935	.
(24) Balanced Formula Relativity:	1.228	0.936	1.124

IX 000241 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 172

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Office and Clerical		
8868 COLLEGE: PROFESSIONAL EMPLOYEES & CLERICAL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	39,541,748	98	3,233	5,395,589	6,435,504	2,060,527	6,107,964	19,999,584	0.299	0.207	0.506
2015	42,007,001	66	3,322	4,170,064	7,180,391	1,720,661	6,706,267	19,777,382	0.270	0.201	0.471
2016	43,567,105	72	3,333	6,451,792	7,242,548	2,629,362	6,629,333	22,953,035	0.314	0.213	0.527
2017	44,917,239	75	3,543	6,041,812	11,785,578	1,942,319	8,521,857	28,291,565	0.397	0.233	0.630
2018	46,162,760	99	3,976	8,346,194	10,362,446	2,392,585	7,875,103	28,976,329	0.405	0.222	0.628
MA Total:	216,195,853	410	17,407	30,405,450	43,006,467	10,745,454	35,840,524	119,997,894	0.340	0.215	0.555

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.235	5.544	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.093	0.081	0.174
(16) Countrywide Indicated Relativity:	1.685	2.260	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	17016	.	.
(19) Pure Premium Underlying Present Rate:	0.288	0.197	0.485
(20) Relativity to Underlying Present Rate:	4.901	5.478	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	5.235	5.544	.
(24) Balanced Formula Relativity:	5.232	5.550	5.351

Class(es):		Effective: 7/1/2022							Goods and Services		
9014 BUILDINGS - OPERATION BY CONTRACTORS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6,088,993	27	450	2,910,212	2,975,938	1,098,164	1,519,715	8,504,030	0.967	0.430	1.397
2015	6,778,816	29	523	2,690,798	3,082,106	727,356	2,317,312	8,817,571	0.852	0.449	1.301
2016	7,053,485	36	587	2,144,556	4,401,458	619,712	2,931,426	10,097,152	0.928	0.503	1.432
2017	7,241,601	39	577	4,350,370	5,993,975	1,936,927	4,264,123	16,545,394	1.428	0.856	2.285
2018	7,660,956	28	568	2,004,756	4,778,151	889,831	2,699,320	10,372,059	0.885	0.468	1.354
MA Total:	34,823,851	159	2,705	14,100,692	21,231,627	5,271,991	13,731,896	54,336,206	1.015	0.546	1.560

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.326	1.283	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.237	0.667	1.904
(16) Countrywide Indicated Relativity:	1.645	1.577	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	18639	.	.
(19) Pure Premium Underlying Present Rate:	0.969	0.516	1.484
(20) Relativity to Underlying Present Rate:	1.399	1.349	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.326	1.283	.
(24) Balanced Formula Relativity:	1.318	1.284	1.306

IX 000242 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 173

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
9015 BUILDINGS-OPERATION BY OWNER OR LESSEE											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	5,881,366	44	821	5,679,812	4,605,181	2,505,547	3,233,436	16,023,975	1,749	0,976	2,725
2015	6,102,605	25	774	3,376,468	6,003,539	1,273,467	4,073,401	14,726,875	1,537	0,876	2,413
2016	6,406,483	36	663	4,028,641	4,376,685	839,989	2,766,902	12,012,218	1,312	0,563	1,875
2017	6,571,125	37	721	4,999,557	6,699,511	1,963,840	3,512,612	17,175,519	1,780	0,833	2,614
2018	6,619,640	26	714	2,343,981	4,774,763	1,104,788	3,347,756	11,571,288	1,075	0,673	1,748
MA Total:	31,581,220	168	3,693	20,428,458	26,459,679	7,687,631	16,934,106	71,509,875	1,485	0,780	2,264

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.941	1.833	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.315	0.670	1.985
(16) Countrywide Indicated Relativity:	1.749	1.584	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	14803	.	.
(19) Pure Premium Underlying Present Rate:	1.356	0.705	2.061
(20) Relativity to Underlying Present Rate:	1.959	1.844	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.941	1.833	.
(24) Balanced Formula Relativity:	1.929	1.834	1.895

Class(es):		Effective: 7/1/2022							Goods and Services		
9016 AMUSEMENT PARK OR EXHIBITION OPERATION & DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	610,525	0	97	0	256,590	0	404,693	661,283	0.420	0.663	1.083
2015	630,054	2	88	41,309	357,332	5,723	578,796	983,159	0.633	0.928	1.560
2016	689,510	1	81	17,198	281,823	7,385	271,172	577,579	0.434	0.404	0.838
2017	770,838	1	94	71,690	146,633	7,906	239,615	465,843	0.283	0.321	0.604
2018	795,942	2	87	37,146	435,010	20,777	510,164	1,003,097	0.593	0.667	1.260
MA Total:	3,496,868	6	447	167,342	1,477,388	41,791	2,004,441	3,690,961	0,470	0,585	1,056

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.615	1.376	.
(14) Massachusetts Credibility:	0.380	0.600	.
(15) Countrywide Pure Premium:	0.935	0.679	1.614
(16) Countrywide Indicated Relativity:	1.244	1.604	.
(17) Countrywide Credibility:	0.310	0.200	.
(18) Countrywide Lost-Time Claims:	1869.0	.	.
(19) Pure Premium Underlying Present Rate:	0.704	0.516	1.220
(20) Relativity to Underlying Present Rate:	1.017	1.351	.
(21) Credibility to Underlying Relativity:	0.310	0.200	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.934	1.417	.
(24) Balanced Formula Relativity:	0.929	1.417	1.103

IX 000243 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 174

Calculation of Class Relativities

Class(es):									Effective: 7/1/2022			Miscellaneous	
9019 BRIDGE OR VEHICULAR TUNNEL OPERATION & DRIVERS													
Converted Unlimited Losses													
Amount													
		Claim Count		Indemnity		Medical		Total	MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)		
2014	28,412	0	0	0	0	0	0	0	0.000	0.000	0.000		
2015	32,438	0	0	0	0	0	0	0	0.000	0.000	0.000		
2016	34,723	0	0	0	0	0	0	0	0.000	0.000	0.000		
2017	31,783	0	0	0	0	0	0	0	0.000	0.000	0.000		
2018	31,703	0	1	0	33,662	0	5,955	39,618	1.062	0.188	1.250		
MA Total:	159,059	0	1	0	33,662	0	5,955	39,618	0.212	0.037	0.249		

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.095	0.033	.
(14) Massachusetts Credibility:	0.160	0.190	.
(15) Countrywide Pure Premium:	1.134	0.922	2.056
(16) Countrywide Indicated Relativity:	0.534	0.855	.
(17) Countrywide Credibility:	0.340	0.350	.
(18) Countrywide Lost-Time Claims:	75.000	.	.
(19) Pure Premium Underlying Present Rate:	1.705	0.675	2.380
(20) Relativity to Underlying Present Rate:	0.840	0.658	.
(21) Credibility to Underlying Relativity:	0.500	0.460	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.617	0.608	.
(24) Balanced Formula Relativity:	0.615	0.612	0.614

Class(es):									Effective: 7/1/2022			Goods and Services	
9033 HOUSING AUTHORITY & CLERICAL, SALES, DRIVERS													
Converted Unlimited Losses													
Amount													
		Claim Count		Indemnity		Medical		Total	MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)		
2014	217,562	0	35	0	29,637	0	61,863	91,501	0.136	0.284	0.421		
2015	217,398	2	25	296,525	444,908	67,148	145,798	954,380	3.410	0.980	4.390		
2016	230,630	0	17	0	114,104	0	68,563	182,668	0.495	0.297	0.792		
2017	225,817	1	19	117,869	373,699	7,937	159,200	658,705	2.177	0.740	2.917		
2018	229,189	1	29	27,474	406,254	3,161	200,321	637,210	1.892	0.888	2.780		
MA Total:	1,120,596	4	125	441,869	1,368,603	78,246	635,746	2,524,464	1.616	0.637	2.253		

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.112	1.498	.
(14) Massachusetts Credibility:	0.290	0.390	.
(15) Countrywide Pure Premium:	0.915	0.445	1.360
(16) Countrywide Indicated Relativity:	1.217	1.052	.
(17) Countrywide Credibility:	0.360	0.310	.
(18) Countrywide Lost-Time Claims:	694.00	.	.
(19) Pure Premium Underlying Present Rate:	1.156	0.553	1.709
(20) Relativity to Underlying Present Rate:	1.670	1.447	.
(21) Credibility to Underlying Relativity:	0.350	0.300	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.635	1.345	.
(24) Balanced Formula Relativity:	1.625	1.345	1.525

IX 000244 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 175

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
9040 HOSPITAL: ALL OTHER EMPLOYEES											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	673.405	5	172	598.902	280.818	242.391	305.288	1,427.400	1.306	0.813	2.120
2015	756.686	4	234	332.731	461.133	172.859	338.553	1,305.276	1.049	0.676	1.725
2016	758.763	2	175	570.512	721.447	217.340	411.377	1,920.676	1.703	0.829	2.531
2017	788.233	5	147	835.217	606.214	492.748	359.032	2,293.211	1.829	1.081	2.909
2018	843.714	6	164	491.523	1,701.089	127.871	606.019	2,926.502	2.599	0.870	3.469
MA Total:	3,820.802	22	892	2,828.885	3,770.702	1,253,209	2,020,270	9,873,065	1.727	0.857	2.584

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.258	2.014	.
(14) Massachusetts Credibility:	0.490	0.720	.
(15) Countrywide Pure Premium:	1.245	0.770	2.014
(16) Countrywide Indicated Relativity:	1.656	1.819	.
(17) Countrywide Credibility:	0.260	0.140	.
(18) Countrywide Lost-Time Claims:	6028.0	.	.
(19) Pure Premium Underlying Present Rate:	1.208	0.748	1.957
(20) Relativity to Underlying Present Rate:	1.746	1.957	.
(21) Credibility to Underlying Relativity:	0.250	0.140	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.973	1.979	.
(24) Balanced Formula Relativity:	1.961	1.980	1.968

Class(es):		Effective: 7/1/2022							Goods and Services		
9052 HOTEL: ALL OTHER EMPLOYEES & SALES, DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	6,297.026	26	646	1,202.263	3,144.470	386.434	1,910.734	6,643.901	0.690	0.365	1.055
2015	6,707.467	25	690	2,050.748	3,201.338	572.550	1,924.202	7,748.838	0.783	0.372	1.155
2016	6,905.740	27	628	1,686.740	3,280.513	584.406	1,772.701	7,324.359	0.719	0.341	1.061
2017	7,358.609	24	636	1,553.517	3,920.040	420.237	2,475.738	8,369.532	0.744	0.394	1.137
2018	7,451.123	28	681	2,109.422	3,165.756	662.640	2,442.823	8,380.641	0.708	0.417	1.125
MA Total:	34,719.965	130	3,281	8,602.688	16,712,116	2,626,268	10,526,200	38,467,272	0.729	0.379	1.108

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.953	0.891	.
(14) Massachusetts Credibility:	0.940	1.000	.
(15) Countrywide Pure Premium:	0.817	0.478	1.295
(16) Countrywide Indicated Relativity:	1.087	1.129	.
(17) Countrywide Credibility:	0.030	0.000	.
(18) Countrywide Lost-Time Claims:	18512	.	.
(19) Pure Premium Underlying Present Rate:	0.688	0.329	1.016
(20) Relativity to Underlying Present Rate:	0.993	0.860	.
(21) Credibility to Underlying Relativity:	0.030	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.958	0.891	.
(24) Balanced Formula Relativity:	0.952	0.891	0.930

IX 000245 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 176

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
9058 HOTEL: RESTAURANT EMPLOYEES											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	2,503,962	5	358	516,733	1,394,143	93,831	913,144	2,917,851	0.763	0.402	1.165
2015	2,550,024	9	362	408,982	1,529,658	129,951	725,478	2,794,069	0.760	0.335	1.096
2016	2,278,621	5	292	250,473	819,423	71,818	591,547	1,733,260	0.470	0.291	0.761
2017	2,290,950	14	347	1,058,877	1,294,319	208,238	1,028,112	3,589,546	1.027	0.540	1.567
2018	1,979,010	7	270	464,001	1,284,360	274,039	726,775	2,749,176	0.883	0.506	1.389
MA Total:	11,602,567	40	1,629	2,699,066	6,321,904	777,878	3,985,056	13,783,903	0.777	0.411	1.188

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.016	0.965	.
(14) Massachusetts Credibility:	0.580	0.830	.
(15) Countrywide Pure Premium:	0.551	0.348	0.899
(16) Countrywide Indicated Relativity:	0.733	0.821	.
(17) Countrywide Credibility:	0.210	0.090	.
(18) Countrywide Lost-Time Claims:	6539.0	.	.
(19) Pure Premium Underlying Present Rate:	0.616	0.343	0.960
(20) Relativity to Underlying Present Rate:	0.890	0.899	.
(21) Credibility to Underlying Relativity:	0.210	0.080	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.930	0.947	.
(24) Balanced Formula Relativity:	0.925	0.947	0.933

Class(es):		Effective: 7/1/2022							Goods and Services		
9060 CLUB-COUNTRY, GOLF, FISHING OR YACHT & CLERICAL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,120,144	3	303	256,466	831,091	382,672	685,483	2,155,712	0.349	0.342	0.691
2015	3,281,438	5	281	383,379	820,691	271,827	951,382	2,427,280	0.367	0.373	0.740
2016	3,464,708	5	284	344,147	921,957	218,207	814,531	2,298,842	0.365	0.298	0.664
2017	3,622,771	4	295	229,836	1,184,411	230,481	1,134,115	2,778,843	0.390	0.377	0.767
2018	3,642,446	7	264	343,009	927,643	174,346	1,015,855	2,460,852	0.349	0.327	0.676
MA Total:	17,131,508	24	1,427	1,556,837	4,685,794	1,277,533	4,601,366	12,121,529	0.364	0.343	0.708

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.476	0.807	.
(14) Massachusetts Credibility:	0.550	0.930	.
(15) Countrywide Pure Premium:	0.555	0.381	0.936
(16) Countrywide Indicated Relativity:	0.738	0.901	.
(17) Countrywide Credibility:	0.230	0.040	.
(18) Countrywide Lost-Time Claims:	4789.0	.	.
(19) Pure Premium Underlying Present Rate:	0.372	0.313	0.684
(20) Relativity to Underlying Present Rate:	0.537	0.818	.
(21) Credibility to Underlying Relativity:	0.220	0.030	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.550	0.811	.
(24) Balanced Formula Relativity:	0.546	0.811	0.641

IX 000246 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 177

Calculation of Class Relativities

Class(es): 9061 CLUB NOC & CLERICAL		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	744,555	0	48	0	499,916	0	626,286	1,126,202	0.671	0.841	1.513
2015	735,005	1	27	333,487	14,598	22,322	36,338	406,746	0.474	0.080	0.553
2016	734,364	2	23	169,885	158,267	43,538	181,885	553,576	0.447	0.307	0.754
2017	723,497	1	29	162	22,086	49	78,883	101,180	0.031	0.109	0.140
2018	725,086	2	21	258,585	180,235	103,444	154,349	696,613	0.605	0.356	0.961
MA Total:	3,662,507	6	148	762,119	875,102	169,354	1,077,742	2,884,317	0.447	0.341	0.788

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.584	0.800	.
(14) Massachusetts Credibility:	0.300	0.470	.
(15) Countrywide Pure Premium:	0.484	0.282	0.766
(16) Countrywide Indicated Relativity:	0.644	0.667	.
(17) Countrywide Credibility:	0.350	0.270	.
(18) Countrywide Lost-Time Claims:	610.00	.	.
(19) Pure Premium Underlying Present Rate:	0.391	0.261	0.652
(20) Relativity to Underlying Present Rate:	0.565	0.682	.
(21) Credibility to Underlying Relativity:	0.350	0.260	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.599	0.734	.
(24) Balanced Formula Relativity:	0.595	0.734	0.645

Class(es): 9063 YMCA, YWCA, YMHA OR YWHA, INSTITUTION-ALL EMPLOYEES & CLERICAL		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	5,701,462	8	329	585,697	901,875	250,223	889,718	2,627,513	0.261	0.200	0.461
2015	6,258,640	4	383	88,046	450,061	90,243	1,059,902	1,688,251	0.086	0.184	0.270
2016	6,803,730	6	395	194,715	1,296,150	140,101	1,392,582	3,023,548	0.219	0.225	0.444
2017	6,957,125	7	358	367,611	1,301,838	157,184	1,330,088	3,156,722	0.240	0.214	0.454
2018	7,440,843	8	351	365,296	2,017,606	210,185	1,496,428	4,089,515	0.320	0.229	0.550
MA Total:	33,161,802	33	1,816	1,601,365	5,967,530	847,936	6,168,717	14,585,549	0.228	0.212	0.440

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.298	0.497	.
(14) Massachusetts Credibility:	0.580	0.990	.
(15) Countrywide Pure Premium:	0.305	0.237	0.541
(16) Countrywide Indicated Relativity:	0.405	0.559	.
(17) Countrywide Credibility:	0.210	0.010	.
(18) Countrywide Lost-Time Claims:	3787.0	.	.
(19) Pure Premium Underlying Present Rate:	0.214	0.190	0.404
(20) Relativity to Underlying Present Rate:	0.309	0.498	.
(21) Credibility to Underlying Relativity:	0.210	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.323	0.498	.
(24) Balanced Formula Relativity:	0.321	0.498	0.384

IX 000247 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 178

Calculation of Class Relativities

Class(es): 9079 RESTAURANT NOC		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	26,296,106	81	3,114	4,966,063	7,962,862	2,107,248	6,287,579	21,323,752	0.492	0.319	0.811
2015	28,404,042	76	3,079	5,455,152	8,745,202	2,507,820	6,811,497	23,519,670	0.500	0.328	0.828
2016	29,850,166	56	2,865	3,869,066	8,830,335	1,232,996	7,557,857	21,490,253	0.425	0.294	0.720
2017	31,232,219	62	2,826	3,651,776	10,296,761	1,357,727	7,692,330	22,998,595	0.447	0.290	0.736
2018	33,737,543	46	2,708	3,001,380	10,758,255	1,225,952	7,824,973	22,810,560	0.408	0.268	0.676
MA Total:	149,520,077	321	14,592	20,943,437	46,593,415	8,431,743	36,174,235	112,142,830	0.452	0.298	0.750

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.590	0.701	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.418	0.303	0.721
(16) Countrywide Indicated Relativity:	0.556	0.717	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	3423.0	.	.
(19) Pure Premium Underlying Present Rate:	0.421	0.278	0.700
(20) Relativity to Underlying Present Rate:	0.608	0.729	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.590	0.701	.
(24) Balanced Formula Relativity:	0.587	0.702	0.628

Class(es): 9089 BILLIARD HALL		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	3,744	0	0	0	0	0	0	0	0.000	0.000	0.000
2015	5,885	0	0	0	0	0	0	0	0.000	0.000	0.000
2016	3,488	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	6,717	0	1	0	173	0	373	546	0.026	0.056	0.081
2018	8,984	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	28,817	0	1	0	173	0	373	546	0.006	0.013	0.019

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.008	0.030	.
(14) Massachusetts Credibility:	0.040	0.060	.
(15) Countrywide Pure Premium:	0.116	0.075	0.192
(16) Countrywide Indicated Relativity:	0.155	0.178	.
(17) Countrywide Credibility:	0.130	0.140	.
(18) Countrywide Lost-Time Claims:	7.000	.	.
(19) Pure Premium Underlying Present Rate:	0.329	0.231	0.560
(20) Relativity to Underlying Present Rate:	0.475	0.605	.
(21) Credibility to Underlying Relativity:	0.830	0.800	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.415	0.511	.
(24) Balanced Formula Relativity:	0.412	0.511	0.447

IX 000248 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 179

Calculation of Class Relativities

Class(es): 9093 BOWLING LANE		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	195.554	0	18	0	189.515	0	106.209	295.724	0.969	0.543	1.512
2015	236.174	2	24	68.656	44.765	63.881	30.554	207.855	0.480	0.400	0.880
2016	242.116	1	27	53.549	22.832	2.003	47.574	125.957	0.315	0.205	0.520
2017	262.917	3	29	77.094	9.909	66.030	38.012	191.046	0.331	0.396	0.727
2018	288.546	0	23	0	217.552	0	77.930	295.481	0.754	0.270	1.024
MA Total:	1,225.307	6	121	199.299	484.572	131.914	300.278	1,116.064	0.558	0.353	0.911

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.730	0.829	.
(14) Massachusetts Credibility:	0.200	0.340	.
(15) Countrywide Pure Premium:	0.412	0.358	0.770
(16) Countrywide Indicated Relativity:	0.548	0.846	.
(17) Countrywide Credibility:	0.400	0.330	.
(18) Countrywide Lost-Time Claims:	423.00	.	.
(19) Pure Premium Underlying Present Rate:	0.420	0.355	0.775
(20) Relativity to Underlying Present Rate:	0.607	0.928	.
(21) Credibility to Underlying Relativity:	0.400	0.330	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.608	0.868	.
(24) Balanced Formula Relativity:	0.604	0.868	0.698

Class(es): 9101 COLLEGE: ALL OTHER EMPLOYEES		Effective: 7/1/2022							Goods and Services		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1.515.707	7	631	386.012	970.810	259.849	1.116.318	2.732.988	0.895	0.908	1.803
2015	1.538.033	14	635	634.610	2.349.432	241.526	1.509.750	4.735.319	1.940	1.139	3.079
2016	1.593.004	18	787	1.400.831	2.186.396	433.375	1.688.645	5.709.247	2.252	1.332	3.584
2017	1.733.407	19	787	1.872.076	2.090.094	583.181	1.552.779	6.098.130	2.286	1.232	3.518
2018	1.766.178	12	431	1.825.062	1.527.769	322.543	1.121.759	4.797.133	1.898	0.818	2.716
MA Total:	8,146.329	70	3,271	6,118.592	9,124.501	1,840.474	6,989.251	24,072.818	1.871	1.084	2.955

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.446	2.548	.
(14) Massachusetts Credibility:	0.710	1.000	.
(15) Countrywide Pure Premium:	1.300	0.856	2.157
(16) Countrywide Indicated Relativity:	1.730	2.024	.
(17) Countrywide Credibility:	0.150	0.000	.
(18) Countrywide Lost-Time Claims:	13246	.	.
(19) Pure Premium Underlying Present Rate:	1.442	0.944	2.386
(20) Relativity to Underlying Present Rate:	2.082	2.470	.
(21) Credibility to Underlying Relativity:	0.140	0.000	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.288	2.548	.
(24) Balanced Formula Relativity:	2.273	2.549	2.372

IX 000249 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 180

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
9102 PARK NOC- ALL EMPLOYEES & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	244,451	1	47	269,690	58,307	83,952	62,865	474,815	1,342	0,601	1,942
2015	271,296	1	28	74	37,477	5,487	67,005	110,043	0,138	0,267	0,406
2016	325,868	0	35	0	35,507	0	38,070	73,577	0,109	0,117	0,226
2017	349,426	0	51	0	66,642	0	79,390	146,032	0,191	0,227	0,418
2018	368,243	0	87	0	239,645	0	292,019	531,664	0,651	0,793	1,444
MA Total:	1,559,285	2	248	269,764	437,578	89,439	539,349	1,336,130	0,454	0,403	0,857

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.204	0.350	.
(14) Massachusetts Credibility:	0.310	0.460	.
(15) Countrywide Pure Premium:	1.235	0.877	2.112
(16) Countrywide Indicated Relativity:	0.582	0.813	.
(17) Countrywide Credibility:	0.350	0.270	.
(18) Countrywide Lost-Time Claims:	7970.0	.	.
(19) Pure Premium Underlying Present Rate:	0.953	0.575	1.527
(20) Relativity to Underlying Present Rate:	0.469	0.560	.
(21) Credibility to Underlying Relativity:	0.340	0.270	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.426	0.532	.
(24) Balanced Formula Relativity:	0.425	0.535	0.463

Class(es):		Effective: 7/1/2022							Miscellaneous		
9154 THEATER NOC: ALL OTHER EMPLOYEES											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	645,332	0	63	0	555,610	0	206,883	762,493	0,861	0,321	1,182
2015	662,833	2	61	385,584	54,563	187,075	164,372	791,594	0,664	0,530	1,194
2016	695,944	1	88	164,380	94,771	91,714	215,764	566,629	0,372	0,442	0,814
2017	846,248	1	104	336	239,627	260	278,552	518,775	0,284	0,329	0,613
2018	966,610	3	106	739,064	628,493	73,189	634,324	2,075,070	1,415	0,732	2,147
MA Total:	3,816,967	7	422	1,289,364	1,573,064	352,237	1,499,894	4,714,560	0,750	0,485	1,235

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.337	0.422	.
(14) Massachusetts Credibility:	0.360	0.560	.
(15) Countrywide Pure Premium:	0.667	0.484	1.151
(16) Countrywide Indicated Relativity:	0.314	0.449	.
(17) Countrywide Credibility:	0.320	0.220	.
(18) Countrywide Lost-Time Claims:	1576.0	.	.
(19) Pure Premium Underlying Present Rate:	0.579	0.401	0.980
(20) Relativity to Underlying Present Rate:	0.285	0.391	.
(21) Credibility to Underlying Relativity:	0.320	0.220	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.313	0.421	.
(24) Balanced Formula Relativity:	0.312	0.424	0.350

IX 000250 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 181

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Office and Clerical		
9156 THEATER NOC: PLAYERS, ENTERTAINERS OR MUSICIANS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	345,310	1	78	5,006	112,659	2,791	180,983	301,439	0.341	0.532	0.873
2015	339,749	1	87	6,410	126,424	24,458	201,379	358,672	0.391	0.665	1.056
2016	370,079	0	100	0	258,880	0	310,407	569,288	0.700	0.839	1.538
2017	361,353	1	85	9,286	758,392	2,626	415,728	1,186,031	2.124	1.158	3.282
2018	422,675	1	51	1,659	421,310	8,985	385,464	817,417	1.001	0.933	1.934
MA Total:	1,839,165	4	401	22,360	1,677,665	38,861	1,493,961	3,232,847	0.924	0.833	1.758

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	14.249	21.445	.
(14) Massachusetts Credibility:	0.280	0.470	.
(15) Countrywide Pure Premium:	0.724	0.511	1.235
(16) Countrywide Indicated Relativity:	13.150	14.256	.
(17) Countrywide Credibility:	0.360	0.270	.
(18) Countrywide Lost-Time Claims:	877.00	.	.
(19) Pure Premium Underlying Present Rate:	0.658	0.535	1.193
(20) Relativity to Underlying Present Rate:	11.193	14.906	.
(21) Credibility to Underlying Relativity:	0.360	0.260	.
(22) Industry Group Converted Pure Premium:	0.065	0.039	0.104
(23) Formula Relativity:	12.754	17.804	.
(24) Balanced Formula Relativity:	12.748	17.821	14.648

Class(es):		Effective: 7/1/2022							Miscellaneous		
9178 ATHLETIC TEAM OR PARK: NON-CONTACT SPORTS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	37,959	0	68	0	95,342	0	221,021	316,363	2.512	5.823	8.334
2015	36,469	1	66	69,617	143,405	2,245	194,548	409,816	5.841	5.396	11.237
2016	33,943	0	75	0	313,805	0	585,170	898,975	9.245	17.240	26.485
2017	16,735	0	81	0	109,667	0	350,031	459,697	6.553	20.916	27.470
2018	34,655	0	58	0	477,892	0	197,140	675,033	13.790	5.689	19.479
MA Total:	159,761	1	348	69,617	1,140,110	2,245	1,547,910	2,759,884	7.572	9.703	17.275

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.401	8.433	.
(14) Massachusetts Credibility:	0.190	0.480	.
(15) Countrywide Pure Premium:	1.003	1.824	2.827
(16) Countrywide Indicated Relativity:	0.473	1.691	.
(17) Countrywide Credibility:	0.410	0.260	.
(18) Countrywide Lost-Time Claims:	547.00	.	.
(19) Pure Premium Underlying Present Rate:	2.925	6.358	9.283
(20) Relativity to Underlying Present Rate:	1.441	6.193	.
(21) Credibility to Underlying Relativity:	0.400	0.260	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	1.416	6.097	.
(24) Balanced Formula Relativity:	1.413	6.136	3.023

IX 000251 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 182

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
9179 ATHLETIC TEAM OR PARK: CONTACT SPORTS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	30,667	1	111	26,273	1,027,953	983	747,554	1,802,763	34,377	24,409	58,786
2015	26,083	4	103	166,538	1,376,106	541,568	818,260	2,902,472	59,144	52,135	111,289
2016	18,213	1	55	666	477,371	25	429,796	907,857	26,248	23,600	49,848
2017	21,062	0	82	0	363,319	0	603,635	966,954	17,250	28,659	45,909
2018	25,157	1	64	24,715	378,149	11,283	425,651	839,798	16,014	17,368	33,382
MA Total:	121,182	7	415	218,192	3,622,898	553,859	3,024,896	7,419,845	31,697	29,532	61,229

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	14.239	25.666	.
(14) Massachusetts Credibility:	0.340	0.640	.
(15) Countrywide Pure Premium:	3.110	2.099	5.209
(16) Countrywide Indicated Relativity:	1.465	1.946	.
(17) Countrywide Credibility:	0.330	0.180	.
(18) Countrywide Lost-Time Claims:	1753.0	.	.
(19) Pure Premium Underlying Present Rate:	15.915	17.644	33.560
(20) Relativity to Underlying Present Rate:	7.840	17.184	.
(21) Credibility to Underlying Relativity:	0.330	0.180	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	7.912	19.869	.
(24) Balanced Formula Relativity:	7.895	19.997	12.019

Class(es):		Effective: 7/1/2022							Miscellaneous		
9180 AMUSEMENT DEVICE OPERATION NOC-NOT TRAV & DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	175,481	0	35	0	111,093	0	263,503	374,596	0.633	1,502	2,135
2015	198,278	1	39	23,171	174,308	1,544	400,731	599,754	0.996	2,029	3,025
2016	203,530	1	44	3,318	522,572	17,065	218,913	761,868	2,584	1,159	3,743
2017	217,602	2	54	19,260	127,254	51,589	228,942	427,045	0.673	1,289	1,963
2018	245,881	1	71	47,593	418,739	107,263	284,489	858,084	1,897	1,593	3,490
MA Total:	1,040,772	5	243	93,341	1,353,965	177,461	1,396,579	3,021,346	1.391	1,512	2,903

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.625	1.314	.
(14) Massachusetts Credibility:	0.320	0.570	.
(15) Countrywide Pure Premium:	2.077	2.033	4.110
(16) Countrywide Indicated Relativity:	0.978	1.884	.
(17) Countrywide Credibility:	0.340	0.220	.
(18) Countrywide Lost-Time Claims:	2039.0	.	.
(19) Pure Premium Underlying Present Rate:	1.523	1.504	3.027
(20) Relativity to Underlying Present Rate:	0.750	1.465	.
(21) Credibility to Underlying Relativity:	0.340	0.210	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.788	1.471	.
(24) Balanced Formula Relativity:	0.786	1.481	1.023

IX 000252 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 183

Calculation of Class Relativities

Class(es): 9182 ATHLETIC TEAM OR PARK: OPERATIONS & DRIVERS									Effective: 7/1/2022			Miscellaneous	
Converted Unlimited Losses													
Amount													
		Claim Count		Indemnity		Medical				MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)		
2014	297.302	3	53	315.043	142.858	181.327	134.868	774.096	1.540	1.064	2.604		
2015	306.206	2	40	22.192	162.201	36.136	146.020	366.549	0.602	0.595	1.197		
2016	274.308	0	34	0	201.654	0	299.302	500.957	0.735	1.091	1.826		
2017	247.447	1	42	350.673	970.440	286.606	506.213	2,113.931	5.339	3.204	8.543		
2018	364.336	1	44	17.155	165.024	4.575	217.925	404.680	0.500	0.611	1.111		
MA Total:	1,489,599	7	213	705,063	1,642,177	508,644	1,304,327	4,160,212	1.576	1.217	2.793		

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.708	1.058	.
(14) Massachusetts Credibility:	0.330	0.550	.
(15) Countrywide Pure Premium:	0.615	0.619	1.234
(16) Countrywide Indicated Relativity:	0.290	0.573	.
(17) Countrywide Credibility:	0.340	0.230	.
(18) Countrywide Lost-Time Claims:	464.00	.	.
(19) Pure Premium Underlying Present Rate:	1.185	0.971	2.156
(20) Relativity to Underlying Present Rate:	0.584	0.945	.
(21) Credibility to Underlying Relativity:	0.330	0.220	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.525	0.922	.
(24) Balanced Formula Relativity:	0.524	0.928	0.661

