

I 000012 STIP

Section I - Rate Recommendation
 Subsection A - Introduction
 7/1/2023

Section I - A
 Exhibit 1

RATE INDICATION SUMMARY

Statewide Rate Change Summary		
<i>Indication Effective Date: 7/1/2023</i>		
(1)	Indicated Rate Change Based on Policy Year 2018 Data (Section I-B, Exhibit 1)	-9.2%
(2)	Indicated Rate Change Based on Policy Year 2019 Data (Section I-B, Exhibit 1)	-13.2%
(3)	Weighted Average Indicated Rate Change = 0.75 x (1) + 0.25 x (2)	-10.2%

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

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Section I - Rate Recommendation
 Subsection B - Calculation of Indicated Rate Change
 7/1/2023

Section I - B
 Exhibit 1

	Policy Year <u>2018</u>	Policy Year <u>2019</u>
(1) Standard Earned Premium plus Adjusted ARAP Premium (Section I-D, Exhibit 2)	1,257,191,166	1,220,866,284
(2) Composite Adjustment Factor (Section I-D, Exhibit 2)	1.039	1.032
(3) Adjusted Standard Earned Premium plus Adjusted ARAP = [(1) x (2)]	1,305,632,842	1,259,536,374
(4) Cumulative Premium Development Factor to Ultimate (Section I-D, Exhibit 2)	1.000	0.999
(5) Rate On-Level Factor (Section I-D, Exhibit 2)	0.834	0.900
(6) Factor to Remove Expense Constant (Section I-D, Exhibit 2)	0.962	0.960
(7) Adjusted On-Level Standard Earned Premium plus Adjusted ARAP at Ultimate = [(3) x (4) x (5) x (6)]	1,046,411,348	1,086,333,438
(8) Annual Wage Trend (Section I-D, Exhibit 4)	0.043	0.043
(9) Wage Trend Factor to 7/1/2024 (based on Section I-D, Exhibit 4)	1.260	1.208
(10) Standard Earned Premium plus ARAP Projected to Prospective Effective Period = [(7) x (9)]	1,318,579,494	1,312,551,401
(11) Average On-Level Incurred Losses Projected to Prospective Effective Period (Section I-C Exhibit I, Page 1 Item (30), Page 2 Item (30))	801,572,919	759,932,989
(12) Loss Ratio Projected to Prospective Effective Period = [(11) / (10)]	0.608	0.579
(13) Factor to Remove the Large Deductible Contribution to the Residual Market Subsidy (Section I-E)	0.996	0.996
(14) Loss Adjustment Expense Factor (Section I-D, Exhibit 5)	1.183	1.183
(15) Fixed Expense Ratio (Section VI-B, Exhibit 1)	0.055	0.055
(16) Indicated Policy Year Loss, LAE, and Fixed Expense Ratio = { [(12) x (14)] + (15) } x (13)	0.771	0.737
(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)	0.055	0.055
(20) Variable Expense Ratio = [(17) + (18) + (19)]	0.202	0.202
(21) Underwriting Profit Provision (Section VII-A)	-0.051	-0.051
(22) Permissible Loss, LAE, and Fixed Expense Ratio = [1.0 - (20) - (21)]	0.849	0.849
(23) Indicated Rate Change = [(16) / (22)] - 1.0	-9.2%	-13.2%
(24) Overall Indicated Rate Change = 0.75 x (23) PY2018 + 0.25 x (23) PY2019		-10.2%

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Section I - Rate Recommendation
 Subsection C - Indicated Rate Change Detail
 7/1/2023

Section I - C
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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)	1,046,411,348
(2)	Annual Wage Trend (Section I-D, Exhibit 4)	0.043
(3)	Wage Trend Factor to Prospective Effective Period (7/1/2024)	1.260
(4)	Standard Earned Premium plus ARAP Projected to Prospective Effective Period = [(1) x (3)]	1,318,579,494

Indemnity Losses

		<u>Paid</u>	<u>Paid + Case</u>
(5)	Indemnity Losses at Latest Month - Industry Total (Section I-D, Exhibit 1)	358,854,892	447,380,183
(6)	Indemnity Loss Development Factor to 252 Months (Section I-D, Exhibit 1)	1.314	1.112
(7)	Tail Factor 252 Months to Ultimate (Section I-D, Exhibit 1)	1.036	1.015
(8)	Factor to Adjust for Escalated Benefits (Section I-D, Exhibit 1)	1.045	1.000
(9)	Estimated Ultimate Indemnity Loss = [(5) x (6) x (7) x (8)]	510,435,654	505,041,225
(10)	Annual Indemnity Loss Trend (Section I-D, Exhibit 4)	0.008	0.008
(11)	Indemnity Loss Trend Factor to 7/1/2024	1.046	1.046
(12)	Estimated Indemnity Losses Trended = [(9) x (11)]	533,761,081	528,120,142
(13)	Estimated Benefit Change Factor Prior to 1/1/2023 (Section I-D, Exhibit 3)	1.075	1.075
(14)	On Level Losses = [(12) x (13)]	573,937,831	567,872,293
(15)	Estimated Benefit Change Factor Subsequent to 1/1/2023 (Section I-D, Exhibit 3)	1.015	1.015
(16)	On-Level Incurred Losses Projected to Prospective Effective Period = [(14) x (15)]	582,323,660	576,169,498

Medical Losses

(17)	Medical Losses at Latest Month - Industry Total (Section I-D, Exhibit 1)	187,001,232	233,846,055
(18)	Medical Loss Development Factor to 252 Months (Section I-D, Exhibit 1)	1.162	0.946
(19)	Tail Factor 252 Months to Ultimate (Section I-D, Exhibit 1)	1.073	0.980
(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)]	233,205,499	216,854,269
(22)	Annual Medical Loss Trend (Section I-D, Exhibit 4)	-0.002	-0.002
(23)	Medical Loss Trend Factor to 7/1/2024	0.988	0.988
(24)	Estimated Medical Losses Trended = [(21) x (23)]	230,403,732	214,248,948
(25)	Estimated Benefit Change Factor Prior to 1/1/2023 (Section I-D, Exhibit 3)	1.000	1.000
(26)	On Level Losses = [(24) x (25)]	230,403,732	214,248,948
(27)	Estimated Benefit Change Factor Subsequent to 1/1/2023 (Section I-D, Exhibit 3)	1.000	1.000
(28)	On-Level Incurred Losses Projected to Prospective Effective Period = [(26) x (27)]	230,403,732	214,248,948

Total Combined Medical and Indemnity Losses

(29)	Total Estimated Ultimate Losses Trended and On Level = [(16) + (28)]	812,727,392	790,418,446
(30)	Average On-Level Incurred Losses Projected to Prospective Effective Period	801,572,919	

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Section I - Rate Recommendation
 Subsection C - Indicated Rate Change Detail
 7/1/2023

Section I - C
 Exhibit 1
 Page 2

Premium and Incurred Losses Projected to the Prospective Effective Period Policy Year 2019

Premium

(1)	Adjusted On-Level Standard Earned Premium plus Adjusted ARAP at Ultimate (Section I -D, Exhibit 2)	1,086,333,438
(2)	Annual Wage Trend (Section I-D, Exhibit 4)	0.043
(3)	Wage Trend Factor to Prospective Effective Period (7/1/2024)	1.208
(4)	Standard Earned Premium plus ARAP Projected to Prospective Effective Period = [(1) x (3)]	1,312,551,401

Indemnity Losses

		<u>Paid</u>	<u>Paid + Case</u>
(5)	Indemnity Losses at Latest Month - Industry Total (Section I-D, Exhibit 1)	257,184,694	374,558,611
(6)	Indemnity Loss Development Factor to 252 Months (Section I-D, Exhibit 1)	1.780	1.279
(7)	Tail Factor 252 Months to Ultimate (Section I-D, Exhibit 1)	1.036	1.015
(8)	Factor to Adjust for Escalated Benefits (Section I-D, Exhibit 1)	1.045	1.000
(9)	Estimated Ultimate Indemnity Loss = [(5) x (6) x (7) x (8)]	495,812,401	486,241,283
(10)	Annual Indemnity Loss Trend (Section I-D, Exhibit 4)	0.008	0.008
(11)	Indemnity Loss Trend Factor to 7/1/2024	1.037	1.037
(12)	Estimated Indemnity Losses Trended = [(9) x (11)]	514,275,482	504,347,954
(13)	Estimated Benefit Change Factor Prior to 1/1/2023 (Section I-D, Exhibit 3)	1.065	1.065
(14)	On Level Losses = [(12) x (13)]	547,699,282	537,126,544
(15)	Estimated Benefit Change Factor Subsequent to 1/1/2023 (Section I-D, Exhibit 3)	1.015	1.015
(16)	On-Level Incurred Losses Projected to Prospective Effective Period = [(14) x (15)]	555,701,739	544,974,522

Medical Losses

(17)	Medical Losses at Latest Month - Industry Total (Section I-D, Exhibit 1)	157,145,731	224,531,354
(18)	Medical Loss Development Factor to 252 Months (Section I-D, Exhibit 1)	1.252	0.965
(19)	Tail Factor 252 Months to Ultimate (Section I-D, Exhibit 1)	1.073	0.980
(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)]	211,059,093	212,296,910
(22)	Annual Medical Loss Trend (Section I-D, Exhibit 4)	-0.002	-0.002
(23)	Medical Loss Trend Factor to 7/1/2024	0.990	0.990
(24)	Estimated Medical Losses Trended = [(21) x (23)]	208,982,040	210,207,676
(25)	Estimated Benefit Change Factor Prior to 1/1/2023 (Section I-D, Exhibit 3)	1.000	1.000
(26)	On Level Losses = [(24) x (25)]	208,982,040	210,207,676
(27)	Estimated Benefit Change Factor Subsequent to 1/1/2023 (Section I-D, Exhibit 3)	1.000	1.000
(28)	On-Level Incurred Losses Projected to Prospective Effective Period = [(26) x (27)]	208,982,040	210,207,676

Total Combined Medical and Indemnity Losses

(29)	Total Estimated Ultimate Losses Trended and On Level = [(16) + (28)]	764,683,779	755,182,198
(30)	Average On-Level Incurred Losses Projected to Prospective Effective Period	759,932,989	

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Section I - Rate Recommendation
 Subsection D - Loss Development Summary
 7/1/2023

Section I - D
 Exhibit 1

Summary of Estimated Ultimate Losses

Paid Loss Development Method

Policy Year (1)	Benefit Type (2)	Paid Losses at 12/31/21 (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)
2018	Indemnity	358,854,892	1.314	471,417,656	1.036	1.045	510,435,654
2018	Medical	187,001,232	1.162	217,314,985	1.073	1.000	233,205,499
2018	Total	545,856,124		688,732,641			743,641,153
2019	Indemnity	257,184,694	1.780	457,912,213	1.036	1.045	495,812,401
2019	Medical	157,145,731	1.252	196,677,625	1.073	1.000	211,059,093
2019	Total	414,330,425		654,589,837			706,871,493

Paid Plus Case Loss Development Method

Policy Year (9)	Benefit Type (10)	Paid Plus Case Losses at 12/31/21 (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)
2018	Indemnity	447,380,183	1.112	497,697,296	1.015	1.000	505,041,225
2018	Medical	233,846,055	0.946	221,228,169	0.980	1.000	216,854,269
2018	Total	681,226,238		718,925,465			721,895,494
2019	Indemnity	374,558,611	1.279	479,170,729	1.015	1.000	486,241,283
2019	Medical	224,531,354	0.965	216,578,889	0.980	1.000	212,296,910
2019	Total	599,089,965		695,749,617			698,538,192

Notes:

Policy Year 2019 excludes a single large loss with a Calendar Year change in excess of \$10 million from the estimation of loss development factors. This single loss is included in the base for estimation of ultimate losses.

(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.

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Section I - Rate Recommendation
 Subsection D - Premium Summary
 7/1/2023

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 12/31/2021	
	2018	2019
(1) Standard Earned Premium plus Adjusted ARAP Premium	1,257,191,166	1,220,866,284
(2) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.038	1.034
(3) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.000	0.997
(4) Composite Adjustment Factor = (2) x (3)	1.039	1.032
(5) Adjusted Standard Earned Premium plus ARAP = (1) x (4)	1,305,632,842	1,259,536,374
(6) Cumulative Premium Development Factor to Ultimate (see Section III-A, Exhibit 1, Page 2)	1.000	0.999
(7) Rate On-Level Factor	0.834	0.900
(8) Factor to Remove Expense Constant	0.962	0.960
(9) Adjusted On-Level Standard Earned Premium plus Adjusted ARAP at Ultimate = (5) x (6) x (7) x (8)	1,046,411,348	1,086,333,438

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.

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Section I - Rate Recommendation
 Subsection D - Benefit Change Adjustments Summary
 7/1/2023

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
1/1/2023	Prosp. Eff. Period					1.015	1.000	
PY 2018	1/1/2023					1.075	1.000	
PY 2019	1/1/2023					1.065	1.000	
PY 2005	Prosp. Eff. Period	1.128	1.152	1.263	1.094	1.201	1.032	
PY 2006	Prosp. Eff. Period	1.122	1.144	1.244	1.090	1.188	1.032	
PY 2007	Prosp. Eff. Period	1.116	1.134	1.227	1.085	1.176	1.032	
PY 2008	Prosp. Eff. Period	1.109	1.125	1.209	1.080	1.162	1.024	
PY 2009	Prosp. Eff. Period	1.107	1.122	1.203	1.078	1.158	1.002	
PY 2010	Prosp. Eff. Period	1.108	1.123	1.204	1.078	1.159	1.000	
PY 2011	Prosp. Eff. Period	1.104	1.117	1.194	1.076	1.151	1.000	
PY 2012	Prosp. Eff. Period	1.099	1.110	1.181	1.072	1.141	1.000	
PY 2013	Prosp. Eff. Period	1.096	1.107	1.175	1.071	1.137	1.000	
PY 2014	Prosp. Eff. Period	1.091	1.103	1.168	1.068	1.130	1.000	
PY 2015	Prosp. Eff. Period	1.079	1.096	1.156	1.065	1.121	1.000	
PY 2016	Prosp. Eff. Period	1.073	1.089	1.144	1.060	1.112	1.000	
PY 2017	Prosp. Eff. Period	1.066	1.081	1.131	1.055	1.102	1.000	
PY 2018	Prosp. Eff. Period	1.059	1.072	1.117	1.049	1.091	1.000	
PY 2019	Prosp. Eff. Period	1.052	1.063	1.104	1.044	1.081	1.000	
PY 2020	Prosp. Eff. Period	1.043	1.053	1.088	1.036	1.068	1.000	
PY 2018	CPY 2019_07	1.011	1.013	1.020	1.009		1.000	
PY 2019	CPY 2020_07	1.016	1.020	1.031	1.014		1.000	
PY 2020	CPY 2021_07	1.026	1.032	1.054	1.022		1.000	
CPY 2019_07	Prosp. Eff. Period							1.050
CPY 2020_07	Prosp. Eff. Period							1.037
CPY 2021_07	Prosp. Eff. Period							1.017
CPY 2008_09	Prosp. Eff. Period							1.105
Prior Eff. Period	Prosp. Eff. Period					1.040	1.000	1.027

Notes:

From Section IV-A, Exhibit 1.

1/1/2023 refers to a point in time. All other time periods refer to Policy Years.

Example: PY 2012 to Prosp. Eff. Period for Permanent Partial = $1.181 = 1.276 / 1.080$,

where 1.276 is the Index Factor for Prosp. Eff. Period and 1.08 is the Index Factor for PY 2012 for Indemnity Permanent Partial, from Exhibit 2.

Prior Eff. Period uses benefit level projections from prior filing.

Paid Trend Summary

	Indemnity				Medical								SAWW		
	Severity		Frequency		Lost-Time Medical				Medical Only				Trend	Credibility	
	Trend	Credibility	Trend	Credibility	Trend	Credibility	Trend	Credibility	Trend	Credibility	Trend	Credibility			
(1) Massachusetts Trend															
5 Year	3.0%	100.0%	-2.3%	28.2%	2.1%	100.0%	-2.3%	28.2%	2.5%	90.9%	-3.7%	19.7%	6.8%	59.0%	
6 Year	2.4%	100.0%	-2.3%	42.1%	1.3%	74.2%	-2.3%	42.1%	2.9%	100.0%	-3.8%	29.1%	6.0%	68.7%	
7 Year	2.8%	100.0%	-2.1%	55.7%	2.2%	62.5%	-2.1%	55.7%	2.4%	100.0%	-3.9%	38.0%	5.4%	76.4%	
8 Year	2.7%	100.0%	-2.0%	68.4%	2.2%	77.4%	-2.0%	68.4%	2.3%	100.0%	-3.9%	46.7%	5.0%	80.6%	
9 Year	2.5%	100.0%	-2.0%	80.5%	2.0%	89.6%	-2.0%	80.5%	2.4%	100.0%	-4.2%	48.5%	4.7%	85.2%	
10 Year	2.7%	100.0%	-2.1%	89.2%	2.2%	100.0%	-2.1%	89.2%	2.4%	100.0%	-4.4%	50.7%	4.4%	88.5%	
(2) Selected Trend	3.0%		-2.1%		2.1%		-2.1%		2.9%		-4.4%		4.4%		
(3) 15 Year Massachusetts Complement of Credibility	2.4%		-1.8%		2.0%		-1.8%		2.0%		-4.2%		3.4%		
(4) Credibility Weighted Trend	3.0%		-2.1%		2.1%		-2.1%		2.9%		-4.3%		4.3%		

	Lost-Time Medical	Medical Only
(5) Medical Loss Trend	0.0%	-1.6%
(6) Fraction of Total Medical	88.0%	12.0%
(7) Total Medical Loss Trend	-0.2%	

	Indemnity	Medical
(8) Total Loss Trend	0.8%	-0.2%
(9) SAWW Trend	4.3%	4.3%
(10) Total Net Trend	-3.3%	-4.3%

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) = $\{ [1.0 + (8)] / [1.0 + (9)] \} - 1.0$

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Section I - Rate Recommendation
Subsection D - Expenses Summary
7/1/2023

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	5.5%
(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	5.5%
(6)	Total Loss Adjustment Expense Ratio (LAE / Loss)	18.3%

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, Page 1.

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Section I - Rate Recommendation
 Subsection E - Reflecting the Impact of Large Deductibles
 7/1/2023

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	84.9%		
(2) Fixed Expense Ratio	5.5%		
(3) Permissible Loss and LAE Ratio = [(1) - (2)]	79.4%		
(4) Loss Ratio Differential, r	1.281		
(5) Market Weight - w_x		19%	81%
(6) Implied Permissible Loss and LAE Ratio		0.965	0.754
(7) Implied Permissible Loss, LAE, and Fixed Expense Ratio		1.020	0.809
(8) Implied Permissible Loss, LAE, and Fixed Expense Ratio Differential	1.262		
(9) Variable Expense Ratio	20.2%	9.9%	22.6%
(10) Underwriting Profit Provision	-5.13%		
(11) Implied Rate Factor Equivalent		1.072	0.980
(12) Implied Rate Differential, d	1.093		
(13) Residual Market Rate equivalent, Q_{rm}	1.074		
(14) Proportion of Total Voluntary Assessable Premium Not from Large Deductibles, u	0.734		
(15) Factor to Remove the Large Deductible Contribution to the Residual Market Subsidy	0.996		

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)
2014	1,077	668	62.0%	242	159	65.9%	835	509	60.9%	1.082
2015	1,150	654	56.9%	262	163	62.0%	887	492	55.4%	1.118
2016	1,198	659	55.0%	267	175	65.3%	930	485	52.1%	1.255
2017	1,270	706	55.6%	273	171	62.5%	997	536	53.8%	1.163
2018	1,254	681	54.3%	259	163	63.1%	996	518	52.0%	1.214
2019	1,218	599	49.2%	235	155	65.8%	983	444	45.2%	1.457
2020	1,174	416	35.5%	219	103	47.2%	956	313	32.8%	1.440
(12) Average of 2018 and 2019				247	159	64.4%	989	481	48.6%	1.325
(13) Average All Years				251	156	62.0%	940	471	50.1%	1.238
(14) Selected Loss Ratio Differential										1.281

Notes:
 Data as of 12/31/2021 from Aggregate Financial Database, excluding large deductible policies.

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Residual Market Weight "w_{rm}"
 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 _{rm} " = (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)
2020	1179	45	44	219	300	878	0.191	0.746
2021	1198	39	39	210	333	864	0.189	0.722
Selected	1188	42	41	215	316	871	0.190	0.734

Note:

Refers to the prospective effective period from 7/1/2023 through 7/1/2024.

(2),(3),(4),(5),(6): Massachusetts Workers' Compensation Assigned Risk Pool Special Bulletin No. SB-11-21 for Calendar Year 2020 and Special Bulletin No. SB-09-22 for Calendar Year 2021.

(2),(3),(4),(5),(6),(7): Selected based on two-year average of Calendar Year 2020 and 2021.

II 000011 STIP

Section II - Loss Development
 Subsection A - Loss Development Summary
 7/1/2023

Section II - A
 Exhibit 1

Summary of Estimated Ultimate Losses Industry

Paid Loss Development Method

Policy Year (1)	Benefit Type (2)	Paid Losses at 12/31/21 (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)
2018	Indemnity	358,854,892	1.314	471,417,656	1.036	1.045	510,435,654
2018	Medical	187,001,232	1.162	217,314,985	1.073	1.000	233,205,499
2018	Total	545,856,124		688,732,641			743,641,153
2019	Indemnity	257,184,694	1.780	457,912,213	1.036	1.045	495,812,401
2019	Medical	157,145,731	1.252	196,677,625	1.073	1.000	211,059,093
2019	Total	414,330,425		654,589,837			706,871,493

Paid Plus Case Loss Development Method

Policy Year (9)	Benefit Type (10)	Paid Plus Case Losses at 12/31/21 (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)
2018	Indemnity	447,380,183	1.112	497,697,296	1.015	1.000	505,041,225
2018	Medical	233,846,055	0.946	221,228,169	0.980	1.000	216,854,269
2018	Total	681,226,238		718,925,465			721,895,494
2019	Indemnity	374,558,611	1.279	479,170,729	1.015	1.000	486,241,283
2019	Medical	224,531,354	0.965	216,578,889	0.980	1.000	212,296,910
2019	Total	599,089,965		695,749,617			698,538,192

Notes:

Policy Year 2019 excludes a single large loss with a Calendar Year change in excess of \$10 million from the estimation of loss development factors. This single loss is included in the base for estimation of ultimate losses.

(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	1.801	1.355	1.153	1.053	1.024	1.009	1.010	1.005	1.003	1.004	1.006	1.002	1.002	1.002	1.002	1.003	1.002	1.002	1.001
Cumulative Factor to 252	3.207	1.780	1.314	1.139	1.082	1.056	1.046	1.035	1.031	1.027	1.023	1.017	1.014	1.013	1.011	1.008	1.005	1.003	1.001
(2) Medical Paid Losses																			
2 Year Average	1.280	1.077	1.037	1.016	1.014	1.005	1.009	1.009	1.008	1.006	1.004	1.001	1.009	1.007	1.004	1.003	1.005	1.006	1.008
Cumulative Factor to 252	1.602	1.252	1.162	1.120	1.102	1.087	1.081	1.072	1.062	1.053	1.047	1.043	1.042	1.033	1.026	1.021	1.019	1.014	1.008
(3) Indemnity Paid Plus Case Losses																			
5 Year Average	1.450	1.150	1.060	1.021	1.007	1.002	1.000	1.006	1.002	1.002	1.002	1.001	1.001	1.002	1.001	1.001	1.001	1.000	1.001
Cumulative Factor to 252	1.855	1.279	1.112	1.049	1.027	1.020	1.018	1.018	1.013	1.011	1.009	1.007	1.006	1.005	1.003	1.002	1.001	1.001	1.001
(4) Medical Paid Plus Case Losses																			
5 Year Average	1.072	1.020	0.998	0.996	0.994	0.998	1.002	0.987	1.001	0.994	1.002	0.999	1.000	0.999	0.994	0.995	0.996	0.994	0.995
Cumulative Factor to 252	1.034	0.965	0.946	0.948	0.951	0.957	0.959	0.957	0.969	0.968	0.974	0.972	0.973	0.974	0.974	0.980	0.985	0.989	0.995

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

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Section II - Loss Development
 Subsection B - Policy Year Data
 7/1/2023

Section II - B
 Exhibit 2
 Page 1

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

Policy Year	Losses (in 000's)		Loss Development Factor	Policy Year	Losses (in 000's)		Loss Development Factor
	Evaluated at Month	Evaluated at Month			Evaluated at Month	Evaluated at Month	
	24	36			144	156	
2015	134,978	251,451	1.863	2005	331,659	333,017	1.004
2016	133,963	254,308	1.898	2006	324,293	325,527	1.004
2017	140,625	264,007	1.877	2007	336,118	337,086	1.003
2018	144,556	258,035	1.785	2008	326,517	327,754	1.004
2019	141,402	257,008	1.818	2009	315,043	317,928	1.009
2 Yr Average			1.801	2 Yr Average			1.006
5 Yr Average			1.848	5 Yr Average			1.005
Selected Average			1.801	Selected Average			1.006
	36	48			156	168	
2014	246,269	333,986	1.356	2004	338,374	339,456	1.003
2015	251,451	334,318	1.330	2005	333,017	333,650	1.002
2016	254,308	330,448	1.299	2006	325,527	326,629	1.003
2017	264,007	348,999	1.322	2007	337,086	337,594	1.002
2018	258,035	358,349	1.389	2008	327,754	328,705	1.003
2 Yr Average			1.355	2 Yr Average			1.002
5 Yr Average			1.339	5 Yr Average			1.003
Selected Average			1.355	Selected Average			1.002
	48	60			168	180	
2013	294,625	335,498	1.139	2003	306,264	306,608	1.001
2014	333,986	380,253	1.139	2004	339,456	339,902	1.001
2015	334,318	375,187	1.122	2005	333,650	334,279	1.002
2016	330,448	374,706	1.134	2006	326,629	327,530	1.003
2017	348,999	409,257	1.173	2007	337,594	337,764	1.001
2 Yr Average			1.153	2 Yr Average			1.002
5 Yr Average			1.141	5 Yr Average			1.002
Selected Average			1.153	Selected Average			1.002
	60	72			180	192	
2012	323,696	345,266	1.067	2002	288,672	288,973	1.001
2013	335,498	350,903	1.046	2003	306,608	307,440	1.003
2014	380,253	396,979	1.044	2004	339,902	341,415	1.004
2015	375,187	392,662	1.047	2005	334,279	335,329	1.003
2016	374,706	397,059	1.060	2006	327,530	327,926	1.001
2 Yr Average			1.053	2 Yr Average			1.002
5 Yr Average			1.053	5 Yr Average			1.003
Selected Average			1.053	Selected Average			1.002
	72	84			192	204	
2011	342,822	350,176	1.021	2001	271,384	271,584	1.001
2012	345,266	355,189	1.029	2002	288,973	289,461	1.002
2013	350,903	360,538	1.027	2003	307,440	308,144	1.002
2014	396,979	402,548	1.014	2004	341,415	342,156	1.002
2015	392,662	406,282	1.035	2005	335,329	336,121	1.002
2 Yr Average			1.024	2 Yr Average			1.002
5 Yr Average			1.025	5 Yr Average			1.002
Selected Average			1.024	Selected Average			1.002
	84	96			204	216	
2010	330,041	333,718	1.011	2000	266,926	267,149	1.001
2011	350,176	355,601	1.015	2001	271,584	272,190	1.002
2012	355,189	360,397	1.015	2002	289,461	289,766	1.001
2013	360,538	363,106	1.007	2003	308,144	308,771	1.002
2014	402,548	407,048	1.011	2004	342,156	343,449	1.004
2 Yr Average			1.009	2 Yr Average			1.003
5 Yr Average			1.012	5 Yr Average			1.002
Selected Average			1.009	Selected Average			1.003
	96	108			216	228	
2009	308,736	310,836	1.007	1999	238,583	238,739	1.001
2010	333,718	335,233	1.005	2000	267,149	267,396	1.001
2011	355,601	359,939	1.012	2001	272,190	272,152	1.000
2012	360,397	363,442	1.008	2002	289,766	290,424	1.002
2013	363,106	367,645	1.013	2003	308,771	309,411	1.002
2 Yr Average			1.010	2 Yr Average			1.002
5 Yr Average			1.009	5 Yr Average			1.001
Selected Average			1.010	Selected Average			1.002
	108	120			228	240	
2008	321,000	322,911	1.006	1998	225,443	226,160	1.003
2009	310,836	312,676	1.006	1999	238,739	239,056	1.001
2010	335,233	337,518	1.007	2000	267,396	267,683	1.001
2011	359,939	362,637	1.007	2001	272,152	272,320	1.001
2012	363,442	364,175	1.002	2002	290,424	291,449	1.004
2 Yr Average			1.005	2 Yr Average			1.002
5 Yr Average			1.006	5 Yr Average			1.002
Selected Average			1.005	Selected Average			1.002
	120	132			240	252	
2007	333,013	334,293	1.004	1997	209,774	210,135	1.002
2008	322,911	325,771	1.009	1998	226,160	226,492	1.001
2009	312,676	313,605	1.003	1999	239,056	239,328	1.001
2010	337,518	338,616	1.003	2000	267,683	268,149	1.002
2011	362,637	363,956	1.004	2001	272,320	272,484	1.001
2 Yr Average			1.003	2 Yr Average			1.001
5 Yr Average			1.005	5 Yr Average			1.001
Selected Average			1.003	Selected Average			1.001
	132	144					
2006	323,358	324,293	1.003				
2007	334,293	336,118	1.005				
2008	325,771	326,517	1.002				
2009	313,605	315,043	1.005				
2010	338,616	339,532	1.003				
2 Yr Average			1.004				
5 Yr Average			1.004				
Selected Average			1.004				

Notes:
 Losses from Aggregate Financial Data.

II 000014 STIP

Section II - Loss Development
 Subsection B - Policy Year Data
 7/1/2023

Section II - B
 Exhibit 2
 Page 2

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	
2015	126,708	164,287	1.297	2005	168,577	169,857	1.008
2016	129,008	162,811	1.262	2006	172,248	174,791	1.015
2017	132,279	171,979	1.300	2007	172,569	173,365	1.005
2018	137,957	172,359	1.249	2008	159,320	159,821	1.003
2019	117,349	153,878	1.311	2009	160,748	161,589	1.005
2 Yr Average			1.280	2 Yr Average			1.004
5 Yr Average			1.284	5 Yr Average			1.007
Selected Average			1.280	Selected Average			1.004
	36	48			156	168	
2014	166,068	181,331	1.092	2004	170,586	171,858	1.007
2015	164,287	178,683	1.088	2005	169,857	170,868	1.006
2016	162,811	176,948	1.087	2006	174,791	177,430	1.015
2017	171,979	184,125	1.071	2007	173,365	173,001	0.998
2018	172,359	186,723	1.083	2008	159,821	160,376	1.003
2 Yr Average			1.077	2 Yr Average			1.001
5 Yr Average			1.084	5 Yr Average			1.006
Selected Average			1.077	Selected Average			1.001
	48	60			168	180	
2013	160,964	165,520	1.028	2003	157,262	158,282	1.006
2014	181,331	188,175	1.038	2004	171,858	172,625	1.004
2015	178,683	183,985	1.030	2005	170,868	172,108	1.007
2016	176,948	182,142	1.029	2006	177,430	180,120	1.015
2017	184,125	192,516	1.046	2007	173,001	173,523	1.003
2 Yr Average			1.037	2 Yr Average			1.009
5 Yr Average			1.034	5 Yr Average			1.007
Selected Average			1.037	Selected Average			1.009
	60	72			180	192	
2012	166,130	168,321	1.013	2002	146,648	147,943	1.009
2013	165,520	168,364	1.017	2003	158,282	159,396	1.007
2014	188,175	192,590	1.023	2004	172,625	173,737	1.006
2015	183,985	186,868	1.016	2005	172,108	173,040	1.005
2016	182,142	185,187	1.017	2006	180,120	181,505	1.008
2 Yr Average			1.016	2 Yr Average			1.007
5 Yr Average			1.017	5 Yr Average			1.007
Selected Average			1.016	Selected Average			1.007
	72	84			192	204	
2011	170,388	172,418	1.012	2001	128,835	129,888	1.008
2012	168,321	169,928	1.010	2002	147,943	148,981	1.007
2013	168,364	169,822	1.009	2003	159,396	160,260	1.005
2014	192,590	194,572	1.010	2004	173,737	174,522	1.005
2015	186,868	190,144	1.018	2005	173,040	173,760	1.004
2 Yr Average			1.014	2 Yr Average			1.004
5 Yr Average			1.012	5 Yr Average			1.006
Selected Average			1.014	Selected Average			1.004
	84	96			204	216	
2010	164,441	166,607	1.013	2000	122,313	123,664	1.011
2011	172,418	174,633	1.013	2001	129,888	130,771	1.007
2012	169,928	171,899	1.012	2002	148,981	150,294	1.009
2013	169,822	170,326	1.003	2003	160,260	160,851	1.004
2014	194,572	196,047	1.008	2004	174,522	174,811	1.002
2 Yr Average			1.005	2 Yr Average			1.003
5 Yr Average			1.010	5 Yr Average			1.006
Selected Average			1.005	Selected Average			1.003
	96	108			216	228	
2009	156,740	158,007	1.008	1999	116,205	117,206	1.009
2010	166,607	168,686	1.012	2000	123,664	124,631	1.008
2011	174,633	176,645	1.012	2001	130,771	131,600	1.006
2012	171,899	174,068	1.013	2002	150,294	151,323	1.007
2013	170,326	171,302	1.006	2003	160,851	161,312	1.003
2 Yr Average			1.009	2 Yr Average			1.005
5 Yr Average			1.010	5 Yr Average			1.006
Selected Average			1.009	Selected Average			1.005
	108	120			228	240	
2008	156,916	157,632	1.005	1998	111,562	112,370	1.007
2009	158,007	159,067	1.007	1999	117,206	118,081	1.007
2010	168,686	170,174	1.009	2000	124,631	125,997	1.011
2011	176,645	178,474	1.010	2001	131,600	132,422	1.006
2012	174,068	175,423	1.008	2002	151,323	152,108	1.005
2 Yr Average			1.009	2 Yr Average			1.006
5 Yr Average			1.008	5 Yr Average			1.007
Selected Average			1.009	Selected Average			1.006
	120	132			240	252	
2007	170,346	171,562	1.007	1997	98,449	98,900	1.005
2008	157,632	158,493	1.005	1998	112,370	112,918	1.005
2009	159,067	159,962	1.006	1999	118,081	118,927	1.007
2010	170,174	171,247	1.006	2000	125,997	127,345	1.011
2011	178,474	180,334	1.010	2001	132,422	133,137	1.005
2 Yr Average			1.008	2 Yr Average			1.008
5 Yr Average			1.007	5 Yr Average			1.007
Selected Average			1.008	Selected Average			1.008
	132	144					
2006	169,842	172,248	1.014				
2007	171,562	172,569	1.006				
2008	158,493	159,320	1.005				
2009	159,962	160,748	1.005				
2010	171,247	172,402	1.007				
2 Yr Average			1.006				
5 Yr Average			1.007				
Selected Average			1.006				

Notes:
 Losses from Aggregate Financial Data.

II 000015 STIP

Section II - Loss Development
 Subsection B - Policy Year Data
 7/1/2023

Section II - B
 Exhibit 3
 Page 1

Policy Year Aggregate Financial Data Calculation of Indemnity 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	
2015	250,030	350,206	1.401	2005	337,550	338,936	1.004
2016	243,872	349,444	1.433	2006	329,762	329,910	1.000
2017	253,293	372,535	1.471	2007	340,585	341,036	1.001
2018	255,543	373,851	1.463	2008	333,047	333,160	1.000
2019	251,733	373,705	1.485	2009	322,810	323,653	1.003
2 Yr Average			1.474	2 Yr Average			1.001
5 Yr Average			1.450	5 Yr Average			1.002
Selected Average			1.450	Selected Average			1.002
	36	48			156	168	
2014	352,317	397,448	1.128	2004	345,684	346,166	1.001
2015	350,206	397,872	1.136	2005	338,936	339,566	1.002
2016	349,444	396,395	1.134	2006	329,910	329,766	1.000
2017	372,535	430,706	1.156	2007	341,036	340,669	0.999
2018	373,851	446,780	1.195	2008	333,160	333,962	1.002
2 Yr Average			1.176	2 Yr Average			1.001
5 Yr Average			1.150	5 Yr Average			1.001
Selected Average			1.150	Selected Average			1.001
	48	60			168	180	
2013	345,728	365,655	1.058	2003	311,102	311,168	1.000
2014	397,448	420,136	1.057	2004	346,166	346,681	1.001
2015	397,872	416,363	1.046	2005	339,566	339,873	1.001
2016	396,395	418,570	1.056	2006	329,766	330,028	1.001
2017	430,706	467,150	1.085	2007	340,669	340,757	1.000
2 Yr Average			1.070	2 Yr Average			1.001
5 Yr Average			1.060	5 Yr Average			1.001
Selected Average			1.060	Selected Average			1.001
	60	72			180	192	
2012	357,497	366,468	1.025	2002	294,138	294,450	1.001
2013	365,655	373,398	1.021	2003	311,168	312,153	1.003
2014	420,136	423,602	1.008	2004	346,681	347,968	1.004
2015	416,363	424,280	1.019	2005	339,873	340,430	1.002
2016	418,570	432,360	1.033	2006	330,028	330,354	1.001
2 Yr Average			1.026	2 Yr Average			1.001
5 Yr Average			1.021	5 Yr Average			1.002
Selected Average			1.021	Selected Average			1.002
	72	84			192	204	
2011	364,926	366,585	1.005	2001	274,018	274,280	1.001
2012	366,468	371,695	1.014	2002	294,450	294,966	1.002
2013	373,398	374,723	1.004	2003	312,153	312,028	1.000
2014	423,602	426,347	1.006	2004	347,968	348,310	1.001
2015	424,280	427,315	1.007	2005	340,430	341,073	1.002
2 Yr Average			1.007	2 Yr Average			1.001
5 Yr Average			1.007	5 Yr Average			1.001
Selected Average			1.007	Selected Average			1.001
	84	96			204	216	
2010	340,930	341,673	1.002	2000	270,712	270,856	1.001
2011	366,585	367,585	1.003	2001	274,280	274,438	1.001
2012	371,695	371,541	1.000	2002	294,966	295,127	1.001
2013	374,723	374,030	0.998	2003	312,028	312,599	1.002
2014	426,347	428,820	1.006	2004	348,310	348,886	1.002
2 Yr Average			1.002	2 Yr Average			1.002
5 Yr Average			1.002	5 Yr Average			1.001
Selected Average			1.002	Selected Average			1.001
	96	108			216	228	
2009	321,138	319,973	0.996	1999	241,669	241,772	1.000
2010	341,673	342,042	1.001	2000	270,856	270,956	1.000
2011	367,585	367,880	1.001	2001	274,438	274,224	0.999
2012	371,541	371,171	0.999	2002	295,127	295,665	1.002
2013	374,030	374,694	1.002	2003	312,599	313,081	1.002
2 Yr Average			1.000	2 Yr Average			1.002
5 Yr Average			1.000	5 Yr Average			1.001
Selected Average			1.000	Selected Average			1.001
	108	120			228	240	
2008	328,397	331,121	1.008	1998	229,904	229,846	1.000
2009	319,973	321,726	1.005	1999	241,772	241,729	1.000
2010	342,042	343,458	1.004	2000	270,956	271,208	1.001
2011	367,880	369,660	1.005	2001	274,224	273,988	0.999
2012	371,171	373,063	1.005	2002	295,665	295,772	1.000
2 Yr Average			1.005	2 Yr Average			1.000
5 Yr Average			1.006	5 Yr Average			1.000
Selected Average			1.006	Selected Average			1.000
	120	132			240	252	
2007	339,741	340,689	1.003	1997	213,240	213,489	1.001
2008	331,121	332,165	1.003	1998	229,846	230,141	1.001
2009	321,726	320,829	0.997	1999	241,729	241,862	1.001
2010	343,458	344,470	1.003	2000	271,208	271,279	1.000
2011	369,660	371,147	1.004	2001	273,988	273,910	1.000
2 Yr Average			1.003	2 Yr Average			1.000
5 Yr Average			1.002	5 Yr Average			1.001
Selected Average			1.002	Selected Average			1.001
	132	144					
2006	329,156	329,762	1.002				
2007	340,689	340,585	1.000				
2008	332,165	333,047	1.003				
2009	320,829	322,810	1.006				
2010	344,470	344,172	0.999				
2 Yr Average			1.003				
5 Yr Average			1.002				
Selected Average			1.002				

Notes:
 Losses from Aggregate Financial Data.

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Section II - Loss Development
 Subsection B - Policy Year Data
 7/1/2023

Section II - B
 Exhibit 3
 Page 2

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
<hr/>							
24 36							
2015	209,227	226,561	1.083	2005	190,313	192,613	1.012
2016	209,540	219,835	1.049	2006	198,297	199,584	1.006
2017	211,950	231,458	1.092	2007	189,914	188,256	0.991
2018	214,431	228,929	1.068	2008	172,189	172,144	1.000
2019	193,445	206,883	1.069	2009	179,294	179,056	0.999
2 Yr Average			1.069	2 Yr Average			0.999
5 Yr Average			1.072	5 Yr Average			1.002
Selected Average			1.072	Selected Average			1.002
<hr/>							
36 48							
2014	237,260	240,904	1.015	2004	194,192	194,158	1.000
2015	226,561	231,441	1.022	2005	192,613	192,631	1.000
2016	219,835	226,908	1.032	2006	199,584	201,179	1.008
2017	231,458	233,497	1.009	2007	188,256	186,036	0.988
2018	228,929	233,532	1.020	2008	172,144	171,876	0.998
2 Yr Average			1.014	2 Yr Average			0.993
5 Yr Average			1.020	5 Yr Average			0.999
Selected Average			1.020	Selected Average			0.999
<hr/>							
48 60							
2013	198,797	200,174	1.007	2003	175,820	176,741	1.005
2014	240,904	241,360	1.002	2004	194,158	194,828	1.003
2015	231,441	227,844	0.984	2005	192,631	191,723	0.995
2016	226,908	224,351	0.989	2006	201,179	200,477	0.997
2017	233,497	235,883	1.010	2007	186,036	185,532	0.997
2 Yr Average			0.999	2 Yr Average			0.987
5 Yr Average			0.998	5 Yr Average			1.000
Selected Average			0.998	Selected Average			1.000
<hr/>							
60 72							
2012	217,150	214,637	0.988	2002	170,097	169,687	0.998
2013	200,174	200,669	1.002	2003	176,741	178,011	1.007
2014	241,360	240,824	0.998	2004	194,828	194,472	0.998
2015	227,844	226,489	0.994	2005	191,723	191,536	0.999
2016	224,351	224,018	0.999	2006	200,477	199,521	0.995
2 Yr Average			0.996	2 Yr Average			0.997
5 Yr Average			0.996	5 Yr Average			0.999
Selected Average			0.996	Selected Average			0.999
<hr/>							
72 84							
2011	210,441	211,592	1.005	2001	151,840	151,608	0.998
2012	214,637	210,152	0.979	2002	169,687	169,579	0.999
2013	200,669	198,983	0.992	2003	178,011	174,126	0.978
2014	240,824	239,042	0.993	2004	194,472	193,438	0.995
2015	226,489	226,598	1.000	2005	191,536	191,585	1.000
2 Yr Average			0.997	2 Yr Average			0.997
5 Yr Average			0.994	5 Yr Average			0.994
Selected Average			0.994	Selected Average			0.994
<hr/>							
84 96							
2010	199,870	201,999	1.011	2000	148,926	148,550	0.997
2011	211,592	210,622	0.995	2001	151,608	151,860	1.002
2012	210,152	210,518	1.002	2002	169,579	169,301	0.998
2013	198,983	196,754	0.989	2003	174,126	173,052	0.994
2014	239,042	237,838	0.995	2004	193,438	189,830	0.981
2 Yr Average			0.992	2 Yr Average			0.988
5 Yr Average			0.998	5 Yr Average			0.995
Selected Average			0.998	Selected Average			0.995
<hr/>							
96 108							
2009	185,809	186,118	1.002	1999	140,702	141,056	1.003
2010	201,999	202,503	1.002	2000	148,550	148,953	1.003
2011	210,622	210,473	0.999	2001	151,860	151,163	0.995
2012	210,518	212,071	1.007	2002	169,301	167,717	0.991
2013	196,754	196,394	0.998	2003	173,052	171,358	0.990
2 Yr Average			1.003	2 Yr Average			0.990
5 Yr Average			1.002	5 Yr Average			0.996
Selected Average			1.002	Selected Average			0.996
<hr/>							
108 120							
2008	171,869	171,380	0.997	1998	137,373	134,066	0.976
2009	186,118	183,132	0.984	1999	141,056	141,537	1.003
2010	202,503	197,628	0.976	2000	148,953	148,611	0.998
2011	210,473	209,800	0.997	2001	151,163	150,527	0.996
2012	212,071	208,227	0.982	2002	167,717	167,094	0.996
2 Yr Average			0.989	2 Yr Average			0.996
5 Yr Average			0.987	5 Yr Average			0.994
Selected Average			0.987	Selected Average			0.994
<hr/>							
120 132							
2007	190,934	192,003	1.006	1997	107,355	107,352	1.000
2008	171,380	171,917	1.003	1998	134,066	133,947	0.999
2009	183,132	180,723	0.987	1999	141,537	140,118	0.990
2010	197,628	199,140	1.008	2000	148,611	146,970	0.989
2011	209,800	210,346	1.003	2001	150,527	150,270	0.998
2 Yr Average			1.005	2 Yr Average			0.994
5 Yr Average			1.001	5 Yr Average			0.995
Selected Average			1.001	Selected Average			0.995
<hr/>							
132 144							
2006	195,590	198,297	0.999				
2007	192,003	189,914	0.989				
2008	171,917	172,189	1.002				
2009	180,723	179,294	0.992				
2010	199,140	196,982	0.989				
2 Yr Average			0.991				
5 Yr Average			0.994				
Selected Average			0.994				

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		(4) 252 - Ult for PY	(5) Growth Factor	(6) Indicated 252 - Ult for PY
		Previous	Current			
1996	196,376,366		9,120,676,419			
1997	210,135,315	9,317,052,785	9,333,702,245	1.079	0.520	1.041
1998	226,492,043	9,543,837,560	9,557,641,889	1.061	0.580	1.035
1999	239,327,879	9,784,133,932	9,798,427,537	1.060	0.640	1.038
2000	268,148,995	10,037,755,416	10,049,030,428	1.042	0.730	1.031
2001	272,483,830	10,317,179,423	10,329,220,838	1.044	0.760	1.034
					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		(11) 252 - Ult for PY	(12) Growth Factor	(13) Indicated 252 - Ult for PY
		Previous	Current			
1996	96,219,682		2,928,963,739			
1997	98,899,548	3,025,183,421	3,035,302,766	1.102	0.760	1.078
1998	112,918,251	3,134,202,314	3,143,402,030	1.081	0.830	1.068
1999	118,926,703	3,256,320,281	3,265,744,304	1.079	0.870	1.069
2000	127,345,474	3,384,671,007	3,394,154,236	1.074	0.940	1.070
2001	133,136,936	3,521,499,710	3,532,321,634	1.081	1.000	1.081
					5yr average	1.073

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) = $1.000 + [(5) - 1.000] \times (6)$
- (12) = $1.000 + [(11) - (10)] / (9)$
- (13): From Page 3
- (14) = $1.000 + [(12) - 1.000] \times (13)$

Growth Factor Adjustment
 Indemnity Paid Losses

Policy Year (1)	Paid Losses (2)	Relative Development for Report Interval (3)					Dollar Development (4)					On-Level Dollar Development (5)				
		Prior to 2001	Prior to 2000	Prior to 1999	Prior to 1998	Prior to 1997	Prior to 2001	Prior to 2000	Prior to 1999	Prior to 1998	Prior to 1997	Prior to 2001	Prior to 2000	Prior to 1999	Prior to 1998	Prior to 1997
1972	62,767,213					0.013%					7,971					24,869
1973	73,759,346				0.011%	0.025%				8,033					23,213	49,738
1974	77,865,871			0.012%	0.022%	0.038%				16,961					46,425	74,606
1975	78,107,817		0.009%	0.023%	0.033%	0.051%			9,092	8,033				26,637	69,638	99,475
1976	94,145,927	0.010%	0.019%	0.035%	0.044%	0.063%		9,696	17,772	32,979	41,013	59,781	27,007	48,445	92,851	124,344
1977	109,594,217	0.021%	0.028%	0.047%	0.054%	0.076%		22,574	31,033	51,187	59,679	83,508	54,015	72,667	106,548	149,213
1978	154,813,691	0.031%	0.038%	0.058%	0.065%	0.089%		47,832	58,450	90,385	101,164	137,625	81,022	96,890	133,185	174,082
1979	179,429,626	0.041%	0.047%	0.070%	0.076%	0.102%		73,917	84,680	125,708	136,791	182,295	108,029	121,112	159,822	198,950
1980	199,752,841	0.051%	0.057%	0.082%	0.087%	0.114%		102,861	113,126	163,270	174,040	228,311	135,037	145,335	186,459	223,819
1981	237,008,170	0.062%	0.066%	0.093%	0.098%	0.127%		146,455	156,595	221,396	232,312	300,991	162,044	169,557	213,096	248,688
1982	260,515,583	0.072%	0.076%	0.105%	0.109%	0.140%		187,811	196,716	273,774	283,726	363,929	189,051	193,780	239,733	273,557
1983	293,478,029	0.082%	0.085%	0.117%	0.120%	0.152%		241,799	249,307	342,682	351,588	447,247	216,059	218,002	266,370	298,426
1984	355,837,967	0.093%	0.094%	0.128%	0.131%	0.165%		329,825	335,868	457,047	465,049	587,471	243,066	242,225	293,008	323,295
1985	438,534,312	0.103%	0.104%	0.140%	0.142%	0.178%		451,640	455,316	614,470	620,886	779,690	270,073	266,447	319,645	348,163
1986	552,105,171	0.113%	0.113%	0.152%	0.152%	0.190%		625,465	625,345	838,072	841,812	1,051,729	297,081	290,670	346,282	373,032
1987	695,660,221	0.124%	0.123%	0.163%	0.163%	0.203%		859,739	853,605	1,137,211	1,136,459	1,413,539	324,088	314,892	372,919	348,191
1988	772,012,181	0.134%	0.132%	0.175%	0.174%	0.216%		1,033,608	1,020,161	1,352,170	1,345,270	1,666,724	351,095	339,115	399,556	371,404
1989	802,368,271	0.144%	0.142%	0.187%	0.185%	0.229%		1,156,885	1,136,008	1,499,028	1,485,552	1,834,158	378,103	363,337	426,193	394,616
1990	728,654,947	0.154%	0.151%	0.199%	0.196%	0.241%		1,125,645	1,100,420	1,446,395	1,428,432	1,758,191	405,110	387,560	452,830	417,829
1991	488,888,984	0.165%	0.160%	0.210%	0.207%	0.254%		805,598	784,469	1,027,540	1,011,647	1,241,740	432,117	411,782	479,467	441,042
1992	303,138,664	0.175%	0.170%	0.222%	0.218%	0.267%		530,736	515,027	672,529	660,293	808,446	459,125	436,005	506,104	464,255
1993	246,118,632	0.185%	0.179%	0.234%	0.229%	0.279%		456,253	441,382	574,765	562,897	687,635	486,132	460,227	532,741	487,467
1994	197,907,758	0.196%	0.189%	0.245%	0.240%	0.292%		387,262	373,602	485,286	474,188	578,071	513,139	484,450	559,378	510,680
1995	201,060,384	0.206%	0.198%	0.257%	0.250%	0.305%		414,138	398,531	516,494	503,639	612,814	540,147	508,672	586,015	533,893
1996	187,578,951	0.216%	0.208%	0.269%	0.261%	0.317%		405,688	389,514	503,765	490,298	595,545	567,154	532,895	612,652	557,105
1997	195,823,310	0.227%	0.217%	0.280%	0.272%			443,686	425,117	548,772	533,175		594,161	557,117	639,289	580,318
1998	213,138,040	0.237%	0.227%	0.292%				504,867	482,824	622,181			621,169	581,340	665,926	
1999	228,123,554	0.247%	0.236%					563,858	538,303				648,176	605,562		
2000	256,627,056	0.257%						660,740					675,183			
2001	262,236,591															
						11,588,576	10,790,543	13,624,439	12,990,424	15,515,490	8,777,383	7,872,311	8,657,041	7,544,137	8,082,363	
(6) Indicated Growth Factor:											0.757	0.730	0.635	0.581	0.521	
(7) Selected Growth Factor:											0.760	0.730	0.640	0.580	0.520	

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- 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 PY YYYY] respectively for each 'Prior to YYYY' column
 (6) = [Sum of (5)] / [Sum of (4)]

Growth Factor Adjustment
 Medical Paid Losses

Policy Year (1)	Paid Losses (2)	Relative Development for Report Interval (3)					Dollar Development (4)					On-Level Dollar Development (5)				
		Prior to 2001	Prior to 2000	Prior to 1999	Prior to 1998	Prior to 1997	Prior to 2001	Prior to 2000	Prior to 1999	Prior to 1998	Prior to 1997	Prior to 2001	Prior to 2000	Prior to 1999	Prior to 1998	Prior to 1997
1972	19,744,461				0.024%					4,697						21,621
1973	24,809,893			0.021%	0.048%				5,133	11,804					20,461	43,241
1974	26,568,349			0.021%	0.041%	0.071%										
1975	28,043,207		0.022%	0.042%	0.062%	0.095%								21,904	40,921	64,862
1976	31,930,835	0.025%	0.043%	0.063%	0.083%	0.119%	8,019	13,776	20,229	26,426	37,980					
1977	36,223,466	0.050%	0.065%	0.084%	0.103%	0.143%	18,195	23,442	30,598	37,473	51,703	60,724	73,017	87,616	102,303	129,724
1978	47,243,917	0.075%	0.086%	0.106%	0.124%	0.167%	35,596	40,765	49,883	58,648	78,672	91,086	97,356	109,520	122,763	151,345
1979	53,532,015	0.100%	0.108%	0.127%	0.145%	0.190%	53,778	57,739	67,827	77,529	101,878	121,448	121,695	131,424	143,224	172,966
1980	59,099,604	0.126%	0.129%	0.148%	0.166%	0.214%	74,214	76,493	87,362	97,820	126,533	151,810	146,034	153,329	163,684	194,587
1981	70,929,091	0.151%	0.151%	0.169%	0.186%	0.238%	106,882	107,105	119,827	132,075	168,733	182,172	170,373	175,233	184,145	216,207
1982	71,162,485	0.176%	0.173%	0.190%	0.207%	0.262%	125,106	122,808	135,249	147,233	186,217	212,534	194,713	197,137	204,605	237,828
1983	80,710,732	0.201%	0.194%	0.211%	0.228%	0.285%	162,163	156,697	170,440	183,686	230,403	242,896	219,052	219,041	225,066	259,449
1984	96,964,340	0.226%	0.216%	0.232%	0.248%	0.309%	219,172	209,170	225,240	240,739	299,869	273,258	243,391	240,945	245,527	281,070
1985	124,826,995	0.251%	0.237%	0.253%	0.269%	0.333%	313,501	296,202	316,322	335,741	415,731	303,620	267,730	262,849	265,987	302,690
1986	147,197,787	0.276%	0.259%	0.275%	0.290%	0.357%	406,653	381,039	404,096	426,366	525,253	333,982	292,069	284,753	286,448	324,311
1987	180,574,846	0.301%	0.280%	0.296%	0.310%	0.381%	544,212	506,393	533,858	560,405	687,311	364,344	316,408	306,657	306,908	345,932
1988	204,470,082	0.326%	0.302%	0.317%	0.331%	0.404%	667,579	617,511	647,681	676,866	826,903	394,706	340,747	328,561	327,369	367,553
1989	219,795,860	0.352%	0.324%	0.338%	0.352%	0.428%	772,818	711,209	742,642	773,075	941,170	425,068	365,086	350,465	347,829	389,173
1990	206,461,244	0.377%	0.345%	0.359%	0.372%	0.452%	777,785	712,599	741,187	768,890	933,185	455,430	389,425	372,369	368,290	410,794
1991	174,776,908	0.402%	0.367%	0.380%	0.393%	0.476%	702,318	640,943	664,350	687,054	831,553	485,793	413,764	394,273	388,750	432,415
1992	134,101,538	0.427%	0.388%	0.401%	0.414%	0.500%	572,549	520,707	538,056	554,903	669,929	516,155	438,103	416,178	409,211	454,035
1993	111,526,161	0.452%	0.410%	0.422%	0.434%	0.523%	504,172	457,106	471,028	484,562	583,681	546,517	462,442	438,082	429,672	475,656
1994	94,935,812	0.477%	0.431%	0.443%	0.455%	0.547%	453,016	409,588	421,007	432,121	519,438	576,879	486,781	459,986	450,132	497,277
1995	88,906,924	0.502%	0.453%	0.465%	0.476%	0.571%	446,576	402,756	413,046	423,074	507,601	607,241	511,120	481,890	470,593	518,898
1996	86,336,465	0.527%	0.475%	0.486%	0.497%	0.595%	455,348	409,736	419,336	428,705	513,464	637,603	535,459	503,794	491,053	540,518
1997	90,885,509	0.553%	0.496%	0.507%	0.517%		502,166	450,930	460,623	470,097		667,965	559,799	525,698	511,514	
1998	98,892,685	0.578%	0.518%	0.528%			571,244	511,991	522,089			698,327	584,138	547,602		
1999	103,725,336	0.603%	0.539%				625,210	559,386				728,689	608,477			
2000	112,828,077	0.628%					708,414					759,051				
2001	120,892,981															
							9,826,684	8,402,140	8,219,432	8,057,020	9,299,353	9,867,661	7,910,197	7,118,827	6,649,679	7,026,739
(6) Indicated Growth Factor:												1.004	0.941	0.866	0.825	0.756
(7) Selected Growth Factor:												1.000	0.940	0.870	0.830	0.760

II 000019 STIP

- 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 PY YYYY] respectively for each 'Prior to YYYY' column
 (6) = [Sum of (5)] / [Sum of (4)]