Class(es): 9220 CEMETERY OPERATION & DRIVERS									Effective: 7/1/2022			Goods and Services	
Converted Unlimited Losses													
Amount													
		Claim Count		Indemnity		Medical				MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)		
2014	198.182	2	32	41.654	63.778	22.145	78.167	205.744	0.532	0.506	1.038		
2015	192.924	1	28	36.917	306.634	6.846	118.794	469.191	1.781	0.651	2.432		
2016	200.731	1	25	186.863	127.243	40.099	125.078	479.283	1.565	0.823	2.388		
2017	198.501	0	31	0	874.152	0	475.512	1,349.664	4.404	2.396	6.799		
2018	186.621	0	26	0	123.449	0	137.349	260.798	0.661	0.736	1.397		
MA Total:	976,959	4	142	265,434	1,495,256	69,090	934,901	2,764,681	1.802	1.028	2.830		

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.356	2.416	.
(14) Massachusetts Credibility:	0.300	0.420	.
(15) Countrywide Pure Premium:	2.044	1.129	3.173
(16) Countrywide Indicated Relativity:	2.719	2.668	.
(17) Countrywide Credibility:	0.350	0.290	.
(18) Countrywide Lost-Time Claims:	618.00	.	.
(19) Pure Premium Underlying Present Rate:	1.430	0.759	2.189
(20) Relativity to Underlying Present Rate:	2.065	1.987	.
(21) Credibility to Underlying Relativity:	0.350	0.290	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.381	2.365	.
(24) Balanced Formula Relativity:	2.366	2.366	2.366

IX 000253 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 184

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Miscellaneous		
9402 STREET CLEANING & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	963.185	8	68	243.759	1.868.015	106.834	521.836	2.740.444	2.192	0.653	2.845
2015	901.908	2	68	77.948	1.607.692	50.964	741.374	2.477.978	1.869	0.879	2.747
2016	953.184	1	70	1.694	965.487	3.284	877.702	1.848.167	1.015	0.924	1.939
2017	1.107.330	6	90	1.003.610	1.582.349	585.557	664.645	3.836.161	2.335	1.129	3.464
2018	1.089.405	11	80	1.558.070	953.665	402.828	581.911	3.496.474	2.306	0.904	3.210
MA Total:	5,015,012	28	376	2,885,081	6,977,207	1,149,468	3,387,468	14,399,224	1.967	0.905	2.871

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.883	0.786	.
(14) Massachusetts Credibility:	0.650	0.860	.
(15) Countrywide Pure Premium:	2.195	1.259	3.455
(16) Countrywide Indicated Relativity:	1.034	1.167	.
(17) Countrywide Credibility:	0.180	0.070	.
(18) Countrywide Lost-Time Claims:	2045.0	.	.
(19) Pure Premium Underlying Present Rate:	1.876	0.865	2.741
(20) Relativity to Underlying Present Rate:	0.924	0.843	.
(21) Credibility to Underlying Relativity:	0.170	0.070	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	0.917	0.817	.
(24) Balanced Formula Relativity:	0.915	0.822	0.884

Class(es):		Effective: 7/1/2022							Miscellaneous		
9403 GARBAGE, ASHES OR REFUSE COLLECTION & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	1,082.258	11	234	2,010.640	2,568.620	296.348	1,437.261	6,312.869	4.231	1.602	5.833
2015	1,146.923	11	262	1,529.559	3,172.215	833.248	1,901.574	7,436.596	4.099	2.384	6.484
2016	1,125.248	12	209	2,470.742	3,291.607	1,006.680	1,712.007	8,481.036	5.121	2.416	7.537
2017	1,250.254	19	276	3,123.265	4,955.483	1,350.057	2,012.883	11,441.688	6.462	2.690	9.151
2018	1,100.681	10	257	1,231.299	4,899.268	1,178.088	1,897.555	9,206.210	5.570	2.794	8.364
MA Total:	5,705,364	63	1,238	10,365,505	18,887,192	4,664,422	8,961,280	42,878,399	5.127	2.388	7.515

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.303	2.076	.
(14) Massachusetts Credibility:	0.970	1.000	.
(15) Countrywide Pure Premium:	3.722	1.872	5.594
(16) Countrywide Indicated Relativity:	1.753	1.735	.
(17) Countrywide Credibility:	0.020	0.000	.
(18) Countrywide Lost-Time Claims:	7816.0	.	.
(19) Pure Premium Underlying Present Rate:	4.610	2.051	6.661
(20) Relativity to Underlying Present Rate:	2.271	1.998	.
(21) Credibility to Underlying Relativity:	0.010	0.000	.
(22) Industry Group Converted Pure Premium:	2.226	1.151	3.377
(23) Formula Relativity:	2.292	2.076	.
(24) Balanced Formula Relativity:	2.287	2.089	2.219

IX 000254 STIP

Section IX - Classification Pricing
Subsection G - Class Relativities
7/1/2022

Section IX - G
Exhibit 185

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
9410 MUNICIPAL, TOWN, COUNTY OR STATE EMP NOC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	51,706	0	17	0	262,163	0	75,450	337,613	5,070	1,459	6,529
2015	49,238	1	23	288,250	60,396	151,653	72,051	572,350	7,081	4,543	11,624
2016	47,525	0	19	0	562,190	0	106,139	668,329	11,829	2,233	14,063
2017	51,803	0	21	0	64,967	0	81,952	146,920	1,254	1,582	2,836
2018	45,226	0	23	0	143,139	0	124,960	268,100	3,165	2,763	5,928
MA Total:	245,498	1	103	288,250	1,092,855	151,653	460,552	1,993,310	5,626	2,494	8,119

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	7.353	5.862	.
(14) Massachusetts Credibility:	0.180	0.270	.
(15) Countrywide Pure Premium:	0.875	0.505	1.380
(16) Countrywide Indicated Relativity:	1.164	1.194	.
(17) Countrywide Credibility:	0.410	0.370	.
(18) Countrywide Lost-Time Claims:	895.00	.	.
(19) Pure Premium Underlying Present Rate:	1.504	0.994	2.498
(20) Relativity to Underlying Present Rate:	2.172	2.602	.
(21) Credibility to Underlying Relativity:	0.410	0.360	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	2.692	2.961	.
(24) Balanced Formula Relativity:	2.675	2.963	2.778

Class(es):		Effective: 7/1/2022							Manufacturing		
9501 SIGN PAINTING OR LETTERING-INSIDE & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	304,396	0	37	0	48,870	0	84,074	132,944	0.161	0.276	0.437
2015	330,033	1	30	2,928	16,986	5,495	59,559	84,968	0.060	0.197	0.257
2016	369,499	2	39	270,821	235,637	19,647	119,504	645,609	1.371	0.377	1.747
2017	400,587	1	31	255,433	380,170	169,697	113,544	918,843	1.587	0.707	2.294
2018	402,791	2	21	77,565	52,355	23,555	45,872	199,347	0.323	0.172	0.495
MA Total:	1,807,306	6	158	606,746	734,017	218,394	422,553	1,981,710	0.742	0.355	1.096

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.808	0.736	.
(14) Massachusetts Credibility:	0.320	0.450	.
(15) Countrywide Pure Premium:	1.222	0.674	1.895
(16) Countrywide Indicated Relativity:	1.457	1.542	.
(17) Countrywide Credibility:	0.340	0.280	.
(18) Countrywide Lost-Time Claims:	1351.0	.	.
(19) Pure Premium Underlying Present Rate:	0.886	0.479	1.365
(20) Relativity to Underlying Present Rate:	1.085	1.139	.
(21) Credibility to Underlying Relativity:	0.340	0.270	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.123	1.071	.
(24) Balanced Formula Relativity:	1.118	1.063	1.099

IX 00255 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 186

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
9519 HOUSEHOLD APPLIANCES-ELECTRICAL-INSTALL, SERV OR REPAIR & DR											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	791,848	4	76	510,026	325,777	82,064	281,437	1,199,304	1,056	0,459	1,515
2015	920,171	8	79	634,794	274,560	176,559	289,917	1,375,829	0,988	0,507	1,495
2016	860,679	1	49	1,949	131,602	1,891	201,995	337,438	0,155	0,237	0,392
2017	876,724	1	67	1,354	986,026	2,465	685,870	1,675,715	1,126	0,785	1,911
2018	936,316	3	61	546,191	735,131	325,753	360,743	1,967,817	1,368	0,733	2,102
MA Total:	4,385,739	17	332	1,694,314	2,453,095	588,732	1,819,962	6,556,103	0,946	0,549	1,495

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.236	1.291	.
(14) Massachusetts Credibility:	0.520	0.660	.
(15) Countrywide Pure Premium:	2.006	0.811	2.817
(16) Countrywide Indicated Relativity:	2.669	1.917	.
(17) Countrywide Credibility:	0.240	0.170	.
(18) Countrywide Lost-Time Claims:	2303.0	.	.
(19) Pure Premium Underlying Present Rate:	1.228	0.521	1.749
(20) Relativity to Underlying Present Rate:	1.774	1.364	.
(21) Credibility to Underlying Relativity:	0.240	0.170	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	1.709	1.410	.
(24) Balanced Formula Relativity:	1.698	1.410	1.596

Class(es):		Effective: 7/1/2022							Manufacturing		
9521 HOUSE FURNISHINGS INSTALLATION-NOC											
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	216,443	1	23	7,269	108,566	6,096	81,666	203,597	0,535	0,405	0,941
2015	277,869	1	20	90,728	261,157	8,867	124,500	485,253	1,266	0,480	1,746
2016	275,642	0	32	0	531,522	0	512,718	1,044,240	1,928	1,860	3,788
2017	311,607	2	34	201,861	382,391	48,669	111,208	744,128	1,875	0,513	2,388
2018	284,395	0	17	0	39,684	0	34,091	73,776	0,140	0,120	0,259
MA Total:	1,365,955	4	126	299,859	1,323,320	63,632	864,184	2,550,994	1,188	0,679	1,868

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.294	1.410	.
(14) Massachusetts Credibility:	0.330	0.460	.
(15) Countrywide Pure Premium:	1.747	0.747	2.494
(16) Countrywide Indicated Relativity:	2.083	1.709	.
(17) Countrywide Credibility:	0.340	0.270	.
(18) Countrywide Lost-Time Claims:	746.00	.	.
(19) Pure Premium Underlying Present Rate:	1.315	0.667	1.982
(20) Relativity to Underlying Present Rate:	1.610	1.588	.
(21) Credibility to Underlying Relativity:	0.330	0.270	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	1.666	1.539	.
(24) Balanced Formula Relativity:	1.660	1.527	1.614

IX 000256 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 187

Calculation of Class Relativities

Class(es): 9522 UPHOLSTERING		Effective: 7/1/2022							Manufacturing		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	131,340	2	18	81,760	29,848	8,559	48,231	168,398	0.850	0.432	1.282
2015	145,716	0	13	0	1,074	0	3,410	4,484	0.007	0.023	0.031
2016	115,056	0	8	0	6,421	0	6,513	12,934	0.056	0.057	0.112
2017	122,488	0	6	0	14,376	0	26,875	41,251	0.117	0.219	0.337
2018	120,893	0	4	0	17,390	0	5,349	22,739	0.144	0.044	0.188
MA Total:	635,492	2	49	81,760	69,109	8,559	90,377	249,805	0.237	0.156	0.393

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.258	0.323	.
(14) Massachusetts Credibility:	0.190	0.260	.
(15) Countrywide Pure Premium:	1.016	0.488	1.504
(16) Countrywide Indicated Relativity:	1.211	1.117	.
(17) Countrywide Credibility:	0.410	0.370	.
(18) Countrywide Lost-Time Claims:	1909.0	.	.
(19) Pure Premium Underlying Present Rate:	0.724	0.348	1.072
(20) Relativity to Underlying Present Rate:	0.887	0.828	.
(21) Credibility to Underlying Relativity:	0.400	0.370	.
(22) Industry Group Converted Pure Premium:	0.919	0.482	1.400
(23) Formula Relativity:	0.900	0.804	.
(24) Balanced Formula Relativity:	0.897	0.798	0.863

Class(es): 9533 SCAFFOLDING: SCAFFOLD INST, RPR OR REMOVAL- BUILT UP FROM GROUN		Effective: 7/1/2022							Construction		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	56,454	1	4	23,967	143,516	12,448	84,945	264,877	2,967	1,725	4,692
2015	59,658	0	10	0	260,668	0	70,138	330,806	4,369	1,176	5,545
2016	58,633	1	8	157,567	697,893	28,131	231,368	1,114,959	14,590	4,426	19,016
2017	65,778	0	10	0	1,380,466	0	247,109	1,627,574	20,987	3,757	24,744
2018	69,127	3	12	710,852	361,181	226,688	264,224	1,562,945	15,508	7,102	22,610
MA Total:	309,651	5	44	892,386	2,843,723	267,267	897,784	4,901,160	12.066	3.762	15.828

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.969	3.364	.
(14) Massachusetts Credibility:	0.350	0.450	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	2.800	2.780	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	6.416	2.883	9.299
(20) Relativity to Underlying Present Rate:	2.931	2.961	.
(21) Credibility to Underlying Relativity:	0.650	0.550	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	3.644	3.143	.
(24) Balanced Formula Relativity:	3.679	3.142	3.510

IX 000257 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 188

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction		
9534 MOBILE CRANE & HOIST SERV CONTR-NOC-ALL OP -INCL YRD EMP &DR											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	272,846	4	15	1,558,878	347,215	360,580	194,528	2,461,201	6,986	2,035	9,020
2015	315,658	1	6	1,361	199,079	1,337	236,811	438,588	0,635	0,754	1,389
2016	362,160	3	20	779,296	1,156,512	213,010	325,765	2,474,583	5,345	1,488	6,833
2017	437,387	0	21	0	1,516,639	0	601,217	2,117,856	3,467	1,375	4,842
2018	504,473	2	22	180,849	371,796	48,849	195,291	796,785	1,095	0,484	1,579
MA Total:	1,892,523	10	84	2,520,384	3,591,241	623,775	1,553,613	8,289,013	3,229	1,151	4,380

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.330	1.029	.
(14) Massachusetts Credibility:	0.500	0.620	.
(15) Countrywide Pure Premium:	2.342	0.814	3.156
(16) Countrywide Indicated Relativity:	0.979	0.748	.
(17) Countrywide Credibility:	0.250	0.190	.
(18) Countrywide Lost-Time Claims:	508.00	.	.
(19) Pure Premium Underlying Present Rate:	2.656	1.031	3.687
(20) Relativity to Underlying Present Rate:	1.213	1.059	.
(21) Credibility to Underlying Relativity:	0.250	0.190	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.213	0.981	.
(24) Balanced Formula Relativity:	1.225	0.981	1.148

Class(es):		Effective: 7/1/2022							Construction		
9549 ADVERTISING CO & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	14,630	0	1	0	3,253	0	4,834	8,087	0,222	0,330	0,553
2015	15,820	0	2	0	0	0	1,186	1,186	0,000	0,075	0,075
2016	16,020	0	1	0	35,013	0	2,334	37,347	2,186	0,146	2,331
2017	6,455	0	1	0	0	0	581	581	0,000	0,090	0,090
2018	3,724	0	0	0	0	0	0	0	0,000	0,000	0,000
MA Total:	56,649	0	5	0	38,267	0	8,935	47,202	0,675	0,158	0,833

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.278	0.141	.
(14) Massachusetts Credibility:	0.120	0.130	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.974	0.712	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.233	0.738	2.971
(20) Relativity to Underlying Present Rate:	1.020	0.758	.
(21) Credibility to Underlying Relativity:	0.880	0.870	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	0.931	0.678	.
(24) Balanced Formula Relativity:	0.940	0.678	0.857

IX 000258 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 189

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Construction			
9552 SIGN MFG-ERECTION, REPAIR OR MAINT & SHOP, DR												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	165,766	4	26	693,659	53,561	385,501	63,627	1,196,347	4,508	2,709	7,217	
2015	170,970	2	23	374,431	330,973	219,455	264,779	1,189,638	4,126	2,832	6,958	
2016	166,687	1	13	473,458	84,858	185,419	43,023	786,758	3,349	1,370	4,720	
2017	175,578	1	17	173,617	196,264	325,933	88,468	784,282	2,107	2,360	4,467	
2018	185,946	0	21	0	58,746	0	46,644	105,390	0,316	0,251	0,567	
MA Total:	864,948	8	100	1,715,165	724,403	1,116,308	506,540	4,062,416	2,820	1,876	4,697	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.162	1.678	.
(14) Massachusetts Credibility:	0.400	0.580	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.411	1.798	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	3.234	1.864	5.099
(20) Relativity to Underlying Present Rate:	1.477	1.915	.
(21) Credibility to Underlying Relativity:	0.600	0.420	.
(22) Industry Group Converted Pure Premium:	2.428	1.118	3.546
(23) Formula Relativity:	1.351	1.777	.
(24) Balanced Formula Relativity:	1.364	1.777	1.494

Class(es):		Effective: 7/1/2022							Goods and Services			
9586 BARBER SHOP, BEAUTY PARLOR, HAIR STYLING SALON												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2014	4,604,409	2	67	407,195	404,975	88,232	202,458	1,102,860	0,176	0,063	0,240	
2015	4,830,805	1	86	18,120	756,739	5,105	398,925	1,178,890	0,160	0,084	0,244	
2016	5,079,146	3	82	71,943	250,029	21,207	300,689	643,869	0,063	0,063	0,127	
2017	5,330,630	0	81	0	1,054,635	0	381,033	1,435,668	0,198	0,071	0,269	
2018	5,710,822	3	70	160,887	579,521	30,402	250,966	1,021,776	0,130	0,049	0,179	
MA Total:	25,555,811	9	386	658,145	3,045,899	144,946	1,534,072	5,383,062	0,145	0,066	0,211	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.189	0.154	.
(14) Massachusetts Credibility:	0.440	0.590	.
(15) Countrywide Pure Premium:	0.218	0.107	0.325
(16) Countrywide Indicated Relativity:	0.290	0.252	.
(17) Countrywide Credibility:	0.280	0.210	.
(18) Countrywide Lost-Time Claims:	1670.0	.	.
(19) Pure Premium Underlying Present Rate:	0.144	0.066	0.210
(20) Relativity to Underlying Present Rate:	0.207	0.174	.
(21) Credibility to Underlying Relativity:	0.280	0.200	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.223	0.179	.
(24) Balanced Formula Relativity:	0.221	0.179	0.206

IX 000259 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2022

Section IX - G
 Exhibit 190

Calculation of Class Relativities

Class(es):		Effective: 7/1/2022							Goods and Services		
9620 FUNERAL DIRECTOR & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2014	664,027	0	16	0	185,255	0	73,110	258,365	0.279	0.110	0.389
2015	655,499	2	14	17,548	198,047	6,169	179,463	401,227	0.329	0.283	0.612
2016	704,217	0	10	0	0	0	25,312	25,312	0.000	0.036	0.036
2017	711,317	2	13	67,938	14,955	19,313	83,524	185,730	0.117	0.145	0.261
2018	729,067	0	6	0	100,957	0	97,477	198,434	0.138	0.134	0.272
MA Total:	3,464,128	4	59	85,486	499,214	25,482	458,886	1,069,068	0.169	0.140	0.309

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.221	0.329	.
(14) Massachusetts Credibility:	0.270	0.410	.
(15) Countrywide Pure Premium:	0.452	0.317	0.769
(16) Countrywide Indicated Relativity:	0.602	0.749	.
(17) Countrywide Credibility:	0.370	0.300	.
(18) Countrywide Lost-Time Claims:	545.00	.	.
(19) Pure Premium Underlying Present Rate:	0.321	0.199	0.519
(20) Relativity to Underlying Present Rate:	0.464	0.519	.
(21) Credibility to Underlying Relativity:	0.360	0.290	.
(22) Industry Group Converted Pure Premium:	0.765	0.425	1.190
(23) Formula Relativity:	0.449	0.510	.
(24) Balanced Formula Relativity:	0.446	0.510	0.469

IX 000260 STIP

Section IX - Classification Pricing
 Subsection H - Industry Group Rate Change and Rate Level Factors
 7/1/2022

Section IX - H
 Exhibit 1

Calculation of Industry Group Rate Change and Limits

	Industry Group				
	Manufacturing	Construction	Office & Clerical	Goods & Services	Miscellaneous
(1) Industry Group Differential	1.015	1.007	0.985	0.995	0.993
(2) Experience and Benefit Level Change - Overall	-3.46%	-3.46%	-3.46%	-3.46%	-3.46%
(3) Target Rate Change = (1) x [1.000 + (2)] - 1.000	-2.0%	-2.8%	-4.9%	-3.9%	-4.1%
(4) Maximum Rate Change = (3) + 20.0%	7.0%	7.7%	7.1%	8.1%	8.4%
(5) Minimum Rate Change = (3) - 20.0%	-11.0%	-13.3%	-16.9%	-15.9%	-16.6%
(6) Present Average Rate	1.706	4.361	0.130	1.484	4.215
(7) Uncapped Rate Level Factor = [1.000 + (3)] x (6)	1.672	4.241	0.124	1.426	4.041
(8) Capped Rate Level Factor	1.681	4.270	0.125	1.429	4.051
(9) Swing %	9.0%	10.5%	12.0%	12.0%	12.5%

In addition, the WCRIBMA is limiting the increase in average rates for any class to \$15.00 and no average rate shall exceed \$90.00 per \$100.00 of payroll.

Notes:

- (1): Exhibit 2.
- (2): Indicated Rate Change, from Section I-A, Exhibit 1.
- (6): Rates by class consistent with the 07/01/20 stipulation, weighted by five years of exposure.
- (8): Proposed average uncapped rates are capped by an iterative process using rate levels to determine if the required change is achieved.
- (9): Per Stipulation

Calculation of Massachusetts Industry Group Differentials
 Excluding Large Deductibles

Industry Group (1)	Expected Losses (2)	Converted Unlimited Losses (3)	Industry Group Differential = (3) / (2) (4)	Lost-Time Cases (5)	Full Standard for Credibility Lost-Time Cases (6)	Credibility (7)	Credibility Weighted (8)	Balanced Industry Group Differential = (8) / 1.113 (9)
Manufacturing	396,268,356	448,578,592	1.132	9,483	12,000	0.889	1.130	1.015
Construction	1,179,894,279	1,323,094,491	1.121	13,647	12,000	1.000	1.121	1.007
Office & Clerical	405,041,683	443,788,214	1.096	11,415	12,000	0.975	1.096	0.985
Goods & Services	1,058,684,499	1,172,963,296	1.108	31,120	12,000	1.000	1.108	0.995
Miscellaneous	480,066,799	530,331,247	1.105	9,978	12,000	0.912	1.105	0.993
All	3,519,955,616	3,918,755,840	1.113			1.000	1.113	1.000

Notes:

(2): Five Years of Exposure x Pure Premium Underlying Present Rate from Section IX - F.

(3): Section IX - C. Goods and Services includes Per Capita classes.

(7) = $\text{Min} (1.0 , [(5)/(6)]^{0.5})$

(8) = $[(7) \times (4)] + [(1.0 - (7)) \times (4) \text{ Total}]$

(8) Total = $\text{sum} [(2) \times (8)] / (2) \text{ Total}$

IX 000262 STIP

Section IX - Classification Pricing
 Subsection I - Average Uncapped Rates
 7/1/2022

Section IX - I
 Exhibit 1

Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (5)	Proposed Average Uncapped Rate (6)
	Indemnity (2)	Medical (3)	Total (4)		
0005	1.569	1.498	1.543	1.426	2.20
0008	1.432	1.653	1.511	1.426	2.15
0016	2.182	2.194	2.186	1.426	3.12
0034	1.735	2.152	1.884	1.426	2.69
0035	1.008	1.080	1.033	1.426	1.47
0036	1.735	2.152	1.884	1.426	2.69
0042	2.019	2.260	2.105	1.426	3.00
0046	1.771	2.672	2.093	1.426	2.98
0050	0.897	0.921	0.904	4.241	3.84
0079	1.297	1.720	1.448	1.426	2.06
0083	2.262	2.236	2.253	1.426	3.21
0106	1.944	2.576	2.159	4.041	8.72
0113	1.735	2.152	1.884	1.426	2.69
0170	1.735	2.152	1.884	1.426	2.69
0908	112.447	95.933	106.546	1.426	75.95
0909	183.486	335.063	237.650	1.426	169.41
0912	183.486	335.063	237.650	1.426	338.82
0913	112.447	95.933	106.546	1.426	151.90
0917	1.566	1.310	1.474	1.426	2.10
0918	0.322	0.187	0.274	1.426	0.39
1430	1.969	1.926	1.954	1.672	3.27
1438	1.839	1.653	1.775	1.672	2.97
1463	6.023	8.765	6.966	1.672	11.65
1624	0.814	0.962	0.864	4.041	3.49
1655	0.504	0.473	0.494	4.041	1.99
1701	1.224	1.163	1.203	1.672	2.01
1710	0.814	0.962	0.864	4.041	3.49
1747	1.298	1.498	1.367	1.672	2.29
1748	1.489	2.170	1.723	1.672	2.88
1853	0.803	0.453	0.683	1.672	1.14
1924	1.189	1.199	1.192	1.672	1.99
1925	1.926	12.474	5.555	1.672	9.29
2003	2.041	1.763	1.946	1.672	3.25
2014	2.135	2.036	2.101	1.672	3.51
2021	1.397	1.463	1.419	1.672	2.37
2039	2.012	1.932	1.984	1.672	3.32
2041	1.290	1.118	1.231	1.672	2.06
2070	1.876	1.583	1.775	1.672	2.97
2081	1.241	1.741	1.413	1.672	2.36
2089	1.487	1.261	1.409	1.672	2.36
2095	1.503	1.286	1.429	1.672	2.39
2101	1.487	1.261	1.409	1.672	2.36

IX 000263 STIP

Section IX - Classification Pricing
 Subsection I - Average Uncapped Rates
 7/1/2022

Section IX - I
 Exhibit 1

Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (5)	Proposed Average Uncapped Rate (6)
	Indemnity (2)	Medical (3)	Total (4)		
2111	1.142	1.195	1.160	1.672	1.94
2114	1.487	1.261	1.409	1.672	2.36
2115	3.560	2.805	3.300	1.672	5.52
2121	0.759	0.777	0.765	1.672	1.28
2130	0.776	0.804	0.785	1.672	1.31
2131	1.563	1.689	1.606	1.672	2.69
2143	1.545	1.091	1.388	1.672	2.32
2150	1.954	2.045	1.985	1.672	3.32
2156	1.917	2.046	1.961	1.672	3.28
2157	2.387	1.931	2.230	1.672	3.73
2172	1.021	0.753	0.929	1.672	1.55
2211	3.042	3.019	3.034	1.672	5.07
2220	1.296	1.466	1.355	1.672	2.27
2260	2.940	2.368	2.743	1.672	4.59
2288	2.034	1.968	2.011	1.672	3.36
2305	1.478	1.428	1.461	1.672	2.44
2362	0.911	1.189	1.007	1.672	1.68
2380	0.860	0.921	0.881	1.672	1.47
2402	1.156	1.249	1.188	1.672	1.99
2413	1.778	1.883	1.814	1.672	3.03
2416	1.142	1.356	1.216	1.672	2.03
2417	1.002	0.695	0.897	1.672	1.50
2501	1.185	1.112	1.160	1.672	1.94
2503	0.652	0.438	0.578	1.672	0.97
2570	1.930	1.558	1.802	1.672	3.01
2576	1.094	1.229	1.140	1.672	1.91
2585	1.436	1.537	1.471	1.672	2.46
2586	1.102	1.181	1.130	1.672	1.89
2587	1.384	1.113	1.287	1.426	1.84
2623	2.501	2.586	2.530	1.672	4.23
2651	0.779	0.913	0.825	1.672	1.38
2660	1.066	1.192	1.109	1.672	1.85
2683	1.103	1.317	1.177	1.672	1.97
2688	0.905	1.025	0.946	1.672	1.58
2702	2.681	3.402	2.927	4.041	11.83
2710	3.302	3.397	3.335	1.672	5.58
2731	1.439	1.725	1.537	1.672	2.57
2747	2.991	2.744	2.906	1.672	4.86
2790	1.210	1.068	1.161	1.672	1.94
2802	1.947	1.964	1.953	1.672	3.27
2835	1.010	0.854	0.956	1.672	1.60
2836	1.421	1.153	1.328	1.672	2.22

IX 000264 STIP

Section IX - Classification Pricing
Subsection I - Average Uncapped Rates
7/1/2022

Section IX - I
Exhibit 1

Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (5)	Proposed Average Uncapped Rate (6)
	Indemnity (2)	Medical (3)	Total (4)		
2841	1.771	2.360	1.974	1.672	3.30
2883	1.789	1.619	1.731	1.672	2.89
2923	0.764	0.771	0.767	1.672	1.28
2942	0.861	0.898	0.874	1.672	1.46
3018	1.337	1.225	1.298	1.672	2.17
3022	1.733	1.945	1.806	1.672	3.02
3027	1.299	1.509	1.371	1.672	2.29
3028	1.370	1.500	1.415	1.672	2.37
3030	2.546	2.793	2.631	1.672	4.40
3040	3.188	2.285	2.877	1.672	4.81
3041	1.507	1.287	1.431	1.672	2.39
3042	1.982	2.021	1.995	1.672	3.34
3066	1.245	1.251	1.248	1.672	2.09
3076	1.176	1.150	1.167	1.672	1.95
3081	2.448	2.749	2.551	1.672	4.27
3082	2.448	2.749	2.551	1.672	4.27
3085	2.423	2.587	2.479	1.672	4.15
3110	4.927	4.100	4.642	1.672	7.76
3111	1.144	1.017	1.100	1.672	1.84
3113	0.889	0.930	0.903	1.672	1.51
3114	1.555	1.438	1.515	1.672	2.53
3118	0.872	0.805	0.849	1.672	1.42
3119	0.547	0.580	0.558	1.672	0.93
3120	0.708	0.556	0.656	1.672	1.10
3122	1.179	1.235	1.198	1.672	2.00
3127	1.247	1.154	1.215	1.672	2.03
3131	0.620	0.786	0.677	1.672	1.13
3132	1.170	1.378	1.242	1.672	2.08
3145	0.848	0.867	0.855	1.672	1.43
3146	1.080	1.208	1.124	1.672	1.88
3169	1.197	1.740	1.384	1.672	2.31
3179	0.612	0.533	0.585	1.672	0.98
3180	1.376	1.161	1.302	1.672	2.18
3188	1.289	1.213	1.263	1.672	2.11
3200	1.133	1.163	1.143	1.672	1.91
3220	1.522	1.568	1.538	1.672	2.57
3255	1.006	1.012	1.008	1.672	1.69
3257	1.189	1.478	1.288	1.672	2.15
3270	1.148	1.173	1.156	1.672	1.93
3300	1.437	2.141	1.679	1.672	2.81
3315	1.603	1.487	1.563	1.672	2.61
3336	1.529	1.236	1.428	1.672	2.39

IX 000265 STIP

Section IX - Classification Pricing
Subsection I - Average Uncapped Rates
7/1/2022