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			
1996	199,853,680		9,222,724,944			
1997	213,488,927	9,422,578,624	9,428,179,044	1.026	0.490	1.013
1998	230,140,977	9,641,667,971	9,647,375,222	1.025	0.550	1.014
1999	241,861,635	9,877,516,199	9,885,715,542	1.034	0.610	1.021
2000	271,278,951	10,127,577,177	10,131,661,095	1.015	0.710	1.011
2001	273,910,419	10,402,940,046	10,408,753,306	1.021	0.750	1.016
					5yr average	1.015

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			
1996	106,793,617		3,082,926,369			
1997	107,352,129	3,189,719,986	3,184,319,520	0.950	0.730	0.963
1998	133,947,456	3,291,671,649	3,293,431,413	1.013	0.920	1.012
1999	140,117,794	3,427,378,869	3,427,197,531	0.999	0.910	0.999
2000	146,970,141	3,567,315,325	3,560,136,602	0.951	1.080	0.947
2001	150,270,362	3,707,106,743	3,704,283,867	0.981	1.080	0.980
					5yr average	0.980

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) = $1.000 + [(5) - 1.000] \times (6)$
- (12) = $1.000 + [(11) - (10)] / (9)$
- (13): From Page 3
- (14) = $1.000 + [(12) - 1.000] \times (13)$

Growth Factor Adjustment
 Indemnity 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 2001	Prior to 2000	Prior to 1999	Prior to 1998	Prior to 1997	Prior to 2001	Prior to 2000	Prior to 1999	Prior to 1998	Prior to 1997			
1977	120,187,409					0.006%					7,309							12,637	
1978	168,105,615					0.006%	0.012%				10,824	20,447					14,353	25,274	
1979	195,313,930			0.010%	0.013%	0.018%				19,154	25,152	35,634				23,342	28,705	37,911	
1980	220,408,617		0.005%	0.020%	0.019%	0.024%				11,289	43,230	42,576	53,617		13,760	46,684	43,058	50,548	
1981	260,613,259	0.008%	0.010%	0.029%	0.026%	0.030%				26,697	76,674	67,123	79,247		27,520	70,026	57,410	63,184	
1982	284,486,926	0.015%	0.015%	0.039%	0.032%	0.036%				43,300	43,714	111,596	91,590	103,807	41,592	41,280	93,368	71,763	75,821
1983	323,942,506	0.023%	0.020%	0.049%	0.039%	0.043%				73,958	66,369	158,842	125,151	137,905	62,388	55,040	116,710	86,115	88,458
1984	387,083,178	0.030%	0.026%	0.059%	0.045%	0.049%				117,831	99,132	227,763	174,469	188,325	83,184	68,800	140,052	100,468	101,095
1985	466,816,343	0.038%	0.031%	0.069%	0.052%	0.055%				177,627	143,462	320,459	240,466	255,507	103,980	82,560	163,393	114,820	113,732
1986	590,901,284	0.046%	0.036%	0.078%	0.058%	0.061%				269,811	211,861	463,589	342,432	359,360	124,776	96,320	186,735	129,173	126,369
1987	749,030,356	0.053%	0.041%	0.088%	0.064%	0.067%				399,017	306,922	661,105	482,299	501,080	145,572	110,080	210,077	143,526	139,006
1988	817,504,176	0.061%	0.046%	0.098%	0.071%	0.073%				497,707	376,852	801,712	579,028	596,604	166,368	123,840	233,419	157,878	151,643
1989	852,577,835	0.068%	0.051%	0.108%	0.077%	0.079%				583,943	436,689	919,719	658,767	674,050	187,164	137,600	256,761	172,231	164,280
1990	774,529,208	0.076%	0.056%	0.118%	0.084%	0.085%				589,429	436,384	911,480	648,333	659,448	207,960	151,360	280,103	186,583	176,916
1991	515,856,362	0.084%	0.061%	0.127%	0.090%	0.091%				431,833	317,065	657,658	465,022	470,582	228,756	165,119	303,445	200,936	189,553
1992	320,523,375	0.091%	0.067%	0.137%	0.097%	0.097%				292,708	213,423	440,064	309,576	311,885	249,552	178,879	326,787	215,288	202,190
1993	262,206,485	0.099%	0.072%	0.147%	0.103%	0.103%				259,406	188,022	385,712	270,135	271,086	270,347	192,639	350,129	229,641	214,827
1994	214,914,123	0.107%	0.077%	0.157%	0.109%	0.109%				228,974	165,118	337,220	235,251	235,262	291,143	206,399	373,471	243,994	227,464
1995	217,525,054	0.114%	0.082%	0.167%	0.116%	0.116%				248,310	178,266	362,649	252,115	251,349	311,939	220,159	396,813	258,346	240,101
1996	196,021,369	0.122%	0.087%	0.177%	0.122%	0.122%				238,681	170,683	346,022	239,814	238,423	332,735	233,919	420,155	272,699	252,738
1997	207,790,316	0.129%	0.092%	0.186%	0.129%					268,824	191,574	387,175	267,591		353,531	247,679	443,497	287,051	
1998	222,901,292	0.137%	0.097%	0.196%						305,337	216,922	437,191			374,327	261,439	466,838		
1999	238,017,229	0.145%	0.102%							344,157	243,824				395,123	275,199			
2000	268,645,092	0.152%								408,887					415,919				
2001	273,265,577																		
						5,799,574	4,044,267	8,069,014	5,527,715	5,450,929	4,367,152	2,889,591	4,901,804	3,014,037	2,653,746				
(6) Indicated Growth Factor:											0.753	0.714	0.607	0.545	0.487				
(7) Selected Growth Factor:											0.750	0.710	0.610	0.550	0.490				

II 000021 STIP

- 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 PY YYYY] respectively for each 'Prior to YYYY' column
 (6) = [Sum of (5)] / [Sum of (4)]

Growth Factor Adjustment
 Medical Paid Plus Case Losses

Policy Year (1)	Incurred Losses (2)	Relative Development for Report Interval (3)				Dollar Development					On-Level Dollar Development				
						Prior to 2001	Prior to 2000	Prior to 1999	Prior to 1998	Prior to 1997	Prior to 2001	Prior to 2000	Prior to 1999	Prior to 1998	Prior to 1997
1977	38,587,362				-0.018%					(6,792)					(18,321)
1978	49,815,665			0.006%	-0.035%				2,860	(17,538)				7,360	(36,642)
1979	57,472,939			-0.001%	0.011%				6,599	(30,351)				14,721	(54,963)
1980	62,122,817		-0.025%	-0.001%	0.017%					(321)				(708)	(73,284)
1981	77,677,866		-0.010%	-0.050%	-0.002%	0.023%	-0.088%			(694)	10,699			(38,034)	22,081
1982	74,813,207		-0.019%	-0.076%	-0.002%	0.029%	-0.106%			(1,302)	17,838			(2,125)	29,442
1983	85,766,376		-0.029%	-0.101%	-0.003%	0.034%	-0.123%			(1,672)	21,475			(2,833)	36,802
1984	104,980,448		-0.039%	-0.126%	-0.003%	0.040%	-0.141%			(1,672)	21,475			(2,833)	36,802
1985	137,155,127		-0.048%	-0.151%	-0.004%	0.046%	-0.158%			(1,672)	21,475			(2,833)	36,802
1986	164,067,413		-0.058%	-0.176%	-0.004%	0.052%	-0.176%			(1,672)	21,475			(2,833)	36,802
1987	198,799,980		-0.068%	-0.202%	-0.005%	0.057%	-0.194%			(1,672)	21,475			(2,833)	36,802
1988	217,918,342		-0.078%	-0.227%	-0.006%	0.063%	-0.211%			(1,672)	21,475			(2,833)	36,802
1989	231,139,216		-0.087%	-0.252%	-0.006%	0.069%	-0.229%			(1,672)	21,475			(2,833)	36,802
1990	217,474,912		-0.097%	-0.277%	-0.007%	0.075%	-0.246%			(1,672)	21,475			(2,833)	36,802
1991	183,795,164		-0.107%	-0.302%	-0.007%	0.080%	-0.264%			(1,672)	21,475			(2,833)	36,802
1992	141,603,167		-0.116%	-0.328%	-0.008%	0.086%	-0.282%			(1,672)	21,475			(2,833)	36,802
1993	126,882,200		-0.126%	-0.353%	-0.008%	0.092%	-0.299%			(1,672)	21,475			(2,833)	36,802
1994	115,172,605		-0.136%	-0.378%	-0.009%	0.098%	-0.317%			(1,672)	21,475			(2,833)	36,802
1995	102,074,365		-0.145%	-0.403%	-0.009%	0.103%	-0.334%			(1,672)	21,475			(2,833)	36,802
1996	99,448,260		-0.155%	-0.428%	-0.010%	0.109%	-0.352%			(1,672)	21,475			(2,833)	36,802
1997	104,079,057		-0.165%	-0.454%	-0.011%	0.115%				(1,672)	21,475			(2,833)	36,802
1998	128,207,506		-0.175%	-0.479%	-0.011%					(1,672)	21,475			(2,833)	36,802
1999	126,734,409		-0.184%	-0.504%						(1,672)	21,475			(2,833)	36,802
2000	150,930,797		-0.194%							(1,672)	21,475			(2,833)	36,802
2001	152,687,652														
						(2,868,286)	(7,372,180)	(164,017)	1,684,354	(5,235,811)	(3,109,879)	(7,987,238)	(148,725)	1,545,694	(3,847,397)
(6) Indicated Growth Factor:											1.084	1.083	0.907	0.918	0.735
(7) Selected Growth Factor:											1.080	1.080	0.910	0.920	0.730

II 000022 STIP

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 PY YYYY] respectively for each 'Prior to YYYY' column
- (6) = [Sum of (5)] / [Sum of (4)]

II 000023 STIP

Section II - Loss Development
 Subsection D - Adjustment for Escalation of Benefits
 7/1/2023

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	1.154	1.149	1.143	1.138	1.132
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	1.060	1.057	1.054	1.052	1.049

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	1.089	1.086	1.084	1.082	1.079

Selected Differential in Indemnity Loss Development at Month 420 1.045

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	1.80%
Escalated	Permanent Total	1,668,738	409,709	448,697	488,350	528,641	569,759	10.75%
Escalated	Other Indemnity							57.19%
Escalated	Total Indemnity							69.74%
Unescalated	Fatal	465,615	239,708	250,218	260,195	269,862	279,221	0.96%
Unescalated	Permanent Total	824,906	336,400	359,427	381,858	403,713	424,987	5.31%
Unescalated	Other Indemnity							57.19%
Unescalated	Total Indemnity							63.46%

Escalated or Unescalated (6)	Injury Type (7)	Estimated Losses at Month					
		Ultimate (8)	168	180	192 (9)	204	216
Escalated	Fatal	1,801	593	630	666	703	740
Escalated	Permanent Total	10,748	2,639	2,890	3,145	3,405	3,670
Escalated	Other Indemnity	57,190	57,190	57,190	57,190	57,190	57,190
Escalated	Total Indemnity	69,740	60,422	60,710	61,002	61,298	61,600
Unescalated	Fatal	959	494	515	536	556	575
Unescalated	Permanent Total	5,313	2,167	2,315	2,459	2,600	2,737
Unescalated	Other Indemnity	57,190	57,190	57,190	57,190	57,190	57,190
Unescalated	Total Indemnity	63,462	59,850	60,020	60,185	60,346	60,502

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
 7/1/2023

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	1.053	1.050	1.047	1.045	1.042
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	1.020	1.019	1.017	1.016	1.015

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	1.033	1.031	1.029	1.028	1.026

Selected Differential in Indemnity Loss Development at Month 420 1.000

Notes:

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

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

II 000026 STIP

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	1.80%
Escalated	Permanent Total	1,668,738	1,193,905	1,219,988	1,245,595	1,270,688	1,295,221	10.75%
Escalated	Other Indemnity							57.19%
Escalated	Total Indemnity							69.74%
Unescalated	Fatal	465,615	384,035	388,719	393,217	397,535	401,676	0.96%
Unescalated	Permanent Total	824,906	658,201	668,658	678,696	688,321	697,538	5.31%
Unescalated	Other Indemnity							57.19%
Unescalated	Total Indemnity							63.46%

Escalated or Unescalated (6)	Injury Type (7)	Estimated Losses at Month					
		Ultimate (8)	168	180	192 (9)	204	216
Escalated	Fatal	1,801	1,320	1,344	1,368	1,391	1,414
Escalated	Permanent Total	10,748	7,690	7,858	8,022	8,184	8,342
Escalated	Other Indemnity	57,190	57,190	57,190	57,190	57,190	57,190
Escalated	Total Indemnity	69,740	66,200	66,392	66,581	66,766	66,947
Unescalated	Fatal	959	791	800	810	819	827
Unescalated	Permanent Total	5,313	4,239	4,307	4,371	4,433	4,493
Unescalated	Other Indemnity	57,190	57,190	57,190	57,190	57,190	57,190
Unescalated	Total Indemnity	63,462	62,220	62,297	62,371	62,442	62,510

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	2.810	1.586	1.245	1.093	1.035	1.017	1.008	1.008	1.004	1.003	1.005	1.005	1.003	1.001	1.003	1.003	1.003	1.003	1.001	1.002	1.036	1.045
Cumulative	7.261	2.584	1.629	1.308	1.197	1.157	1.138	1.129	1.119	1.115	1.112	1.107	1.101	1.098	1.097	1.094	1.091	1.088	1.085	1.084	1.083	1.045
<u>(2) Medical Paid Losses</u>																						
2 Yr Average	2.033	1.141	1.052	1.025	1.012	1.011	1.010	1.008	1.008	1.008	1.005	1.004	1.004	1.007	1.004	1.004	1.004	1.006	1.005	1.009	1.073	1.000
Cumulative	2.991	1.471	1.290	1.226	1.196	1.182	1.170	1.158	1.149	1.140	1.131	1.125	1.120	1.116	1.107	1.103	1.098	1.094	1.088	1.082	1.073	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 000027 STIP

II 000028 STIP

Section II - Loss Development
 Subsection E - Accident Year Data
 7/1/2023

Section II - E
 Exhibit 1
 Page 2

Accident Year Aggregate Financial Data Calculation of Indemnity 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	
2016	63,518	184,424	2.903	2006	319,770	320,859	1.003
2017	63,445	190,745	3.006	2007	331,941	333,800	1.006
2018	68,035	201,555	2.962	2008	342,755	343,327	1.002
2019	69,349	198,237	2.859	2009	313,811	315,868	1.007
2020	58,718	162,186	2.762	2010	316,215	317,073	1.003
2 Yr Average			2.810	2 Yr Average			1.005
5 Yr Average			2.899	5 Yr Average			1.004
Selected Average			2.810	Selected Average			1.005
	24	36			144	156	
2015	191,261	304,299	1.591	2005	335,453	336,525	1.003
2016	184,424	292,391	1.585	2006	320,859	321,597	1.002
2017	190,745	297,169	1.558	2007	333,800	334,603	1.002
2018	201,555	309,832	1.537	2008	343,327	343,535	1.001
2019	198,237	324,064	1.635	2009	315,868	319,090	1.010
2 Yr Average			1.586	2 Yr Average			1.005
5 Yr Average			1.581	5 Yr Average			1.004
Selected Average			1.586	Selected Average			1.005
	36	48			156	168	
2014	266,718	330,894	1.241	2004	328,449	329,222	1.002
2015	304,299	375,046	1.232	2005	336,525	337,163	1.002
2016	292,391	351,384	1.202	2006	321,597	322,795	1.004
2017	297,169	363,203	1.222	2007	334,603	335,895	1.004
2018	309,832	393,053	1.269	2008	343,535	344,098	1.002
2 Yr Average			1.245	2 Yr Average			1.003
5 Yr Average			1.233	5 Yr Average			1.003
Selected Average			1.245	Selected Average			1.003
	48	60			168	180	
2013	326,151	355,850	1.091	2003	306,503	306,684	1.001
2014	330,894	357,490	1.080	2004	329,222	330,047	1.003
2015	375,046	400,533	1.068	2005	337,163	338,595	1.004
2016	351,384	380,167	1.082	2006	322,795	323,161	1.001
2017	363,203	400,657	1.103	2007	335,895	335,995	1.000
2 Yr Average			1.093	2 Yr Average			1.001
5 Yr Average			1.085	5 Yr Average			1.002
Selected Average			1.093	Selected Average			1.001
	60	72			180	192	
2012	319,533	333,712	1.044	2002	276,987	277,454	1.002
2013	355,850	366,578	1.030	2003	306,684	307,118	1.001
2014	357,490	375,195	1.050	2004	330,047	331,019	1.003
2015	400,533	410,037	1.024	2005	338,595	339,874	1.004
2016	380,167	397,632	1.046	2006	323,161	323,589	1.001
2 Yr Average			1.035	2 Yr Average			1.003
5 Yr Average			1.039	5 Yr Average			1.002
Selected Average			1.035	Selected Average			1.003
	72	84			192	204	
2011	357,278	359,932	1.007	2001	265,544	265,677	1.001
2012	333,712	342,179	1.025	2002	277,454	278,028	1.002
2013	366,578	369,905	1.009	2003	307,118	307,619	1.002
2014	375,195	378,793	1.010	2004	331,019	331,794	1.002
2015	410,037	419,700	1.024	2005	339,874	340,817	1.003
2 Yr Average			1.017	2 Yr Average			1.003
5 Yr Average			1.015	5 Yr Average			1.002
Selected Average			1.017	Selected Average			1.003
	84	96			204	216	
2010	307,707	312,030	1.014	2000	257,605	257,886	1.001
2011	359,932	363,513	1.010	2001	265,677	266,182	1.002
2012	342,179	347,448	1.015	2002	278,028	278,339	1.001
2013	369,905	373,064	1.009	2003	307,619	308,158	1.002
2014	378,793	381,932	1.008	2004	331,794	333,199	1.004
2 Yr Average			1.008	2 Yr Average			1.003
5 Yr Average			1.011	5 Yr Average			1.002
Selected Average			1.008	Selected Average			1.003
	96	108			216	228	
2009	307,661	310,150	1.008	1999	224,093	224,664	1.003
2010	312,030	313,276	1.004	2000	257,886	258,248	1.001
2011	363,513	366,614	1.009	2001	266,182	266,017	0.999
2012	347,448	350,302	1.008	2002	278,339	278,668	1.001
2013	373,064	376,142	1.008	2003	308,158	309,349	1.004
2 Yr Average			1.008	2 Yr Average			1.003
5 Yr Average			1.007	5 Yr Average			1.002
Selected Average			1.008	Selected Average			1.003
	108	120			228	240	
2008	339,415	340,444	1.003	1998	228,374	228,823	1.002
2009	310,150	312,612	1.008	1999	224,664	224,889	1.001
2010	313,276	315,233	1.006	2000	258,248	258,646	1.002
2011	366,614	368,415	1.005	2001	266,017	266,270	1.001
2012	350,302	351,384	1.003	2002	278,668	278,902	1.001
2 Yr Average			1.004	2 Yr Average			1.001
5 Yr Average			1.005	5 Yr Average			1.001
Selected Average			1.004	Selected Average			1.001
	120	132			240	252	
2007	330,464	331,941	1.004	1997	195,833	196,048	1.001
2008	340,444	342,755	1.007	1998	228,823	229,257	1.002
2009	312,612	313,811	1.004	1999	224,889	225,055	1.001
2010	315,233	316,215	1.003	2000	258,646	259,346	1.003
2011	368,415	369,308	1.002	2001	266,270	266,383	1.000
2 Yr Average			1.003	2 Yr Average			1.002
5 Yr Average			1.004	5 Yr Average			1.001
Selected Average			1.003	Selected Average			1.002

Notes:
 Losses from Aggregate Financial Data.

II 00029 STIP

Section II - Loss Development
 Subsection E - Accident Year Data
 7/1/2023

Section II - E
 Exhibit 1
 Page 3

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	
2016	78,916	152,508	1.933	2006	161,062	162,269	1.007
2017	77,982	149,117	1.913	2007	178,143	180,406	1.013
2018	81,842	164,765	2.013	2008	169,256	170,070	1.005
2019	81,021	153,991	1.901	2009	155,355	155,882	1.003
2020	57,416	124,329	2.165	2010	164,551	165,660	1.007
2 Yr Average			2.033	2 Yr Average			1.005
5 Yr Average			1.985	5 Yr Average			1.007
Selected Average			2.033	Selected Average			1.005
	24	36			144	156	
2015	149,460	172,005	1.151	2005	171,085	172,517	1.008
2016	152,508	173,305	1.136	2006	162,269	163,300	1.006
2017	149,117	172,972	1.160	2007	180,406	182,605	1.012
2018	164,765	185,418	1.125	2008	170,070	170,712	1.004
2019	153,991	178,020	1.156	2009	155,882	156,595	1.005
2 Yr Average			1.141	2 Yr Average			1.004
5 Yr Average			1.146	5 Yr Average			1.007
Selected Average			1.141	Selected Average			1.004
	36	48			156	168	
2014	166,388	176,609	1.061	2004	169,194	170,437	1.007
2015	172,005	181,904	1.058	2005	172,517	173,399	1.005
2016	173,305	182,074	1.051	2006	163,300	164,548	1.008
2017	172,972	181,492	1.049	2007	182,605	183,631	1.006
2018	185,418	195,440	1.054	2008	170,712	171,204	1.003
2 Yr Average			1.052	2 Yr Average			1.004
5 Yr Average			1.055	5 Yr Average			1.006
Selected Average			1.052	Selected Average			1.004
	48	60			168	180	
2013	169,397	172,246	1.017	2003	156,855	157,844	1.006
2014	176,609	181,971	1.030	2004	170,437	171,751	1.008
2015	181,904	185,740	1.021	2005	173,399	174,766	1.008
2016	182,074	184,751	1.015	2006	164,548	165,808	1.008
2017	181,492	188,059	1.036	2007	183,631	184,941	1.007
2 Yr Average			1.025	2 Yr Average			1.007
5 Yr Average			1.024	5 Yr Average			1.007
Selected Average			1.025	Selected Average			1.007
	60	72			180	192	
2012	160,368	162,390	1.013	2002	140,039	141,667	1.012
2013	172,246	174,020	1.010	2003	157,844	158,768	1.006
2014	181,971	185,814	1.021	2004	171,751	172,916	1.007
2015	185,740	187,912	1.012	2005	174,766	175,685	1.005
2016	184,751	186,940	1.012	2006	165,808	166,369	1.003
2 Yr Average			1.012	2 Yr Average			1.004
5 Yr Average			1.014	5 Yr Average			1.007
Selected Average			1.012	Selected Average			1.004
	72	84			192	204	
2011	173,437	175,011	1.009	2001	120,897	121,504	1.005
2012	162,390	164,044	1.010	2002	141,667	142,877	1.009
2013	174,020	175,131	1.006	2003	158,768	159,573	1.005
2014	185,814	187,609	1.010	2004	172,916	173,668	1.004
2015	187,912	190,099	1.012	2005	175,685	176,281	1.003
2 Yr Average			1.011	2 Yr Average			1.004
5 Yr Average			1.009	5 Yr Average			1.005
Selected Average			1.011	Selected Average			1.004
	84	96			204	216	
2010	157,719	159,875	1.014	2000	119,570	121,108	1.013
2011	175,011	177,298	1.013	2001	121,504	121,967	1.004
2012	164,044	166,284	1.014	2002	142,877	144,522	1.012
2013	175,131	177,051	1.011	2003	159,573	160,537	1.006
2014	187,609	189,256	1.009	2004	173,668	174,066	1.002
2 Yr Average			1.010	2 Yr Average			1.004
5 Yr Average			1.012	5 Yr Average			1.007
Selected Average			1.010	Selected Average			1.004
	96	108			216	228	
2009	152,678	153,722	1.007	1999	114,688	115,518	1.007
2010	159,875	161,661	1.011	2000	121,108	122,342	1.010
2011	177,298	178,744	1.008	2001	121,967	122,357	1.003
2012	166,284	167,709	1.009	2002	144,522	145,485	1.007
2013	177,051	178,300	1.007	2003	160,537	161,295	1.005
2 Yr Average			1.008	2 Yr Average			1.006
5 Yr Average			1.008	5 Yr Average			1.006
Selected Average			1.008	Selected Average			1.006
	108	120			228	240	
2008	167,309	168,204	1.005	1998	104,688	105,331	1.006
2009	153,722	154,593	1.006	1999	115,518	116,058	1.005
2010	161,661	163,310	1.010	2000	122,342	123,944	1.013
2011	178,744	180,299	1.009	2001	122,357	122,809	1.004
2012	167,709	169,059	1.008	2002	145,485	146,361	1.006
2 Yr Average			1.008	2 Yr Average			1.005
5 Yr Average			1.008	5 Yr Average			1.007
Selected Average			1.008	Selected Average			1.005
	120	132			240	252	
2007	175,853	178,143	1.013	1997	96,118	96,586	1.005
2008	168,204	169,256	1.006	1998	105,331	105,772	1.004
2009	154,593	155,355	1.005	1999	116,058	116,645	1.005
2010	163,310	164,551	1.008	2000	123,944	125,658	1.014
2011	180,299	181,777	1.008	2001	122,809	123,251	1.004
2 Yr Average			1.008	2 Yr Average			1.009
5 Yr Average			1.008	5 Yr Average			1.006
Selected Average			1.008	Selected Average			1.009

Notes:
 Losses from Aggregate Financial Data.

III 000006 STIP

Section III - Premiums
 Subsection A - Summary
 7/1/2023

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 12/31/2021	
	2018	2019
(1) Standard Earned Premium plus Adjusted ARAP Premium	1,257,191,166	1,220,866,284
(2) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.038	1.034
(3) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.000	0.997
(4) Composite Adjustment Factor = (2) x (3)	1.039	1.032
(5) Adjusted Standard Earned Premium plus ARAP = (1) x (4)	1,305,632,842	1,259,536,374
(6) Cumulative Premium Development Factor to Ultimate (see Page 2)	1.000	0.999
(7) Rate On-Level Factor	0.834	0.900
(8) Factor to Remove Expense Constant	0.962	0.960
(9) Adjusted On-Level Standard Earned Premium plus Adjusted ARAP at Ultimate = (5) x (6) x (7) x (8)	1,046,411,348	1,086,333,438

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	1.012	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	1.000
Cumulative Factor to 252	1.011	0.999	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
5 Year Average	1.013	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:
 Page 3

III 000007 STIP

III 00008 STIP

Section III - Premiums
 Subsection A - Summary
 7/1/2023

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	
2015	1,080,427	1,088,524	1.007	2006	998,598	998,597	1.000
2016	1,117,787	1,132,501	1.013	2007	981,967	981,963	1.000
2017	1,183,358	1,204,893	1.018	2008	806,643	806,642	1.000
2018	1,172,243	1,193,160	1.018	2009	768,933	768,933	1.000
2019	1,144,335	1,151,646	1.006	2010	842,867	842,867	1.000
2 yr Average			1.012	2 yr Average			1.000
5 yr Average			1.013	5 yr Average			1.000
	36	48			144	156	
2014	1,028,781	1,027,787	0.999	2005	937,360	937,360	1.000
2015	1,088,524	1,088,017	1.000	2006	998,597	998,594	1.000
2016	1,132,501	1,131,655	0.999	2007	981,963	981,963	1.000
2017	1,204,893	1,205,165	1.000	2008	806,642	806,640	1.000
2018	1,193,160	1,191,885	0.999	2009	768,933	768,933	1.000
2 yr Average			1.000	2 yr Average			1.000
5 yr Average			0.999	5 yr Average			1.000
	48	60			156	168	
2013	976,011	975,743	1.000	2004	900,201	900,201	1.000
2014	1,027,787	1,027,443	1.000	2005	937,360	937,358	1.000
2015	1,088,017	1,087,541	1.000	2006	998,594	998,593	1.000
2016	1,131,655	1,131,259	1.000	2007	981,963	981,963	1.000
2017	1,205,165	1,204,751	1.000	2008	806,640	806,640	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	
2012	928,413	928,309	1.000	2003	897,175	897,175	1.000
2013	975,743	975,683	1.000	2004	900,201	900,200	1.000
2014	1,027,443	1,027,373	1.000	2005	937,358	937,358	1.000
2015	1,087,541	1,087,327	1.000	2006	998,593	998,594	1.000
2016	1,131,259	1,131,067	1.000	2007	981,963	981,963	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	
2011	913,952	913,907	1.000	2002	838,890	838,885	1.000
2012	928,309	928,322	1.000	2003	897,175	897,175	1.000
2013	975,683	975,643	1.000	2004	900,200	900,200	1.000
2014	1,027,373	1,027,256	1.000	2005	937,358	937,358	1.000
2015	1,087,327	1,087,272	1.000	2006	998,594	998,594	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	
2010	842,644	842,668	1.000	2001	723,089	723,086	1.000
2011	913,907	913,918	1.000	2002	838,885	838,885	1.000
2012	928,322	928,312	1.000	2003	897,175	897,175	1.000
2013	975,643	975,568	1.000	2004	900,200	900,200	1.000
2014	1,027,256	1,027,235	1.000	2005	937,358	937,358	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	
2009	768,918	768,910	1.000	2000	664,304	664,304	1.000
2010	842,668	842,687	1.000	2001	723,086	723,086	1.000
2011	913,918	913,899	1.000	2002	838,885	838,885	1.000
2012	928,312	928,352	1.000	2003	897,175	897,175	1.000
2013	975,568	975,580	1.000	2004	900,200	900,200	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	
2008	806,681	806,636	1.000	1999	679,445	679,445	1.000
2009	768,910	768,934	1.000	2000	664,304	664,304	1.000
2010	842,687	842,870	1.000	2001	723,086	723,086	1.000
2011	913,899	913,900	1.000	2002	838,885	838,885	1.000
2012	928,352	928,324	1.000	2003	897,175	897,175	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	
2007	981,971	981,967	1.000	1998	707,400	707,400	1.000
2008	806,636	806,643	1.000	1999	679,445	679,445	1.000
2009	768,934	768,933	1.000	2000	664,304	664,304	1.000
2010	842,870	842,867	1.000	2001	723,086	723,086	1.000
2011	913,900	913,894	1.000	2002	838,885	838,885	1.000
2 yr Average			1.000	2 yr Average			1.000
5 yr Average			1.000	5 yr Average			1.000
					240	252	
				1997	717,369	717,369	1.000
				1998	707,400	707,400	1.000
				1999	679,445	679,445	1.000
				2000	664,304	664,305	1.000
				2001	723,086	723,086	1.000
				2 yr Average			1.000
				5 yr Average			1.000

Notes:
 Premiums from Aggregate Financial Data.

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)				2018 (9)	2019 (10)	2019 (11)	2020 (12)	2021 (13)
7/1/2018	1.000	0.860	-0.021	0.140	0.997	0.051	-0.033	43.2%	100.0%	88.5%	87.3%	11.2%
7/1/2020	1.000	0.870	-0.022	0.130	0.997	0.053	-0.033				12.7%	88.8%
7/1/2022	1.000	0.870	-0.022	0.130	0.997	0.054	-0.037					

	Policy Year		Calendar Year Earned		
	2018	2019	2019	2020	2021
(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	0.051	0.051	0.051	0.053
(16) Percentage of Premium for CCPAP Eligible Classes	0.381	0.374	0.377	0.378	0.378
(17) Weighted Average Construction Credit anticipated in rates	-0.015	-0.012	-0.013	-0.012	-0.012
(18) Combined Weighted Average impact anticipated in rates = (14) x [1.0 + (15)] x [1.0 + (17)]	1.033	1.035	1.035	1.035	1.037
(19) Manual Premium	1,229,820,608	1,181,367,273	1,205,593,941	1,170,751,620	
(20) Standard Earned Premium at DSR Level, excluding Expense Constants	1,169,114,986	1,127,494,260	1,148,304,623	1,119,945,745	
(21) ARAP Premium	51,722,114	51,749,007	51,735,561	51,463,946	
(22) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.054	1.055	1.056	1.059	
(23) Standard Earned Premium plus Adjusted ARAP = (20) + [(21) x (22)]	1,223,628,794	1,182,081,698	1,202,917,272	1,174,444,805	
(24) Combined Actual impact = (23) / (19)	0.995	1.001	0.998	1.003	1.003
(25) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance = (18) / (24)	1.038	1.034	1.037	1.032	1.033

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 Data, Excluding Large Deductible Policies. CY 2021 uses CY 2020 values.
 (22): 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 12/31/2021		Calendar Years		
	2018	2019	2019	2020	2021
(1) Aggregate Financial: Standard Earned Premium at DSR Level	1,203,082,168	1,166,107,362	1,186,600,053	1,157,016,335	1,129,373,934
(2) Aggregate Financial: Standard Earned Premium at Company Level	1,141,471,409	1,105,472,250	1,124,087,920	1,092,580,780	1,078,894,878
(3) Aggregate Financial: ARAP Premium	51,338,035	51,911,574	52,653,640	50,924,455	49,558,783
(4) Adjustment Factor to Adjust from Company Level to DSR Level Premium = (1) / (2)	1.054	1.055	1.056	1.059	1.047
(5) Adjusted ARAP Premium = (3) x (4)	54,108,998	54,758,922	55,581,784	53,927,753	51,877,527
(6) Standard Earned Premium plus adjusted ARAP Premium = (1) + (5)	1,257,191,166	1,220,866,284	1,242,181,837	1,210,944,088	1,181,251,461

Notes:
 (1),(2),(3): Aggregate Financial Data.

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		
		2018 (3)	2019 (4)	2019 (5)	2020 (6)	2021 (7)
7/1/2016	-0.23%	56.8%		11.5%		
7/1/2018	0.26%	43.2%	100.0%	88.5%	87.3%	11.2%
7/1/2020	-0.54%				12.7%	88.8%
7/1/2022						

Policy Year		Calendar Year Earned		
2018	2019	2019	2020	2021

(8) Weighted Average Loading for Recoupment of Insolvency Fund Assessment in the Rates = Sum [(2) x (3) through (7)]	-0.0002	0.0026	0.0020	0.0016	-0.0045
(9) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments = [1.0 - (8)]	1.000	0.997	0.998	0.998	1.005

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 00012 STIP

Section III - Premiums
 Subsection D - Rate On-Level Factors
 7/1/2023

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	
				2018 (5)	2019 (6)
7/1/2016		1.000	0.784	56.8%	
7/1/2018	0.871	0.871	0.900	43.2%	100.0%
7/1/2020	0.932	0.812	0.965		
7/1/2022	0.965	0.784	1.000		

Policy Year	
2018	2019
0.834	0.900

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

Notes:

(2) 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 00013 STIP

Section III - Premiums
 Subsection D - Premium On-Level Factors
 7/1/2023

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)
		7/1/2016 (3)	7/1/2018 (4)	7/1/2020 (5)	
2018	1	211,618,191			211,618,191
2018	2	79,729,939			79,729,939
2018	3	96,925,852			96,925,852
2018	4	117,422,496			117,422,496
2018	5	97,660,184			97,660,184
2018	6	116,300,259			116,300,259
2018	7		137,300,458		137,300,458
2018	8		72,471,161		72,471,161
2018	9		87,067,871		87,067,871
2018	10		89,959,470		89,959,470
2018	11		69,436,633		69,436,633
2018	12		92,054,482		92,054,482
2018	Total	719,656,921	548,290,075		1,267,946,997

2019	1		209,444,814		209,444,814
2019	2		76,081,091		76,081,091
2019	3		90,357,289		90,357,289
2019	4		110,705,277		110,705,277
2019	5		87,239,996		87,239,996
2019	6		108,150,746		108,150,746
2019	7		135,374,810		135,374,810
2019	8		72,001,601		72,001,601
2019	9		87,280,652		87,280,652
2019	10		90,474,301		90,474,301
2019	11		71,172,858		71,172,858
2019	12		88,575,313		88,575,313
2019	Total		1,226,858,747		1,226,858,747

2020	1		196,719,904		196,719,904
2020	2		75,047,845		75,047,845
2020	3		84,751,546		84,751,546
2020	4		115,883,167		115,883,167
2020	5		86,981,504		86,981,504
2020	6		114,262,605		114,262,605
2020	7			128,388,681	128,388,681
2020	8			67,497,515	67,497,515
2020	9			89,255,957	89,255,957
2020	10			94,232,629	94,232,629
2020	11			68,189,682	68,189,682
2020	12			90,194,644	90,194,644
2020	Total		673,646,571	537,759,107	1,211,405,678

Rate Level Effective Date (7)	Policy Year Weights		
	2018 (8)	2019 (9)	2020 (10)
7/1/2016	56.8%		
7/1/2018	43.2%	100.0%	55.6%
7/1/2020			44.4%

Notes:

(3),(4),(5): Unit Statistical Data. PY 2020 based on PY 2019 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 00014 STIP

Section III - Premiums
 Subsection D - Premium On-Level Factors
 7/1/2023

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)
			7/1/2016 (4)	7/1/2018 (5)	7/1/2020 (6)	
2017	12	2019	2			2
2018	1	2019	2,288,187			2,288,187
2018	2	2019	8,174,276			8,174,276
2018	3	2019	17,953,054			17,953,054
2018	4	2019	30,735,672			30,735,672
2018	5	2019	32,960,177			32,960,177
2018	6	2019	51,011,840			51,011,840
2018	7	2019		68,919,012		68,919,012
2018	8	2019		43,431,970		43,431,970
2018	9	2019		60,518,364		60,518,364
2018	10	2019		68,729,784		68,729,784
2018	11	2019		58,955,094		58,955,094
2018	12	2019		88,465,134		88,465,134
2019	1	2019		207,250,224		207,250,224
2019	2	2019		68,207,783		68,207,783
2019	3	2019		73,331,787		73,331,787
2019	4	2019		81,814,746		81,814,746
2019	5	2019		57,243,810		57,243,810
2019	6	2019		61,331,347		61,331,347
2019	7	2019		67,781,707		67,781,707
2019	8	2019		28,939,667		28,939,667
2019	9	2019		26,706,995		26,706,995
2019	10	2019		21,322,263		21,322,263
2019	11	2019		10,788,873		10,788,873
2019	12	2019		3,512,839		3,512,839
Total		2019	143,123,208	1,097,251,399		1,240,374,606

2018	12	2020				0
2019	1	2020		2,203,368		2,203,368
2019	2	2020		7,876,006		7,876,006
2019	3	2020		17,029,763		17,029,763
2019	4	2020		28,897,376		28,897,376
2019	5	2020		30,002,601		30,002,601
2019	6	2020		46,829,862		46,829,862
2019	7	2020		67,610,923		67,610,923
2019	8	2020		43,069,848		43,069,848
2019	9	2020		60,585,712		60,585,712
2019	10	2020		69,164,254		69,164,254
2019	11	2020		60,393,198		60,393,198
2019	12	2020		85,073,653		85,073,653
2020	1	2020		194,613,599		194,613,599
2020	2	2020		67,354,793		67,354,793
2020	3	2020		69,003,101		69,003,101
2020	4	2020		85,658,319		85,658,319
2020	5	2020		57,000,338		57,000,338
2020	6	2020		64,692,797		64,692,797
2020	7	2020			64,056,949	64,056,949
2020	8	2020			26,952,857	26,952,857
2020	9	2020			27,286,273	27,286,273
2020	10	2020			22,047,523	22,047,523
2020	11	2020			10,009,985	10,009,985
2020	12	2020			3,607,193	3,607,193
Total		2020		1,057,059,511	153,960,780	1,211,020,290

Rate Level Effective Date (8)	Calendar Year Earned Weights	
	2019 (9)	2020 (10)
7/1/2016	11.5%	
7/1/2018	88.5%	87.3%
7/1/2020		12.7%

Notes:

(4),(5),(6): Unit Statistical Data.

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

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

III 00015 STIP

Section III - Premiums
 Subsection D - Premium On-Level Factors
 7/1/2023

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)
			7/1/2016 (4)	7/1/2018 (5)	7/1/2020 (6)	
2019	12	2021		17		17
2020	1	2021		2,145,954		2,145,954
2020	2	2021		7,699,180		7,699,180
2020	3	2021		15,753,908		15,753,908
2020	4	2021		30,229,783		30,229,783
2020	5	2021		29,980,875		29,980,875
2020	6	2021		49,564,219		49,564,219
2020	7	2021			64,317,347	64,317,347
2020	8	2021			40,536,495	40,536,495
2020	9	2021			61,952,099	61,952,099
2020	10	2021			72,164,110	72,164,110
2020	11	2021			58,162,837	58,162,837
2020	12	2021			86,556,656	86,556,656
2021	1	2021			189,821,297	189,821,297
2021	2	2021			65,693,045	65,693,045
2021	3	2021			67,318,832	67,318,832
2021	4	2021			83,557,811	83,557,811
2021	5	2021			55,609,339	55,609,339
2021	6	2021			63,110,842	63,110,842
2021	7	2021			67,036,625	67,036,625
2021	8	2021			28,212,445	28,212,445
2021	9	2021			28,559,491	28,559,491
2021	10	2021			23,076,527	23,076,527
2021	11	2021			10,477,396	10,477,396
2021	12	2021			3,775,707	3,775,707
Total		2021		135,373,937	1,069,938,899	1,205,312,836

Rate Level Effective Date (8)	Calendar Year Earned Weights
	2021 (9)
7/1/2016	
7/1/2018	11.2%
7/1/2020	88.8%

Notes:

(4),(5),(6): Unit Statistical Data. PY 2021 based on PY 2020 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
7/1/2023

Section III - E
Exhibit 1

Calculation of Premium Adjustment Factor PY 2019 to Prospective Effective Period 7/1/2023 - 6/30/2024

(1)	Wage Trend from PY 2019 to Prospective Effective Period 7/1/2023 - 6/30/2024	1.283
(2)	Exposure Growth	1.034
(3)	Rate On-Level Factor	0.900
(4)	Overall Indicated Rate Change for Policies Effective 7/1/2023	0.898
(5)	Adjustment Factor to Balance Experience Rating, ARAP, and Construction Credits	1.034
(6)	Impact of Change in Indicated Loading for Recoupment of Insolvency Fund Assessments	0.997
(7)	Adjustment Factor = (1) x (2) x (3) x (4) x (5) x (6)	1.106
(8)	Selected Factor	1.11

Notes:

(1):	Statewide Average Weekly Wage for PY 2019 (Section V-G, Exhibit 1)	1,544.09
	Statewide Average Weekly Wage for 10/1/2022, based on data period 4/1/21 to 4/1/22 (Section V-G, Exhibit 1)	1,765.34
	Statewide Average Weekly Wage at 7/1/2024 (using wage trend of 4.3%, Section V-A, Exhibit 1)	1,981.77
(2):	Exposure growth from PY 2019 to Prospective Effective Period 7/1/2023 - 6/30/2024 (Section V-H, Exhibit 3)	
(3):	Section III-D, Exhibit 1.	
(4):	Section I-B, Exhibit 1.	
(5):	Exhibit 2.	
(6):	PY 2019 factor to load for Recoupment of Insolvency Fund (Section III-C, Exhibit 1: [1.0 + (8)]).	1.003
	Policy Effective factor to load for Recoupment of Insolvency Fund Assessments (Section IX-K, Exhibit 5, Page 1).	1.000

III 00017 STIP

Section III - Premiums
Subsection E - Premium Adjustment Factors
7/1/2023

Section III - E
Exhibit 2

Factor to Balance Experience Rating, ARAP, and Construction Credit

Beginning Period - PY 2019

(1)	Anticipated Impact on Manual Rates of Experience Rating, ARAP, and Construction Credits	1.035
(2)	Actual Impact on Manual Rates of Experience Rating, ARAP, and Construction Credits	1.001
(3)	Ratio of Anticipated to Actual = (1) / (2)	1.034

Ending Period - Prospective Effective Period 7/1/2023 - 6/30/2024

(4)	Anticipated Impact on Manual Rates of Experience Rating, ARAP, and Construction Credits	1.037
(5)	Actual is Assumed to be equal to the Anticipated, Since the Actual Impact has yet to be Determined	1.037
(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)	1.034

Notes:

(1),(2): PY 2019, 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
 7/1/2023

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
1/1/2023	Prosp. Eff. Period					1.015	1.000	
PY 2018	1/1/2023					1.075	1.000	
PY 2019	1/1/2023					1.065	1.000	
PY 2005	Prosp. Eff. Period	1.128	1.152	1.263	1.094	1.201	1.032	
PY 2006	Prosp. Eff. Period	1.122	1.144	1.244	1.090	1.188	1.032	
PY 2007	Prosp. Eff. Period	1.116	1.134	1.227	1.085	1.176	1.032	
PY 2008	Prosp. Eff. Period	1.109	1.125	1.209	1.080	1.162	1.024	
PY 2009	Prosp. Eff. Period	1.107	1.122	1.203	1.078	1.158	1.002	
PY 2010	Prosp. Eff. Period	1.108	1.123	1.204	1.078	1.159	1.000	
PY 2011	Prosp. Eff. Period	1.104	1.117	1.194	1.076	1.151	1.000	
PY 2012	Prosp. Eff. Period	1.099	1.110	1.181	1.072	1.141	1.000	
PY 2013	Prosp. Eff. Period	1.096	1.107	1.175	1.071	1.137	1.000	
PY 2014	Prosp. Eff. Period	1.091	1.103	1.168	1.068	1.130	1.000	
PY 2015	Prosp. Eff. Period	1.079	1.096	1.156	1.065	1.121	1.000	
PY 2016	Prosp. Eff. Period	1.073	1.089	1.144	1.060	1.112	1.000	
PY 2017	Prosp. Eff. Period	1.066	1.081	1.131	1.055	1.102	1.000	
PY 2018	Prosp. Eff. Period	1.059	1.072	1.117	1.049	1.091	1.000	
PY 2019	Prosp. Eff. Period	1.052	1.063	1.104	1.044	1.081	1.000	
PY 2020	Prosp. Eff. Period	1.043	1.053	1.088	1.036	1.068	1.000	
PY 2018	CPY 2019_07	1.011	1.013	1.020	1.009		1.000	
PY 2019	CPY 2020_07	1.016	1.020	1.031	1.014		1.000	
PY 2020	CPY 2021_07	1.026	1.032	1.054	1.022		1.000	
CPY 2019_07	Prosp. Eff. Period							1.050
CPY 2020_07	Prosp. Eff. Period							1.037
CPY 2021_07	Prosp. Eff. Period							1.017
CPY 2008_09	Prosp. Eff. Period							1.105
Prior Eff. Period	Prosp. Eff. Period					1.040	1.000	1.027

Notes:

1/1/2023 refers to a point in time. All other time periods refer to Policy Years.

Example: PY 2012 to Prosp. Eff. Period for Permanent Partial = $1.181 = 1.276 / 1.080$,

where 1.276 is the Index Factor for Prosp. Eff. Period and 1.08 is the Index Factor for PY 2012 for Indemnity Permanent Partial, from Exhibit 2.

IV 000009 STIP

Section IV - Benefit Change Adjustments
 Subsection A - Summary
 7/1/2023

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	0.8%	1.0%	1.5%	0.7%	1.2%	0.0%	0.8%
10/1/2023	0.8%	0.9%	1.5%	0.7%	1.2%	0.0%	0.8%
10/1/2024	0.8%	0.9%	1.5%	0.7%	1.2%	0.0%	0.8%

Notes:

Estimated changes for 10/1/2023 and 10/1/2024 use projected SAWW values for 10/1/2023 and 10/1/2024.

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 10/1/2022		Effects of SAWW Change of 10/1/2023		Effects of SAWW Change of 10/1/2024	
						10/1/2021 Cost (7)	10/1/2022 Cost (8)	10/1/2022 Cost (9)	10/1/2023 Cost (10)	10/1/2023 Cost (11)	10/1/2024 Cost (12)
None	204	0	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Spouse, No Children	212	1	40	$a_{40:\overline{Life}}$	24.28	258,825,596	260,838,095	269,888,419	272,036,532	281,475,562	283,715,935
Spouse with Children	407	1	38	$a_{38:\overline{Life}}$	24.23	495,947,608	499,803,849	517,145,590	521,261,689	539,348,247	543,641,130
Child(ren)		1.9	10	$a_{\overline{6}}$	7.31						
Orphan, No Sibling	21	1	13	$a_{13:\overline{5}}$	4.68	4,940,098	4,978,510	5,151,250	5,192,250	5,372,409	5,415,170
Orphan with Sibling(s)	15	2.5	12	$a_{\overline{6}}$	5.57	4,204,979	4,237,675	4,384,710	4,419,609	4,572,959	4,609,357
Other Dependents (No Spouse)	141	1.7	58	$a_{58:\overline{Life}}$	19.27	18,750,785	18,750,785	18,750,497	18,750,497	18,750,835	18,750,835
(15) Total Survivor Benefits	1,000					782,669,066	788,608,913	815,320,465	821,660,577	849,520,011	856,132,427
(16) Cost of Burial (1,000 cases)						13,553,920	14,122,720	14,122,720	14,729,281	14,729,281	15,361,894
(17) Total Monetary Cost [= (15) + (16)]						796,222,986	802,731,633	829,443,185	836,389,859	864,249,292	871,494,320
(18) Fatal Benefit Change Factors							1.008		1.008		1.008

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 7/1/2023).

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 x SAWW

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

IV 000011 STIP

Determination of the Average Weekly Survivor Benefit for Fatalities

Fatal: Spouse and Orphans - Effective 10/1/2021

(1)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	66.67%
(2)	Min Weekly Compensation	110.00
(3)	Max Weekly Compensation	1,694.24
(4)	Average Injured Worker Weekly Wage ("AIWWW") for 12 months starting 10/1/2022	1,555.34

Wage Intervals (5)	Benefit (6)	Wage Distribution Entry Ratios = (5) / (4)		Percentage in Interval		Average Wage in Interval = (9) / (8) x (4)	Average Benefit in Interval (11)
		(7)	(8)	(8)	(9)		
0.00 165.00	Statutory Minimum	0.00	0.10	0.35%	0.02%	99.20	110.00
165.00 2,541.36	Actual Wage x Comp. Rate	0.10	1.65	88.63%	75.22%	1,320.04	880.03
2,541.36 over	Statutory Maximum	1.65	over	11.03%	24.76%	3,492.11	1,694.24

(12) Average Weekly Benefit **967.15**

	Effects of SAWW Change		
	10/1/2022	10/1/2023	10/1/2024
(13) Starting date of 12 month period for AIWWW			
(14) Benefits Effective	10/1/2021	10/1/2022	10/1/2023
Average Weekly Benefits	967.15	1008.49	1051.78
(15) Benefits Effective	10/1/2022	10/1/2023	10/1/2024
Average Weekly Benefits	974.67	1016.51	1060.16
(16) Fatal: Spouse and Orphans Benefit Change Factors	1.008	1.008	1.008

Fatal: All Others - Effective 10/1/2021

(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 10/1/2022	1,555.34

Wage Intervals (21)	Benefit (22)	Wage Distribution Entry Ratios = (21) / (20)		Percentage in Interval		Average Wage in Interval = (25) / (24) x (20)	Average Benefit in Interval (27)
		(23)	(24)	(24)	(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%	99.20	66.13
120.00 over	Statutory Maximum	0.10	over	99.65%	99.98%	1,560.40	80.00

(28) Average Weekly Benefit **79.95**

	Effects of SAWW Change		
	10/1/2022	10/1/2023	10/1/2024
(29) Starting date of 12 month period for AIWWW			
(30) Benefits Effective	10/1/2021	10/1/2022	10/1/2023
Average Weekly Benefits	79.95	79.95	79.95
(31) Benefits Effective	10/1/2022	10/1/2023	10/1/2024
Average Weekly Benefits	79.95	79.95	79.95
(32) Fatal: All Others Benefit Change Factors	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) = (1) x (10), 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)
- (27) = (17) x (26), subject to a statutory maximum and statutory minimum
- (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
 7/1/2023

Section IV-B
 Exhibit 2

Determination of the Average Weekly Benefit for Permanent Totals

Permanent Total - Effective 10/1/2021

(1)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	66.67%
(2)	Min Weekly Compensation	338.85
(3)	Max Weekly Compensation	1,694.24
(4)	Average Injured Worker Weekly Wage ("AIWWW") for 12 months starting 10/1/2022	1,555.34

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	508.27	Statutory Minimum	0.00	0.35	7.27%	1.83%	390.62	338.85
508.27	2,541.36	Actual Wage x Comp. Rate	0.35	1.65	81.70%	73.41%	1,397.57	931.71
2,541.36	over	Statutory Maximum	1.65	over	11.03%	24.76%	3,492.11	1,694.24

(12) Average Weekly Benefit **972.70**

	Effects of SAWW Change		
	10/1/2022	10/1/2023	10/1/2024
(13) Starting date of 12 month period for AIWWW	10/1/2022	10/1/2023	10/1/2024
(14) Benefits Effective	10/1/2021	10/1/2022	10/1/2023
Average Weekly Wage Loss Benefit	972.70	981.25	989.33
(15) Benefits Effective	10/1/2022	10/1/2023	10/1/2024
Average Weekly Wage Loss Benefit	981.25	989.33	996.61
(16) Permanent Total Wage Loss Benefit Change Factors	1.009	1.008	1.007
(17) Specific Injury Benefits			
SAWW Effect on Specific Injury Benefits	1.042	1.043	1.043
(18) Benefit Proportions Associated with Permanent Total Claims			
(a) Permanent Total Wage Loss Benefits	96.50%	96.50%	96.50%
(b) Specific Injury Benefits	3.50%	3.50%	3.50%
(19) Permanent Total Benefit Change Factors	1.010	1.009	1.009
= [(16) x (18a)] + [(17) x (18b)]			

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) = (1) x (10), 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 10/1/2022 = SAWW 10/1/2022 / SAWW 10/1/2021 = 1.042 = 1,765.34 / 1,694.24

(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
 7/1/2023

Section IV-B
 Exhibit 3

Determination of the Average Weekly Benefit for Permanent Partial

Permanent Partial - Effective 10/1/2021

(1)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	37.20%
(2)	Min Weekly Compensation	0.00
(3)	Max Weekly Compensation	1,270.68
(4)	Average Injured Worker Weekly Wage ("AIWWW") for 12 months starting 10/1/2022	1,555.34
(5)	SAWW effective 10/1/2021	1,694.24

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	3,415.81	Actual Wage x Comp. Rate	0.00	2.20	96.38%	89.09%	1,437.67	534.81
3,415.81	5,573.16	Statutory Maximum	2.20	3.60	3.03%	7.93%	4,073.92	1270.68
5,573.16	8,917.05	Statutorily Reduced	3.60	5.75	0.50%	2.16%	6,762.83	818.61
8,917.05	over	Exceeds Statutory Limit	5.75	over	0.09%	0.82%	13,751.75	0.00

(13) Average Weekly Benefit **558.01**

	Effects of SAWW Change		
	10/1/2022	10/1/2023	10/1/2024
(14) Starting date of 12 month period for AIWWW			
(15) Benefits Effective Average Weekly Wage Loss Benefit	10/1/2021 558.01	10/1/2022 581.93	10/1/2023 606.92
(16) Benefits Effective Average Weekly Wage Loss Benefit	10/1/2022 560.18	10/1/2023 584.24	10/1/2024 609.33
(17) Permanent Partial Wage Loss Benefit Change Factors	1.004	1.004	1.004
(18) Specific Injury Benefits SAWW Effect on Specific Injury Benefits	1.042	1.043	1.043
(19) Permanent Partial Healing Period Effect on Healing Period Benefits	1.007	1.007	1.007
(20) Benefit Proportions Associated with Permanent Partial Claims			
(a) Permanent Partial Wage Loss Benefits	27%	27%	27%
(b) Specific Injury Benefits	26%	26%	26%
(c) Healing Period - Temporary Total Benefits	47%	47%	47%
(21) Permanent Partial Benefit Change Factors = [(17) x (20a)] + [(18) x (20b)] + [(19) x (20c)]	1.015	1.015	1.015

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 10/1/2022 = 1.042 = 1,765.34 / 1,694.24
- (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
 7/1/2023

Section IV-B
 Exhibit 4

Determination of the Average Weekly Benefit for Temporary Totals

Temporary Total - Effective 10/1/2021

(1)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	60.00%
(2)	Min Weekly Compensation	338.85
(3)	Max Weekly Compensation	1,694.24
(4)	Average Injured Worker Weekly Wage ("AIWW") for 12 months starting 10/1/2022	1,555.34

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 - 338.85	Actual Wage	0.00 - 0.20	1.71%	0.24%	217.55	217.55
338.85 - 564.75	Statutory Minimum	0.20 - 0.35	5.56%	1.59%	443.97	338.85
564.75 - 2,823.73	Actual Wage x Comp. Rate	0.35 - 1.80	84.70%	78.57%	1,442.81	865.69
2,823.73 - over	Statutory Maximum	1.80 - over	8.03%	19.60%	3,796.32	1,694.24

(12) Average Weekly Benefit **891.85**

	Effects of SAWW Change		
	10/1/2022	10/1/2023	10/1/2024
(13) Starting date of 12 month period for AIWW			
(14) Benefits Effective Average Weekly Benefits	10/1/2021 891.85	10/1/2022 930.00	10/1/2023 969.95
(15) Benefits Effective Average Weekly Benefits	10/1/2022 897.80	10/1/2023 936.36	10/1/2024 976.58
(16) Temporary Total Benefit Change Factors	1.007	1.007	1.007

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 Benefits

	10/1/2021	10/1/2022	10/1/2023	10/1/2024
(1) Fatal				
% Rate of Compensation	66.67%	66.67%	66.67%	66.67%
Minimum Weekly Benefit				
Widow/Orphan	\$110.00	\$110.00	\$110.00	\$110.00
Others	\$0.00	\$0.00	\$0.00	\$0.00
Maximum Weekly Benefit				
Widow/Orphan	\$1,694.24	\$1,765.34	<i>\$1,841.16</i>	<i>\$1,920.24</i>
Others	\$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
Maximum Aggregate Payable	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
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
(2) Total Disability				
Permanent Total				
% Rate of Compensation	66.67%	66.67%	66.67%	66.67%
Minimum Weekly Benefit	\$338.85	\$353.07	<i>\$368.23</i>	<i>\$384.05</i>
Maximum Weekly Benefit	\$1,694.24	\$1,765.34	<i>\$1,841.16</i>	<i>\$1,920.24</i>
Duration	Lifetime	Lifetime	Lifetime	Lifetime
Cost of Living Adjustment - benefits increase annually by:	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%
Minimum Weekly Benefit	\$338.85	\$353.07	<i>\$368.23</i>	<i>\$384.05</i>
Maximum Weekly Benefit	\$1,694.24	\$1,765.34	<i>\$1,841.16</i>	<i>\$1,920.24</i>
Waiting Period/Retroactive After	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%
Minimum Weekly Benefit	\$0.00	\$0.00	\$0.00	\$0.00
Maximum Weekly Benefit	\$1,270.68	\$1,324.01	<i>\$1,380.87</i>	<i>\$1,440.18</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
Non-Scheduled Injuries				
	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
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

Notes:

Source: The General Laws of Massachusetts, Chapter 152, Sections 31-36.