Section IX - I
Exhibit 1

Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (5)	Proposed Average Uncapped Rate (6)
	Indemnity (2)	Medical (3)	Total (4)		
3365	0.886	1.206	0.987	4.241	4.19
3372	1.107	1.106	1.107	1.672	1.85
3373	2.095	1.613	1.929	1.672	3.23
3381	1.015	0.935	0.987	1.672	1.65
3383	0.798	0.835	0.811	1.672	1.36
3385	0.423	0.418	0.421	1.672	0.70
3400	1.197	1.740	1.384	1.672	2.31
3507	1.511	1.343	1.454	1.672	2.43
3515	1.434	1.379	1.415	1.672	2.37
3558	0.332	0.532	0.401	1.672	0.67
3571	0.355	0.315	0.342	1.672	0.57
3574	0.881	0.859	0.874	1.672	1.46
3612	0.680	0.694	0.685	1.672	1.15
3620	1.932	1.886	1.916	1.672	3.20
3629	0.881	0.859	0.874	1.672	1.46
3632	0.881	0.859	0.874	1.672	1.46
3634	0.825	0.695	0.780	1.672	1.30
3635	1.137	1.803	1.366	1.672	2.28
3638	0.881	0.859	0.874	1.672	1.46
3642	0.548	0.534	0.543	1.672	0.91
3643	0.840	0.783	0.820	1.672	1.37
3647	1.255	1.189	1.233	1.672	2.06
3648	0.598	0.684	0.627	1.672	1.05
3681	0.327	0.319	0.324	1.672	0.54
3685	0.315	0.284	0.305	1.672	0.51
3724	0.950	0.963	0.954	4.241	4.05
3726	0.816	0.587	0.744	4.241	3.15
3807	1.197	1.740	1.384	1.672	2.31
3808	1.700	1.825	1.743	1.672	2.91
3821	3.006	3.265	3.098	1.426	4.42
3826	2.065	2.809	2.321	1.672	3.88
3830	0.881	0.859	0.874	1.672	1.46
3841	1.017	0.935	0.989	1.672	1.65
4000	1.259	1.291	1.270	4.041	5.13
4021	1.651	1.785	1.697	1.672	2.84
4024	2.098	2.013	2.068	1.672	3.46
4034	3.087	3.358	3.180	1.672	5.32
4036	0.980	1.035	0.999	1.672	1.67
4038	1.584	0.975	1.375	1.672	2.30
4053	1.278	1.307	1.288	1.672	2.15
4062	1.057	0.963	1.024	1.672	1.71
4112	0.189	0.221	0.200	1.672	0.33

IX 000266 STIP

Section IX - Classification Pricing
Subsection I - Average Uncapped Rates
7/1/2022

Section IX - I
Exhibit 1

Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (5)	Proposed Average Uncapped Rate (6)
	Indemnity (2)	Medical (3)	Total (4)		
4113	1.278	1.307	1.288	1.672	2.15
4114	1.564	1.255	1.458	1.672	2.44
4130	1.870	1.916	1.886	1.672	3.15
4133	0.845	0.813	0.834	1.672	1.39
4150	0.533	0.375	0.478	1.672	0.80
4239	1.356	1.280	1.330	1.672	2.22
4243	1.505	1.304	1.435	1.672	2.40
4244	1.588	1.546	1.573	1.672	2.63
4250	1.156	1.165	1.159	1.672	1.94
4251	1.284	0.939	1.166	1.672	1.95
4273	1.696	1.536	1.641	1.672	2.74
4279	1.208	1.167	1.194	1.672	2.00
4283	0.833	0.685	0.782	1.672	1.31
4299	0.929	0.945	0.934	1.672	1.56
4304	2.296	2.596	2.399	1.672	4.01
4307	0.837	0.896	0.857	1.672	1.43
4308	1.506	0.377	1.118	1.672	1.87
4351	0.476	0.459	0.470	1.672	0.79
4352	0.653	0.565	0.623	1.672	1.04
4360	0.332	0.293	0.319	1.672	0.53
4361	3.970	4.728	4.254	0.124	0.53
4362	0.317	0.289	0.307	1.426	0.44
4410	1.484	2.018	1.667	1.672	2.79
4432	0.335	0.427	0.367	1.672	0.61
4439	2.932	3.945	3.281	1.672	5.49
4452	1.474	1.263	1.402	1.672	2.34
4459	1.528	1.555	1.537	1.672	2.57
4470	1.090	1.006	1.061	1.672	1.77
4484	1.030	1.224	1.097	1.672	1.83
4493	1.008	1.027	1.015	1.672	1.70
4511	0.211	0.192	0.204	1.426	0.29
4512	0.059	0.057	0.058	1.426	0.08
4557	1.061	0.770	0.961	1.672	1.61
4558	0.805	0.880	0.831	1.672	1.39
4583	1.338	1.367	1.348	1.672	2.25
4611	0.458	0.433	0.450	1.672	0.75
4635	2.263	3.349	2.636	1.672	4.41
4653	1.117	0.903	1.043	1.672	1.74
4665	6.332	4.676	5.763	1.672	9.64
4692	0.286	0.257	0.276	1.672	0.46
4693	0.413	0.464	0.430	1.672	0.72
4720	0.849	0.885	0.862	1.672	1.44

IX 000267 STIP

Section IX - Classification Pricing
Subsection I - Average Uncapped Rates
7/1/2022

Section IX - I
Exhibit 1

Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (5)	Proposed Average Uncapped Rate (6)
	Indemnity (2)	Medical (3)	Total (4)		
4740	0.417	0.368	0.400	1.672	0.67
4741	1.409	1.297	1.370	1.672	2.29
4771	1.399	0.983	1.256	1.672	2.10
4777	1.338	1.367	1.348	1.672	2.25
4825	0.238	0.198	0.224	1.672	0.37
4828	0.477	0.467	0.473	1.672	0.79
4829	0.477	0.467	0.473	1.672	0.79
4902	0.861	0.898	0.874	1.672	1.46
4923	0.332	0.293	0.319	1.672	0.53
5020	0.971	0.765	0.906	4.241	3.84
5022	2.221	2.011	2.155	4.241	9.14
5037	3.408	3.169	3.332	4.241	14.13
5040	4.637	4.122	4.474	4.241	18.98
5057	3.251	5.551	3.976	4.241	16.86
5059	5.824	7.505	6.354	4.241	26.95
5102	1.452	1.119	1.347	4.241	5.71
5146	1.486	1.355	1.445	4.241	6.13
5160	0.644	0.583	0.625	4.241	2.65
5183	0.688	0.630	0.670	4.241	2.84
5188	0.887	0.713	0.832	4.241	3.53
5190	0.496	0.545	0.511	4.241	2.17
5191	0.491	0.483	0.488	1.426	0.70
5192	1.773	1.711	1.751	1.426	2.50
5213	2.506	2.253	2.426	4.241	10.29
5215	0.909	0.890	0.903	4.241	3.83
5221	1.476	1.273	1.412	4.241	5.99
5222	2.210	1.414	1.959	4.241	8.31
5223	0.897	0.823	0.874	4.241	3.70
5348	1.132	0.825	1.035	4.241	4.39
5402	1.454	1.297	1.404	4.241	5.96
5403	2.002	1.755	1.924	4.241	8.16
5437	0.804	0.753	0.788	4.241	3.34
5443	0.783	0.721	0.763	4.241	3.24
5445	1.469	1.144	1.367	4.241	5.80
5462	1.275	0.995	1.187	4.241	5.03
5472	1.781	1.381	1.655	4.241	7.02
5473	1.933	1.909	1.926	4.241	8.17
5474	0.874	0.858	0.869	4.241	3.69
5478	0.808	0.618	0.748	4.241	3.17
5479	1.166	1.191	1.173	4.241	4.98
5480	1.063	0.837	0.992	4.241	4.21
5506	1.292	1.170	1.254	4.241	5.32

IX 000268 STIP

Section IX - Classification Pricing
Subsection I - Average Uncapped Rates
7/1/2022

Section IX - I
Exhibit 1

Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (5)	Proposed Average Uncapped Rate (6)
	Indemnity (2)	Medical (3)	Total (4)		
5507	1.245	1.027	1.177	4.241	4.99
5508	0.897	0.921	0.904	4.241	3.84
5509	1.181	1.576	1.306	4.241	5.54
5538	0.875	0.916	0.888	4.241	3.76
5545	9.187	13.673	10.602	4.241	44.96
5547	2.226	2.691	2.372	4.241	10.06
5606	0.258	0.305	0.273	4.241	1.16
5610	1.072	0.785	0.982	4.241	4.16
5645	1.296	1.736	1.435	4.241	6.09
5701	4.119	4.887	4.361	4.241	18.50
5703	2.469	2.239	2.396	4.241	10.16
5705	2.080	1.868	2.013	4.241	8.54
6003	1.736	1.420	1.636	4.241	6.94
6005	0.897	0.921	0.904	4.241	3.84
6204	1.165	1.061	1.132	4.241	4.80
6217	0.987	0.835	0.939	4.241	3.98
6229	0.833	0.825	0.831	4.241	3.52
6233	0.495	0.367	0.455	4.241	1.93
6251	1.020	0.731	0.929	4.241	3.94
6252	0.929	0.691	0.854	4.241	3.62
6306	1.998	1.661	1.892	4.241	8.02
6319	0.615	0.539	0.591	4.241	2.51
6325	0.563	0.534	0.554	4.241	2.35
6400	0.972	1.157	1.030	4.241	4.37
6504	1.487	1.261	1.409	1.672	2.36
6834	0.446	0.592	0.496	4.041	2.00
6836	0.567	0.864	0.668	4.041	2.70
7219	1.787	1.587	1.719	4.041	6.94
7230	2.078	1.740	1.963	4.041	7.93
7231	2.666	2.551	2.627	4.041	10.62
7360	0.991	0.887	0.956	4.041	3.86
7370	0.813	0.966	0.865	4.041	3.49
7380	1.366	1.329	1.354	4.041	5.47
7382	0.859	0.845	0.854	4.041	3.45
7403	0.718	0.871	0.770	4.041	3.11
7405	0.276	0.241	0.264	4.041	1.07
7420	4.194	6.941	5.130	4.041	20.73
7421	0.272	0.194	0.246	4.041	0.99
7422	0.272	0.194	0.246	4.041	0.99
7425	0.637	0.510	0.594	4.041	2.40
7431	0.272	0.194	0.246	4.041	0.99
7502	0.393	0.357	0.381	4.041	1.54

IX 000269 STIP

Section IX - Classification Pricing
Subsection I - Average Uncapped Rates
7/1/2022

Section IX - I
Exhibit 1

Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (5)	Proposed Average Uncapped Rate (6)
	Indemnity (2)	Medical (3)	Total (4)		
7515	0.539	1.814	0.974	4.041	3.94
7520	0.645	0.693	0.661	4.041	2.67
7538	1.185	1.160	1.177	4.241	4.99
7539	0.300	0.376	0.326	4.041	1.32
7580	0.809	0.675	0.763	4.041	3.08
7590	1.416	1.895	1.579	4.041	6.38
7600	0.913	0.698	0.840	4.041	3.39
7601	1.063	1.225	1.114	4.241	4.73
7610	4.820	3.139	4.190	0.124	0.52
7704	0.897	1.196	0.999	4.041	4.04
7720	0.319	0.367	0.335	4.041	1.35
7855	0.735	0.599	0.692	4.241	2.94
8001	0.964	1.223	1.056	1.426	1.51
8002	1.020	1.799	1.298	1.426	1.85
8006	0.691	0.873	0.756	1.426	1.08
8008	0.472	0.533	0.494	1.426	0.70
8010	1.013	1.111	1.048	1.426	1.49
8013	0.206	0.280	0.232	1.426	0.33
8017	0.580	0.693	0.620	1.426	0.88
8018	2.470	1.995	2.300	1.426	3.28
8021	2.298	1.933	2.167	1.426	3.09
8031	1.043	1.085	1.058	1.426	1.51
8032	0.798	0.867	0.823	1.426	1.17
8033	0.931	0.864	0.907	1.426	1.29
8034	2.136	1.450	1.891	1.426	2.70
8039	0.773	0.984	0.849	1.426	1.21
8044	1.737	1.745	1.740	1.426	2.48
8046	1.284	1.656	1.417	1.426	2.02
8048	1.530	1.584	1.549	1.426	2.21
8058	1.242	1.813	1.446	1.426	2.06
8103	1.634	1.789	1.689	1.426	2.41
8105	13.388	8.073	11.489	1.426	16.38
8106	3.168	3.489	3.282	1.426	4.68
8107	1.908	1.953	1.924	1.426	2.74
8111	1.591	1.958	1.722	1.426	2.46
8203	4.014	3.664	3.889	1.426	5.54
8204	4.301	5.010	4.554	1.426	6.49
8215	1.981	2.137	2.037	1.426	2.90
8227	1.014	1.388	1.132	4.241	4.80
8232	3.496	3.480	3.490	1.426	4.98
8233	3.387	3.713	3.503	1.426	4.99
8235	2.529	2.655	2.574	1.426	3.67

IX 000270 STIP

Section IX - Classification Pricing
 Subsection I - Average Uncapped Rates
 7/1/2022

Section IX - I
 Exhibit 1

Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (5)	Proposed Average Uncapped Rate (6)
	Indemnity (2)	Medical (3)	Total (4)		
8263	3.351	3.256	3.317	1.426	4.73
8264	3.073	3.296	3.153	1.426	4.49
8265	3.387	3.713	3.503	1.426	4.99
8279	2.134	2.848	2.389	1.426	3.41
8291	2.012	2.472	2.177	1.426	3.10
8292	2.192	2.029	2.134	1.426	3.04
8293	4.916	4.781	4.868	1.426	6.94
8350	4.642	3.688	4.301	1.426	6.13
8380	1.680	1.572	1.642	1.426	2.34
8381	0.989	1.218	1.071	1.426	1.53
8385	2.439	2.261	2.376	1.426	3.39
8392	0.960	1.329	1.092	1.426	1.56
8393	0.859	0.645	0.782	1.426	1.12
8500	3.387	3.713	3.503	1.426	4.99
8601	1.499	1.380	1.454	0.124	0.18
8710	1.845	1.433	1.698	1.426	2.42
8719	1.845	1.433	1.698	1.426	2.42
8720	0.544	0.504	0.530	1.426	0.76
8721	1.445	1.413	1.433	0.124	0.18
8742	0.691	0.797	0.731	0.124	0.09
8745	3.590	4.603	3.952	1.426	5.63
8747	0.521	0.345	0.458	1.426	0.65
8748	5.309	4.242	4.909	0.124	0.61
8800	7.654	6.623	7.268	0.124	0.90
8803	0.333	0.334	0.333	0.124	0.04
8810	0.451	0.493	0.467	0.124	0.06
8820	0.514	0.470	0.497	0.124	0.06
8824	1.371	1.374	1.372	1.426	1.96
8826	0.981	0.971	0.978	1.426	1.39
8829	1.595	1.318	1.496	1.426	2.13
8831	0.468	1.014	0.663	1.426	0.95
8832	2.137	1.859	2.033	0.124	0.25
8833	8.768	6.608	7.959	0.124	0.98
8835	1.228	0.936	1.124	1.426	1.60
8868	5.232	5.550	5.351	0.124	0.66
8901	0.451	0.493	0.467	0.124	0.06
9014	1.318	1.284	1.306	1.426	1.86
9015	1.929	1.834	1.895	1.426	2.70
9016	0.929	1.417	1.103	1.426	1.57
9019	0.615	0.612	0.614	4.041	2.48
9033	1.625	1.345	1.525	1.426	2.17
9040	1.961	1.980	1.968	1.426	2.81

IX 000271 STIP

Section IX - Classification Pricing
Subsection I - Average Uncapped Rates
7/1/2022

Section IX - I
Exhibit 1

Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (5)	Proposed Average Uncapped Rate (6)
	Indemnity (2)	Medical (3)	Total (4)		
9052	0.952	0.891	0.930	1.426	1.33
9058	0.925	0.947	0.933	1.426	1.33
9060	0.546	0.811	0.641	1.426	0.91
9061	0.595	0.734	0.645	1.426	0.92
9063	0.321	0.498	0.384	1.426	0.55
9079	0.587	0.702	0.628	1.426	0.90
9089	0.412	0.511	0.447	1.426	0.64
9093	0.604	0.868	0.698	1.426	1.00
9101	2.273	2.549	2.372	1.426	3.38
9102	0.425	0.535	0.463	4.041	1.87
9154	0.312	0.424	0.350	4.041	1.42
9156	12.748	17.821	14.648	0.124	1.81
9178	1.413	6.136	3.023	4.041	12.22
9179	7.895	19.997	12.019	4.041	48.57
9180	0.786	1.481	1.023	4.041	4.13
9182	0.524	0.928	0.661	4.041	2.67
9186	0.786	1.481	1.023	4.041	4.13
9220	2.366	2.366	2.366	1.426	3.37
9402	0.915	0.822	0.884	4.041	3.57
9403	2.287	2.089	2.219	4.041	8.97
9410	2.675	2.963	2.778	1.426	3.96
9501	1.118	1.063	1.099	1.672	1.84
9505	1.118	1.063	1.099	1.672	1.84
9519	1.698	1.410	1.596	1.426	2.27
9521	1.660	1.527	1.614	1.672	2.70
9522	0.897	0.798	0.863	1.672	1.44
9533	3.679	3.142	3.510	4.241	14.88
9534	1.225	0.981	1.148	4.241	4.87
9549	0.940	0.678	0.857	4.241	3.64
9552	1.364	1.777	1.494	4.241	6.34
9586	0.221	0.179	0.206	1.426	0.29
9620	0.446	0.510	0.469	1.426	0.67

Notes:

(2), (3), (4): Section IX - G.

(5): Section IX - H, Exhibit 1.

(6) = (4) x (5)

IX 000272 STIP

Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2022

Section IX - J
Exhibit 1

Comparison of Average Rates All Industry Groups

Class (1)	Present Average Capped Rate (2)	Proposed Average Uncapped Rate (3)	Proposed Average Capped Rate (4)
0005	2.16	2.20	2.21
0008	2.39	2.15	2.16
0016	3.27	3.12	3.12
0034	2.87	2.69	2.69
0035	1.73	1.47	1.48
0036	2.87	2.69	2.69
0042	3.32	3.00	3.01
0046	1.97	2.98	2.13
0050	3.83	3.84	3.86
0079	2.50	2.06	2.10
0083	3.24	3.21	3.22
0106	9.19	8.72	8.75
0113	2.87	2.69	2.69
0170	2.87	2.69	2.69
0908	74.50	75.95	76.14
0909	170.47	169.41	169.82
0912	340.94	338.82	339.64
0913	149.00	151.90	152.27
0917	2.36	2.10	2.11
0918	0.44	0.39	0.39
1430	5.07	3.27	4.51
1438	3.09	2.97	2.98
1463	10.16	11.65	10.87
1624	3.47	3.49	3.50
1655	2.75	1.99	2.29
1701	2.09	2.01	2.02
1710	3.47	3.49	3.50
1747	2.70	2.29	2.40
1748	2.84	2.88	2.90
1853	1.23	1.14	1.15
1924	2.09	1.99	2.00
1925	5.42	9.29	5.80
2003	3.37	3.25	3.27
2014	3.51	3.51	3.53
2021	2.19	2.37	2.34
2039	3.33	3.32	3.34
2041	2.24	2.06	2.07
2070	3.31	2.97	2.98
2081	2.52	2.36	2.38
2089	2.48	2.36	2.37
2095	2.75	2.39	2.45
2101	2.48	2.36	2.37
2111	2.00	1.94	1.95
2114	2.48	2.36	2.37
2115	4.75	5.52	5.08
2121	1.31	1.28	1.29
2130	1.34	1.31	1.32
2131	2.67	2.69	2.70

IX 000273 STIP

Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2022

Section IX - J
Exhibit 1

Comparison of Average Rates All Industry Groups

Class (1)	Present Average Capped Rate (2)	Proposed Average Uncapped Rate (3)	Proposed Average Capped Rate (4)
2143	2.03	2.32	2.17
2150	3.57	3.32	3.34
2156	3.98	3.28	3.54
2157	3.66	3.73	3.75
2172	1.62	1.55	1.56
2211	5.48	5.07	5.10
2220	2.07	2.27	2.22
2260	4.97	4.59	4.61
2288	3.19	3.36	3.38
2305	3.10	2.44	2.76
2362	1.50	1.68	1.60
2380	1.95	1.47	1.74
2402	2.06	1.99	2.00
2413	3.05	3.03	3.05
2416	2.29	2.03	2.04
2417	2.09	1.50	1.86
2501	1.82	1.94	1.94
2503	1.09	0.97	0.97
2570	4.28	3.01	3.81
2576	1.92	1.91	1.92
2585	2.56	2.46	2.47
2586	1.77	1.89	1.90
2587	2.63	1.84	2.21
2623	4.51	4.23	4.25
2651	1.42	1.38	1.39
2660	1.95	1.85	1.86
2683	1.93	1.97	1.98
2688	1.72	1.58	1.59
2702	11.57	11.83	11.86
2710	5.61	5.58	5.61
2731	2.78	2.57	2.58
2747	5.09	4.86	4.88
2790	1.53	1.94	1.64
2802	3.38	3.27	3.28
2835	1.37	1.60	1.46
2836	1.90	2.22	2.03
2841	3.49	3.30	3.32
2883	3.03	2.89	2.91
2923	1.49	1.28	1.32
2942	1.57	1.46	1.47
3018	2.33	2.17	2.18
3022	3.21	3.02	3.04
3027	3.92	2.29	3.49
3028	2.63	2.37	2.38
3030	5.49	4.40	4.89
3040	4.31	4.81	4.61
3041	2.76	2.39	2.45
3042	4.35	3.34	3.87

IX 000274 STIP

Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2022

Section IX - J
Exhibit 1

Comparison of Average Rates All Industry Groups

Class (1)	Present Average Capped Rate (2)	Proposed Average Uncapped Rate (3)	Proposed Average Capped Rate (4)
3066	2.11	2.09	2.10
3076	1.91	1.95	1.96
3081	4.57	4.27	4.29
3082	4.57	4.27	4.29
3085	4.13	4.15	4.17
3110	7.41	7.76	7.80
3111	1.72	1.84	1.84
3113	1.46	1.51	1.52
3114	2.82	2.53	2.55
3118	1.52	1.42	1.43
3119	0.70	0.93	0.75
3120	1.18	1.10	1.10
3122	2.13	2.00	2.01
3127	1.11	2.03	1.19
3131	1.30	1.13	1.15
3132	2.35	2.08	2.10
3145	1.50	1.43	1.44
3146	2.05	1.88	1.89
3169	2.50	2.31	2.33
3179	1.06	0.98	0.98
3180	2.06	2.18	2.19
3188	2.14	2.11	2.12
3200	1.87	1.91	1.92
3220	2.74	2.57	2.58
3255	1.80	1.69	1.69
3257	2.05	2.15	2.17
3270	2.15	1.93	1.94
3300	3.07	2.81	2.82
3315	2.63	2.61	2.63
3336	2.79	2.39	2.49
3365	4.52	4.19	4.21
3372	1.87	1.85	1.86
3373	3.35	3.23	3.24
3381	1.86	1.65	1.66
3383	1.51	1.36	1.36
3385	0.63	0.70	0.67
3400	2.50	2.31	2.33
3507	2.47	2.43	2.44
3515	2.59	2.37	2.38
3558	0.73	0.67	0.67
3571	0.66	0.57	0.59
3574	1.51	1.46	1.47
3612	1.29	1.15	1.15
3620	3.52	3.20	3.22
3629	1.51	1.46	1.47
3632	1.51	1.46	1.47
3634	1.28	1.30	1.31
3635	2.69	2.28	2.39

IX 000275 STIP

Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2022

Section IX - J
Exhibit 1

Comparison of Average Rates All Industry Groups

Class (1)	Present Average Capped Rate (2)	Proposed Average Uncapped Rate (3)	Proposed Average Capped Rate (4)
3638	1.51	1.46	1.47
3642	1.01	0.91	0.91
3643	1.39	1.37	1.38
3647	1.95	2.06	2.07
3648	1.10	1.05	1.05
3681	0.62	0.54	0.55
3685	0.59	0.51	0.52
3724	4.70	4.05	4.08
3726	6.35	3.15	5.51
3807	2.50	2.31	2.33
3808	2.96	2.91	2.93
3821	4.67	4.42	4.43
3826	3.80	3.88	3.90
3830	1.51	1.46	1.47
3841	1.27	1.65	1.36
4000	4.80	5.13	5.14
4021	3.27	2.84	2.91
4024	3.01	3.46	3.22
4034	5.06	5.32	5.35
4036	1.86	1.67	1.68
4038	2.77	2.30	2.46
4053	2.05	2.15	2.16
4062	1.67	1.71	1.72
4112	0.37	0.33	0.34
4113	2.05	2.15	2.16
4114	2.30	2.44	2.45
4130	2.70	3.15	2.89
4133	1.32	1.39	1.40
4150	0.68	0.80	0.72
4239	1.91	2.22	2.05
4243	2.65	2.40	2.41
4244	2.32	2.63	2.49
4250	1.59	1.94	1.70
4251	1.88	1.95	1.96
4273	2.75	2.74	2.76
4279	1.95	2.00	2.01
4283	1.58	1.31	1.41
4299	1.63	1.56	1.57
4304	4.09	4.01	4.03
4307	1.41	1.43	1.44
4308	1.50	1.87	1.60
4351	0.82	0.79	0.79
4352	1.18	1.04	1.05
4360	0.57	0.53	0.54
4361	0.65	0.53	0.54
4362	0.47	0.44	0.44
4410	2.71	2.79	2.80
4432	0.66	0.61	0.62

IX 000276 STIP

Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2022

Section IX - J
Exhibit 1

Comparison of Average Rates All Industry Groups

Class (1)	Present Average Capped Rate (2)	Proposed Average Uncapped Rate (3)	Proposed Average Capped Rate (4)
4439	3.84	5.49	4.11
4452	2.44	2.34	2.36
4459	2.49	2.57	2.58
4470	1.87	1.77	1.78
4484	1.84	1.83	1.84
4493	1.74	1.70	1.71
4511	0.26	0.29	0.28
4512	0.09	0.08	0.08
4557	1.55	1.61	1.62
4558	1.37	1.39	1.40
4583	2.40	2.25	2.27
4611	0.70	0.75	0.75
4635	4.48	4.41	4.43
4653	1.58	1.74	1.69
4665	7.98	9.64	8.54
4692	0.46	0.46	0.46
4693	0.77	0.72	0.72
4720	1.59	1.44	1.45
4740	0.87	0.67	0.78
4741	1.94	2.29	2.08
4771	5.02	2.10	4.47
4777	2.40	2.25	2.27
4825	0.43	0.37	0.38
4828	0.87	0.79	0.80
4829	0.87	0.79	0.80
4902	1.57	1.46	1.47
4923	0.57	0.53	0.54
5020	4.14	3.84	3.87
5022	9.11	9.14	9.20
5037	15.65	14.13	14.23
5040	20.26	18.98	19.11
5057	21.40	16.86	18.56
5059	18.50	26.95	19.93
5102	6.24	5.71	5.75
5146	6.63	6.13	6.17
5160	2.32	2.65	2.50
5183	2.88	2.84	2.86
5188	3.73	3.53	3.55
5190	2.09	2.17	2.18
5191	0.74	0.70	0.70
5192	2.46	2.50	2.50
5213	10.64	10.29	10.36
5215	3.84	3.83	3.86
5221	6.25	5.99	6.03
5222	9.40	8.31	8.37
5223	3.73	3.70	3.73
5348	3.93	4.39	4.24
5402	5.59	5.96	6.00

IX 000277 STIP

Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2022

Section IX - J
Exhibit 1

Comparison of Average Rates All Industry Groups

Class (1)	Present Average Capped Rate (2)	Proposed Average Uncapped Rate (3)	Proposed Average Capped Rate (4)
5403	7.93	8.16	8.22
5437	3.92	3.34	3.40
5443	3.36	3.24	3.26
5445	5.72	5.80	5.84
5462	5.29	5.03	5.07
5472	7.66	7.02	7.07
5473	9.50	8.17	8.24
5474	3.79	3.69	3.71
5478	3.70	3.17	3.21
5479	5.22	4.98	5.01
5480	4.47	4.21	4.24
5506	4.42	5.32	4.76
5507	5.31	4.99	5.02
5508	3.83	3.84	3.86
5509	4.23	5.54	4.56
5538	3.97	3.76	3.79
5545	38.49	44.96	41.47
5547	10.21	10.06	10.13
5606	1.25	1.16	1.17
5610	4.27	4.16	4.19
5645	6.49	6.09	6.13
5701	19.02	18.50	18.62
5703	11.00	10.16	10.23
5705	9.67	8.54	8.60
6003	7.98	6.94	6.99
6005	3.83	3.84	3.86
6204	4.89	4.80	4.83
6217	4.04	3.98	4.01
6229	3.63	3.52	3.55
6233	2.17	1.93	1.94
6251	4.21	3.94	3.97
6252	6.25	3.62	5.42
6306	6.85	8.02	7.38
6319	2.87	2.51	2.52
6325	2.61	2.35	2.36
6400	4.51	4.37	4.40
6504	2.48	2.36	2.37
6834	2.32	2.00	2.01
6836	3.41	2.70	2.84
7219	8.00	6.94	6.96
7230	8.93	7.93	7.95
7231	9.82	10.62	10.64
7360	3.68	3.86	3.87
7370	3.63	3.49	3.50
7380	5.62	5.47	5.48
7382	3.44	3.45	3.46
7403	3.84	3.11	3.20
7405	1.13	1.07	1.07

IX 000278 STIP

Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2022

Section IX - J
Exhibit 1

Comparison of Average Rates All Industry Groups

Class (1)	Present Average Capped Rate (2)	Proposed Average Uncapped Rate (3)	Proposed Average Capped Rate (4)
7420	7.36	20.73	7.97
7421	1.15	0.99	1.00
7422	1.15	0.99	1.00
7425	2.30	2.40	2.41
7431	1.15	0.99	1.00
7502	1.73	1.54	1.54
7515	2.64	3.94	2.86
7520	2.79	2.67	2.68
7538	5.95	4.99	5.16
7539	1.16	1.32	1.26
7580	3.04	3.08	3.09
7590	4.04	6.38	4.38
7600	3.36	3.39	3.40
7601	5.36	4.73	4.76
7610	0.28	0.52	0.30
7704	2.80	4.04	3.03
7720	1.36	1.35	1.36
7855	3.33	2.94	2.96
8001	1.55	1.51	1.51
8002	1.56	1.85	1.69
8006	1.14	1.08	1.08
8008	0.68	0.70	0.71
8010	1.57	1.49	1.50
8013	0.33	0.33	0.33
8017	0.89	0.88	0.89
8018	3.33	3.28	3.29
8021	3.18	3.09	3.10
8031	1.63	1.51	1.51
8032	1.14	1.17	1.18
8033	1.43	1.29	1.30
8034	2.76	2.70	2.70
8039	1.20	1.21	1.21
8044	2.67	2.48	2.49
8046	1.89	2.02	2.02
8048	2.44	2.21	2.21
8058	2.11	2.06	2.07
8103	2.33	2.41	2.41
8105	6.38	16.38	6.89
8106	5.26	4.68	4.69
8107	2.60	2.74	2.75
8111	2.65	2.46	2.46
8203	5.80	5.54	5.56
8204	5.20	6.49	5.62
8215	3.36	2.90	2.91
8227	4.35	4.80	4.69
8232	5.38	4.98	4.99
8233	5.29	4.99	5.01
8235	3.76	3.67	3.68

IX 000279 STIP

Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2022

Section IX - J
Exhibit 1

Comparison of Average Rates All Industry Groups

Class (1)	Present Average Capped Rate (2)	Proposed Average Uncapped Rate (3)	Proposed Average Capped Rate (4)
8263	4.21	4.73	4.55
8264	4.54	4.49	4.51
8265	5.29	4.99	5.01
8279	3.74	3.41	3.41
8291	3.62	3.10	3.11
8292	3.34	3.04	3.05
8293	7.54	6.94	6.96
8350	6.16	6.13	6.15
8380	2.46	2.34	2.35
8381	1.70	1.53	1.53
8385	2.92	3.39	3.15
8392	1.40	1.56	1.51
8393	1.26	1.12	1.12
8500	5.29	4.99	5.01
8601	0.20	0.18	0.18
8710	2.96	2.42	2.49
8719	2.96	2.42	2.49
8720	0.75	0.76	0.76
8721	0.26	0.18	0.21
8742	0.10	0.09	0.09
8745	5.15	5.63	5.57
8747	0.72	0.65	0.65
8748	0.62	0.61	0.61
8800	0.96	0.90	0.91
8803	0.04	0.04	0.04
8810	0.06	0.06	0.06
8820	0.07	0.06	0.06
8824	1.72	1.96	1.86
8826	1.37	1.39	1.40
8829	2.03	2.13	2.14
8831	0.94	0.95	0.95
8832	0.27	0.25	0.25
8833	1.06	0.98	0.99
8835	1.72	1.60	1.61
8868	0.67	0.66	0.67
8901	0.06	0.06	0.06
9014	2.05	1.86	1.87
9015	2.85	2.70	2.71
9016	1.69	1.57	1.58
9019	2.97	2.48	2.49
9033	2.36	2.17	2.18
9040	2.70	2.81	2.81
9052	1.40	1.33	1.33
9058	1.33	1.33	1.33
9060	0.95	0.91	0.92
9061	0.90	0.92	0.92
9063	0.56	0.55	0.55
9079	0.97	0.90	0.90

IX 000280 STIP

Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2022

Section IX - J
Exhibit 1

Comparison of Average Rates All Industry Groups

Class (1)	Present Average Capped Rate (2)	Proposed Average Uncapped Rate (3)	Proposed Average Capped Rate (4)
9089	0.77	0.64	0.65
9093	1.07	1.00	1.00
9101	3.30	3.38	3.39
9102	2.13	1.87	1.88
9154	1.37	1.42	1.42
9156	1.63	1.81	1.75
9178	13.02	12.22	12.25
9179	32.92	48.57	35.67
9180	4.23	4.13	4.14
9182	3.01	2.67	2.68
9186	4.23	4.13	4.14
9220	3.02	3.37	3.27
9402	3.81	3.57	3.58
9403	9.27	8.97	8.99
9410	3.02	3.96	3.26
9501	1.92	1.84	1.85
9505	1.92	1.84	1.85
9519	2.66	2.27	2.28
9521	2.79	2.70	2.71
9522	1.51	1.44	1.45
9533	12.82	14.88	13.81
9534	5.08	4.87	4.90
9549	4.09	3.64	3.66
9552	7.04	6.34	6.38
9586	0.29	0.29	0.29
9620	0.72	0.67	0.67

Notes:

(2) = (4) from Section IX - J, Exhibit 1 of the 07/01/2020 stipulation.