(1), (2): Maximum Weekly Benefit for Fatalities and Total Disabilities is 100% of the SAWW.

(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 Disability.

(3): Permanent Partial % Rate of Compensation is 60% of 62%, the lost wage-earning capacity, Section IV-D, Exhibit 4.

Values in Italics are Projected

IV 000016 STIP

Section IV - Benefit Change Adjustments
 Subsection D - Massachusetts Data
 7/1/2023

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
 7/1/2023

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	12
3 Children		1	12
4 Children		1	12
More than 4 Children		5	12
Orphans with Sibling(s)	15	2.5	12
Summary			
Other Dependents (No Spouse)	41	1	62
1 Parent			
2 Parents	91	2	58
Sibling	7	1	37
Other	2	2	31
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)
10/1/2021	4/1/20 to 4/1/21	10/1/2020	1,694.24		1,694.24	10/1/21 to 10/1/22	1,491.29
10/1/2022	4/1/21 to 4/1/22	10/1/2021	1,765.34		1,765.34	10/1/22 to 10/1/23	1,555.34
10/1/2023	4/1/22 to 4/1/23	10/1/2022		1.043	1,841.16	10/1/23 to 10/1/24	1,622.14
10/1/2024	4/1/23 to 4/1/24	10/1/2023		1.043	1,920.24	10/1/24 to 10/1/25	1,691.81

Notes:

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

(5): 4.3% Estimated Annual Trend in SAWW, Section V-A, Exhibit 1.

(6): For SAWW Effective Date 10/1/2021 - 10/1/2022, (6) = (4)

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

For SAWW Effective Date 10/1/2024, (6) = (5) x (6) from prior period

(8): 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 Period 10/1/22 to 10/1/23, (8) is the product of .827 and the average of the SAWWs effective 10/1/2023 and 10/1/2024, respectively.

For the AIWWW Periods 10/1/23 to 10/1/24 and 10/1/24 to 10/1/25, (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
 7/1/2023

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	2012	1,909,719	1.099	2,098,154	8,207,921	1.099	9,017,811	11,115,966	
Death	2013	1,592,212	1.096	1,745,666	8,255,702	1.096	9,051,370	10,797,036	
Death	2014	6,153,067	1.091	6,710,735	2,550,363	1.091	2,781,509	9,492,244	
Death	2015	1,142,621	1.079	1,232,477	13,439,677	1.079	14,496,571	15,729,047	
Death	2016	327,800	1.073	351,575	11,646,103	1.073	12,490,780	12,842,355	
Total Death		11,125,419		12,138,607	44,099,766		47,838,041	59,976,648	1.76%
Permanent Total	2012	57,202,597	1.110	63,494,998	0	1.110	0	63,494,998	
Permanent Total	2013	56,061,855	1.107	62,054,592	0	1.107	0	62,054,592	
Permanent Total	2014	67,181,481	1.103	74,074,019	0	1.103	0	74,074,019	
Permanent Total	2015	61,360,192	1.096	67,255,698	0	1.096	0	67,255,698	
Permanent Total	2016	68,812,856	1.089	74,937,637	0	1.089	0	74,937,637	
Total Permanent Total		310,618,981		341,816,943	0		0	341,816,943	10.06%
Permanent Partial	2012	75,020,193	1.181	88,611,120	118,069,159	1.181	139,458,991	228,070,110	
Permanent Partial	2013	72,186,331	1.175	84,849,185	123,723,481	1.175	145,426,930	230,276,116	
Permanent Partial	2014	87,062,305	1.168	101,651,773	135,567,252	1.168	158,284,938	259,936,711	
Permanent Partial	2015	85,011,144	1.156	98,259,308	134,726,764	1.156	155,722,627	253,981,935	
Permanent Partial	2016	77,297,486	1.144	88,434,882	133,158,966	1.144	152,345,155	240,780,038	
Total Permanent Partial		396,577,459		461,806,269	645,245,622		751,238,641	1,213,044,909	35.69%
Temporary Total	2012	36,303,381	1.072	38,933,558	72,654,892	1.072	77,918,732	116,852,290	
Temporary Total	2013	31,954,142	1.071	34,209,966	83,078,427	1.071	88,943,404	123,153,370	
Temporary Total	2014	41,085,314	1.068	43,882,307	85,809,593	1.068	91,651,312	135,533,620	
Temporary Total	2015	40,875,117	1.065	43,514,436	92,090,207	1.065	98,036,500	141,550,936	
Temporary Total	2016	47,035,959	1.060	49,869,761	100,885,635	1.060	106,963,749	156,833,510	
Total Temporary Total		197,253,913		210,410,028	434,518,754		463,513,697	673,923,725	19.83%
(11) Total Indemnity		915,575,772		1,026,171,847	1,123,864,142		1,262,590,379	2,288,762,225	67.33%

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- (12) Aggregate Financial Policy Year Call, Indemnity Fifth to Ultimate Development Factor Paid + Case 1.042
- (13) Tail Development Attributed to Likely to Develop Claims 0.8
- (14) Percentage Likely to Develop 0.448
- (15) Indemnity Likely to Develop - Loss Development Factor from 5th Report to Ultimate = $1.0 + \{ [(12) - 1.0] \times (13) \} / (14)$ 1.076
- (16) Indemnity Not Likely to Develop - Loss Development Factor from 5th Report to Ultimate = $1.0 + \{ [(12) - 1.0] \times [1.0 - (13)] \} / [1.0 - (14)]$ 1.015

Notes:

- (3), (6): Unit Statistical Data, excluding Large Deductibles.
- (4), (7): Section IV - A, Exhibit 1
- (10) = (9), Total / Page 2, Column (9), Total Medical & Indemnity
- (12) = $1.027 \times 1.015 \times 1$ where 1.027 is the loss development factor from Section II - B, Exhibit 1, 1.015 is the tail factor from Section II - C, Exhibit 2, Page 1.
and 1 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	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	
Death	2015	179,725	1.000	179,725	1,246,106	1.000	1,246,106	1,425,831	
Death	2016	25,420	1.000	25,420	511,622	1.000	511,622	537,042	
Total Death		2,997,593		2,997,593	2,884,834		2,884,834	5,882,427	0.17%
Permanent Total	2012	41,537,099	1.000	41,537,099	0	1.000	0	41,537,099	
Permanent Total	2013	28,016,688	1.000	28,016,688	0	1.000	0	28,016,688	
Permanent Total	2014	39,792,412	1.000	39,792,412	0	1.000	0	39,792,412	
Permanent Total	2015	41,807,781	1.000	41,807,781	0	1.000	0	41,807,781	
Permanent Total	2016	35,327,893	1.000	35,327,893	0	1.000	0	35,327,893	
Total Permanent Total		186,481,873		186,481,873	0		0	186,481,873	5.49%
Permanent Partial	2012	32,646,007	1.000	32,646,007	43,145,138	1.000	43,145,138	75,791,145	
Permanent Partial	2013	27,447,782	1.000	27,447,782	48,288,593	1.000	48,288,593	75,736,375	
Permanent Partial	2014	37,976,871	1.000	37,976,871	49,635,021	1.000	49,635,021	87,611,892	
Permanent Partial	2015	32,597,341	1.000	32,597,341	44,826,974	1.000	44,826,974	77,424,315	
Permanent Partial	2016	31,970,314	1.000	31,970,314	43,164,154	1.000	43,164,154	75,134,468	
Total Permanent Partial		162,638,315		162,638,315	229,059,880		229,059,880	391,698,195	11.52%
Temporary Total	2012	16,404,309	1.000	16,404,309	55,961,666	1.000	55,961,666	72,365,975	
Temporary Total	2013	13,088,215	1.000	13,088,215	59,560,811	1.000	59,560,811	72,649,026	
Temporary Total	2014	21,434,047	1.000	21,434,047	60,869,206	1.000	60,869,206	82,303,253	
Temporary Total	2015	19,056,450	1.000	19,056,450	63,010,048	1.000	63,010,048	82,066,498	
Temporary Total	2016	21,668,648	1.000	21,668,648	68,608,247	1.000	68,608,247	90,276,895	
Total Temporary Total		91,651,669		91,651,669	308,009,978		308,009,978	399,661,647	11.76%
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	25,636,631	1.000	25,636,631	25,636,631	
Medical Only	2014	0	1.000	0	25,478,305	1.000	25,478,305	25,478,305	
Medical Only	2015	0	1.000	0	25,457,616	1.000	25,457,616	25,457,616	
Medical Only	2016	0	1.000	0	24,948,119	1.000	24,948,119	24,948,119	
Total Medical Only		0		0	126,731,635		126,731,635	126,731,635	3.73%
(11) Total Medical		443,769,450		443,769,450	666,686,327		666,686,327	1,110,455,777	32.67%
(12) Total Medical & Indemnity		1,359,345,222		1,469,941,297	1,790,550,469		1,929,276,706	3,399,218,002	

- (13) Medical Only fraction of Total Medical 11.41%
- (14) Aggregate Financial Policy Year Call, Medical Fifth to Ultimate Development Factor Paid + Case 0.932
- (15) Tail Development Attributed to Likely to Develop Claims 0.8
- (16) Percentage Likely to Develop 0.400
- (17) Medical Likely to Develop - Loss Development Factor from 5th Report to Ultimate = $1.0 + \{[(14) - 1.0] \times (15)\} / (16)$ 0.864
- (18) Medical Not Likely to Develop - Loss Development Factor from 5th Report to Ultimate = $1.0 + \{[(14) - 1.0] \times [1.0 - (15)]\} / [1.0 - (16)]$ 0.977
- (19) Indemnity Likely Weight at 5th Report 30.19%
- (20) Indemnity Not Likely Weight at 5th Report 37.14%
- (21) Medical Likely Weight at 5th Report 13.06%
- (22) Medical Not Likely Weight at 5th Report 19.61%

Notes:

- (3), (6): Unit Statistical 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) = 0.951×0.98 where 0.951 is the loss development factor from Section II - B, Exhibit 1, 0.98 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

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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	2012	2,098,154	1.076	2,257,021	9,017,811	1.015	9,156,548	11,413,569	1.80%
Death	2013	1,745,666	1.076	1,877,843	9,051,370	1.015	9,190,623	11,068,466	
Death	2014	6,710,735	1.076	7,218,852	2,781,509	1.015	2,824,302	10,043,154	
Death	2015	1,232,477	1.076	1,325,796	14,496,571	1.015	14,719,598	16,045,394	
Death	2016	351,575	1.076	378,195	12,490,780	1.015	12,682,948	13,061,143	
Total Death		12,138,607		13,057,707	47,838,041		48,574,019	61,631,727	
Permanent Total	2012	63,494,998	1.076	68,302,655	0	1.015	0	68,302,655	10.75%
Permanent Total	2013	62,054,592	1.076	66,753,186	0	1.015	0	66,753,186	
Permanent Total	2014	74,074,019	1.076	79,682,690	0	1.015	0	79,682,690	
Permanent Total	2015	67,255,698	1.076	72,348,105	0	1.015	0	72,348,105	
Permanent Total	2016	74,937,637	1.076	80,611,698	0	1.015	0	80,611,698	
Total Permanent Total		341,816,943		367,698,334	0		0	367,698,334	
Permanent Partial	2012	88,611,120	1.076	95,320,497	139,458,991	1.015	141,604,538	236,925,036	36.82%
Permanent Partial	2013	84,849,185	1.076	91,273,720	145,426,930	1.015	147,664,294	238,938,014	
Permanent Partial	2014	101,651,773	1.076	109,348,551	158,284,938	1.015	160,720,119	270,068,670	
Permanent Partial	2015	98,259,308	1.076	105,699,219	155,722,627	1.015	158,118,387	263,817,606	
Permanent Partial	2016	88,434,882	1.076	95,130,916	152,345,155	1.015	154,688,954	249,819,870	
Total Permanent Partial		461,806,269		496,772,904	751,238,641		762,796,291	1,259,569,195	
Temporary Total	2012	38,933,558	1.076	41,881,494	77,918,732	1.015	79,117,496	120,998,990	20.37%
Temporary Total	2013	34,209,966	1.076	36,800,246	88,943,404	1.015	90,311,780	127,112,025	
Temporary Total	2014	43,882,307	1.076	47,204,949	91,651,312	1.015	93,061,349	140,266,298	
Temporary Total	2015	43,514,436	1.076	46,809,223	98,036,500	1.015	99,544,771	146,353,994	
Temporary Total	2016	49,869,761	1.076	53,645,755	106,963,749	1.015	108,609,364	162,255,119	
Total Temporary Total		210,410,028		226,341,667	463,513,697		470,644,759	696,986,426	
(11) Total Indemnity		1,026,171,847		1,103,870,611	1,262,590,379		1,282,015,070	2,385,885,681	69.74%

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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	2012	233,322	0.864	201,691	334,710	0.977	327,159	528,850	
Death	2013	277,312	0.864	239,717	593,619	0.977	580,227	819,944	
Death	2014	2,281,814	0.864	1,972,470	198,777	0.977	194,293	2,166,762	
Death	2015	179,725	0.864	155,360	1,246,106	0.977	1,217,994	1,373,354	
Death	2016	25,420	0.864	21,974	511,622	0.977	500,080	522,054	
Total Death		2,997,593		2,591,211	2,884,834		2,819,752	5,410,963	0.16%
Permanent Total	2012	41,537,099	0.864	35,905,938	0	0.977	0	35,905,938	
Permanent Total	2013	28,016,688	0.864	24,218,482	0	0.977	0	24,218,482	
Permanent Total	2014	39,792,412	0.864	34,397,778	0	0.977	0	34,397,778	
Permanent Total	2015	41,807,781	0.864	36,139,924	0	0.977	0	36,139,924	
Permanent Total	2016	35,327,893	0.864	30,538,511	0	0.977	0	30,538,511	
Total Permanent Total		186,481,873		161,200,633	0		0	161,200,633	4.71%
Permanent Partial	2012	32,646,007	0.864	28,220,207	43,145,138	0.977	42,171,787	70,391,994	
Permanent Partial	2013	27,447,782	0.864	23,726,702	48,288,593	0.977	47,199,206	70,925,908	
Permanent Partial	2014	37,976,871	0.864	32,828,369	49,635,021	0.977	48,515,259	81,343,627	
Permanent Partial	2015	32,597,341	0.864	28,178,138	44,826,974	0.977	43,815,681	71,993,819	
Permanent Partial	2016	31,970,314	0.864	27,636,117	43,164,154	0.977	42,190,374	69,826,491	
Total Permanent Partial		162,638,315		140,589,533	229,059,880		223,892,307	364,481,839	10.65%
Temporary Total	2012	16,404,309	0.864	14,180,386	55,961,666	0.977	54,699,175	68,879,561	
Temporary Total	2013	13,088,215	0.864	11,313,853	59,560,811	0.977	58,217,124	69,530,977	
Temporary Total	2014	21,434,047	0.864	18,528,246	60,869,206	0.977	59,496,001	78,024,247	
Temporary Total	2015	19,056,450	0.864	16,472,978	63,010,048	0.977	61,588,546	78,061,524	
Temporary Total	2016	21,668,648	0.864	18,731,042	68,608,247	0.977	67,060,450	85,791,492	
Total Temporary Total		91,651,669		79,226,505	308,009,978		301,061,297	380,287,802	11.12%
Medical Only	2012	0	0.864	0	25,210,964	0.977	24,642,207	24,642,207	
Medical Only	2013	0	0.864	0	25,636,631	0.977	25,058,271	25,058,271	
Medical Only	2014	0	0.864	0	25,478,305	0.977	24,903,516	24,903,516	
Medical Only	2015	0	0.864	0	25,457,616	0.977	24,883,294	24,883,294	
Medical Only	2016	0	0.864	0	24,948,119	0.977	24,385,291	24,385,291	
Total Medical Only		0		0	126,731,635		123,872,579	123,872,579	3.62%
(11) Total Medical		443,769,450		383,607,882	666,686,327		651,645,935	1,035,253,817	30.26%
(12) Total Medical & Indemnity		1,469,941,297		1,487,478,493	1,929,276,706		1,933,661,005	3,421,139,498	

- (13) Medical Only fraction of Total Medical 11.97%
- (14) Indemnity Likely to Develop at Ultimate 32.27%
- (15) Indemnity Not Likely to Develop at Ultimate 37.47%
- (16) Medical Likely to Develop at Ultimate 11.21%
- (17) Medical Not Likely to Develop at Ultimate 19.05%

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

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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 2016	Prosp. Eff. Period	1.040	1.032	1.016	1.032	1.024	1.000	1.016
PY 2017	Prosp. Eff. Period	1.035	1.028	1.014	1.028	1.021	1.000	1.014
PY 2018	Prosp. Eff. Period	1.030	1.024	1.012	1.024	1.018	1.000	1.012
PY 2019	Prosp. Eff. Period	1.025	1.020	1.010	1.020	1.015	1.000	1.010
PY 2020	Prosp. Eff. Period	1.020	1.016	1.008	1.016	1.012	1.000	1.008
CPY 2019_07	Prosp. Eff. Period	1.020	1.016	1.008	1.016	1.012	1.000	1.008
CPY 2020_07	Prosp. Eff. Period	1.015	1.012	1.006	1.012	1.009	1.000	1.006
CPY 2021_07	Prosp. Eff. Period	1.010	1.008	1.004	1.008	1.006	1.000	1.004
Prior Eff. Period (using benefit level projections from prior filing) Prosp. Eff. Period						1.003	1.000	1.002

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Notes:

All time periods refer to Policy Years.

Example: PY 2020 to Prosp. Eff. Period for Indemnity Permanent Partial = 1.008 = 1.016 / 1.008

where 1.016 is the Index Factor of Prosp. Eff. Period and 1.008 is the Index Factor of PY 2020 for Indemnity Permanent Partial, from Exhibit 2.

USL&HW Benefit Level Changes and Weights

Death											
Benefit Level Change	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	10/1/2024	Weighted Average Benefit Level
Cumulative Benefit Level Change	1.000	1.004	1.009	1.014	1.019	1.024	1.029	1.034	1.040	1.045	
Time Period											
PY 2016	0.375	0.620	0.005								1.003
PY 2017		0.319	0.677	0.004							1.007
PY 2018			0.347	0.650	0.003						1.012
PY 2019				0.330	0.667	0.003					1.017
PY 2020					0.325	0.671	0.004				1.023
CPY 2019_07				0.005	0.403	0.592					1.022
CPY 2020_07					0.005	0.411	0.584				1.027
CPY 2021_07						0.005	0.411	0.584			1.032
Prior Eff. Period							0.005	0.410	0.585		1.037
Prosp. Eff. Period								0.005	0.411	0.584	1.043

Indemnity All Injury Types - Average Benefit Level for Current Policy Period, Estimated at 7/1/2022 (using benefit level projections from prior filing).

Date of Change	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
Benefit Level Change	1.000	1.002	1.003	1.003	1.003	1.003	1.003	1.003	1.003	
Cumulative Level Change	1.000	1.002	1.005	1.008	1.011	1.014	1.017	1.020	1.023	1.022

Medical All Injury Types - Average Benefit Level for Current Policy Period, Estimated at 7/1/2022 (using benefit level projections from prior filing).

Date of Change	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
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 7/1/2022 (using benefit level projections from prior filing).

Date of Change	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
Benefit Level Change	1.000	1.001	1.002	1.002	1.002	1.002	1.002	1.002	1.002	
Cumulative Level Change	1.000	1.001	1.003	1.005	1.007	1.009	1.011	1.013	1.015	1.014

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 2016	1.003	1.002	1.001	1.002	1.001	1.000	1.001
PY 2017	1.007	1.006	1.002	1.006	1.004	1.000	1.002
PY 2018	1.012	1.010	1.004	1.010	1.007	1.000	1.004
PY 2019	1.017	1.014	1.006	1.014	1.010	1.000	1.006
PY 2020	1.023	1.018	1.008	1.018	1.013	1.000	1.008
CPY 2019_07	1.022	1.017	1.008	1.017	1.013	1.000	1.008
CPY 2020_07	1.027	1.022	1.010	1.022	1.016	1.000	1.010
CPY 2021_07	1.032	1.026	1.012	1.026	1.019	1.000	1.012
Prior Eff. Period	1.037	1.030	1.014	1.030	1.022	1.000	1.014
Prosp. Eff. Period	1.043	1.034	1.016	1.034	1.025	1.000	1.016

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.

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Section IV - Benefit Change Adjustments
 Subsection F - Effects of USL&HW Benefit Changes
 7/1/2023

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)
10/1/2015	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%
10/1/2024	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 - 10/1/2024 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	3.0%	100.0%	-2.3%	28.2%	2.1%	100.0%	-2.3%	28.2%	2.5%	90.9%	-3.7%	19.7%	6.8%	59.0%	
6 Year	2.4%	100.0%	-2.3%	42.1%	1.3%	74.2%	-2.3%	42.1%	2.9%	100.0%	-3.8%	29.1%	6.0%	68.7%	
7 Year	2.8%	100.0%	-2.1%	55.7%	2.2%	62.5%	-2.1%	55.7%	2.4%	100.0%	-3.9%	38.0%	5.4%	76.4%	
8 Year	2.7%	100.0%	-2.0%	68.4%	2.2%	77.4%	-2.0%	68.4%	2.3%	100.0%	-3.9%	46.7%	5.0%	80.6%	
9 Year	2.5%	100.0%	-2.0%	80.5%	2.0%	89.6%	-2.0%	80.5%	2.4%	100.0%	-4.2%	48.5%	4.7%	85.2%	
10 Year	2.7%	100.0%	-2.1%	89.2%	2.2%	100.0%	-2.1%	89.2%	2.4%	100.0%	-4.4%	50.7%	4.4%	88.5%	
(2) Selected Trend	3.0%		-2.1%		2.1%		-2.1%		2.9%		-4.4%		4.4%		
(3) 15 Year Massachusetts Complement of Credibility	2.4%		-1.8%		2.0%		-1.8%		2.0%		-4.2%		3.4%		
(4) Credibility Weighted Trend	3.0%		-2.1%		2.1%		-2.1%		2.9%		-4.3%		4.3%		
					Lost-Time Medical				Medical Only						
(5) Medical Loss Trend					0.0%				-1.6%						
(6) Fraction of Total Medical					88.0%				12.0%						
(7) Total Medical Loss Trend					-0.2%										
	Indemnity				Medical										
(8) Total Loss Trend	0.8%				-0.2%										
(9) SAWW Trend	4.3%				4.3%										
(10) Total Net Trend	-3.3%				-4.3%										

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 + Credibility Weighted Severity Trend) x (1.0 + 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 + Credibility Weighted Severity Trend) x (1.0 + 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
2010	26,890											27,312	177,329
2011	28,641											28,041	360,021
2012	28,930							28,747	33,689	28,236	164,586	28,953	494
2013	28,915					29,415	249,891	29,522	368,527	29,688	597,501	28,791	19,535
2014	31,112			30,583	280,523	30,235	769,351	30,318	631,296	30,442	449,860	29,560	416,176
2015	31,250	30,901	121,818	31,328	6,141	31,078	29,320	31,135	13,148	31,214	1,242	30,350	581,488
2016	31,608	31,817	43,654	32,092	233,547	31,945	113,512	31,974	133,937	32,007	158,860	31,161	7,938
2017	32,459	32,761	91,160	32,874	171,914	32,836	142,190	31,974	133,937	32,007	158,860	31,993	148,040
2018	33,510	33,733	49,906	32,874	171,914	32,836	142,190	32,836	142,190	32,820	129,856	32,848	151,087
2019	35,127	34,734	154,690	33,675	27,398	33,752	58,843	33,722	44,902	33,653	20,519	33,726	46,636
				34,496	398,219	34,694	187,823	34,631	246,430	34,508	384,037	34,627	250,345
(1)	Massachusetts Trend		3.0%		2.4%		2.8%		2.7%		2.5%		2.7%
(2)	n		5		6		7		8		9		10
(3)	s		392.10		528.62		556.94		518.67		521.94		519.45
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		6.50		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		2,148.45		2,244.60		1,991.75		1,640.33		1,504.49		1,393.85
(8)	Projected Value Prospective Period		39,614.18		38,448.44		39,262.34		39,038.48		38,627.79		38,995.10
(9)	CI/Projected Severity		0.05		0.06		0.05		0.04		0.04		0.04
(10)	Credibility - MA Trend (Z)		100%		100%		100%		100%		100%		100%
(11)	Complement of Credibility								2.4%				
(12)	Credibility Weighted Severity Trend		3.0%		2.4%		2.8%		2.7%		2.5%		2.7%

- 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
2010	10,029											10,184	24,185
2011	10,599									10,476	14,979	10,405	37,555
2012	10,625							10,627	6	10,689	4,144	10,630	26
2013	10,394					10,858	215,875	10,857	214,533	10,907	262,994	10,860	217,445
2014	11,735			11,421	98,460	11,093	412,091	11,091	413,516	11,128	367,459	11,095	408,872
2015	11,362	11,317	1,979	11,565	41,452	11,332	903	11,331	948	11,355	53	11,335	711
2016	11,496	11,554	3,414	11,712	46,691	11,576	6,447	11,576	6,385	11,585	8,013	11,581	7,151
2017	11,726	11,796	4,940	11,861	18,065	11,826	9,975	11,826	9,975	11,821	9,020	11,831	11,042
2018	12,182	12,043	19,303	12,011	29,424	12,081	10,261	12,081	10,179	12,061	14,622	12,087	9,047
2019	12,242	12,296	2,845	12,163	6,281	12,342	9,871	12,342	10,035	12,307	4,146	12,349	11,352
(1)	Massachusetts Trend		2.1%		1.3%		2.2%		2.2%		2.0%		2.2%
(2)	n		5		6		7		8		9		10
(3)	s		104.05		245.14		364.81		333.06		312.92		301.54
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		6.50		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		570.14		1,040.90		1,304.63		1,053.32		901.99		809.12
(8)	Projected Value Prospective Period		13,496.76		12,872.71		13,584.61		13,589.42		13,473.11		13,599.35
(9)	CI/Projected Severity		0.04		0.08		0.10		0.08		0.07		0.06
(10)	Credibility - MA Trend (Z)		100%		74%		62%		77%		90%		100%
(11)	Complement of Credibility								2.0%				
(12)	Credibility Weighted Severity Trend		2.1%		1.5%		2.1%		2.1%		2.0%		2.2%

- 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
2010	797											798	0
2011	809									817	63	817	59
2012	850							841	82	837	173	836	179
2013	872					855	305	860	149	857	240	856	246
2014	853			864	119	876	511	880	710	877	585	877	579
2015	895	898	5	889	46	897	3	900	20	898	8	898	8
2016	914	920	30	914	0	919	21	920	36	920	29	920	29
2017	948	942	28	940	59	941	41	941	41	942	37	942	37
2018	982	966	276	967	236	964	323	963	378	964	328	964	324
2019	976	990	192	995	357	988	149	985	84	987	135	988	138
(1)	Massachusetts Trend		2.5%		2.9%		2.4%		2.3%		2.4%		2.4%
(2)	n		5		6		7		8		9		10
(3)	s		13.31		14.29		16.45		15.81		15.11		14.14
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		6.50		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		72.91		60.67		58.84		50.01		43.56		37.94
(8)	Projected Value Prospective Period		1,104.29		1,129.30		1,101.27		1,090.54		1,098.27		1,098.93
(9)	CI/Projected Severity		0.07		0.05		0.05		0.05		0.04		0.03
(10)	Credibility - MA Trend (Z)		91%		100%		100%		100%		100%		100%
(11)	Complement of Credibility							2.0%					
(12)	Credibility Weighted Severity Trend		2.4%		2.9%		2.4%		2.3%		2.4%		2.4%

- 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
2010	187.49											186	3
2011	181.53											182	0
2012	175.45											178	6
2013	172.95					174	1					174	1
2014	171.26			171	0	170	1					170	1
2015	164.69	167	7	167	7	167	5	166	3	167	4	167	4
2016	161.88	164	3	164	3	163	2	163	2	163	2	163	2
2017	165.76	160	34	160	34	160	35	160	35	160	35	160	36
2018	160.24	156	15	156	15	156	14	157	13	157	14	156	15
2019	147.69	153	26	153	26	153	30	153	34	153	32	153	28
(1)	Massachusetts Trend		-2.3%		-2.3%		-2.1%		-2.0%		-2.0%		-2.1%
(2)	n		5		6		7		8		9		10
(3)	s		5.35		4.63		4.19		3.88		3.61		3.48
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		6.50		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		29.30		19.66		14.98		12.28		10.42		9.35
(8)	Projected Value Prospective Period		137.89		137.87		139.06		140.12		139.76		138.93
(9)	CI/Projected Frequency		0.21		0.14		0.11		0.09		0.07		0.07
(10)	Credibility - MA Trend (Z)		28%		42%		56%		68%		80%		89%
(11)	Complement of Credibility								-1.8%				
(12)	Credibility Weighted Frequency Trend		-1.9%		-2.0%		-2.0%		-1.9%		-2.0%		-2.1%

- 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) = $[(1) \times (10)] + \{(11) \times [1.0 - (10)]\}$

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
2010	404.55											395	87
2011	383.19											378	27
2012	355.54											362	36
2013	341.62					340	4					346	18
2014	325.87			325	0	326	0	327	1	329	12	331	24
2015	307.70	313	23	313	28	314	38	314	42	316	62	316	75
2016	295.95	301	25	301	28	302	33	302	35	302	42	303	44
2017	299.48	290	93	290	91	290	89	290	89	290	93	289	101
2018	292.60	279	182	279	183	279	189	279	193	278	221	277	248
2019	256.31	269	156	269	151	268	138	268	132	266	97	265	72
(1)	Massachusetts Trend		-3.7%		-3.8%		-3.9%		-3.9%		-4.2%		-4.4%
(2)	n		5		6		7		8		9		10
(3)	s		12.64		10.97		9.92		9.09		9.42		9.57
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		6.50		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		69.25		46.59		35.47		28.75		27.17		25.68
(8)	Projected Value Prospective Period		226.88		226.12		224.49		223.74		219.81		216.78
(9)	CI/Projected Frequency		0.31		0.21		0.16		0.13		0.12		0.12
(10)	Credibility - MA Trend (Z)		20%		29%		38%		47%		49%		51%
(11)	Complement of Credibility								-4.2%				
(12)	Credibility Weighted Frequency Trend		-4.1%		-4.1%		-4.1%		-4.1%		-4.2%		-4.3%

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) = $[(1) \times (10)] + \{ (11) \times [1.0 - (10)] \}$

V 000025 STIP

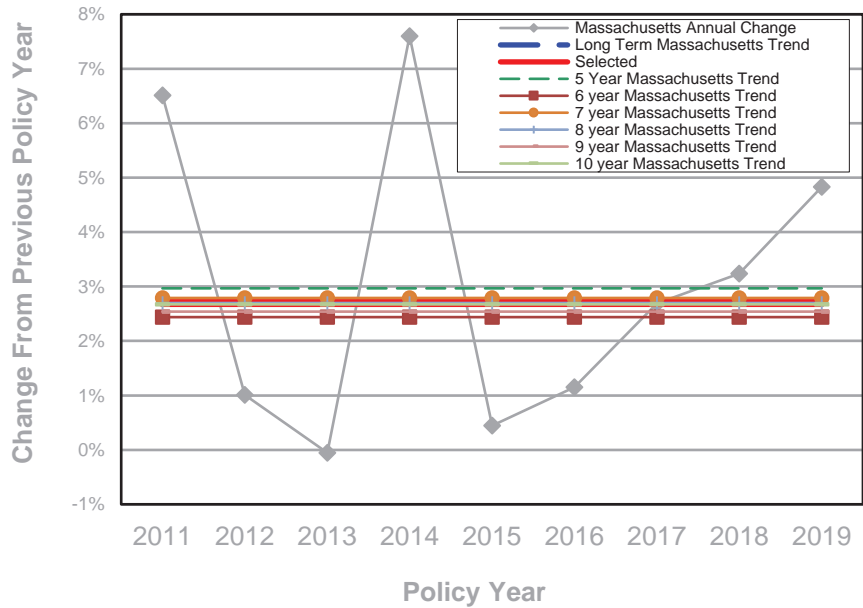
Statewide Average Weekly Wage Trend Calculation

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
4/1/12 to 4/1/13	1,181											1,147	1,198
4/1/13 to 4/1/14	1,215											1,197	313
4/1/14 to 4/1/15	1,256							1,220	1,353	1,182	1,117	1,250	40
4/1/15 to 4/1/16	1,292					1,259	1,074	1,281	126	1,295	8	1,305	186
4/1/16 to 4/1/17	1,338			1,305	1,102	1,327	114	1,344	40	1,355	293	1,363	624
4/1/17 to 4/1/18	1,383	1,355	788	1,383	0	1,400	260	1,411	787	1,419	1,232	1,423	1,584
4/1/18 to 4/1/19	1,432	1,447	242	1,466	1,147	1,476	1,931	1,482	2,522	1,485	2,827	1,486	2,959
4/1/19 to 4/1/20	1,488	1,545	3,314	1,553	4,271	1,556	4,626	1,556	4,626	1,554	4,418	1,552	4,083
4/1/20 to 4/1/21	1,694	1,650	1,947	1,646	2,329	1,640	2,904	1,633	3,701	1,627	4,533	1,620	5,482
4/1/21 to 4/1/22	1,765	1,762	11	1,744	439	1,730	1,284	1,715	2,546	1,703	3,890	1,692	5,416
(1)	Massachusetts Trend		6.8%		6.0%		5.4%		5.0%		4.7%		4.4%
(2)	n		5		6		7		8		9		10
(3)	s		45.83		48.19		49.38		51.16		51.69		52.30
(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		228.97		189.39		165.61		153.24		142.33		134.94
(8)	Projected Value Prospective Period		2,253.40		2,169.61		2,109.17		2,058.92		2,021.24		1,989.81
(9)	CI/Projected Wage		0.10		0.09		0.08		0.07		0.07		0.07
(10)	Credibility - MA Trend (Z)		59%		69%		76%		81%		85%		88%
(11)	Complement of Credibility						3.4%						
(12)	Credibility Weighted Wage Trend		5.4%		5.2%		4.9%		4.7%		4.5%		4.3%

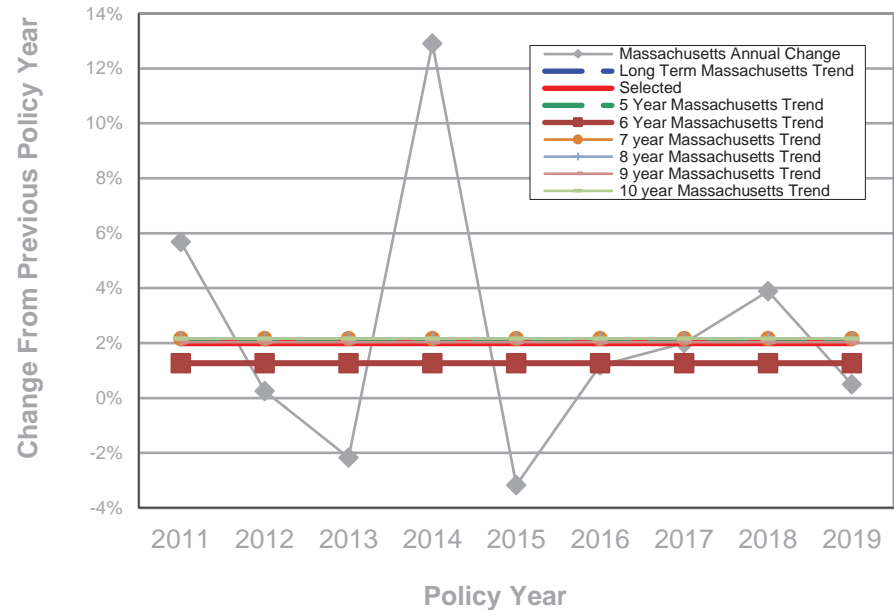
- Notes:
- (1): Massachusetts Trend from exponential fit to the SAWW.
 - (2): Number of data points used in the exponential fitting of the statewide average weekly wages.
 - (3): $\sqrt{SSR/(n - 2)}$ where SSR is the sum of squared residuals and n is the number of data points used in the exponential 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) = $[(1) \times (10)] + \{(11) \times [1.0 - (10)]\}$

V 000026 STIP

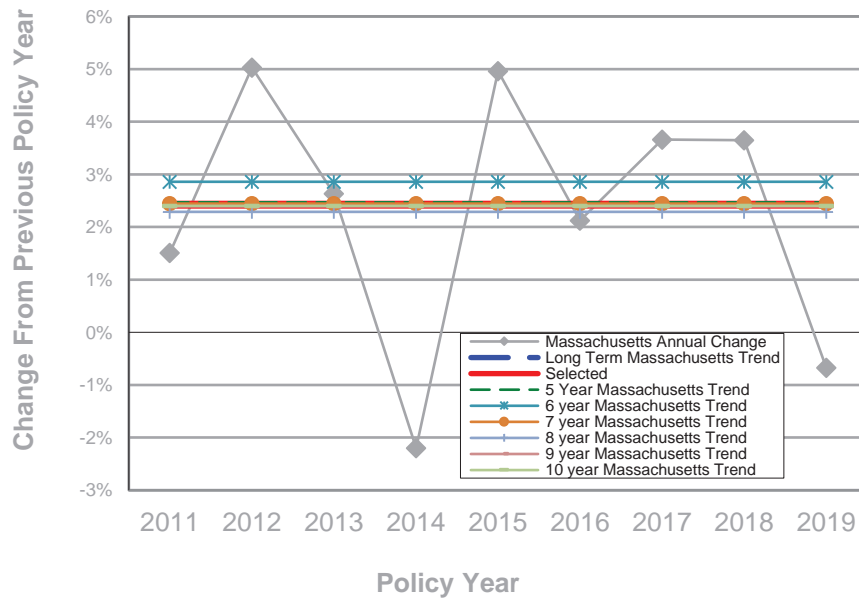
Indemnity Severity Trend



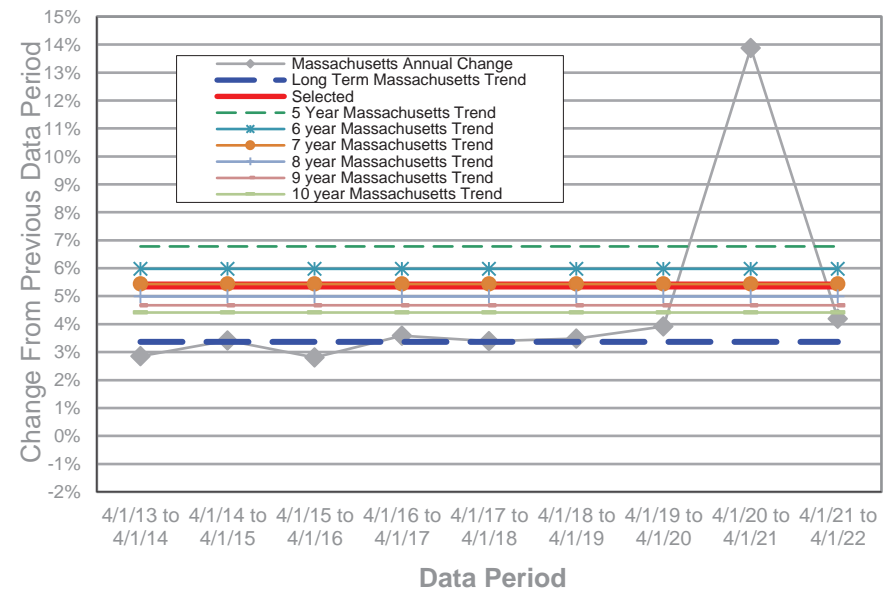
Lost Time Medical Severity Trend



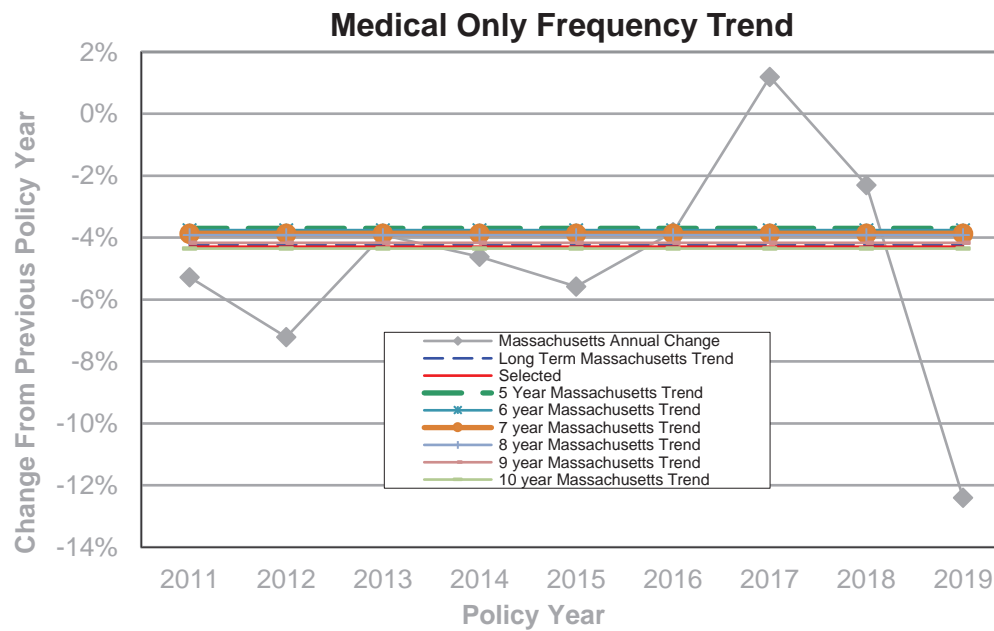
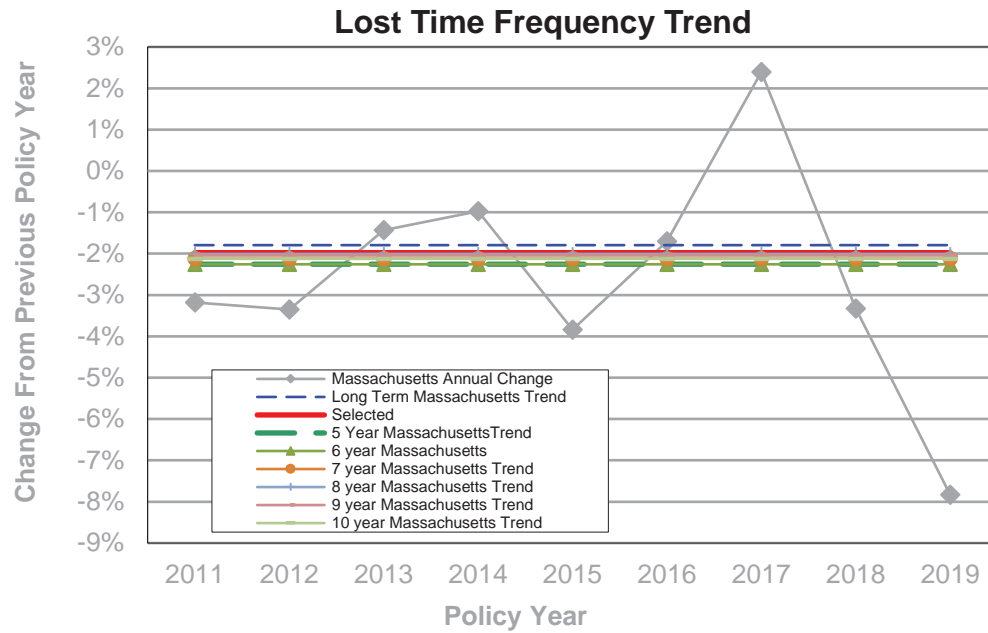
Medical Only Severity Trend



SAWW Trend



V 000027 STIP



Lost Time Reported Claim Counts - Industrywide

Policy Year (1)	Lost Time Reported Claim Counts Age of Development											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)
	18	30	42	54	66	78	90	102	114	126							
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	0.866	202.79		
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	0.918	193.83	-4.4%	
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	0.962	193.67	-0.1%	
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	0.994	181.98	-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	1.003	177.78	-2.3%	
2010_01	14,379	14,656	14,725	14,773	14,799	14,814	14,817	14,816	14,816	14,817	14,817	79.76	185.77	1.009	187.49	5.5%	
2011_01	14,468	14,697	14,790	14,830	14,865	14,878	14,878	14,882	14,888	14,888	14,889	82.97	179.46	1.012	181.53	-3.2%	
2012_01	14,207	14,462	14,532	14,562	14,587	14,590	14,596	14,602	14,601		14,602	83.65	174.57	1.005	175.45	-3.4%	
2013_01	14,411	14,672	14,748	14,798	14,819	14,823	14,823	14,832			14,836	85.14	174.25	0.993	172.95	-1.4%	
2014_01	14,800	15,071	15,155	15,194	15,212	15,221	15,220				15,231	87.14	174.80	0.980	171.26	-1.0%	
2015_01	14,852	15,071	15,149	15,189	15,216	15,226					15,237	90.37	168.61	0.977	164.69	-3.8%	
2016_01	14,629	14,845	14,930	14,958	14,975						14,995	90.20	166.24	0.974	161.88	-1.7%	
2017_01	15,270	15,542	15,621	15,655							15,699	91.72	171.17	0.968	165.76	2.4%	
2018_01	14,908	15,160	15,227								15,301	92.67	165.11	0.970	160.24	-3.3%	
2019_01	13,331	13,539									13,669	92.55	147.69	1.000	147.69	-7.8%	
	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	1.016	1.005	1.002	1.001	1.001	1.000	1.001	1.000	1.000								
Selected	1.016	1.005	1.002	1.001	1.001	1.000	1.001	1.000	1.000								
Cumulative	1.026	1.010	1.005	1.003	1.001	1.001	1.001	1.000	1.000								
												Selected Complement of Credibility			-1.8%		

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 Age of Development											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)
	18	30	42	54	66	78	90	102	114	126							
	(2)																
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	0.866	486.27		
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	0.918	463.41	-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	0.962	456.76	-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	0.994	419.87	-8.1%	
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	1.003	402.15	-4.2%	
2010_01	31,550	31,919	31,969	31,976	31,969	31,967	31,969	31,967	31,966	31,970	31,970	79.76	400.82	1.009	404.55	0.6%	
2011_01	30,939	31,372	31,423	31,446	31,441	31,437	31,430	31,427	31,428	31,428	31,428	82.97	378.81	1.012	383.19	-5.3%	
2012_01	29,128	29,510	29,565	29,592	29,587	29,585	29,584	29,589	29,588			29,590	83.65	353.75	1.005	355.54	-7.2%
2013_01	28,894	29,225	29,286	29,304	29,301	29,299	29,309	29,303				29,305	85.14	344.19	0.993	341.62	-3.9%
2014_01	28,527	28,929	28,989	28,987	28,988	28,981	28,980					28,981	87.14	332.60	0.980	325.87	-4.6%
2015_01	27,918	28,379	28,443	28,454	28,462	28,463						28,469	90.37	315.03	0.977	307.70	-5.6%
2016_01	26,908	27,365	27,395	27,410	27,412							27,415	90.20	303.92	0.974	295.95	-3.8%
2017_01	27,941	28,307	28,334	28,356								28,364	91.72	309.26	0.968	299.48	1.2%
2018_01	27,637	27,892	27,913									27,939	92.67	301.50	0.970	292.60	-2.3%
2019_01	23,385	23,680										23,722	92.55	256.31	1.000	256.31	-12.4%
	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	1.011	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000								
Selected	1.011	1.001	1.001	1.000	1.000	1.000	1.000	1.000	1.000								
Cumulative	1.013	1.002	1.001	1.000	1.000	1.000	1.000	1.000	1.000								
													Selected Complement of Credibility				-4.2%

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

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)
2005_01	349,657	1.201	420,099	17,237	24,372
2006_01	343,142	1.188	407,814	15,968	25,539
2007_01	342,885	1.176	403,081	15,756	25,583
2008_01	332,279	1.162	386,264	14,387	26,848
2009_01	321,646	1.158	372,373	13,345	27,904
2010_01	343,817	1.159	398,435	14,817	26,890
2011_01	370,362	1.151	426,440	14,889	28,641
2012_01	370,147	1.141	422,440	14,602	28,930
2013_01	377,428	1.137	428,965	14,836	28,915
2014_01	419,232	1.130	473,882	15,231	31,112
2015_01	424,652	1.121	476,148	15,237	31,250
2016_01	426,184	1.112	473,971	14,995	31,608
2017_01	462,530	1.102	509,575	15,699	32,459
2018_01	469,963	1.091	512,722	15,301	33,510
2019_01	444,366	1.081	480,161	13,669	35,127

15 Year Indemnity Trend

2.4%

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)										
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	339,468	342,181	343,817	343,817
2011_01	108,820	209,336	285,745	327,104	346,063	355,377	362,544	365,695	369,451	370,362	370,362
2012_01	109,341	213,099	283,775	327,474	349,051	359,355	365,428	367,935	368,827		370,147
2013_01	117,451	223,296	294,413	335,664	356,417	365,819	370,030	373,715			377,428
2014_01	127,507	247,486	334,385	379,224	397,244	404,903	411,641				419,232
2015_01	132,268	251,088	331,266	376,898	395,569	411,123					424,652
2016_01	132,909	252,812	332,383	378,153	400,869						426,184
2017_01	140,608	268,447	353,895	412,448							462,530
2018_01	143,182	264,742	363,778								469,963
2019_01	138,610	255,545									444,366
	Age-to-Age Development Factors										
	18 - 30	30 - 42	42 - 54	54 - 66	66 - 78	78 - 90	90 - 102	102 - 114	114 - 126		
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	1.005		
2011_01	1.924	1.365	1.145	1.058	1.027	1.020	1.009	1.010	1.002		
2012_01	1.949	1.332	1.154	1.066	1.030	1.017	1.007	1.002			
2013_01	1.901	1.318	1.140	1.062	1.026	1.012	1.010				
2014_01	1.941	1.351	1.134	1.048	1.019	1.017					
2015_01	1.898	1.319	1.138	1.050	1.039						
2016_01	1.902	1.315	1.138	1.060							
2017_01	1.909	1.318	1.165								
2018_01	1.849	1.374									
2019_01	1.844										
2 Yr Weighted Average	1.846	1.346	1.152	1.055	1.029	1.014	1.008	1.006	1.004		
5 Yr Weighted Average	1.880	1.336	1.143	1.057	1.028	1.015	1.008	1.007	1.005		
Selected	1.846	1.346	1.152	1.055	1.029	1.014	1.008	1.006	1.004		
Cumulative	3.211	1.739	1.292	1.121	1.063	1.033	1.018	1.010	1.004		

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)
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	148,597	1.000	148,597	14,817	10,029
2011_01	157,802	1.000	157,802	14,889	10,599
2012_01	155,143	1.000	155,143	14,602	10,625
2013_01	154,196	1.000	154,196	14,836	10,394
2014_01	178,733	1.000	178,733	15,231	11,735
2015_01	173,119	1.000	173,119	15,237	11,362
2016_01	172,383	1.000	172,383	14,995	11,496
2017_01	184,086	1.000	184,086	15,699	11,726
2018_01	186,398	1.000	186,398	15,301	12,182
2019_01	167,342	1.000	167,342	13,669	12,242

15 Year Lost Time Medical Trend

2.0%

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)										
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	148,597	148,597
2011_01	93,517	121,633	136,257	142,710	146,925	149,825	152,043	153,922	155,844	157,802	157,802
2012_01	96,025	126,297	136,907	142,691	145,929	147,930	150,140	152,018	153,615		155,143
2013_01	96,063	124,400	136,618	143,081	146,130	148,369	149,642	150,941			154,196
2014_01	107,786	141,058	155,196	163,564	168,492	171,271	173,124				178,733
2015_01	105,900	139,715	152,454	158,099	163,118	166,063					173,119
2016_01	108,619	138,216	152,058	158,764	162,550						172,383
2017_01	113,814	147,233	160,873	168,893							184,086
2018_01	116,692	148,961	163,328								186,398
2019_01	102,726	133,964									167,342
	Age-to-Age Development Factors										
	18 - 30	30 - 42	42 - 54	54 - 66	66 - 78	78 - 90	90 - 102	102 - 114	114 - 126		
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	1.007		
2011_01	1.301	1.120	1.047	1.030	1.020	1.015	1.012	1.012	1.013		
2012_01	1.315	1.084	1.042	1.023	1.014	1.015	1.013	1.011			
2013_01	1.295	1.098	1.047	1.021	1.015	1.009					
2014_01	1.309	1.100	1.054	1.030	1.016	1.011					
2015_01	1.319	1.091	1.037	1.032	1.018						
2016_01	1.272	1.100	1.044	1.024							
2017_01	1.294	1.093	1.050								
2018_01	1.277	1.096									
2019_01	1.304										
2 Yr Weighted Average	1.289	1.095	1.047	1.028	1.017	1.010	1.011	1.012	1.010		
5 Yr Weighted Average	1.293	1.096	1.046	1.026	1.017	1.013	1.012	1.010	1.009		
Selected	1.289	1.095	1.047	1.028	1.017	1.010	1.011	1.012	1.010		
Cumulative	1.611	1.249	1.141	1.090	1.060	1.042	1.032	1.022	1.010		

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)
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	25,481	1.000	25,481	31,970	797
2011_01	25,428	1.000	25,428	31,428	809
2012_01	25,144	1.000	25,144	29,590	850
2013_01	25,558	1.000	25,558	29,305	872
2014_01	24,720	1.000	24,720	28,981	853
2015_01	25,489	1.000	25,489	28,469	895
2016_01	25,065	1.000	25,065	27,415	914
2017_01	26,883	1.000	26,883	28,364	948
2018_01	27,447	1.000	27,447	27,939	982
2019_01	23,147	1.000	23,147	23,722	976

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)										
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	25,481	25,481
2011_01	23,243	25,043	25,329	25,448	25,412	25,440	25,421	25,415	25,426	25,428	25,428
2012_01	22,799	24,519	24,895	25,047	25,033	25,077	25,097	25,163	25,141	25,144	25,144
2013_01	23,731	24,878	25,214	25,281	25,334	25,401	25,544	25,560		25,558	25,558
2014_01	22,820	24,293	24,676	24,570	24,593	24,659	24,682			24,720	24,720
2015_01	22,942	24,741	25,078	25,201	25,295	25,365				25,489	25,489
2016_01	22,496	24,284	24,661	24,816	24,876					25,065	25,065
2017_01	24,427	25,909	26,113	26,598						26,883	26,883
2018_01	24,529	26,404	26,817							27,447	27,447
2019_01	20,670	22,353								23,147	23,147
	Age-to-Age Development Factors										
	18 - 30	30 - 42	42 - 54	54 - 66	66 - 78	78 - 90	90 - 102	102 - 114	114 - 126		
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	1.000		
2011_01	1.077	1.011	1.005	0.999	1.001	0.999	1.000	1.000	1.000		
2012_01	1.075	1.015	1.006	0.999	1.002	1.001	1.003	0.999			
2013_01	1.048	1.013	1.003	1.002	1.003	1.006	1.001				
2014_01	1.065	1.016	0.996	1.001	1.003	1.001					
2015_01	1.078	1.014	1.005	1.004	1.003						
2016_01	1.079	1.016	1.006	1.002							
2017_01	1.061	1.008	1.019								
2018_01	1.076	1.016									
2019_01	1.081										
2 Yr Weighted Average	1.079	1.012	1.013	1.003	1.003	1.003	1.002	1.000	1.000		
5 Yr Weighted Average	1.075	1.014	1.006	1.002	1.002	1.001	1.001	0.999	1.000		
Selected	1.079	1.012	1.013	1.003	1.003	1.003	1.002	1.000	1.000		
Cumulative	1.117	1.036	1.023	1.011	1.008	1.005	1.002	1.000	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)												
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	1,092.12	78.30
2008_01									85,859	85,859	85,859	1,092.79	78.57
2009_01								82,944	82,944	82,944	82,944	1,101.70	75.29
2010_01							91,311	91,311	91,311	91,311	91,311	1,144.80	79.76
2011_01						97,424	97,419	97,419	97,419	97,419	97,419	1,174.21	82.97
2012_01					99,595	99,579	99,582	99,582	99,580	99,580	99,580	1,190.50	83.65
2013_01				104,382	104,352	104,351	104,352	104,350		104,349	1,225.60	85.14	
2014_01			110,244	110,230	110,227	110,228	110,237			110,235	1,265.09	87.14	
2015_01		117,820	117,798	117,799	117,798	117,808				117,811	1,303.66	90.37	
2016_01	121,768	121,733	121,711	121,703	121,708					121,717	1,349.36	90.20	
2017_01	127,651	127,946	127,989	127,984						127,996	1,395.56	91.72	
2018_01	133,812	133,981	133,986							133,991	1,445.94	92.67	
2019_01	141,917	142,882								142,913	1,544.09	92.55	

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	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Selected	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cumulative	1.004	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: 0012, 0059, 0065, 0066, 0067, 0088, 0770, 0771, 0773, 0774, 0775, 0776, 0779, 0799, 0908, 0909, 0912, 0913, 7445, 7453, and 9985.

V 000037 STIP

V 000038 STIP

Section V - Trend
Subsection F - Calculation of Class Mix Adjustment Factor
7/1/2023

Section V - F
Exhibit 1

Class Mix Adjustment Factors

Policy Year (1)	Average Rates Based on Rates Effective 7/1/22 (2)	Class Mix Adjustment Factor = 0.745 / (2) (3)
2005_01	0.861	0.866
2006_01	0.811	0.918
2007_01	0.774	0.962
2008_01	0.749	0.994
2009_01	0.743	1.003
2010_01	0.738	1.009
2011_01	0.736	1.012
2012_01	0.741	1.005
2013_01	0.750	0.993
2014_01	0.760	0.980
2015_01	0.763	0.977
2016_01	0.765	0.974
2017_01	0.769	0.968
2018_01	0.767	0.970
2019_01	0.745	1.000

Notes:

(2): Current rates (Effective 7/1/22) averaged over class payrolls (excluding large deductibles) by Policy Year.

(3): Adjustment to 2019_01 Policy Year level.