(3): Section IX - I.

(4): Total Balanced Formula Relativity (from Section IX - I, Exhibit 1) x Capped Rate Level Factors and subject to maximum and minimum caps (from Section IX - H, Exhibit 1.)

IX 000281 STIP

Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2022

Section IX - J
Exhibit 2

Summary of Proposed Premium Change All Industry Groups

Industry Group (1)	Present Premium (2)	Proposed Premium (3)	Proposed Change (4)	Target Change (5)	Capped Rate Level Factor (6)
Manufacturing	546,612,656	535,619,568	-2.0%	-2.0%	1.681
Construction	1,627,019,502	1,582,215,864	-2.8%	-2.8%	4.270
Office & Clerical	556,358,978	528,846,272	-4.9%	-4.9%	0.125
Goods & Services	1,462,160,824	1,404,878,486	-3.9%	-3.9%	1.429
Miscellaneous	662,031,114	634,668,409	-4.1%	-4.1%	4.051
All Groups	4,854,183,074	4,686,228,599	-3.46%		

Notes:

(2) = Exposure x Present Average Rates from Exhibit 1.

(3) = Exposure x Proposed Average Capped Rates from Exhibit 1.

(4) = [(3) - (2)] / (2)

(5): Section IX - H, Exhibit 1.

(6): Section IX - H, Exhibit 1. Proposed average uncapped rates are capped by an iterative process using rate levels to determine if the required change is achieved.

IX 000282 STIP

Section IX - Classification Pricing
Subsection K - Adjustments to Derive Final Manual Rates
7/1/2022

Section IX - K
Exhibit 1

Calculation of Proposed Manual Rates

The proposed manual rates in Section IX - A, Exhibit 1 are derived from the proposed average capped rates in Section IX - J, Exhibit 1 as follows:

$$\text{Proposed Manual Rate} = [\text{Proposed Average Rate} / (\text{Factor 1} \times \text{Factor 2} \times \text{Factor 3})] \times [1.000 / (1.000 - \text{Factor 4})]$$

(1)	Factor 1 =	0.997	The offset for Merit Rating and Average Experience Modification
(2)	Factor 2 =	1.054	The offset for ARAP
(3)	Factor 3 =	0.963	For eligible classes, the offset for the Construction Classification Premium Adjustment Program
(4)	Factor 4 =	0.0056	The loading from the filing of recoupment of amounts paid to the Insolvency Fund

Notes:

- (1): Exhibit 2.
- (2): Exhibit 3.
- (3): Exhibit 4.
- (4): Exhibit 5, Page 1.

Offset for Experience & Merit Rating

Policy Year (1)	Age (2)	Rating Category (3)	Number of Policies (4)	% of Policies = (4) / Total (4) (5)	Manual Premium (6)	% of Manual = (6) / Total (6) (7)	Standard Premium (8)	Historical Average Mod = (8) / (6) (9)	Selected Average Mod (10)
2014	78	Non Rated	93,335	44%	22,203,735	2%	22,197,610	1.000	
		Merit Rated	79,803	37%	150,882,034	14%	147,472,632	0.977	
		Intrastate Rated	20,621	10%	466,058,694	43%	470,135,942	1.009	
		Interstate Rated	20,332	9%	439,379,535	41%	403,095,166	0.917	
		Total	214,091	100%	1,078,523,998	100%	1,042,901,350	0.967	
2015	66	Non Rated	97,498	44%	23,297,444	2%	23,289,053	1.000	
		Merit Rated	80,244	36%	154,817,454	13%	151,328,259	0.977	
		Intrastate Rated	22,275	10%	498,410,125	43%	497,946,243	0.999	
		Interstate Rated	21,647	10%	477,393,043	41%	438,023,808	0.918	
		Total	221,664	100%	1,153,918,066	100%	1,110,587,363	0.962	
2016	54	Non Rated	100,800	44%	22,948,342	2%	22,941,961	1.000	
		Merit Rated	80,569	35%	157,256,464	13%	153,734,585	0.978	
		Intrastate Rated	23,436	10%	528,007,141	44%	527,729,144	0.999	
		Interstate Rated	23,395	10%	493,152,576	41%	454,090,243	0.921	
		Total	228,200	100%	1,201,364,523	100%	1,158,495,933	0.964	
2017	42	Non Rated	99,060	43%	23,300,981	2%	23,294,167	1.000	
		Merit Rated	79,706	35%	157,891,144	12%	154,357,803	0.978	
		Intrastate Rated	24,399	11%	561,408,722	44%	560,312,973	0.998	
		Interstate Rated	24,990	11%	537,810,384	42%	494,199,106	0.919	
		Total	228,155	100%	1,280,411,231	100%	1,232,164,049	0.962	
2018	30	Non Rated	102,470	44%	23,888,747	2%	23,882,207	1.000	
		Merit Rated	80,224	35%	158,147,121	13%	154,743,807	0.978	
		Intrastate Rated	24,345	10%	555,141,021	44%	554,812,928	0.999	
		Interstate Rated	24,962	11%	519,231,071	41%	480,574,439	0.926	
		Total	232,001	100%	1,256,407,960	100%	1,214,013,381	0.966	
Total		Non Rated	493,163	44%	115,639,249	2%	115,604,998	1.000	1.000
		Merit Rated	400,546	36%	778,994,217	13%	761,637,086	0.978	0.978
		Intrastate Rated	115,076	10%	2,609,025,703	44%	2,610,937,230	1.001	1.000
		Interstate Rated	115,326	10%	2,466,966,609	41%	2,269,982,762	0.920	1.000
		Total	1,124,111	100%	5,970,625,778	100%	5,758,162,076	0.964	0.997

Notes:

Unit Statistical Plan data, excluding Large Deductibles and SIGs.
 Non Rated, Merit Rated and Intrastate Rated categories are estimated based on manual premium.
 (10): Set to 1.000 for Non Rated and Interstate Rated and Intrastate Rated.

IX 000284 STIP

Section IX - Classification Pricing
 Subsection K - Adjustments to Derive Final Manual Rates
 7/1/2022

Section IX - K
 Exhibit 3

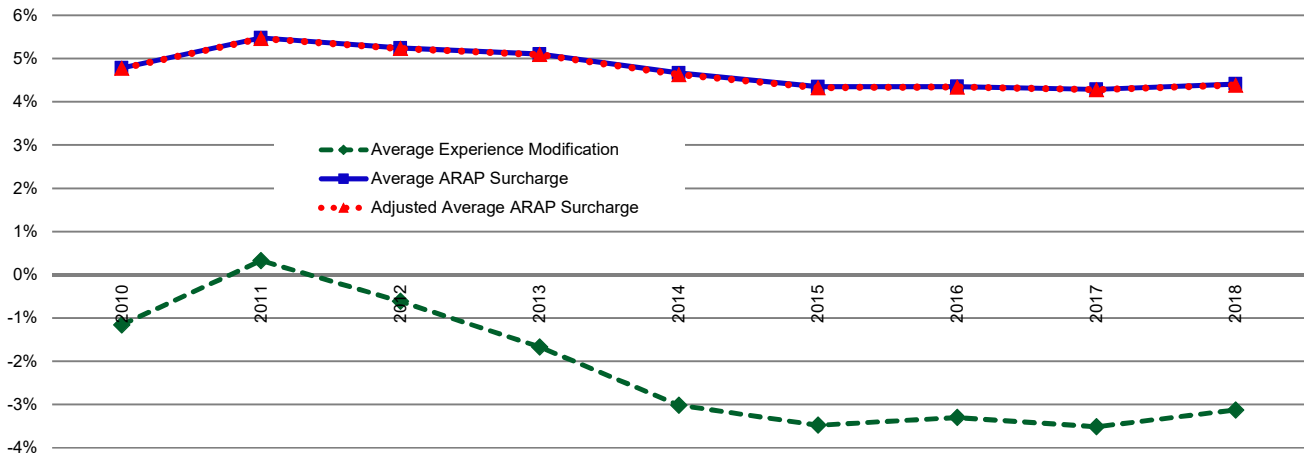
Offset for ARAP Estimate of Average ARAP Surcharge for Prospective Effective Period

Historical Average Experience Modification and ARAP Surcharge

Policy Year (1)	Manual Premium (2)	Standard Premium (3)	ARAP Premium (4)	Adjusted ARAP Premium (5)	Average ARAP Surcharge =(4) / (3) (6)	Average Experience Modification =(3) / (2) - 1.000 (7)	Adjusted Average ARAP Surcharge =(5) / [(3)+(4)-(5)] (8)
2010	870,437,515	860,366,123	41,141,500	41,054,589	4.8%	-1.2%	4.8%
2011	914,834,538	917,837,332	50,256,579	50,160,670	5.5%	0.3%	5.5%
2012	943,303,428	937,505,205	49,160,807	49,039,440	5.2%	-0.6%	5.2%
2013	1,001,395,712	984,687,596	50,230,559	50,125,534	5.1%	-1.7%	5.1%
2014	1,075,292,326	1,042,901,350	48,667,270	48,289,734	4.7%	-3.0%	4.6%
2015	1,150,582,309	1,110,587,363	48,301,566	48,034,744	4.3%	-3.5%	4.3%
2016	1,198,012,527	1,158,495,933	50,412,520	50,286,604	4.4%	-3.3%	4.3%
2017	1,277,035,869	1,232,164,049	52,815,889	52,740,333	4.3%	-3.5%	4.3%
2018	1,253,154,605	1,214,013,381	53,569,069	53,239,945	4.4%	-3.1%	4.4%

Regression of Average ARAP Surcharge on Average Experience Modification

(9) R-Squared	0.902
(10) Slope	0.292
(11) Intercept	0.054
(12) Projected Average ARAP Surcharge = (11)	0.054



Notes:

- (2)-(4): Unit Statistical Plan data, excluding Large Deductibles and SIGs. ARAP adjusted from company level to DSR level.
- (5): (4) adjusted to maximum ARAP surcharge factor of 1.25.

IX 000285 STIP

Section IX - Classification Pricing
Subsection K - Adjustments to Derive Final Manual Rates
7/1/2022

Section IX - K
Exhibit 4

Construction Class Premium Adjustment Program

Policy Year (1)	Manual Premium for Eligible Class Codes (2)	Construction Credit (3)	Percent (4)
2017	460,975,842	15,529,533	3.4%
2018	456,295,035	17,064,014	3.7%
(5) Selected Average Credit for Eligible Class Codes in Prospective Effective Period			3.7%

Note:

(2),(3): Unit Statistical Plan data, excluding Large Deductibles and SIGs.

(4): (3) / (2)

IX 000286 STIP

Section IX - Classification Pricing
Subsection K - Adjustments to Derive Final Manual Rates
7/1/2022

Section IX - K
Exhibit 5
Page 1

Loading for Recoupment of Insolvency Fund Assessments

Unanticipated Insolvency Assessment Recoupments

(1)	Estimated Written Premium for the Policy Period beginning 7/1/21 and ending 6/30/22, absent Insolvency loads	1,420,450,494
(2)	Unanticipated Insolvency Assessment Recoupment Rate (As a % of premium absent insolvency loads)	-0.54%
(3)	Unanticipated Insolvency Assessment Recoupments	(7,670,433)
(4)	Interest Adjustment Factor	1.004
(5)	Adjusted Unanticipated Insolvency Assessment Recoupments	(7,697,947)

Net Assessments

(6)	Amount Sufficient to Recoup Assessment	0
(7)	Net Assessments	7,697,947

Loading for Recoupment

(8)	Estimated Written Premium in the Prospective Effective Period, absent insolvency loads	1,371,302,907
(9)	Indicated Loading for Recoupment of Insolvency Fund Assessments	0.56%

Notes:

- (1): Page 2.
- (2): loading for insolvency fund in 07/01/2020 effective rates.
- (3) = (1) x (2)
- (4): 0.4% is the risk-free rate of interest, shown in Section VII-J, Exhibit 1, Page 1 compounded from the expected collection date of the unanticipated insolvency assessment recoupments to the average date the assessment will be recouped or returned.
- (5) = (3) x (4)
- (6): No assessment or refund of assessment in 2020 or 2021.
- (7) = (6) - (5)
- (8): Page 2.
- (9) = (7) / [(7) + (8)]

IX 000287 STIP

Section IX - Classification Pricing
Subsection K - Adjustments to Derive Final Manual Rates
7/1/2022

Section IX - K
Exhibit 5
Page 2

Expected Workers' Compensation Written Premium in Prospective Effective Period

(1)	2019 Calendar Year Written Premium, absent insolvency loads	1,524,088,513
(2)	Estimated Exposure Growth Factor from Calendar Year 2019 to Policy Period ending 6/30/22	1.000
(3)	Rate Change from Calendar Year 2019 Written to the Policy Period ending 6/30/22	-6.8%
(4)	Estimated Written Premium for the Policy Period ending 6/30/22, absent Insolvency Loads = (1) x (2) x [1.0 + (3)]	1,420,450,494
(5)	Estimated Exposure Growth Factor from the Policy Period ending 6/30/22 to the Prospective Effective Period	1.000
(6)	Average Indicated Rate Change	-3.46%
(7)	Estimated Written Premium in Prospective Effective Period, absent insolvency loads = (4) x (5) x [1.0 + (6)]	1,371,302,907

Notes:

- (1): Adjusted to remove any loading for recoupment of insolvency fund assessments.
- (2): Assumes a 0.0% (from Section V-H, Exhibit 3).
- (3): The 7/1/20 rate change was -6.8%.
- (5): Assumes a 0.0% annual change (from Section V-H, Exhibit 3) compounded for 1 year.
- (6): Section I-A, Exhibit 1.

IX 000288 STIP

Section IX - Classification Pricing
 Subsection L - Pricing Example
 7/1/2022

Section IX - L
 Exhibit 1
 Page 1

Pricing Example for Class 2660 Boot Or Shoe Mfg Noc

Calculation of MA Indicated Relativity:

(A). Limited Losses (Unit Statistical Plan data, excluding Large Deductibles)									
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
		Indemnity	2014	0	0	0	0	0	3,528
2015	0		0	0	0	79,225	0	337	0
2016	0		0	0	0	0	0	427	0
2017	0		0	0	0	0	0	1,058	0
2018	0		0	0	0	32,800	0	31	0
Medical	2014	0	0	0	0	0	1,781	0	326
	2015	0	0	0	0	22,860	0	1,274	113
	2016	0	0	0	0	0	0	749	2,254
	2017	0	0	0	0	0	0	2,419	369
	2018	0	0	0	0	9,530	0	218	312

(B). Primary Conversion Factors (Section IX - B, Exhibit 1, Page 1)									
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
		Indemnity	2014	0.818	0.812	0.822	0.854	0.849	0.804
2015	0.889		0.889	0.899	0.930	0.929	0.881	0.880	0.000
2016	0.974		0.967	0.983	1.014	1.007	0.966	0.959	0.000
2017	1.101		1.082	1.111	1.141	1.121	1.094	1.075	0.000
2018	1.710		1.505	1.722	1.761	1.550	1.700	1.497	0.000
Medical	2014	0.705	0.750	0.705	0.705	0.750	0.705	0.750	0.705
	2015	0.779	0.833	0.779	0.779	0.833	0.779	0.833	0.735
	2016	0.804	0.861	0.804	0.804	0.861	0.804	0.861	0.780
	2017	0.822	0.857	0.822	0.822	0.857	0.822	0.857	0.774
	2018	0.894	0.899	0.894	0.894	0.899	0.894	0.899	0.814

(C). Converted Limited Losses [(A) x (B)]									
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
		Indemnity	2014	0	0	0	0	0	2,835
2015	0		0	0	0	73,628	0	297	0
2016	0		0	0	0	0	0	410	0
2017	0		0	0	0	0	0	1,137	0
2018	0		0	0	0	50,842	0	46	0
Medical	2014	0	0	0	0	0	1,255	0	230
	2015	0	0	0	0	19,052	0	1,062	83
	2016	0	0	0	0	0	0	645	1,758
	2017	0	0	0	0	0	0	2,074	286
	2018	0	0	0	0	8,566	0	196	254

IX 000289 STIP

Section IX - Classification Pricing
 Subsection L - Pricing Example
 7/1/2022

Section IX - L
 Exhibit 1
 Page 2

Pricing Example for Class 2660
 Boot Or Shoe Mfg Noc

Calculation of MA Indicated Relativity:

		(D). Unadjusted Excess Losses [(Excess Factor -1.0) x (C)]							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2014	0	0	0	0	0	387	0	0
	2015	0	0	0	0	10,040	0	40	0
	2016	0	0	0	0	0	0	56	0
	2017	0	0	0	0	0	0	155	0
	2018	0	0	0	0	6,933	0	6	0
Medical	2014	0	0	0	0	0	171	0	31
	2015	0	0	0	0	2,598	0	145	11
	2016	0	0	0	0	0	0	88	240
	2017	0	0	0	0	0	0	283	39
	2018	0	0	0	0	1,168	0	27	35

		(E). Adjusted Excess Losses							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2014	0	0	0	0	0	271	0	0
	2015	0	0	0	0	7,028	0	28	0
	2016	0	0	0	0	0	0	39	0
	2017	0	0	0	0	0	0	109	0
	2018	0	0	0	0	4,853	0	4	0
Medical	2014	0	0	0	0	0	287	0	31
	2015	0	0	0	0	5,610	0	157	11
	2016	0	0	0	0	0	0	105	240
	2017	0	0	0	0	0	0	329	39
	2018	0	0	0	0	3,248	0	29	35

		(F). Secondary Conversion Factors				
		Fatal	Permanent Total	Permanent Partial	Temporary Total	Medical Only
Indemnity		1.132	1.116	1.199	1.202	0.000
Medical		1.187	1.118	1.201	1.203	1.187

		(G). Converted Unlimited Losses							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2014	0	0	0	0	0	3,732	0	0
	2015	0	0	0	0	96,718	0	390	0
	2016	0	0	0	0	0	0	539	0
	2017	0	0	0	0	0	0	1,497	0
	2018	0	0	0	0	66,786	0	61	0
Medical	2014	0	0	0	0	0	1,856	0	310
	2015	0	0	0	0	29,616	0	1,466	112
	2016	0	0	0	0	0	0	901	2,372
	2017	0	0	0	0	0	0	2,892	385
	2018	0	0	0	0	14,187	0	270	343

		(H). Total					
Policy Year	Exposure	Indemnity			Medical		
		LD	NLD		LD	NLD	
2014	46,156	3,732	0		1,856	310	
2015	44,779	0	97,108		0	31,194	
2016	37,929	0	539		0	3,273	
2017	52,045	0	1,497		0	3,277	
2018	53,397	0	66,847		0	14,800	
Total	234,306	3,732	165,992		1,856	52,855	

	Indemnity	Medical
(I). Indicated Pure Premium	0.724	0.234
(J). Manufacturing Industry Group Pure Premium	0.919	0.482
(K). MA Indicated Relativity	0.788	0.484

Notes:

(E): Indemnity Adjusted Excess Losses = Indemnity Unadjusted Excess Losses x 0.7

Medical Adjusted Excess Losses = Medical Unadjusted Excess Losses + 0.3 x Indemnity Unadjusted Excess Losses

(F): Section IX-B, Exhibit 1, Page 3.

(G) = [(C) + (E)] x (F)

(I) = Total Losses / Total Exposure

(J): Industry Group Pure Premium from Section IX - C, Exhibit 1, Page 2.

(K) = (I) / (J)

IX 000290 STIP

Section IX - Classification Pricing
 Subsection L - Pricing Example
 7/1/2022

Section IX - L
 Exhibit 2
 Page 1

Pricing Example for Class 2660
 Boot Or Shoe Mfg Noc

Calculation of Countrywide Relativity

State (1)	State Code (2)	Losses				Lost-Time Claims		Payroll (9)
		Indemnity		Medical		Likely (7)	Not-Likely (8)	
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)			
Alabama	1	0	0	0	0	0	0	713
Arizona	2	0	0	0	12,133	0	0	9,160,199
Arkansas	3	1,051	63,974	1,773	236,539	1	15	65,341,994
Colorado	5	0	3,182	0	9,755	0	1	4,897,598
Connecticut	6	0	0	0	0	0	0	286,534
D.C.	8	0	0	0	0	0	0	0
Florida	9	10,637	0	15,257	6,313	1	0	5,428,813
Georgia	10	0	31,586	0	12,240	0	1	2,864,840
Idaho	11	0	2,786	0	11,087	0	1	901,192
Illinois	12	57,222	148,804	62,145	261,003	3	15	18,527,490
Indiana	13	0	613	0	4,947	0	1	1,075,656
Iowa	14	0	0	0	0	0	0	674,753
Kansas	15	0	0	0	0	0	0	0
Kentucky	16	0	0	0	0	0	0	284,612
Louisiana	17	0	0	0	0	0	0	0
Maine	18	352,605	1,087,437	956,630	1,445,137	11	80	144,883,765
Maryland	19	0	0	0	0	0	0	294,610
Michigan	21	0	112,633	0	160,549	0	8	48,873,616
Minnesota	22	0	25,858	0	27,288	0	3	6,432,019
Mississippi	23	0	0	0	0	0	0	0
Missouri	24	55,075	453,069	132,010	1,212,718	2	40	69,694,751
Montana	25	0	0	0	0	0	0	660,674
Nebraska	26	0	0	0	0	0	0	796,853
Nevada	27	0	624	0	1,629	0	1	588,776
New Hampshire	28	0	0	0	0	0	0	525,160
New Mexico	30	0	0	0	0	0	0	0
North Carolina	32	23,339	59,098	8,611	103,123	2	7	25,348,208
Oklahoma	35	0	0	0	0	0	0	0
Oregon	36	151,944	446,297	49,431	464,658	3	46	87,256,074
Rhode Island	38	0	0	0	0	0	0	139,164
South Carolina	39	0	0	0	1,117	0	0	59,619
South Dakota	40	0	0	0	0	0	0	0
Tennessee	41	0	61,663	0	227,253	0	6	28,962,061
Utah	43	0	0	0	2,740	0	0	2,840,143
Vermont	44	0	0	0	0	0	0	0
Virginia	45	25,536	10,824	26,620	18,548	1	2	8,058,701
West Virginia	47	0	0	0	0	0	0	956,817
Wisconsin	48	172,957	433,129	842,962	1,770,113	6	38	87,494,839
Hawaii	52	0	174	0	2,905	0	2	2,417,768
Alaska	54	0	0	0	0	0	0	0
Total		850,366	2,941,751	2,095,439	5,991,795	30	267	625,728,012

Note:
 (3) - (9): Data are total for latest three policy years. See Section IX-D, Exhibit 3.

IX 000291 STIP

Section IX - Classification Pricing
 Subsection L - Pricing Example
 7/1/2022

Section IX - L
 Exhibit 2
 Page 2

Pricing Example for Class 2660
 Boot Or Shoe Mfg Noc

Calculation of Countrywide Relativity

State (1)	State Code (2)	Manufacturing Pitch Factors		Pure Premiums, on MA Level		Total (7)
		Indemnity (3)	Medical (4)	Indemnity (5)	Medical (6)	
Alabama	1	2.483	0.636	0.000	0.000	
Arizona	2	3.236	0.435	0.000	0.058	
Arkansas	3	3.273	1.060	0.326	0.387	
Colorado	5	2.071	0.628	0.135	0.125	
Connecticut	6	0.938	0.504	0.000	0.000	
D.C.	8	0.780	0.429	0.000	0.000	
Florida	9	2.059	0.454	0.403	0.181	
Georgia	10	1.364	0.710	1.503	0.303	
Idaho	11	1.454	0.411	0.449	0.505	
Illinois	12	1.028	0.476	1.143	0.831	
Indiana	13	3.601	0.737	0.205	0.339	
Iowa	14	1.388	0.444	0.000	0.000	
Kansas	15	2.382	0.573	0.000	0.000	
Kentucky	16	2.058	0.900	0.000	0.000	
Louisiana	17	1.663	0.566	0.000	0.000	
Maine	18	1.068	0.509	1.061	0.844	
Maryland	19	1.574	0.795	0.000	0.000	
Michigan	21	2.261	0.813	0.521	0.267	
Minnesota	22	1.519	0.715	0.611	0.303	
Mississippi	23	1.719	0.684	0.000	0.000	
Missouri	24	1.442	0.496	1.051	0.956	
Montana	25	1.305	0.371	0.000	0.000	
Nebraska	26	1.728	0.495	0.000	0.000	
Nevada	27	0.803	0.468	0.085	0.129	
New Hampshire	28	1.850	0.409	0.000	0.000	
New Mexico	30	0.532	0.277	0.000	0.000	
North Carolina	32	1.785	1.069	0.581	0.471	
Oklahoma	35	1.269	0.579	0.000	0.000	
Oregon	36	2.090	0.848	1.433	0.499	
Rhode Island	38	0.717	0.701	0.000	0.000	
South Carolina	39	0.831	0.608	0.000	1.138	
South Dakota	40	3.118	0.581	0.000	0.000	
Tennessee	41	3.127	0.773	0.666	0.607	
Utah	43	4.460	0.924	0.000	0.089	
Vermont	44	1.048	0.457	0.000	0.000	
Virginia	45	2.553	0.554	1.152	0.310	
West Virginia	47	2.551	1.135	0.000	0.000	
Wisconsin	48	2.058	0.416	1.425	1.242	
Hawaii	52	0.854	0.386	0.006	0.046	
Alaska	54	1.017	0.165	0.000	0.000	
(8)	Average of (5), (6) weighted by Payroll from Page 1, respectively			0.958	0.692	1.651
(9)	CW Manufacturing Pure Premium			0.828	0.432	1.260
(10)	CW Relativity = (8) / (9)			1.157	1.603	1.310
(11)	CW Relativity, balanced to unity			1.143	1.584	

Notes:

- (3), (4) = (MA Total Unlimited Losses) / [(State Pure Premium) x (MA Total Exposure)] for Industry Code 1. See Section IX - D, Exhibit 2.
- (5) = 100 x [State Indemnity Losses / State Payroll] x (3), where State Indemnity Losses and State Payroll from page 1.
- (6) = 100 x [State Medical Losses / State Payroll] x (4), where State Medical Losses and State Payroll from page 1.
- (9) = (8) weighted by MA five year Manufacturing Exposure
- (11): Relativities balanced to unity (weighted by MA exposure) over Manufacturing Industry Group.

IX 000292 STIP

Section IX - Classification Pricing
 Subsection L - Pricing Example
 7/1/2022

Section IX - L
 Exhibit 3

Pricing Example for Class 2660 Boot Or Shoe Mfg Noc

Calculation of Credibility and Balanced Formula Relativity:

- (1) MA Indicated Relativity
- (2) Countrywide Indicated Relativity
- (3) Relativity to Underlying Present Rate

Injury Type	
Indemnity	Medical
0.788	0.484
1.143	1.584
1.088	1.176

Calculation of MA Credibility:

The MA Credibilities are calculated using the formula $Z=(E / F)^{0.4}$ where E are expected losses for that injury type.

- (4) Adopted Relativity
- (5) Industry Group Pure Premium Underlying Present Rate Factor
- (6) Pure Premium Underlying Present Rate = (4) x (5)
- (7) Expected Losses = (6) x [(Total Exposure from Exhibit 1)]
- (8) Full Credibility Standards
- (9) MA Credibility = Minimum of {100%, [(7) / (8)]^{0.4}}

Injury Type	
Indemnity	Medical
1.089	1.175
0.816	0.421
0.889	0.495
208,198	115,900
28,050,000	6,400,000
14%	20%

Calculation of Countrywide Credibility

The Countrywide Credibilities are calculated using the formula $Z=(E / F)^{0.4}$ where E are the countrywide claim counts for that injury type. The countrywide credibility is limited to no more than half of the complement of the credibility assigned to the Massachusetts data.

- (10) Countrywide Lost-Time Claims
- (11) Countrywide Claim Count Standard
- (12) Countrywide Credibility = Minimum of {[(10) / (11)]^{0.4}, 0.5 x [100% - (9)]}
- (13) Credibility to Underlying Present Rate = 100% - (9) - (12)
- (14) Formula Relativity = [(1) x (9)] + [(2) x (12)] + [(3) x (13)]
- (15) Off Balance Factor

Injury Type	
Indemnity	Medical
297	297
1,150	1,000
43%	40%
43%	40%
1.070	1.201
1.004	1.007

- (16) Balanced Formula Relativity

Injury Type		
Indemnity	Medical	Total
1.066	1.192	1.109

Notes:

- (1): Exhibit 1, Page 2.
- (2): Exhibit 2, Page 2.
- (3): Relativity of (6) to Industry Group average, using 5 year Schedule Z exposure as weights.
- (4): Section IX-F, Exhibit 1.
- (5): Section IX-E, Exhibit 1.
- (8), (11): Section IX-D, Exhibit 1, Page 1.
- (10): Exhibit 2, Page 1.
- (15): Factor to balance Formula relativities across industry group to unity using 5 year Schedule Z exposure by injury type.
- (16) = (14) / (15) , Total Balanced Formula Relativity is the weighted average of Partial Relativities using the MA Industry Group Pure Premium as weights.

IX 000293 STIP

Section IX - Classification Pricing
Subsection L - Pricing Example
7/1/2022

Section IX - L
Exhibit 4

Pricing Example for Class 2660 Boot Or Shoe Mfg Noc

Calculation of Proposed Average Rate and Proposed Manual Rate:

(1) Total Balanced Formula Relativity	1.109
(2) Capped Rate Level Factor	1.681
(3) Proposed Average Capped Rate = (1) x (2)	1.86
(4) Offset for Merit Rating	0.997
(5) Offset for ARAP	1.054
(6) Offset for Construction Classification Premium Adjustment Program	1.000
(7) Provision for Insolvency Fund Assessment Recoupment	0.0056
(8) Proposed Manual Rate = $\{(3) / [(4) \times (5) \times (6)]\} \times \{1.000 / [1.000 - (7)]\}$	1.78
(9) Minimum Premium	221
(10) Loss Constant	0
(11) Expected Loss Rate	0.95
(12) D-Ratio	0.19

Notes:

(1): Exhibit 3.

(2): Section IX-H, Exhibit 1. Proposed average uncapped rates are capped by an iterative process using rate levels to determine if the required change is achieved. Class 2660 is in the Manufacturing Industry Group.

(4), (5), (6), (7): Section IX-K, Exhibit 1. Class 2660 is not eligible for the Construction Credit program.

(9) = $\{[(8) \times 35.0] + (10) + \text{Expense Constant}\}$ subject to a maximum of \$500

Where Expense Constant = 159 if $(8) \times 35 + (10) < 200$

= 250 if $(8) \times 35 + (10) \geq 200$ and < 1000 .

= 338 if $(8) \times 35 + (10) \geq 1000$.

(10): No loss constant for Manufacturing classes, \$50 for Construction classes, \$20 for all other classes.

(11) = (3) x Ratio of Experience Rating ELR to Average Rate, from Section X - A, Exhibit 1. Class 2660 is in Hazard Group B.

(12): See text of Section X for an explanation of the calculation of D-Ratios.

Calculation of ELR Factors

Unit Report / Policy Effective Dates (1)	Hazard Group (2)	Permissible Loss Ratio (3)	Exp Rating LER by Hazard Group (4)	Law Factor (5)	Loss Trend / Payroll Trend (6)	Loss Development to 10th Report (7)	Loss Development from 10th Report to Ult (8)	Investment Income Offset (9)	Ratio of Exp Rating ELR to Average Rate (10)
1st Report 7/1/2020 to 6/30/2021	A	0.625	0.010	1.010	0.942	1.443	1.038	1.010	0.431
	B	0.625	0.022	1.010	0.942	1.462	1.046	1.007	0.417
	C	0.625	0.044	1.010	0.942	1.470	1.049	1.007	0.405
	D	0.625	0.071	1.010	0.942	1.468	1.051	1.005	0.394
	E	0.625	0.093	1.010	0.942	1.486	1.054	1.005	0.379
	F	0.625	0.119	1.010	0.942	1.478	1.055	1.001	0.371
	G	0.625	0.131	1.010	0.942	1.486	1.058	1.002	0.363
2nd Report 7/1/2019 to 6/30/2020	A	0.625	0.015	1.022	0.915	1.158	1.038	1.010	0.543
	B	0.625	0.034	1.022	0.915	1.173	1.046	1.007	0.523
	C	0.625	0.068	1.022	0.915	1.179	1.049	1.007	0.500
	D	0.625	0.111	1.022	0.915	1.178	1.051	1.005	0.478
	E	0.625	0.147	1.022	0.915	1.192	1.054	1.005	0.452
	F	0.625	0.188	1.022	0.915	1.186	1.055	1.001	0.434
	G	0.625	0.207	1.022	0.915	1.192	1.058	1.002	0.420
3rd Report 7/1/2018 to 6/30/2019	A	0.625	0.017	1.029	0.888	1.055	1.038	1.010	0.608
	B	0.625	0.039	1.029	0.888	1.069	1.046	1.007	0.584
	C	0.625	0.077	1.029	0.888	1.075	1.049	1.007	0.556
	D	0.625	0.126	1.029	0.888	1.074	1.051	1.005	0.527
	E	0.625	0.165	1.029	0.888	1.087	1.054	1.005	0.496
	F	0.625	0.212	1.029	0.888	1.081	1.055	1.001	0.473
	G	0.625	0.233	1.029	0.888	1.087	1.058	1.002	0.456
1st - 3rd Report Average	A								0.527
	B								0.508
	C								0.487
	D								0.466
	E								0.443
	F								0.426
	G								0.413

Notes:

- (1): Unit Stat Reports used to experience rate a policy taking effect during the prospective effective period.
- (3): Section VI-J, Exhibit 1, (10).
- (4): Exhibit 2, (10) - (12).
- (5): Section IV-A, Exhibit 1.
- (6): Section V-A, Exhibit 1, Page 1. Net Trend applied from USR policy effective period to prospective effective period.
- (7): Exhibit 4, Page 1, (6).
- (8): Exhibit 5, Page 1, (7).
- (9): Exhibit 6, (7).
- (10) = { (3) x [1.0 - (4)] } / [(5) x (6) x (7) x (8) x (9)]

X 000006 STIP

Loss Elimination Ratios for Losses in Excess of Experience Rating Caps
 By Hazard Group

Hazard Group	Adjusted Total Losses	Adjusted Excess Losses	Implied Loss Elimination Ratio = (3) / (2)	Expected Losses	Expected Losses Wgtd LER	Balanced LER Differential	Selected LER Differential
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A	67,984,773	970,222	0.014	83,052,299	0.014	0.13	0.13
B	243,330,772	7,977,694	0.033	274,916,926	0.033	0.29	0.29
C	465,730,533	30,451,642	0.065	549,653,911	0.065	0.58	0.58
D	225,405,005	25,784,945	0.114	260,162,131	0.114	1.02	0.95
E	314,064,645	29,933,372	0.095	407,601,539	0.095	0.85	1.25
F	450,096,579	94,840,896	0.211	544,762,271	0.211	1.88	1.60
G	71,520,983	14,115,343	0.197	94,443,899	0.197	1.76	1.76
Total	1,838,133,292	204,074,113	0.111	2,214,592,976	0.112	1.00	1.00

Loss Elimination Ratio by Hazard Group

Hazard Group	First Report	Second Report	Third Report
(9)	(10)	(11)	(12)
A	0.010	0.015	0.017
B	0.022	0.034	0.039
C	0.044	0.068	0.077
D	0.071	0.111	0.126
E	0.093	0.147	0.165
F	0.119	0.188	0.212
G	0.131	0.207	0.233
Total	0.075	0.117	0.132

Notes:

- (2): Unit Statistical Plan losses, PYs 2016 - 2018. Adjusted by factors from Section X - B, Exhibit 1, Page 2.
- (3): Adjusted losses above per claim limit of \$350,000
- (5): PYs 2016 - 2018, exposure times pure premium underlying present rates.
- (6): Total = (6) Weighted by (5)
- (7) = (6) / [Total for (6)]
- (10) - (12) = [Exhibit 3, (5)] x (8)

Loss Elimination Ratio
 Factor to Reflect the State Accident Limitation of \$350,000

Report (1)	Injury Type (2)	Adjusted Total Losses (3)	Adjusted Excess Losses (4)	Loss Elimination Ratio = (4) / (3) (5)
1st	Fatal	7,534,656	3,492,742	0.464
1st	Permanent Total	12,988,442	9,193,844	0.708
1st	Permanent Partial	181,226,858	21,158,483	0.117
1st	Temporary Total	276,524,962	4,033,564	0.015
1st	Medical Only	29,231,846	0	0.000
1st	Total	507,506,763	37,878,634	0.075
2nd	Fatal	12,235,311	6,466,470	0.529
2nd	Permanent Total	55,640,870	34,607,875	0.622
2nd	Permanent Partial	294,203,840	28,170,321	0.096
2nd	Temporary Total	271,135,325	8,389,559	0.031
2nd	Medical Only	28,303,317	0	0.000
2nd	Total	661,518,665	77,634,225	0.117
3rd	Fatal	13,289,053	6,152,688	0.463
3rd	Permanent Total	70,358,503	34,850,593	0.495
3rd	Permanent Partial	311,762,388	38,246,729	0.123
3rd	Temporary Total	247,011,132	9,311,245	0.038
3rd	Medical Only	26,686,788	0	0.000
3rd	Total	669,107,864	88,561,255	0.132

Notes:

Unit Statistical Plan losses have been adjusted by multiplying by law amendment changes and severity trend factors from Section X - B, Exhibit 1, Page 2.

(4): Adjusted losses above per claim limit of \$350,000

X 000009 STIP

Section X - Experience Rating
 Subsection A - Expected Loss Rates
 7/1/2022

Section X - A
 Exhibit 4
 Page 1

Hazard Group Development Factors to Tenth Report

Development to 10th Report (1)	Hazard Group (2)	Losses at Latest Report (3)	Selected Relativity (4)	Balanced Relativity = (4) / TT(4) (5)	Selected Dev. Factor to 10th Report (6)
1st to 10th	A	18,229,625	0.980	0.980	1.443
1st to 10th	B	65,570,595	0.993	0.993	1.462
1st to 10th	C	129,017,522	0.998	0.998	1.470
1st to 10th	D	59,597,181	0.997	0.997	1.468
1st to 10th	E	76,838,983	1.009	1.009	1.486
1st to 10th	F	100,436,580	1.004	1.004	1.478
1st to 10th	G	23,852,218	1.009	1.009	1.486
1st to 10th	Total	473,542,704	1.000	1.000	1.472
2nd to 10th	A	23,108,335	0.980	0.980	1.158
2nd to 10th	B	78,900,210	0.993	0.992	1.173
2nd to 10th	C	147,761,979	0.998	0.998	1.179
2nd to 10th	D	72,990,276	0.997	0.997	1.178
2nd to 10th	E	105,736,588	1.009	1.009	1.192
2nd to 10th	F	160,063,082	1.004	1.003	1.186
2nd to 10th	G	20,216,735	1.009	1.009	1.192
2nd to 10th	Total	608,777,205	1.000	1.000	1.182
3rd to 10th	A	21,765,745	0.980	0.980	1.055
3rd to 10th	B	81,377,941	0.993	0.992	1.069
3rd to 10th	C	155,089,075	0.998	0.998	1.075
3rd to 10th	D	76,512,910	0.997	0.997	1.074
3rd to 10th	E	105,626,170	1.009	1.009	1.087
3rd to 10th	F	156,285,207	1.004	1.003	1.081
3rd to 10th	G	25,215,477	1.009	1.009	1.087
3rd to 10th	Total	621,872,525	1.000	1.000	1.077

Notes:

(3): See Exhibit 4 Pages 3-5.

(4): See Page 2 for State Classifications for selection. The entry in the "Total" row is the weighted average using incurred losses at latest report in column (3) as the weights.

(6) = (5) x (Total LDF from page (3) - (5))

Hazard Group Reported Loss Development Relativities to Tenth Report

Relativities for State Classification Rates

Hazard Group (1)	Development			Average Relativity (5)	Selected (6)
	3rd Report to 10th Report (2)	2nd Report to 10th Report (3)	1st Report to 10th Report (4)		
A	0.991	0.985	0.963	0.980	0.980
B	0.997	0.993	0.988	0.993	0.993
C	0.999	0.997	0.997	0.998	0.998
D	0.997	1.000	0.994	0.997	0.997
E	1.005	1.006	1.015	1.009	1.009
F	1.001	1.003	1.007	1.004	1.004
G	1.002	1.012	1.013	1.009	1.009

Relativities for F-Class Rates

Hazard Group (7)	Development			Average Relativity (11)	Selected (12)
	3rd Report to 10th Report (8)	2nd Report to 10th Report (9)	1st Report to 10th Report (10)		
C	0.998	0.995	0.992	0.995	0.995
E	1.004	1.004	1.010	1.006	1.006
F	1.000	1.001	1.001	1.001	1.001
G	1.001	1.010	1.007	1.006	1.006

Notes:

(2) - (4): Pages 3 through 5. = [(12) for Hazard Group] / [(12) for Hazard Groups A-G Total]

(5): Average of (2) - (4)

(8) - (10): Pages 3 through 5. = [(12) for Hazard Group] / [(12) for Hazard Groups C,E,F,G Total]

(11): Average of (8) - (10)

X 000010 STIP

Loss Development of Schedule Z to Tenth Report by Hazard Group

Policy Year 2018 at 18 Months
 First Report to Tenth Report

Hazard Group	Indemnity Losses Likely To Develop		Indemnity Losses Not Likely To Develop		Medical Losses Likely To Develop		Medical Losses Not Likely To Develop		Total Losses		
	Reported Losses	Losses Developed to 10th Report	Reported Losses	Losses Developed to 10th Report	Reported Losses	Losses Developed to 10th Report	Reported Losses	Losses Developed to 10th Report	Total Reported Losses =(2)+(4)+(6)+(8)	Total Developed Losses =(3)+(5)+(7)+(9)	Develop. Factor = (11) / (10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A	1,956,179	3,800,001	7,159,100	12,230,138	1,390,960	1,667,925	7,723,386	8,148,150	18,229,625	25,846,214	1.418
B	10,577,008	20,546,504	24,486,468	41,831,080	5,685,306	6,817,352	24,821,813	26,186,941	65,570,595	95,381,877	1.455
C	22,601,283	43,904,415	47,485,659	81,121,394	15,759,329	18,897,292	43,171,251	45,545,546	129,017,522	189,468,646	1.469
D	10,680,436	20,747,419	20,595,338	35,183,728	9,990,891	11,980,255	18,330,516	19,338,642	59,597,181	87,250,044	1.464
E	15,192,654	29,512,687	29,066,332	49,655,020	9,336,130	11,195,120	23,243,867	24,522,213	76,838,983	114,885,040	1.495
F	15,272,052	29,666,923	42,251,977	72,180,514	12,296,311	14,744,725	30,616,240	32,300,045	100,436,580	148,892,207	1.482
G	5,393,177	10,476,586	7,688,473	13,134,484	4,113,792	4,932,921	6,656,776	7,022,880	23,852,218	35,566,871	1.491
A, B, C, D, E, F, G	81,672,789	158,654,535	178,733,347	305,336,358	58,572,719	70,235,589	154,563,849	163,064,416	473,542,704	697,290,899	1.472
C, E, F, G	58,459,166	113,560,611	126,492,441	216,091,412	41,505,562	49,770,058	103,688,134	109,390,683	330,145,303	488,812,764	1.481

Notes:

(2), (4), (6), (8): Unit Statistical Plan Data.

(3), (5), (7), (9): Unit Statistical Plan Data x Loss Development Factors to 10th report from Exhibit 5, Page 5.

X 000011 STIP

Loss Development of Schedule Z to Tenth Report by Hazard Group

Policy Year 2017 at 30 Months
 Second Report to Tenth Report

Hazard Group	Indemnity Losses Likely To Develop		Indemnity Losses Not Likely To Develop		Medical Losses Likely To Develop		Medical Losses Not Likely To Develop		Total Losses		
	Reported Losses	Losses Developed to 10th Report	Reported Losses	Losses Developed to 10th Report	Reported Losses	Losses Developed to 10th Report	Reported Losses	Losses Developed to 10th Report	Total Reported Losses =(2)+(4)+(6)+(8)	Total Developed Losses =(3)+(5)+(7)+(9)	Develop. Factor = (11) / (10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A	3,445,433	4,439,075	9,761,169	12,239,503	1,342,895	1,455,676	8,558,838	8,759,135	23,108,335	26,893,390	1.164
B	15,290,032	19,699,584	32,320,906	40,527,096	6,255,980	6,781,381	25,033,292	25,619,130	78,900,210	92,627,191	1.174
C	33,077,353	42,616,659	57,723,704	72,379,596	14,431,872	15,643,915	42,529,050	43,524,330	147,761,979	174,164,500	1.179
D	14,897,784	19,194,214	30,501,818	38,246,147	9,002,963	9,759,066	18,587,711	19,022,707	72,990,276	86,222,134	1.181
E	26,565,112	34,226,328	41,786,232	52,395,643	13,578,618	14,719,002	23,806,626	24,363,757	105,736,588	125,704,729	1.189
F	38,516,765	49,624,764	58,859,820	73,804,169	34,426,786	37,318,077	28,259,711	28,921,055	160,063,082	189,668,065	1.185
G	4,577,963	5,898,220	9,065,399	11,367,079	3,038,541	3,293,729	3,534,832	3,617,555	20,216,735	24,176,583	1.196
A, B, C, D, E, F, G	136,370,442	175,698,843	240,019,048	300,959,234	82,077,655	88,970,846	150,310,060	153,827,670	608,777,205	719,456,592	1.182
C, E, F, G	102,737,193	132,365,971	167,435,155	209,946,487	65,475,817	70,974,723	98,130,219	100,426,698	433,778,384	513,713,878	1.184

Notes:

(2), (4), (6), (8): Unit Statistical Plan Data.

(3), (5), (7), (9): Unit Statistical Plan Data x Loss Development Factors to 10th report from Exhibit 5, Page 5.

X 000012 STIP

Loss Development of Schedule Z to Tenth Report by Hazard Group

Policy Year 2016 at 42 Months
 Third Report to Tenth Report

Hazard Group	Indemnity Losses Likely To Develop		Indemnity Losses Not Likely To Develop		Medical Losses Likely To Develop		Medical Losses Not Likely To Develop		Total Losses		
	Reported Losses	Losses Developed to 10th Report	Reported Losses	Losses Developed to 10th Report	Reported Losses	Losses Developed to 10th Report	Reported Losses	Losses Developed to 10th Report	Total Reported Losses =(2)+(4)+(6)+(8)	Total Developed Losses =(3)+(5)+(7)+(9)	Develop. Factor = (11) / (10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A	3,749,389	4,177,735	8,535,987	9,451,017	1,192,637	1,232,256	8,287,732	8,389,716	21,765,745	23,250,723	1.068
B	18,080,128	20,145,676	31,422,228	34,790,588	8,781,585	9,073,305	23,094,000	23,378,182	81,377,941	87,387,751	1.074
C	38,407,255	42,795,058	60,041,217	66,477,439	15,576,608	16,094,056	41,063,995	41,569,305	155,089,075	166,935,858	1.076
D	18,194,117	20,272,688	28,224,193	31,249,734	11,275,968	11,650,551	18,818,632	19,050,203	76,512,910	82,223,176	1.075
E	31,571,953	35,178,863	42,285,262	46,818,104	10,352,991	10,696,913	21,415,964	21,679,497	105,626,170	114,373,376	1.083
F	42,427,342	47,274,416	57,145,184	63,270,961	31,626,141	32,676,747	25,086,540	25,395,241	156,285,207	168,617,364	1.079
G	7,016,380	7,817,960	9,168,514	10,151,349	5,396,206	5,575,466	3,634,377	3,679,100	25,215,477	27,223,874	1.080
A, B, C, D, E, F, G	159,446,564	177,662,394	236,822,585	262,209,191	84,202,136	86,999,293	141,401,240	143,141,244	621,872,525	670,012,122	1.077
C, E, F, G	119,422,930	133,066,296	168,640,177	186,717,852	62,951,946	65,043,181	91,200,876	92,323,143	442,215,929	477,150,472	1.079

Notes:

(2), (4), (6), (8): Unit Statistical Plan Data.

(3), (5), (7), (9): Unit Statistical Plan Data x Loss Development Factors to 10th report from Exhibit 5, Page 5.

X 000013 STIP

Loss Development Factors From 10th to Ultimate

Hazard Group	Losses Developed to 10th Report				Indicated Development Factor to Ultimate	Balanced Selected Factor
	Indemnity		Medical			
	Likely to Develop	Not Likely to Develop	Likely to Develop	Not Likely to Develop		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
A	12,416,810	33,920,658	4,355,857	25,297,001	1.038	1.038
B	60,391,764	117,148,765	22,672,038	75,184,253	1.046	1.046
C	129,316,132	219,978,428	50,635,263	130,639,181	1.049	1.049
D	60,214,321	104,679,609	33,389,871	57,411,552	1.051	1.051
E	98,917,877	148,868,767	36,611,034	70,565,467	1.054	1.054
F	126,566,103	209,255,643	84,739,550	86,616,341	1.055	1.055
G	24,192,765	34,652,912	13,802,116	14,319,535	1.058	1.058
TOTAL	512,015,772	868,504,782	246,205,728	460,033,331	1.051	1.051

Notes:

(2) - (5): Exhibit 4, Pages 3-5.

(6): Weighted Average of Development Factors from Page 2.

(Likely to Dev. Ind. 1.127, Not Likely to Dev. Ind.1.019, Likely to Dev. Med. 1.084, Not Likely to Dev. Med. 1.011)

(7): Factors are balanced to the total development factor from Page 2.

X 000014 STIP

X 000015 STIP

Section X - Experience Rating
 Subsection A - Expected Loss Rates
 7/1/2022

Section X - A
 Exhibit 5
 Page 2

Calculation of Development Category Development Factors from 10th to Ultimate

Policy Year (1)	Unit Stat Plan Losses Developed to 10th Rept. (2)	Aggregate Financial Develop. Factor 10th to Ult. (3)	Differential in Loss Development (4)	Unit Stat Plan Losses Adjusted to Financial Agg. Ult. Loss Level = (2) x (3) x (4) (5)	Development Factor 10th to Ult. = (5) / (2) (6)
Indemnity					
2018	463,990,893	1.036	1.022	491,246,797	1.059
2017	476,658,076	1.036	1.022	504,658,080	1.059
2016	439,871,585	1.036	1.022	465,710,665	1.059
Total	1,380,520,555			1,461,615,542	1.059
Medical					
2018	233,300,006	1.037	1.000	241,883,891	1.037
2017	242,798,516	1.037	1.000	251,731,883	1.037
2016	230,140,537	1.037	1.000	238,608,175	1.037
Total	706,239,059			732,223,950	1.037
Ind.+ Med.					
2018	697,290,899			733,130,688	1.051
2017	719,456,592			756,389,964	1.051
2016	670,012,122			704,318,840	1.051
Total	2,086,759,613			2,193,839,492	1.051

(7)	Unit Stat Plan Indem. Losses Developed to 10th Report (8)	Development Factor 10th to Ult. (9)	(10)	Unit Stat Plan Med. Losses Developed to 10th Report (11)	Development Factor 10th to Ult. (12)
a. Likely to Develop	512,015,772	1.127	a. Likely to Develop	246,205,728	1.084
b. Not Likely to Develop	868,504,782	1.019	b. Not Likely to Develop	460,033,331	1.011
c. Total	1,380,520,555	1.059	c. Total	706,239,059	1.037

Notes:

(2): Page 4.

(3): Page 3.

(4): Page 8.

(8),(11): Page 4.

(9), (12): Likely to Develop Factor = 1 + (Total Losses/Likely to Develop Losses) x ("Appropriate Column 6 Factor" - 1) x 0.8

(9), (12): Not Likely to Develop Factor = 1 + (Total Losses/Not Likely to Develop Losses) x ("Appropriate Column 6 Factor" - 1) x (1 - 0.8)

X 000016 STIP

Section X - Experience Rating
Subsection A - Expected Loss Rates
7/1/2022

Section X - A
Exhibit 5
Page 3

Calculation of Development Factor from USR at 10th report to Aggregate Financial Ultimate Level

	<u>Indemnity</u>	<u>Medical</u>
(1) Development Factor based on Paid + Case 132 Months to Ult.	1.028	1.011
(2) Est. Ultimate Losses (Prior to Escalation Adj.) based on Paid + Case Develop. Method		
(a) PY2017	470,808,643	233,314,817
(b) PY2018	458,033,395	229,554,165
(c) Average	464,421,019	231,434,491
(3) Est. Ultimate Losses (Prior to Escalation Adj.) based on Paid Develop. Method		
(a) PY2017	463,878,304	240,341,463
(b) PY2018	478,288,342	246,528,033
(c) Average	471,083,323	243,434,748
(4) Ratio of Est. Ultimate Losses based on average of Paid and Paid + Case indications to Est. Ultimate Losses based on Paid + Case = { [(2c) + (3c)] / 2.000 } / (2c)	1.007	1.026
(5) Development Factor to bring Unit Statistical Plan Data 10th report to Aggregate Financial Ultimate Level = (1) x (4)	1.036	1.037

Notes:

- (1): 132 Months to 252 Months LDF from Section II-B, Exhibit 1.
x 252 Months to Ult LDF from Section II-C, Exhibit 2, Page 1.
(2),(3): Section II-A, Exhibit 1.

Losses Developed to 10th Report

Policy Year	Loss Development Category	Paid + Case			
		Reported Schedule Z Losses		Losses Developed to 10th Report	
		Indemnity	Medical	Indemnity	Medical
(1)	(2)	(3)	(4)	(5)	(6)
2018	Likely	81,672,789	58,572,719	158,654,535	70,235,589
2018	Not Likely	178,733,347	154,563,849	305,336,358	163,064,416
2018	TOTALS	260,406,136	213,136,568	463,990,893	233,300,006
2017	Likely	136,370,442	82,077,655	175,698,843	88,970,846
2017	Not Likely	240,019,048	150,310,060	300,959,234	153,827,670
2017	TOTALS	376,389,490	232,387,715	476,658,076	242,798,516
2016	Likely	159,446,564	84,202,136	177,662,394	86,999,293
2016	Not Likely	236,822,585	141,401,240	262,209,191	143,141,244
2016	TOTALS	396,269,149	225,603,376	439,871,585	230,140,537

Notes:

(3),(4): Sum of Unit Statistical Plan Data.

(5),(6): Unit Statistical Plan Data x Loss Development Factors to 10th report from Exhibit 5,
 Page 5.

X 000018 STIP

Section X - Experience Rating
 Subsection A - Expected Loss Rates
 7/1/2022

Section X - A
 Exhibit 5
 Page 5

Summary of Development Factors Industry

		Likely to Develop								
		Development Factors From:								
		18-30	30-42	42-54	54-66	66-78	78-90	90-102	102-114	114-126
		(1) Indemnity Paid + Case Losses								
5yr Weighted Average		1.508	1.156	1.067	1.023	1.009	1.002	1.000	1.006	1.003
Cumulative		1.943	1.288	1.114	1.044	1.021	1.011	1.009	1.009	1.003
		(2) Medical Paid + Case Losses								
5yr Weighted Average		1.106	1.049	1.010	1.002	0.994	1.006	0.995	0.999	1.028
Cumulative		1.199	1.084	1.033	1.023	1.021	1.028	1.022	1.027	1.028
		Not-Likely to Develop								
		Development Factors From:								
		18-30	30-42	42-54	54-66	66-78	78-90	90-102	102-114	114-126
		(3) Indemnity Paid + Case Losses								
5yr Weighted Average		1.362	1.132	1.061	1.026	1.013	1.000	1.003	1.000	1.001
Cumulative		1.708	1.254	1.107	1.043	1.017	1.004	1.004	1.001	1.001
		(4) Medical Paid + Case Losses								
5yr Weighted Average		1.031	1.011	1.009	1.002	1.000	1.000	1.001	1.000	1.000
Cumulative		1.055	1.023	1.012	1.003	1.001	1.001	1.000	0.999	1.000

Notes:
 (1),(2): Page 6.
 (3),(4): Page 7.

X 000019 STIP

Section X - Experience Rating
 Subsection A - Expected Loss Rates
 7/1/2022

Section X - A
 Exhibit 5
 Page 6

Calculation of Likely to Develop Development Factors Industry

Likely to Develop						
Policy Year	Unlimited Indemnity Paid + Case Losses			Unlimited Medical Paid + Case Losses		
	Evaluated at month		Link Ratio	Evaluated at month		Link Ratio
	18	30		18	30	
2013	75,085,375	108,661,340	1.447	55,878,171	58,042,191	1.039
2014	90,023,062	132,399,487	1.471	86,197,739	87,485,628	1.015
2015	81,691,092	123,108,598	1.507	73,153,224	78,506,698	1.073
2016	79,129,954	120,807,014	1.527	57,536,352	64,905,850	1.128
2017	77,362,318	123,082,734	1.591	59,105,047	78,179,392	1.323
Weighted Average			1.508			1.106
	30	42		30	42	
2012	115,645,789	133,211,420	1.152	80,121,961	81,207,774	1.014
2013	116,427,911	132,126,317	1.135	60,551,723	62,880,097	1.038
2014	141,402,597	166,301,789	1.176	91,703,285	95,922,252	1.046
2015	129,759,902	150,385,056	1.159	80,486,836	85,256,821	1.059
2016	129,015,282	149,044,072	1.155	72,268,200	78,787,395	1.090
Weighted Average			1.156			1.049
	42	54		42	54	
2011	134,109,135	147,184,349	1.097	79,496,022	81,865,452	1.030
2012	140,879,961	150,341,403	1.067	84,244,178	87,633,830	1.040
2013	138,831,558	147,898,346	1.065	64,745,900	64,266,294	0.993
2014	173,878,981	183,230,453	1.054	98,540,661	98,382,261	0.998
2015	158,503,009	167,734,740	1.058	88,157,886	87,205,926	0.989
Weighted Average			1.067			1.010
	54	66		54	66	
2010	138,887,438	143,265,084	1.032	71,827,516	72,099,216	1.004
2011	153,883,029	157,014,689	1.020	84,851,989	84,313,856	0.994
2012	159,136,429	163,097,441	1.025	90,049,359	88,818,185	0.986
2013	155,975,467	158,724,906	1.018	66,369,694	67,681,042	1.020
2014	192,688,404	196,819,987	1.021	100,871,265	101,735,082	1.009
Weighted Average			1.023			1.002
	66	78		66	78	
2009	144,311,051	145,538,317	1.009	67,498,561	66,361,195	0.983
2010	146,293,312	145,897,684	0.997	73,305,701	74,902,254	1.022
2011	160,596,528	163,902,541	1.021	85,898,204	86,818,288	1.011
2012	170,435,890	173,236,811	1.016	90,838,418	86,706,351	0.955
2013	162,069,568	162,403,159	1.002	69,276,432	69,542,045	1.004
Weighted Average			1.009			0.994
	78	90		78	90	
2008	148,815,195	148,382,645	0.997	61,766,844	60,186,275	0.974
2009	146,821,809	146,570,917	0.998	66,718,336	66,921,102	1.003
2010	148,210,917	148,736,251	1.004	75,547,228	77,945,948	1.032
2011	165,489,820	165,754,772	1.002	87,105,586	86,203,911	0.990
2012	174,510,658	176,217,730	1.010	87,003,805	88,999,252	1.023
Weighted Average			1.002			1.006
	90	102		90	102	
2007	168,573,320	167,495,002	0.994	81,512,166	80,771,074	0.991
2008	149,073,543	149,080,438	1.000	60,583,065	59,919,449	0.989
2009	150,055,803	149,762,061	0.998	67,681,748	68,053,950	1.005
2010	148,495,064	149,873,824	1.009	77,545,953	77,608,539	1.001
2011	167,373,195	167,449,219	1.000	86,761,485	85,966,358	0.991
Weighted Average			1.000			0.995
	102	114		102	114	
2006	179,190,854	181,060,586	1.010	96,843,838	98,818,269	1.020
2007	167,832,664	168,286,340	1.003	80,791,981	80,638,159	0.998
2008	148,613,968	149,257,000	1.004	59,604,481	59,447,227	0.997
2009	149,665,102	150,357,176	1.005	67,940,750	67,213,895	0.989
2010	150,087,823	150,925,089	1.006	77,943,008	76,577,876	0.982
Weighted Average			1.006			0.999
	114	126		114	126	
2005	180,497,859	180,793,941	1.002	89,093,107	89,473,888	1.004
2006	180,330,402	180,524,178	1.001	98,586,453	97,044,058	0.984
2007	168,286,340	169,602,704	1.008	80,638,159	94,835,773	1.176
2008	149,517,000	150,491,753	1.007	59,472,227	59,217,046	0.996
2009	150,662,820	150,475,520	0.999	67,489,412	65,841,599	0.976
Weighted Average			1.003			1.028

Note:
 Unit Statistical Plan Data, Excluding Large Deductible Policies.

X 000020 STIP

Section X - Experience Rating
 Subsection A - Expected Loss Rates
 7/1/2022

Section X - A
 Exhibit 5
 Page 7

Calculation of Not-Likely to Develop Development Factors Industry

Policy Year	Not-Likely to Develop					
	Unlimited Indemnity Paid + Case Losses			Unlimited Medical Paid + Case Losses		
	Evaluated at month	Link Ratio		Evaluated at month	Link Ratio	
	18	30		18	30	
2013	151,893,831	197,119,159	1.298	135,797,902	138,584,820	1.021
2014	156,117,962	211,413,562	1.354	140,235,236	144,067,755	1.027
2015	167,781,433	223,719,198	1.333	140,468,808	144,197,592	1.027
2016	161,538,066	224,542,821	1.390	142,881,583	150,521,185	1.053
2017	177,470,018	253,306,756	1.427	150,286,998	154,208,323	1.026
Weighted Average			1.362			1.031
	30	42		30	42	
2012	180,539,073	204,885,106	1.135	130,876,561	133,226,468	1.018
2013	189,352,588	213,569,478	1.128	136,075,288	136,329,252	1.002
2014	202,410,452	230,143,679	1.137	139,850,098	140,993,317	1.008
2015	217,067,894	243,134,347	1.120	142,217,454	142,400,897	1.001
2016	216,334,553	247,225,077	1.143	143,158,835	146,815,981	1.026
Weighted Average			1.132			1.011
	42	54		42	54	
2011	202,730,203	213,513,934	1.053	131,551,649	132,811,796	1.010
2012	197,216,565	209,394,773	1.062	130,190,064	130,815,533	1.005
2013	206,864,237	219,732,459	1.062	134,463,449	136,103,188	1.012
2014	222,566,487	235,418,420	1.058	138,374,908	139,749,314	1.010
2015	235,016,394	251,407,709	1.070	139,499,832	140,768,178	1.009
Weighted Average			1.061			1.009
	54	66		54	66	
2010	194,625,626	200,250,656	1.029	126,048,121	126,999,564	1.008
2011	206,815,254	212,291,911	1.026	129,825,259	129,717,029	0.999
2012	200,599,747	206,270,421	1.028	128,400,004	126,672,711	0.987
2013	211,655,338	218,218,291	1.031	133,999,788	135,305,033	1.010
2014	225,960,469	229,471,658	1.016	137,260,310	138,335,920	1.008
Weighted Average			1.026			1.002
	66	78		66	78	
2009	180,040,985	183,626,325	1.020	120,158,627	120,719,906	1.005
2010	197,176,378	199,815,831	1.013	125,734,546	125,541,421	0.998
2011	208,710,072	209,731,799	1.005	128,132,681	127,593,282	0.996
2012	198,931,972	202,376,015	1.017	124,652,478	124,623,582	1.000
2013	214,873,629	216,968,566	1.010	133,709,643	134,089,868	1.003
Weighted Average			1.013			1.000
	78	90		78	90	
2008	186,985,748	186,856,470	0.999	116,549,359	116,820,041	1.002
2009	182,342,833	183,211,379	1.005	120,362,765	120,017,965	0.997
2010	197,502,598	196,982,144	0.997	124,896,447	125,339,594	1.004
2011	208,144,520	208,739,206	1.003	127,305,984	127,338,863	1.000
2012	201,102,168	200,310,015	0.996	124,326,128	124,180,074	0.999
Weighted Average			1.000			1.000
	90	102		90	102	
2007	179,281,974	179,969,621	1.004	123,480,783	123,564,406	1.001
2008	186,165,572	186,474,061	1.002	116,423,251	115,988,622	0.996
2009	179,726,493	179,929,108	1.001	119,257,319	119,432,521	1.001
2010	197,223,331	198,160,537	1.005	125,739,589	125,670,248	0.999
2011	207,120,783	207,744,834	1.003	126,781,289	127,492,778	1.006
Weighted Average			1.003			1.001
	102	114		102	114	
2006	167,236,771	167,322,886	1.001	111,899,825	112,370,808	1.004
2007	179,631,959	179,728,191	1.001	123,543,499	123,029,750	0.996
2008	186,940,531	187,245,197	1.002	116,303,590	116,528,878	1.002
2009	180,026,067	179,809,922	0.999	119,545,721	119,514,576	1.000
2010	197,946,538	197,621,320	0.998	125,335,779	124,999,152	0.997
Weighted Average			1.000			1.000
	114	126		114	126	
2005	176,662,285	176,795,303	1.001	114,588,846	114,565,630	1.000
2006	168,053,070	168,914,320	1.005	112,602,624	112,666,572	1.001
2007	179,728,191	180,208,721	1.003	123,029,750	122,785,675	0.998
2008	186,985,197	187,091,798	1.001	116,503,878	116,471,507	1.000
2009	179,504,278	179,191,973	0.998	119,239,059	119,291,728	1.000
Weighted Average			1.001			1.000

Note:
 Unit Statistical Plan Data, Excluding Large Deductible Policies.