V 000039 STIP

Section V - Trend
 Subsection G - External Data
 7/1/2023

Section V - G
 Exhibit 1

Summary of Statewide Average Weekly Wage (SAWW) Data

Date Promulgated by DUA (1)	Period of Data Used by DUA (2)	SAWW (3)
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
10/1/21	4/1/20 to 4/1/21	1,694.24
10/1/22	4/1/21 to 4/1/22	1,765.34
15 Year Exponential Fit, Trend =		3.4%

Policy Year (4)	SAWW (5)
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
2019_01	1,544.09

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).

V 000040 STIP

Section V - Trend
 Subsection H - Expense Trends
 7/1/2023

Section V - H
 Exhibit 1

Calculation of Expense Trend Index

Time Interval (1)	Time Index (2)	Expense Trend Index (3)	Expense Trend Factors		
			PY2018 (4)	PY2019 (5)	7/1/2023 (6)
CY2007	7/1/2007	69.07			
CY2008	7/1/2008	73.44			
CY2009	7/1/2009	73.74			
CY2010	7/1/2010	75.83			
CY2011	7/1/2011	73.10			
CY2012	7/1/2012	73.33			
CY2013	7/1/2013	77.70			
CY2014	7/1/2014	78.01			
CY2015	7/1/2015	82.79			
CY2016	7/1/2016	84.19			
CY2017	7/1/2017	85.16			
CY2018	7/1/2018	89.00			
CY2019	7/1/2019	91.91	0.984	1.025	1.200
CY2020	7/1/2020	96.45	0.938	0.976	1.144
CY2021	7/1/2021	100.00	0.905	0.942	1.103

15 Year Exponential Fit, Trend: 2.4%

PY2018	1/1/2019	90.45			1.219
PY2019	1/1/2020	94.18			1.171
7/1/2022	7/1/2023	106.75			1.033
7/1/2023	7/1/2024	110.30			

Notes:

- (1): 7/1/22 and 7/1/23 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 3.3%.
- (3): Calendar Years: Exhibit 2, Page 2, col (17), Converted to Index with 2021 = 100.
 PY2018 - Average of indices for CY2018 and CY2019.
 PY2019 - Average of indices for CY2019 and CY2020.
 The exponential trend rate derived from an exponential regression of the Expense Trend Index for CY2015 - CY2021 is applied to the CY2021 Expense Trend Index value to derive the Expense Trend Index values for 7/1/2022 and 7/1/2023.
- (4) = [(3) for PY2018] / (3)
- (5) = [(3) for PY2019] / (3)
- (6) = [(3) for 7/1/2023] / (3)

V 000041 STIP

Section V - Trend
 Subsection H - Expense Trends
 7/1/2023

Section V - H
 Exhibit 2
 Page 1

Calculation of Credibility Weighted Expense Trend

Calendar Year (1)	Expense Index (2)	7 Year Exponential Fit (3)	Difference Squared (4)
2015	82.79	81.35	2.07
2016	84.19	84.05	0.02
2017	85.16	86.84	2.84
2018	89.00	89.73	0.53
2019	91.91	92.71	0.64
2020	96.45	95.79	0.44
2021	100.00	98.97	1.06

(5)	7 Year Expense Index Trend	3.3%
(6)	n	7
(7)	s	1.23
(8)	t	2.02
(9)	m	6.00
(10)	$[1 + 1/n + 12 \times m^2 / (n^3 - n)]^{.5}$	1.56
(11)	Confidence Interval	3.87
(12)	Projected Value Prospective Period	109.17
(13)	CI/Projected Expense Index	0.04
(14)	Credibility - 7 Year Expense Index Trend (Z)	100%
(15)	Complement of Credibility - 15 year	2.4%
(16)	Credibility Weighted Expense Trend	3.3%

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)] }

V 00042 STIP

Section V - Trend
 Subsection H - Expense Trends
 7/1/2023

Section V - H
 Exhibit 2
 Page 2

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)
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	121.50	200.60
2020	2,579.00	294.34	198.23	89.08	319.56	121.30	195.40
2021	2,686.00	308.02	232.43	91.00	332.10	121.75	214.28

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)
2007								
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%	0.3%	1.5%	3.3%
2020	6.1%	3.4%	-3.8%	2.8%	4.4%	-0.2%	-2.6%	4.9%
2021	4.1%	4.6%	17.3%	2.2%	3.9%	0.4%	9.7%	3.7%

Weights							
Calendar Year (18)	Average Weekly Earnings (19)	Food (20)	Private Transportation (21)	Phone (22)	Postage (23)	Machines & Equipment (24)	Paper (25)
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%
2020	80.7%	0.6%	0.6%	1.3%	1.3%	14.9%	0.6%
2021	81.4%	0.6%	0.6%	1.2%	1.2%	14.3%	0.6%

Notes:

- (2): Average Weekly Earnings, Covered Employment and Wages, Private Fire, Marine, and Casualty Insurers - Massachusetts Unadjusted for Seasonality
 Years CY2015 - CY2021: Bureau of Labor Statistics, Series ID ENU25000405524126 (Direct Property and Casualty Insurers 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 2020-2021. Prior Filings for all other years.

V 000043 STIP

Section V - Trend
 Subsection H - Expense Trends
 7/1/2023

Section V - H
 Exhibit 2
 Page 3

Calendar Year 2020
 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	7.35%	65.9%	Average Weekly Earnings Covered Employment and Wages; Private Fire, Marine, Casualty Massachusetts	80.7%
Payroll Taxes	0.49%	4.4%		
Employee Relations	1.17%	10.5%		
Travel & Travel Items	0.14%	1.3%	Food Away From Home-CPI-US	0.6%
			Private Transportation-CPI-US	0.6%
Postage & Telephone	0.28%	2.5%	Postage-CPI-US	1.3%
			Telephone-CPI-US	1.3%
Equipment	1.66%	14.9%	Office & Stores Machines & Equipment-PPI	14.9%
Printing & Stationery	0.07%	0.6%	Paper-PPI	0.6%
Total	11.16%	100.0%		100.0%

Notes:

(2): 2021 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

Section V - Trend
 Subsection H - Expense Trends
 7/1/2023

Section V - H
 Exhibit 2
 Page 4

Calendar Year 2021
 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	7.03%	67.0%	Average Weekly Earnings Covered Employment and Wages; Private Fire, Marine, Casualty Massachusetts	81.4%
Payroll Taxes	0.46%	4.4%		
Employee Relations	1.06%	10.1%		
Travel & Travel Items	0.13%	1.2%	Food Away From Home-CPI-US	0.6%
			Private Transportation-CPI-US	0.6%
Postage & Telephone	0.26%	2.5%	Postage-CPI-US	1.2%
			Telephone-CPI-US	1.2%
Equipment	1.50%	14.3%	Office & Stores Machines & Equipment-PPI	14.3%
Printing & Stationary	0.06%	0.6%	Paper-PPI	0.6%
Total	10.50%	100.0%		100.0%

Notes:

(2): 2022 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 00045 STIP

Section V - Trend
Subsection H - Expense Trends
7/1/2023

Section V - H
Exhibit 3

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)
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	87.14		
2015	90.37	90.14	0.05
2016	90.20	90.81	0.37
2017	91.72	91.50	0.05
2018	92.67	92.18	0.23
2019	92.55	92.87	0.10

15 Year Million Worker-Weeks Trend

1.8%

(5)	5 Year MA Trend	0.8%
(6)	n	5
(7)	s	0.52
(8)	t	2.35
(9)	m	6.50
(10)	$[1 + 1/n + 12 \times m^2 / (n^3 - n)]^{.5}$	2.33
(11)	Confidence Interval	2.85
(12)	Projected	96.05
(13)	CI / Projected	0.03
(14)	Credibility - 5 Year MA Trend (Z)	100%
(15)	Complement of Credibility	1.8%
(16)	Credibility-Weighted Overall Exposure Growth	0.8%

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 000009 STIP

Section VI - Expenses
Subsection A - Summary
7/1/2023

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	5.5%
(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	5.5%
(6)	Total Loss Adjustment Expense Ratio (LAE / Loss)	18.3%

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, Page 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 2018			Projected to PY 2019		
				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)
2019	35,657,163	1,301,686	36,958,849	0.984	0.996	36,238,704	1.025	1.004	38,014,301
2020	35,209,276	1,158,816	36,368,092	0.938	0.989	33,726,433	0.976	0.996	35,378,935
2021	37,827,812	1,284,168	39,111,981	0.905	0.981	34,723,444	0.942	0.989	36,424,797
Average			37,479,640			34,896,194			36,606,011

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 7/1/2024 (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)
2018	34,896,194	2,019,941	36,916,134	1.219	45,016,501	816,352,996	5.5%
2019	36,606,011	2,118,912	38,724,924	1.171	45,354,239	826,209,551	5.5%
Average							5.5%

Notes:

- (2): Exhibit 2, Page 1.
- (3): Exhibit 2, Page 3.
- (5): Section V-H, Exhibit 1.
- (6): 0.8% annual growth in worker-weeks, from Section V-H, Exhibit 3; -0.5 years from CY 2019 to PY 2018, -1.5 years from CY 2020 to PY 2018, -2.5 years from CY 2021 to PY 2018.
- (8): Section V-H, Exhibit 1.
- (9): 0.8% annual growth in worker-weeks, from Section V-H, Exhibit 3; 0.5 years from CY 2019 to PY 2019, -0.5 years from CY 2020 to PY 2019, -1.5 years from CY 2021 to PY 2019.
- (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 00011 STIP

Section VI - Expenses
 Subsection B - Fixed Expenses
 7/1/2023

Section VI - B
 Exhibit 2
 Page 1

General Expense Exclusive of Proposed Expense Constant

	Calendar Year		
	2019	2020	2021
(1) Standard Earned Premium Including Expense Constant Premium	761,215,908	734,895,197	752,052,813
(2) ARAP Premium at Company Level	31,554,272	31,338,601	31,056,758
(3) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.056	1.059	1.047
(4) Standard Earned Premium plus Adjusted ARAP = (1) + [(2) x (3)]	794,524,958	768,082,009	784,562,647
(5) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.037	1.032	1.033
(6) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	0.998	0.998	1.005
(7) Adjusted Standard Earned Premium plus ARAP = (4) x (5) x (6)	822,119,363	791,290,275	814,420,875
(8) Ratio of Adjusted General Expense to Adjusted Standard Earned Premium plus ARAP	6.0%	6.3%	6.5%
(9) General Expenses = (7) x (8)	49,290,544	49,701,833	52,853,540
(10) Expense Constant Premium	30,630,268	30,541,480	30,606,552
(11) General Expense Portion of Expense Constant	51.0%	51.0%	51.0%
(12) Average Expense Constant in Effect	250.26	246.34	246.87
(13) Proposed Average Expense Constant	262.26	262.26	262.26
(14) Expense Trend Factor - Calendar Year XXXX to 7/1/24, the midpoint of the Prospective Effective Period	1.200	1.144	1.103
(15) Trend Factor to Adjust Proposed Average Expense Constant to Calendar Year XXXX = 1.0 / (14)	0.833	0.874	0.907
(16) Detrended Proposed Average Expense Constant = (13) x (15)	218.52	229.33	237.77
(17) Adjusted General Expenses Generated by the Expense Constant = [(10) x (11)] x [(16) / (12)]	13,633,381	14,492,557	15,025,728
(18) General Expenses Exclusive of Expense Constant Premium = (9) - (17)	35,657,163	35,209,276	37,827,812

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 Data.
- (11): Exhibit 3.
- (12): Calculated average expense constant in effect based on historical Unit Statistical Data.
- (13): Section VI-D, Exhibit 1.
- (14): Section V-H, Exhibit 1.

VI 000012 STIP

Section VI - Expenses
 Subsection B - Fixed Expenses
 7/1/2023

Section VI - B
 Exhibit 2
 Page 2

Calculation of General Expense

	Calendar Year		
	2019	2020	2021
(1) Standard Earned Premium Including Expense Constant Premium	952,296,677	915,172,108	920,343,199
(2) ARAP Premium at Company Level	38,815,576	37,728,950	37,611,910
(3) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.056	1.059	1.047
(4) Standard Earned Premium plus Adjusted ARAP = (1) + [(2) x (3)]	993,270,843	955,126,144	959,714,885
(5) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.037	1.032	1.033
(6) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	0.998	0.998	1.005
(7) Adjusted Standard Earned Premium plus ARAP = (4) x (5) x (6)	1,027,767,830	983,986,110	996,238,911
(8) Actual WCRIBMA Expenses	8,929,031	9,434,175	10,345,685
(9) General Expenses (excluding Boards & Bureaus Expenses)	52,691,261	52,371,100	54,307,315
(10) Adjusted General Expense = (8) + (9)	61,620,292	61,805,275	64,653,000
(11) Ratio of Adjusted General Expense to Adjusted Standard Earned Premium plus ARAP (including expense constants) = (10) / (7)	6.0%	6.3%	6.5%

Notes:

- (1),(2): Aggregate Financial Reconciliation Report Calls, Calendar Years 2019 - 2021, 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 2019 - 2021.

VI 000013 STIP

Section VI - Expenses
 Subsection B - Fixed Expenses
 7/1/2023

Section VI - B
 Exhibit 2
 Page 3

Calculation of Pool Expense

	Calendar Year		
	2019	2020	2021
(1) Administrative Expenses	548,444	551,604	550,546
(2) Other Expense Allowances	-	-	-
(3) Workers' Compensation Bureau Pool Expenses	2,121,129	1,857,197	2,031,265
(4) Total Pool Expenses = (1) + (2) + (3)	2,669,573	2,408,801	2,581,811
(5) Target Pool Expenses for Excluded Companies	895,450	829,400	831,562
(6) Total Pool Expenses, excluding 4 company(ies) = (4) - (5)	1,774,124	1,579,401	1,750,249
(7) Proportion of Voluntary Assessable Premium Not from Large Deductibles " u "	0.734	0.734	0.734
(8) Total Pool Expenses for Non-Large Deductibles = (6) x (7)	1,301,686	1,158,816	1,284,168

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 WCRIBMA Financial Statements and Expense Analysis Report
- (7): Section I-E, Exhibit 2.

VI 000014 STIP

Section VI - Expenses
Subsection B - Fixed Expenses
7/1/2023

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, 2021 Form 63-23P.

2.28% is Premium Tax as % of Net Premium.

VI 000015 STIP

Section VI - Expenses
 Subsection C - Other Taxes
 7/1/2023

Section VI - C
 Exhibit 1

Calculation of Other Taxes

(1)	Calendar Year 2021 Standard Earned Premium Including Expense Constant Premium	752,052,813	
(2)	Calendar Year 2021 ARAP Premium at Company Level	31,056,758	
(3)	Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.047	
(4)	Calendar Year 2021 Standard Earned Premium plus Adjusted ARAP = (1) + [(2) x (3)]	784,562,647	
(5)	Calendar Year 2021 Other Taxes Ratio	0.29%	
(6)	Calendar Year 2021 Other Taxes = (4) x (5)	2,275,232	
		<u>PY2018</u>	<u>PY2019</u>
(7)	Other Tax Trend Factor from CY 2021 to PY XXXX	0.905	0.942
(8)	Annual Exposure Growth	0.8%	0.8%
(9)	Trend Length	-2.5	-1.5
(10)	Provision for Other Taxes = (6) x (7) x { [1.0 + (8)] ^ (9) }	2,019,941	2,118,912

Notes:

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

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

(5): 2022 Best's Aggregates and Averages. Page 26.

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

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

(9): -2.5 years from CY 2021 to PY 2018, -1.5 years from CY 2021 to PY 2019.

VI 000016 STIP

Section VI - Expenses
 Subsection D - Expense Constant
 7/1/2023

Section VI - D
 Exhibit 1

Calculation of Expense Constant

Standard Premium Ranges		PY 2019 Adjusted Policy Count	Adjusted Policy Distribution	Current Expense Constant	Trend Factor from 7/1/23 to 7/1/24	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 \$180	38,157	31%	\$159.00	1.033	1.000	\$159.00
\$200 to \$1,000	\$180 to \$901	28,340	23%	\$250.00	1.033	1.000	\$250.00
\$1,000 or more	\$901 or more	56,608	46%	\$338.00	1.033	1.000	\$338.00
Total		123,105	100%	\$262.26			\$262.26

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, 1.11, from Section III-E, Exhibit 1.

(3): Unit Statistical Data PY 2019 (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 000017 STIP

Section VI - Expenses
Subsection E - Expenses Net of Premium Discount
7/1/2023

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	7.7%	3.9%
(2) Percentage of Voluntary Written Premium by Discount Type	75.7%	24.3%
(3) Weighted Average Premium Discount as a % of Standard Premium in Voluntary Market = (1) weighted by (2)	<hr/>	
	6.8%	
(4) Voluntary Market Share	85.8%	
(5) Average Premium Discount in Total Market = (3) x (4)	5.8%	
(6) Average ARAP Surcharge for Prospective Effective Period as a % of Standard Premium	5.5%	
(7) Average Premium Discount as a % of Standard Premium + ARAP = (5) / [1.0 + (6)]	5.5%	

Notes:

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

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

(2): Exhibit 4.

(4): Market Share is estimated using Standard Premium plus ARAP.

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

VI 000018 STIP

Section VI - Expenses
 Subsection E - Expenses Net of Premium Discount
 7/1/2023

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 2019				Total = [Sum of (2)] (3)
	0 - 10,000	10,000 - 200,000	200,000 - 1,750,000	1,750,000 & Over	
0 - 10,000	105,757,599	72,230,000	2,970,000	60,000	181,017,599
10,000 - 200,000		177,064,720	56,430,000	1,140,000	234,634,720
200,000 - 1,750,000			62,823,539	9,300,000	72,123,539
1,750,000 - & Over				8,143,180	8,143,180
Total	105,757,599	249,294,720	122,223,539	18,643,180	495,919,038

Interstate Intervals					
Layer of Standard Premium (4)	Standard Premium Ranges - PY 2019				Total Premium in Layer (6)
	0 - 10,000	10,000 - 200,000	200,000 - 1,750,000	1,750,000 & Over	
0 - 10,000	193,231	4,132,303	1,621,320	211,957	6,158,811
10,000 - 200,000		25,519,515	30,805,085	4,027,195	60,351,795
200,000 - 1,750,000			59,725,320	32,853,428	92,578,748
1,750,000 - & Over				86,760,191	86,760,191
Total	193,231	29,651,818	92,151,725	123,852,771	245,849,545

Total		Proportion of Premium in Layer (9)	% Premium Discount Type A Company (10)
Layer of Standard Premium (7)	Total = (3) + (6) (8)		
0 - 10,000	187,176,410	25.2%	0.0%
10,000 - 200,000	294,986,515	39.8%	9.1%
200,000 - 1,750,000	164,702,287	22.2%	11.3%
1,750,000 - & Over	94,903,371	12.8%	12.3%
Total	741,768,583	100.0%	7.7%

Notes:

Unit Statistical 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)

(10): Section XI-C, Exhibit 4, Page 2

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

VI 000019 STIP

Section VI - Expenses
 Subsection E - Expenses Net of Premium Discount
 7/1/2023

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 2019				Total = [Sum of (2)] (3)
	0 - 10,000	10,000 - 200,000	200,000 - 1,750,000	1,750,000 & Over	
0 - 10,000	60,389,159	31,860,000	870,000	10,000	93,129,159
10,000 - 200,000		55,106,156	16,530,000	190,000	71,826,156
200,000 - 1,750,000			15,434,744	1,550,000	16,984,744
1,750,000 - & Over				457,762	457,762
Total	60,389,159	86,966,156	32,834,744	2,207,762	182,397,821

Interstate Intervals					
Layer of Standard Premium (4)	Standard Premium Ranges - PY 2019				Total Premium in Layer (6)
	0 - 10,000	10,000 - 200,000	200,000 - 1,750,000	1,750,000 & Over	
0 - 10,000	79,326	1,771,321	491,414	43,816	2,385,877
10,000 - 200,000		9,310,421	9,336,858	832,504	19,479,783
200,000 - 1,750,000			17,314,755	6,791,480	24,106,235
1,750,000 - & Over				44,049,667	44,049,667
Total	79,326	11,081,742	27,143,027	51,717,467	90,021,562

Total		Proportion of Premium in Layer (9)	% Premium Discount Type B Company (10)
Layer of Standard Premium (7)	Total = (3) + (6) (8)		
0 - 10,000	95,515,036	35.1%	0.0%
10,000 - 200,000	91,305,939	33.5%	5.1%
200,000 - 1,750,000	41,090,979	15.1%	6.5%
1,750,000 - & Over	44,507,429	16.3%	7.5%
Total	272,419,383	100.0%	3.9%

Notes:

Unit Statistical 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)

(10): Section XI-C, Exhibit 4, Page 2

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

VI 00020 STIP

Section VI - Expenses

Subsection E - Expenses Net of Premium Discount

7/1/2023

Section VI - E

Exhibit 4

Calendar Year 2021 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	82,291,143	45,645,717	36,645,426	36,645,426	0
22667	ACE AMERICAN INSURANCE COMPANY	A	55,159,873	24,113,373	31,046,500	31,046,500	0
25682	TRAVELERS INDEMNITY COMPANY OF CONNECTICUT	A	42,840,227	0	42,840,227	42,840,227	0
40142	AMERICAN ZURICH INSURANCE COMPANY	A	37,664,617	10,395,541	27,269,076	27,269,076	0
11104	ASSOCIATED EMPLOYERS INSURANCE COMPANY	B	37,002,582	0	37,002,582	0	37,002,582
16535	ZURICH AMERICAN INSURANCE COMPANY	A	34,138,755	0	34,138,755	34,138,755	0
44326	ATLANTIC CHARTER INSURANCE COMPANY	A	31,638,576	8,078,414	23,560,162	23,560,162	0
30104	HARTFORD UNDERWRITERS INSURANCE COMPANY	A	31,179,469	16,981,917	14,197,552	14,197,552	0
25666	TRAVELERS INDEMNITY COMPANY OF AMERICA	A	28,048,441	23,790,383	4,258,058	4,258,058	0
33600	LM INSURANCE CORPORATION	A	24,536,259	23,605,737	930,522	930,522	0
23035	LIBERTY MUTUAL FIRE INSURANCE COMPANY	A	24,460,085	16,777,140	7,682,945	7,682,945	0
23841	NEW HAMPSHIRE INSURANCE COMPANY	B	24,367,119	0	24,367,119	0	24,367,119
31470	NORGUARD INSURANCE COMPANY	A	24,285,767	0	24,285,767	24,285,767	0
25658	TRAVELERS INDEMNITY COMPANY	A	22,609,045	0	22,609,045	22,609,045	0
25011	WESCO INSURANCE COMPANY	A	22,469,287	0	22,469,287	22,469,287	0
42390	AMGUARD INSURANCE COMPANY	A	22,184,577	11,723,744	10,460,833	10,460,833	0
29459	TWIN CITY FIRE INSURANCE COMPANY	B	20,787,903	0	20,787,903	0	20,787,903
11984	INDEPENDENCE CASUALTY INSURANCE COMPANY	A	19,468,299	0	19,468,299	19,468,299	0
25674	TRAVELERS PROPERTY CASUALTY COMPANY OF AMERICA	A	19,126,719	17,067,808	2,058,911	2,058,911	0
22357	HARTFORD ACCIDENT AND INDEMNITY COMPANY	A	18,555,736	0	18,555,736	18,555,736	0
19682	HARTFORD FIRE INSURANCE COMPANY	B	18,468,076	0	18,468,076	0	18,468,076
20281	FEDERAL INSURANCE COMPANY	A	17,078,177	0	17,078,177	17,078,177	0
24147	OLD REPUBLIC INSURANCE COMPANY	A	16,182,302	0	16,182,302	16,182,302	0
42404	LIBERTY INSURANCE CORPORATION	A	16,128,087	0	16,128,087	16,128,087	0
12262	PENNSYLVANIA MANUFACTURERS' ASSOCIATION INS. CO.	A	14,829,276	9,409,785	5,419,491	5,419,491	0
37478	HARTFORD INSURANCE COMPANY OF THE MIDWEST	B	14,656,537	0	14,656,537	0	14,656,537
29424	HARTFORD CASUALTY INSURANCE COMPANY	B	12,551,597	0	12,551,597	0	12,551,597
31325	ACADIA INSURANCE COMPANY	B	12,370,724	-36,655	12,407,379	0	12,407,379
12886	MASSACHUSETTS EMPLOYERS INSURANCE COMPANY	A	11,921,539	0	11,921,539	11,921,539	0
41360	ARBELLA PROTECTION INSURANCE COMPANY, INC.	A	10,374,493	0	10,374,493	10,374,493	0
19399	AIU INSURANCE COMPANY	B	9,946,737	0	9,946,737	0	9,946,737
13083	NEW HAMPSHIRE EMPLOYERS INSURANCE COMPANY	A	9,863,326	0	9,863,326	9,863,326	0
24074	OHIO CASUALTY INSURANCE COMPANY (THE)	B	9,653,699	0	9,653,699	0	9,653,699
39926	SELECTIVE INSURANCE COMPANY OF THE SOUTHEAST	A	9,515,316	0	9,515,316	9,515,316	0
11150	ARCH INSURANCE COMPANY	A	9,220,871	0	9,220,871	9,220,871	0
22292	HANOVER INSURANCE COMPANY (THE)	A	9,113,360	0	9,113,360	9,113,360	0
20443	CONTINENTAL CASUALTY COMPANY	B	8,574,446	2,912,827	5,661,619	0	5,661,619
28258	CONTINENTAL INDEMNITY COMPANY	B	8,447,670	0	8,447,670	0	8,447,670
11030	MEMIC INDEMNITY COMPANY	A	8,131,900	0	8,131,900	8,131,900	0
12416	PROTECTIVE INSURANCE COMPANY	A	8,011,952	0	8,011,952	8,011,952	0
19038	TRAVELERS CASUALTY AND SURETY COMPANY	A	7,907,014	0	7,907,014	7,907,014	0
12777	CHUBB INDEMNITY INSURANCE COMPANY	A	7,419,868	0	7,419,868	7,419,868	0
42376	TECHNOLOGY INSURANCE COMPANY INC.	A	7,409,128	0	7,409,128	7,409,128	0
18023	STAR INSURANCE COMPANY	A	7,346,564	0	7,346,564	7,346,564	0
37257	PRAETORIAN INSURANCE COMPANY	A	7,090,431	0	7,090,431	7,090,431	0
39217	QBE INSURANCE CORPORATION	B	6,874,633	0	6,874,633	0	6,874,633
23965	NORFOLK & DEDHAM MUTUAL FIRE INSURANCE COMPANY	A	6,852,954	0	6,852,954	6,852,954	0
13935	FEDERATED MUTUAL INSURANCE COMPANY	A	6,639,741	0	6,639,741	6,639,741	0
20052	NATIONAL LIABILITY & FIRE INSURANCE COMPANY	A	6,637,565	0	6,637,565	6,637,565	0
21458	EMPLOYERS INSURANCE COMPANY OF WAUSAU	B	6,460,466	0	6,460,466	0	6,460,466
14164	MEMIC CASUALTY COMPANY	A	6,284,219	0	6,284,219	6,284,219	0
38318	STARR INDEMNITY & LIABILITY COMPANY	A	5,444,053	0	5,444,053	5,444,053	0
13803	FARM FAMILY CASUALTY INSURANCE COMPANY	A	5,421,522	0	5,421,522	5,421,522	0
20478	NATIONAL FIRE INSURANCE COMPANY OF HARTFORD	B	5,168,327	0	5,168,327	0	5,168,327

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Section VI - Expenses

Subsection E - Expenses Net of Premium Discount

7/1/2023

Section VI - E

Exhibit 4

Calendar Year 2021 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)
39152	SERVICE AMERICAN INDEMNITY COMPANY	A	5,021,055	0	5,021,055	5,021,055	0
13374	ARROW MUTUAL LIABILITY INSURANCE COMPANY	B	4,949,544	0	4,949,544	0	4,949,544
15105	SAFETY NATIONAL CASUALTY CORPORATION	A	4,677,800	0	4,677,800	4,677,800	0
25224	GREAT DIVIDE INSURANCE COMPANY	A	4,604,247	0	4,604,247	4,604,247	0
25976	UTICA MUTUAL INSURANCE COMPANY	A	4,540,920	0	4,540,920	4,540,920	0
21113	UNITED STATES FIRE INSURANCE COMPANY	A	4,506,047	0	4,506,047	4,506,047	0
11000	SENTINEL INSURANCE COMPANY, LTD.	A	4,426,040	0	4,426,040	4,426,040	0
19259	SELECTIVE INSURANCE COMPANY OF SOUTH CAROLINA	A	4,257,218	0	4,257,218	4,257,218	0
25615	CHARTER OAK FIRE INSURANCE COMPANY, (THE)	A	4,249,717	0	4,249,717	4,249,717	0
35408	IMPERIUM INSURANCE COMPANY	A	4,235,673	0	4,235,673	4,235,673	0
19445	NATIONAL UNION FIRE INS. CO. OF PITTSBURGH PA	B	4,121,635	0	4,121,635	0	4,121,635
19429	INSURANCE COMPANY OF THE STATE OF PENNSYLVANIA	A	4,114,293	0	4,114,293	4,114,293	0
31534	CITIZENS INSURANCE COMPANY OF AMERICA	A	4,050,248	0	4,050,248	4,050,248	0
21415	EMPLOYERS MUTUAL CASUALTY COMPANY	A	3,933,661	0	3,933,661	3,933,661	0
15563	CLEAR SPRING PROPERTY AND CASUALTY COMPANY	A	3,913,837	0	3,913,837	3,913,837	0
21784	FIREMEN'S INSURANCE COMPANY OF WASHINGTON, D.C.	B	3,886,054	0	3,886,054	0	3,886,054
21261	ELECTRIC INSURANCE COMPANY	A	3,810,234	0	3,810,234	3,810,234	0
21105	NORTH RIVER INSURANCE COMPANY	A	3,741,862	0	3,741,862	3,741,862	0
10052	CHUBB NATIONAL INSURANCE COMPANY	A	3,705,038	0	3,705,038	3,705,038	0
10017	ARBELLA INDEMNITY INSURANCE COMPANY, INC.	A	3,665,508	0	3,665,508	3,665,508	0
24988	SENTRY INSURANCE A MUTUAL COMPANY	A	3,556,602	0	3,556,602	3,556,602	0
20044	BERKSHIRE HATHAWAY HOMESTATE INSURANCE COMPANY	A	3,554,375	0	3,554,375	3,554,375	0
36897	MANUFACTURERS ALLIANCE INSURANCE COMPANY	A	3,509,889	0	3,509,889	3,509,889	0
14788	NGM INSURANCE COMPANY	A	3,483,494	0	3,483,494	3,483,494	0
20427	AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA	B	3,445,749	0	3,445,749	0	3,445,749
31003	TRI-STATE INSURANCE COMPANY OF MINNESOTA	A	3,278,421	0	3,278,421	3,278,421	0
25496	STARSTONE NATIONAL INSURANCE COMPANY	A	3,150,322	0	3,150,322	3,150,322	0
21172	VANLINER INSURANCE COMPANY	A	3,059,699	0	3,059,699	3,059,699	0
20494	TRANSPORTATION INSURANCE COMPANY	B	3,017,327	0	3,017,327	0	3,017,327
12475	REPUBLIC FRANKLIN INSURANCE COMPANY	A	2,977,002	0	2,977,002	2,977,002	0
22306	MASSACHUSETTS BAY INSURANCE COMPANY	A	2,940,855	0	2,940,855	2,940,855	0
10664	ENDEAVOUR INSURANCE COMPANY	B	2,825,224	0	2,825,224	0	2,825,224
25844	UNION INSURANCE COMPANY	B	2,806,002	0	2,806,002	0	2,806,002
14702	EASTGUARD INSURANCE COMPANY	A	2,798,069	0	2,798,069	2,798,069	0
41840	ALLMERICA FINANCIAL BENEFIT INSURANCE COMPANY	A	2,734,514	0	2,734,514	2,734,514	0
24082	OHIO SECURITY INSURANCE COMPANY	B	2,731,552	0	2,731,552	0	2,731,552
16109	STARR SPECIALTY INSURANCE COMPANY	A	2,704,181	0	2,704,181	2,704,181	0
35289	CONTINENTAL INSURANCE COMPANY, (THE)	B	2,657,974	0	2,657,974	0	2,657,974
10510	CAROLINA CASUALTY INSURANCE COMPANY	A	2,651,645	0	2,651,645	2,651,645	0
36064	HANOVER AMERICAN INSURANCE COMPANY (THE)	A	2,566,658	0	2,566,658	2,566,658	0
20346	PACIFIC INDEMNITY COMPANY	A	2,520,267	0	2,520,267	2,520,267	0
40045	STARNET INSURANCE COMPANY	A	2,513,195	0	2,513,195	2,513,195	0
31348	CRUM & FORSTER INDEMNITY COMPANY	B	2,482,053	0	2,482,053	0	2,482,053
20508	VALLEY FORGE INSURANCE COMPANY	B	2,449,093	0	2,449,093	0	2,449,093
23434	MIDDLESEX INSURANCE COMPANY	A	2,359,880	0	2,359,880	2,359,880	0
10391	BERKSHIRE HATHAWAY DIRECT INSURANCE COMPANY	A	2,273,893	0	2,273,893	2,273,893	0
37885	XL SPECIALTY INSURANCE COMPANY	A	2,270,256	0	2,270,256	2,270,256	0
23329	MERCHANTS MUTUAL INSURANCE COMPANY	A	2,222,550	0	2,222,550	2,222,550	0
41394	BENCHMARK INSURANCE COMPANY	A	2,167,935	0	2,167,935	2,167,935	0
41424	PENNSYLVANIA MANUFACTURERS INDEMNITY COMPANY	A	2,099,869	0	2,099,869	2,099,869	0
25623	PHOENIX INSURANCE COMPANY, (THE)	A	2,068,569	0	2,068,569	2,068,569	0
20230	CENTRAL MUTUAL INSURANCE COMPANY	B	2,038,498	0	2,038,498	0	2,038,498
25984	GRAPHIC ARTS MUTUAL INSURANCE COMPANY	A	1,943,854	0	1,943,854	1,943,854	0
19801	ARGONAUT INSURANCE COMPANY	A	1,943,097	0	1,943,097	1,943,097	0

VI 00022 STIP

Section VI - Expenses

Subsection E - Expenses Net of Premium Discount

7/1/2023

Section VI - E

Exhibit 4

Calendar Year 2021 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)
43478	UTICA NATIONAL INSURANCE COMPANY OF TEXAS	A	1,938,023	0	1,938,023	1,938,023	0
24554	XL INSURANCE AMERICA, INC.	A	1,860,382	0	1,860,382	1,860,382	0
10687	UTICA NATIONAL ASSURANCE COMPANY	A	1,704,263	0	1,704,263	1,704,263	0
16045	EVEREST PREMIER INSURANCE COMPANY	A	1,629,474	0	1,629,474	1,629,474	0
23817	ILLINOIS NATIONAL INSURANCE COMPANY	B	1,613,128	0	1,613,128	0	1,613,128
16608	NEW YORK MARINE AND GENERAL INSURANCE COMPANY	A	1,605,247	0	1,605,247	1,605,247	0
29939	MAIN STREET AMERICA ASSURANCE COMPANY	A	1,557,042	0	1,557,042	1,557,042	0
10120	EVEREST NATIONAL INSURANCE COMPANY	B	1,530,700	0	1,530,700	0	1,530,700
42552	NOVA CASUALTY COMPANY	A	1,527,621	0	1,527,621	1,527,621	0
11673	REDWOOD FIRE AND CASUALTY INSURANCE COMPANY	A	1,504,497	0	1,504,497	1,504,497	0
33588	FIRST LIBERTY INSURANCE CORPORATION (THE)	A	1,462,894	0	1,462,894	1,462,894	0
25402	EMPLOYERS ASSURANCE COMPANY	A	1,456,645	0	1,456,645	1,456,645	0
11512	EMPLOYERS COMPENSATION INSURANCE COMPANY	A	1,453,992	0	1,453,992	1,453,992	0
18767	CHURCH MUTUAL INSURANCE COMPANY	B	1,450,023	0	1,450,023	0	1,450,023
10804	CONTINENTAL WESTERN INSURANCE COMPANY	B	1,413,201	0	1,413,201	0	1,413,201
28932	MARKEL AMERICAN INSURANCE COMPANY	A	1,399,800	0	1,399,800	1,399,800	0
10346	EMPLOYERS PREFERRED INSURANCE COMPANY	A	1,377,347	0	1,377,347	1,377,347	0
27855	ZURICH AMERICAN INSURANCE COMPANY OF ILLINOIS	A	1,336,012	0	1,336,012	1,336,012	0
11126	SOMPO JAPAN INSURANCE COMPANY OF AMERICA	A	1,333,442	0	1,333,442	1,333,442	0
12831	STATE NATIONAL INSURANCE COMPANY INC.	A	1,311,173	0	1,311,173	1,311,173	0
11149	MAINE EMPLOYERS' MUTUAL INSURANCE COMPANY	B	1,268,467	0	1,268,467	0	1,268,467
25135	STATE AUTOMOBILE MUTUAL INSURANCE COMPANY	A	1,249,693	0	1,249,693	1,249,693	0
38970	MARKEL INSURANCE COMPANY	A	1,248,909	0	1,248,909	1,248,909	0
28460	SENTRY CASUALTY COMPANY	A	1,233,988	0	1,233,988	1,233,988	0
19879	SECURITY NATIONAL INSURANCE COMPANY	A	1,223,502	0	1,223,502	1,223,502	0
31232	WORK FIRST CASUALTY COMPANY	A	1,207,531	0	1,207,531	1,207,531	0
24139	OLD REPUBLIC GENERAL INSURANCE CORPORATION	A	1,130,984	0	1,130,984	1,130,984	0
23280	CINCINNATI INDEMNITY COMPANY	A	1,109,217	0	1,109,217	1,109,217	0
21407	EMCASCO INSURANCE COMPANY	A	1,084,388	0	1,084,388	1,084,388	0
23809	GRANITE STATE INSURANCE COMPANY	B	1,061,819	0	1,061,819	0	1,061,819
38997	SOMPO AMERICAN FIRE AND MARINE INSURANCE COMPANY	A	1,048,912	0	1,048,912	1,048,912	0
38911	BERKLEY NATIONAL INSURANCE COMPANY	A	1,012,321	0	1,012,321	1,012,321	0
20303	GREAT NORTHERN INSURANCE COMPANY	A	1,009,896	0	1,009,896	1,009,896	0
32620	NATIONAL INTERSTATE INSURANCE COMPANY	A	982,225	0	982,225	982,225	0
13714	PHARMACISTS MUTUAL INSURANCE COMPANY	A	867,090	0	867,090	867,090	0
16356	CHIRON INSURANCE COMPANY	A	802,429	0	802,429	802,429	0
27154	ATLANTIC SPECIALTY INSURANCE COMPANY	A	793,891	0	793,891	793,891	0
29157	UNITED WISCONSIN INSURANCE COMPANY	A	793,586	0	793,586	793,586	0
28304	FEDERATED SERVICE INSURANCE COMPANY	A	793,144	0	793,144	793,144	0
13706	DORCHESTER MUTUAL INSURANCE COMPANY	A	731,582	0	731,582	731,582	0
26247	AMERICAN GUARANTEE AND LIABILITY INSURANCE COMPANY	A	702,982	0	702,982	702,982	0
33723	GREAT AMERICAN SPIRIT INSURANCE COMPANY	A	668,487	0	668,487	668,487	0
20397	VIGILANT INSURANCE COMPANY	A	635,678	0	635,678	635,678	0
16044	EVEREST DENALI INSURANCE COMPANY	A	634,281	0	634,281	634,281	0
12304	ACCIDENT FUND GENERAL INSURANCE COMPANY	A	602,144	0	602,144	602,144	0
10677	CINCINNATI INSURANCE COMPANY	A	593,361	0	593,361	593,361	0
15954	AMTRUST INSURANCE COMPANY	A	586,501	0	586,501	586,501	0
15032	GUIDEONE MUTUAL INSURANCE COMPANY	A	570,749	0	570,749	570,749	0
12901	MERCHANTS PREFERRED INSURANCE COMPANY	A	567,040	0	567,040	567,040	0
40460	SAGAMORE INSURANCE COMPANY	A	556,810	0	556,810	556,810	0
18279	BANKERS STANDARD INSURANCE COMPANY	A	551,338	0	551,338	551,338	0
14190	OBI NATIONAL INSURANCE COMPANY	A	550,683	0	550,683	550,683	0
20222	ALL AMERICA INSURANCE COMPANY	A	530,991	0	530,991	530,991	0
26832	GREAT AMERICAN ALLIANCE INSURANCE COMPANY	A	497,728	0	497,728	497,728	0

VI 00023 STIP

Section VI - Expenses

Subsection E - Expenses Net of Premium Discount

7/1/2023

Section VI - E

Exhibit 4

Calendar Year 2021 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)
26662	MILWAUKEE CASUALTY INSURANCE CO.	A	497,191	0	497,191	497,191	0
44393	WEST AMERICAN INSURANCE COMPANY	B	495,190	0	495,190	0	495,190
41106	TRIUMPH CASUALTY COMPANY	A	494,451	0	494,451	494,451	0
16024	FEDERATED RESERVE INSURANCE COMPANY	A	483,467	0	483,467	483,467	0
14923	PATRONS MUTUAL INSURANCE COMPANY OF CONNECTICUT	A	467,757	0	467,757	467,757	0
13978	FLORISTS' MUTUAL INSURANCE COMPANY	A	459,209	0	459,209	459,209	0
23396	AMERISURE MUTUAL INSURANCE COMPANY	B	452,086	0	452,086	0	452,086
26182	HARLEYSVILLE WORCESTER INSURANCE COMPANY	A	444,979	0	444,979	444,979	0
11991	NATIONAL CASUALTY COMPANY	A	432,816	0	432,816	432,816	0
27626	FIRSTCOMP INSURANCE COMPANY	A	420,512	0	420,512	420,512	0
10749	INTREPID INS CO	A	420,326	0	420,326	420,326	0
20362	MITSUI SUMITOMO INSURANCE COMPANY OF AMERICA	A	404,385	0	404,385	404,385	0
31925	FALLS LAKE NATIONAL INSURANCE COMPANY	A	400,230	0	400,230	400,230	0
21423	UNION INSURANCE COMPANY OF PROVIDENCE	A	397,357	0	397,357	397,357	0
29580	BERKLEY REGIONAL INSURANCE COMPANY	A	393,028	0	393,028	393,028	0
28665	CINCINNATI CASUALTY COMPANY	A	372,986	0	372,986	372,986	0
22748	PACIFIC EMPLOYERS INSURANCE COMPANY	A	372,904	0	372,904	372,904	0
15911	AMERICAN MINING INSURANCE COMPANY	A	364,608	0	364,608	364,608	0
10800	PREMIER GROUP INSURANCE COMPANY	B	361,546	0	361,546	0	361,546
24414	GENERAL CASUALTY COMPANY OF WISCONSIN	A	353,817	0	353,817	353,817	0
23442	PATRIOT GENERAL INSURANCE COMPANY	A	322,487	0	322,487	322,487	0
10166	ACCIDENT FUND INSURANCE COMPANY OF AMERICA	A	294,832	0	294,832	294,832	0
30830	ARCH INDEMNITY INSURANCE COMPANY	B	285,028	0	285,028	0	285,028
22551	MITSUI SUMITOMO INSURANCE USA INC.	A	276,349	0	276,349	276,349	0
25127	STATE AUTO PROPERTY & CASUALTY INSURANCE COMPANY	A	266,096	0	266,096	266,096	0
23582	HARLEYSVILLE INSURANCE COMPANY	A	259,215	0	259,215	259,215	0
13269	ZENITH INSURANCE COMPANY	A	255,624	0	255,624	255,624	0
21180	SENTRY SELECT INSURANCE COMPANY	A	240,352	0	240,352	240,352	0
28223	NATIONWIDE AGRIBUSINESS INSURANCE COMPANY	B	232,602	0	232,602	0	232,602
32280	WELLFLEET INSURANCE COMPANY	A	220,573	0	220,573	220,573	0
35696	HARLEYSVILLE PREFERRED INSURANCE COMPANY	A	219,578	0	219,578	219,578	0
23612	MIDWEST EMPLOYERS CASUALTY COMPANY	A	213,582	0	213,582	213,582	0
10945	TOKIO MARINE AMERICA INSURANCE COMPANY	A	209,571	0	209,571	209,571	0
11242	ALLIED EASTERN INDEMNITY COMPANY	A	200,703	0	200,703	200,703	0
20931	ATLANTA INTERNATIONAL INSURANCE COMPANY	B	199,251	0	199,251	0	199,251
27847	INSURANCE COMPANY OF THE WEST	A	195,333	0	195,333	195,333	0
13528	BROTHERHOOD MUTUAL INSURANCE COMPANY	B	192,666	0	192,666	0	192,666
19984	ACIG INSURANCE COMPANY	A	185,899	0	185,899	185,899	0
27740	NORTH POINTE INSURANCE COMPANY	A	170,097	0	170,097	170,097	0
21849	AMERICAN AUTOMOBILE INSURANCE COMPANY	A	152,704	0	152,704	152,704	0
23787	NATIONWIDE MUTUAL INSURANCE COMPANY	A	152,351	0	152,351	152,351	0
41343	HDI GLOBAL INSURANCE COMPANY	A	150,219	0	150,219	150,219	0
41238	TRANS PACIFIC INSURANCE COMPANY	A	148,856	0	148,856	148,856	0
13056	RLI INSURANCE COMPANY	A	146,127	0	146,127	146,127	0
13998	UTICA NATIONAL INSURANCE COMPANY OF OHIO	A	144,956	0	144,956	144,956	0
10642	CHEROKEE INSURANCE COMPANY	A	131,076	0	131,076	131,076	0
10665	AMERITRUST INSURANCE CORPORATION	A	126,990	0	126,990	126,990	0
24449	REGENT INSURANCE COMPANY	A	121,120	0	121,120	121,120	0
11050	AMERISURE PARTNERS INSURANCE COMPANY	B	121,079	0	121,079	0	121,079
25186	EMC PROPERTY & CASUALTY COMPANY	A	111,511	0	111,511	111,511	0
12305	ACCIDENT FUND NATIONAL INSURANCE COMPANY	A	107,560	0	107,560	107,560	0
28886	TRANSGUARD INSURANCE COMPANY OF AMERICA, INC.	A	106,796	0	106,796	106,796	0
24066	AMERICAN FIRE AND CASUALTY COMPANY	B	104,157	0	104,157	0	104,157
31895	AMERICAN INTERSTATE INSURANCE COMPANY	A	93,399	0	93,399	93,399	0

VI 00024 STIP

Section VI - Expenses
 Subsection E - Expenses Net of Premium Discount
 7/1/2023

Section VI - E
 Exhibit 4

Calendar Year 2021 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)
10885	KEY RISK INSURANCE COMPANY	A	83,899	0	83,899	83,899	0
21873	FIREMAN'S FUND INSURANCE COMPANY	A	83,782	0	83,782	83,782	0
20699	ACE PROPERTY AND CASUALTY INSURANCE COMPANY	A	80,414	0	80,414	80,414	0
24767	ST. PAUL FIRE & MARINE INSURANCE COMPANY	A	75,369	0	75,369	75,369	0
10212	ALLMERICA FINANCIAL ALLIANCE INSURANCE COMPANY	A	73,154	0	73,154	73,154	0
21881	NATIONAL SURETY CORPORATION	A	72,305	0	72,305	72,305	0
19402	AIG PROPERTY CASUALTY COMPANY	B	69,137	0	69,137	0	69,137
19488	AMERISURE INSURANCE COMPANY	B	68,861	0	68,861	0	68,861
15645	OBI AMERICA INS CO	A	42,754	0	42,754	42,754	0
10006	CERITY INSURANCE COMPANY	A	35,647	0	35,647	35,647	0
19410	COMMERCE AND INDUSTRY INSURANCE COMPANY	B	33,458	0	33,458	0	33,458
40517	ADVANTAGE WORKERS COMPENSATION INSURANCE COMPANY	A	31,984	0	31,984	31,984	0
25143	STATE FARM FIRE AND CASUALTY COMPANY	A	30,374	0	30,374	30,374	0
22136	GREAT AMERICAN INSURANCE COMPANY OF NEW YORK	A	29,397	0	29,397	29,397	0
26344	GREAT AMERICAN ASSURANCE COMPANY	A	26,103	0	26,103	26,103	0
38300	SAMSUNG FIRE & MARINE INSURANCE CO. LTD (U.S. BRANCH)	A	24,546	0	24,546	24,546	0
16691	GREAT AMERICAN INSURANCE COMPANY	A	24,416	0	24,416	24,416	0
12866	T.H.E INSURANCE COMPANY	B	24,399	0	24,399	0	24,399
34630	OAK RIVER INSURANCE COMPANY	A	20,344	0	20,344	20,344	0
19828	ARGONAUT-MIDWEST INSURANCE COMPANY	A	16,790	0	16,790	16,790	0
14982	PENN MILLERS INSURANCE COMPANY	A	15,910	0	15,910	15,910	0
10030	WESTCHESTER FIRE INSURANCE COMPANY	B	15,416	0	15,416	0	15,416
21709	TRUCK INSURANCE EXCHANGE	A	14,709	0	14,709	14,709	0
11371	GREAT WEST CASUALTY COMPANY	A	12,698	0	12,698	12,698	0
24198	PEERLESS INSURANCE COMPANY	A	8,248	0	8,248	8,248	0
43575	INDEMNITY INSURANCE COMPANY OF NORTH AMERICA	A	7,327	0	7,327	7,327	0
14990	PENNSYLVANIA NATIONAL MUTUAL CASUALTY INS. CO.	B	6,905	0	6,905	0	6,905
15350	WEST BEND MUTUAL INSURANCE COMPANY	A	6,437	0	6,437	6,437	0
13019	EASTERN ADVANTAGE ASSURANCE COMPANY	A	5,345	0	5,345	5,345	0
23043	LIBERTY MUTUAL INSURANCE COMPANY	B	4,561	0	4,561	0	4,561
23663	NATIONAL AMERICAN INSURANCE COMPANY	A	3,175	0	3,175	3,175	0
37877	NATIONWIDE PROPERTY & CASUALTY INSURANCE COMPANY	B	1,716	0	1,716	0	1,716
23450	AMERICAN FAMILY HOME INSURANCE COMPANY	A	1,698	0	1,698	1,698	0
36307	GRAY INSURANCE COMPANY (THE)	A	1,544	0	1,544	1,544	0
34690	PROPERTY AND CASUALTY INSURANCE CO. OF HARTFORD	A	561	0	561	561	0
20095	BITCO GENERAL INSURANCE CORPORATION	A	494	0	494	494	0
24171	NETHERLANDS INSURANCE COMPANY (THE)	A	215	0	215	215	0
42803	GUIDEONE ELITE INSURANCE COMPANY	B	194	0	194	0	194
25453	NATIONWIDE INSURANCE COMPANY OF AMERICA	A	104	0	104	104	0
Total			1,202,293,470	210,465,731	991,827,739	750,957,100	240,870,639

Percentage of Voluntary written premium electing Type A Discount: 75.7%
 Percentage of Voluntary written premium electing Type B Discount: 24.3%

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 000025 STIP

Section VI - Expenses
Subsection F - Expense Constant Offset
7/1/2023

Section VI - F
Exhibit 1

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

(1) Expense Constant Offset for Policy Year 2019	0.960
(2) Expense Constant as Percent of Premium for Policy Year 2019 = 1.0 - (1)	4.0%
(3) Calculated Expense Constant for Policy Year 2019	\$248.92
(4) Factor to Bring Policy Year 2019 Premium to Premium Level of Prospective Effective Period	1.11
(5) Estimated Expense Constant for Prospective Effective Period	\$262.26
(6) Expense Constant as Percent of Premium for Prospective Effective Period = { (2) x [(5) / (3)] } / { [(1) x (4)] + [(2) x ((5) / (3))] }	3.8%

Notes:

(1): Exhibit 2.

(3): Based on Unit Statistical Data

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

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

VI 00026 STIP

Section VI - Expenses
 Subsection F - Expense Constant Offset
 7/1/2023

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)
2018	1,162,491,659	51,722,114	1.054	48,595,077	0.962
2019	1,120,313,227	51,749,007	1.055	49,416,237	0.960

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)
2019	714,267,061	31,504,988	1.055	30,786,330	0.960

Notes:

Based on Unit Statistical 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 2019 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 00027 STIP

Section VI - Expenses
Subsection G - Acquisition Expenses
7/1/2023

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	2.4%
(2)	Selected Average Commission Ratio, Excluding Expense Constants	9.2%
(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 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 00028 STIP

Section VI - Expenses
 Subsection G - Acquisition Expenses
 7/1/2023

Section VI - G
 Exhibit 2

Calculation of Other Acquisition Expense

	Calendar Year		
	2019	2020	2021
(1) Standard Earned Premium Including Expense Constant Premium	952,296,677	915,172,108	920,343,199
(2) ARAP Premium at Company Level	38,815,576	37,728,950	37,611,910
(3) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.056	1.059	1.047
(4) Standard Earned Premium plus Adjusted ARAP = (1) + [(2) x (3)]	993,270,843	955,126,144	959,714,885
(5) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.037	1.032	1.033
(6) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	0.998	0.998	1.005
(7) Adjusted Standard Earned Premium plus ARAP = (4) x (5) x (6)	1,027,767,830	983,986,110	996,238,911
(8) Other Acquisition, Field Supervision, Collection Expenses for Home Office and Branch Office, excluding Commissions	41,841,670	39,119,271	41,204,023
(9) Other Acquisition Expense Ratio = (8) / (7)	4.1%	4.0%	4.1%
(10) Three Year Average		4.1%	
(11) Expense Constant as Percent of Premium for Prospective Effective Period		3.8%	
(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)		1.8%	
(14) Other Acquisition and Field Supervision Expense Ratio, Excluding Expense Constants = [(10) - (13)] / [1.0 - (11)]		2.4%	

Notes:

- (1), (2): Aggregate Financial Reconciliation Report Calls, Calendar Years 2019 - 2021.
 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 2019 - 2021.
- (11): Section VI-F, Exhibit 1.
- (12): Section VI-B, Exhibit 3.

VI 000029 STIP

Section VI - Expenses
Subsection G - Acquisition Expenses
7/1/2023

Section VI - G
Exhibit 3

Calculation of Average Commission Rate

	Calendar Year		
	2019	2020	2021
(1) Direct Written Premium	803,391,423	774,305,211	811,545,422
(2) Total Commissions for Agents and Brokers	68,877,762	67,584,465	74,481,203
(3) Average Commission Rate = (2) / (1)	8.6%	8.7%	9.2%
(4) Three Year Average		8.8%	
(5) Expense Constant as Percent of Premium for Prospective Effective Period		3.8%	
(6) Average Commission Ratio, Excluding Expense Constants = (4) / [1.0 - (5)]		9.2%	
(7) Selected Average Commission Ratio, Excluding Expense Constants		9.2%	

Notes:

(1),(2): Annual Statement, Statutory Page 14, Exhibit of Premium and Loss, Calendar Years 2019 - 2021.

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

VI 00030 STIP

Section VI - Expenses
 Subsection G - Acquisition Expenses
 7/1/2023

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)
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%
2020	19.8%	1.4%	2.3%	0.2%	23.7%
2021	19.3%	1.3%	2.0%	0.2%	22.8%
(7) Average	18.6%	2.9%	3.2%	0.3%	25.0%
(8) Estimated Ceding Commission & Brokerage Rate for Workers' Compensation Non-Proportional Reinsurance	15.8%				
(9) Adjusted Average = (7) - (8)	2.8%	2.9%	3.2%	0.3%	9.2%

- (10)
Estimated % of Direct Premium Ceded for Workers' Compensation Non-Proportional Reinsurance
14.9%
- (11)
Implied Frictional Reinsurance Expenses Relative to Direct Premiums (as a %)
= Total (9) x (10)
1.37%
- (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 2008 - 2022.

(8): Page 2, (10).

(10): Page 2, (11).

VI 00031 STIP

Section VI - Expenses
 Subsection G - Acquisition Expenses
 7/1/2023

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)
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
2020	51,302,048	44,142,946	7,159,102	0.088	0.082	4,514,580	3,619,722	894,859
2021	52,153,460	44,870,161	7,283,299	0.087	0.086	4,537,351	3,858,834	678,517
Total	737,321,677	627,784,702	109,536,975	0.085	0.072	62,453,278	45,130,550	17,322,729

- (10) Estimated Ceding Commission & Brokerage Rate for Workers' Compensation Non-Proportional Reinsurance = Total (9) / Total (4) 15.8%
- (11) Estimated % of Direct Premium Ceded for Workers' Compensation Non-Proportional Reinsurance = Total (4) / Total (2) 14.9%

Notes:

(2), (3), (5), (6): Insurance Expense Exhibit database - By Line Underwriting Experience from Best's Aggregates & Averages for Workers' Comp Editions 2008 - 2022.