Escalation Adjustment for Indemnity Losses Only

Loss Development Method (1)	Policy Year (2)	Differential in Loss Development (3)
Paid Plus Case	2018	1.007
	2017	1.007
	2016	1.007
Paid	2018	1.037
	2017	1.037
	2016	1.037
Average of Paid and Paid Plus Case	2018	1.022
	2017	1.022
	2016	1.022

Notes:
 (3): Section II-D, Exhibit 1, Page 1 and Exhibit 2, Page 1.

X 000021 STIP

X 00022 STIP

Section X - Experience Rating
 Subsection A - Expected Loss Rates
 7/1/2022

Section X - A
 Exhibit 6

Investment Income Offset

Hazard Code (1)	Injury Type (2)	Indemnity		Medical		Total Investment Income Offset (7)
		Developed Losses at Ultimate (3)	Investment Income Offset (4)	Developed Losses at Ultimate (5)	Investment Income Offset (6)	
A	Fatal	50,821	0.954	0	1.000	
A	Permanent Total	1,148,381	0.940	167,120	0.942	
A	Permanent Partial	21,924,977	1.010	8,972,414	1.012	
A	Temporary Total	25,434,717	1.012	14,480,422	1.014	
A	Medical Only	0		6,677,061	1.000	
A	TOTAL	48,558,896	1.010	30,297,017	1.010	1.010
B	Fatal	5,408,597	0.954	584,130	1.000	
B	Permanent Total	6,242,046	0.940	3,944,681	0.942	
B	Permanent Partial	77,893,310	1.010	24,437,072	1.012	
B	Temporary Total	97,892,156	1.012	52,954,483	1.014	
B	Medical Only	0		18,667,403	1.000	
B	TOTAL	187,436,109	1.007	100,587,769	1.008	1.007
C	Fatal	4,093,587	0.954	307,019	1.000	
C	Permanent Total	18,342,266	0.940	9,902,369	0.942	
C	Permanent Partial	179,937,951	1.010	61,164,769	1.012	
C	Temporary Total	167,523,495	1.012	87,226,106	1.014	
C	Medical Only	0		28,364,574	1.000	
C	TOTAL	369,897,299	1.007	186,964,837	1.007	1.007
D	Fatal	5,153,269	0.954	615,278	1.000	
D	Permanent Total	9,148,643	0.940	9,892,730	0.942	
D	Permanent Partial	78,758,963	1.010	32,744,765	1.012	
D	Temporary Total	81,469,187	1.012	42,410,876	1.014	
D	Medical Only	0		8,574,052	1.000	
D	TOTAL	174,530,061	1.006	94,237,700	1.004	1.005
E	Fatal	5,179,327	0.954	302,496	1.000	
E	Permanent Total	22,855,948	0.940	8,639,835	0.942	
E	Permanent Partial	103,699,116	1.010	34,557,612	1.012	
E	Temporary Total	131,443,330	1.012	56,382,091	1.014	
E	Medical Only	0		11,146,014	1.000	
E	TOTAL	263,177,721	1.004	111,028,048	1.006	1.005
F	Fatal	14,134,719	0.954	972,853	1.000	
F	Permanent Total	31,560,267	0.940	33,805,611	0.942	
F	Permanent Partial	184,275,921	1.010	79,228,868	1.012	
F	Temporary Total	125,900,590	1.012	57,504,574	1.014	
F	Medical Only	0		7,914,886	1.000	
F	TOTAL	355,871,498	1.002	179,426,793	0.999	1.001
G	Fatal	2,882,795	0.954	121,917	1.000	
G	Permanent Total	5,273,298	0.940	4,956,980	0.942	
G	Permanent Partial	35,583,370	1.010	14,359,013	1.012	
G	Temporary Total	18,837,102	1.012	9,149,750	1.014	
G	Medical Only	0		850,883	1.000	
G	TOTAL	62,576,564	1.002	29,438,543	1.000	1.002

Notes:

(3),(5): From Exhibit 4, Pages 3-5, Developed to Ultimate.

(4),(6): Section IX-B, Exhibit 4.

(7) = Average of (4) and (6) weighted by (3) and (5).

Calculation of Statewide Partial "D" Ratios by Benefit Type

Benefit Type (1)	Adjusted Primary Losses (2)	Adjusted Total Losses (3)	Partial D-Ratio = (2) / (3) (4)
Indemnity	133,120,322	1,026,820,558	0.130
Medical	175,088,820	607,238,621	0.288

Notes:

Data at the individual claim level for PYs 2016 - 2018 have been adjusted by the factors shown on Page 2. The Adjusted Primary Losses are capped at \$7,500 per claim. The Adjusted Total Losses are capped at \$350,000 per claim. If losses are capped, the proportions for capped indemnity and capped medical losses are consistent with the proportions for unlimited indemnity and unlimited medical.

Severity Trend and State Benefit Level Adjustment Factors

Policy Year	Indemnity By Injury Type				Medical by Injury Type				
	Fatal	Permanent Total	Permanent Partial	Temporary Total	Fatal	Permanent Total	Permanent Partial	Temporary Total	Medical Only
(1) Severity Trend Factors									
2016	1.055	1.055	1.055	1.055	1.069	1.069	1.069	1.069	1.068
2017	1.068	1.068	1.068	1.068	1.078	1.078	1.078	1.078	1.065
2018	1.051	1.051	1.051	1.051	1.059	1.059	1.059	1.059	1.071
(2) State Benefit Level Adjustment Factors									
2016	1.017	1.020	1.031	1.014	1.000	1.000	1.000	1.000	1.000
2017	1.018	1.021	1.032	1.014	1.000	1.000	1.000	1.000	1.000
2018	1.023	1.028	1.044	1.019	1.000	1.000	1.000	1.000	1.000
(3) Combined Severity Trend and State Benefit Level Adjustment Factors									
2016	1.073	1.077	1.088	1.070	1.069	1.069	1.069	1.069	1.068
2017	1.086	1.090	1.102	1.083	1.078	1.078	1.078	1.078	1.065
2018	1.075	1.080	1.097	1.071	1.059	1.059	1.059	1.059	1.071

Notes:

(1): Exhibit 2.

(2): Section IV-A, Exhibit 1. PY 2016 to CPY 2018_07. PY 2017 to CPY 2019_07. PY 2018 to CPY 2020_07.

(3) = (1) x (2)

X 000024 STIP

Severity Trend Factors

(1)			(2) Historical Values		
Schedule Z Policy Year			Indemnity Severity	Lost Time Medical Severity	Medical Only Severity
01/01/2016	-	12/31/2016	30,384	11,575	902
01/01/2017	-	12/31/2017	30,639	11,745	929
01/01/2018	-	12/31/2018	31,748	12,237	950
(3) Selected Annual Trend			2.0%	2.3%	2.8%
(4) Trend Period Length [Years between (1) and (5)]				2.497	

(5)			(6) Trend Factors from Sched Z PYs to Pol Eff Periods		
Policy Effective Period			Indemnity Severity	Lost Time Medical Severity	Medical Only Severity
07/01/2018	-	06/30/2019	1.055	1.069	1.068
07/01/2019	-	06/30/2020	1.068	1.078	1.065
07/01/2020	-	06/30/2021	1.051	1.059	1.071

Notes:

(2): Section V-A Exhibit 2, Pages 1, 2, and 3.

(3): Section V-A Exhibit 1, Page 1.

(6): For 7/1/2018 effective period, 1/1/2018 divided by 1/1/2016, then (3) for .5 years.

For 7/1/2019 effective period, 1/1/2018 divided by 1/1/2017, then (3) for 1.5 years.

For 7/1/2020 effective period, (3) for (4).

Calculation of ELR Factors

Unit Report / Policy Effective Dates (1)	Hazard Group (2)	Permissible Loss and LBA Ratio (3)	Weighted LBA (4)	Exp Rating LER by Hazard Group (5)	Law Factor (6)	Loss Trend / Payroll Trend (7)	Loss Development to Ultimate Report (8)	Investment Income Offset (9)	Ratio of Exp Rating ELR to Average Rate (10)
1st Report 7/1/2020 to 6/30/2021	C	0.625	0.063	0.044	1.004	0.942	1.680	1.007	0.351
	E	0.625	0.063	0.093	1.004	0.942	1.688	1.005	0.333
	F	0.625	0.063	0.119	1.004	0.942	1.684	1.001	0.325
	G	0.625	0.063	0.131	1.004	0.942	1.688	1.002	0.320
2nd Report 7/1/2019 to 6/30/2020	C	0.625	0.063	0.068	1.006	0.915	1.274	1.007	0.464
	E	0.625	0.063	0.147	1.006	0.915	1.277	1.005	0.425
	F	0.625	0.063	0.188	1.006	0.915	1.275	1.001	0.407
	G	0.625	0.063	0.207	1.006	0.915	1.277	1.002	0.397
3rd Report 7/1/2018 to 6/30/2019	C	0.625	0.063	0.077	1.008	0.888	1.153	1.007	0.522
	E	0.625	0.063	0.165	1.008	0.888	1.155	1.005	0.473
	F	0.625	0.063	0.212	1.008	0.888	1.154	1.001	0.448
	G	0.625	0.063	0.233	1.008	0.888	1.155	1.002	0.436
1st - 3rd Report Average	C								0.446
	E								0.410
	F								0.393
	G								0.384

Notes:

(1): Unit Stat Reports used to experience rate a policy taking effect during the prospective effective period.

(3), (5), (7), (9): Section X-A, Exhibit 1.

(4): Loss Based Assessment weighted by federal indemnity losses as a % of losses.

(6): State Factors from Section IV-A, Exhibit 1 and Federal Factors from Section IV-F, Exhibit 1 weighted by Adjusted Reported Losses from Section VIII-C, Exhibit 1, Pages 2 and 4. Federal losses are 100% of total reported indemnity losses and 100% of total reported medical losses.

(8): Exhibit 2.

(10) = $[(3) / \{ 1.0 + (4) \}] \times [1.0 - (5)] / [(6) \times (7) \times (8) \times (9)]$

X 000026 STIP

X 000027 STIP

Section X - Experience Rating
 Subsection C - Expected Loss Rates for F-Class
 7/1/2022

Section X - C
 Exhibit 2

Hazard Group Development Factors to Ultimate

Development to Ultimate (1)	Hazard Group (2)	Losses at Latest Report (3)	Selected Relativity (4)	Balanced Relativity = (4) / TT(4) (5)	Selected Dev. Factor to Ultimate (6)
1st	C	129,017,522	0.995	0.995	1.680
1st	E	76,838,983	1.006	1.006	1.688
1st	F	100,436,580	1.001	1.001	1.684
1st	G	23,852,218	1.006	1.006	1.688
1st	Total	330,145,303	1.000	1.000	1.684
2nd	C	147,761,979	0.995	0.995	1.274
2nd	E	105,736,588	1.006	1.006	1.277
2nd	F	160,063,082	1.001	1.000	1.275
2nd	G	20,216,735	1.006	1.006	1.277
2nd	Total	433,778,384	1.000	1.000	1.275
3rd	C	155,089,075	0.995	0.995	1.153
3rd	E	105,626,170	1.006	1.006	1.155
3rd	F	156,285,207	1.001	1.000	1.154
3rd	G	25,215,477	1.006	1.006	1.155
3rd	Total	442,215,929	1.000	1.000	1.154

Notes:

(3): See Section X-A, Exhibit 4, Page 1.

(4): See Section X-A, Exhibit 4, Page 2 for F-Classes for selection. The entry in the "Total" row is the weighted average using incurred losses at latest report in column (3) as the weights.

(6) = 1.00 + (5) x (Total LDF from Exhibit 3 - 1.00)

Loss Development Factors For Use in Calculation of Reciprocals

Report (1)	Benefit Type (2)	Injury Type (3)	State Loss Development Factor to Ultimate (4)	Federal Loss Development Factor to Ultimate (5)	Average Loss Development Factor to Ultimate (6)	Distribution of Ultimate Losses (7)	Adjusted Distribution = (7) / (6) (8)	LDF to Ultimate to Derive ELR = TT(7) / TT(8) (9)
1st	Indemnity	Likely to Develop	2.189	2.325	2.325	30.9%	13.3%	
1st	Indemnity	Not Likely to Develop	1.740	1.810	1.810	36.2%	20.0%	
1st	Medical	Likely to Develop	1.300	1.527	1.527	12.8%	8.4%	
1st	Medical	Not Likely to Develop	1.067	1.135	1.135	20.1%	17.7%	
1st	Total					100.0%	59.4%	1.684
2nd	Indemnity	Likely to Develop	1.452	1.481	1.481	30.9%	20.8%	
2nd	Indemnity	Not Likely to Develop	1.277	1.254	1.254	36.2%	28.9%	
2nd	Medical	Likely to Develop	1.176	1.316	1.316	12.8%	9.7%	
2nd	Medical	Not Likely to Develop	1.035	1.060	1.060	20.1%	19.0%	
2nd	Total					100.0%	78.4%	1.275
3rd	Indemnity	Likely to Develop	1.255	1.281	1.281	30.9%	24.1%	
3rd	Indemnity	Not Likely to Develop	1.128	1.109	1.109	36.2%	32.6%	
3rd	Medical	Likely to Develop	1.120	1.250	1.250	12.8%	10.3%	
3rd	Medical	Not Likely to Develop	1.024	1.024	1.024	20.1%	19.6%	
3rd	Total					100.0%	86.6%	1.154

Notes:

(4): Section X-A, Exhibit 5, Page 5 and Section X-A, Exhibit 5, Page 2.

(5): Section VIII-E, Exhibit 1, Page 1.

(6): Average of (4) and (5) weighted by % of Total Reported Losses from Section VIII-C, Exhibit 1 Page 2 and Page 4.

Federal losses are 100.0% of total reported indemnity losses and 100.0% of total reported medical losses.

(7): Section IV-E, Exhibit 2, Page 2.

X 000028 STIP

X 000029 STIP

Section X - Experience Rating
 Subsection D - State Reference Point
 7/1/2022

Section X - D
 Exhibit 1

State Reference Point

Report (1)	Policy Year (2)	Reported Claims (3)	Reported Losses (4)	Average Claim Cost = (4) / (3) (5)
1st	2018	42,577	473,542,704	11,122
2nd	2017	43,867	608,777,205	13,878
3rd	2016	42,354	621,872,525	14,683
Total		128,798	1,704,192,434	13,232
(6)	Indicated State Reference Point = [Total (5)] x 250			3,307,878
(7)	Average Annual Severity Trend			2.12%
(8)	Length of Trending Period in Years			2.497
(9)	Trend Factor = [1.000 + (7)] ^ (8)			1.054
(10)	Trended State Reference Point = (6) x (9)			3,486,126
(11)	Selected State Reference Point			3,500,000
(12)	G = (11) / 250,000			14.00
(13)	State Per Claim Accident Limitation = (11) x 0.1			350,000
(14)	Multiple State Claim Accident Limitation = (13) x 2			700,000

Notes:

(3), (4): Unit Statistical Plan Data, Excluding Large Deductible Policies.

(7): Credibility Weighted Severity Trends from Section V-A, Exhibit 1, Page 1 weighted by Injury Type Weights at Ultimate from Section IV-E, Exhibit 2, Pages 1 and 2.

(8): Section X-B, Exhibit 2.

(11): Current State Reference Point is 3,000,000.

X 000030 STIP

EXPERIENCE RATING PLAN MANUAL

MASSACHUSETTS

Proposed Effective July 1, 2022

TABLE OF EXPECTED LOSS RATES AND DISCOUNT RATIOS

CLASS CODE	EXP LOSS RATE	DISC RATIO	CLASS CODE	EXP LOSS RATE	DISC RATIO	CLASS CODE	EXP LOSS RATE	DISC RATIO	CLASS CODE	EXP LOSS RATE	DISC RATIO	CLASS CODE	EXP LOSS RATE	DISC RATIO
0005	1.07	.18	2115	2.25	.18	3041	1.20	.18	3634	0.67	.18	4439	1.82	.20
0008	1.01	.19	2121	0.63	.19	3042	1.80	.19	3635	1.17	.20	4452	1.15	.18
0016	1.38	.19	2130	0.64	.19	3066	1.02	.18	3638	0.75	.18	4459	1.26	.18
0034	1.31	.19	2131	1.31	.19	3076	1.00	.18	3642	0.44	.18	4470	0.87	.18
0035	0.75	.19	2143	1.10	.17	3081D	1.90	.19	3643	0.67	.18	4484	0.90	.19
0036	1.31	.19	2150	1.62	.19	3082D	1.90	.19	3647	0.97	.18	4493	0.83	.18
0042	1.40	.19	2156	1.73	.19	3085D	1.85	.19	3648	0.54	.19	4511	0.13	.18
0046	1.04	.20	2157	1.83	.18	3110	3.80	.18	3681	0.28	.18	4512	0.04	.19
0050	1.88	.18	2172	0.73	.17	3111	0.89	.18	3685	0.27	.18	4557	0.82	.17
0059D	.	.	2211	2.26	.18	3113	0.74	.19	3724	1.74	.18	4558	0.68	.19
0065D	.	.	2220	1.08	.19	3114	1.24	.18	3726	2.27	.17	4583	0.97	.19
0066D	.	.	2260	2.04	.18	3118	0.72	.18	3807	1.18	.20	4611	0.38	.18
0067D	.	.	2288	1.72	.18	3119	0.39	.19	3808	1.36	.19	4635	1.83	.20
0079	0.93	.20	2305	1.28	.18	3120	0.58	.18	3821	2.06	.19	4653	0.86	.18
0083	1.57	.19	2362	0.78	.19	3122	1.02	.19	3826	1.90	.20	4665	3.78	.17
0106	3.73	.19	2380	0.85	.19	3127	0.58	.18	3830	0.68	.18	4692	0.24	.18
0113	1.31	.19	2402	0.88	.19	3131	0.56	.19	3841	0.66	.18	4693	0.35	.19
0170	1.31	.19	2413	1.48	.19	3132	1.02	.19	4000	2.19	.18	4720	0.71	.19
0771	.	.	2416	1.00	.19	3145	0.70	.19	4021	1.29	.19	4740	0.34	.18
0908	37.08	.18	2417	0.90	.17	3146	0.92	.19	4024	1.43	.18	4741	1.01	.18
0909	86.27	.21	2501	0.95	.18	3169	1.13	.20	4034	2.37	.19	4771	1.85	.17
0912	172.54	.21	2503	0.49	.17	3179	0.50	.18	4036	0.74	.19	4777	0.94	.19
0913	74.16	.18	2570	1.93	.18	3180	1.11	.18	4038	1.30	.17	4825	0.17	.18
0917	1.07	.18	2576	0.97	.19	3188	1.08	.18	4053	1.05	.19	4828	0.37	.18
0918	0.19	.17	2585	1.26	.19	3200	0.94	.19	4062	0.84	.18	4829	0.34	.18
1430	2.00	.18	2586	0.92	.19	3220	1.26	.19	4112	0.16	.19	4902	0.75	.19
1438	1.27	.18	2587	1.12	.18	3223	(a)	(a)	4113	1.05	.19	4923	0.26	.18
1463	4.63	.20	2623	1.98	.19	3255	0.89	.18	4114	1.19	.18	5020	1.71	.17
1624D	1.49	.19	2651	0.70	.19	3257	1.05	.19	4130	1.41	.19	5022	3.92	.18
1655	1.01	.18	2660	0.95	.19	3270	0.95	.19	4133	0.71	.18	5037	5.88	.18
1701	0.90	.18	2683	1.00	.19	3300	1.37	.20	4150	0.38	.17	5040	7.89	.18
1710D	1.55	.19	2688	0.81	.19	3305	(a)	(a)	4239	0.91	.18	5057	7.67	.20
1747	1.06	.19	2702	4.90	.19	3315	1.33	.18	4243	1.17	.18	5059	8.23	.19
1748	1.28	.20	2710	2.39	.19	3336	1.10	.18	4244	1.21	.18	5102	2.45	.17
1853	0.53	.17	2731	1.14	.19	3365	1.87	.19	4250	0.83	.18	5146	2.73	.18
1924	1.02	.18	2747	2.57	.18	3372	0.87	.18	4251	0.95	.17	5160	1.07	.18
1925	2.70	.25	2790	0.83	.18	3373	1.58	.18	4273	1.34	.18	5183	1.27	.18
2003	1.59	.18	2802	1.53	.18	3381	0.81	.18	4279	0.98	.18	5188	1.57	.17
2014	1.56	.18	2835	0.77	.18	3383	0.69	.19	4283	0.69	.18	5190	0.97	.18
2021	1.09	.19	2836	1.07	.18	3385	0.34	.18	4299	0.80	.18	5191	0.34	.19
2039	1.69	.18	2841	1.69	.19	3400	1.08	.20	4304	1.88	.19	5192	1.22	.19
2041	1.05	.18	2883	1.42	.18	3507	1.19	.18	4307	0.76	.19	5213	4.41	.18
2070	1.45	.18	2923	0.67	.18	3515	1.16	.18	4308	0.81	.15	5215	1.80	.18
2081	1.16	.20	2942	0.77	.19	3558	0.33	.20	4351	0.38	.18	5221	2.67	.17
2089	1.15	.18	3018	0.97	.18	3571	0.30	.18	4352	0.53	.18	5222	3.56	.17
2095	1.19	.18	3022	1.54	.19	3574	0.75	.18	4360	0.27	.18	5223	1.65	.18
2101	1.20	.18	3027	1.54	.19	3612	0.54	.19	4361	0.28	.20	5348	1.88	.17
2105	(a)	(a)	3028	1.16	.19	3620	1.43	.18	4362	0.21	.18	5402	3.05	.18
2111	0.99	.19	3030	2.16	.19	3629	0.75	.18	4410	1.36	.20	5403	3.50	.18
2114	1.20	.18	3040	2.04	.17	3632	0.68	.18	4432	0.32	.19	5437	1.51	.18

(a) Expected Loss Rates and Discount Ratios for each individual risk must be obtained by Home Office from the WCRIBMA
 D Supplement Disease Loading

X 000031 STIP

Proposed Effective July 1, 2022

TABLE OF EXPECTED LOSS RATES AND DISCOUNT RATIOS

CLASS CODE	EXP LOSS RATE	DISC RATIO	CLASS CODE	EXP LOSS RATE	DISC RATIO	CLASS CODE	EXP LOSS RATE	DISC RATIO	CLASS CODE	EXP LOSS RATE	DISC RATIO	CLASS CODE	EXP LOSS RATE	DISC RATIO
5443	1.59	.18	7016M	1.12	.79	7704	1.29	.19	8719	1.03	.18	9179	18.12	.22
5445	2.49	.17	7024M	1.40	.79	7720	0.60	.19	8720	0.34	.18	9180	1.84	.21
5462	2.25	.17	7038M	2.12	.76	7855	1.31	.17	8721	0.09	.19	9182	1.30	.21
5472	2.92	.17	7046M	3.02	.58	8001	0.77	.20	8726F	1.69	.20	9186	1.77	.21
5473	3.40	.18	7047M	1.76	.69	8002	0.82	.21	8734M	0.21	.54	9220	1.52	.19
5474	1.58	.18	7050M	3.32	.67	8006	0.53	.20	8737M	0.17	.54	9402	1.59	.18
5478	1.42	.17	7090M	2.65	.76	8008	0.36	.19	8738M	0.26	.53	9403	3.83	.18
5479	2.34	.18	7098M	3.55	.58	8010	0.76	.19	8742	0.04	.19	9410	1.59	.19
5480	1.80	.17	7099M	4.45	.51	8013	0.16	.20	8745	2.60	.20	9501	0.86	.18
5506	1.97	.18	7133	(a)	(a)	8017	0.45	.19	8747	0.33	.17	9505	0.86	.18
5507	2.14	.17	7151M	3.96	.52	8018	1.67	.18	8748	0.29	.18	9519	1.01	.18
5508D	1.71	.18	7152M	6.22	.52	8021	1.51	.18	8800	0.48	.18	9521	1.20	.18
5509	1.94	.19	7153M	4.96	.52	8031	0.74	.19	8803	0.02	.19	9522	0.71	.18
5538	1.68	.18	7219	2.97	.18	8032	0.60	.19	8805M	0.09	.60	9533	5.88	.17
5545	17.13	.19	7230	3.71	.18	8033	0.63	.18	8810	0.03	.19	9534	2.09	.17
5547	4.18	.19	7231	4.96	.18	8034	1.32	.17	8814M	0.07	.60	9549	1.62	.17
5606	0.50	.19	7309F	4.12	.19	8039	0.62	.20	8815M	0.11	.59	9552	2.83	.19
5610	2.04	.17	7313F	5.55	.15	8044	1.16	.19	8820	0.03	.19	9586	0.16	.18
5645	2.61	.19	7317F	6.95	.19	8046	0.99	.20	8824	0.90	.19	9620	0.31	.19
5701	7.69	.19	7327F	9.04	.19	8048	1.12	.19	8826	0.71	.19			
5703	4.53	.18	7333M	4.51	.70	8058	1.01	.20	8829	1.04	.18			
5705	3.81	.18	7335M	5.30	.70	8103	1.12	.19	8831	0.46	.22			
6003	3.10	.17	7337M	6.65	.61	8105	3.50	.17	8832	0.12	.18			
6005	1.71	.18	7350F	7.01	.17	8106	2.08	.19	8833	0.48	.18			
6204	2.06	.18	7360	1.72	.18	8107	1.22	.19	8835	0.78	.18			
6217	1.71	.17	7370	1.71	.19	8111	1.20	.19	8837	(a)	(a)			
6229	1.51	.18	7380	2.56	.18	8203	2.71	.18	8868	0.34	.19			
6233	0.83	.17	7382	1.69	.18	8204	2.49	.19	8901	0.03	.19			
6251D	1.69	.17	7394M	5.80	.84	8215	1.29	.19	9014	0.91	.19			
6252D	2.24	.17	7395M	7.41	.84	8227	1.94	.19	9015	1.32	.18			
6306	3.14	.17	7398M	9.29	.74	8232	2.21	.19	9016	0.77	.20			
6319	1.08	.18	7403	1.42	.19	8233	2.22	.19	9019	1.10	.18			
6325	1.01	.18	7405	0.47	.18	8235	1.79	.19	9033	1.06	.18			
6400	2.05	.19	7420	3.29	.20	8263	2.12	.19	9040	1.43	.19			
6504	1.20	.18	7421	0.42	.17	8264	2.00	.19	9044	0.61	.18			
6702M	(a)	(a)	7422	0.41	.17	8265	2.13	.19	9052	0.68	.18			
6703M	(a)	(a)	7425	0.99	.18	8279	1.45	.20	9058	0.70	.19			
6704M	(a)	(a)	7431	0.41	.17	8291	1.45	.19	9060	0.47	.20			
6801F	2.57	.18	7445	.	.	8292	1.49	.18	9061	0.49	.19			
6811	2.26	.18	7453	.	.	8293	3.08	.19	9062	0.49	.19			
6824F	3.40	.20	7502	0.68	.18	8350	2.62	.18	9063	0.28	.20			
6826F	2.13	.18	7515	1.18	.23	8380	1.09	.18	9077F	2.75	.23			
6834	0.94	.19	7520	1.30	.19	8381	0.71	.19	9079	0.47	.19			
6836	1.26	.20	7538	2.13	.18	8385	1.40	.18	9089	0.33	.19			
6843F	4.38	.18	7539	0.54	.19	8392	0.74	.20	9093	0.51	.20			
6854	3.85	.18	7580	1.37	.18	8393	0.54	.18	9101	1.72	.19			
6872F	6.13	.19	7590	2.04	.19	8500	2.22	.19	9102	0.91	.19			
6874F	6.70	.18	7600	1.51	.17	8601	0.08	.19	9154	0.69	.20			
6882	5.39	.19	7601	2.03	.18	8709F	2.15	.19	9156	0.81	.20			
6884	5.89	.18	7610	0.14	.17	8710	1.10	.18	9178	6.45	.24			

(a) Expected Loss Rates and Discount Ratios for each individual risk must be obtained by Home Office from the WCRIBMA
 D Supplement Disease Loading
 F Expected Loss Rates and Discount Ratios for risks covered under the United States Longshore and Harbor Workers' Compensation Act.
 M Expected Loss Rates and Discount Ratios for risks subject to Admiralty Law or Federal Employers Liability Act (FELA).