VI 00032 STIP

Section VI - Expenses
 Subsection G - Acquisition Expenses
 7/1/2023

Section VI - G
 Exhibit 5

Effect of Incidental Income and Earned but Uncollected Premium

	Calendar Year		
	2019	2020	2021
(1) Standard Earned Premium Including Expense Constant Premium	952,296,677	915,172,108	920,343,199
(2) ARAP Premium at Company Level	38,815,576	37,728,950	37,611,910
(3) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.056	1.059	1.047
(4) Standard Earned Premium plus Adjusted ARAP = (1) + [(2) x (3)]	993,270,843	955,126,144	959,714,885
(5) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.037	1.032	1.033
(6) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	0.998	0.998	1.005
(7) Adjusted Standard Earned Premium plus ARAP = (4) x (5) x (6)	1,027,767,830	983,986,110	996,238,911
(8) Earned But Uncollected Premium ("EBUP")	5,148,442	6,299,598	8,264,694
(9) Incidental Income	1,202,758	1,840,046	1,269,569
(10) Net Effect of Incidental Income and EBUP Expense = [(8) - (9)] / (7)	0.4%	0.5%	0.7%
(11) Three Year Average		0.5%	
(12) Expense Constant as Percent of Premium for Prospective Effective Period		3.8%	
(13) Effect of Incidental Income and EBUP Expense, Excluding Expense Constants = (11) / [1.0 - (12)]		0.5%	
(14) Selected Effect of Incidental Income and EBUP Expense, Excluding Expense Constants		0.0%	

Notes:

- (1), (2): Aggregate Financial Reconciliation Report Calls, Calendar Years 2019 - 2021.
 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 00033 STIP

Section VI - Expenses
Subsection H - Loss Adjustment Expense
7/1/2023

Section VI - H
Exhibit 1
Page 1

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

	Policy Year		
	2018	2019	2020
(1) Defense and Cost Containment Expense Ratio	8.7%	8.5%	8.1%
(2) Three Year Average Defense and Cost Containment Expense Ratio = Average of (1)		8.4%	
(3) Selected Three Year Average Defense and Cost Containment Expense Ratio		8.4%	
(4) Total Loss Adjustment Expense Ratio (LAE / Loss)		18.3%	

Notes:

(1): Section VI-H, Exhibit 1, Page 3

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

Paid Defense and Cost Containment ("DCCE") (\$000s)

Policy Year (1)	Age of Development																					
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	
1999															17,779	17,869	17,955	18,059	18,137	18,263	18,312	18,405
2000													18,001	18,081	18,157	18,214	18,276	18,248	18,390	18,460	18,476	
2001												17,786	17,877	17,989	18,095	18,175	18,169	18,178	18,226	18,256	18,276	
2002												18,655	18,787	18,895	18,998	19,097	19,224	19,238	19,334	19,413	19,488	
2003										18,639	18,866	18,963	19,075	19,150	19,219	19,214	19,466	19,562	19,636			
2004										17,837	17,870	17,976	18,133	18,252	18,318	18,270	18,252	18,335	18,372			
2005										17,722	17,963	18,159	18,315	18,473	18,620	18,868	18,936	19,068	19,119			
2006										19,125	19,429	19,704	19,865	20,020	20,159	20,258	20,339	20,444	20,490			
2007									21,246	21,916	22,352	22,652	22,934	23,006	23,255	23,380	23,469	23,567				
2008									20,902	22,091	22,791	23,304	23,628	23,909	24,003	24,223	24,352	24,434				
2009									18,846	20,482	21,526	22,243	22,572	22,896	23,124	23,180	23,286	23,384				
2010									20,834	21,890	22,558	22,922	23,207	23,460	23,615	23,780						
2011									15,579	18,305	22,302	24,474	25,573	26,314	26,726	27,065	27,319	27,507				
2012									18,785	20,834	21,890	22,558	22,922	23,207	23,460	23,615	23,780					
2013									18,846	20,482	21,526	22,243	22,572	22,896	23,124	23,180	23,286	23,384				
2014									20,902	22,091	22,791	23,304	23,628	23,909	24,003	24,223	24,352	24,434				
2015									20,834	21,890	22,558	22,922	23,207	23,460	23,615	23,780						
2016									20,834	21,890	22,558	22,922	23,207	23,460	23,615	23,780						
2017									20,834	21,890	22,558	22,922	23,207	23,460	23,615	23,780						
2018									20,834	21,890	22,558	22,922	23,207	23,460	23,615	23,780						
2019									20,834	21,890	22,558	22,922	23,207	23,460	23,615	23,780						
2020									20,834	21,890	22,558	22,922	23,207	23,460	23,615	23,780						

Paid Losses

Policy Year (1)	Age of Development																					
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	
1999																						
2000																						
2001																						
2002																						
2003																						
2004																						
2005																						
2006																						
2007																						
2008																						
2009																						
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2011																						
2012																						
2013																						
2014																						
2015																						
2016																						
2017																						
2018																						
2019																						
2020																						

Notes:
 (2),(3): Aggregate Financial Policy Year Calls.

VI 000034 STIP

VI 00036 STIP

Section VI - Expenses
 Subsection H - Loss Adjustment Expense
 7/1/2023

Section VI - H
 Exhibit 2

Adjusting and Other ("AO") Expense Ratio

	Calendar Year		
	2019	2020	2021
(1) Direct Incurred Losses	451,498,520	465,195,895	488,721,614
(2) Factor to Adjust the Direct Losses to Full Coverage Losses	1.203	1.214	1.225
(3) Estimated Full Coverage Incurred Losses = (1) x (2)	543,361,428	564,687,548	598,598,474
(4) Direct Incurred Adjusting and Other Expense	55,361,076	52,325,869	44,166,201
(5) Factor to Adjust the Direct Adjusting and Other Expense to Full Coverage AO Expense	1.092	1.097	1.101
(6) Estimated Full Coverage Adjusting and Other Expense = (4) x (5)	60,472,981	57,380,798	48,629,324
(7) Adjusted Adjusting and Other Expense Ratio = (6) / (3)	11.13%	10.16%	8.12%
(8) Three Year Average Adjusted Adjusting and Other Expense Ratio = Average of (7)		9.8%	
(9) Selected Three Year Average Adjusted Adjusting and Other Expense Ratio		9.8%	

Notes:

(1): Annual Statement, Statutory Page 14, Exhibit of Premium and Loss.

(4): Aggregate Financial Calendar Year Expense Data Calls, 2019 - 2021.

VI 00037 STIP

Section VI - Expenses
 Subsection I - Adjustment for Large Deductible Policies
 7/1/2023

Section VI - I
 Exhibit 1
 Page 1

Adjustment to the Adjusting and Other Expense Provision

	Calendar Year		
	2019	2020	2021
(1) Average Premium Reduction Factor for Large Deductible Policies	0.814	0.826	0.835
(2) Loss Elimination Ratio (LER) for Large Deductible Policies = (1) x 1.118	91.0%	92.4%	93.4%
(3) Market Share (Standard Premium Basis) of Large Deductible Policies	18.6%	19.1%	19.7%
(4) LER for Full Coverage plus Large Deductible Policies = [(2) x (3)] + { 0.0 x [1.0 - (3)] }	16.9%	17.6%	18.4%
(5) Factor to Adjust the Direct Losses to Full Coverage Losses = 1.0 / [1.0 - (4)]	1.203	1.214	1.225
(6) Factor to Adjust the Direct AO Expense to Full Coverage AO Expense = 1.0 / { 1.0 - [0.5 x (4)] }	1.092	1.097	1.101

Notes:

- (1),(3): Exhibit 2.
- (2): 1.118 from Exhibit 1, Page 2.
- (6): Assumes 50% of Adjusting & Other expense varies directly with losses.

VI 00038 STIP

Section VI - Expenses
 Subsection I - Adjustment for Large Deductible Policies
 7/1/2023

Section VI - I
 Exhibit 1
 Page 2

Loss Elimination Ratio for Large Deductible Policies

		<u>As a % of Standard Premium plus 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)	Profit Provision	-0.5%
(5)	Insolvency Fund Assessment	0.6%
(6)	Residual Market Subsidy (Retrospectively-rated policies)	0.3%
(7)	Variable Expense Ratio = (1) + (2) + (3) + (4) + (5) + (6)	20.5%
(8)	Expected Loss Ratio without LAE	62.5%
(9)	Defense and Cost Containment Expense ("DCC")	5.3%
(10)	Adjusting and Other Expenses ("AO")	6.4%
(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)	71.0%
(13)	LER / D = [1.0 - (7)] / (12)	1.118

D = Average Premium Reduction Factor for Large Deductible Policies

LER = Loss Elimination Ratio

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

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

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

Notes:

Values approved for rates effective 7/1/22.

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

(8) = From prior Rate Decision/Stipulation

(9) = 8.5% x (8), ratio of DCC to Losses from the 7/1/22 filing.

(10) = 10.2% x (8), ratio of AO to Losses from the 7/1/22 filing.

VI 00039 STIP

Section VI - Expenses
 Subsection I - Adjustment for Large Deductible Policies
 7/1/2023

Section VI - I
 Exhibit 2

Average Large Deductible Premium Reduction Factor and Large Deductible Market Share

		Policy Year												
		2018	2019	2020	2021*									
(1)	Standard Earned Premium Excluding Large Deductible Policies	766,433,821	745,070,043	735,961,341	411,092,313									
(2)	Earned Premium Net of Deductible Credit for Large Deductible Policies	33,370,473	30,650,410	29,962,592	16,371,408									
(3)	Standard Earned Premium for Large Deductible Policies	169,782,987	174,841,315	174,073,507	103,921,821									
(4)	Standard Earned Premium for All Policies = (1) + (3)	936,216,808	919,911,358	910,034,848	515,014,134									
(5)	Average Premium Reduction Factor for Large Deductible Policies = 1.0 - [(2) / (3)]	0.803	0.825	0.828	0.842									
(6)	Market Share (Standard Premium Basis) of Large Deductible Policies = (3) / (4)	18.1%	19.0%	19.1%	20.2%									
		<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;">2019</th> <th style="text-align: center;">2020</th> <th style="text-align: center;">2021</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0.814</td> <td style="text-align: center;">0.826</td> <td style="text-align: center;">0.835</td> </tr> </tbody> </table>				Calendar Year			2019	2020	2021	0.814	0.826	0.835
Calendar Year														
2019	2020	2021												
0.814	0.826	0.835												
(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		18.6%	19.1%	19.7%									

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 2021 is an incomplete Policy Year, valued as of 12/31/2021

VI 000040 STIP

Section VI - Expenses
Subsection J - Expected Loss Ratios Underlying the Proposed Rates & Rating Values
7/1/2023

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	5.5%
(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	-5.1%
(6) Permissible Loss, LAE, and Fixed Expense Ratio = 1.0 - [(4) + (5)]	84.9%
(7) Fixed Expense Ratio	6.1%
(8) Expected Loss and Loss Adjustment Expense Ratio = (6) - (7)	78.8%
(9) Total Loss Adjustment Expense Ratio (LAE / Loss)	18.3%
(10) Expected Loss Ratio without Loss Adjustment Expense = (8) / [1.0 + (9)]	66.6%

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, 5.5%, is divided by [1.0 + indicated rate change], -10.2%, to derive the Fixed Expense Ratio underlying the proposed rates.

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

VII 000019 STIP

Section VII - Profit
Subsection A - Summary
7/1/2023

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	944.84
(2)	Collected Premium Net - After Premium Discount	944.84
(3)	Loss & LAE Ratio	78.79%
(4)	Commission Ratio	9.17%
(5)	Premium Discount	5.52%
(6)	General Expense Ratio	5.78%
(7)	Other Acquisition Expense Ratio	2.39%
(8)	Premium Tax Rate	2.15%
(9)	Reinsurance Expense Ratio	1.00%
(10)	Miscellaneous and Other Taxes	0.33%
Cost of Capital:		
(11)	Weighted Average Cost of Capital	8.64%
Portfolio Rate of Return:		
(12)	After Tax Portfolio Rate of Return	5.16%
Leverage Ratio:		
(13)	Reserves to Surplus Ratio	1.51
Profit Provision:		
(14)	Profit Provision Calculation	-5.13%

Notes:

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

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

(3) - (10): Section VII-H, Exhibit 1 (weighted 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 000039 STIP

Section VII - Profit
 Subsection B - DCF Models
 7/1/2023

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)								
10/01/43	12/31/43	0.00	0.03	0.03	0.74	0.31	0.49	1.58	0.27
01/01/44	03/31/44	0.00	0.03	0.03	0.74	0.36	0.49	1.62	0.27
04/01/44	06/30/44	0.00	0.03	0.03	0.73	0.41	0.48	1.65	0.27
07/01/44	09/30/44	0.00	0.03	0.03	0.72	0.46	0.48	1.69	0.27
10/01/44	12/31/44	0.00	0.03	0.03	0.71	0.51	0.47	1.73	0.27
01/01/45	03/31/45	0.00	0.03	0.03	0.70	0.58	0.46	1.78	0.28
04/01/45	06/30/45	0.00	0.03	0.03	0.69	0.63	0.46	1.81	0.27
07/01/45	09/30/45	0.00	0.03	0.03	0.68	0.66	0.45	1.82	0.27
10/01/45	12/31/45	0.00	0.03	0.03	0.67	0.66	0.44	1.80	0.26
01/01/46	03/31/46	0.00	0.03	0.03	0.66	0.66	0.43	1.78	0.25
04/01/46	06/30/46	0.00	0.03	0.03	0.64	0.65	0.42	1.75	0.25
07/01/46	09/30/46	0.00	0.03	0.03	0.63	0.66	0.42	1.74	0.24
10/01/46	12/31/46	0.00	0.03	0.03	0.62	0.66	0.41	1.72	0.23
01/01/47	03/31/47	0.00	0.03	0.03	0.61	0.66	0.40	1.69	0.22
04/01/47	06/30/47	0.00	0.03	0.03	0.59	0.65	0.39	1.67	0.21
07/01/47	09/30/47	0.00	0.03	0.03	0.58	0.66	0.38	1.65	0.21
10/01/47	12/31/47	0.00	0.03	0.03	0.57	0.66	0.37	1.63	0.20
01/01/48	03/31/48	0.00	0.03	0.03	0.55	0.66	0.37	1.61	0.19
04/01/48	06/30/48	0.00	0.03	0.03	0.54	0.65	0.36	1.58	0.19
07/01/48	09/30/48	0.00	0.03	0.03	0.53	0.66	0.35	1.57	0.18
10/01/48	12/31/48	0.00	0.03	0.03	0.52	0.66	0.34	1.55	0.18
01/01/49	03/31/49	0.00	0.03	0.03	0.50	0.66	0.33	1.52	0.17
04/01/49	06/30/49	0.00	0.02	0.03	0.49	0.65	0.32	1.50	0.16
07/01/49	09/30/49	0.00	0.02	0.03	0.48	0.66	0.32	1.48	0.16
10/01/49	12/31/49	0.00	0.02	0.03	0.47	0.66	0.31	1.46	0.15
01/01/50	03/31/50	0.00	0.02	0.03	0.45	0.66	0.30	1.44	0.15
04/01/50	06/30/50	0.00	0.02	0.03	0.44	0.65	0.29	1.41	0.14
07/01/50	09/30/50	0.00	0.02	0.02	0.43	0.66	0.28	1.39	0.14
10/01/50	12/31/50	0.00	0.02	0.02	0.42	0.66	0.27	1.38	0.13
01/01/51	03/31/51	0.00	0.02	0.02	0.40	0.66	0.27	1.35	0.13
04/01/51	06/30/51	0.00	0.02	0.02	0.39	0.65	0.26	1.33	0.12
07/01/51	09/30/51	0.00	0.02	0.02	0.38	0.66	0.25	1.31	0.12
10/01/51	12/31/51	0.00	0.02	0.02	0.37	0.66	0.24	1.29	0.11
01/01/52	03/31/52	0.00	0.02	0.02	0.35	0.66	0.23	1.27	0.11
04/01/52	06/30/52	0.00	0.02	0.02	0.34	0.65	0.22	1.24	0.11
07/01/52	09/30/52	0.00	0.02	0.02	0.33	0.66	0.22	1.22	0.10
10/01/52	12/31/52	0.00	0.02	0.02	0.32	0.66	0.21	1.20	0.10
01/01/53	03/31/53	0.00	0.02	0.02	0.30	0.66	0.20	1.18	0.09
04/01/53	06/30/53	0.00	0.01	0.02	0.29	0.65	0.19	1.15	0.09
07/01/53	09/30/53	0.00	0.01	0.02	0.28	0.66	0.18	1.14	0.09
10/01/53	12/31/53	0.00	0.01	0.02	0.26	0.66	0.17	1.12	0.08
01/01/54	03/31/54	0.00	0.01	0.02	0.25	0.66	0.17	1.09	0.08
04/01/54	06/30/54	0.00	0.01	0.01	0.24	0.65	0.16	1.07	0.08
07/01/54	09/30/54	0.00	0.01	0.01	0.23	0.66	0.15	1.05	0.07
10/01/54	12/31/54	0.00	0.01	0.01	0.21	0.66	0.14	1.03	0.07
01/01/55	03/31/55	0.00	0.01	0.01	0.20	0.66	0.13	1.01	0.07
04/01/55	06/30/55	0.00	0.01	0.01	0.19	0.65	0.12	0.98	0.07
07/01/55	09/30/55	0.00	0.01	0.01	0.18	0.66	0.12	0.96	0.06
10/01/55	12/31/55	0.00	0.01	0.01	0.16	0.66	0.11	0.95	0.06
01/01/56	03/31/56	0.00	0.01	0.01	0.15	0.66	0.10	0.92	0.06
04/01/56	06/30/56	0.00	0.01	0.01	0.14	0.65	0.09	0.89	0.05
07/01/56	09/30/56	0.00	0.01	0.01	0.13	0.66	0.08	0.88	0.05
10/01/56	12/31/56	0.00	0.01	0.01	0.11	0.66	0.08	0.86	0.05
01/01/57	03/31/57	0.00	0.01	0.01	0.10	0.66	0.07	0.83	0.05
04/01/57	06/30/57	0.00	0.00	0.01	0.09	0.65	0.06	0.81	0.05
07/01/57	09/30/57	0.00	0.00	0.01	0.08	0.66	0.05	0.79	0.04
10/01/57	12/31/57	0.00	0.00	0.01	0.06	0.66	0.04	0.77	0.04
01/01/58	03/31/58	0.00	0.00	0.00	0.05	0.66	0.03	0.74	0.04
04/01/58	06/30/58	0.00	0.00	0.00	0.04	0.65	0.02	0.72	0.04
07/01/58	09/30/58	0.00	0.00	0.00	0.03	0.57	0.02	0.61	0.03
10/01/58	12/31/58	0.00	0.00	0.00	0.01	0.43	0.01	0.45	0.02
01/01/59	03/31/59	(0.00)	0.00	0.00	0.01	0.24	0.00	0.25	0.01
04/01/59	06/30/59	0.00	0.00	0.00	0.00	0.08	0.00	0.08	0.00
TOTAL		(40.52)	5.59	(34.93)	158.64	(0.00)	119.31	243.02	0.00

Notes:

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

(4) = Table B2, (5)

(5) = (3) + (4)

(6) = Table C3, (7)_{t-1} x { [1.0 + Table A1, (12)] ^ 0.25 - 1.0 }

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

(8) = Table D1, (7)_{t-1} 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 07/01/22

WACC is the weighted average cost of capital from Section VII-E, Exhibit 1 which is equal to 8.64%.

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 -5.13% from Table A1, (14).

VII 000044 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)						
01/01/22	12/31/22	0.00	0.00	0.00	0.00	0.00	0.00
01/01/23	12/31/23	429.66	313.06	313.06	250.45	62.61	179.21
01/01/24	12/31/24	515.19	113.10	(199.96)	(159.97)	(39.99)	675.16
01/01/25	12/31/25	0.00	0.00	(113.10)	(90.48)	(22.62)	90.48
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
01/01/59	12/31/59	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL		944.84	426.16	0.00	0.00	0.00	944.84

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 000045 STIP

TABLE C2_2: DERIVATION OF DISCOUNTED LOSS & LAE RESERVES

ACCIDENT YEAR 2023									
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)
01/01/22	12/31/22	0.8839	0.00	82.19	82.19	0.00	72.65	72.65	15.13
01/01/23	12/31/23	0.8693	82.19	57.36	(24.83)	72.65	49.86	(22.78)	24.83
01/01/24	12/31/24	0.8588	57.36	37.13	(20.22)	49.86	31.89	(17.97)	20.22
01/01/25	12/31/25	0.8443	37.13	24.09	(13.04)	31.89	20.34	(11.55)	13.04
01/01/26	12/31/26	0.8390	24.09	17.04	(7.05)	20.34	14.30	(6.04)	7.05
01/01/27	12/31/27	0.8340	17.04	13.89	(3.15)	14.30	11.58	(2.71)	3.15
01/01/28	12/31/28	0.8376	13.89	12.38	(1.51)	11.58	10.37	(1.21)	1.51
01/01/29	12/31/29	0.8458	12.38	11.51	(0.87)	10.37	9.74	(0.63)	0.87
01/01/30	12/31/30	0.8518	11.51	10.83	(0.68)	9.74	9.22	(0.51)	0.68
01/01/31	12/31/31	0.8701	10.83	10.31	(0.51)	9.22	8.97	(0.25)	0.51
01/01/32	12/31/32	0.8818	10.31	9.93	(0.38)	8.97	8.76	(0.22)	0.38
01/01/33	12/31/33	0.8938	9.93	9.55	(0.38)	8.76	8.53	(0.22)	0.38
01/01/34	12/31/34	0.9061	9.55	9.13	(0.41)	8.53	8.27	(0.26)	0.41
01/01/35	12/31/35	0.9185	9.13	8.81	(0.32)	8.27	8.09	(0.18)	0.32
01/01/36	12/31/36	0.9312	8.81	8.57	(0.24)	8.09	7.98	(0.12)	0.24
01/01/37	12/31/37	0.9440	8.57	8.32	(0.25)	7.98	7.85	(0.13)	0.25
01/01/38	12/31/38	0.9571	8.32	8.06	(0.25)	7.85	7.72	(0.13)	0.25
01/01/39	12/31/39	0.9704	8.06	7.79	(0.27)	7.72	7.56	(0.16)	0.27
01/01/40	12/31/40	0.9835	7.79	7.49	(0.29)	7.56	7.37	(0.19)	0.29
01/01/41	12/31/41	0.9860	7.49	7.28	(0.22)	7.37	7.17	(0.20)	0.22
01/01/42	12/31/42	0.9860	7.28	7.00	(0.28)	7.17	6.90	(0.27)	0.28
01/01/43	12/31/43	0.9860	7.00	6.56	(0.44)	6.90	6.47	(0.43)	0.44
01/01/44	12/31/44	0.9860	6.56	6.07	(0.49)	6.47	5.99	(0.49)	0.49
01/01/45	12/31/45	0.9860	6.07	5.58	(0.49)	5.99	5.50	(0.49)	0.49
01/01/46	12/31/46	0.9860	5.58	5.09	(0.49)	5.50	5.01	(0.49)	0.49
01/01/47	12/31/47	0.9860	5.09	4.59	(0.49)	5.01	4.53	(0.49)	0.49
01/01/48	12/31/48	0.9860	4.59	4.10	(0.49)	4.53	4.04	(0.49)	0.49
01/01/49	12/31/49	0.9860	4.10	3.61	(0.49)	4.04	3.56	(0.49)	0.49
01/01/50	12/31/50	0.9860	3.61	3.12	(0.49)	3.56	3.07	(0.49)	0.49
01/01/51	12/31/51	0.9860	3.12	2.62	(0.49)	3.07	2.59	(0.49)	0.49
01/01/52	12/31/52	0.9860	2.62	2.13	(0.49)	2.59	2.10	(0.49)	0.49
01/01/53	12/31/53	0.9860	2.13	1.64	(0.49)	2.10	1.62	(0.49)	0.49
01/01/54	12/31/54	0.9860	1.64	1.15	(0.49)	1.62	1.13	(0.49)	0.49
01/01/55	12/31/55	0.9860	1.15	0.65	(0.49)	1.13	0.64	(0.49)	0.49
01/01/56	12/31/56	0.9860	0.65	0.16	(0.49)	0.64	0.16	(0.49)	0.49
01/01/57	12/31/57	0.9860	0.16	0.00	(0.16)	0.16	0.00	(0.16)	0.16
01/01/58	12/31/58	0.9860	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01/01/59	12/31/59	0.9860	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL			415.72	415.72	0.00	371.53	371.53	0.00	97.31

- Notes:
- (3): Discount factors specified in IRS Internal Revenue Bulletin 2021-52.
 - (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 000046 STIP

TABLE C2_3: 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	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)	(2)								
01/01/22	12/31/22		0.00	0.00	0.00	0.00	0.00	0.00	
01/01/23	12/31/23								
01/01/24	12/31/24	0.8839	0.00	459.25	459.25	0.00	405.93	405.93	137.14
01/01/25	12/31/25	0.8693	459.25	300.10	(159.15)	405.93	260.88	(145.05)	159.15
01/01/26	12/31/26	0.8588	300.10	193.07	(107.03)	260.88	165.80	(95.08)	107.03
01/01/27	12/31/27	0.8443	193.07	126.04	(67.03)	165.80	106.42	(59.38)	67.03
01/01/28	12/31/28	0.8390	126.04	94.17	(31.87)	106.42	79.01	(27.41)	31.87
01/01/29	12/31/29	0.8340	94.17	80.82	(13.35)	79.01	67.40	(11.61)	13.35
01/01/30	12/31/30	0.8376	80.82	73.53	(7.29)	67.40	61.59	(5.81)	7.29
01/01/31	12/31/31	0.8458	73.53	69.12	(4.42)	61.59	58.46	(3.13)	4.42
01/01/32	12/31/32	0.8518	69.12	65.04	(4.08)	58.46	55.40	(3.06)	4.08
01/01/33	12/31/33	0.8701	65.04	62.35	(2.69)	55.40	54.25	(1.16)	2.69
01/01/34	12/31/34	0.8818	62.35	60.15	(2.19)	54.25	53.05	(1.20)	2.19
01/01/35	12/31/35	0.8938	60.15	57.72	(2.44)	53.05	51.59	(1.46)	2.44
01/01/36	12/31/36	0.9061	57.72	55.13	(2.59)	51.59	49.95	(1.64)	2.59
01/01/37	12/31/37	0.9185	55.13	53.47	(1.66)	49.95	49.11	(0.84)	1.66
01/01/38	12/31/38	0.9312	53.47	52.06	(1.41)	49.11	48.48	(0.64)	1.41
01/01/39	12/31/39	0.9440	52.06	50.46	(1.60)	48.48	47.63	(0.84)	1.60
01/01/40	12/31/40	0.9571	50.46	48.92	(1.54)	47.63	46.82	(0.81)	1.54
01/01/41	12/31/41	0.9704	48.92	47.17	(1.75)	46.82	45.77	(1.05)	1.75
01/01/42	12/31/42	0.9835	47.17	45.34	(1.83)	45.77	44.59	(1.18)	1.83
01/01/43	12/31/43	0.9860	45.34	44.23	(1.11)	44.59	43.61	(0.98)	1.11
01/01/44	12/31/44	0.9860	44.23	42.26	(1.97)	43.61	41.67	(1.94)	1.97
01/01/45	12/31/45	0.9860	42.26	39.25	(3.01)	41.67	38.70	(2.97)	3.01
01/01/46	12/31/46	0.9860	39.25	36.23	(3.02)	38.70	35.72	(2.98)	3.02
01/01/47	12/31/47	0.9860	36.23	33.21	(3.02)	35.72	32.75	(2.98)	3.02
01/01/48	12/31/48	0.9860	33.21	30.19	(3.02)	32.75	29.77	(2.98)	3.02
01/01/49	12/31/49	0.9860	30.19	27.17	(3.02)	29.77	26.79	(2.98)	3.02
01/01/50	12/31/50	0.9860	27.17	24.16	(3.02)	26.79	23.82	(2.98)	3.02
01/01/51	12/31/51	0.9860	24.16	21.14	(3.02)	23.82	20.84	(2.98)	3.02
01/01/52	12/31/52	0.9860	21.14	18.12	(3.02)	20.84	17.87	(2.98)	3.02
01/01/53	12/31/53	0.9860	18.12	15.10	(3.02)	17.87	14.89	(2.98)	3.02
01/01/54	12/31/54	0.9860	15.10	12.08	(3.02)	14.89	11.91	(2.98)	3.02
01/01/55	12/31/55	0.9860	12.08	9.07	(3.02)	11.91	8.94	(2.98)	3.02
01/01/56	12/31/56	0.9860	9.07	6.05	(3.02)	8.94	5.96	(2.98)	3.02
01/01/57	12/31/57	0.9860	6.05	3.03	(3.02)	5.96	2.99	(2.98)	3.02
01/01/58	12/31/58	0.9860	3.03	0.01	(3.02)	2.99	0.01	(2.98)	3.02
01/01/59	12/31/59	0.9860	0.01	0.00	(0.01)	0.01	0.00	(0.01)	0.01
TOTAL			2,355.20	2,355.20	0.00	2,108.37	2,108.37	0.00	596.39

Notes:

(3): Discount factors specified in IRS Internal Revenue Bulletin 2021-52.

(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

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TABLE C2_4: DERIVATION OF DISCOUNTED LOSS & LAE RESERVES

ACCIDENT YEAR									
2025									
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)							
1/1/2022	12/31/2022								
1/1/2023	12/31/2023		0.00	0.00	0.00	0.00	0.00	0.00	
1/1/2024	12/31/2024		0.00	0.00	0.00	0.00	0.00	0.00	
1/1/2025	12/31/2025	0.8839	0.00	64.04	64.04	0.00	56.61	56.61	30.12
1/1/2026	12/31/2026	0.8693	64.04	41.66	(22.38)	56.61	36.22	(20.39)	22.38
1/1/2027	12/31/2027	0.8588	41.66	26.90	(14.76)	36.22	23.10	(13.12)	14.76
1/1/2028	12/31/2028	0.8443	26.90	18.19	(8.71)	23.10	15.36	(7.74)	8.71
1/1/2029	12/31/2029	0.8390	18.19	14.15	(4.04)	15.36	11.87	(3.49)	4.04
1/1/2030	12/31/2030	0.8340	14.15	12.37	(1.78)	11.87	10.32	(1.56)	1.78
1/1/2031	12/31/2031	0.8376	12.37	11.37	(1.00)	10.32	9.53	(0.79)	1.00
1/1/2032	12/31/2032	0.8458	11.37	10.70	(0.68)	9.53	9.05	(0.48)	0.68
1/1/2033	12/31/2033	0.8518	10.70	10.13	(0.57)	9.05	8.62	(0.42)	0.57
1/1/2034	12/31/2034	0.8701	10.13	9.73	(0.40)	8.62	8.46	(0.16)	0.40
1/1/2035	12/31/2035	0.8818	9.73	9.37	(0.36)	8.46	8.26	(0.20)	0.36
1/1/2036	12/31/2036	0.8938	9.37	8.97	(0.39)	8.26	8.02	(0.24)	0.39
1/1/2037	12/31/2037	0.9061	8.97	8.62	(0.36)	8.02	7.81	(0.22)	0.36
1/1/2038	12/31/2038	0.9185	8.62	8.37	(0.25)	7.81	7.69	(0.12)	0.25
1/1/2039	12/31/2039	0.9312	8.37	8.13	(0.23)	7.69	7.57	(0.11)	0.23
1/1/2040	12/31/2040	0.9440	8.13	7.88	(0.25)	7.57	7.44	(0.13)	0.25
1/1/2041	12/31/2041	0.9571	7.88	7.63	(0.25)	7.44	7.30	(0.14)	0.25
1/1/2042	12/31/2042	0.9704	7.63	7.35	(0.28)	7.30	7.13	(0.17)	0.28
1/1/2043	12/31/2043	0.9835	7.35	7.10	(0.25)	7.13	6.98	(0.15)	0.25
1/1/2044	12/31/2044	0.9860	7.10	6.88	(0.22)	6.98	6.78	(0.20)	0.22
1/1/2045	12/31/2045	0.9860	6.88	6.51	(0.37)	6.78	6.42	(0.36)	0.37
1/1/2046	12/31/2046	0.9860	6.51	6.04	(0.48)	6.42	5.95	(0.47)	0.48
1/1/2047	12/31/2047	0.9860	6.04	5.56	(0.48)	5.95	5.48	(0.47)	0.48
1/1/2048	12/31/2048	0.9860	5.56	5.08	(0.48)	5.48	5.01	(0.47)	0.48
1/1/2049	12/31/2049	0.9860	5.08	4.61	(0.48)	5.01	4.54	(0.47)	0.48
1/1/2050	12/31/2050	0.9860	4.61	4.13	(0.48)	4.54	4.07	(0.47)	0.48
1/1/2051	12/31/2051	0.9860	4.13	3.65	(0.48)	4.07	3.60	(0.47)	0.48
1/1/2052	12/31/2052	0.9860	3.65	3.18	(0.48)	3.60	3.13	(0.47)	0.48
1/1/2053	12/31/2053	0.9860	3.18	2.70	(0.48)	3.13	2.66	(0.47)	0.48
1/1/2054	12/31/2054	0.9860	2.70	2.22	(0.48)	2.66	2.19	(0.47)	0.48
1/1/2055	12/31/2055	0.9860	2.22	1.75	(0.48)	2.19	1.72	(0.47)	0.48
1/1/2056	12/31/2056	0.9860	1.75	1.27	(0.48)	1.72	1.25	(0.47)	0.48
1/1/2057	12/31/2057	0.9860	1.27	0.79	(0.48)	1.25	0.78	(0.47)	0.48
1/1/2058	12/31/2058	0.9860	0.79	0.32	(0.48)	0.78	0.31	(0.47)	0.48
1/1/2059	12/31/2059	0.9860	0.32	0.00	(0.32)	0.31	0.00	(0.31)	0.32
TOTAL			347.35	347.35	0.00	311.27	311.27	0.00	94.16

Notes:

(3): Discount factors specified in IRS Internal Revenue Bulletin 2021-52.

(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)
01/01/22	12/31/22	0.00	0.00	0.00	0.00	0.00
01/01/23	12/31/23	15.13	72.65	87.77	57.27	145.04
01/01/24	12/31/24	161.98	383.14	545.12	135.20	680.32
01/01/25	12/31/25	209.49	(106.41)	103.08	14.75	117.82
01/01/26	12/31/26	142.45	(127.02)	15.43	1.06	16.50
01/01/27	12/31/27	88.84	(78.54)	10.30	0.00	10.30
01/01/28	12/31/28	43.73	(37.87)	5.86	0.00	5.86
01/01/29	12/31/29	18.90	(16.31)	2.59	0.00	2.59
01/01/30	12/31/30	9.94	(8.00)	1.94	0.00	1.94
01/01/31	12/31/31	6.10	(4.43)	1.67	0.00	1.67
01/01/32	12/31/32	5.27	(3.79)	1.48	0.00	1.48
01/01/33	12/31/33	3.65	(1.79)	1.85	0.00	1.85
01/01/34	12/31/34	2.98	(1.59)	1.39	0.00	1.39
01/01/35	12/31/35	3.21	(1.92)	1.29	0.00	1.29
01/01/36	12/31/36	3.30	(2.06)	1.24	0.00	1.24
01/01/37	12/31/37	2.26	(1.17)	1.09	0.00	1.09
01/01/38	12/31/38	1.91	(0.89)	1.03	0.00	1.03
01/01/39	12/31/39	2.09	(1.09)	1.00	0.00	1.00
01/01/40	12/31/40	2.07	(1.11)	0.96	0.00	0.96
01/01/41	12/31/41	2.30	(1.38)	0.92	0.00	0.92
01/01/42	12/31/42	2.33	(1.55)	0.78	0.00	0.78
01/01/43	12/31/43	1.63	(1.40)	0.23	0.00	0.23
01/01/44	12/31/44	2.63	(2.57)	0.05	0.00	0.05
01/01/45	12/31/45	3.87	(3.82)	0.05	0.00	0.05
01/01/46	12/31/46	3.99	(3.93)	0.06	0.00	0.06
01/01/47	12/31/47	3.99	(3.93)	0.06	0.00	0.06
01/01/48	12/31/48	3.99	(3.93)	0.06	0.00	0.06
01/01/49	12/31/49	3.99	(3.93)	0.06	0.00	0.06
01/01/50	12/31/50	3.99	(3.93)	0.06	0.00	0.06
01/01/51	12/31/51	3.99	(3.93)	0.06	0.00	0.06
01/01/52	12/31/52	3.99	(3.93)	0.06	0.00	0.06
01/01/53	12/31/53	3.99	(3.93)	0.06	0.00	0.06
01/01/54	12/31/54	3.99	(3.93)	0.06	0.00	0.06
01/01/55	12/31/55	3.99	(3.93)	0.06	0.00	0.06
01/01/56	12/31/56	3.99	(3.93)	0.06	0.00	0.06
01/01/57	12/31/57	3.99	(3.93)	0.06	0.00	0.06
01/01/58	12/31/58	3.66	(3.60)	0.05	0.00	0.05
01/01/59	12/31/59	0.33	(0.32)	0.00	0.00	0.00
TOTAL		787.86	0.00	787.86	208.28	996.14

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)
01/01/22	12/31/22	0.00	0.00	0.00	0.00
01/01/23	12/31/23	179.21	145.04	34.17	7.18
01/01/24	12/31/24	675.16	680.32	(5.16)	(1.08)
01/01/25	12/31/25	90.48	117.82	(27.35)	(5.74)
01/01/26	12/31/26	0.00	16.50	(16.50)	(3.46)
01/01/27	12/31/27	0.00	10.30	(10.30)	(2.16)
01/01/28	12/31/28	0.00	5.86	(5.86)	(1.23)
01/01/29	12/31/29	0.00	2.59	(2.59)	(0.54)
01/01/30	12/31/30	0.00	1.94	(1.94)	(0.41)
01/01/31	12/31/31	0.00	1.67	(1.67)	(0.35)
01/01/32	12/31/32	0.00	1.48	(1.48)	(0.31)
01/01/33	12/31/33	0.00	1.85	(1.85)	(0.39)
01/01/34	12/31/34	0.00	1.39	(1.39)	(0.29)
01/01/35	12/31/35	0.00	1.29	(1.29)	(0.27)
01/01/36	12/31/36	0.00	1.24	(1.24)	(0.26)
01/01/37	12/31/37	0.00	1.09	(1.09)	(0.23)
01/01/38	12/31/38	0.00	1.03	(1.03)	(0.22)
01/01/39	12/31/39	0.00	1.00	(1.00)	(0.21)
01/01/40	12/31/40	0.00	0.96	(0.96)	(0.20)
01/01/41	12/31/41	0.00	0.92	(0.92)	(0.19)
01/01/42	12/31/42	0.00	0.78	(0.78)	(0.16)
01/01/43	12/31/43	0.00	0.23	(0.23)	(0.05)
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	0.06	(0.06)	(0.01)
01/01/47	12/31/47	0.00	0.06	(0.06)	(0.01)
01/01/48	12/31/48	0.00	0.06	(0.06)	(0.01)
01/01/49	12/31/49	0.00	0.06	(0.06)	(0.01)
01/01/50	12/31/50	0.00	0.06	(0.06)	(0.01)
01/01/51	12/31/51	0.00	0.06	(0.06)	(0.01)
01/01/52	12/31/52	0.00	0.06	(0.06)	(0.01)
01/01/53	12/31/53	0.00	0.06	(0.06)	(0.01)
01/01/54	12/31/54	0.00	0.06	(0.06)	(0.01)
01/01/55	12/31/55	0.00	0.06	(0.06)	(0.01)
01/01/56	12/31/56	0.00	0.06	(0.06)	(0.01)
01/01/57	12/31/57	0.00	0.06	(0.06)	(0.01)
01/01/58	12/31/58	0.00	0.05	(0.05)	(0.01)
01/01/59	12/31/59	0.00	0.00	(0.00)	(0.00)
TOTAL		944.84	996.14	(51.30)	(10.77)

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.

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

TIME INTERVAL		AY 2023		AY 2024		AY 2025		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)											
01/01/22	12/31/22							0.00	0.00			0.00
01/01/23	12/31/23							0.00	0.43	313.06	13.15	13.58
01/01/24	12/31/24	(22.78)	24.83					2.05	3.43	113.10	4.75	8.18
01/01/25	12/31/25	(17.97)	20.22	(145.05)	159.15			16.35	3.24	0.00	0.00	3.24
01/01/26	12/31/26	(11.55)	13.04	(95.08)	107.03	(20.39)	22.38	15.43	2.16	0.00	0.00	2.16
01/01/27	12/31/27	(6.04)	7.05	(59.38)	67.03	(13.12)	14.76	10.30	1.23	0.00	0.00	1.23
01/01/28	12/31/28	(2.71)	3.15	(27.41)	31.87	(7.74)	8.71	5.86	0.54	0.00	0.00	0.54
01/01/29	12/31/29	(1.21)	1.51	(11.61)	13.35	(3.49)	4.04	2.59	0.41	0.00	0.00	0.41
01/01/30	12/31/30	(0.63)	0.87	(5.81)	7.29	(1.56)	1.78	1.94	0.35	0.00	0.00	0.35
01/01/31	12/31/31	(0.51)	0.68	(3.13)	4.42	(0.79)	1.00	1.67	0.31	0.00	0.00	0.31
01/01/32	12/31/32	(0.25)	0.51	(3.06)	4.08	(0.48)	0.68	1.48	0.39	0.00	0.00	0.39
01/01/33	12/31/33	(0.22)	0.38	(1.16)	2.69	(0.42)	0.57	1.85	0.29	0.00	0.00	0.29
01/01/34	12/31/34	(0.22)	0.38	(1.20)	2.19	(0.16)	0.40	1.39	0.27	0.00	0.00	0.27
01/01/35	12/31/35	(0.26)	0.41	(1.46)	2.44	(0.20)	0.36	1.29	0.26	0.00	0.00	0.26
01/01/36	12/31/36	(0.18)	0.32	(1.64)	2.59	(0.24)	0.39	1.24	0.23	0.00	0.00	0.23
01/01/37	12/31/37	(0.12)	0.24	(0.84)	1.66	(0.22)	0.36	1.09	0.22	0.00	0.00	0.22
01/01/38	12/31/38	(0.13)	0.25	(0.64)	1.41	(0.12)	0.25	1.03	0.21	0.00	0.00	0.21
01/01/39	12/31/39	(0.13)	0.25	(0.84)	1.60	(0.11)	0.23	1.00	0.20	0.00	0.00	0.20
01/01/40	12/31/40	(0.16)	0.27	(0.81)	1.54	(0.13)	0.25	0.96	0.19	0.00	0.00	0.19
01/01/41	12/31/41	(0.19)	0.29	(1.05)	1.75	(0.14)	0.25	0.92	0.16	0.00	0.00	0.16
01/01/42	12/31/42	(0.20)	0.22	(1.18)	1.83	(0.17)	0.28	0.78	0.05	0.00	0.00	0.05
01/01/43	12/31/43	(0.27)	0.28	(0.98)	1.11	(0.15)	0.25	0.23	0.01	0.00	0.00	0.01
01/01/44	12/31/44	(0.43)	0.44	(1.94)	1.97	(0.20)	0.22	0.05	0.01	0.00	0.00	0.01
01/01/45	12/31/45	(0.49)	0.49	(2.97)	3.01	(0.36)	0.37	0.05	0.01	0.00	0.00	0.01
01/01/46	12/31/46	(0.49)	0.49	(2.98)	3.02	(0.47)	0.48	0.06	0.01	0.00	0.00	0.01
01/01/47	12/31/47	(0.49)	0.49	(2.98)	3.02	(0.47)	0.48	0.06	0.01	0.00	0.00	0.01
01/01/48	12/31/48	(0.49)	0.49	(2.98)	3.02	(0.47)	0.48	0.06	0.01	0.00	0.00	0.01
01/01/49	12/31/49	(0.49)	0.49	(2.98)	3.02	(0.47)	0.48	0.06	0.01	0.00	0.00	0.01
01/01/50	12/31/50	(0.49)	0.49	(2.98)	3.02	(0.47)	0.48	0.06	0.01	0.00	0.00	0.01
01/01/51	12/31/51	(0.49)	0.49	(2.98)	3.02	(0.47)	0.48	0.06	0.01	0.00	0.00	0.01
01/01/52	12/31/52	(0.49)	0.49	(2.98)	3.02	(0.47)	0.48	0.06	0.01	0.00	0.00	0.01
01/01/53	12/31/53	(0.49)	0.49	(2.98)	3.02	(0.47)	0.48	0.06	0.01	0.00	0.00	0.01
01/01/54	12/31/54	(0.49)	0.49	(2.98)	3.02	(0.47)	0.48	0.06	0.01	0.00	0.00	0.01
01/01/55	12/31/55	(0.49)	0.49	(2.98)	3.02	(0.47)	0.48	0.06	0.01	0.00	0.00	0.01
01/01/56	12/31/56	(0.49)	0.49	(2.98)	3.02	(0.47)	0.48	0.06	0.01	0.00	0.00	0.01
01/01/57	12/31/57	(0.49)	0.49	(2.98)	3.02	(0.47)	0.48	0.06	0.01	0.00	0.00	0.01
01/01/58	12/31/58	(0.16)	0.16	(2.98)	3.02	(0.47)	0.48	0.05	0.00	0.00	0.00	0.00
01/01/59	12/31/59	0.00	0.00	(0.01)	0.01	(0.31)	0.32	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 x (9)_{t-1}, where 0.21 is the Federal income tax rate.
 (11) = Table C2_1, (4)
 (12) = 0.2 x 0.21 x (11), 0.21 is the Federal income tax rate and 20% of unearned premiums is taxable.
 (13) = (10) + (12)

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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)									
10/01/42	12/31/42	0.00	60.00	0.00	0.05	59.96	19.26	0.00	19.26	40.70
01/01/43	03/31/43	0.00	59.55	0.00	0.04	59.51	18.82	0.00	18.82	40.70
04/01/43	06/30/43	0.00	59.16	0.00	0.03	59.13	18.44	0.00	18.44	40.69
07/01/43	09/30/43	0.00	58.76	0.00	0.02	58.74	18.05	0.00	18.05	40.69
10/01/43	12/31/43	0.00	58.29	0.00	0.01	58.28	17.59	0.00	17.59	40.69
01/01/44	03/31/44	0.00	57.74	0.00	0.01	57.73	17.05	0.00	17.05	40.68
04/01/44	06/30/44	0.00	57.13	0.00	0.01	57.12	16.44	0.00	16.44	40.68
07/01/44	09/30/44	0.00	56.43	0.00	0.01	56.42	15.74	0.00	15.74	40.68
10/01/44	12/31/44	0.00	55.65	0.00	0.01	55.64	14.97	0.00	14.97	40.68
01/01/45	03/31/45	0.00	54.78	0.00	0.01	54.77	14.10	0.00	14.10	40.67
04/01/45	06/30/45	0.00	53.83	0.00	0.01	53.82	13.15	0.00	13.15	40.67
07/01/45	09/30/45	0.00	52.84	0.00	0.01	52.82	12.16	0.00	12.16	40.67
10/01/45	12/31/45	0.00	51.83	0.00	0.01	51.82	11.16	0.00	11.16	40.66
01/01/46	03/31/46	0.00	50.84	0.00	0.01	50.83	10.16	0.00	10.16	40.66
04/01/46	06/30/46	0.00	49.85	0.00	0.01	49.83	9.18	0.00	9.18	40.66
07/01/46	09/30/46	0.00	48.85	0.00	0.01	48.84	8.18	0.00	8.18	40.66
10/01/46	12/31/46	0.00	47.85	0.00	0.01	47.84	7.18	0.00	7.18	40.65
01/01/47	03/31/47	0.00	46.85	0.00	0.01	46.84	6.19	0.00	6.19	40.65
04/01/47	06/30/47	0.00	45.86	0.00	0.01	45.85	5.20	0.00	5.20	40.65
07/01/47	09/30/47	0.00	44.86	0.00	0.01	44.85	4.21	0.00	4.21	40.64
10/01/47	12/31/47	0.00	43.86	0.00	0.01	43.85	3.21	0.00	3.21	40.64
01/01/48	03/31/48	0.00	42.86	0.00	0.01	42.85	2.21	0.00	2.21	40.64
04/01/48	06/30/48	0.00	41.87	0.00	0.01	41.86	1.23	0.00	1.23	40.63
07/01/48	09/30/48	0.00	40.87	0.00	0.01	40.86	0.23	0.00	0.23	40.63
10/01/48	12/31/48	0.00	39.87	0.00	0.01	39.86	(0.77)	(0.77)	0.00	39.86
01/01/49	03/31/49	0.00	38.88	0.00	0.01	38.86	(1.76)	(0.99)	0.00	38.86
04/01/49	06/30/49	0.00	37.88	0.00	0.01	37.87	(2.75)	(0.99)	0.00	37.87
07/01/49	09/30/49	0.00	36.89	0.00	0.01	36.88	(3.74)	(0.99)	0.00	36.88
10/01/49	12/31/49	0.00	35.89	0.00	0.01	35.87	(4.74)	(1.00)	0.00	35.87
01/01/50	03/31/50	0.00	34.89	0.00	0.01	34.88	(5.74)	(0.99)	0.00	34.88
04/01/50	06/30/50	0.00	33.90	0.00	0.01	33.89	(6.73)	(0.99)	0.00	33.89
07/01/50	09/30/50	0.00	32.90	0.00	0.01	32.89	(7.72)	(0.99)	0.00	32.89
10/01/50	12/31/50	0.00	31.90	0.00	0.01	31.89	(8.72)	(1.00)	0.00	31.89
01/01/51	03/31/51	0.00	30.90	0.00	0.01	30.89	(9.71)	(0.99)	0.00	30.89
04/01/51	06/30/51	0.00	29.91	0.00	0.01	29.90	(10.70)	(0.99)	0.00	29.90
07/01/51	09/30/51	0.00	28.91	0.00	0.01	28.90	(11.70)	(0.99)	0.00	28.90
10/01/51	12/31/51	0.00	27.91	0.00	0.01	27.90	(12.69)	(1.00)	0.00	27.90
01/01/52	03/31/52	0.00	26.91	0.00	0.01	26.90	(13.69)	(0.99)	0.00	26.90
04/01/52	06/30/52	0.00	25.92	0.00	0.01	25.91	(14.68)	(0.99)	0.00	25.91
07/01/52	09/30/52	0.00	24.93	0.00	0.01	24.91	(15.67)	(0.99)	0.00	24.91
10/01/52	12/31/52	0.00	23.92	0.00	0.01	23.91	(16.67)	(1.00)	0.00	23.91
01/01/53	03/31/53	0.00	22.93	0.00	0.01	22.92	(17.66)	(0.99)	0.00	22.92
04/01/53	06/30/53	0.00	21.94	0.00	0.01	21.92	(18.65)	(0.99)	0.00	21.92
07/01/53	09/30/53	0.00	20.94	0.00	0.01	20.93	(19.65)	(0.99)	0.00	20.93
10/01/53	12/31/53	0.00	19.94	0.00	0.01	19.92	(20.65)	(1.00)	0.00	19.92
01/01/54	03/31/54	0.00	18.94	0.00	0.01	18.93	(21.64)	(0.99)	0.00	18.93
04/01/54	06/30/54	0.00	17.95	0.00	0.01	17.94	(22.63)	(0.99)	0.00	17.94
07/01/54	09/30/54	0.00	16.95	0.00	0.01	16.94	(23.62)	(0.99)	0.00	16.94
10/01/54	12/31/54	0.00	15.95	0.00	0.01	15.94	(24.62)	(1.00)	0.00	15.94
01/01/55	03/31/55	0.00	14.95	0.00	0.01	14.94	(25.61)	(0.99)	0.00	14.94
04/01/55	06/30/55	0.00	13.96	0.00	0.01	13.95	(26.60)	(0.99)	0.00	13.95
07/01/55	09/30/55	0.00	12.96	0.00	0.01	12.95	(27.60)	(0.99)	0.00	12.95
10/01/55	12/31/55	0.00	11.96	0.00	0.01	11.95	(28.60)	(1.00)	0.00	11.95
01/01/56	03/31/56	0.00	10.97	0.00	0.01	10.95	(29.59)	(0.99)	0.00	10.95
04/01/56	06/30/56	0.00	9.97	0.00	0.01	9.96	(30.58)	(0.99)	0.00	9.96
07/01/56	09/30/56	0.00	8.98	0.00	0.01	8.97	(31.57)	(0.99)	0.00	8.97
10/01/56	12/31/56	0.00	7.97	0.00	0.01	7.96	(32.57)	(1.00)	0.00	7.96
01/01/57	03/31/57	0.00	6.98	0.00	0.01	6.97	(33.57)	(0.99)	0.00	6.97
04/01/57	06/30/57	0.00	5.99	0.00	0.01	5.98	(34.55)	(0.99)	0.00	5.98
07/01/57	09/30/57	0.00	4.99	0.00	0.01	4.98	(35.55)	(0.99)	0.00	4.98
10/01/57	12/31/57	0.00	3.99	0.00	0.01	3.98	(36.55)	(1.00)	0.00	3.98
01/01/58	03/31/58	0.00	2.99	0.00	0.01	2.98	(37.54)	(0.99)	0.00	2.98
04/01/58	06/30/58	0.00	2.00	0.00	0.01	1.99	(38.53)	(0.99)	0.00	1.99
07/01/58	09/30/58	0.00	1.14	0.00	0.00	1.13	(39.39)	(0.86)	0.00	1.13
10/01/58	12/31/58	0.00	0.49	0.00	0.00	0.49	(40.04)	(0.65)	0.00	0.49
01/01/59	03/31/59	0.00	0.12	0.00	0.00	0.12	(40.40)	(0.36)	0.00	0.12
04/01/59	06/30/59	0.00	0.00	0.00	0.00	(0.00)	(40.52)	(0.12)	(0.00)	0.00
TOTAL		1,846.31	12,433.95	1,617.39	120.46	12,542.40	6,437.00	(40.52)	7,363.66	5,178.74

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)					
07/01/22	09/30/22	0.00	0.00	0.00	0.00	0.00
10/01/22	12/31/22	0.00	0.00	0.00	0.00	0.00
01/01/23	03/31/23	0.00	0.00	0.00	0.00	0.00
04/01/23	06/30/23	0.00	5.54	5.54	0.00	(5.54)
07/01/23	09/30/23	32.02	60.73	60.73	0.00	170.43
10/01/23	12/31/23	115.15	177.37	145.35	0.00	252.29
01/01/24	03/31/24	264.97	358.16	243.02	0.00	351.97
04/01/24	06/30/24	471.05	556.51	291.54	0.00	388.34
07/01/24	09/30/24	675.25	720.31	249.25	0.00	224.54
10/01/24	12/31/24	829.60	818.26	143.01	0.00	126.59
01/01/25	03/31/25	915.99	870.55	40.95	0.00	74.30
04/01/25	06/30/25	944.84	898.85	(17.14)	15.47	30.52
07/01/25	09/30/25	944.84	919.71	(25.14)	22.70	2.44
10/01/25	12/31/25	944.84	933.88	(10.97)	9.90	1.06
01/01/26	03/31/26	944.84	940.90	(3.95)	3.56	0.38
04/01/26	06/30/26	944.84	943.95	(0.89)	0.80	0.09
07/01/26	09/30/26	944.84	944.84	0.00	0.00	0.00
10/01/26	12/31/26	944.84	944.84	0.00	0.00	0.00
01/01/27	03/31/27	944.84	944.84	0.00	0.00	0.00
04/01/27	06/30/27	944.84	944.84	0.00	0.00	0.00
07/01/27	09/30/27	944.84	944.84	0.00	0.00	0.00
10/01/27	12/31/27	944.84	944.84	0.00	0.00	0.00
01/01/28	03/31/28	944.84	944.84	0.00	0.00	0.00
04/01/28	06/30/28	944.84	944.84	0.00	0.00	0.00
07/01/28	09/30/28	944.84	944.84	0.00	0.00	0.00
10/01/28	12/31/28	944.84	944.84	0.00	0.00	0.00
01/01/29	03/31/29	944.84	944.84	0.00	0.00	0.00
04/01/29	06/30/29	944.84	944.84	0.00	0.00	0.00
07/01/29	09/30/29	944.84	944.84	0.00	0.00	0.00
10/01/29	12/31/29	944.84	944.84	0.00	0.00	0.00
01/01/30	03/31/30	944.84	944.84	0.00	0.00	0.00
04/01/30	06/30/30	944.84	944.84	0.00	0.00	0.00
07/01/30	09/30/30	944.84	944.84	0.00	0.00	0.00
10/01/30	12/31/30	944.84	944.84	0.00	0.00	0.00
01/01/31	03/31/31	944.84	944.84	0.00	0.00	0.00
04/01/31	06/30/31	944.84	944.84	0.00	0.00	0.00
07/01/31	09/30/31	944.84	944.84	0.00	0.00	0.00
10/01/31	12/31/31	944.84	944.84	0.00	0.00	0.00
01/01/32	03/31/32	944.84	944.84	0.00	0.00	0.00
04/01/32	06/30/32	944.84	944.84	0.00	0.00	0.00
07/01/32	09/30/32	944.84	944.84	0.00	0.00	0.00
10/01/32	12/31/32	944.84	944.84	0.00	0.00	0.00
01/01/33	03/31/33	944.84	944.84	0.00	0.00	0.00
04/01/33	06/30/33	944.84	944.84	0.00	0.00	0.00
07/01/33	09/30/33	944.84	944.84	0.00	0.00	0.00
10/01/33	12/31/33	944.84	944.84	0.00	0.00	0.00
01/01/34	03/31/34	944.84	944.84	0.00	0.00	0.00
04/01/34	06/30/34	944.84	944.84	0.00	0.00	0.00
07/01/34	09/30/34	944.84	944.84	0.00	0.00	0.00
10/01/34	12/31/34	944.84	944.84	0.00	0.00	0.00
01/01/35	03/31/35	944.84	944.84	0.00	0.00	0.00
04/01/35	06/30/35	944.84	944.84	0.00	0.00	0.00
07/01/35	09/30/35	944.84	944.84	0.00	0.00	0.00
10/01/35	12/31/35	944.84	944.84	0.00	0.00	0.00
01/01/36	03/31/36	944.84	944.84	0.00	0.00	0.00
04/01/36	06/30/36	944.84	944.84	0.00	0.00	0.00
07/01/36	09/30/36	944.84	944.84	0.00	0.00	0.00
10/01/36	12/31/36	944.84	944.84	0.00	0.00	0.00
01/01/37	03/31/37	944.84	944.84	0.00	0.00	0.00
04/01/37	06/30/37	944.84	944.84	0.00	0.00	0.00
07/01/37	09/30/37	944.84	944.84	0.00	0.00	0.00
10/01/37	12/31/37	944.84	944.84	0.00	0.00	0.00
01/01/38	03/31/38	944.84	944.84	0.00	0.00	0.00
04/01/38	06/30/38	944.84	944.84	0.00	0.00	0.00
07/01/38	09/30/38	944.84	944.84	0.00	0.00	0.00
10/01/38	12/31/38	944.84	944.84	0.00	0.00	0.00
01/01/39	03/31/39	944.84	944.84	0.00	0.00	0.00
04/01/39	06/30/39	944.84	944.84	0.00	0.00	0.00
07/01/39	09/30/39	944.84	944.84	0.00	0.00	0.00
10/01/39	12/31/39	944.84	944.84	0.00	0.00	0.00
01/01/40	03/31/40	944.84	944.84	0.00	0.00	0.00
04/01/40	06/30/40	944.84	944.84	0.00	0.00	0.00
07/01/40	09/30/40	944.84	944.84	0.00	0.00	0.00
10/01/40	12/31/40	944.84	944.84	0.00	0.00	0.00
01/01/41	03/31/41	944.84	944.84	0.00	0.00	0.00
04/01/41	06/30/41	944.84	944.84	0.00	0.00	0.00
07/01/41	09/30/41	944.84	944.84	0.00	0.00	0.00
10/01/41	12/31/41	944.84	944.84	0.00	0.00	0.00
01/01/42	03/31/42	944.84	944.84	0.00	0.00	0.00
04/01/42	06/30/42	944.84	944.84	0.00	0.00	0.00
07/01/42	09/30/42	944.84	944.84	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)					
10/01/42	12/31/42	944.84	944.84	0.00	0.00	0.00
01/01/43	03/31/43	944.84	944.84	0.00	0.00	0.00
04/01/43	06/30/43	944.84	944.84	0.00	0.00	0.00
07/01/43	09/30/43	944.84	944.84	0.00	0.00	0.00
10/01/43	12/31/43	944.84	944.84	0.00	0.00	0.00
01/01/44	03/31/44	944.84	944.84	0.00	0.00	0.00
04/01/44	06/30/44	944.84	944.84	0.00	0.00	0.00
07/01/44	09/30/44	944.84	944.84	0.00	0.00	0.00
10/01/44	12/31/44	944.84	944.84	0.00	0.00	0.00
01/01/45	03/31/45	944.84	944.84	0.00	0.00	0.00
04/01/45	06/30/45	944.84	944.84	0.00	0.00	0.00
07/01/45	09/30/45	944.84	944.84	0.00	0.00	0.00
10/01/45	12/31/45	944.84	944.84	0.00	0.00	0.00
01/01/46	03/31/46	944.84	944.84	0.00	0.00	0.00
04/01/46	06/30/46	944.84	944.84	0.00	0.00	0.00
07/01/46	09/30/46	944.84	944.84	0.00	0.00	0.00
10/01/46	12/31/46	944.84	944.84	0.00	0.00	0.00
01/01/47	03/31/47	944.84	944.84	0.00	0.00	0.00
04/01/47	06/30/47	944.84	944.84	0.00	0.00	0.00
07/01/47	09/30/47	944.84	944.84	0.00	0.00	0.00
10/01/47	12/31/47	944.84	944.84	0.00	0.00	0.00
01/01/48	03/31/48	944.84	944.84	0.00	0.00	0.00
04/01/48	06/30/48	944.84	944.84	0.00	0.00	0.00
07/01/48	09/30/48	944.84	944.84	0.00	0.00	0.00
10/01/48	12/31/48	944.84	944.84	0.00	0.00	0.00
01/01/49	03/31/49	944.84	944.84	0.00	0.00	0.00
04/01/49	06/30/49	944.84	944.84	0.00	0.00	0.00
07/01/49	09/30/49	944.84	944.84	0.00	0.00	0.00
10/01/49	12/31/49	944.84	944.84	0.00	0.00	0.00
01/01/50	03/31/50	944.84	944.84	0.00	0.00	0.00
04/01/50	06/30/50	944.84	944.84	0.00	0.00	0.00
07/01/50	09/30/50	944.84	944.84	0.00	0.00	0.00
10/01/50	12/31/50	944.84	944.84	0.00	0.00	0.00
01/01/51	03/31/51	944.84	944.84	0.00	0.00	0.00
04/01/51	06/30/51	944.84	944.84	0.00	0.00	0.00
07/01/51	09/30/51	944.84	944.84	0.00	0.00	0.00
10/01/51	12/31/51	944.84	944.84	0.00	0.00	0.00
01/01/52	03/31/52	944.84	944.84	0.00	0.00	0.00
04/01/52	06/30/52	944.84	944.84	0.00	0.00	0.00
07/01/52	09/30/52	944.84	944.84	0.00	0.00	0.00
10/01/52	12/31/52	944.84	944.84	0.00	0.00	0.00
01/01/53	03/31/53	944.84	944.84	0.00	0.00	0.00
04/01/53	06/30/53	944.84	944.84	0.00	0.00	0.00
07/01/53	09/30/53	944.84	944.84	0.00	0.00	0.00
10/01/53	12/31/53	944.84	944.84	0.00	0.00	0.00
01/01/54	03/31/54	944.84	944.84	0.00	0.00	0.00
04/01/54	06/30/54	944.84	944.84	0.00	0.00	0.00
07/01/54	09/30/54	944.84	944.84	0.00	0.00	0.00
10/01/54	12/31/54	944.84	944.84	0.00	0.00	0.00
01/01/55	03/31/55	944.84	944.84	0.00	0.00	0.00
04/01/55	06/30/55	944.84	944.84	0.00	0.00	0.00
07/01/55	09/30/55	944.84	944.84	0.00	0.00	0.00
10/01/55	12/31/55	944.84	944.84	0.00	0.00	0.00
01/01/56	03/31/56	944.84	944.84	0.00	0.00	0.00
04/01/56	06/30/56	944.84	944.84	0.00	0.00	0.00
07/01/56	09/30/56	944.84	944.84	0.00	0.00	0.00
10/01/56	12/31/56	944.84	944.84	0.00	0.00	0.00
01/01/57	03/31/57	944.84	944.84	0.00	0.00	0.00
04/01/57	06/30/57	944.84	944.84	0.00	0.00	0.00
07/01/57	09/30/57	944.84	944.84	0.00	0.00	0.00
10/01/57	12/31/57	944.84	944.84	0.00	0.00	0.00
01/01/58	03/31/58	944.84	944.84	0.00	0.00	0.00
04/01/58	06/30/58	944.84	944.84	0.00	0.00	0.00
07/01/58	09/30/58	944.84	944.84	0.00	0.00	0.00
10/01/58	12/31/58	944.84	944.84	0.00	0.00	0.00
01/01/59	03/31/59	944.84	944.84	0.00	0.00	0.00
04/01/59	06/30/59	944.84	944.84	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)

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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)
04/01/43	06/30/43	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.49%
07/01/43	09/30/43	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.54%
10/01/43	12/31/43	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.60%
01/01/44	03/31/44	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.67%
04/01/44	06/30/44	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.75%
07/01/44	09/30/44	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.84%
10/01/44	12/31/44	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.94%
01/01/45	03/31/45	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.05%
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%	93.17%
07/01/45	09/30/45	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.29%
10/01/45	12/31/45	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.42%
01/01/46	03/31/46	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.55%
04/01/46	06/30/46	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.67%
07/01/46	09/30/46	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.80%
10/01/46	12/31/46	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.93%
01/01/47	03/31/47	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.05%
04/01/47	06/30/47	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.18%
07/01/47	09/30/47	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.31%
10/01/47	12/31/47	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.43%
01/01/48	03/31/48	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.56%
04/01/48	06/30/48	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.69%
07/01/48	09/30/48	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.81%
10/01/48	12/31/48	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.94%
01/01/49	03/31/49	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.07%
04/01/49	06/30/49	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.19%
07/01/49	09/30/49	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.32%
10/01/49	12/31/49	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.45%
01/01/50	03/31/50	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.57%
04/01/50	06/30/50	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.70%
07/01/50	09/30/50	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.82%
10/01/50	12/31/50	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.95%
01/01/51	03/31/51	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.08%
04/01/51	06/30/51	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.20%
07/01/51	09/30/51	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.33%
10/01/51	12/31/51	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.46%
01/01/52	03/31/52	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.58%
04/01/52	06/30/52	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.71%
07/01/52	09/30/52	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.84%
10/01/52	12/31/52	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.96%
01/01/53	03/31/53	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.09%
04/01/53	06/30/53	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.22%
07/01/53	09/30/53	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.34%
10/01/53	12/31/53	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.47%
01/01/54	03/31/54	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.60%
04/01/54	06/30/54	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.72%
07/01/54	09/30/54	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.85%
10/01/54	12/31/54	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.98%
01/01/55	03/31/55	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.10%
04/01/55	06/30/55	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.23%
07/01/55	09/30/55	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.35%
10/01/55	12/31/55	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.48%
01/01/56	03/31/56	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.61%
04/01/56	06/30/56	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.73%
07/01/56	09/30/56	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.86%
10/01/56	12/31/56	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.99%
01/01/57	03/31/57	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.11%
04/01/57	06/30/57	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.24%
07/01/57	09/30/57	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.37%
10/01/57	12/31/57	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.49%
01/01/58	03/31/58	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.62%
04/01/58	06/30/58	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.75%
07/01/58	09/30/58	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.86%
10/01/58	12/31/58	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.94%
01/01/59	03/31/59	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.98%
04/01/59	06/30/59	0.00%	0.02%	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%		

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

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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)
07/01/22	09/30/22		0.00%	0.00%	0.00%	0.00%	0.00%
10/01/22	12/31/22		0.00%	0.00%	0.00%	0.00%	0.00%
01/01/23	03/31/23		0.00%	0.00%	0.00%	0.00%	0.00%
04/01/23	06/30/23		0.00%	0.00%	0.00%	0.00%	0.00%
07/01/23	09/30/23	24.47%	3.39%	3.39%	24.47%	3.39%	3.39%
10/01/23	12/31/23	21.01%	8.80%	8.80%	45.47%	12.19%	12.19%
01/01/24	03/31/24	29.68%	15.86%	15.86%	75.16%	28.04%	28.04%
04/01/24	06/30/24	24.84%	21.81%	21.81%	100.00%	49.86%	49.86%
07/01/24	09/30/24		21.61%	21.61%	100.00%	71.47%	71.47%
10/01/24	12/31/24		16.34%	16.34%	100.00%	87.80%	87.80%
01/01/25	03/31/25		9.14%	9.14%	100.00%	96.95%	96.95%
04/01/25	06/30/25		3.05%	3.05%	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%
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%

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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)
01/01/43	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%
07/01/58	09/30/58		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/58	12/31/58		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/59	03/31/59		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/59	06/30/59		0.00%	0.00%	100.00%	100.00%	100.00%
TOTAL		100.00%	100.00%	100.00%			

Notes:

- (3): Based on Unit Statistical 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

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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)							
07/01/22	09/30/22	0.00	0.00	0.00	1.51	0.00	0.00	0.00
10/01/22	12/31/22	0.00	0.00	0.00	1.51	0.00	0.00	0.00
01/01/23	03/31/23	0.00	0.00	0.00	1.51	0.00	0.00	0.00
04/01/23	06/30/23	0.00	0.00	0.00	1.51	0.00	3.91	3.91
07/01/23	09/30/23	199.14	20.54	219.68	1.51	145.11	13.17	158.29
10/01/23	12/31/23	314.51	73.86	388.37	1.51	256.54	31.73	288.28
01/01/24	03/31/24	445.16	169.95	615.12	1.51	406.33	54.01	460.35
04/01/24	06/30/24	473.79	302.14	775.93	1.51	512.56	68.24	580.80
07/01/24	09/30/24	269.60	425.98	695.58	1.51	459.48	62.88	522.36
10/01/24	12/31/24	115.25	506.47	621.72	1.51	410.69	52.54	463.23
01/01/25	03/31/25	28.86	528.53	557.39	1.51	368.20	45.70	413.90
04/01/25	06/30/25	0.00	501.16	501.16	1.51	331.05	59.81	390.86
07/01/25	09/30/25	0.00	450.92	450.92	1.51	297.86	68.86	366.73
10/01/25	12/31/25	0.00	404.14	404.14	1.51	266.96	57.24	324.21
01/01/26	03/31/26	0.00	362.52	362.52	1.51	239.47	50.99	290.46
04/01/26	06/30/26	0.00	325.31	325.31	1.51	214.89	47.93	262.82
07/01/26	09/30/26	0.00	291.82	291.82	1.51	192.77	46.61	239.38
10/01/26	12/31/26	0.00	260.99	260.99	1.51	172.40	46.02	218.42
01/01/27	03/31/27	0.00	234.07	234.07	1.51	154.62	45.71	200.33
04/01/27	06/30/27	0.00	210.49	210.49	1.51	139.04	45.40	184.45
07/01/27	09/30/27	0.00	189.97	189.97	1.51	125.49	45.09	170.59
10/01/27	12/31/27	0.00	171.85	171.85	1.51	113.52	44.79	158.31
01/01/28	03/31/28	0.00	157.13	157.13	1.51	103.79	44.65	148.44
04/01/28	06/30/28	0.00	145.28	145.28	1.51	95.97	44.51	140.48
07/01/28	09/30/28	0.00	135.62	135.62	1.51	89.59	44.38	133.97
10/01/28	12/31/28	0.00	127.23	127.23	1.51	84.05	44.24	128.29
01/01/29	03/31/29	0.00	120.61	120.61	1.51	79.68	44.14	123.82
04/01/29	06/30/29	0.00	115.51	115.51	1.51	76.30	44.04	120.34
07/01/29	09/30/29	0.00	111.39	111.39	1.51	73.58	43.94	117.52
10/01/29	12/31/29	0.00	107.68	107.68	1.51	71.13	43.84	114.96
01/01/30	03/31/30	0.00	104.55	104.55	1.51	69.06	43.75	112.81
04/01/30	06/30/30	0.00	101.92	101.92	1.51	67.33	43.66	110.99
07/01/30	09/30/30	0.00	99.65	99.65	1.51	65.83	43.57	109.40
10/01/30	12/31/30	0.00	97.57	97.57	1.51	64.45	43.49	107.94
01/01/31	03/31/31	0.00	95.77	95.77	1.51	63.26	43.41	106.67
04/01/31	06/30/31	0.00	94.21	94.21	1.51	62.23	43.33	105.56
07/01/31	09/30/31	0.00	92.76	92.76	1.51	61.28	43.25	104.53
10/01/31	12/31/31	0.00	91.34	91.34	1.51	60.34	43.18	103.51
01/01/32	03/31/32	0.00	89.95	89.95	1.51	59.42	43.08	102.50
04/01/32	06/30/32	0.00	88.60	88.60	1.51	58.53	42.98	101.51
07/01/32	09/30/32	0.00	87.32	87.32	1.51	57.68	42.88	100.56
10/01/32	12/31/32	0.00	86.13	86.13	1.51	56.89	42.79	99.68
01/01/33	03/31/33	0.00	85.07	85.07	1.51	56.20	42.71	98.91
04/01/33	06/30/33	0.00	84.13	84.13	1.51	55.58	42.64	98.22
07/01/33	09/30/33	0.00	83.27	83.27	1.51	55.00	42.57	97.57
10/01/33	12/31/33	0.00	82.43	82.43	1.51	54.45	42.49	96.95
01/01/34	03/31/34	0.00	81.65	81.65	1.51	53.93	42.43	96.36
04/01/34	06/30/34	0.00	80.91	80.91	1.51	53.45	42.36	95.80
07/01/34	09/30/34	0.00	80.17	80.17	1.51	52.96	42.29	95.25
10/01/34	12/31/34	0.00	79.42	79.42	1.51	52.46	42.22	94.68
01/01/35	03/31/35	0.00	78.64	78.64	1.51	51.95	42.16	94.10
04/01/35	06/30/35	0.00	77.85	77.85	1.51	51.43	42.09	93.52
07/01/35	09/30/35	0.00	77.04	77.04	1.51	50.89	42.03	92.92
10/01/35	12/31/35	0.00	76.21	76.21	1.51	50.34	41.96	92.30
01/01/36	03/31/36	0.00	75.37	75.37	1.51	49.79	41.90	91.70
04/01/36	06/30/36	0.00	74.53	74.53	1.51	49.23	41.85	91.08
07/01/36	09/30/36	0.00	73.72	73.72	1.51	48.70	41.79	90.49
10/01/36	12/31/36	0.00	72.97	72.97	1.51	48.20	41.73	89.93
01/01/37	03/31/37	0.00	72.31	72.31	1.51	47.77	41.68	89.44
04/01/37	06/30/37	0.00	71.73	71.73	1.51	47.38	41.62	89.01
07/01/37	09/30/37	0.00	71.19	71.19	1.51	47.03	41.57	88.60
10/01/37	12/31/37	0.00	70.67	70.67	1.51	46.68	41.52	88.20
01/01/38	03/31/38	0.00	70.18	70.18	1.51	46.36	41.46	87.82
04/01/38	06/30/38	0.00	69.70	69.70	1.51	46.04	41.41	87.46
07/01/38	09/30/38	0.00	69.23	69.23	1.51	45.73	41.36	87.09
10/01/38	12/31/38	0.00	68.74	68.74	1.51	45.41	41.31	86.71
01/01/39	03/31/39	0.00	68.23	68.23	1.51	45.07	41.26	86.33
04/01/39	06/30/39	0.00	67.71	67.71	1.51	44.73	41.21	85.93
07/01/39	09/30/39	0.00	67.18	67.18	1.51	44.38	41.16	85.54
10/01/39	12/31/39	0.00	66.66	66.66	1.51	44.03	41.11	85.14
01/01/40	03/31/40	0.00	66.14	66.14	1.51	43.69	41.06	84.75
04/01/40	06/30/40	0.00	65.63	65.63	1.51	43.36	41.01	84.37
07/01/40	09/30/40	0.00	65.12	65.12	1.51	43.01	40.96	83.97
10/01/40	12/31/40	0.00	64.58	64.58	1.51	42.66	40.91	83.57
01/01/41	03/31/41	0.00	64.03	64.03	1.51	42.30	40.87	83.17
04/01/41	06/30/41	0.00	63.46	63.46	1.51	41.92	40.83	82.75
07/01/41	09/30/41	0.00	62.88	62.88	1.51	41.54	40.79	82.33
10/01/41	12/31/41	0.00	62.29	62.29	1.51	41.15	40.75	81.89
01/01/42	03/31/42	0.00	61.70	61.70	1.51	40.75	40.74	81.49
04/01/42	06/30/42	0.00	61.10	61.10	1.51	40.36	40.72	81.08
07/01/42	09/30/42	0.00	60.53	60.53	1.51	39.98	40.71	80.69
10/01/42	12/31/42	0.00	60.00	60.00	1.51	39.64	40.70	80.34

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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)							
01/01/43	03/31/43	0.00	59.55	59.55	1.51	39.34	40.70	80.03
04/01/43	06/30/43	0.00	59.16	59.16	1.51	39.08	40.69	79.77
07/01/43	09/30/43	0.00	58.76	58.76	1.51	38.81	40.69	79.50
10/01/43	12/31/43	0.00	58.29	58.29	1.51	38.50	40.69	79.19
01/01/44	03/31/44	0.00	57.74	57.74	1.51	38.14	40.68	78.83
04/01/44	06/30/44	0.00	57.13	57.13	1.51	37.74	40.68	78.42
07/01/44	09/30/44	0.00	56.43	56.43	1.51	37.28	40.68	77.95
10/01/44	12/31/44	0.00	55.65	55.65	1.51	36.76	40.68	77.44
01/01/45	03/31/45	0.00	54.78	54.78	1.51	36.19	40.67	76.86
04/01/45	06/30/45	0.00	53.83	53.83	1.51	35.56	40.67	76.23
07/01/45	09/30/45	0.00	52.84	52.84	1.51	34.90	40.67	75.57
10/01/45	12/31/45	0.00	51.83	51.83	1.51	34.24	40.66	74.90
01/01/46	03/31/46	0.00	50.84	50.84	1.51	33.58	40.66	74.24
04/01/46	06/30/46	0.00	49.85	49.85	1.51	32.93	40.66	73.59
07/01/46	09/30/46	0.00	48.85	48.85	1.51	32.27	40.66	72.92
10/01/46	12/31/46	0.00	47.85	47.85	1.51	31.61	40.65	72.26
01/01/47	03/31/47	0.00	46.85	46.85	1.51	30.95	40.65	71.60
04/01/47	06/30/47	0.00	45.86	45.86	1.51	30.29	40.65	70.94
07/01/47	09/30/47	0.00	44.86	44.86	1.51	29.63	40.64	70.28
10/01/47	12/31/47	0.00	43.86	43.86	1.51	28.97	40.64	69.61
01/01/48	03/31/48	0.00	42.86	42.86	1.51	28.31	40.64	68.95
04/01/48	06/30/48	0.00	41.87	41.87	1.51	27.66	40.63	68.29
07/01/48	09/30/48	0.00	40.87	40.87	1.51	27.00	40.63	67.63
10/01/48	12/31/48	0.00	39.87	39.87	1.51	26.34	39.86	66.20
01/01/49	03/31/49	0.00	38.88	38.88	1.51	25.68	38.86	64.54
04/01/49	06/30/49	0.00	37.88	37.88	1.51	25.03	37.87	62.90
07/01/49	09/30/49	0.00	36.89	36.89	1.51	24.37	36.88	61.24
10/01/49	12/31/49	0.00	35.89	35.89	1.51	23.70	35.87	59.58
01/01/50	03/31/50	0.00	34.89	34.89	1.51	23.05	34.88	57.92
04/01/50	06/30/50	0.00	33.90	33.90	1.51	22.39	33.89	56.28
07/01/50	09/30/50	0.00	32.90	32.90	1.51	21.73	32.89	54.62
10/01/50	12/31/50	0.00	31.90	31.90	1.51	21.07	31.89	52.96
01/01/51	03/31/51	0.00	30.90	30.90	1.51	20.41	30.89	51.30
04/01/51	06/30/51	0.00	29.91	29.91	1.51	19.76	29.90	49.66
07/01/51	09/30/51	0.00	28.91	28.91	1.51	19.10	28.90	48.00
10/01/51	12/31/51	0.00	27.91	27.91	1.51	18.44	27.90	46.34
01/01/52	03/31/52	0.00	26.91	26.91	1.51	17.78	26.90	44.68
04/01/52	06/30/52	0.00	25.92	25.92	1.51	17.12	25.91	43.03
07/01/52	09/30/52	0.00	24.93	24.93	1.51	16.47	24.91	41.38
10/01/52	12/31/52	0.00	23.92	23.92	1.51	15.80	23.91	39.72
01/01/53	03/31/53	0.00	22.93	22.93	1.51	15.14	22.92	38.06
04/01/53	06/30/53	0.00	21.94	21.94	1.51	14.49	21.92	36.41
07/01/53	09/30/53	0.00	20.94	20.94	1.51	13.83	20.93	34.76
10/01/53	12/31/53	0.00	19.94	19.94	1.51	13.17	19.92	33.09
01/01/54	03/31/54	0.00	18.94	18.94	1.51	12.51	18.93	31.44
04/01/54	06/30/54	0.00	17.95	17.95	1.51	11.86	17.94	29.79
07/01/54	09/30/54	0.00	16.95	16.95	1.51	11.20	16.94	28.14
10/01/54	12/31/54	0.00	15.95	15.95	1.51	10.54	15.94	26.47
01/01/55	03/31/55	0.00	14.95	14.95	1.51	9.88	14.94	24.82
04/01/55	06/30/55	0.00	13.96	13.96	1.51	9.22	13.95	23.17
07/01/55	09/30/55	0.00	12.96	12.96	1.51	8.56	12.95	21.52
10/01/55	12/31/55	0.00	11.96	11.96	1.51	7.90	11.95	19.85
01/01/56	03/31/56	0.00	10.97	10.97	1.51	7.24	10.95	18.20
04/01/56	06/30/56	0.00	9.97	9.97	1.51	6.59	9.96	16.55
07/01/56	09/30/56	0.00	8.98	8.98	1.51	5.93	8.97	14.90
10/01/56	12/31/56	0.00	7.97	7.97	1.51	5.27	7.96	13.23
01/01/57	03/31/57	0.00	6.98	6.98	1.51	4.61	6.97	11.58
04/01/57	06/30/57	0.00	5.99	5.99	1.51	3.95	5.98	9.93
07/01/57	09/30/57	0.00	4.99	4.99	1.51	3.30	4.98	8.27
10/01/57	12/31/57	0.00	3.99	3.99	1.51	2.63	3.98	6.61
01/01/58	03/31/58	0.00	2.99	2.99	1.51	1.98	2.98	4.96
04/01/58	06/30/58	0.00	2.00	2.00	1.51	1.32	1.99	3.31
07/01/58	09/30/58	0.00	1.14	1.14	1.51	0.75	1.13	1.89
10/01/58	12/31/58	0.00	0.49	0.49	1.51	0.32	0.49	0.81
01/01/59	03/31/59	0.00	0.12	0.12	1.51	0.08	0.12	0.20
04/01/59	06/30/59	0.00	0.00	0.00	1.51	0.00	0.00	0.00
TOTAL		1,846.31	12,433.95	14,280.25		9,433.16	5,178.74	14,611.90

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)

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Section VII - Profit
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Section VII - E
Exhibit 1

Cost of Capital: Summary Exhibit

(1) Discounted Cash Flow	8.28%
(2) Capital Asset Pricing Model	11.21%
(3) Equity Capital Cost	9.74%
(4) Debt Capital Cost	3.91%
(5) Capital Structure	
(a) Equity Capital Share	81%
(b) Debt Capital Share	19%
(6) Weighted Average Cost of Capital (WACC)	8.64%

Notes:

(1): Exhibit 2, Page 1

(2): Exhibit 3, Page 1

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

(4): Average of three-horizons yields:

Short-Term = 2.4%, the average yield on 1-month Commercial Paper (line (1)' of Section VII-J, Exhibit 2, Page 3)

Intermediate-Term = 4.21%, the average yield on 5-year HQM yield (line (15) of Section VII-J, Exhibit 2, Page 3)

Long-Term = 5.11%, 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)]

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Section VII - E
Exhibit 2
Page 1

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

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

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

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

	Time (t) (1)	Dividend Growth Rate (g) (2)	Discounted Dividends (3)
Stage 1	1	5.87%	
	2	5.87%	
	3	5.87%	
	4	5.87%	
	5	5.87%	4.42
Stage 2	6	5.88%	0.83
	7	5.89%	0.81
	8	5.91%	0.79
	9	5.92%	0.77
Stage 3	≥10	5.94%	34.93
(4) Total Discounted Dividends			42.54

(5) Dividend Yield Rate (D_1/V_0)

2.35%

(6) Cost of Capital (k)

8.28%

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 $[1.0 / (5)] - (4) = 0$.

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Section VII - Profit
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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%
1981	6,935.2	2.54%
1982	6,810.1	-1.80%

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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)
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	18,076.7	2.24%
2018	18,609.1	2.95%
2019	19,036.1	2.29%
2020	18,509.1	-2.77%
2021	19,609.8	5.95%
(4) Average		3.28%
(5) Rate of Expected Inflation		2.57%
(6) Long-Term Dividend Growth Rate		5.94%

Notes:

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

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

(5): Page 3, average of column (4)

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

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 Subsection E - Cost of Capital
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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)
2021-10	1.58	-0.95	2.53
2021-11	1.56	-1.06	2.62
2021-12	1.47	-0.99	2.46
2022-01	1.76	-0.69	2.45
2022-02	1.93	-0.52	2.45
2022-03	2.13	-0.72	2.85
2022-04	2.75	-0.14	2.89
2022-05	2.9	0.21	2.69
2022-06	3.14	0.53	2.61
2022-07	2.9	0.53	2.37
2022-08	2.9	0.39	2.51
2022-09	3.52	1.14	2.38
Average			2.57%

Source: Federal Reserve Statistical Release, H.15.

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Section VII - E
Exhibit 2
Page 4

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

(1) Growth Forecast { = [(a) + (b)] / 2.0 }	5.55
(a) Dividend Component	5.41
(b) Earnings Component	5.69
(2) Fundamental Analysis [= (a) + (b)]	6.19
(a) Retention to book	6.28
(b) Stock issuance factor	-0.09
(3) Short-Term Dividend Growth Rate { = [(1) + (2)] / 2.0 }	5.87

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, average of 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)	2022 Shares (12)	2025 - 2027 Shares (13)	2025 - 2027 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	6.2	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
AMERICAN FINANCIAL GROUP INC	1.9	12.00	12.50	11.00	9.50	12.00	9.00	9.40	11.38	12.50	85.00	80.00	2.10	-1.65
AMERICAN INTERNATIONAL GROUP	2.5	NA	20.50	3.00	NA	-17.00	6.50	6.20	7.55	6.50	785.00	700.00	0.80	0.56
AMERISAFE INC	2.6	NA	-24.00	NA	NA	3.50	10.00	4.82	1.30	NA	0.00	0.00	0.00	NA
AMERITRUST GROUP	6.1	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	NA	6.00	9.50	18.00	9.93	8.58	12.00	365.00	340.00	1.35	-0.62
ARGO GROUP	3.3	19.50	14.50	3.00	NA	NA	NMF	6.23	1.50	8.50	34.50	32.00	1.07	-0.13
BERKLEY (W R) CORP	0.6	10.00	8.50	10.00	8.50	8.50	15.50	8.08	7.82	13.50	265.00	270.00	2.40	0.66
BERKSHIRE HATHAWAY	0.0	NA	NA	0.00	6.00	12.00	6.00	6.83	5.40	7.00	2200.00	2000.00	1.05	-0.12
CHUBB LTD	1.7	9.00	3.00	4.50	2.50	NA	14.50	6.70	5.40	10.00	410.00	375.00	1.65	-1.43
CINCINNATI FINANCIAL CORP	2.8	4.00	3.50	6.50	14.00	8.50	8.50	2.83	2.64	3.60	159.00	155.00	1.45	-0.29
CNA FINANCIAL CORP	3.9	NA	8.00	4.50	2.50	5.00	12.00	4.28	4.42	8.00	272.00	275.00	1.70	0.19
EMPLOYERS HOLDINGS INC	2.6	NA	5.00	NA	NA	7.00	10.00	11.02	9.12	NA	0.00	0.00	0.00	NA
EVEREST RE GROUP	2.4	11.50	13.00	4.00	2.50	-10.00	9.50	9.12	6.33	11.00	40.00	43.00	1.30	0.55
FAIRFAX FINANCIAL GROUP	2.0	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
HANOVER INS GROUP	2.3	13.00	10.00	6.50	9.00	8.00	9.00	6.42	6.96	8.00	35.00	35.00	1.26	0.00
HARTFORD FINANCIAL	2.4	14.00	11.50	6.00	10.50	11.50	6.50	7.58	8.64	9.00	325.00	305.00	0.80	0.32
HDI/TALANX US PC GROUP	4.1	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	0.8	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
MARKEL CORP	0.0	NA	NA	0.00	19.00	36.00	7.00	7.13	10.05	8.50	13.50	13.00	1.32	-0.30
MS&AD US INSURANCE GROUP	5.0	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
NATIONAL HEALTHCARE	3.3	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
OLD REPUBLIC INTL CORP	3.8	2.00	2.50	6.00	NA	15.00	9.00	5.07	6.12	8.50	308.00	310.00	1.75	0.12
PROASSURANCE CORP	0.9	NA	NA	NA	NA	NA	27.30	6.55	5.95	NA	0.00	0.00	0.00	NA
PROGRESSIVE CORP	0.3	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
QBE NORTH AMERICA INSURANCE GROUP	1.5	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	1.50	4.50	12.00	8.08	7.26	10.00	45.00	45.00	2.80	0.00
SAMSUNG F & M INSURANCE CO	6.3	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
SELECTIVE INS GROUP INC	1.4	6.00	10.50	9.00	17.00	14.50	9.50	7.85	9.60	11.50	60.00	65.00	1.70	1.41
SOMPO HOLDINGS US GROUP	4.0	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
TOKIO MARINE US PC GROUP	3.8	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
TRAVELERS CO INC	2.2	9.00	7.00	4.00	8.00	1.50	6.50	8.54	6.88	7.50	235.00	230.00	1.50	-0.27
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	6.4	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
ZURICH INSURANCE US PC GROUP	5.3	NA	NA	NA	NA	NA	0.00	NA	NA	NA	0.00	0.00	0.00	NA
(16) Weighed Average	2.35	6.20	6.21	3.82	5.29	4.43	7.35	5.97	5.73	7.14				-0.09

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 2022)

(2): The dividend yields needed for the DCF Analysis relate dividends at time 1, D_1 , to stock prices at time 0, P_0 . Dividend yields from VLIS, Small and Mid Cap Edition, must be adjusted because they are derived from the ratio of dividends at time 0, D_0 , to stock price at time zero, P_0 . D_1 is estimated from D_0 as follows:

$$D_1 = D_0 \times [1.0 + (0.5 \times \text{Dividend Growth Rate})], \quad \text{where Dividend Growth Rate} = 5.87\% \text{ from Page 4.}$$

(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) = $[(14) - 1.0] \times \{ [(13) / (12)]^{(t) - 1.0} \} \times 100$, where t is 0.25 for the years between midyear 2023 and midyear 2027.

(16): Weighted by direct premiums written.

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Section VII - Profit
Subsection E - Cost of Capital
7/1/2023

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	2.25	9.03	1.00	11.32
Intermediate-Term	3.23	8.04	1.00	11.31
Long-Term	3.51	7.46	1.00	11.00
Average	2.99	8.17	1.00	11.21

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)]

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Section VII - Profit
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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	1.2
AMERICAN FINANCIAL GROUP INC	1.3
AMERICAN INTERNATIONAL GROUP	1.5
AMERISAFE INC	0.8
AMERITRUST GROUP	0.9
ARCH CAPITAL GROUP LTD	1.2
ARGO GROUP	1.0
BERKLEY (W R) CORP	1.1
BERKSHIRE HATHAWAY	1.0
CHUBB LTD	1.1
CINCINNATI FINANCIAL CORP	1.1
CNA FINANCIAL CORP	1.1
EMPLOYERS HOLDINGS INC	0.7
EVEREST RE GROUP	1.0
FAIRFAX FINANCIAL GROUP	0.9
HANOVER INS GROUP	1.0
HARTFORD FINANCIAL	1.2
HDI/TALANX US PC GROUP	1.1
INTACT US INSURANCE GROUP	0.6
JAMES RIVER GROUP	0.4
MARKEL CORP	1.2
MS&AD US INSURANCE GROUP	0.6
NATIONAL HEALTHCARE	0.3
OLD REPUBLIC INTL CORP	1.2
PROASSURANCE CORP	0.7
PROGRESSIVE CORP	0.4
QBE NORTH AMERICA INSURANCE GROUP	0.9
RLI CORP	0.8
SAMSUNG F & M INSURANCE CO	0.7
SELECTIVE INS GROUP INC	0.9
SOMPO HOLDINGS US GROUP	0.5
TOKIO MARINE US PC GROUP	0.5
TRAVELERS CO INC	1.0
TREAN INSURANCE GROUP	0.4
XL REINSURANCE AMERICA GROUP	1.5
ZURICH INSURANCE US PC GROUP	0.6
Weighted Average	1.00

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 2022)

Weighted by direct premiums written.

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Section VII - Profit
Subsection E - Cost of Capital
7/1/2023

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	35,569.0	0.0	35,569.0	72,126.2	0.67	0.33
AMERICAN FINANCIAL GROUP INC	1,542.0	0.0	1,542.0	11,060.9	0.88	0.12
AMERICAN INTERNATIONAL GROUP	29,900.0	0.0	29,900.0	43,047.6	0.59	0.41
AMERISAFE INC	0.0	0.0	0.0	924.6	1.00	0.00
AMERITRUST GROUP	257,871.7	0.0	257,871.7	40,768.0	0.14	0.86
ARCH CAPITAL GROUP LTD	2,724.9	830.0	3,554.9	17,367.9	0.83	0.17
ARGO GROUP	456.0	0.0	456.0	803.9	0.64	0.36
BERKLEY (W R) CORP	2,840.3	0.0	2,840.3	17,699.0	0.86	0.14
BERKSHIRE HATHAWAY	0.0	0.0	0.0	624,647.3	1.00	0.00
CHUBB LTD	16,093.0	308.0	16,401.0	80,688.3	0.83	0.17
CINCINNATI FINANCIAL CORP	885.0	0.0	885.0	15,821.2	0.95	0.05
CNA FINANCIAL CORP	2,780.0	0.0	2,780.0	10,535.3	0.79	0.21
EMPLOYERS HOLDINGS INC	0.0	0.0	0.0	1,040.6	1.00	0.00
EVEREST RE GROUP	3,088.9	0.0	3,088.9	11,022.1	0.78	0.22
FAIRFAX FINANCIAL GROUP	8,893.7	58.2	8,951.9	16,172.0	0.64	0.36
HANOVER INS GROUP	782.0	0.0	782.0	4,738.3	0.86	0.14
HARTFORD FINANCIAL	4,945.0	0.0	4,945.0	21,932.6	0.82	0.18
HDI/TALANX US PC GROUP	7,653.0	0.0	7,653.0	10,064.3	0.57	0.43
INTACT US INSURANCE GROUP	5,867.0	0.0	5,867.0	27,153.2	0.82	0.18
JAMES RIVER GROUP	366.4	0.0	366.4	918.3	0.71	0.29
MARKEL CORP	4,502.2	0.0	4,502.2	16,049.5	0.78	0.22
MS&AD US INSURANCE GROUP	782,902.0	0.0	782,902.0	15,282.0	0.02	0.98
NATIONAL HEALTHCARE	166.7	0.0	166.7	1,071.8	0.87	0.13
OLD REPUBLIC INTL CORP	1,594.5	0.0	1,594.5	6,762.6	0.81	0.19
PROASSURANCE CORP	425.0	0.0	425.0	1,123.4	0.73	0.27
PROGRESSIVE CORP	4,898.8	0.0	4,898.8	74,138.0	0.94	0.06
QBE NORTH AMERICA INSURANCE GROUP	3,622.0	0.0	3,622.0	18,485.2	0.84	0.16
RLI CORP	199.8	0.0	199.8	5,040.9	0.96	0.04
SAMSUNG F & M INSURANCE CO	0.0	2.7	2.7	5,549.7	1.00	0.00
SELECTIVE INS GROUP INC	505.1	0.0	505.1	4,895.1	0.91	0.09
SOMPO HOLDINGS US GROUP	539,742.0	0.0	539,742.0	14,106.9	0.03	0.97
TOKIO MARINE US PC GROUP	219,795.0	0.0	219,795.0	35,379.2	0.14	0.86
TRAVELERS CO INC	7,291.0	0.0	7,291.0	38,496.9	0.84	0.16
TREAN INSURANCE GROUP	35.3	0.0	35.3	198.1	0.85	0.15
XL REINSURANCE AMERICA GROUP	61,839.0	0.0	61,839.0	57,914.0	0.48	0.52
ZURICH INSURANCE US PC GROUP	16,987.0	0.0	16,987.0	65,934.0	0.80	0.20
(8) Weighed Average					0.81	0.19

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 2022)

(5) = (outstanding shares) * (one month average share price)

One month (Aug 15, 2022 - Sep 14, 2022) 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.

Leverage Ratio

Company	Loss & LAE and Unearned Premium Reserves (\$000)					Surplus (\$000)					Leverage Ratio				
	2021	2020	2019	2018	2017	2021	2020	2019	2018	2017	2021	2020	2019	2018	2017
(1)	(2)					(3)					(4) = (3) / (2)				
000419 Coaction Specialty Insurance Group (G)	1,508	1,782	1,712	1,545	1,286	589	668	569	474	434	0.39	0.37	0.33	0.31	0.34
018887 Church Mutual Insurance Group (G)	1,305	1,263	1,170	1,118	947	791	743	679	619	704	0.61	0.59	0.58	0.55	0.74
018458 Intact US Insurance Group (G)	1,976	1,745	1,557	1,546	1,398	852	823	961	819	808	0.43	0.47	0.62	0.53	0.58
013103 Work First Casualty Company	42	43	40	37	31	36	25	21	18	15	0.86	0.57	0.52	0.49	0.48
018782 MS&AD US Insurance Group (G)	785	750	740	729	713	1,501	1,489	1,144	559	545	1.91	1.99	1.55	0.77	0.76
004071 Amerisure Companies (G)	1,839	1,830	1,843	1,787	1,754	1,177	1,080	1,008	984	983	0.64	0.59	0.55	0.55	0.56
003918 GuideOne Insurance Companies (G)	1,081	948	838	870	963	458	442	456	433	442	0.42	0.47	0.54	0.50	0.46
018626 James River Group (G)	684	435	432	361	297	325	286	267	242	219	0.48	0.66	0.62	0.67	0.74
012124 Premier Group Insurance Company	19	18	17	17	17	34	36	39	40	39	1.81	1.95	2.24	2.31	2.30
018429 Allianz US PC Insurance Companies (G)	6,215	5,905	6,467	5,833	6,134	2,836	2,831	2,798	3,094	2,669	0.46	0.48	0.43	0.53	0.44
002967 ICW Pool (G)	2,696	2,390	2,050	1,785	1,617	1,494	1,290	1,301	1,109	1,034	0.55	0.54	0.63	0.62	0.64
000221 Brotherhood Mutual Insurance Company	555	474	436	397	314	324	298	280	241	266	0.58	0.63	0.64	0.61	0.85
018067 American Contractors Insurance Group (G)	307	325	323	295	284	186	181	174	160	153	0.60	0.56	0.54	0.54	0.54
018559 ProAssurance Group (G)	3,314	3,214	3,024	2,668	2,682	1,453	1,421	1,488	1,778	1,906	0.44	0.44	0.49	0.67	0.71
018907 HDI/Talanx US PC Group (G)	699	728	521	252	37	280	246	227	216	188	0.40	0.34	0.44	0.86	5.13
003883 RLI Group (G)	1,985	1,779	1,636	1,522	1,363	1,241	1,122	1,030	830	865	0.63	0.63	0.63	0.55	0.63
012138 Cherokee Insurance Company	414	399	374	345	322	337	289	227	186	198	0.81	0.73	0.61	0.54	0.61
018567 IAT Insurance Group (G)	1,579	1,358	1,226	1,007	860	939	811	854	730	909	0.59	0.60	0.70	0.72	1.06
018211 AMERISAFE Insurance Group (G)	747	784	818	840	844	278	366	360	384	382	0.37	0.47	0.44	0.46	0.45
018894 WCF Insurance Group (G)	1,275	1,233	1,170	1,142	1,117	1,185	1,074	1,041	946	935	0.93	0.87	0.89	0.83	0.84
000088 State Farm Group (G)	70,138	66,417	64,820	65,737	66,649	143,205	126,077	116,308	100,887	97,134	2.04	1.90	1.79	1.53	1.46
011021 Samsung F & M Insurance Co, Ltd USB	51	63	78	108	126	80	78	73	68	58	1.57	1.24	0.94	0.63	0.46
000032 Farmers Insurance Group (G)	18,681	18,803	18,509	17,960	17,893	6,533	8,688	8,376	8,019	7,606	0.35	0.46	0.45	0.45	0.43
000766 Penn National Insurance Companies (G)	1,080	1,061	1,041	1,056	1,043	789	718	664	591	587	0.73	0.68	0.64	0.56	0.56
000964 West Bend Mutual Insurance Company	1,997	1,814	1,672	1,577	1,498	1,597	1,401	1,231	1,138	1,041	0.80	0.77	0.74	0.72	0.69
000672 National American Insurance Company	205	177	162	149	129	94	85	80	74	68	0.46	0.48	0.50	0.50	0.53
018392 The Gray Insurance Group (G)	209	209	210	186	175	201	152	133	128	119	0.96	0.73	0.63	0.69	0.68
018753 Munich-American Holding Corp Companies (G)	16,655	13,589	12,240	11,496	9,933	5,396	5,516	5,055	5,001	5,247	0.32	0.41	0.41	0.44	0.53

	2021	2020	2019	2018	2017
(5): Premium Weighted Leverage Ratio	1.42	1.50	1.49	1.63	1.52
(6): Selected Leverage Ratio					1.51

Notes:
Source: A.M. Best's Global Insurance Database for all Massachusetts Workers' Compensation Group Companies.
(5) = Sum (4) / Sum [(4) x Direct Premiums Written from Section VII - J, Exhibit 3]
(6): Selected Leverage Ratio is equal to five year average.

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)		
07/01/22	09/30/22	0.0%	0.0%	24.5%	0.1%	0.0%	48.9%	0.0%	0.0%	26.6%	0.0%
10/01/22	12/31/22	0.0%	0.0%	24.5%	0.0%	0.0%	48.9%	0.2%	0.0%	26.6%	0.0%
01/01/23	03/31/23	0.1%	0.0%	24.5%	0.1%	0.0%	48.9%	0.0%	0.0%	26.6%	0.0%
04/01/23	06/30/23	11.2%	11.2%	24.5%	2.7%	2.7%	48.9%	1.1%	1.0%	26.6%	4.3%
07/01/23	09/30/23	38.1%	38.1%	24.5%	34.5%	34.5%	48.9%	37.8%	37.8%	26.6%	36.3%
10/01/23	12/31/23	22.6%	22.6%	24.5%	26.0%	26.0%	48.9%	22.4%	22.4%	26.6%	24.2%
01/01/24	03/31/24	15.4%	15.4%	24.5%	20.5%	20.5%	48.9%	20.1%	20.1%	26.6%	19.1%
04/01/24	06/30/24	4.0%	4.0%	24.5%	5.7%	5.7%	48.9%	7.4%	7.5%	26.6%	5.8%
07/01/24	09/30/24	2.2%	2.2%	24.5%	1.8%	1.8%	48.9%	3.1%	3.0%	26.6%	2.2%
10/01/24	12/31/24	2.8%	2.8%	24.5%	4.0%	4.0%	48.9%	5.6%	5.6%	26.6%	4.1%
01/01/25	03/31/25	1.9%	1.9%	24.5%	2.2%	2.2%	48.9%	1.9%	1.9%	26.6%	2.0%
04/01/25	06/30/25	1.1%	1.1%	24.5%	1.2%	1.5%	48.9%	0.2%	0.5%	26.6%	1.1%
07/01/25	09/30/25	0.1%	0.7%	24.5%	0.2%	1.1%	48.9%	0.0%	0.2%	26.6%	0.8%
10/01/25	12/31/25	0.0%	0.0%	24.5%	0.1%	0.0%	48.9%	0.1%	0.0%	26.6%	0.0%
01/01/26	03/31/26	0.0%	0.0%	24.5%	0.0%	0.0%	48.9%	0.1%	0.0%	26.6%	0.0%
04/01/26	06/30/26	0.0%	0.0%	24.5%	0.0%	0.0%	48.9%	0.0%	0.0%	26.6%	0.0%
07/01/26	09/30/26	0.2%	0.0%	24.5%	0.2%	0.0%	48.9%	0.0%	0.0%	26.6%	0.0%
10/01/26	12/31/26	0.2%	0.0%	24.5%	0.4%	0.0%	48.9%	0.0%	0.0%	26.6%	0.0%
01/01/27	03/31/27	0.1%	0.0%	24.5%	0.3%	0.0%	48.9%	0.0%	0.0%	26.6%	0.0%
Total											100.0%

Notes:
 (5), (8), (11) are calculated using Unit Statistical Data for PY 2019.
 (3), (6), (9) are from the premium collection special call.
 (12) = [(4) x (5)] + [(7) x (8)] + [(10) x (11)]

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Section VII - Profit
Subsection H - Expense Weights
7/1/2023

Section VII - H
Exhibit 1

Cash Flow Weights

Item of Expense Allowance (% of Standard Premium plus ARAP)	Policy Year		Weighted Average
	2018	2019	
(1) Expected Losses	60.55%	57.67%	59.83%
(2) Expected Loss Adjustment Expense (LAE):	11.05%	10.52%	10.92%
(a) Defense and Cost Containment Expense	5.11%	4.87%	5.05%
(b) Adjusting and Other Expense	5.94%	5.65%	5.87%
(3) Expected Losses + Expected LAE [= (1) + (2)]	71.60%	68.19%	70.75%
(4) Fixed Expenses	5.49%	5.47%	5.49%
(a) General Expenses	5.19%	5.17%	5.19%
(b) Miscellaneous and Other Taxes	0.30%	0.30%	0.30%
(5) Variable Expenses [= (5a) + (5b) + (5c)]	20.23%	20.23%	20.23%
(a) Total Acquisition	12.56%	12.56%	12.56%
(i) Commissions	9.17%	9.17%	9.17%
(ii) Other Acquisition	2.39%	2.39%	2.39%
(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	2.15%	2.15%	2.15%
(c) Premium Discount	5.52%	5.52%	5.52%
(6) Total Expenses [= (4) + (5)]	25.73%	25.70%	25.72%

Notes:

- (1): Policy Year 2018 and Policy Year 2019 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 0.183 where 0.183 is the LAE ratio calculated in VI-H, Exhibit 1.
- (2a), (2b): Loss Adjustment Expense split between DCC and AO is $0.463 = 0.084 / 0.183$ and $0.537 = 1 - 0.463$ where 0.084 is three year average ratio of DCC to loss from Section VI-H, Exhibit 1, line (4) and LAE ratio = 0.183 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 2018 Fixed Expenses split between General Expenses and Other Taxes based on \$34,896,194 General Expenses and \$2,019,941 Other Taxes. Policy Year 2019 General Expenses split based on \$36,606,011 General Expenses and \$2,118,912 Other Taxes. See VI-B, Exhibit 1, columns (12) & (13).
- (5a): Section VI-G, Exhibit 1.
- (5b), (5c): Section VI-A, Exhibit 1.
- Weighted average is calculated by giving weights 75% / 25% to PY 2018 / PY 2019 respectively.

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Section VII - Profit
 Subsection I - Loss & LAE Flow
 7/1/2023

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)					
07/01/22	09/30/22	0.0000	0.0000	0.0000	0.0000	0.0000
10/01/22	12/31/22	0.0000	0.0000	0.0000	0.0000	0.0000
01/01/23	03/31/23	0.0000	0.0000	0.0000	0.0000	0.0000
04/01/23	06/30/23	0.0000	0.0000	0.0000	0.0000	0.0000
07/01/23	09/30/23	0.2500	0.0494	0.0494	0.1497	0.0577
10/01/23	12/31/23	0.2500	0.0494	0.0494	0.1497	0.0577
01/01/24	03/31/24	0.2500	0.0494	0.0494	0.1497	0.0577
04/01/24	06/30/24	0.2500	0.0494	0.0494	0.1497	0.0577
07/01/24	09/30/24	0.0000	0.0696	0.0696	0.0348	0.0667
10/01/24	12/31/24	0.0000	0.0696	0.0696	0.0348	0.0667
01/01/25	03/31/25	0.0000	0.0696	0.0696	0.0348	0.0667
04/01/25	06/30/25	0.0000	0.0696	0.0696	0.0348	0.0667
07/01/25	09/30/25	0.0000	0.0467	0.0467	0.0234	0.0448
10/01/25	12/31/25	0.0000	0.0467	0.0467	0.0234	0.0448
01/01/26	03/31/26	0.0000	0.0467	0.0467	0.0234	0.0448
04/01/26	06/30/26	0.0000	0.0467	0.0467	0.0234	0.0448
07/01/26	09/30/26	0.0000	0.0292	0.0292	0.0146	0.0280
10/01/26	12/31/26	0.0000	0.0292	0.0292	0.0146	0.0280
01/01/27	03/31/27	0.0000	0.0292	0.0292	0.0146	0.0280
04/01/27	06/30/27	0.0000	0.0292	0.0292	0.0146	0.0280
07/01/27	09/30/27	0.0000	0.0139	0.0139	0.0069	0.0133
10/01/27	12/31/27	0.0000	0.0139	0.0139	0.0069	0.0133
01/01/28	03/31/28	0.0000	0.0139	0.0139	0.0069	0.0133
04/01/28	06/30/28	0.0000	0.0139	0.0139	0.0069	0.0133
07/01/28	09/30/28	0.0000	0.0058	0.0058	0.0029	0.0056
10/01/28	12/31/28	0.0000	0.0058	0.0058	0.0029	0.0056
01/01/29	03/31/29	0.0000	0.0058	0.0058	0.0029	0.0056
04/01/29	06/30/29	0.0000	0.0058	0.0058	0.0029	0.0056
07/01/29	09/30/29	0.0000	0.0032	0.0032	0.0016	0.0030
10/01/29	12/31/29	0.0000	0.0032	0.0032	0.0016	0.0030
01/01/30	03/31/30	0.0000	0.0032	0.0032	0.0016	0.0030
04/01/30	06/30/30	0.0000	0.0032	0.0032	0.0016	0.0030
07/01/30	09/30/30	0.0000	0.0019	0.0019	0.0010	0.0018
10/01/30	12/31/30	0.0000	0.0019	0.0019	0.0010	0.0018
01/01/31	03/31/31	0.0000	0.0019	0.0019	0.0010	0.0018
04/01/31	06/30/31	0.0000	0.0019	0.0019	0.0010	0.0018
07/01/31	09/30/31	0.0000	0.0018	0.0018	0.0009	0.0017
10/01/31	12/31/31	0.0000	0.0018	0.0018	0.0009	0.0017
01/01/32	03/31/32	0.0000	0.0018	0.0018	0.0009	0.0017
04/01/32	06/30/32	0.0000	0.0018	0.0018	0.0009	0.0017
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	0.0010	0.0010	0.0005	0.0009
10/01/33	12/31/33	0.0000	0.0010	0.0010	0.0005	0.0009
01/01/34	03/31/34	0.0000	0.0010	0.0010	0.0005	0.0009
04/01/34	06/30/34	0.0000	0.0010	0.0010	0.0005	0.0009
07/01/34	09/30/34	0.0000	0.0011	0.0011	0.0005	0.0010
10/01/34	12/31/34	0.0000	0.0011	0.0011	0.0005	0.0010
01/01/35	03/31/35	0.0000	0.0011	0.0011	0.0005	0.0010
04/01/35	06/30/35	0.0000	0.0011	0.0011	0.0005	0.0010
07/01/35	09/30/35	0.0000	0.0011	0.0011	0.0006	0.0011
10/01/35	12/31/35	0.0000	0.0011	0.0011	0.0006	0.0011
01/01/36	03/31/36	0.0000	0.0011	0.0011	0.0006	0.0011
04/01/36	06/30/36	0.0000	0.0011	0.0011	0.0006	0.0011
07/01/36	09/30/36	0.0000	0.0007	0.0007	0.0004	0.0007
10/01/36	12/31/36	0.0000	0.0007	0.0007	0.0004	0.0007
01/01/37	03/31/37	0.0000	0.0007	0.0007	0.0004	0.0007
04/01/37	06/30/37	0.0000	0.0007	0.0007	0.0004	0.0007
07/01/37	09/30/37	0.0000	0.0006	0.0006	0.0003	0.0006
10/01/37	12/31/37	0.0000	0.0006	0.0006	0.0003	0.0006
01/01/38	03/31/38	0.0000	0.0006	0.0006	0.0003	0.0006
04/01/38	06/30/38	0.0000	0.0006	0.0006	0.0003	0.0006
07/01/38	09/30/38	0.0000	0.0007	0.0007	0.0004	0.0007
10/01/38	12/31/38	0.0000	0.0007	0.0007	0.0004	0.0007
01/01/39	03/31/39	0.0000	0.0007	0.0007	0.0004	0.0007
04/01/39	06/30/39	0.0000	0.0007	0.0007	0.0004	0.0007
07/01/39	09/30/39	0.0000	0.0007	0.0007	0.0003	0.0006
10/01/39	12/31/39	0.0000	0.0007	0.0007	0.0003	0.0006
01/01/40	03/31/40	0.0000	0.0007	0.0007	0.0003	0.0006
04/01/40	06/30/40	0.0000	0.0007	0.0007	0.0003	0.0006
07/01/40	09/30/40	0.0000	0.0008	0.0008	0.0004	0.0007
10/01/40	12/31/40	0.0000	0.0008	0.0008	0.0004	0.0007
01/01/41	03/31/41	0.0000	0.0008	0.0008	0.0004	0.0007
04/01/41	06/30/41	0.0000	0.0008	0.0008	0.0004	0.0007
07/01/41	09/30/41	0.0000	0.0008	0.0008	0.0004	0.0008
10/01/41	12/31/41	0.0000	0.0008	0.0008	0.0004	0.0008

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Section VII - Profit
 Subsection I - Loss & LAE Flow
 7/1/2023

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)					
01/01/42	03/31/42	0.0000	0.0008	0.0008	0.0004	0.0008
04/01/42	06/30/42	0.0000	0.0008	0.0008	0.0004	0.0008
07/01/42	09/30/42	0.0000	0.0005	0.0005	0.0002	0.0005
10/01/42	12/31/42	0.0000	0.0005	0.0005	0.0002	0.0005
01/01/43	03/31/43	0.0000	0.0005	0.0005	0.0002	0.0005
04/01/43	06/30/43	0.0000	0.0005	0.0005	0.0002	0.0005
07/01/43	09/30/43	0.0000	0.0009	0.0009	0.0004	0.0008
10/01/43	12/31/43	0.0000	0.0009	0.0009	0.0004	0.0008
01/01/44	03/31/44	0.0000	0.0009	0.0009	0.0004	0.0008
04/01/44	06/30/44	0.0000	0.0009	0.0009	0.0004	0.0008
07/01/44	09/30/44	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/44	12/31/44	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/45	03/31/45	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/45	06/30/45	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/45	09/30/45	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/45	12/31/45	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/46	03/31/46	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/46	06/30/46	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/46	09/30/46	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/46	12/31/46	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/47	03/31/47	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/47	06/30/47	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/47	09/30/47	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/47	12/31/47	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/48	03/31/48	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/48	06/30/48	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/48	09/30/48	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/48	12/31/48	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/49	03/31/49	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/49	06/30/49	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/49	09/30/49	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/49	12/31/49	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/50	03/31/50	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/50	06/30/50	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/50	09/30/50	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/50	12/31/50	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/51	03/31/51	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/51	06/30/51	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/51	09/30/51	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/51	12/31/51	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/52	03/31/52	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/52	06/30/52	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/52	09/30/52	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/52	12/31/52	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/53	03/31/53	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/53	06/30/53	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/53	09/30/53	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/53	12/31/53	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/54	03/31/54	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/54	06/30/54	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/54	09/30/54	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/54	12/31/54	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/55	03/31/55	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/55	06/30/55	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/55	09/30/55	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/55	12/31/55	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/56	03/31/56	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/56	06/30/56	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/56	09/30/56	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/56	12/31/56	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/57	03/31/57	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/57	06/30/57	0.0000	0.0013	0.0013	0.0007	0.0013
07/01/57	09/30/57	0.0000	0.0013	0.0013	0.0007	0.0013
10/01/57	12/31/57	0.0000	0.0013	0.0013	0.0007	0.0013
01/01/58	03/31/58	0.0000	0.0013	0.0013	0.0007	0.0013
04/01/58	06/30/58	0.0000	0.0013	0.0013	0.0007	0.0013
(8) Relative Weights			1.0000	0.0845	0.0980	

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) + 0.0845 x (5) + 0.098 x (6)) / (1.000 + 0.0845 + 0.098)
- (8): DCC relative weight = 1.000 x 0.183 x 0.463; AO relative weight = 1.000 x 0.183 x 0.537
 where 0.183 is the LAE factor calculated in Section VI-H, Exhibit 1 and 0.463, 0.537
 are the DCC and AO relative weights from Section VI-H, Exhibit 1.