X 00032 STIP

EXPERIENCE RATING PLAN MANUAL

Proposed Effective July 1, 2022

TABLE OF WEIGHTING VALUES

Expected Losses	Weighting Values	Expected Losses	Weighting Values	Expected Losses	Weighting Values
0 - 2,931	0.04	829,408 - 894,882	0.24	3,418,995 - 3,696,438	0.44
2,932 - 11,851	0.05	894,883 - 963,836	0.25	3,696,439 - 4,005,844	0.45
11,852 - 20,962	0.06	963,837 - 1,036,559	0.26	4,005,845 - 4,353,074	0.46
20,963 - 86,018	0.07	1,036,560 - 1,113,376	0.27	4,353,075 - 4,745,517	0.47
86,019 - 125,216	0.08	1,113,377 - 1,194,646	0.28	4,745,518 - 5,192,622	0.48
125,217 - 162,596	0.09	1,194,646 - 1,280,770	0.29	5,192,623 - 5,706,665	0.49
162,597 - 200,061	0.10	1,280,771 - 1,372,202	0.30	5,706,666 - 6,303,899	0.50
200,062 - 238,261	0.11	1,372,203 - 1,469,451	0.31	6,303,900 - 7,006,299	0.51
238,262 - 277,532	0.12	1,469,452 - 1,573,094	0.32	7,006,300 - 7,844,326	0.52
277,533 - 318,093	0.13	1,573,095 - 1,683,786	0.33	7,844,327 - 8,861,466	0.53
318,094 - 360,117	0.14	1,683,787 - 1,802,272	0.34	8,861,467 - 10,122,016	0.54
360,118 - 403,757	0.15	1,802,273 - 1,929,410	0.35	10,122,017 - 11,725,231	0.55
403,758 - 449,157	0.16	1,929,411 - 2,066,185	0.36	11,725,232 - 13,832,817	0.56
449,158 - 496,463	0.17	2,066,186 - 2,213,738	0.37	13,832,818 - 16,727,225	0.57
496,464 - 545,823	0.18	2,213,739 - 2,373,398	0.38	16,727,226 - 20,950,201	0.58
545,824 - 597,396	0.19	2,373,399 - 2,546,720	0.39	20,950,202 - 27,688,977	0.59
597,397 - 651,350	0.20	2,546,721 - 2,735,538	0.40	27,688,978 - 40,145,480	0.60
651,351 - 707,868	0.21	2,735,539 - 2,942,030	0.41	40,145,481 - 70,958,899	0.61
707,869 - 767,148	0.22	2,942,031 - 3,168,801	0.42	70,958,900 - 274,327,342	0.62
767,149 - 829,407	0.23	3,168,802 - 3,418,994	0.43	274,327,343 - 999,999,999	0.63

- | | |
|-----------------------------------------------------------------------------------------------|-----------|
| (a) G | 14 |
| (b) State Per Claim Accident Limitation | \$350,000 |
| (c) State Multiple Claim Accident Limitation | \$700,000 |
| (d) U.S. Longshore and Harbor Workers' Act Per Claim Accident Limitation | \$130,000 |
| (e) U.S. Longshore and Harbor Workers' Act Multiple Claim Accident Limitation | \$260,000 |
| (f) Employers Liability Accident Limitation | \$55,000 |
| (g) Primary/Excess Loss Split Point | \$7,500 |
| (h) USL&HW Act-Expected Loss Factor-Non-F Classes | 1.137 |
| (Multiply a Non-F classification ELR by the USL&HW Act – Expected Loss Factor of 1.137) | |
| (i) Cap on Modifications = $1 + (0.00005) [(Expected Losses) + (2) (Expected Losses) / (14)]$ | |

X 00033 STIP

Proposed Effective July 1, 2022

TABLE OF BALLAST VALUES

Expected Losses	Ballast Values	Expected Losses	Ballast Values	Expected Losses	Ballast Values
0 - 68,696	35,000	1,726,975 - 1,776,919	210,000	3,475,984 - 3,525,970	385,000
68,697 - 104,903	40,000	1,776,920 - 1,826,867	215,000	3,525,971 - 3,575,956	390,000
104,904 - 146,890	45,000	1,826,868 - 1,876,818	220,000	3,575,957 - 3,625,943	395,000
146,891 - 191,997	50,000	1,876,819 - 1,926,771	225,000	3,625,944 - 3,675,930	400,000
191,998 - 238,797	55,000	1,926,772 - 1,976,726	230,000	3,675,931 - 3,725,918	405,000
238,798 - 286,573	60,000	1,976,727 - 2,026,684	235,000	3,725,919 - 3,775,906	410,000
286,574 - 334,949	65,000	2,026,685 - 2,076,643	240,000	3,775,907 - 3,825,894	415,000
334,950 - 383,716	70,000	2,076,644 - 2,126,605	245,000	3,825,895 - 3,875,882	420,000
383,717 - 432,750	75,000	2,126,606 - 2,176,568	250,000	3,875,883 - 3,925,871	425,000
432,751 - 481,974	80,000	2,176,569 - 2,226,533	255,000	3,925,872 - 3,975,860	430,000
481,975 - 531,338	85,000	2,226,534 - 2,276,500	260,000	3,975,861 - 4,025,849	435,000
531,339 - 580,807	90,000	2,276,501 - 2,326,468	265,000	4,025,850 - 4,075,839	440,000
580,808 - 630,358	95,000	2,326,469 - 2,376,437	270,000	4,075,840 - 4,125,829	445,000
630,359 - 679,972	100,000	2,376,438 - 2,426,407	275,000	4,125,830 - 4,175,819	450,000
679,973 - 729,638	105,000	2,426,408 - 2,476,379	280,000	4,175,820 - 4,225,809	455,000
729,639 - 779,346	110,000	2,476,380 - 2,526,352	285,000	4,225,810 - 4,275,800	460,000
779,347 - 829,088	115,000	2,526,353 - 2,576,326	290,000	4,275,801 - 4,325,791	465,000
829,089 - 878,859	120,000	2,576,327 - 2,626,301	295,000	4,325,792 - 4,375,782	470,000
878,860 - 928,654	125,000	2,626,302 - 2,676,276	300,000	4,375,783 - 4,425,773	475,000
928,655 - 978,470	130,000	2,676,277 - 2,726,253	305,000	4,425,774 - 4,475,764	480,000
978,471 - 1,028,304	135,000	2,726,254 - 2,776,231	310,000	4,475,765 - 4,525,756	485,000
1,028,305 - 1,078,152	140,000	2,776,232 - 2,826,209	315,000	4,525,757 - 4,575,748	490,000
1,078,153 - 1,128,014	145,000	2,826,210 - 2,876,188	320,000	4,575,749 - 4,625,739	495,000
1,128,015 - 1,177,887	150,000	2,876,189 - 2,926,168	325,000	4,625,740 - 4,675,732	500,000
1,177,888 - 1,227,771	155,000	2,926,169 - 2,976,148	330,000	4,675,733 - 4,725,724	505,000
1,227,772 - 1,277,664	160,000	2,976,149 - 3,026,129	335,000	4,725,725 - 4,775,716	510,000
1,277,665 - 1,327,564	165,000	3,026,130 - 3,076,111	340,000	4,775,717 - 4,825,709	515,000
1,327,565 - 1,377,472	170,000	3,076,112 - 3,126,093	345,000	4,825,710 - 4,875,702	520,000
1,377,473 - 1,427,386	175,000	3,126,094 - 3,176,076	350,000	4,875,703 - 4,925,694	525,000
1,427,387 - 1,477,306	180,000	3,176,077 - 3,226,059	355,000	4,925,695 - 4,975,687	530,000
1,477,307 - 1,527,231	185,000	3,226,060 - 3,276,043	360,000		
1,527,232 - 1,577,161	190,000	3,276,044 - 3,326,028	365,000		
1,577,162 - 1,627,095	195,000	3,326,029 - 3,376,013	370,000		
1,627,096 - 1,677,033	200,000	3,376,014 - 3,425,998	375,000		
1,677,034 - 1,726,974	205,000	3,425,999 - 3,475,983	380,000		

For Expected Losses (E) greater than \$4,975,687, the Ballast Value is calculated using the following formula (rounded to the nearest 1):

$$\text{Ballast} = (0.1E + 2,500GE / (E + 700G))$$

G = 14

XI 000004 STIP

Section XI - Miscellaneous Rating Values
Subsection B - Massachusetts Benefits Deductible Program Credits
7/1/2022

Section XI-B
Exhibit 1

Massachusetts Benefits Deductible Program Premium Credits

Deductible Level (1)	Loss Elimination Ratio (2)	Expected Loss Ratio (3)	Safety Factor (4)	Variable Expense Ratio (5)	Underwriting Profit Provision (6)	Premium Credit (7)
500	2.9%	0.625	0.90	0.202	-0.005	2.0%
1,000	5.1%	0.625	0.90	0.202	-0.005	3.6%
2,000	8.4%	0.625	0.90	0.202	-0.005	5.9%
2,500	9.8%	0.625	0.90	0.202	-0.005	6.9%
5,000	16.0%	0.625	0.90	0.202	-0.005	11.2%

Notes:

(2): Based on Unit Statistical Data

(3): Section VI-J, Exhibit 1.

(4) = 0.9 from 9/1/2007 Stipulation.

(5): Section VI-A, Exhibit 1.

(6): Section VII-A, Exhibit 1.

(7) = $[(2) \times (3) \times (4)] / [1.0 - (5) - (6)]$

XI 000007 STIP

Section XI - Miscellaneous Rating Values
 Subsection C - Massachusetts Benefits Claim and Aggregate Deductible Program Credits
 7/1/2022

Section XI-C
 Exhibit 1

Massachusetts Benefits Claim and Aggregate Deductible Program Premium Credit for \$2,500 Per Claim Deductible with Aggregate Limit

Estimated Annual Standard Premium (1)	Expected Number of Claims Per Year = Midpoint of (1) / \$22,849 (2)	Aggregate Limit (3)	Selected Adjustment Factor for Aggregate Limit (4)	Premium Credit = (4) x 6.9% (5)
0 - 75,000	1.6	\$10,000	0.99	6.8%
75,000 - 100,000	3.8	\$10,000	0.93	6.4%
100,000 - 125,000	4.9	\$10,000	0.87	6.0%
125,000 - 150,000	6.0	\$10,000	0.80	5.5%
150,000 - 200,000	7.7	\$10,000	0.71	4.9%
Over 200,000	9 or more	5% of the 'Basis for the Aggregate Limit at Policy Inception'	0.65	4.5%

Notes:

- (2): Based on \$22,849 in standard premium (no ARAP) per expected claim.
- (4): Selected based on the simulation results shown in Exhibit 2.
- (5): The 6.9% is based on the \$2,500 per claim deductible without any aggregate limit, from Section XI-B, Exhibit 1.

XI 000008 STIP

Section XI - Miscellaneous Rating Values
 Subsection C - Massachusetts Benefits Claim and Aggregate Deductible Program Credits
 7/1/2022

Section XI-C
 Exhibit 2

Results of Simulation Model

Expected Number of Claims Per Year (1)	Number of Simulated Risks (2)	LER with No Aggregate Limit (3)	LER with \$10,000 Aggregate Limit (4)	LER with 5% of the Basis for Aggregate Limit (5)	Ratio of LERs (\$10,000 limit) = (4) / (3) (6)	Ratio of LERs (5% limit) = (5) / (3) (7)
1	1,000,000	9.78%	9.77%	3.98%	1.00	0.41
2	1,000,000	9.79%	9.73%	5.40%	0.99	0.55
3	1,000,000	9.80%	9.59%	5.95%	0.98	0.61
4	1,000,000	9.81%	9.31%	6.27%	0.95	0.64
5	1,000,000	9.71%	8.82%	6.43%	0.91	0.66
6	1,000,000	9.79%	8.41%	6.64%	0.86	0.68
7	1,000,000	9.81%	7.89%	6.77%	0.80	0.69
8	1,000,000	9.78%	7.32%	6.84%	0.75	0.70
9	1,000,000	9.83%	6.82%	6.95%	0.69	0.71
10	1,000,000	9.81%	6.30%	7.00%	0.64	0.71
12	1,000,000	9.80%	5.41%	7.09%	0.55	0.72
14	1,000,000	9.82%	4.72%	7.19%	0.48	0.73
16	1,000,000	9.82%	4.14%	7.24%	0.42	0.74
18	1,000,000	9.82%	3.69%	7.29%	0.38	0.74
20	1,000,000	9.80%	3.32%	7.31%	0.34	0.75
25	1,000,000	9.80%	2.65%	7.37%	0.27	0.75
30	1,000,000	9.83%	2.22%	7.44%	0.23	0.76
40	1,000,000	9.79%	1.66%	7.47%	0.17	0.76
50	1,000,000	9.80%	1.33%	7.51%	0.14	0.77
75	1,000,000	9.81%	0.89%	7.55%	0.09	0.77
100	1,000,000	9.80%	0.66%	7.56%	0.07	0.77
150	1,000,000	9.80%	0.44%	7.56%	0.04	0.77
200	1,000,000	9.80%	0.33%	7.57%	0.03	0.77
300	1,000,000	9.80%	0.22%	7.57%	0.02	0.77
400	1,000,000	9.80%	0.17%	7.57%	0.02	0.77
500	1,000,000	9.81%	0.13%	7.57%	0.01	0.77

Notes:

(5): The Aggregate Limit is based on the average claim severity of the simulated losses, \$15,059 and the permissible loss ratio of 0.625. One claim is assumed to be expected for each \$22,849 of standard premium.

XI 000009 STIP

Section XI - Miscellaneous Rating Values
 Subsection C - Massachusetts Benefits Claim and Aggregate Deductible Program Credits
 7/1/2022

Section XI-C
 Exhibit 3

Law Amendments, Loss Development Factors, and Severity Trend

(1) Law Amendment Factors to Prospective Effective Period

Policy Year	Indemnity Losses				Medical Losses
	Death	Permanent Total	Permanent Partial	Temporary Total	All Injury Types
PY 2010	1.080	1.088	1.146	1.055	1.000
PY 2011	1.076	1.083	1.136	1.053	1.000
PY 2012	1.071	1.076	1.124	1.049	1.000
PY 2013	1.069	1.073	1.118	1.047	1.000
PY 2014	1.063	1.069	1.111	1.045	1.000

(2) Loss Development Factors - Fifth Report to Ultimate

Loss Development Category	Indemnity	Medical
Likely to Develop	1.078	0.977
Not Likely to Develop	1.016	0.996

(3) Severity Trend Factors

We apply three distinct trend factors.

Trend to PY 2014 is based on empirical USR data at 5th report.

Trend from PY 2014 to PY 2018 is based on severities from Section V-A, Exhibit 2.

Trend from PY 2018 to the Prospective Effective Period is based on the projected severity trends from Section V-A, Exhibit 1.

Trend Period		Indemnity	Lost Time Medical	Medical Only
From	To			
PY 2010	PY 2014	1.177	1.209	1.099
PY 2011	PY 2014	1.109	1.115	1.079
PY 2012	PY 2014	1.098	1.086	1.032
PY 2013	PY 2014	1.100	1.175	1.004
PY 2014	PY 2018	1.046	1.040	1.120
PY 2018	Prosp. Eff. Period	1.093	1.108	1.131

Notes:

(1): Section IV-A, Exhibit 1.

(2): Section IV-E, Exhibit 1, Pages 1 and 2.

(3): Section V-A, Exhibits 1 and 2.

XI 000010 STIP

MASSACHUSETTS WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE MANUAL	RATES
<i>Proposed Effective July 1, 2022</i>	Page RA-5

MISCELLANEOUS VALUES

Basis of Premium applicable in accordance with the footnote instructions for Code 7370 - "Taxicab Co.":	
Employee operated vehicles.....	\$132,200.00
Leased or rented vehicles.....	\$88,100.00
Basis of Premium for Sole Proprietors, Partners of Legal Partnerships, Members of Limited Liability Companies or Partners of Limited Liability Partnerships in accordance with Rule IX-B-3-a.....	
	\$61,700.00
Payroll Limitations:	
For Executive Officers - in accordance with Rule IX-A-3-a and b	
Minimum individual payroll for an executive officer per week.....	\$270.00
Maximum individual payroll for an executive officer per week.....	\$1,350.00
For Spouses of Individuals, Co-Partners or Corporate Officers - in accordance with Rule IX-A-4	
Minimum individual payroll for a spouse per week.....	\$270.00
For Elected or Appointed Officers of a City or Town - in accordance with Rule IX-A-5	
Minimum individual payroll for an elected or appointed officer per week.....	\$270.00
Maximum individual payroll for an elected or appointed officer per week.....	\$1,350.00
Applicable with footnote instructions detailing the maximum average weekly wage per employee for the following three classification codes:	
Code 9186 - Amusement Device Operator, Carnival or Circus Traveling - All Employees & Drivers.....	\$400.00
Code 9179 - Athletic Sports Or Park: Contact Sports.....	\$400.00
Code 9178 - Athletic Sports Or Park: Non-Contact Sports.....	\$400.00
Terrorism Insurance Program - Certified Loss:.....	0.03

BENEFITS DEDUCTIBLE COVERAGE PROGRAM

Medical and Indemnity Deductible Amount	Premium Reduction Percentage
\$500	2.0%
\$1,000	3.6%
\$2,000	5.9%
\$2,500	6.9%
\$5,000	11.2%

BENEFITS CLAIM AND AGGREGATE DEDUCTIBLE PROGRAM

Basis for the Aggregate Limit	Claim Deductible Amount	Aggregate Deductible Amount	Premium Reduction Percentage
\$ 0 to \$75,000	\$2,500	\$10,000	6.8%
\$75,001 to \$100,000	\$2,500	\$10,000	6.4%
\$100,001 to \$125,000	\$2,500	\$10,000	6.0%
\$125,001 to \$150,000	\$2,500	\$10,000	5.5%
\$150,001 to \$200,000	\$2,500	\$10,000	4.9%
over \$200,000	\$2,500	5% of Basis for the Aggregate Limit	4.5%

Expense Constant applicable in accordance with Basic Manual Rule VI-E-2:	
Policies which develop earned Standard Premium of less than \$200.....	\$159.00
Policies which develop earned Standard Premium of at least \$200 and less than \$1,000.....	\$250.00
Policies which develop earned Standard Premium of \$1,000 or more.....	\$338.00

The expense constant for private residence per capita classifications is \$64, up to a maximum of 4.

Notes:

- Benefit Deductible Coverage Program - Section XI-B, Exhibit 1.
- Benefit Claim and Aggregate Deductible Program - Section XI-C, Exhibit 1.
- Expense Constant - Section VI-D, Exhibit 1.
- Expense Constant for private residences - Section I-A, Exhibit 1.

XI 000011 STIP

RATES		MASSACHUSETTS WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE MANUAL																
Page RA-6		<i>Proposed Effective July 1, 2022</i>																
<p>Premium Discount Percentages—(See Basic Manual Rule VII). The following premium discounts are applicable to Standard Premiums. Note: Premium Discount is not applicable to Assigned Risk policies.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 35%; text-align: center;">Type A Discount</th> <th style="width: 35%; text-align: center;">Type B Discount</th> </tr> </thead> <tbody> <tr> <td>First \$ 10,000.....</td> <td style="text-align: center;">0.0%</td> <td style="text-align: center;">0.0%</td> </tr> <tr> <td>Next 190,000.....</td> <td style="text-align: center;">9.1%</td> <td style="text-align: center;">5.1%</td> </tr> <tr> <td>Next 1,550,000.....</td> <td style="text-align: center;">11.3%</td> <td style="text-align: center;">6.5%</td> </tr> <tr> <td>Over 1,750,000.....</td> <td style="text-align: center;">12.3%</td> <td style="text-align: center;">7.5%</td> </tr> </tbody> </table>					Type A Discount	Type B Discount	First \$ 10,000.....	0.0%	0.0%	Next 190,000.....	9.1%	5.1%	Next 1,550,000.....	11.3%	6.5%	Over 1,750,000.....	12.3%	7.5%
	Type A Discount	Type B Discount																
First \$ 10,000.....	0.0%	0.0%																
Next 190,000.....	9.1%	5.1%																
Next 1,550,000.....	11.3%	6.5%																
Over 1,750,000.....	12.3%	7.5%																
<p>United States Longshore and Harbor Workers' Compensation Coverage Percentage applicable only in connection with Rule XII-D-3-b "U.S. Longshore and Harbor Workers' Compensation Act" of the MA Manual.....</p>			19.6%															
<p>(Multiply an eligible Non-F classification rate by a factor of 1.196)</p>																		
EXPERIENCE RATING ELIGIBILITY																		
<p>A risk is eligible for intrastate experience rating when the payrolls or other exposures developed in the last year or last two years of the experience period produced a subject premium of at least \$11,000. If more than two years, an average annual premium of at least \$5,500 is required. The Experience Rating Plan Manual should be referenced for the latest eligibility amounts by state.</p>																		

Notes:

USL&H factor - Section VIII-J, Exhibit 1.

XII 00003 STIP

RETROSPECTIVE RATING PLAN MANUAL	MASSACHUSETTS
STATE SPECIAL RATING VALUES	RR1

Proposed Effective July 1, 2022

1. Hazard Group Differentials

A	B	C	D	E	F	G
1.87	1.54	1.32	1.11	0.93	0.72	0.59

2. Tax Multipliers

- a. State (non-F Classes) 1.036*
 - b. Federal Classes, or non-F classes 1.081*
- where rate is increased by the USL&HW Act Percentage
- * Includes 0.29% residual market subsidy provision and 0.56% insolvency fund assessment provision

3. Expected Loss Ratio

0.617

Expected Loss and Allocated Loss Adjustment Expense Ratio (ALAE Option)

0.670

4. Loss Conversion Factor

1.187

Loss Conversion Factor for Allocated Loss Adjustment Expense Option (ALAE Option)

1.094

5. Table of Expense Ratios Excluding Taxes and Including Profit

Type A Company

Massachusetts
 Effective July 1, 2022

Type B Company

Massachusetts
 Effective July 1, 2022

Table of Expense Ratios Excluding Allocated Loss Adjustment Expense and Taxes and Including Profit (ALAE Option)

Type A Company

Massachusetts
 Effective July 1, 2022

Type B Company

Massachusetts
 Effective July 1, 2022

6. 2013—Table of Expected Loss Ranges

April 1, 2014

7a.

Excess Loss Factors

(Applicable to New and Renewal Policies)

Per Accident Limitation	Hazard Groups						
	A	B	C	D	E	F	G
\$25,000	0.397	0.422	0.445	0.465	0.484	0.512	0.542
30,000	0.380	0.405	0.429	0.451	0.471	0.500	0.533
35,000	0.365	0.391	0.416	0.439	0.459	0.489	0.525
40,000	0.351	0.377	0.403	0.427	0.448	0.479	0.517
50,000	0.327	0.354	0.380	0.407	0.428	0.460	0.504
75,000	0.278	0.306	0.335	0.366	0.388	0.422	0.474
100,000	0.242	0.270	0.299	0.333	0.356	0.389	0.447
125,000	0.214	0.240	0.270	0.305	0.328	0.360	0.424
150,000	0.191	0.215	0.245	0.281	0.303	0.335	0.402
175,000	0.172	0.194	0.223	0.260	0.281	0.311	0.383
200,000	0.156	0.176	0.204	0.241	0.261	0.291	0.364
250,000	0.129	0.147	0.173	0.209	0.227	0.255	0.332
300,000	0.110	0.125	0.149	0.183	0.200	0.226	0.303
500,000	0.065	0.075	0.092	0.119	0.131	0.150	0.222
1,000,000	0.030	0.035	0.044	0.059	0.066	0.077	0.125
2,000,000	0.014	0.016	0.020	0.028	0.031	0.037	0.063
3,000,000	0.008	0.010	0.012	0.017	0.019	0.023	0.041
4,000,000	0.006	0.007	0.009	0.012	0.014	0.016	0.030
5,000,000	0.004	0.005	0.007	0.009	0.010	0.012	0.023

XII 00004 STIP

**MASSACHUSETTS
 RR2**

**RETROSPECTIVE RATING PLAN MANUAL
 STATE SPECIAL RATING VALUES**

Proposed Effective July 1, 2022

**7b. ALAE Option Excess Loss and Allocated Loss Adjustment Expense Factors
 (Applicable to New and Renewal Policies)**

Per Accident Limitation	Hazard Groups						
	A	B	C	D	E	F	G
\$25,000	0.440	0.465	0.490	0.511	0.532	0.561	0.592
30,000	0.427	0.448	0.474	0.497	0.518	0.549	0.583
35,000	0.405	0.433	0.459	0.483	0.505	0.537	0.575
40,000	0.390	0.419	0.446	0.472	0.494	0.527	0.567
50,000	0.364	0.394	0.422	0.450	0.473	0.507	0.552
75,000	0.313	0.343	0.374	0.407	0.431	0.467	0.521
100,000	0.274	0.305	0.336	0.372	0.397	0.433	0.494
125,000	0.244	0.273	0.305	0.343	0.368	0.403	0.470
150,000	0.219	0.246	0.278	0.317	0.341	0.376	0.447
175,000	0.198	0.223	0.254	0.294	0.318	0.352	0.427
200,000	0.180	0.203	0.234	0.274	0.296	0.329	0.408
250,000	0.151	0.171	0.200	0.239	0.260	0.291	0.374
300,000	0.128	0.146	0.173	0.211	0.230	0.259	0.344
500,000	0.077	0.089	0.109	0.139	0.153	0.175	0.255
1,000,000	0.036	0.042	0.053	0.070	0.078	0.091	0.147
2,000,000	0.016	0.019	0.024	0.033	0.037	0.044	0.075
3,000,000	0.010	0.012	0.015	0.021	0.023	0.027	0.049
4,000,000	0.007	0.008	0.010	0.015	0.016	0.019	0.035
5,000,000	0.005	0.006	0.008	0.011	0.012	0.015	0.027

8. Retrospective Development Factors

With Loss Limit				Without Loss Limit			
1st	2nd	3rd	4th & Subsequent	1st	2nd	3rd	4th & Subsequent
<u>Adj.</u>	<u>Adj.</u>	<u>Adj.</u>	<u>Adj.</u>	<u>Adj.</u>	<u>Adj.</u>	<u>Adj.</u>	<u>Adj.</u>
0.11	0.07	0.05	0.00	0.14	0.09	0.06	0.00

9. State Special Classifications by Hazard Group

All Massachusetts Hazard Group assignments can be found in Appendix G of the 2008 Edition of the Massachusetts Workers' Compensation & Employers Liability Insurance Manual.

XII 000005 STIP

Section XII - Retrospective Rating
Subsection A - Expenses
7/1/2022

Section XII - A
Exhibit 3

Expense Provisions Underlying the Proposed Retrospective Rating Plans

Total Expenses:

(1) Commission and Other Acquisition Expenses	12.6%
(2) Fixed Expenses	5.8%
(3) Premium Discount	5.4%
(4) Underwriting Profit Provision	<u>-0.5%</u>
(5) Total Expenses Excluding Taxes and Assessments (= (1) + (2) + (3) + (4))	23.3%
(6) Current Premium Tax Rate	2.28%
(7) Miscellaneous Taxes	0.32%
(8) Retro Provision for the Residual Market Subsidy	0.29%
(9) Insolvency Fund Assessment	<u>0.56%</u>
(10) Tax Multiplier (= $1.0 / \{ 1.0 - [(6) + (7) + (8) + (9)] \}$)	1.036
(11) Expected Loss and LAE Ratio (adjusted for Residual Market Subsidy) (= $[1.0 / (10)] - (5)$)	73.3%
(12) Loss Adjustment Expense (as percentage of losses)	18.7%
(13) Loss Conversion Factor (= $1.0 + (12)$)	1.187
(14) Expected Loss without LAE (= $(11) / (13)$)	61.7%
(15) Expenses excluding Premium Taxes but including LAE (= $(5) + [(12) \times (14)]$)	34.8%

Notes:

- (1): Section VI-J, Exhibit 1, line (1).
- (2): Section VI-J, Exhibit 1, line (7), less the provision for miscellaneous taxes, see line (7) below.
- (3): Section VI-A, Exhibit 1, line (2).
- (4): Section VII-A, Exhibit 1, line (14).
- (6): Section VI-B, Exhibit 3, line (2).
- (7): Section VI-B, Exhibit 1, the average of the results of columns (13) x (15) / (17).
- (8): Section XII-B, Exhibit 1, line (3).
- (9): Section IX-K, Exhibit 5, page 1, line (9).
- (12): Section VI-J, Exhibit 1, line (9).

XII 000006 STIP

Section XII - Retrospective Rating
Subsection A - Expenses
7/1/2022

Section XII - A
Exhibit 4

Expense Provisions Underlying the ALAE Option of the Recommended Retrospective Rating Plans

(1) Expected Loss without Defense and Cost Containment Expense (as percentage of Standard Premium plus ARAP)	61.7%
(2) Selected Three Year Average Defense and Cost Containment Expense Ratio (as percentage of losses)	8.5%
(3) Expected Loss plus ALAE Ratio (= (1) x [1.0 + (2)])	67.0%
(4) Loss Adjustment Expense (as percentage of losses)	18.7%
(5) Loss Conversion Factor (= [1.0 + (4)] / [1.0 + (2)])	1.094
(6) Tax Multiplier	1.036
(7) Expenses excluding Premium Taxes but including LAE (as percentage of Standard Premium plus ARAP)	34.8%
(8) Expenses including all AO Expenses but excluding ALAE Expenses and Premium Taxes (= (7) - [(1) x (2)])	29.6%

Notes:

(1): Exhibit 3, line (14)

(2): Section VI-H, Exhibit 1, Page 1, line (3), DCC assumed a proxy for ALAE.

(4), (6), (7): Exhibit 3, lines (12), (10) and (15) respectively.

XII 000007 STIP

Section XII - Retrospective Rating
Subsection B - Residual Market Subsidy
7/1/2022

Section XII - B
Exhibit 1

Calculation of the Provision for the Residual Market Subsidy

(1) Voluntary Market Implied Rate Factor Equivalent	0.996
(2) Factor to Take into Account Basic Premium	0.800
(3) Retro Provision for the Residual Market Subsidy	0.29%

Notes:

(1): Section I-E, Exhibit 1, page 1.

(2): From the filing for the provision for the Residual Market Subsidy effective 1/1/89.