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Section VII - Profit
 Subsection I - Loss & LAE Flow
 7/1/2023

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	7.261	13.77%	13.77%	2.991	33.43%	33.43%	19.75%
24	2.584	38.70%	24.93%	1.471	67.97%	34.53%	27.85%
36	1.629	61.38%	22.68%	1.290	77.53%	9.56%	18.69%
48	1.308	76.45%	15.06%	1.226	81.53%	4.00%	11.70%
60	1.197	83.52%	7.07%	1.196	83.61%	2.07%	5.55%
72	1.157	86.43%	2.91%	1.182	84.59%	0.98%	2.32%
84	1.138	87.86%	1.43%	1.170	85.49%	0.90%	1.27%
96	1.129	88.60%	0.74%	1.158	86.34%	0.84%	0.77%
108	1.119	89.33%	0.73%	1.149	87.01%	0.67%	0.71%
120	1.115	89.69%	0.36%	1.140	87.74%	0.73%	0.47%
132	1.112	89.94%	0.25%	1.131	88.43%	0.69%	0.38%
144	1.107	90.35%	0.42%	1.125	88.88%	0.45%	0.43%
156	1.101	90.84%	0.49%	1.120	89.25%	0.37%	0.45%
168	1.098	91.09%	0.25%	1.116	89.63%	0.38%	0.29%
180	1.097	91.16%	0.07%	1.107	90.29%	0.66%	0.25%
192	1.094	91.39%	0.23%	1.103	90.68%	0.39%	0.28%
204	1.091	91.62%	0.23%	1.098	91.03%	0.35%	0.27%
216	1.088	91.90%	0.27%	1.094	91.41%	0.38%	0.31%
228	1.085	92.13%	0.23%	1.088	91.93%	0.52%	0.32%
240	1.084	92.21%	0.08%	1.082	92.38%	0.45%	0.19%
252	1.083	92.36%	0.14%	1.073	93.19%	0.80%	0.35%
264			0.55%			0.49%	0.53%
276			0.55%			0.49%	0.53%
288			0.55%			0.49%	0.53%
300			0.55%			0.49%	0.53%
312			0.55%			0.49%	0.53%
324			0.55%			0.49%	0.53%
336			0.55%			0.49%	0.53%
348			0.55%			0.49%	0.53%
360			0.55%			0.49%	0.53%
372			0.55%			0.49%	0.53%
384			0.55%			0.49%	0.53%
396			0.55%			0.49%	0.53%
408			0.55%			0.49%	0.53%
420			0.55%			0.49%	0.53%
Total			100.00%			100.00%	100.00%

Notes:

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

(8) = (4) x 69.58% + (7) x 30.42%, where 69.58% and 30.42% are indemnity and medical estimated ultimate losses respectively, from Section II - A, Exhibit 1, Page 2.

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Section VII - Profit
 Subsection J - Portfolio Rate of Return
 7/1/2023

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	5.01%	2.25%	21.00%	1.77%
Governments	11.70%	3.28%	21.00%	2.59%
States & Territories	5.81%	2.43%	5.25%	2.30%
Special Revenue	16.04%	2.18%	5.25%	2.07%
Industrials	38.84%	4.22%	21.00%	3.33%
Common Stocks	12.82%	19.32%	14.38%	16.54%
Real Estate	0.88%	10.33%	21.00%	8.16%
Mortgage Loans	1.82%	4.84%	21.00%	3.82%
Preferred Stocks	0.38%	5.84%	13.13%	5.07%
Other Invested Assets	6.70%	15.28%	13.13%	13.27%
(6) Total	100.00%	6.33%	15.89%	5.32%
(7) Investment Expenses		0.21%	21.00%	0.17%
(8) Portfolio Rate of Return		6.12%		5.16%

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 -10.2% as stipulated.

The original calculated value as filed was 11.17%.

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 = 14.02%, using CAPM three horizon methodology from Section VII-E, Exhibit 3, page 1 with beta = 1.34874317760382, 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)

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Section VII - Profit
 Subsection J - Portfolio Rate of Return
 7/1/2023

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	5.01%
Bonds:	72.39%
Governments	<i>11.70%</i>
States & Territories	<i>5.81%</i>
Special Revenue	<i>16.04%</i>
Industrials	<i>38.84%</i>
Common Stocks	12.82%
Real Estate	0.88%
Mortgage Loans	1.82%
Preferred Stocks	0.38%
Other Invested Assets	6.70%

(3) Total 100.00%

Notes:

Proportion of each asset class is from page 3. The Bond share in total is 72.39%.

This is allocated to the following subcategories:

Governments, States & Territories, Special Revenue and Industrials
 by multiplying 72.39% 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)
A.I.M. Mutual Insurance Companies (G)	595	0	106	0	0	7	5	713	83.48%	0.00%	14.92%	0.00%	0.00%	0.94%	0.67%
Travelers Group (G)	68,942	41	1,708	1,236	0	1,433	4,012	77,372	89.11%	0.05%	2.21%	1.60%	0.00%	1.85%	5.19%
Hartford Insurance Group (G)	30,809	292	1,086	316	3,928	1,398	5,106	42,935	71.76%	0.68%	2.53%	0.74%	9.15%	3.26%	11.89%
Chubb INA Group (G)	55,618	20	3,697	169	0	-1,123	2,410	60,791	91.49%	0.03%	6.08%	0.28%	0.00%	-1.85%	3.96%
Liberty Mutual Insurance Companies (G)	59,177	6	10,815	239	2,661	3,622	13,610	90,129	65.66%	0.01%	12.00%	0.27%	2.95%	4.02%	15.10%
Zurich Insurance US PC Group (G)	18,160	0	1,162	1,195	0	228	1,511	22,257	81.59%	0.00%	5.22%	5.37%	0.00%	1.02%	6.79%
Berkshire Hathaway Insurance Group (G)	10,029	10,920	328,018	155	1	76,781	67,263	493,168	2.03%	2.21%	66.51%	0.03%	0.00%	15.57%	13.64%
Charter Insurance Group (G)	94	0	48	0	0	22	1	165	57.27%	0.00%	29.14%	0.00%	0.00%	13.21%	0.38%
American International Group (G)	41,093	9	574	0	5,570	1,753	5,976	54,974	74.75%	0.02%	1.04%	0.00%	10.13%	3.19%	10.87%
Old Republic Insurance Group (G)	7,817	1	3,251	0	0	273	10	11,351	68.86%	0.01%	28.64%	0.00%	0.00%	2.40%	0.09%
W. R. Berkley Insurance Group (G)	13,747	235	3,278	450	53	574	2,545	20,881	65.83%	1.13%	15.70%	2.15%	0.25%	2.75%	12.19%
AmTrust Group (G)	5,891	8	169	4	0	529	407	7,008	84.07%	0.11%	2.41%	0.06%	0.00%	7.55%	5.81%
CNA Insurance Companies (G)	36,256	796	1,030	12	957	1,282	2,084	42,417	85.47%	1.88%	2.43%	0.03%	2.26%	3.02%	4.91%
Hanover Ins Group Prop & Cas Cos (G)	7,193	13	704	47	178	21	589	8,746	82.25%	0.15%	8.05%	0.53%	2.04%	6.74%	6.74%
MEMIC Group (G)	1,141	0	224	0	0	61	29	1,454	78.46%	0.00%	15.39%	0.00%	0.00%	4.18%	1.98%
QBE North America Insurance Group (G)	2,758	0	59	52	0	1,025	397	4,289	64.29%	0.00%	1.37%	1.20%	0.00%	23.89%	9.24%
Arbella Insurance Group (G)	1,385	0	249	0	0	64	3	1,700	81.43%	0.00%	14.66%	0.00%	0.00%	0.15%	0.15%
Selective Insurance Group (G)	6,179	11	204	0	114	379	435	7,321	84.40%	0.15%	2.78%	0.00%	1.55%	5.18%	5.94%
Utica National Insurance Group (G)	2,799	0	458	19	3	12	12	3,302	84.76%	0.00%	13.86%	0.56%	0.08%	0.37%	0.37%
Fairfax Financial (USA) Group (G)	4,834	351	4,673	412	1,493	10,370	2,493	24,626	19.63%	1.43%	18.98%	1.67%	6.06%	42.11%	10.12%
Arch Insurance Group (G)	9,507	14	276	0	28	1,231	261	11,317	84.00%	0.13%	2.44%	0.00%	0.25%	10.88%	2.30%
Progressive Insurance Group (G)	40,309	289	5,843	609	2	632	17	47,701	84.50%	0.61%	12.25%	1.28%	0.01%	1.33%	0.04%
AU Holding Company Group (G)	97	0	203	144	0	934	490	1,869	5.22%	0.02%	10.85%	7.70%	0.00%	50.00%	26.21%
Sentry Insurance Group (G)	8,619	0	2,298	149	0	60	1,725	12,850	67.08%	0.00%	17.88%	1.16%	0.00%	0.46%	13.42%
Starr International Group (G)	4,291	133	1,473	0	0	629	267	6,793	63.17%	1.95%	21.69%	0.00%	0.00%	9.26%	3.93%
Federated Mutual Group (G)	5,098	51	1,795	60	0	161	456	7,622	66.89%	0.67%	23.55%	0.79%	0.00%	2.12%	5.99%
Norfolk & Dedham Group Pool (G)	398	0	177	15	0	308	106	726	54.81%	0.00%	24.42%	2.06%	0.00%	4.11%	14.60%
AmeriTrust Group (G)	1,492	0	106	6	0	244	42	1,890	78.95%	0.00%	5.60%	0.32%	0.00%	12.91%	2.23%
Great American P & C Insurance Group (G)	8,530	433	452	39	677	1,718	1,727	13,576	62.83%	3.19%	3.33%	0.29%	4.99%	12.65%	12.72%
EMC Insurance Companies (G)	3,097	117	1,114	141	0	133	112	4,713	65.71%	2.48%	23.63%	3.00%	0.00%	2.82%	2.37%
American National Prop & Cas Group (G)	2,610	0	3	14	0	666	6	3,298	79.15%	0.00%	0.08%	0.41%	0.00%	20.19%	0.17%
American Family Insurance Group (G)	16,833	0	3,853	222	237	764	2,144	24,053	69.98%	0.00%	16.02%	0.92%	0.99%	3.17%	8.91%
Service Insurance Group (G)	207	10	27	0	4	34	19	301	68.73%	3.21%	8.92%	0.00%	1.44%	11.34%	6.36%
Tokio Marine US PC Group (G)	21,783	220	1,266	143	3,716	810	835	28,773	75.70%	0.77%	4.40%	0.50%	12.92%	2.82%	2.90%
Arrow Mutual Liability Insurance Company	25	0	16	0	0	3	0	44	57.00%	0.00%	35.29%	0.05%	0.00%	7.31%	0.36%
Markel Corporation Group (G)	8,743	0	3,571	13	0	1,252	557	14,135	61.85%	0.00%	25.26%	0.10%	0.00%	8.86%	3.94%
Employers Insurance Group (G)	2,256	0	319	0	0	73	39	2,688	83.95%	0.00%	11.89%	0.00%	0.00%	2.72%	1.45%
Skyward Specialty Insurance Group (G)	500	18	94	0	52	206	99	968	51.60%	1.87%	9.66%	0.00%	5.37%	21.27%	10.22%
Group 1001 Property and Casualty Group (G)	395	0	14	0	19	83	13	525	75.36%	0.00%	2.61%	0.00%	3.71%	15.76%	2.57%
Electric Insurance Company	618	0	10	17	0	20	6	670	92.20%	0.00%	1.46%	2.49%	0.00%	2.97%	0.87%
Everest Re U.S. Group (G)	12,329	265	743	0	0	1,052	2,531	16,919	72.87%	1.57%	4.39%	0.00%	0.00%	6.22%	14.96%
Core Specialty Insurance Group (G)	1,598	0	1	4	0	236	0	1,839	86.88%	0.00%	0.04%	0.24%	0.00%	12.83%	0.00%
Merchants Insurance Group (G)	652	12	70	0	0	56	0	791	82.47%	1.54%	8.82%	0.00%	0.00%	7.14%	0.04%
XL Reinsurance America Group (G)	10,771	0	0	0	161	722	1,100	12,754	84.46%	0.00%	0.00%	0.00%	1.26%	5.66%	8.63%
Central Insurance Companies (G)	1,315	2	366	36	0	151	3	1,873	70.23%	0.13%	19.54%	1.90%	0.00%	8.05%	0.15%
Sompo Holdings US Group (G)	6,648	3	122	12	0	1,877	302	8,964	74.17%	0.03%	1.36%	0.14%	0.00%	20.94%	3.37%
Benchmark Insurance Group (G)	465	0	1	6	0	100	0	573	81.29%	0.04%	0.13%	1.07%	0.00%	17.47%	0.00%
The Cincinnati Insurance Companies (G)	8,204	440	6,331	8	0	805	515	16,303	50.32%	2.70%	38.84%	0.05%	0.00%	4.94%	3.16%
Argo Group (G)	3,219	1	35	0	0	380	241	3,875	83.06%	0.02%	0.90%	0.01%	0.00%	9.80%	6.21%
AF Group (G)	2,935	0	281	104	0	300	226	3,846	76.31%	0.00%	7.31%	2.70%	0.00%	7.79%	5.89%
Nationwide Group (G)	21,260	50	7,753	371	1,985	573	6,271	38,262	55.56%	0.13%	20.26%	0.97%	5.19%	1.50%	16.39%
Pharmacists Mutual Insurance Group (G)	278	6	31	25	0	11	7	358	77.64%	1.64%	8.78%	6.84%	0.00%	3.18%	1.91%
Coaction Specialty Insurance Group (G)	1,767	1	0	0	0	77	100	1,946	90.83%	0.07%	0.00%	0.00%	0.00%	3.95%	5.15%
Church Mutual Insurance Group (G)	1,369	0	321	11	0	103	107	1,911	71.65%	0.00%	16.80%	0.59%	0.00%	5.38%	5.58%
Intact US Insurance Group (G)	1,997	0	731	0	2	179	19	2,927	68.22%	0.00%	24.98%	0.00%	0.06%	6.10%	0.63%
Work First Casualty Company	56	0	2	2	1	12	6	79	70.65%	0.00%	2.89%	1.96%	1.78%	15.20%	7.52%
MS&AD US Insurance Group (G)	1,933	0	132	18	0	115	4	2,201	87.80%	0.00%	5.99%	0.82%	0.00%	5.22%	0.18%

VII 000097 STIP

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)
Amerisure Companies (G)	2,111	23	232	12	0	75	279	2,733	77.23%	0.85%	8.50%	0.43%	0.00%	2.76%	10.22%
GuideOne Insurance Companies (G)	1,063	3	18	12	81	93	76	1,347	78.96%	0.22%	1.37%	0.88%	6.01%	6.89%	5.66%
James River Group (G)	329	48	43	0	0	330	44	794	41.39%	6.00%	5.46%	0.00%	0.00%	41.59%	5.56%
Premier Group Insurance Company	52	0	0	0	0	4	0	55	93.65%	0.00%	0.00%	0.00%	0.00%	6.35%	0.00%
Allianz US PC Insurance Companies (G)	9,815	0	160	0	618	414	532	11,538	85.07%	0.00%	1.38%	0.00%	5.35%	3.58%	4.61%
ICW Pool (G)	2,548	21	940	31	10	159	42	3,752	67.92%	0.57%	25.07%	0.84%	0.25%	4.24%	1.11%
Brotherhood Mutual Insurance Company	382	0	212	44	0	59	65	762	50.06%	0.05%	27.81%	5.79%	0.00%	7.79%	8.51%
American Contractors Insurance Group (G)	351	2	65	0	0	17	99	534	65.81%	0.31%	12.12%	0.00%	0.00%	3.17%	18.60%
ProAssurance Group (G)	3,904	17	32	36	0	219	339	4,547	85.88%	0.36%	0.71%	0.79%	0.00%	4.81%	7.45%
HDI/Talanx US PC Group (G)	1,005	0	13	1	0	51	0	1,070	93.96%	0.00%	1.20%	0.05%	0.00%	4.80%	0.00%
RLI Group (G)	2,260	0	939	29	0	86	56	3,370	67.06%	0.00%	27.86%	0.86%	0.00%	2.55%	1.67%
Cherokee Insurance Company	293	81	236	0	0	1	82	694	42.26%	11.71%	34.04%	0.00%	0.00%	0.16%	11.83%
IAT Insurance Group (G)	952	53	961	0	0	324	37	2,328	40.92%	2.27%	41.28%	0.00%	0.00%	13.92%	1.61%
AMERISAFE Insurance Group (G)	854	0	50	4	0	53	0	962	88.81%	0.00%	5.20%	0.46%	0.00%	5.52%	0.00%
WCF Insurance Group (G)	1,643	0	314	89	128	130	143	2,446	67.16%	0.00%	12.83%	3.63%	5.24%	5.32%	5.83%
State Farm Group (G)	112,584	282	111,282	369	978	2,941	6,778	235,214	47.86%	0.12%	47.31%	0.16%	0.42%	1.25%	2.88%
Samsung F & M Insurance Co, Ltd USB	94	0	0	0	0	19	0	114	83.19%	0.00%	0.00%	0.00%	0.00%	16.81%	0.00%
Farmers Insurance Group (G)	22,811	28	893	596	283	443	164	25,219	90.45%	0.11%	3.54%	2.36%	1.12%	1.76%	0.65%
Penn National Insurance Companies (G)	1,400	1	217	24	0	65	0	1,707	82.01%	0.06%	12.69%	1.42%	0.00%	3.83%	0.00%
West Bend Mutual Insurance Company	2,262	20	391	53	0	96	368	3,190	70.93%	0.63%	12.24%	1.66%	0.00%	3.00%	11.55%
National American Insurance Company	217	0	32	5	0	20	10	285	76.39%	0.00%	11.22%	1.77%	0.00%	7.01%	3.61%
The Gray Insurance Group (G)	66	5	195	17	2	56	47	388	17.10%	1.30%	50.25%	4.42%	0.42%	14.44%	12.07%
Munich-American Holding Corp Companies (G)	17,483	0	204	169	0	891	932	19,680	88.84%	0.00%	1.04%	0.86%	0.00%	4.53%	4.73%

	% Bonds	% Preferred Stocks	% Common Stocks	% Real Estate	% Mortgage Loans	% Cash and Short Term Investments	% Other Invested Assets
(17): Premium Weighted Asset Distribution	72.39%	0.38%	12.82%	0.88%	1.82%	5.01%	6.70%

Notes:
 Source: A.M. Best's Global Insurance Database for all Massachusetts Workers' Compensation Group Companies, 2021 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 000098 STIP

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Section VII - Profit
 Subsection J - Portfolio Rate of Return
 7/1/2023

Section VII - J
 Exhibit 2
 Page 1

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	7.58%	0.76%	2.73%	5.64%
3	5.06%	2.47%	8.74%	24.27%
7	2.62%	1.98%	5.19%	19.32%
15	0.46%	2.60%	3.65%	3.04%
25	0.44%	0.22%	1.85%	1.39%
Total	16.16%	8.02%	22.16%	53.66%

As of	Term to Maturity in years	Yield Data			
		Governments	States and Territories	Special Revenue	Industrials
Jul-22	0.5	2.87%	1.26%	1.30%	3.13%
	3	3.03%	1.75%	1.60%	3.77%
	7	2.97%	2.20%	1.76%	4.21%
	15	3.13%	2.81%	2.35%	4.74%
	25	3.23%	3.03%	3.00%	4.84%
Aug-22	0.5	3.15%	1.64%	1.67%	3.26%
	3	3.23%	1.97%	1.87%	3.92%
	7	2.98%	2.12%	1.83%	4.19%
	15	3.13%	2.66%	2.37%	4.70%
	25	3.24%	2.97%	2.99%	4.79%
Sep-22	0.5	3.71%	2.33%	2.34%	3.79%
	3	3.88%	2.69%	2.62%	4.64%
	7	3.64%	2.76%	2.56%	4.90%
	15	3.67%	3.18%	2.95%	5.32%
	25	3.69%	3.51%	3.42%	5.31%
Jul-22 Aug-22 Sep-22 Average	All	Weighted Yields			
	All	2.95%	2.19%	1.84%	3.95%
	All	3.15%	2.23%	2.01%	4.02%
	All	3.75%	2.85%	2.70%	4.70%
Average	3.28%	2.43%	2.18%	4.22%	

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.

15 Years to Maturity = Average of 10 and 20 years to maturity

20 Years to Maturity = Average of 20 and 30 years to maturity

Example of Weighted Yield calculation for Jul-22, States and Territories:

$$2.19 = (1.26 \times 0.76 + 1.75 \times 2.47 + 2.2 \times 1.98 + 2.81 \times 2.6 + 3.03 \times 0.22) / 8.02$$

VII 000100 STIP

Section VII - Profit
 Subsection J - Portfolio Rate of Return
 7/1/2023

Section VII - J
 Exhibit 2
 Page 2

Calculation of Yield Data

Term to Maturity in Years	Jul-22	Aug-22	Sep-22	Formulas used to derive the yields (reference to data on page 3)
Governments				
0.5	2.87%	3.15%	3.71%	=(4)
3	3.03%	3.23%	3.88%	=(7)
7	2.97%	2.98%	3.64%	=(9)
10	2.90%	2.90%	3.52%	=(10)
20	3.35%	3.35%	3.82%	=(11)
30	3.10%	3.13%	3.56%	=(12)
States and Territories				
0.5	1.26%	1.64%	2.33%	=(4) + 9.5/9.0 x [(20) - (5)] - 0.5/9.0 x [(21) - (10)]
3	1.75%	1.97%	2.69%	=(7) + 7.0/9.0 x [(20) - (5)] + 2.0/9.0 x [(21) - (10)]
7	2.20%	2.12%	2.76%	=(9) + 1.0/3.0 x [(20) - (5)] + 2.0/3.0 x [(21) - (10)]
10	2.52%	2.34%	2.88%	=(21)
20	3.10%	2.99%	3.49%	=(11) + 0.5 x [(21) - (10)] + 0.5 x [(22) - (12)]
30	2.97%	2.96%	3.54%	=(22)
Special Revenue				
0.5	1.30%	1.67%	2.34%	=(4) + 29.5/29.0 x [(20) - (5)] - 0.5/29.0 x [(19) - (12)]
3	1.60%	1.87%	2.62%	=(7) + 27.0/29.0 x [(20) - (5)] + 2.0/29.0 x [(19) - (12)]
7	1.76%	1.83%	2.56%	=(9) + 23.0/29.0 x [(20) - (5)] + 6.0/29.0 x [(19) - (12)]
10	1.85%	1.90%	2.58%	=(10) + 20.0/29.0 x [(20) - (5)] + 9.0/29.0 x [(19) - (12)]
20	2.85%	2.85%	3.32%	=(11) + 10.0/29.0 x [(20) - (5)] + 19.0/29.0 x [(19) - (12)]
30	3.15%	3.14%	3.51%	=(19)
Industrial				
0.5	3.13%	3.26%	3.79%	=(4) + 18.0/21.0 x [(1) - (3)] + 3.0/21.0 x [(14) - (6)]
3	3.77%	3.92%	4.64%	=(7) + 2.0/3.0 x [(14) - (6)] + 1.0/3.0 x [(15) - (8)]
7	4.21%	4.19%	4.90%	=(9) + 3.0/5.0 x [(15) - (8)] + 2.0/5.0 x [(16) - (10)]
10	4.52%	4.49%	5.18%	=(16)
20	4.97%	4.92%	5.46%	=(11) + 1.0/2.0 x [(16) - (10)] + 1.0/2.0 x [(17) - (12)]
30	4.71%	4.67%	5.17%	=(17)

VII 000101 STIP

Section VII - Profit
 Subsection J - Portfolio Rate of Return
 7/1/2023

Section VII - J
 Exhibit 2
 Page 3

Yield Data

	Jul-22	Aug-22	Sep-22	Average
FEDERAL RESERVE STATISTICAL RELEASE				
Commercial Paper				
(1) 1-month	2.03%	2.38%	2.79%	2.40%
(1) 3-month	2.50%	2.76%	3.21%	2.82%
U.S. Govt Securities - Secondary Market				
Treasury Constant Maturities				
(2) 1-month	1.85%	2.28%	2.61%	2.25%
(3) 3-month	2.30%	2.72%	3.22%	2.75%
(4) 6-month	2.87%	3.15%	3.71%	3.24%
(5) 1-year	3.02%	3.28%	3.89%	3.40%
(6) 2-year	3.04%	3.25%	3.86%	3.38%
(7) 3-year	3.03%	3.23%	3.88%	3.38%
(8) 5-year	2.96%	3.03%	3.70%	3.23%
(9) 7-year	2.97%	2.98%	3.64%	3.20%
(10) 10-year	2.90%	2.90%	3.52%	3.11%
(11) 20-year	3.35%	3.35%	3.82%	3.51%
(12) 30-year	3.10%	3.13%	3.56%	3.26%
YAHOO				
(13) Preferred Stock	5.66%	5.44%	6.40%	5.84%
US DEPARTMENT OF THE TREASURY				
HQM Corporate Bond Yield Curve Par Yields				
(14) 2-year	3.66%	3.81%	4.50%	3.99%
(15) 5-year	3.95%	3.99%	4.69%	4.21%
(16) 10-year	4.52%	4.49%	5.18%	4.73%
(17) 30-year	4.71%	4.67%	5.17%	4.85%
VALUE LINE INVESTMENT SURVEY (Part II)				
Bond Buyer Indexes				
(18) 20-Bond Index (GOs)	3.40%	3.36%	3.77%	3.51%
(19) Calculated 30-Bond Index (= (18) x [(12) / (11)])	3.15%	3.14%	3.51%	3.27%
General Obligation Bonds (GOs)				
(20) 1-year Aaa	1.48%	1.82%	2.55%	1.95%
(21) 10-year Aaa	2.52%	2.34%	2.88%	2.58%
(22) 25/30-year Aaa	2.97%	2.96%	3.54%	3.15%
FEDERAL RESERVE ECONOMIC DATA				
(23) 15-Year Fixed Rate Mortgage	4.61%	4.56%	5.35%	4.84%

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.

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Section VII - Profit
Subsection J - Portfolio Rate of Return
7/1/2023

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	2.718980%	1				
Joint Venture, LLCs: Common Stock	1.319090%		1			
Joint Venture, LLCs: Real Estate	1.048790%				1	
Other Assets	0.980987%					
Noncollateral Loans	0.324292%			1		
Collateral Loans	0.152451%			1		
Joint Venture, LLCs: Fixed Income, NAIC Designation Not Assigned by SVO	0.088240%			1		
Surplus Debentures	0.087168%			1		
Non-Registered Private Funds: Bonds, NAIC Designation Not Assigned by SVO	0.062640%			1		
Nonguaranteed Federal Low-Income Housing Tax Credit	0.036039%				1	
Joint Venture, LLCs: Fixed Income, NAIC Designation Assigned by SVO	0.024482%			1		
Non-Registered Private Funds: Other Fixed Income	0.023011%			1		
Non-Registered Private Funds: Mortgage Loans	0.014641%			1		
Non-Guaranteed State Low-Income Housing Tax Credit	0.013474%				1	
Oil and Gas Production	0.007160%		1			
Joint Venture, LLCs: Mortgage Loans	0.005350%			1		
Non-Registered Private Funds: Bonds, NAIC Designation Assigned by SVO	0.005290%			1		
Mineral Rights	0.000642%		1			
Other Low-Income Housing Tax Credit	0.000083%				1	
Guaranteed Federal Low-Income Housing Tax Credit	0.000032%				1	
Transportation Equipment	0.000008%		1			
Guaranteed State Low-Income Housing Tax Credit	0.000000%				1	
Total	6.91%	2.72%	1.33%	0.79%	1.10%	5.93%

(8) Adjusted Total (remove Other Assets and Uncategorized)	3.17%	1.55%	0.92%	1.28%	6.91%
(9) Allocation by Category	45.84%	22.37%	13.28%	18.52%	100.00%

(10) Projected Return	16.67%	22.86%	4.58%	10.33%
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(11) Pretax Return on Other Assets	15.28%
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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 8/31/2022.
 $HF = 16.67\% = 19.32\% + (7.19\% - 9.84\%)$, where 19.32% is the Common Stock pretax return from Section VII-J, Exhibit 1, page 1,
7.19% is the Credit Suisse Hedge Fund average return and 9.84% 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 12/31/2021.
 $PE = 22.86\% = 19.32\% + (14.69\% - 11.15\%)$, where 19.32% is the Common Stock pretax return from Section VII-J, Exhibit 1, page 1,
14.69% is the US Private Equity Index average return from Cambridge Associates and 11.15% 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.
 $FI = 4.58\% = \text{average}(5.49\%, 3.4\%, 4.84\%)$, where 5.49%, is the three month (July-Sep 2021) average return of High Yield Corporate Bond ETF (HYG),
3.4% is the Investment Grade Corporate Bond ETF (LQD) from Yahoo Finance and 4.84% 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 = 14.02%, 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)]

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Section VII - Profit
 Subsection J - Portfolio Rate of Return
 7/1/2023

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	7.53%	0.75%	2.71%	5.60%	0.06%	16.67%
3	5.04%	2.46%	8.69%	24.12%	0.22%	40.52%
7.5	2.60%	1.97%	5.16%	19.21%	0.14%	29.09%
15	0.46%	2.58%	3.62%	3.02%	0.02%	9.70%
25	0.44%	0.22%	1.84%	1.38%	0.14%	4.02%
Total	16.07%	7.98%	22.03%	53.35%	0.58%	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	7.58%	0.76%	2.73%	5.64%	16.70%
3	5.06%	2.47%	8.74%	24.27%	40.54%
7.5	2.62%	1.98%	5.19%	19.32%	29.12%
15	0.46%	2.60%	3.65%	3.04%	9.74%
25	0.44%	0.22%	1.85%	1.39%	3.91%
Total	16.16%	8.02%	22.16%	53.66%	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)				
A.I.M. Mutual Insurance Companies (G)	0.72%	0.30%	0.74%	0.17%	0.00%	0.41%	1.36%	0.96%	0.70%	0.00%	4.84%	18.12%	8.52%	3.21%	1.33%
Travelers Group (G)	1.16%	1.63%	4.38%	0.13%	0.00%	0.84%	3.76%	7.13%	19.73%	0.35%	1.06%	2.63%	3.86%	10.14%	1.45%
Hartford Insurance Group (G)	0.76%	6.55%	4.71%	0.60%	0.94%	0.08%	0.33%	0.25%	0.80%	0.70%	0.82%	2.74%	2.74%	5.37%	8.81%
Chubb INA Group (G)	1.11%	2.96%	1.28%	0.77%	0.58%	1.01%	2.85%	0.15%	0.16%	0.10%	7.36%	17.79%	6.82%	2.47%	0.88%
Liberty Mutual Insurance Companies (G)	1.94%	12.78%	6.06%	0.42%	0.52%	0.42%	2.56%	5.04%	0.51%	0.42%	2.09%	7.37%	6.05%	2.66%	0.65%
Zurich Insurance US PC Group (G)	6.38%	14.67%	5.89%	2.84%	2.72%	0.21%	1.94%	1.16%	0.30%	0.37%	1.57%	6.37%	4.76%	3.24%	4.29%
Berkshire Hathaway Insurance Group (G)	92.92%	2.52%	0.04%	0.03%	0.06%	0.01%	0.02%	0.00%	0.00%	0.00%	0.05%	0.06%	0.03%	0.01%	0.00%
Charter Insurance Group (G)	0.00%	0.00%	0.58%	0.00%	0.00%	7.31%	10.16%	0.65%	1.30%	0.30%	5.80%	13.85%	2.71%	2.99%	0.05%
American International Group (G)	0.62%	5.21%	0.65%	0.27%	0.86%	0.68%	2.07%	0.47%	0.44%	0.01%	2.87%	10.26%	3.34%	2.07%	0.42%
Old Republic Insurance Group (G)	2.46%	7.21%	4.36%	0.00%	0.00%	0.27%	6.66%	0.48%	0.00%	0.00%	0.77%	5.78%	1.18%	0.00%	0.00%
W. R. Berkley Insurance Group (G)	1.22%	8.25%	0.20%	0.02%	0.00%	0.25%	2.16%	1.38%	0.38%	0.00%	3.69%	10.59%	7.10%	1.44%	0.91%
AmTrust Group (G)	1.81%	2.85%	0.46%	0.01%	0.00%	0.18%	0.21%	0.30%	0.00%	0.00%	1.91%	4.53%	1.80%	0.65%	0.05%
CNA Insurance Companies (G)	2.65%	0.65%	0.21%	0.00%	0.15%	0.63%	1.94%	2.75%	2.12%	0.77%	2.32%	7.98%	9.27%	4.26%	1.19%
Hanover Ins Group Prop & Cas Cos (G)	0.26%	1.56%	1.70%	0.25%	0.26%	0.22%	0.99%	1.78%	1.91%	0.00%	3.16%	7.01%	8.45%	5.42%	1.51%
MEMIC Group (G)	0.38%	2.69%	0.89%	0.79%	0.01%	0.22%	3.11%	3.59%	1.85%	0.44%	4.18%	12.66%	9.03%	4.27%	3.43%
QBE North America Insurance Group (G)	17.95%	2.67%	0.24%	1.42%	1.24%	0.61%	1.62%	1.02%	0.05%	0.00%	0.45%	2.00%	1.15%	0.42%	0.02%
Arbella Insurance Group (G)	0.47%	3.02%	1.07%	0.00%	0.00%	0.44%	0.99%	10.53%	0.67%	0.00%	1.46%	12.67%	16.92%	1.93%	0.00%
Selective Insurance Group (G)	0.53%	0.17%	0.59%	0.02%	0.08%	0.68%	2.33%	0.44%	0.03%	0.19%	3.33%	11.90%	9.00%	2.03%	0.40%
Utica National Insurance Group (G)	0.73%	1.63%	0.62%	0.15%	0.09%	0.07%	0.40%	0.36%	0.00%	0.00%	3.36%	12.10%	7.30%	4.05%	0.76%
Fairfax Financial (USA) Group (G)	76.17%	6.79%	0.20%	0.04%	0.01%	0.08%	0.34%	0.00%	0.00%	0.00%	0.38%	0.12%	0.02%	1.10%	0.02%
Arch Insurance Group (G)	0.58%	10.53%	8.96%	0.02%	0.00%	0.02%	0.18%	0.26%	0.00%	0.00%	0.20%	1.61%	1.59%	0.18%	0.10%
Progressive Insurance Group (G)	3.15%	26.48%	8.75%	0.00%	0.00%	0.34%	1.47%	0.92%	0.00%	0.00%	0.26%	1.00%	1.85%	0.08%	0.00%
AU Holding Company Group (G)	32.82%	13.76%	0.22%	0.01%	0.00%	0.50%	1.23%	0.90%	0.30%	0.19%	2.52%	32.41%	3.12%	2.06%	0.38%
Sentry Insurance Group (G)	1.74%	4.38%	3.93%	4.92%	1.12%	0.34%	2.07%	2.20%	0.27%	0.00%	1.38%	8.66%	10.17%	6.45%	0.86%
Starr International Group (G)	1.25%	3.58%	1.07%	0.00%	0.00%	0.97%	3.96%	0.18%	0.22%	0.00%	5.03%	7.90%	1.61%	0.03%	0.00%
Federated Mutual Group (G)	0.17%	1.03%	0.53%	0.22%	0.00%	1.65%	5.84%	3.49%	0.30%	0.00%	2.22%	10.59%	6.30%	1.99%	0.22%
Norfolk & Dedham Group Pool (G)	0.79%	1.52%	3.67%	0.01%	0.00%	0.25%	1.26%	0.00%	0.00%	0.00%	9.09%	24.46%	16.70%	3.88%	0.30%
AmeriTrust Group (G)	0.25%	0.45%	0.05%	0.00%	0.00%	0.27%	1.39%	1.78%	0.09%	0.00%	1.30%	6.09%	4.48%	0.57%	0.10%
Great American P & C Insurance Group (G)	0.49%	5.77%	0.11%	0.01%	0.02%	0.99%	0.78%	0.16%	0.13%	0.00%	3.00%	6.87%	5.98%	0.98%	1.66%
EMC Insurance Companies (G)	1.22%	2.20%	1.38%	0.12%	0.02%	0.26%	6.37%	0.79%	0.80%	0.00%	2.21%	5.58%	6.57%	27.78%	0.79%
American National Prop & Cas Group (G)	0.00%	0.53%	0.00%	0.00%	0.17%	0.62%	8.41%	5.48%	0.38%	0.00%	0.24%	2.79%	2.21%	0.36%	0.00%
American Family Insurance Group (G)	1.15%	3.97%	1.75%	0.03%	0.08%	0.62%	3.22%	3.46%	0.85%	0.00%	3.35%	12.53%	12.54%	1.36%	0.15%
Service Insurance Group (G)	3.04%	6.43%	0.78%	0.00%	0.00%	0.00%	0.08%	0.14%	0.00%	0.00%	2.44%	5.22%	1.10%	0.37%	0.05%
Tokio Marine US PC Group (G)	0.43%	1.11%	0.61%	0.75%	0.18%	0.36%	2.79%	2.39%	3.08%	0.83%	3.11%	9.57%	9.53%	7.93%	6.28%
Arrow Mutual Liability Insurance Company	17.76%	24.66%	13.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Markel Corporation Group (G)	4.53%	21.54%	4.66%	0.28%	0.00%	1.15%	14.76%	6.87%	2.82%	0.00%	2.64%	15.58%	12.55%	4.37%	0.44%
Employers Insurance Group (G)	0.33%	2.59%	1.20%	0.05%	0.23%	1.27%	4.43%	0.99%	0.00%	0.00%	3.86%	15.35%	4.80%	2.09%	0.87%
Skyward Specialty Insurance Group (G)	2.16%	10.93%	1.11%	0.48%	0.04%	0.15%	0.20%	1.47%	0.89%	0.00%	2.27%	6.70%	6.84%	4.20%	0.23%
Group 1001 Property and Casualty Group (G)	0.27%	7.30%	0.38%	0.00%	0.00%	0.88%	0.46%	1.04%	0.00%	0.00%	1.03%	1.66%	9.71%	0.15%	3.13%
Electric Insurance Company	0.69%	2.71%	0.14%	0.00%	0.00%	0.01%	0.02%	0.00%	0.00%	0.00%	0.95%	1.60%	1.40%	0.25%	0.02%
Everest Re U.S. Group (G)	3.83%	7.48%	3.75%	0.20%	0.06%	0.10%	0.19%	0.17%	0.30%	0.09%	2.84%	5.88%	2.38%	1.99%	1.78%
Core Specialty Insurance Group (G)	9.64%	3.30%	1.70%	0.53%	0.07%	0.19%	0.52%	1.15%	0.05%	0.00%	2.31%	6.04%	3.66%	1.84%	0.30%
Merchants Insurance Group (G)	1.44%	2.50%	0.62%	0.02%	0.00%	1.71%	0.89%	3.77%	2.06%	0.94%	6.35%	9.85%	7.78%	6.89%	6.13%
XL Reinsurance America Group (G)	4.43%	16.54%	3.48%	0.27%	3.32%	0.00%	0.49%	1.26%	1.31%	0.04%	1.77%	4.74%	8.07%	8.74%	1.79%

VII 000104 STIP

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)				
Central Insurance Companies (G)	1.08%	1.92%	0.75%	0.04%	1.21%	0.93%	5.61%	2.95%	1.07%	0.00%	2.43%	8.55%	7.54%	2.66%	1.39%
Sompo Holdings US Group (G)	2.35%	15.90%	2.50%	0.21%	0.02%	0.01%	0.75%	0.01%	0.00%	0.00%	2.78%	8.94%	5.73%	2.82%	0.45%
Benchmark Insurance Group (G)	2.44%	8.03%	0.60%	0.02%	0.00%	1.20%	3.09%	4.23%	1.69%	0.32%	4.53%	15.10%	13.90%	7.99%	1.19%
The Cincinnati Insurance Companies (G)	0.14%	0.62%	0.23%	0.00%	0.00%	2.66%	17.01%	8.82%	0.55%	0.07%	1.19%	10.50%	10.24%	0.88%	0.06%
Argo Group (G)	2.77%	4.41%	2.36%	0.14%	0.39%	0.27%	0.77%	0.27%	0.00%	0.00%	2.42%	6.56%	3.96%	1.64%	0.41%
AF Group (G)	3.28%	14.68%	7.67%	1.36%	5.49%	0.00%	0.00%	0.00%	0.00%	0.00%	4.16%	8.71%	5.61%	4.02%	2.54%
Nationwide Group (G)	0.30%	7.00%	4.39%	0.27%	1.94%	0.42%	1.48%	1.08%	0.33%	0.00%	1.31%	5.71%	4.35%	2.92%	0.50%
Pharmacists Mutual Insurance Group (G)	3.44%	2.21%	3.49%	0.98%	0.02%	0.21%	2.13%	4.10%	0.00%	0.00%	2.91%	13.38%	20.10%	3.51%	0.33%
Coaction Specialty Insurance Group (G)	0.39%	2.63%	0.24%	0.07%	0.01%	0.16%	0.37%	0.54%	1.04%	0.23%	1.92%	4.80%	4.47%	4.02%	1.55%
Church Mutual Insurance Group (G)	4.80%	3.56%	2.75%	0.22%	0.12%	0.45%	2.60%	4.06%	0.36%	0.00%	3.48%	12.49%	12.14%	4.32%	1.08%
Intact US Insurance Group (G)	2.43%	6.49%	9.74%	1.99%	0.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.85%	3.78%	4.25%	0.66%	0.03%
Work First Casualty Company	0.72%	3.11%	0.00%	0.00%	0.45%	0.00%	5.02%	8.44%	0.00%	0.00%	0.00%	3.73%	5.31%	1.89%	2.03%
MS&AD US Insurance Group (G)	6.01%	9.81%	4.68%	0.15%	0.00%	0.07%	1.68%	1.39%	0.05%	0.00%	1.78%	5.20%	4.16%	1.61%	0.51%
Amerisure Companies (G)	0.89%	6.39%	2.86%	0.87%	3.78%	0.00%	2.94%	1.30%	0.52%	0.00%	2.45%	8.04%	4.17%	1.71%	0.02%
GuideOne Insurance Companies (G)	2.25%	0.85%	1.33%	0.00%	0.02%	0.30%	2.82%	6.50%	1.32%	0.00%	1.08%	6.90%	5.90%	1.11%	0.01%
James River Group (G)	28.06%	4.88%	0.17%	0.02%	0.00%	0.03%	1.92%	2.95%	0.79%	0.00%	1.71%	6.60%	6.91%	3.70%	0.05%
Premier Group Insurance Company	0.90%	10.92%	18.17%	0.00%	0.00%	0.00%	3.99%	0.00%	0.00%	0.00%	2.37%	5.97%	0.69%	0.33%	0.00%
Allianz US PC Insurance Companies (G)	2.55%	11.20%	3.32%	1.20%	1.21%	0.11%	0.55%	0.06%	0.04%	0.02%	2.60%	5.42%	2.60%	1.79%	1.43%
ICW Pool (G)	9.69%	15.99%	22.85%	0.25%	0.00%	0.22%	13.15%	2.62%	1.25%	0.14%	0.07%	1.02%	0.48%	0.27%	0.10%
Brotherhood Mutual Insurance Company	0.39%	0.05%	0.54%	0.00%	0.00%	3.13%	12.75%	6.53%	0.39%	0.00%	2.55%	22.92%	24.14%	2.49%	0.00%
American Contractors Insurance Group (G)	2.45%	6.05%	0.34%	0.03%	0.00%	0.44%	2.17%	0.00%	0.00%	0.00%	4.40%	16.21%	10.27%	2.72%	0.37%
ProAssurance Group (G)	0.91%	3.58%	2.81%	0.13%	0.00%	0.13%	1.14%	1.11%	0.08%	0.00%	2.99%	9.31%	5.93%	1.41%	0.30%
HDI/Talanx US PC Group (G)	1.90%	11.26%	4.16%	0.40%	0.00%	0.00%	0.19%	0.66%	0.63%	0.08%	0.25%	0.99%	2.05%	3.17%	1.16%
RLI Group (G)	0.80%	4.73%	3.45%	1.41%	0.23%	0.57%	1.70%	0.11%	0.00%	0.00%	2.21%	6.34%	10.51%	9.19%	4.85%
Cherokee Insurance Company	0.27%	2.88%	1.94%	0.00%	0.00%	3.51%	5.55%	1.31%	0.33%	0.03%	8.25%	17.28%	10.03%	4.93%	3.18%
IAT Insurance Group (G)	2.82%	3.74%	0.16%	0.09%	0.02%	0.00%	0.04%	0.00%	0.00%	0.00%	0.18%	0.36%	0.14%	0.04%	0.00%
AMERISAFE Insurance Group (G)	1.61%	2.60%	0.67%	0.03%	0.00%	3.73%	13.57%	8.04%	1.18%	0.05%	5.77%	26.80%	19.15%	0.92%	0.55%
WCF Insurance Group (G)	2.34%	9.69%	4.20%	3.75%	0.17%	0.66%	4.02%	6.64%	4.76%	0.00%	0.53%	6.89%	9.53%	6.80%	0.00%
State Farm Group (G)	1.72%	8.85%	3.10%	0.39%	0.03%	2.48%	17.53%	10.64%	1.47%	0.03%	1.48%	12.00%	11.97%	0.79%	0.09%
Samsung F & M Insurance Co, Ltd USB	2.54%	23.67%	2.82%	0.00%	0.00%	0.02%	0.07%	0.00%	0.00%	0.00%	0.58%	2.11%	0.53%	0.00%	0.00%
Farmers Insurance Group (G)	5.30%	19.64%	1.28%	0.32%	0.05%	0.18%	1.93%	0.63%	0.91%	0.37%	4.46%	11.49%	4.89%	4.44%	3.06%
Penn National Insurance Companies (G)	0.15%	1.21%	0.05%	0.00%	0.00%	0.01%	0.53%	1.06%	0.41%	0.00%	4.71%	7.42%	6.69%	2.97%	0.85%
West Bend Mutual Insurance Company	0.09%	3.50%	5.37%	0.49%	0.91%	0.28%	1.77%	2.01%	0.14%	0.00%	2.85%	10.25%	8.82%	2.35%	0.54%
National American Insurance Company	1.50%	3.20%	2.16%	1.05%	0.05%	0.54%	1.01%	1.91%	2.87%	0.16%	3.13%	7.55%	12.11%	8.55%	0.78%
The Gray Insurance Group (G)	57.45%	0.31%	0.00%	0.00%	0.00%	0.04%	3.66%	0.00%	0.00%	0.00%	1.43%	11.11%	2.46%	0.87%	0.10%
Munich-American Holding Corp Companies (G)	2.16%	21.78%	18.13%	1.32%	9.17%	0.00%	0.01%	0.00%	0.00%	0.00%	0.59%	2.68%	1.12%	0.72%	0.37%

Notes:
 Source: A.M. Best's Global Insurance Database for all Massachusetts Workers' Compensation Group Companies, 2021 Schedule D, Part 1A.

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)				
A.I.M. Mutual Insurance Companies (G)	3.54%	26.42%	23.80%	3.54%	1.33%	0.00%	0.00%	0.00%	0.00%	0.00%
Travelers Group (G)	3.43%	15.21%	21.12%	1.66%	0.31%	0.00%	0.00%	0.00%	0.00%	0.00%
Hartford Insurance Group (G)	7.45%	26.37%	20.43%	6.26%	2.46%	0.00%	0.00%	0.03%	0.00%	0.77%
Chubb INA Group (G)	5.12%	23.92%	20.38%	2.07%	2.14%	0.00%	0.01%	0.00%	0.00%	0.08%
Liberty Mutual Insurance Companies (G)	3.94%	23.89%	18.21%	2.87%	1.58%	0.00%	0.00%	0.00%	0.00%	0.00%
Zurich Insurance US PC Group (G)	4.48%	20.36%	15.26%	2.55%	0.53%	0.00%	0.00%	0.00%	0.06%	0.04%
Berkshire Hathaway Insurance Group (G)	0.30%	0.56%	0.37%	0.17%	0.04%	0.00%	1.24%	1.55%	0.00%	0.00%
Charter Insurance Group (G)	5.34%	34.35%	14.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.26%
American International Group (G)	8.74%	28.11%	22.96%	4.51%	3.33%	1.02%	0.96%	0.08%	0.06%	0.00%
Old Republic Insurance Group (G)	8.30%	30.48%	30.94%	0.93%	0.00%	0.18%	0.00%	0.00%	0.00%	0.00%
W. R. Berkley Insurance Group (G)	15.01%	31.94%	11.23%	1.50%	0.27%	0.35%	1.30%	0.00%	0.00%	0.81%
AmTrust Group (G)	8.14%	43.41%	29.16%	2.41%	0.72%	0.31%	0.83%	0.26%	0.00%	0.00%
CNA Insurance Companies (G)	3.19%	18.03%	22.94%	10.05%	7.27%	0.05%	0.38%	0.66%	0.30%	0.23%
Hanover Ins Group Prop & Cas Cos (G)	2.89%	25.70%	34.40%	1.90%	0.63%	0.00%	0.00%	0.00%	0.00%	0.00%
MEMIC Group (G)	2.36%	22.85%	17.39%	4.73%	4.76%	0.00%	0.00%	0.00%	0.17%	0.18%
QBE North America Insurance Group (G)	18.72%	42.39%	6.48%	1.34%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%
Arbella Insurance Group (G)	5.69%	25.65%	18.14%	0.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Selective Insurance Group (G)	6.70%	29.31%	23.16%	5.12%	2.00%	0.03%	1.18%	0.39%	0.01%	0.38%
Utica National Insurance Group (G)	4.96%	26.91%	28.18%	4.43%	3.76%	0.00%	0.00%	0.14%	0.00%	0.00%
Fairfax Financial (USA) Group (G)	3.26%	7.30%	1.04%	0.39%	2.32%	0.00%	0.39%	0.00%	0.00%	0.03%
Arch Insurance Group (G)	14.01%	31.14%	25.79%	3.69%	0.78%	0.00%	0.36%	0.00%	0.00%	0.00%
Progressive Insurance Group (G)	11.29%	30.74%	13.57%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
AU Holding Company Group (G)	1.63%	3.36%	2.59%	0.82%	0.18%	0.05%	0.75%	0.15%	0.00%	0.07%
Sentry Insurance Group (G)	6.38%	23.43%	18.51%	2.62%	0.54%	0.00%	0.00%	0.00%	0.00%	0.00%
Starr International Group (G)	5.00%	28.55%	35.82%	3.33%	0.29%	0.01%	0.66%	0.38%	0.00%	0.17%
Federated Mutual Group (G)	5.19%	25.13%	15.20%	17.87%	2.06%	0.00%	0.00%	0.00%	0.00%	0.00%
Norfolk & Dedham Group Pool (G)	5.93%	19.12%	12.83%	0.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
AmeriTrust Group (G)	11.34%	33.99%	21.51%	13.60%	2.75%	0.00%	0.00%	0.00%	0.00%	0.00%
Great American P & C Insurance Group (G)	16.44%	38.51%	10.93%	4.77%	2.26%	0.00%	0.06%	0.00%	0.00%	0.08%
EMC Insurance Companies (G)	4.79%	23.37%	13.34%	2.21%	0.06%	0.00%	0.03%	0.10%	0.00%	0.00%

VII 000106 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)				
American National Prop & Cas Group (G)	22.70%	24.22%	27.75%	3.20%	0.94%	0.00%	0.00%	0.00%	0.00%	0.00%
American Family Insurance Group (G)	6.63%	23.25%	20.04%	3.84%	1.15%	0.00%	0.00%	0.03%	0.00%	0.00%
Service Insurance Group (G)	17.39%	38.63%	22.45%	1.21%	0.03%	0.00%	0.38%	0.26%	0.00%	0.00%
Tokio Marine US PC Group (G)	2.80%	19.55%	16.10%	4.79%	6.70%	0.02%	0.65%	0.22%	0.08%	0.14%
Arrow Mutual Liability Insurance Company	11.14%	28.17%	5.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Markel Corporation Group (G)	0.49%	3.12%	3.39%	0.81%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Employers Insurance Group (G)	5.33%	28.28%	25.35%	1.76%	1.00%	0.00%	0.23%	0.00%	0.00%	0.00%
Skyward Specialty Insurance Group (G)	3.40%	38.53%	16.07%	2.37%	1.01%	0.00%	0.64%	0.20%	0.00%	0.10%
Group 1001 Property and Casualty Group (G)	2.17%	34.46%	32.49%	4.19%	0.06%	0.00%	0.12%	0.08%	0.00%	0.42%
Electric Insurance Company	5.10%	61.53%	22.64%	2.87%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%
Everest Re U.S. Group (G)	5.42%	23.85%	31.24%	2.49%	1.37%	0.00%	0.08%	4.34%	0.02%	0.16%
Core Specialty Insurance Group (G)	3.40%	36.69%	25.16%	2.27%	0.41%	0.00%	0.00%	0.14%	0.00%	0.65%
Merchants Insurance Group (G)	3.82%	22.87%	11.43%	0.65%	6.73%	0.11%	2.73%	0.71%	0.00%	0.00%
XL Reinsurance America Group (G)	3.81%	16.68%	20.65%	2.25%	0.37%	0.00%	0.00%	0.00%	0.00%	0.00%
Central Insurance Companies (G)	3.28%	24.74%	25.43%	1.31%	7.08%	0.00%	0.01%	0.03%	0.00%	0.00%
Sompo Holdings US Group (G)	7.64%	33.34%	14.37%	1.65%	0.51%	0.00%	0.01%	0.01%	0.00%	0.01%
Benchmark Insurance Group (G)	8.75%	19.12%	7.12%	0.61%	0.04%	0.00%	0.02%	0.00%	0.00%	0.00%
The Cincinnati Insurance Companies (G)	4.52%	24.43%	11.67%	6.37%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%
Argo Group (G)	6.16%	37.96%	26.75%	2.13%	0.52%	0.00%	0.00%	0.01%	0.10%	0.00%
AF Group (G)	7.56%	15.88%	10.03%	4.13%	4.88%	0.00%	0.00%	0.00%	0.00%	0.00%
Nationwide Group (G)	6.45%	32.25%	21.91%	4.79%	2.59%	0.00%	0.00%	0.00%	0.00%	0.00%
Pharmacists Mutual Insurance Group (G)	2.29%	13.30%	19.33%	5.00%	3.27%	0.00%	0.00%	0.00%	0.00%	0.00%
Coaction Specialty Insurance Group (G)	7.39%	36.59%	24.70%	5.41%	2.61%	0.00%	0.83%	0.04%	0.00%	0.00%
Church Mutual Insurance Group (G)	4.68%	22.48%	16.01%	3.42%	0.99%	0.00%	0.00%	0.00%	0.00%	0.00%
Intact US Insurance Group (G)	5.10%	31.48%	18.35%	10.61%	3.72%	0.00%	0.00%	0.00%	0.00%	0.00%
Work First Casualty Company	7.16%	25.39%	17.82%	14.86%	2.24%	0.00%	1.82%	0.00%	0.00%	0.00%
MS&AD US Insurance Group (G)	3.50%	27.19%	30.05%	1.19%	0.82%	0.00%	0.00%	0.12%	0.00%	0.00%
Amerisure Companies (G)	5.41%	30.47%	16.10%	9.10%	2.97%	0.00%	0.00%	0.00%	0.00%	0.00%
GuideOne Insurance Companies (G)	8.22%	32.87%	22.73%	4.07%	1.58%	0.00%	0.00%	0.04%	0.00%	0.11%
James River Group (G)	5.58%	14.86%	18.24%	0.25%	0.79%	0.00%	1.37%	0.00%	0.00%	1.13%

VII 000107 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)				
Premier Group Insurance Company	12.11%	32.37%	11.21%	0.96%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Allianz US PC Insurance Companies (G)	5.27%	30.09%	25.42%	3.10%	2.03%	0.00%	0.00%	0.00%	0.00%	0.00%
ICW Pool (G)	4.37%	14.28%	7.45%	1.59%	2.52%	0.18%	0.40%	0.28%	0.00%	0.82%
Brotherhood Mutual Insurance Company	2.26%	12.28%	9.23%	0.27%	0.03%	0.03%	0.01%	0.00%	0.00%	0.00%
American Contractors Insurance Group (G)	7.74%	29.09%	15.31%	1.82%	0.18%	0.04%	0.06%	0.11%	0.00%	0.19%
ProAssurance Group (G)	7.28%	35.30%	23.56%	3.21%	0.49%	0.00%	0.06%	0.07%	0.05%	0.12%
HDI/Talanx US PC Group (G)	3.15%	24.38%	36.15%	7.81%	0.99%	0.00%	0.16%	0.48%	0.00%	0.00%
RLI Group (G)	2.69%	23.00%	20.15%	4.58%	3.48%	0.00%	0.00%	0.00%	0.00%	0.00%
Cherokee Insurance Company	2.50%	30.04%	5.59%	1.76%	0.63%	0.00%	0.00%	0.00%	0.00%	0.00%
IAT Insurance Group (G)	21.52%	41.81%	19.71%	3.41%	5.79%	0.00%	0.18%	0.00%	0.00%	0.00%
AMERISAFE Insurance Group (G)	2.58%	10.77%	1.99%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
WCF Insurance Group (G)	5.82%	12.25%	13.91%	3.57%	4.47%	0.00%	0.00%	0.00%	0.00%	0.00%
State Farm Group (G)	1.23%	9.36%	16.37%	0.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
Samsung F & M Insurance Co, Ltd USB	2.80%	34.08%	28.57%	2.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Farmers Insurance Group (G)	3.56%	19.57%	15.89%	1.61%	0.39%	0.00%	0.00%	0.00%	0.00%	0.06%
Penn National Insurance Companies (G)	7.16%	34.72%	23.77%	5.16%	3.04%	0.07%	0.00%	0.00%	0.00%	0.00%
West Bend Mutual Insurance Company	5.69%	28.28%	23.73%	2.51%	0.41%	0.00%	0.00%	0.00%	0.00%	0.00%
National American Insurance Company	2.60%	18.01%	22.36%	9.12%	1.34%	0.00%	0.00%	0.00%	0.00%	0.00%
The Gray Insurance Group (G)	0.59%	2.43%	0.00%	19.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Munich-American Holding Corp Companies (G)	2.82%	24.36%	10.74%	2.75%	0.84%	0.00%	0.06%	0.00%	0.00%	0.37%

Notes:

Source: A.M. Best's Global Insurance Database for all Massachusetts Workers' Compensation Group Companies, 2021 Schedule D, Part 1A.