(3) = $[1.0 - (1)] \times (2)$

RETROSPECTIVE RATING PLAN MANUAL **MASSACHUSETTS**
STATE SPECIAL RATING VALUES **RR5**
Proposed Effective July 1, 2022

TABLE OF EXPENSE RATIOS—EXCLUDING TAXES AND INCLUDING PROFIT
TYPE A COMPANY—MASSACHUSETTS

Standard Premium		Expense Ratio	Standard Premium		Expense Ratio	Standard Premium		Expense Ratio
From	To		From	To		From	To	
0	10,057	0.348	18,173	18,556	0.308	105,349	119,705	0.268
10,058	10,174	0.347	18,557	18,956	0.307	119,706	138,593	0.267
10,175	10,293	0.346	18,957	19,374	0.306	138,594	164,557	0.266
10,294	10,415	0.345	19,375	19,811	0.305	164,558	200,423	0.265
10,416	10,540	0.344	19,812	20,268	0.304	200,424	208,579	0.264
10,541	10,668	0.343	20,269	20,747	0.303	208,580	217,427	0.263
10,669	10,799	0.342	20,748	21,249	0.302	217,428	227,059	0.262
10,800	10,934	0.341	21,250	21,776	0.301	227,060	237,584	0.261
10,935	11,071	0.340	21,777	22,329	0.300	237,585	249,132	0.260
11,072	11,213	0.339	22,330	22,912	0.299	249,133	261,860	0.259
11,214	11,358	0.338	22,913	23,525	0.298	261,861	275,959	0.258
11,359	11,506	0.337	23,526	24,173	0.297	275,960	291,662	0.257
11,507	11,659	0.336	24,174	24,857	0.296	291,663	309,260	0.256
11,660	11,816	0.335	24,858	25,580	0.295	309,261	329,119	0.255
11,817	11,977	0.334	25,581	26,348	0.294	329,120	351,702	0.254
11,978	12,143	0.333	26,349	27,163	0.293	351,703	377,613	0.253
12,144	12,313	0.332	27,164	28,029	0.292	377,614	407,646	0.252
12,314	12,488	0.331	28,030	28,953	0.291	407,647	442,869	0.251
12,489	12,668	0.330	28,954	29,940	0.290	442,870	484,754	0.250
12,669	12,853	0.329	29,941	30,997	0.289	484,755	535,390	0.249
12,854	13,044	0.328	30,998	32,130	0.288	535,391	597,838	0.248
13,045	13,241	0.327	32,131	33,350	0.287	597,839	676,778	0.247
13,242	13,444	0.326	33,351	34,667	0.286	676,779	779,736	0.246
13,445	13,653	0.325	34,668	36,091	0.285	779,737	919,640	0.245
13,654	13,868	0.324	36,092	37,638	0.284	919,641	1,120,726	0.244
13,869	14,091	0.323	37,639	39,322	0.283	1,120,727	1,434,360	0.243
14,092	14,320	0.322	39,323	41,165	0.282	1,434,361	1,800,884	0.242
14,321	14,558	0.321	41,166	43,189	0.281	1,800,885	1,961,307	0.241
14,559	14,803	0.320	43,190	45,423	0.280	1,961,308	2,153,106	0.240
14,804	15,057	0.319	45,424	47,900	0.279	2,153,107	2,386,483	0.239
15,058	15,319	0.318	47,901	50,663	0.278	2,386,484	2,676,602	0.238
15,320	15,591	0.317	50,664	53,763	0.277	2,676,603	3,047,021	0.237
15,592	15,873	0.316	53,764	57,269	0.276	3,047,022	3,536,434	0.236
15,874	16,165	0.315	57,270	61,263	0.275	3,536,435	4,213,151	0.235
16,166	16,468	0.314	61,264	65,856	0.274	4,213,152	5,210,142	0.234
16,469	16,783	0.313	65,857	71,194	0.273	5,210,143	6,825,254	0.233
16,784	17,110	0.312	71,195	77,473	0.272	6,825,255	9,891,587	0.232
17,111	17,450	0.311	77,474	84,967	0.271	9,891,588	17,960,630	0.231
17,451	17,803	0.310	84,968	94,067	0.270	17,960,631	97,478,632	0.230
17,804	18,172	0.309	94,068	105,348	0.269	97,478,633	OVER	0.229

Table based on the following discounts:

Standard Premium	Discount	
First	10,000	0.0%
Next	190,000	9.1%
Next	1,550,000	11.3%
Over	1,750,000	12.3%

Expected Loss Ratio

0.617

Tax Multiplier

1.036

MASSACHUSETTS **RETROSPECTIVE RATING PLAN MANUAL**
RR6 **STATE SPECIAL RATING VALUES**
Proposed Effective July 1, 2022

TABLE OF EXPENSE RATIOS—EXCLUDING TAXES AND INCLUDING PROFIT

TYPE B COMPANY—MASSACHUSETTS

Standard Premium		Expense Ratio	Standard Premium		Expense Ratio	Standard Premium		Expense Ratio
From	To		From	To		From	To	
0	- 10,103	0.348	19,909	- 20,747	0.323	241,290	- 261,000	0.298
10,104	- 10,314	0.347	20,748	- 21,660	0.322	261,001	- 284,218	0.297
10,315	- 10,535	0.346	21,661	- 22,657	0.321	284,219	- 311,970	0.296
10,536	- 10,765	0.345	22,658	- 23,750	0.320	311,971	- 345,728	0.295
10,766	- 11,006	0.344	23,751	- 24,954	0.319	345,729	- 387,679	0.294
11,007	- 11,258	0.343	24,955	- 26,286	0.318	387,680	- 441,216	0.293
11,259	- 11,521	0.342	26,287	- 27,769	0.317	441,217	- 511,908	0.292
11,522	- 11,797	0.341	27,770	- 29,429	0.316	511,909	- 609,576	0.291
11,798	- 12,087	0.340	29,430	- 31,300	0.315	609,577	- 753,300	0.290
12,088	- 12,391	0.339	31,301	- 33,425	0.314	753,301	- 985,706	0.289
12,392	- 12,711	0.338	33,426	- 35,860	0.313	985,707	- 1,425,495	0.288
12,712	- 13,048	0.337	35,861	- 38,677	0.312	1,425,496	- 1,843,877	0.287
13,049	- 13,403	0.336	38,678	- 41,975	0.311	1,843,878	- 2,030,244	0.286
13,404	- 13,779	0.335	41,976	- 45,888	0.310	2,030,245	- 2,258,520	0.285
13,780	- 14,175	0.334	45,889	- 50,605	0.309	2,258,521	- 2,544,632	0.284
14,176	- 14,596	0.333	50,606	- 56,403	0.308	2,544,633	- 2,913,750	0.283
14,597	- 15,042	0.332	56,404	- 63,702	0.307	2,913,751	- 3,408,123	0.282
15,043	- 15,516	0.331	63,703	- 73,171	0.306	3,408,124	- 4,104,536	0.281
15,517	- 16,021	0.330	73,172	- 85,945	0.305	4,104,537	- 5,158,651	0.280
16,022	- 16,560	0.329	85,946	- 104,124	0.304	5,158,652	- 6,941,294	0.279
16,561	- 17,136	0.328	104,125	- 132,056	0.303	6,941,295	- 10,606,524	0.278
17,137	- 17,754	0.327	132,057	- 180,467	0.302	10,606,525	- 22,473,002	0.277
17,755	- 18,418	0.326	180,468	- 209,626	0.301	22,473,003	- OVER	0.276
18,419	- 19,134	0.325	209,627	- 224,346	0.300			
19,135	- 19,908	0.324	224,347	- 241,289	0.299			

Table based on the following discounts:

Standard Premium	Discount
First	10,000 0.0%
Next	190,000 5.1%
Next	1,550,000 6.5%
Over	1,750,000 7.5%

Expected Loss Ratio

0.617

Tax Multiplier

1.036

RETROSPECTIVE RATING PLAN MANUAL **MASSACHUSETTS**
STATE SPECIAL RATING VALUES **RR7**
Proposed Effective July 1, 2022

**TABLE OF EXPENSE RATIOS—EXCLUDING ALLOCATED LOSS ADJUSTMENT EXPENSE
 AND TAXES AND INCLUDING PROFIT**

TYPE A COMPANY—MASSACHUSETTS

Standard Premium		Expense Ratio	Standard Premium		Expense Ratio	Standard Premium		Expense Ratio
From	To		From	To		From	To	
0	- 10,057	0.296	18,173	- 18,556	0.258	105,349	- 119,705	0.216
10,058	- 10,174	0.295	18,557	- 18,956	0.255	119,706	- 138,593	0.215
10,175	- 10,293	0.294	18,957	- 19,374	0.254	138,594	- 164,557	0.214
10,294	- 10,415	0.293	19,375	- 19,811	0.253	164,558	- 200,423	0.213
10,416	- 10,540	0.292	19,812	- 20,268	0.252	200,424	- 208,579	0.212
10,541	- 10,668	0.291	20,269	- 20,747	0.251	208,580	- 217,427	0.211
10,669	- 10,799	0.290	20,748	- 21,249	0.250	217,428	- 227,059	0.210
10,800	- 10,934	0.289	21,250	- 21,776	0.249	227,060	- 237,584	0.209
10,935	- 11,071	0.288	21,777	- 22,329	0.248	237,585	- 249,132	0.208
11,072	- 11,213	0.287	22,330	- 22,912	0.247	249,133	- 261,860	0.207
11,214	- 11,358	0.286	22,913	- 23,525	0.246	261,861	- 275,959	0.206
11,359	- 11,506	0.285	23,526	- 24,173	0.245	275,960	- 291,662	0.205
11,507	- 11,659	0.284	24,174	- 24,857	0.244	291,663	- 309,260	0.204
11,660	- 11,816	0.283	24,858	- 25,580	0.243	309,261	- 329,119	0.203
11,817	- 11,977	0.282	25,581	- 26,348	0.242	329,120	- 351,702	0.202
11,978	- 12,143	0.281	26,349	- 27,163	0.241	351,703	- 377,613	0.201
12,144	- 12,313	0.280	27,164	- 28,029	0.240	377,614	- 407,646	0.200
12,314	- 12,488	0.279	28,030	- 28,953	0.239	407,647	- 442,869	0.199
12,489	- 12,668	0.278	28,954	- 29,940	0.238	442,870	- 484,754	0.198
12,669	- 12,853	0.277	29,941	- 30,997	0.237	484,755	- 535,390	0.197
12,854	- 13,044	0.276	30,998	- 32,130	0.236	535,391	- 597,838	0.196
13,045	- 13,241	0.275	32,131	- 33,350	0.235	597,839	- 676,778	0.195
13,242	- 13,444	0.274	33,351	- 34,667	0.234	676,779	- 779,736	0.194
13,445	- 13,653	0.273	34,668	- 36,091	0.233	779,737	- 919,640	0.193
13,654	- 13,868	0.272	36,092	- 37,638	0.232	919,641	- 1,120,726	0.192
13,869	- 14,091	0.271	37,639	- 39,322	0.231	1,120,727	- 1,434,360	0.191
14,092	- 14,320	0.270	39,323	- 41,165	0.230	1,434,361	- 1,800,884	0.190
14,321	- 14,558	0.269	41,166	- 43,189	0.229	1,800,885	- 1,961,307	0.189
14,559	- 14,803	0.268	43,190	- 45,423	0.228	1,961,308	- 2,153,106	0.188
14,804	- 15,057	0.267	45,424	- 47,900	0.227	2,153,107	- 2,386,483	0.187
15,058	- 15,319	0.266	47,901	- 50,663	0.226	2,386,484	- 2,676,602	0.186
15,320	- 15,591	0.265	50,664	- 53,763	0.225	2,676,603	- 3,047,021	0.185
15,592	- 15,873	0.264	53,764	- 57,269	0.224	3,047,022	- 3,536,434	0.184
15,874	- 16,165	0.263	57,270	- 61,263	0.223	3,536,435	- 4,213,151	0.183
16,166	- 16,468	0.262	61,264	- 65,856	0.222	4,213,152	- 5,210,142	0.182
16,469	- 16,783	0.261	65,857	- 71,194	0.221	5,210,143	- 6,825,254	0.181
16,784	- 17,110	0.260	71,195	- 77,473	0.220	6,825,255	- 9,891,587	0.180
17,111	- 17,450	0.259	77,474	- 84,967	0.219	9,891,588	- 17,960,630	0.179
17,451	- 17,803	0.258	84,968	- 94,067	0.218	17,960,631	- 97,478,632	0.178
17,804	- 18,172	0.257	94,068	- 105,348	0.217	97,478,633	- OVER	0.177

Table based on the following discounts:

Standard Premium	Discount
First	10,000 0.0%
Next	190,000 9.1%
Next	1,550,000 11.3%
Over	1,750,000 12.3%

Expected Loss and Allocated Loss Adjustment
Expense Ratio (ALAE Option)

0.670

Tax Multiplier

1.036

XII 00011 STIP

MASSACHUSETTS	RETROSPECTIVE RATING PLAN MANUAL
RR8	STATE SPECIAL RATING VALUES
<i>Proposed Effective July 1, 2022</i>	

**TABLE OF EXPENSE RATIOS—EXCLUDING ALLOCATED LOSS ADJUSTMENT EXPENSE
 AND TAXES AND INCLUDING PROFIT**

TYPE B COMPANY—MASSACHUSETTS

Standard Premium		Expense Ratio	Standard Premium		Expense Ratio	Standard Premium		Expense Ratio
From	To		From	To		From	To	
0	- 10,103	0.296	19,909	- 20,747	0.271	241,290	- 261,000	0.246
10,104	- 10,314	0.295	20,748	- 21,660	0.270	261,001	- 284,218	0.245
10,315	- 10,535	0.294	21,661	- 22,657	0.269	284,219	- 311,970	0.244
10,536	- 10,765	0.293	22,658	- 23,750	0.268	311,971	- 345,728	0.243
10,766	- 11,006	0.292	23,751	- 24,954	0.267	345,729	- 387,679	0.242
11,007	- 11,258	0.291	24,955	- 26,286	0.266	387,680	- 441,216	0.241
11,259	- 11,521	0.290	26,287	- 27,769	0.265	441,217	- 511,908	0.240
11,522	- 11,797	0.289	27,770	- 29,429	0.264	511,909	- 609,576	0.239
11,798	- 12,087	0.288	29,430	- 31,300	0.263	609,577	- 753,300	0.238
12,088	- 12,391	0.287	31,301	- 33,425	0.262	753,301	- 985,706	0.237
12,392	- 12,711	0.286	33,426	- 35,860	0.261	985,707	- 1,425,495	0.236
12,712	- 13,048	0.285	35,861	- 38,677	0.260	1,425,496	- 1,843,877	0.235
13,049	- 13,403	0.284	38,678	- 41,975	0.259	1,843,878	- 2,030,244	0.234
13,404	- 13,779	0.283	41,976	- 45,888	0.258	2,030,245	- 2,258,520	0.233
13,780	- 14,175	0.282	45,889	- 50,605	0.257	2,258,521	- 2,544,632	0.232
14,176	- 14,596	0.281	50,606	- 56,403	0.256	2,544,633	- 2,913,750	0.231
14,597	- 15,042	0.280	56,404	- 63,702	0.255	2,913,751	- 3,408,123	0.230
15,043	- 15,516	0.279	63,703	- 73,171	0.254	3,408,124	- 4,104,536	0.229
15,517	- 16,021	0.278	73,172	- 85,945	0.253	4,104,537	- 5,158,651	0.228
16,022	- 16,560	0.277	85,946	- 104,124	0.252	5,158,652	- 6,941,294	0.227
16,561	- 17,136	0.276	104,125	- 132,056	0.251	6,941,295	- 10,606,524	0.226
17,137	- 17,754	0.275	132,057	- 180,467	0.250	10,606,525	- 22,473,002	0.225
17,755	- 18,418	0.274	180,468	- 209,626	0.249	22,473,003	- OVER	0.224
18,419	- 19,134	0.273	209,627	- 224,346	0.248			
19,135	- 19,908	0.272	224,347	- 241,289	0.247			

Table based on the following discounts:

Standard Premium	Discount
First 10,000	0.0%
Next 190,000	5.1%
Next 1,550,000	6.5%
Over 1,750,000	7.5%

Expected Loss and Allocated Loss Adjustment
 Expense Ratio (ALAE Option)

0.670

Tax Multiplier

1.036

XII 000012 STIP

Section XII - Retrospective Rating
 Subsection D - NCCI's Item R-1413
 7/1/2022

Section XII - D
 Exhibit 1

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

R-1413
 PAGE 26

ITEM R-1413—2017 UPDATE TO THE RETROSPECTIVE RATING PLAN PARAMETERS—HAZARD GROUP DIFFERENTIALS, EXCESS LOSS PURE PREMIUM FACTORS AND EXCESS LOSS AND ALLOCATED EXPENSE PURE PREMIUM FACTORS

**EXHIBIT 2-HG
 DEVELOPMENT OF MICHIGAN HAZARD GROUP DIFFERENTIALS
 FOR HAZARD GROUPS A TO G**

- Step 1.** Five years of historical experience is trended, on-leveled, and developed to estimate the severities for each hazard group. For a given hazard group, state severities are calculated by weighting the severities by claim group together using claim counts. The severities and claim counts have been adjusted using countrywide relativities from NCCI's excess loss factor methodology.
- Step 2.** The severities are weighted with the countrywide severities by hazard group using a credibility that is based on the number of claims in the state's experience period. For this purpose, 155,000 claims are regarded as fully credible and the square root rule is used to compute partial credibilities.
- Step 3.** Credibility weighted severities for each hazard group are produced. A countrywide average severity is calculated by taking the weighted average of the state severities using claim counts as weights.
- Step 4.** The differentials are calculated by dividing the countrywide severity by the individual state hazard group severities.

Step 1	Hazard Group	Michigan	Countrywide
Severities	A	27,381	37,282
	B	33,796	45,889
	C	36,053	51,116
	D	42,308	60,165
	E	49,253	71,093
	F	58,989	87,212
	G	65,830	100,004
 Step 2	Claim Count	=	78,533
	Credibility	=	$(78,533 / 155,000)^{0.5} = 0.712$
 Step 3	Hazard Group	Michigan	
Credibility Weighted Severities	A	30,223	= $(0.712)(27,381) + (0.288)(37,282)$
	B	37,223	
	C	40,394	
	D	47,453	
	E	55,547	
	F	67,122	
	G	75,679	
	Countrywide Overall:	59,736	
 Step 4	Hazard Group	Differentials	
Differentials	A	1.98	= $59,736 / 30,223$
	B	1.60	
	C	1.48	
	D	1.28	
	E	1.08	
	F	0.89	
	G	0.79	

Note: The underlying data source for the above calculations is NCCI's Unit Statistical data, excluding medical-only claims. The Unit Statistical data for each state is adjusted accordingly, as reflected in the data underlying the Excess Loss Factor (ELF) calculation.

XII 00013 STIP

Section XII - Retrospective Rating
 Subsection E - State Hazard Group Relativities
 7/1/2022

Section XII - E
 Exhibit 1

Development of State Hazard Group Differentials

Step 1, Severities:

Hazard Group (1)	Massachusetts Severities (2)	Countrywide Severities (3)	Massachusetts Overall Severity Split Using CW Severity Relativities = Overall (2) x (3) / Overall (3) (4)
A	26,508	37,292	32,287
B	31,380	45,689	39,557
C	41,749	51,116	44,256
D	52,510	60,165	52,090
E	62,730	71,093	61,551
F	96,752	87,212	75,507
G	139,898	100,004	86,582
Overall	51,719	59,736	51,719

Step 2, Credibility:

(5) Massachusetts Claim Count =	45,419
(6) Requirement for Full Credibility =	155,000
(7) Massachusetts Credibility = = [(5) / (6)] ^{0.5}	0.54

Step 3, Credibility Weighted Severities:

Hazard Group (8)	Massachusetts Credibility Weighted Severities (9)
A	31,454
B	37,943
C	46,045
D	56,021
E	66,566
F	92,376
G	121,599

Step 4, Relativities:

Hazard Group (10)	Indicated Relativities = Overall (3) / (9) (11)	Indicated Relativities Based on MA Severity Split Using CW Relativities = Overall (3) / (4) (12)	Average of the Two Indicated Relativities = [(11) + (12)] / 2.0 (13)	Selected Hazard Group Differential (14)
A	1.90	1.85	1.87	1.87
B	1.57	1.51	1.54	1.54
C	1.30	1.35	1.32	1.32
D	1.07	1.15	1.11	1.11
E	0.90	0.97	0.93	0.93
F	0.65	0.79	0.72	0.72
G	0.49	0.69	0.59	0.59

Notes:

- (2), (5): Lost Time Claim Data for Policy Years 2018 at 1st report, 2017 at 2nd report, 2016 at 3rd report, adjusted for trend, law amendments and development factors.
- (3), (6): Section XII - D, Exhibit 1 (NCCI's Item R-1413, Page 26.)
- (9) = [(2) x (7)] + { (3) x [1.0 - (7)] }

XII 000022 STIP

Section XII - Retrospective Rating
 Subsection F - Excess Loss Factors
 7/1/2022

Section XII - F
 Exhibit 1
 Page 1

Excess Loss Factors Proposed to be Effective 07/01/2022

Accident Limit	Hazard Group						
	A	B	C	D	E	F	G
\$25,000	0.397	0.422	0.445	0.465	0.484	0.512	0.542
\$30,000	0.380	0.405	0.429	0.451	0.471	0.500	0.533
\$35,000	0.365	0.391	0.416	0.439	0.459	0.489	0.525
\$40,000	0.351	0.377	0.403	0.427	0.448	0.479	0.517
\$50,000	0.327	0.354	0.380	0.407	0.428	0.460	0.504
\$75,000	0.278	0.306	0.335	0.366	0.388	0.422	0.474
\$100,000	0.242	0.270	0.299	0.333	0.356	0.389	0.447
\$125,000	0.214	0.240	0.270	0.305	0.328	0.360	0.424
\$150,000	0.191	0.215	0.245	0.281	0.303	0.335	0.402
\$175,000	0.172	0.194	0.223	0.260	0.281	0.311	0.383
\$200,000	0.156	0.176	0.204	0.241	0.261	0.291	0.364
\$250,000	0.129	0.147	0.173	0.209	0.227	0.255	0.332
\$300,000	0.110	0.125	0.149	0.183	0.200	0.226	0.303
\$500,000	0.065	0.075	0.092	0.119	0.131	0.150	0.222
\$1,000,000	0.030	0.035	0.044	0.059	0.066	0.077	0.125
\$2,000,000	0.014	0.016	0.020	0.028	0.031	0.037	0.063
\$3,000,000	0.008	0.010	0.012	0.017	0.019	0.023	0.041
\$4,000,000	0.006	0.007	0.009	0.012	0.014	0.016	0.030
\$5,000,000	0.004	0.005	0.007	0.009	0.010	0.012	0.023

Notes:

Exhibit 3, page 1 times the Expected Loss Ratio without LAE of 61.7% from Section XII-A, Exhibit 3.

XII 000023 STIP

Section XII - Retrospective Rating
 Subsection F - Excess Loss Factors
 7/1/2022

Section XII - F
 Exhibit 1
 Page 2

Excess Loss and ALAE Factors Proposed to be Effective 07/01/2022

Accident Limit	Hazard Group						
	A	B	C	D	E	F	G
\$25,000	0.440	0.465	0.490	0.511	0.532	0.561	0.592
\$30,000	0.421	0.448	0.474	0.497	0.518	0.549	0.583
\$35,000	0.405	0.433	0.459	0.483	0.505	0.537	0.575
\$40,000	0.390	0.419	0.446	0.472	0.494	0.527	0.567
\$50,000	0.364	0.394	0.422	0.450	0.473	0.507	0.552
\$75,000	0.313	0.343	0.374	0.407	0.431	0.467	0.521
\$100,000	0.274	0.305	0.336	0.372	0.397	0.433	0.494
\$125,000	0.244	0.273	0.305	0.343	0.368	0.403	0.470
\$150,000	0.219	0.246	0.278	0.317	0.341	0.376	0.447
\$175,000	0.198	0.223	0.254	0.294	0.318	0.352	0.427
\$200,000	0.180	0.203	0.234	0.274	0.296	0.329	0.408
\$250,000	0.151	0.171	0.200	0.239	0.260	0.291	0.374
\$300,000	0.128	0.146	0.173	0.211	0.230	0.259	0.344
\$500,000	0.077	0.089	0.109	0.139	0.153	0.175	0.255
\$1,000,000	0.036	0.042	0.053	0.070	0.078	0.091	0.147
\$2,000,000	0.016	0.019	0.024	0.033	0.037	0.044	0.075
\$3,000,000	0.010	0.012	0.015	0.021	0.023	0.027	0.049
\$4,000,000	0.007	0.008	0.010	0.015	0.016	0.019	0.035
\$5,000,000	0.005	0.006	0.008	0.011	0.012	0.015	0.027

Excess Loss Factors Effective 9/1/2008

Accident Limit	Hazard Group						
	A	B	C	D	E	F	G
\$25,000	0.382	0.409	0.436	0.460	0.482	0.514	0.552
\$30,000	0.362	0.390	0.417	0.444	0.466	0.499	0.541
\$35,000	0.344	0.373	0.401	0.429	0.451	0.485	0.531
\$40,000	0.328	0.357	0.386	0.415	0.438	0.472	0.521
\$50,000	0.299	0.329	0.359	0.391	0.414	0.449	0.503
\$75,000	0.246	0.275	0.306	0.342	0.366	0.401	0.464
\$100,000	0.208	0.233	0.265	0.303	0.326	0.360	0.430
\$125,000	0.179	0.201	0.232	0.271	0.292	0.325	0.400
\$150,000	0.156	0.176	0.205	0.244	0.264	0.294	0.374
\$175,000	0.137	0.155	0.183	0.221	0.239	0.266	0.350
\$200,000	0.122	0.138	0.164	0.201	0.217	0.243	0.329
\$250,000	0.098	0.112	0.135	0.169	0.183	0.205	0.291
\$300,000	0.081	0.092	0.113	0.144	0.156	0.176	0.260
\$500,000	0.046	0.053	0.066	0.088	0.095	0.108	0.177
\$1,000,000	0.020	0.024	0.030	0.042	0.045	0.051	0.093
\$2,000,000	0.009	0.010	0.013	0.019	0.020	0.023	0.045
\$3,000,000	0.005	0.006	0.008	0.011	0.012	0.014	0.028
\$4,000,000	0.004	0.004	0.006	0.008	0.009	0.010	0.020
\$5,000,000	0.003	0.003	0.004	0.006	0.006	0.007	0.015

Note:
 9/1/2008 Stipulation. Section XII-F, Exhibit 1, Page 1.

XII 000024 STIP

XII 000025 STIP

Section XII - Retrospective Rating
 Subsection F - Excess Loss Factors
 7/1/2022

Section XII - F
 Exhibit 3
 Page 1

Estimated Excess Ratios Based on Adjusted Data and Curves Fit to Data Truncated and Shifted at \$150,000

Accident Limit	Hazard Group						
	A	B	C	D	E	F	G
\$25,000	0.644	0.683	0.721	0.753	0.784	0.830	0.878
\$30,000	0.616	0.657	0.696	0.731	0.763	0.810	0.864
\$35,000	0.591	0.633	0.673	0.711	0.743	0.792	0.851
\$40,000	0.569	0.611	0.653	0.692	0.726	0.776	0.838
\$50,000	0.529	0.573	0.616	0.660	0.694	0.746	0.816
\$75,000	0.451	0.496	0.543	0.593	0.629	0.683	0.767
\$100,000	0.393	0.437	0.485	0.540	0.577	0.630	0.725
\$125,000	0.347	0.389	0.437	0.495	0.531	0.584	0.687
\$150,000	0.310	0.348	0.397	0.455	0.491	0.542	0.652
\$175,000	0.279	0.314	0.361	0.420	0.454	0.505	0.620
\$200,000	0.252	0.285	0.330	0.390	0.422	0.471	0.590
\$250,000	0.209	0.238	0.280	0.338	0.368	0.413	0.537
\$300,000	0.178	0.203	0.241	0.296	0.323	0.366	0.492
\$500,000	0.106	0.122	0.149	0.192	0.212	0.244	0.359
\$1,000,000	0.049	0.057	0.072	0.096	0.107	0.125	0.203
\$2,000,000	0.022	0.026	0.033	0.045	0.050	0.059	0.103
\$3,000,000	0.013	0.016	0.020	0.028	0.031	0.037	0.066
\$4,000,000	0.009	0.011	0.014	0.020	0.022	0.026	0.048
\$5,000,000	0.007	0.008	0.011	0.015	0.017	0.020	0.037

Note:

For Accident Limit $L \leq \$150,000$ excess ratios are from Page 3. For Accident Limit $L > \$150,000$ excess ratios are from Page 2 times the estimated excess ratio at $L = \$150,000$ (See Appendix).

Fitted Excess Ratios Based on Losses Truncated and Shifted to \$150,000

Accident Limit	Hazard Group													
	A		B		C		D		E		F		G	
	Entry Ratio	Excess Ratio	Entry Ratio	Excess Ratio	Entry Ratio	Excess Ratio	Entry Ratio	Excess Ratio	Entry Ratio	Excess Ratio	Entry Ratio	Excess Ratio	Entry Ratio	Excess Ratio
\$175,000	0.109	0.899	0.106	0.902	0.095	0.911	0.081	0.924	0.078	0.926	0.073	0.931	0.051	0.951
\$200,000	0.218	0.813	0.211	0.818	0.190	0.834	0.161	0.856	0.156	0.860	0.146	0.868	0.101	0.906
\$250,000	0.436	0.676	0.422	0.684	0.381	0.707	0.322	0.742	0.312	0.749	0.292	0.762	0.203	0.825
\$300,000	0.654	0.573	0.633	0.582	0.571	0.609	0.484	0.651	0.468	0.659	0.438	0.675	0.304	0.754
\$500,000	1.526	0.342	1.478	0.350	1.333	0.377	1.128	0.422	1.092	0.431	1.022	0.449	0.709	0.551
\$1,000,000	3.707	0.159	3.590	0.164	3.237	0.181	2.740	0.211	2.652	0.217	2.482	0.230	1.721	0.312
\$2,000,000	8.068	0.071	7.812	0.073	7.044	0.082	5.965	0.098	5.771	0.102	5.401	0.109	3.745	0.158
\$3,000,000	12.430	0.043	12.035	0.045	10.852	0.050	9.189	0.061	8.891	0.063	8.321	0.068	5.770	0.102
\$4,000,000	16.791	0.030	16.258	0.031	14.659	0.035	12.413	0.043	12.011	0.045	11.241	0.048	7.795	0.074
\$5,000,000	21.152	0.023	20.481	0.023	18.467	0.027	15.637	0.033	15.130	0.034	14.160	0.037	9.819	0.057

XII 000026 STIP

Notes:

Entry Ratio = ([Limit] - [\$150,000 Truncation Point]) / [Average Size of Data Truncated and Shifted to \$150,000]

For the seven Hazard Groups, the detrended average sizes are \$160,493 for HGA, \$165,751 for HGB, \$183,830 for HGC, \$217,104 for HGD, \$224,369 for HGE, \$239,740 for HGF and \$345,729 for HGG.

Excess Ratio is computed for a Mixed Pareto - Exponential distribution with parameters: 0.7344, 2.3285, 1.4950, 0.6270 (weight to Pareto, Pareto Shape, Pareto Scale, Exponential Scale).

XII 000027 STIP

Section XII - Retrospective Rating
 Subsection F - Excess Loss Factors
 7/1/2022

Section XII - F
 Exhibit 3
 Page 3

Excess Ratios Based on Adjusted Data

Accident Limit	Hazard Group						
	A	B	C	D	E	F	G
\$25,000	0.644	0.683	0.721	0.753	0.784	0.830	0.878
\$30,000	0.616	0.657	0.696	0.731	0.763	0.810	0.864
\$35,000	0.591	0.633	0.673	0.711	0.743	0.792	0.851
\$40,000	0.569	0.611	0.653	0.692	0.726	0.776	0.838
\$50,000	0.529	0.573	0.616	0.660	0.694	0.746	0.816
\$75,000	0.451	0.496	0.543	0.593	0.629	0.683	0.767
\$100,000	0.393	0.437	0.485	0.540	0.577	0.630	0.725
\$125,000	0.347	0.389	0.437	0.495	0.531	0.584	0.687
\$150,000	0.310	0.348	0.397	0.455	0.491	0.542	0.652
\$175,000	0.279	0.314	0.361	0.421	0.455	0.505	0.620
\$200,000	0.253	0.285	0.331	0.391	0.422	0.470	0.591
\$250,000	0.211	0.239	0.282	0.341	0.367	0.410	0.540
\$300,000	0.179	0.205	0.244	0.302	0.321	0.360	0.496
\$500,000	0.108	0.125	0.155	0.205	0.204	0.228	0.373
\$1,000,000	0.051	0.053	0.082	0.128	0.100	0.110	0.240
\$2,000,000	0.019	0.022	0.045	0.089	0.045	0.052	0.138
\$3,000,000	0.007	0.015	0.034	0.078	0.030	0.031	0.085
\$4,000,000	0.002	0.013	0.028	0.074	0.024	0.021	0.060
\$5,000,000	0.000	0.012	0.025	0.069	0.021	0.015	0.041

Notes:

Unit Statistical Plan Data for Composite Policy Years 00/01, 99/00, 98/99, 97/98, 96/97, 95/96 at fifth report, adjusted for trend, law amendments and development factors using factors from Exhibit 5.

XII 000028 STIP

Section XII - Retrospective Rating
 Subsection F - Excess Loss Factors
 7/1/2022

Section XII - F
 Exhibit 4

Mixed Pareto-Exponential Distribution

Parameters:

Pareto shape = s	2.3285
Pareto scale = b	1.4950
Exponential scale = θ	0.6270
Weight to Pareto = p	0.7344
Mean =	1.0000
Variance =	5.5243
Coefficient of Variation =	2.3504
Skewness =	18.0452
Pareto Mean = $b / (s - 1.0)$	1.1253
Exponential Mean = θ	0.6270

Entry Ratio	Excess Ratio	Entry Ratio	Excess Ratio
0.1	0.9067	11	0.0496
0.2	0.8263	12	0.0448
0.3	0.7567	13	0.0407
0.4	0.6960	14	0.0372
0.5	0.6428	15	0.0343
0.6	0.5960	20	0.0241
0.7	0.5546	25	0.0183
0.8	0.5178	30	0.0145
0.9	0.4849	35	0.0119
1.0	0.4555	40	0.0101
1.25	0.3941	45	0.0087
1.5	0.3460	50	0.0076
1.75	0.3075	55	0.0067
2.0	0.2763	60	0.0060
2.50	0.2286	65	0.0054
3.0	0.1942	70	0.0049
3.5	0.1682	75	0.0045
4.0	0.1479	80	0.0041
4.5	0.1316	85	0.0038
5.0	0.1183	90	0.0035
6.0	0.0978	95	0.0033
7.0	0.0828	100	0.0031
8.0	0.0714		
9.0	0.0625		
10.0	0.0554		

Notes:
 See the Appendix for a sample calculation of an excess ratio.

XII 000029 STIP

Section XII - Retrospective Rating
 Subsection F - Excess Loss Factors
 7/1/2022

Section XII - F
 Exhibit 5

Total Severity Trend & Benefit Change Adjustment

	Indemnity	Lost Time Medical	Medical Only	Total
(1) PY 9/1/2008 Average Severity	26,182	10,183	794	
(2) PY 2018 Average Severity	31,748	12,237	950	
(3) Annual Severity Trend - From PY 2018 to Prospective Effective Period	2.0%	2.3%	2.8%	
(4) Trend Factor from PY 9/1/2008 to Prospective Effective Period = $[(2) / (1)] \times [1.000 + (3)]^{4.5}$	1.326	1.332	1.353	
(5) Injury Type Weight at Ultimate	67.06%	28.99%	3.95%	
(6) Total Severity Trend Factor from PY 9/1/2008 to Prospective Effective Period = (4) Weighted by (5)				1.329
(7) Total Benefit Level Change Factor from PY 9/1/2008 to Prospective Effective Period				1.075
(8) Combined Trend and Benefit Factor from PY 9/1/2008 to Prospective Effective Period = (6) x (7)				1.429

Notes:

- (1),(2) : From Section V-A, Exhibit 2, Pages 1, 3, and 5. PY9/1/2008 is a weighted average of PY2008 and PY2009. = (1/3) x PY2008 + (2/3) x PY2009
- (3): From Section V-A, Exhibit 1.
- (5): From Section IV-E, Exhibit 2, Pages 1 and 2.
- (7): From Section IV-A, Exhibit 1.