VII 000108 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 000109 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	2.47	0.75	0.06	13.53	15.25	15.94
2013	32.39	2.90	1.06	0.02	29.49	31.33	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	1.83	-7.20	-7.03	-6.21
2019	31.49	2.55	2.08	2.15	28.94	29.41	29.34
2020	18.40	1.53	0.66	0.45	16.87	17.74	17.95
2021	28.71	1.73	0.86	0.04	26.98	27.85	28.67
Average	12.33	4.87	4.29	3.30	7.46	8.04	9.03

Notes:

Source: 2022 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 000110 STIP

Investment Expense to Invested Assets Ratio

Companies	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
A.I.M. Mutual Insurance Companies (G)	0.14%	0.14%	0.14%	0.14%	0.13%	0.14%	0.15%	0.16%	0.16%	0.16%
Travelers Group (G)	0.21%	0.22%	0.22%	0.23%	0.22%	0.22%	0.23%	0.22%	0.23%	0.20%
Hartford Insurance Group (G)	0.20%	0.20%	0.24%	0.25%	0.24%	0.20%	0.19%	0.19%	0.18%	0.19%
Chubb INA Group (G)	0.15%	0.14%	0.14%	0.13%	0.13%	0.16%	0.16%	0.18%	0.17%	0.14%
Liberty Mutual Insurance Companies (G)	0.30%	0.31%	0.32%	0.30%	0.27%	0.26%	0.27%	0.27%	0.27%	0.27%
Zurich Insurance US PC Group (G)	0.41%	0.40%	0.40%	0.30%	0.25%	0.24%	0.14%	0.15%	0.09%	0.09%
Berkshire Hathaway Insurance Group (G)	0.11%	0.10%	0.11%	0.13%	0.09%	0.12%	0.12%	0.12%	0.06%	0.08%
Charter Insurance Group (G)	0.33%	0.31%	0.30%	0.28%	0.27%	0.24%	0.26%	0.25%	0.25%	0.26%
American International Group (G)	0.15%	0.17%	0.16%	0.17%	0.19%	0.15%	0.16%	0.13%	0.15%	0.16%
Old Republic Insurance Group (G)	0.06%	0.07%	0.08%	0.08%	0.07%	0.09%	0.12%	0.12%	0.13%	0.15%
W. R. Berkley Insurance Group (G)	0.20%	0.28%	0.25%	0.23%	0.25%	0.29%	0.30%	0.26%	0.26%	0.28%
AmTrust Group (G)	0.02%	0.05%	0.08%	0.11%	0.25%	0.18%	0.16%	0.16%	0.18%	0.22%
CNA Insurance Companies (G)	0.15%	0.15%	0.15%	0.14%	0.14%	0.15%	0.23%	0.20%	0.19%	0.20%
Hanover Ins Group Prop & Cas Cos (G)	0.20%	0.20%	0.20%	0.21%	0.24%	0.25%	0.26%	0.15%	0.15%	0.16%
MEMIC Group (G)	0.17%	0.18%	0.18%	0.18%	0.19%	0.19%	0.19%	0.22%	0.22%	0.23%
QBE North America Insurance Group (G)	0.24%	0.25%	0.27%	0.28%	0.29%	0.25%	0.33%	0.29%	0.29%	0.30%
Arbella Insurance Group (G)	0.09%	0.11%	0.11%	0.11%	0.11%	0.11%	0.10%	0.11%	0.24%	0.23%
Selective Insurance Group (G)	0.27%	0.23%	0.21%	0.20%	0.22%	0.18%	0.19%	0.19%	0.18%	0.20%
Utica National Insurance Group (G)	0.22%	0.23%	0.26%	0.27%	0.27%	0.26%	0.29%	0.30%	0.28%	0.30%
Fairfax Financial (USA) Group (G)	0.51%	0.47%	0.50%	0.46%	0.40%	0.62%	0.62%	0.77%	0.97%	1.10%
Arch Insurance Group (G)	0.22%	0.22%	0.22%	0.22%	0.21%	0.15%	0.14%	0.11%	0.10%	0.11%
Progressive Insurance Group (G)	0.17%	0.19%	0.23%	0.26%	0.30%	0.34%	0.38%	0.38%	0.40%	0.40%
AU Holding Company Group (G)	0.11%	0.08%	0.03%	0.03%	0.02%	0.02%	0.02%	0.02%	0.03%	0.10%
Sentry Insurance Group (G)	0.28%	0.32%	0.33%	0.29%	0.25%	0.25%	0.25%	0.25%	0.25%	0.27%
Starr International Group (G)	0.10%	0.09%	0.11%	0.12%	0.14%	0.13%	0.13%	0.11%	0.10%	0.14%
Federated Mutual Group (G)	0.23%	0.22%	0.23%	0.23%	0.21%	0.20%	0.18%	0.18%	0.20%	0.19%
Norfolk & Dedham Group Pool (G)	0.33%	0.55%	0.57%	0.63%	0.58%	0.60%	0.58%	0.61%	0.50%	0.54%
AmeriTrust Group (G)	0.25%	0.24%	0.26%	0.29%	0.12%	0.14%	0.16%	0.13%	0.12%	0.11%
Great American P & C Insurance Group (G)	0.18%	0.20%	0.28%	0.30%	0.29%	0.32%	0.32%	0.34%	0.41%	0.39%
EMC Insurance Companies (G)	0.58%	0.64%	0.82%	0.79%	0.67%	0.69%	0.63%	0.58%	0.56%	0.52%
American National Prop & Cas Group (G)	0.11%	0.11%	0.13%	0.13%	0.14%	0.15%	0.13%	0.13%	0.15%	0.13%
American Family Insurance Group (G)	0.58%	0.49%	0.56%	0.56%	0.54%	0.49%	0.48%	0.46%	0.46%	0.59%
Service Insurance Group (G)	0.49%	0.49%	0.78%	0.59%	0.38%	0.50%	0.42%	0.41%	0.39%	0.43%

VII 000111 STTP

Investment Expense to Invested Assets Ratio

Companies	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Tokio Marine US PC Group (G)	0.53%	0.45%	0.40%	0.40%	0.40%	0.29%	0.25%	0.19%	0.17%	0.16%
Arrow Mutual Liability Insurance Company	0.26%	0.35%	0.20%	0.31%	0.33%	0.31%	0.31%	0.41%	0.32%	0.31%
Markel Corporation Group (G)	0.41%	0.38%	0.43%	0.47%	0.43%	0.42%	0.43%	0.39%	0.37%	0.36%
Employers Insurance Group (G)	0.15%	0.15%	0.16%	0.10%	0.10%	0.10%	0.10%	0.10%	0.11%	0.11%
Skyward Specialty Insurance Group (G)	0.45%	0.36%	0.48%	0.66%	0.39%	0.24%	0.17%	0.13%	0.19%	0.24%
Group 1001 Property and Casualty Group (G)	0.10%	0.08%	0.08%	0.11%	0.13%	0.14%	0.72%	0.44%	0.45%	0.41%
Electric Insurance Company	0.46%	0.44%	0.42%	0.43%	0.44%	0.38%	0.38%	0.36%	0.35%	0.34%
Everest Re U.S. Group (G)	0.12%	0.13%	0.12%	0.09%	0.11%	0.10%	0.09%	0.10%	0.11%	0.09%
Core Specialty Insurance Group (G)	0.16%	0.37%	0.38%	0.20%	0.27%	0.25%	0.27%	0.30%	0.44%	0.48%
Merchants Insurance Group (G)	0.15%	0.15%	0.16%	0.15%	0.12%	0.12%	0.14%	0.14%	0.13%	0.15%
XL Reinsurance America Group (G)	0.22%	0.23%	0.25%	0.22%	0.24%	0.23%	0.25%	0.25%	0.25%	0.25%
Central Insurance Companies (G)	0.31%	0.36%	0.43%	0.38%	0.28%	0.26%	0.27%	0.28%	0.29%	0.28%
Sompo Holdings US Group (G)	0.12%	0.14%	0.10%	0.12%	0.12%	0.14%	0.17%	0.15%	0.17%	0.17%
Benchmark Insurance Group (G)	0.61%	0.84%	0.94%	0.92%	0.54%	0.64%	0.75%	0.82%	0.76%	0.68%
The Cincinnati Insurance Companies (G)	0.06%	0.06%	0.06%	0.06%	0.06%	0.05%	0.07%	0.06%	0.07%	0.06%
Argo Group (G)	0.25%	0.31%	0.42%	0.51%	0.49%	0.39%	0.41%	0.42%	0.37%	0.36%
AF Group (G)	0.19%	0.19%	0.15%	0.20%	0.12%	0.12%	0.15%	0.13%	0.12%	0.12%
Nationwide Group (G)	0.27%	0.30%	0.36%	0.37%	0.35%	0.35%	0.25%	0.35%	0.37%	0.33%
Pharmacists Mutual Insurance Group (G)	0.45%	0.58%	0.71%	0.52%	0.52%	0.45%	0.54%	0.66%	0.66%	0.61%
Coaction Specialty Insurance Group (G)	0.15%	0.12%	0.11%	0.12%	0.12%	0.14%	0.14%	0.14%	0.16%	0.13%
Church Mutual Insurance Group (G)	0.27%	0.24%	0.25%	0.27%	0.31%	0.32%	0.28%	0.29%	0.30%	0.33%
Intact US Insurance Group (G)	0.20%	0.22%	0.39%	0.32%	0.18%	0.19%	0.20%	0.38%	0.38%	0.04%
Work First Casualty Company	0.40%	0.41%	0.41%	0.48%	0.54%	0.82%	0.42%	0.44%	0.53%	0.57%
MS&AD US Insurance Group (G)	0.40%	0.36%	0.24%	0.35%	0.35%	0.41%	0.36%	0.36%	0.35%	0.35%
Amerisure Companies (G)	0.18%	0.18%	0.16%	0.14%	0.15%	0.15%	0.14%	0.16%	0.17%	0.19%
GuideOne Insurance Companies (G)	0.55%	0.65%	0.76%	0.69%	0.63%	0.56%	0.53%	0.53%	0.49%	0.55%
James River Group (G)	0.15%	0.11%	0.09%	0.30%	0.31%	0.37%	0.41%	0.39%	0.36%	0.33%
Premier Group Insurance Company	0.23%	0.22%	0.24%	0.26%	0.29%	0.29%	0.29%	0.32%	0.26%	0.31%
Allianz US PC Insurance Companies (G)	0.07%	0.07%	0.06%	0.08%	0.09%	0.09%	0.06%	0.07%	0.06%	0.06%
ICW Pool (G)	0.79%	0.68%	0.63%	0.50%	0.80%	0.65%	0.69%	0.30%	0.24%	0.37%
Brotherhood Mutual Insurance Company	0.67%	0.63%	0.69%	0.77%	0.78%	0.83%	0.90%	0.98%	0.82%	0.86%
American Contractors Insurance Group (G)	0.21%	0.22%	0.21%	0.22%	0.27%	0.29%	0.33%	0.33%	0.33%	0.44%
ProAssurance Group (G)	0.30%	0.28%	0.35%	0.32%	0.37%	0.31%	0.29%	0.35%	0.34%	0.34%

VII 000112 STTP

Investment Expense to Invested Assets Ratio

Companies	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
HDI/Talanx US PC Group (G)	0.14%	0.13%	0.15%	0.10%	0.12%	0.14%	0.11%	0.12%	0.13%	0.09%
RLI Group (G)	0.33%	0.30%	0.30%	0.30%	0.31%	0.32%	0.32%	0.33%	0.32%	0.32%
Cherokee Insurance Company	0.04%	0.06%	0.07%	0.07%	0.07%	0.07%	0.08%	0.09%	0.08%	0.11%
IAT Insurance Group (G)	0.31%	0.37%	0.30%	0.42%	0.32%	0.34%	0.39%	0.34%	0.34%	0.34%
AMERISAFE Insurance Group (G)	0.17%	0.15%	0.15%	0.14%	0.14%	0.16%	0.16%	0.19%	0.20%	0.21%
WCF Insurance Group (G)	0.29%	0.33%	0.34%	0.31%	0.31%	0.30%	0.27%	0.28%	0.26%	0.24%
State Farm Group (G)	0.11%	0.13%	0.13%	0.14%	0.15%	0.20%	0.28%	0.19%	0.24%	0.28%
Samsung F & M Insurance Co, Ltd USB	0.15%	0.13%	0.13%	0.33%	0.57%	0.18%	0.31%	0.25%	0.34%	0.39%
Farmers Insurance Group (G)	0.18%	0.19%	0.20%	0.18%	0.18%	0.14%	0.11%	0.12%	0.16%	0.15%
Penn National Insurance Companies (G)	0.49%	0.23%	0.16%	0.19%	0.18%	0.17%	0.18%	0.20%	0.21%	0.19%
West Bend Mutual Insurance Company	0.45%	0.47%	0.57%	0.55%	0.60%	0.60%	0.65%	0.72%	0.81%	0.80%
National American Insurance Company	0.60%	0.65%	0.73%	0.69%	0.71%	0.67%	0.68%	0.73%	0.76%	0.68%
The Gray Insurance Group (G)	0.35%	0.42%	0.56%	0.53%	0.53%	0.44%	0.46%	0.37%	0.11%	0.11%
Munich-American Holding Corp Companies (G)	0.22%	0.22%	0.24%	0.24%	0.25%	0.24%	0.24%	0.24%	0.17%	0.18%

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Premium Weighted Investment Expense to Asset Ratio	0.21%	0.22%	0.23%	0.22%	0.21%	0.21%	0.21%	0.21%	0.20%	0.21%

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 000113 STIP

Direct Premiums Written for MA Workers' Compensation Group Companies

Companies	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
A.I.M. Mutual Insurance Companies (G)	141,079	141,670	158,738	155,688	158,179	156,921	149,530	144,469	138,172	122,474
Travelers Group (G)	126,925	143,085	155,681	165,699	165,917	170,238	159,479	151,076	142,948	124,857
Hartford Insurance Group (G)	120,626	107,771	122,647	116,964	115,136	106,794	100,625	95,680	93,792	92,384
Chubb INA Group (G)	88,568	91,942	95,010	93,797	88,015	85,214	70,148	62,298	56,332	43,831
Liberty Mutual Insurance Companies (G)	88,029	96,993	104,384	107,101	101,407	94,245	96,864	93,636	108,538	109,695
Zurich Insurance US PC Group (G)	73,842	70,523	60,369	61,930	60,851	63,002	61,220	53,484	43,096	39,237
Berkshire Hathaway Insurance Group (G)	63,679	62,947	70,797	70,331	64,812	63,215	54,174	41,941	28,225	27,891
Charter Insurance Group (G)	53,932	57,464	60,082	60,790	64,004	61,617	58,394	57,349	53,707	48,975
American International Group (G)	44,927	84,792	103,726	93,630	84,054	91,871	106,329	105,983	99,753	192,817
Old Republic Insurance Group (G)	37,766	35,383	29,096	25,785	26,755	21,483	19,474	21,366	20,020	13,221
W. R. Berkley Insurance Group (G)	36,010	34,183	33,269	42,470	46,425	41,191	35,083	33,183	30,140	33,958
AmTrust Group (G)	32,186	23,632	25,794	32,669	36,819	40,042	36,955	30,874	28,174	23,387
CNA Insurance Companies (G)	25,313	24,741	21,232	21,127	20,840	18,238	16,003	15,858	15,740	16,328
Hanover Ins Group Prop & Cas Cos (G)	23,006	22,909	20,803	21,394	20,360	17,429	16,309	12,945	12,871	12,258
MEMIC Group (G)	15,685	16,705	15,237	11,239	9,658	8,147	6,500	6,470	6,535	6,472
QBE North America Insurance Group (G)	14,134	9,753	4,219	4,218	6,333	5,862	3,483	2,990	2,924	1,987
Arbella Insurance Group (G)	14,040	14,155	14,180	14,367	15,091	14,935	13,905	13,389	13,312	10,894
Selective Insurance Group (G)	13,773	10,335	9,480	8,189	7,060	6,254	5,646	5,225	4,938	5,061
Utica National Insurance Group (G)	13,249	11,936	12,186	11,778	10,704	9,921	9,731	9,239	8,962	7,759
Fairfax Financial (USA) Group (G)	10,986	8,287	11,917	12,424	11,527	10,596	9,840	7,808	5,967	7,094
Arch Insurance Group (G)	9,506	9,698	6,883	6,148	5,889	6,417	4,136	5,364	5,021	4,588
Progressive Insurance Group (G)	8,569	5,922	5,560	3,499	3,560	2,387	2,337	2,074	1,341	1,493
AU Holding Company Group (G)	8,448	7,343	7,096	9,344	12,208	12,165	12,229	11,285	10,812	9,070
Sentry Insurance Group (G)	8,173	8,949	9,080	8,263	7,293	7,197	5,974	7,166	7,496	7,191
Starr International Group (G)	8,148	7,945	7,043	7,458	4,833	4,455	4,196	2,914	1,759	102
Federated Mutual Group (G)	7,916	8,170	6,820	6,117	5,898	5,082	3,335	3,071	2,381	2,182
Norfolk & Dedham Group Pool (G)	7,585	7,445	9,599	8,552	8,692	8,848	7,859	7,323	7,235	7,207
AmeriTrust Group (G)	7,474	8,928	7,021	7,717	9,674	12,187	9,267	9,227	12,037	12,170
Great American P & C Insurance Group (G)	5,783	3,050	5,850	4,819	5,786	4,303	3,896	3,493	2,674	3,247
EMC Insurance Companies (G)	5,527	5,832	6,209	6,326	4,285	4,012	3,246	1,095	593	495

VII 000114 STTP

Direct Premiums Written for MA Workers' Compensation Group Companies

Companies	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
American National Prop & Cas Group (G)	5,422	5,854	6,093	6,612	6,545	6,400	6,034	5,677	5,296	5,299
American Family Insurance Group (G)	5,041	5,194	6,214	6,426	6,652	7,607	6,649	5,855	5,874	5,970
Service Insurance Group (G)	5,021	3,157	6	0	0	0	0	0	0	0
Tokio Marine US PC Group (G)	5,020	5,798	4,928	5,089	4,708	4,273	3,783	2,686	2,518	2,395
Arrow Mutual Liability Insurance Company	4,950	5,525	6,211	6,671	5,757	5,180	5,589	5,414	5,419	4,588
Markel Corporation Group (G)	4,380	3,694	6,312	7,294	5,507	1,455	1,319	1,314	1,074	1,734
Employers Insurance Group (G)	4,324	4,285	4,757	3,125	1,583	110	0	0	0	0
Skyward Specialty Insurance Group (G)	4,236	4,263	2,208	634	195	34	41	62	11	3
Group 1001 Property and Casualty Group (G)	3,914	1,738	230	4	-3	0	0	-20	488	2,989
Electric Insurance Company	3,810	3,805	3,289	4,451	3,278	4,408	4,164	3,850	4,097	4,240
Everest Re U.S. Group (G)	3,794	5,279	3,240	1,727	1,759	616	489	799	709	422
Core Specialty Insurance Group (G)	3,150	1,044	1,135	997	641	0	0	0	0	0
Merchants Insurance Group (G)	2,790	2,767	2,709	2,603	2,602	2,345	2,058	1,946	1,560	1,460
XL Reinsurance America Group (G)	2,574	3,311	3,802	3,765	4,457	3,265	1,356	1,304	2,650	1,178
Central Insurance Companies (G)	2,569	2,422	1,856	2,116	1,914	2,029	2,334	2,006	1,819	2,009
Sompo Holdings US Group (G)	2,382	2,493	2,171	2,301	1,406	899	585	579	415	578
Benchmark Insurance Group (G)	2,168	1,350	302	26	92	31	0	0	0	0
The Cincinnati Insurance Companies (G)	2,076	1,406	619	367	252	227	294	313	279	271
Argo Group (G)	1,960	1,984	1,808	2,766	2,854	2,870	2,732	3,120	3,328	3,107
AF Group (G)	1,798	1,574	2,781	980	421	361	179	111	139	161
Nationwide Group (G)	1,743	1,348	1,564	2,072	2,462	2,506	3,402	3,282	3,222	2,304
Pharmacists Mutual Insurance Group (G)	1,670	616	549	650	573	536	342	409	364	570
Coaction Specialty Insurance Group (G)	1,605	2,170	3,646	2,976	2,056	1,681	1,047	730	387	171
Church Mutual Insurance Group (G)	1,450	1,318	1,419	1,363	1,287	1,175	1,006	925	919	806
Intact US Insurance Group (G)	1,387	1,441	1,431	1,298	1,306	1,352	1,515	1,632	1,903	226
Work First Casualty Company	1,208	1,414	1,984	1,414	900	0	0	0	0	0
MS&AD US Insurance Group (G)	681	998	1,063	1,284	1,315	2,075	1,706	1,628	1,999	1,860
Amerisure Companies (G)	642	457	503	804	708	777	1,059	550	306	494
GuideOne Insurance Companies (G)	571	386	385	477	557	509	316	59	49	51
James River Group (G)	400	394	257	126	4	0	0	0	0	0

VII 000115 STTP

Direct Premiums Written for MA Workers' Compensation Group Companies

Companies	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Premier Group Insurance Company	362	360	356	367	382	347	322	317	384	341
Allianz US PC Insurance Companies (G)	309	734	816	1,065	1,034	581	397	457	446	1,210
ICW Pool (G)	195	133	145	44	329	490	65	2	0	0
Brotherhood Mutual Insurance Company	193	178	180	139	66	36	5	0	0	0
American Contractors Insurance Group (G)	186	30	55	187	80	47	3	-10	-12	63
ProAssurance Group (G)	174	64	321	12	0	0	0	0	0	0
HDI/Talanx US PC Group (G)	150	1	1,481	2,716	5,579	8,710	6,821	5,300	4,242	2,161
RLI Group (G)	146	151	137	114	111	88	62	45	19	0
Cherokee Insurance Company	131	135	118	109	118	117	99	81	79	91
IAT Insurance Group (G)	107	-26	477	430	414	496	345	335	479	470
AMERISAFE Insurance Group (G)	93	100	176	60	103	125	45	50	111	91
WCF Insurance Group (G)	32	48	56	55	65	30	25	18	18	23
State Farm Group (G)	30	19	32	35	35	24	50	19	30	43
Samsung F & M Insurance Co, Ltd USB	25	11	12	16	36	31	42	17	14	0
Farmers Insurance Group (G)	15	-7	-267	987	2,205	2,660	2,671	3,310	1,187	41
Penn National Insurance Companies (G)	7	3	2	2	3	1	6	3	2	1
West Bend Mutual Insurance Company	6	4	0	0	0	0	0	0	0	0
National American Insurance Company	3	0	1	0	0	0	0	0	0	0
The Gray Insurance Group (G)	2	6	1	1	0	0	0	0	0	0
Munich-American Holding Corp Companies (G)	2	-23	5	92	679	134	72	698	1,636	1,151

Notes:

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

VII 000116 STTP

VII 000117 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

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
2021	1.61	26.89
Average	3.89	8.20

	Dividend	Capital Gains
(4) Weights	32.20%	67.80%
(5) Tax Rate	13.13%	14.98%
(6) Common Stock Tax Rate		14.38%

Notes:

Source: 2022 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	8.64%
(3) Marginal Tax Rate	21.00%
(4) Annual Expected Capital Gains Rate	8.20%

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	1,081,956.25	389,504.25	29,504.25	6,195.89	5,944.47
1	640,000.00	692,452.00	749,202.77	269,713.00	39,313.00	8,255.73	7,290.94
2	409,600.00	479,489.77	518,786.96	186,763.30	39,307.30	8,254.53	6,710.26
3	262,144.00	332,023.65	359,235.07	129,324.62	34,952.78	7,340.08	5,492.46
4	167,772.16	229,910.44	248,753.04	89,551.09	29,153.12	6,122.15	4,216.86
5	107,374.18	159,201.95	172,249.54	62,009.83	23,355.13	4,904.58	3,109.60
6	68,719.48	110,239.71	119,274.54	42,938.83	18,199.82	3,821.96	2,230.53
7	43,980.47	76,335.70	82,591.89	29,733.08	13,900.11	2,919.02	1,568.12
8	28,147.50	52,858.81	57,190.92	20,588.73	10,455.63	2,195.68	1,085.75
9	18,014.40	36,602.19	39,601.97	14,256.71	7,771.52	1,632.02	742.85
10	11,529.22	25,345.26	27,422.46	9,872.09	5,721.57	1,201.53	503.42
11	7,378.70	17,550.38	18,988.74	6,835.95	4,179.61	877.72	338.51
12	4,722.37	12,152.79	13,148.79	4,733.56	3,033.51	637.04	226.15
13	3,022.31	8,415.23	9,104.91	3,277.77	2,189.73	459.84	150.27
14	1,934.28	5,827.14	6,304.71	2,269.70	1,573.35	330.40	99.38
15	1,237.94	4,035.01	4,365.71	1,571.66	1,126.00	236.46	65.47
16	792.28	2,794.05	3,023.04	1,088.30	803.07	168.65	42.98
17	507.06	1,934.75	2,093.31	753.59	571.05	119.92	28.13
18	324.52	1,339.72	1,449.52	521.83	405.00	85.05	18.37
19	207.69	927.69	1,003.72	361.34	286.57	60.18	11.96
20	132.92	642.38	695.03	695.03	562.11	118.04	21.60
Total					266,364.26	55,936.49	39,898.09

(13) Implied Tax Rate on Capital Gains 14.98%

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, average of column (3)
- (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 000119 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	12.34%	11.36%	10.53%	9.82%	9.22%	8.70%	8.26%	7.87%	7.54%	7.24%	6.99%	6.76%
	0.15	13.34%	12.47%	11.72%	11.06%	10.49%	9.98%	9.54%	9.15%	8.80%	8.49%	8.21%	7.96%
	0.20	14.27%	13.52%	12.85%	12.26%	11.73%	11.25%	10.83%	10.44%	10.09%	9.77%	9.48%	9.22%
	0.25	15.06%	14.42%	13.84%	13.31%	12.83%	12.39%	11.99%	11.62%	11.28%	10.97%	10.68%	10.42%
	0.30	15.69%	15.14%	14.63%	14.17%	13.74%	13.34%	12.98%	12.63%	12.32%	12.02%	11.74%	11.48%
	0.35	16.17%	15.70%	15.27%	14.86%	14.48%	14.12%	13.79%	13.47%	13.18%	12.90%	12.64%	12.40%
	0.40	16.55%	16.15%	15.77%	15.41%	15.07%	14.75%	14.45%	14.17%	13.90%	13.65%	13.40%	13.17%
	0.45	16.85%	16.50%	16.17%	15.85%	15.56%	15.27%	15.00%	14.75%	14.50%	14.27%	14.05%	13.84%
	0.50	17.09%	16.78%	16.50%	16.22%	15.96%	15.71%	15.47%	15.24%	15.02%	14.80%	14.60%	14.41%
	0.55	17.29%	17.02%	16.77%	16.53%	16.30%	16.07%	15.86%	15.65%	15.45%	15.26%	15.08%	14.90%
	0.60	17.45%	17.22%	17.00%	16.79%	16.58%	16.39%	16.20%	16.01%	15.83%	15.66%	15.50%	15.34%
	0.65	17.59%	17.39%	17.20%	17.01%	16.83%	16.66%	16.49%	16.33%	16.17%	16.01%	15.86%	15.72%
	0.70	17.71%	17.54%	17.37%	17.21%	17.05%	16.89%	16.75%	16.60%	16.46%	16.32%	16.19%	16.06%

VIII 000009 STIP

Section VIII - F-Class Recommendation
Subsection A - Indicated Rate Change
7/1/2023

Section VIII-A
Exhibit 1

F-Class Rate Review Overall Indicated Rate Change

(1)	5-Year Adjusted Standard Plus ARAP Earned Premium	6,192,969
(2)	5-Year Adjusted Losses, LAE, and LBA	2,814,195
(3)	5-Year Adjusted Loss, LAE, and LBA Ratio = (2) / (1)	45.4%
(4)	Fixed Expense Ratio	5.5%
(5)	Factor to Remove the Large Deductible Contribution to the Residual Market Subsidy	0.996
(6)	Indicated Policy Year 7/1/2023 Loss, LAE, Fixed Expense Ratio = [(3) + (4)] x (5)	50.7%
(7)	Variable Expense Ratio	20.2%
(8)	Profit and Contingencies	-5.1%
(9)	Permissible Loss, LAE, LBA, and Fixed Expense Ratio = 1.000 - [(7) + (8)]	84.9%
(10)	Indicated Average Rate Change = [(6) / (9)] - 1.000	-40.2%
(11)	Rate Changed based on Trended On-Level Expected Loss Ratio	-10.5%
(12)	5-Year Total Claim Count	116
(13)	Credibility of the Indicated Average Rate Change = [(12) / 4,000] ^ 0.5	17.0%
(14)	Credibility Weighted Average Rate Change = [(10) x (13)] + { (11) x [100% - (13)] }	-15.6%

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 Data.

VIII 000010 STIP

Section VIII - F-Class Recommendation
 Subsection A - Indicated Rate Change
 7/1/2023

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	74.2%	
(2)	Loss Adjustment Expense Ratio from Prior Revision	0.187	
(3)	Special Fund Assessment Rate as a % of Federal Indemnity Losses from Prior Revision	11.3%	
		<u>Indemnity</u>	<u>Medical</u>
(4)	Federal Indemnity/Medical Losses as % of Total Federal Losses	58.0%	42.0%
(5)	F-Class Expected Loss Ratio from Prior Revision	59.2%	
	= (1) / {(4) for Indemnity x [1.000 + (2) + (3)] + (4) for Medical x [1.000 + (2)] }		
(6)	Benefit Level Change Factor	1.003	1.000
(7)	Net Indemnity/Medical Trend	-3.3%	-4.3%
(8)	Years since Prior Revision	1.0	1.0
(9)	Trended On-Level Loss Ratio	33.3%	23.8%
	= (4) x (5) x (6) x [1.000 + (7)] ^ (8)		
(10)	Special Fund Assessment Rate as a % of Federal Indemnity Losses	8.8%	
(11)	Loss Adjustment Expense Factor	1.183	
(12)	Trended Loss, LAE and LBA Ratio	70.5%	
	= [(9) for indemnity x (10)] + [(9) Total x (11)]		
(13)	Fixed Expense Ratio	5.5%	
(14)	Trended Loss, LAE and Fixed Expense Ratio	76.0%	
	= (12) + (13)		
(15)	Variable Expense Ratio	20.2%	
(16)	Underwriting Profit Provision	-5.1%	
(17)	Permissible Loss, LAE, LBA, and Fixed Expense Ratio	84.9%	
	= 1.000 - [(15) + (16)]		
(18)	Rate Changed based on Trended On-Level Expected Loss Ratio from Prior Revision	-10.5%	
	= [(14) / (17)] - 1.000		

Notes:

- (1): Section VI-J, Exhibit 1 of 7/1/2022 Stipulation.
 (2), (3), (4): Section VIII-J, Exhibit 1 of 7/1/2022 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
7/1/2023

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)
2016	1,269,651	1.000	0.997	1.054	1,334,198
2017	1,131,807	1.000	0.997	1.054	1,189,453
2018	1,147,135	1.000	0.997	1.054	1,205,497
2019	1,029,570	1.000	0.997	1.054	1,082,150
2020	1,309,154	1.004	0.997	1.054	1,381,672
Total	5,887,317				6,192,969

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 7/1/2022 Stipulation.

(5): The offset for ARAP from the 7/1/2022 Stipulation.

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

VIII 00012 STIP

Section VIII - F-Class Recommendation
 Subsection C - Adjusted Losses
 7/1/2023

Section VIII-C
 Exhibit 1
 Page 1

Calculation of Adjusted Indemnity and Medical Losses Federal Losses

(A). Unit Statistical Limited Reported Losses

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
Fatal	0	200,000	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	4,957	0	0	29,889
Temporary Total	297,363	112,310	91,246	223,902	115,227
Medical					
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	6,272	0	0	34,619
Temporary Total	137,240	89,218	66,408	163,393	76,016
Medical Only	28,611	17,579	8,377	11,244	13,477

(B). Unit Statistical Converted Unlimited Losses

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

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
Fatal	0	183,299	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	6,758	0	0	93,656
Temporary Total	407,220	170,442	148,644	462,614	363,356
Medical					
Fatal	0	17,955	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	8,200	0	0	79,497
Temporary Total	193,156	139,012	100,822	324,453	170,696
Medical Only	28,563	17,613	8,608	14,908	20,713

Note:

(B): Section VIII-G.

VIII 00013 STIP

Section VIII - F-Class Recommendation
 Subsection C - Adjusted Losses
 7/1/2023

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	0.694
Permanent Total	0.611
Permanent Partial	1.076
Temporary Total	1.095

Medical	
Fatal	1.000
Permanent Total	0.610
Permanent Partial	1.075
Temporary Total	1.093
Medical Only	1.000

(D). Adjusted Losses

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
Fatal	0	263,986	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	6,279	0	0	87,023
Temporary Total	372,021	155,709	135,796	422,626	331,948
Medical					
Fatal	0	17,955	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	7,628	0	0	73,951
Temporary Total	176,659	127,139	92,211	296,742	156,117
Medical Only	28,563	17,613	8,608	14,908	20,713
Adjusted Losses, LAE, LBA	2,814,195				

Notes:

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

(D) = (B) / (C)

VIII 000014 STIP

Section VIII - F-Class Recommendation
 Subsection C - Adjusted Losses
 7/1/2023

Section VIII-C
 Exhibit 1
 Page 3

Calculation of Adjusted Indemnity and Medical Losses State Losses

(A). Unit Statistical Limited Reported Losses

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
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 Converted Unlimited Losses

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

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
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
 7/1/2023

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	0.694
Permanent Total	0.611
Permanent Partial	1.076
Temporary Total	1.095

Medical	
Fatal	1.000
Permanent Total	0.610
Permanent Partial	1.075
Temporary Total	1.093
Medical Only	1.000

(D). Adjusted Losses

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
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
7/1/2023

Section VIII-D
Exhibit 1

Proposed Rates and Rating Values to be Effective 7/1/2023

Class Code (1)	Manual Rate (2)	Minimum Premium (3)	Loss Constant (4)	Expected Loss Rate (5)	D-Ratio (6)
6801	4.66	322	0	2.24	0.17
6824	5.90	457	0	2.73	0.19
6826	3.73	290	0	1.79	0.17
6843	11.31	500	0	5.18	0.17
6872	10.48	500	0	4.80	0.19
6874	13.83	500	0	6.33	0.17
7309	10.42	500	0	4.77	0.18
7313	14.35	500	0	6.57	0.16
7317	11.96	500	0	5.47	0.17
7327	17.64	500	0	8.07	0.17
7350	14.45	500	0	6.69	0.16
8709	4.01	299	0	1.83	0.18
8726	3.77	291	0	1.81	0.18
9077	6.13	465	0	3.05	0.21

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 00017 STIP

Section VIII - F-Class Recommendation
 Subsection E - Conversion/Excess Loss Factors
 7/1/2023

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 losses to the benefit level of the proposed effective policy year period.

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
Fatal	1.040	1.035	1.030	1.025	1.020
Permanent Total	1.032	1.028	1.024	1.020	1.016
Permanent Partial	1.016	1.014	1.012	1.010	1.008
Temporary Total	1.032	1.028	1.024	1.020	1.016
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 losses from first through fifth report to an ultimate basis.

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
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				
	2016	2017	2018	2019	2020
All Injury Types	0.761	0.748	0.777	0.858	0.888
Medical					
Lost Time Medical	0.701	0.695	0.717	0.826	0.862
Medical Only	0.623	0.614	0.628	0.771	0.817

(D). Primary Conversion Factors (PCF)

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
Fatal - LD	0.861	0.862	1.025	1.303	2.105
Fatal - NLD	0.823	0.816	0.887	1.103	1.639
Permanent Total	0.854	0.856	1.019	1.296	2.097
Permanent Partial - LD	0.840	0.844	1.007	1.284	2.081
Permanent Partial - NLD	0.803	0.799	0.872	1.087	1.620
Temporary Total - LD	0.854	0.856	1.019	1.296	2.097
Temporary Total - NLD	0.816	0.810	0.882	1.098	1.633
Medical					
Lost Time Medical -LD	0.795	0.817	0.896	1.087	1.316
Lost Time Medical -NLD	0.718	0.711	0.734	0.876	0.978
Medical - NLD	0.638	0.628	0.643	0.818	0.927

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
 7/1/2023

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	1.183	1.183

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

	Indemnity	Medical
Loss Based Assessments	0.088	0.000

(C). Investment Income Offset Factor

The following factor is applied to adjust for investment income.

	Investment Income Offset Factor
Indemnity	
Fatal	0.694
Permanent Total	0.611
Permanent Partial	1.076
Temporary Total	1.095
Medical	
Fatal	1.000
Permanent Total	0.610
Permanent Partial	1.075
Temporary Total	1.093
Medical Only	1.000

(D). Secondary Conversion Factors (SCF)

Indemnity	
Fatal	0.882
Permanent Total	0.776
Permanent Partial	1.367
Temporary Total	1.391
Medical	
Fatal	1.183
Permanent Total	0.721
Permanent Partial	1.271
Temporary Total	1.293
Medical Only	1.183

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 000019 STIP

Section VIII - F-Class Recommendation
 Subsection E - Conversion/Excess Loss Factors
 7/1/2023

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 data.

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

(A). Primary State Conversion Factors

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
Fatal - LD	0.860	0.857	0.931	1.186	1.888
Fatal - NLD	0.834	0.830	0.906	1.133	1.615
Permanent Total	0.874	0.869	0.943	1.199	1.905
Permanent Partial - LD	0.918	0.909	0.982	1.245	1.968
Permanent Partial - NLD	0.890	0.880	0.956	1.189	1.684
Temporary Total - LD	0.850	0.848	0.923	1.177	1.875
Temporary Total - NLD	0.824	0.821	0.898	1.124	1.605
Medical					
Lost Time Medical - LD	0.626	0.615	0.635	0.753	0.850
Lost Time Medical - NLD	0.691	0.683	0.705	0.812	0.868
Medical - NLD	0.614	0.604	0.618	0.758	0.823

(B). Secondary State Conversion Factors

Indemnity	
Fatal	0.821
Permanent Total	0.723
Permanent Partial	1.273
Temporary Total	1.295
Medical	
Fatal	1.183
Permanent Total	0.722
Permanent Partial	1.272
Temporary Total	1.293
Medical Only	1.183

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)	
2016	Fatal	0	0	0	0	0	0	0	0	0	0
	Permanent Total	0	0	0	0	0	0	0	0	0	0
	Permanent Partial	0	0	0	0	0	0	0	0	0	0
	Temporary Total	0	297,363	0	137,240	434,603	0	242,712	0	98,578	341,290
	Medical Only	0	0	0	28,611	28,611	0	0	0	18,250	18,250
2017	Fatal	200,000	0	0	0	200,000	172,350	0	0	0	172,350
	Permanent Total	0	0	0	0	0	0	0	0	0	0
	Permanent Partial	0	4,957	0	6,272	11,229	0	3,963	0	4,457	8,420
	Temporary Total	0	112,310	0	89,218	201,528	0	91,026	0	63,396	154,422
	Medical Only	0	0	0	17,579	17,579	0	0	0	11,044	11,044
2018	Fatal	0	0	0	0	0	0	0	0	0	0
	Permanent Total	0	0	0	0	0	0	0	0	0	0
	Permanent Partial	0	0	0	0	0	0	0	0	0	0
	Temporary Total	0	91,246	0	66,408	157,654	0	80,470	0	48,727	129,197
	Medical Only	0	0	0	8,377	8,377	0	0	0	5,390	5,390
2019	Fatal	0	0	0	0	0	0	0	0	0	0
	Permanent Total	0	0	0	0	0	0	0	0	0	0
	Permanent Partial	0	0	0	0	0	0	0	0	0	0
	Temporary Total	67,794	156,108	57,205	106,188	387,295	87,893	171,368	62,196	92,993	414,450
	Medical Only	0	0	0	11,244	11,244	0	0	0	9,192	9,192
2020	Fatal	0	0	0	0	0	0	0	0	0	0
	Permanent Total	0	0	0	0	0	0	0	0	0	0
	Permanent Partial	0	29,889	0	34,619	64,508	0	48,418	0	33,870	82,288
	Temporary Total	32,168	83,059	10,750	65,266	191,243	67,459	135,600	14,150	63,853	281,062
	Medical Only	0	0	0	13,477	13,477	0	0	0	12,498	12,498
All Years, All Injury Types		299,962	774,932	67,955	584,499	1,727,348	327,702	773,557	76,346	462,248	1,639,853

Notes:

(3), (4), (5), (6): Unit Statistical 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 (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)		
2016	Fatal	0	0	0	0	0	0	0	0	0	0	193,244
2016	Permanent Total	0	0	0	0	0	0	0	0	0	0	
2016	Permanent Partial	0	0	0	0	0	0	0	0	0	0	
2016	Temporary Total	0	50,099	0	50,814	100,913	0	407,220	0	193,156	600,376	
2016	Medical Only	0	0	0	5,904	5,904	0	0	0	28,563	28,563	
2017	Fatal	35,429	0	15,184	0	50,613	183,299	0	17,955	0	201,254	171,747
2017	Permanent Total	0	0	0	0	0	0	0	0	0	0	
2017	Permanent Partial	0	980	0	1,994	2,974	0	6,758	0	8,200	14,958	
2017	Temporary Total	0	31,530	0	44,120	75,650	0	170,442	0	139,012	309,454	
2017	Medical Only	0	0	0	3,850	3,850	0	0	0	17,613	17,613	
2018	Fatal	0	0	0	0	0	0	0	0	0	0	178,290
2018	Permanent Total	0	0	0	0	0	0	0	0	0	0	
2018	Permanent Partial	0	0	0	0	0	0	0	0	0	0	
2018	Temporary Total	0	26,412	0	29,251	55,663	0	148,644	0	100,822	249,466	
2018	Medical Only	0	0	0	1,889	1,889	0	0	0	8,608	8,608	
2019	Fatal	0	0	0	0	0	0	0	0	0	0	165,984
2019	Permanent Total	0	0	0	0	0	0	0	0	0	0	
2019	Permanent Partial	0	0	0	0	0	0	0	0	0	0	
2019	Temporary Total	34,138	39,243	50,635	45,117	169,133	169,711	292,903	145,883	178,569	787,066	
2019	Medical Only	0	0	0	3,415	3,415	0	0	0	14,908	14,908	
2020	Fatal	0	0	0	0	0	0	0	0	0	0	175,170
2020	Permanent Total	0	0	0	0	0	0	0	0	0	0	
2020	Permanent Partial	0	20,077	0	28,667	48,744	0	93,656	0	79,497	173,153	
2020	Temporary Total	27,972	30,240	20,370	33,649	112,231	132,719	230,638	44,632	126,065	534,054	
2020	Medical Only	0	0	0	5,018	5,018	0	0	0	20,713	20,713	
(14)	All Years and Injury Types	97,539	198,581	86,189	253,688	635,997	485,729	1,350,261	208,470	915,726	2,960,186	884,435
(15)	Pure Premium						0.549	1.527	0.236	1.035	3.347	

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	Exposure By Policy Year						Current Rate	Manual Premium					
	2016	2017	2018	2019	2020	Total		2016	2017	2018	2019	2020	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	6.01	0	0	0	0	0	0
6824	45,902	36,701	34,164	31,788	33,327	181,882	8.28	380,069	303,884	282,878	263,205	275,948	1,505,983
6826	19,475	0	3	801	1,568	21,847	4.97	96,791	0	15	3,981	7,793	108,580
6843	6,497	7,410	2,665	1,304	0	17,876	10.91	70,882	80,843	29,075	14,227	0	195,027
6872	8,885	11,081	11,281	11,492	33,308	76,047	15.28	135,763	169,318	172,374	175,598	508,946	1,161,998
6874	10	0	0	40	0	50	16.69	167	0	0	668	0	835
7309	13,523	11,775	20,845	13,002	11,471	70,616	10.27	138,881	120,929	214,078	133,531	117,807	725,226
7313	0	0	0	0	0	0	13.84	0	0	0	0	0	0
7317	4,059	3,162	655	539	884	9,299	17.32	70,302	54,766	11,345	9,335	15,311	161,059
7327	157	91	494	395	569	1,706	22.53	3,537	2,050	11,130	8,899	12,820	38,436
7350	0	0	0	0	0	0	17.07	0	0	0	0	0	0
8709	0	0	0	23	0	23	5.35	0	0	0	123	0	123
8726	94,736	101,527	108,183	106,600	94,043	505,089	3.94	373,260	400,016	426,241	420,004	370,529	1,990,051
9077	0	0	0	0	0	0	5.91	0	0	0	0	0	0
Total	193,244	171,747	178,290	165,984	175,170	884,435		1,269,651	1,131,807	1,147,135	1,029,570	1,309,154	5,887,317

Notes:
 (2) - (7): Unit Statistical Data.
 (8): Section VIII-D, Exhibit 1 of the 7/1/2022 Stipulation.

VIII 000022 STIP

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	6.903	2.212	0.581	0.742	0.996	1.000	1.003	0.967	2.873
	Medical	6.903	1.596	0.419	0.742	0.996	1.000	1.000	0.957	2.045
	Total		3.808							

Notes:

- (3): Section VIII-H, Exhibit 1 of the 7/1/2022 Stipulation.
- (4): Section VIII-G of the 7/1/2022 Stipulation.
- (6): Section VI-J, Exhibit 1 of the 7/1/2022 Stipulation.
- (7): Change in load from Section VIII-K, Exhibit 1 and the 7/1/2022 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
 7/1/2023

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	1.065	0.632	3.060	1.292	4.353
6824	1.144	1.318	3.287	2.695	5.982
6826	0.826	0.600	2.372	1.228	3.600
6843	2.579	1.860	7.408	3.803	11.212
6872	2.485	2.044	7.140	4.180	11.320
6874	2.948	1.898	8.470	3.882	12.352
7309	1.672	1.285	4.803	2.628	7.431
7313	14.607	2.781	41.965	5.687	47.652
7317	2.784	2.218	7.998	4.535	12.533
7327	3.672	2.813	10.550	5.752	16.302
7350	3.115	1.673	8.948	3.422	12.370
8709	0.861	0.686	2.474	1.404	3.877
8726	0.538	0.636	1.546	1.301	2.847
9077	0.859	1.796	2.469	3.673	6.142

Notes:

(2), (3): Section VIII-H, Exhibit 2 of the 7/1/2022 Stipulation.

(4), (5) = (2), (3) x Pure Premium Underlying Present Rate Factors from Exhibit 2.

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Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2023

Section VIII - G
 Exhibit 1

Calculation of Class Relativities

Class(es): 6801 BOAT BUILDING - WOOD - NOC & DRIVERS: US ACT									Effective: 7/1/2023			Federal Class Codes		
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)			
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			
2019	0	0	0	0	0	0	0	0	0.000	0.000	0.000			
2020	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:	0.424	0.410	0.834
(16) Countrywide Indicated Relativity:	0.193	0.333	.
(17) Countrywide Credibility:	0.120	0.130	.
(18) Countrywide Lost-Time Claims:	6.000	.	.
(19) Pure Premium Underlying Present Rate:	3.060	1.292	4.353
(20) Relativity to Underlying Present Rate:	1.066	0.636	.
(21) Credibility to Underlying Relativity:	0.880	0.870	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	0.961	0.597	.
(24) Balanced Formula Relativity:	0.970	0.586	0.824

Class(es): 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT									Effective: 7/1/2023			Federal Class Codes		
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)			
2016	45.902	0	5	0	3.188	0	17.827	21.015	0.069	0.388	0.458			
2017	36.701	0	7	0	46.549	0	53.053	99.602	1.268	1.446	2.714			
2018	34.164	0	9	0	24.267	0	14.813	39.081	0.710	0.434	1.144			
2019	31.788	0	4	0	167.222	0	43.369	210.591	5.261	1.364	6.625			
2020	33.327	0	4	0	98.478	0	65.928	164.406	2.955	1.978	4.933			
MA Total:	181.882	0	29	0	339.705	0	194.991	534.695	1.868	1.072	2.940			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.900	0.843	.
(14) Massachusetts Credibility:	0.210	0.380	.
(15) Countrywide Pure Premium:	1.890	1.519	3.409
(16) Countrywide Indicated Relativity:	0.858	1.234	.
(17) Countrywide Credibility:	0.310	0.310	.
(18) Countrywide Lost-Time Claims:	64.000	.	.
(19) Pure Premium Underlying Present Rate:	3.287	2.695	5.982
(20) Relativity to Underlying Present Rate:	1.145	1.326	.
(21) Credibility to Underlying Relativity:	0.480	0.310	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	1.005	1.114	.
(24) Balanced Formula Relativity:	1.014	1.095	1.044

VIII 00026 STIP

Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2023

Section VIII - G
 Exhibit 2

Calculation of Class Relativities

Class(es): 6826 MARINA & DRIVERS: US ACT		Effective: 7/1/2023							Federal Class Codes		
		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)
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
2019	801	0	1	0	0	0	2,805	2,805	0.000	3.503	3.503
2020	1,568	0	1	0	4,470	0	13,721	18,191	2,851	8,752	11,603
MA Total:	21,847	0	2	0	4,470	0	16,526	20,996	0.205	0.756	0.961

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.099	0.595	.
(14) Massachusetts Credibility:	0.080	0.120	.
(15) Countrywide Pure Premium:	1.115	0.548	1.663
(16) Countrywide Indicated Relativity:	0.506	0.445	.
(17) Countrywide Credibility:	0.170	0.180	.
(18) Countrywide Lost-Time Claims:	13.000	.	.
(19) Pure Premium Underlying Present Rate:	2.372	1.228	3.600
(20) Relativity to Underlying Present Rate:	0.827	0.604	.
(21) Credibility to Underlying Relativity:	0.750	0.700	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	0.714	0.574	.
(24) Balanced Formula Relativity:	0.720	0.564	0.661

Class(es): 6843 SHIP BUILDING-IRON OR STEEL-NOC & DRIVERS: US ACT		Effective: 7/1/2023							Federal Class Codes		
		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)
2016	6,497	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	7,410	0	3	0	0	0	631	631	0.000	0.085	0.085
2018	2,665	0	2	0	84,537	0	29,921	114,458	31,724	11,229	42,953
2019	1,304	0	1	0	0	0	824	824	0.000	0.631	0.631
2020	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	17,876	0	6	0	84,537	0	31,375	115,912	4,729	1,755	6,484

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.278	1.381	.
(14) Massachusetts Credibility:	0.110	0.170	.
(15) Countrywide Pure Premium:	7.380	3.667	11.046
(16) Countrywide Indicated Relativity:	3.351	2.978	.
(17) Countrywide Credibility:	0.370	0.400	.
(18) Countrywide Lost-Time Claims:	99.000	.	.
(19) Pure Premium Underlying Present Rate:	7.408	3.803	11.212
(20) Relativity to Underlying Present Rate:	2.582	1.871	.
(21) Credibility to Underlying Relativity:	0.520	0.430	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	2.833	2.231	.
(24) Balanced Formula Relativity:	2.858	2.192	2.605

VIII 00027 STIP

Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2023

Section VIII - G
 Exhibit 3

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	8,885	0	1	0	588	0	799	1,387	0.066	0.090	0.156	
2017	11,081	0	2	0	111,618	0	88,561	200,179	10.073	7.992	18.066	
2018	11,281	0	1	0	0	0	678	678	0.000	0.060	0.060	
2019	11,492	0	4	0	0	0	2,206	2,206	0.000	0.192	0.192	
2020	33,308	0	5	0	93,656	0	87,717	181,373	2.812	2.634	5.445	
MA Total:	76,046	0	13	0	205,862	0	179,961	385,823	2.707	2.366	5.074	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.304	1.862	.
(14) Massachusetts Credibility:	0.200	0.320	.
(15) Countrywide Pure Premium:	2.792	2.614	5.406
(16) Countrywide Indicated Relativity:	1.268	2.123	.
(17) Countrywide Credibility:	0.400	0.340	.
(18) Countrywide Lost-Time Claims:	168.00	.	.
(19) Pure Premium Underlying Present Rate:	7.140	4.180	11.320
(20) Relativity to Underlying Present Rate:	2.488	2.057	.
(21) Credibility to Underlying Relativity:	0.400	0.340	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	1.763	2.017	.
(24) Balanced Formula Relativity:	1.778	1.982	1.856

Class(es):		Effective: 7/1/2023							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)	
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	
2019	40	0	0	0	0	0	0	0	0.000	0.000	0.000	
2020	0	0	0	0	0	0	0	0	0.000	0.000	0.000	
MA Total:	50	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	0.020	.
(15) Countrywide Pure Premium:	4.172	2.976	7.148
(16) Countrywide Indicated Relativity:	1.895	2.417	.
(17) Countrywide Credibility:	0.170	0.180	.
(18) Countrywide Lost-Time Claims:	13.000	.	.
(19) Pure Premium Underlying Present Rate:	8.470	3.882	12.352
(20) Relativity to Underlying Present Rate:	2.951	1.910	.
(21) Credibility to Underlying Relativity:	0.820	0.800	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	2.742	1.963	.
(24) Balanced Formula Relativity:	2.766	1.929	2.448

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Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2023

Section VIII - G
 Exhibit 4

Calculation of Class Relativities

Class(es): 7309 STEVEDORING: NOC - US ACT		Effective: 7/1/2023							Federal Class Codes		
		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)
2016	13.523	0	1	0	634	0	1,381	2,016	0.047	0.102	0.149
2017	11.775	0	1	0	0	0	537	537	0.000	0.046	0.046
2018	20.845	0	1	0	0	0	61	61	0.000	0.003	0.003
2019	13.002	1	1	151.211	0	139.935	1,235	292.380	11.630	10.858	22.487
2020	11.471	1	0	132.719	0	44.632	0	177.350	11.570	3.891	15.461
MA Total:	70.616	2	4	283.929	634	184.566	3,214	472.343	4.030	2.659	6.689

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.941	2.092	.
(14) Massachusetts Credibility:	0.170	0.260	.
(15) Countrywide Pure Premium:	4.811	2.406	7.218
(16) Countrywide Indicated Relativity:	2.185	1.954	.
(17) Countrywide Credibility:	0.370	0.370	.
(18) Countrywide Lost-Time Claims:	95.000	.	.
(19) Pure Premium Underlying Present Rate:	4.803	2.628	7.431
(20) Relativity to Underlying Present Rate:	1.674	1.293	.
(21) Credibility to Underlying Relativity:	0.460	0.370	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	1.908	1.745	.
(24) Balanced Formula Relativity:	1.925	1.715	1.845

Class(es): 7313 COAL DOCK OPERATION & STEVEDORING: US ACT		Effective: 7/1/2023							Federal Class Codes		
		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)
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
2019	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	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:	3.235	16.137	19.372
(16) Countrywide Indicated Relativity:	1.469	13.104	.
(17) Countrywide Credibility:	0.230	0.240	.
(18) Countrywide Lost-Time Claims:	28.000	.	.
(19) Pure Premium Underlying Present Rate:	41.965	5.687	47.652
(20) Relativity to Underlying Present Rate:	14.623	2.798	.
(21) Credibility to Underlying Relativity:	0.770	0.760	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	11.598	5.271	.
(24) Balanced Formula Relativity:	11.698	5.179	9.223

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Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2023

Section VIII - G
 Exhibit 5

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
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	2,856	0	3,423	6,279	4.362	5.228	9.590
2019	539	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	884	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	9,298	0	1	0	2,856	0	3,423	6,279	0.307	0.368	0.675

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.148	0.290	.
(14) Massachusetts Credibility:	0.090	0.140	.
(15) Countrywide Pure Premium:	4.403	2.247	6.650
(16) Countrywide Indicated Relativity:	2.000	1.825	.
(17) Countrywide Credibility:	0.320	0.340	.
(18) Countrywide Lost-Time Claims:	65.000	.	.
(19) Pure Premium Underlying Present Rate:	7.998	4.535	12.533
(20) Relativity to Underlying Present Rate:	2.787	2.232	.
(21) Credibility to Underlying Relativity:	0.590	0.520	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	2.297	1.821	.
(24) Balanced Formula Relativity:	2.317	1.790	2.117

Class(es):		Effective: 7/1/2023							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)
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
2019	395	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	569	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	1,706	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	0.080	.
(15) Countrywide Pure Premium:	9.618	0.642	10.259
(16) Countrywide Indicated Relativity:	4.368	0.521	.
(17) Countrywide Credibility:	0.080	0.080	.
(18) Countrywide Lost-Time Claims:	2.000	.	.
(19) Pure Premium Underlying Present Rate:	10.550	5.752	16.302
(20) Relativity to Underlying Present Rate:	3.676	2.830	.
(21) Credibility to Underlying Relativity:	0.870	0.840	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	3.548	2.419	.
(24) Balanced Formula Relativity:	3.578	2.377	3.122

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Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2023

Section VIII - G
 Exhibit 6

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
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
2019	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	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:	6.473	2.237	8.710
(16) Countrywide Indicated Relativity:	2.940	1.816	.
(17) Countrywide Credibility:	0.340	0.350	.
(18) Countrywide Lost-Time Claims:	75.000	.	.
(19) Pure Premium Underlying Present Rate:	8.948	3.422	12.370
(20) Relativity to Underlying Present Rate:	3.118	1.684	.
(21) Credibility to Underlying Relativity:	0.660	0.650	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	3.057	1.730	.
(24) Balanced Formula Relativity:	3.084	1.700	2.558

Class(es):		Effective: 7/1/2023							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)
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
2019	23	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	23	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:	0.295	0.474	0.769
(16) Countrywide Indicated Relativity:	0.134	0.385	.
(17) Countrywide Credibility:	0.140	0.140	.
(18) Countrywide Lost-Time Claims:	8.000	.	.
(19) Pure Premium Underlying Present Rate:	2.474	1.404	3.877
(20) Relativity to Underlying Present Rate:	0.862	0.691	.
(21) Credibility to Underlying Relativity:	0.850	0.850	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	0.751	0.641	.
(24) Balanced Formula Relativity:	0.758	0.630	0.709

VIII 00031 STIP

Section VIII - F-Class Recommendation
 Subsection G - Class Relativities
 7/1/2023

Section VIII - G
 Exhibit 7

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Federal Class Codes			
8726 STEAMSHIP LINE OR AGENCY-PORT EMP: SPRVSR, CAPTNS, ENGRS, STWR												
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)	
2016	94.736	0	14	0	402.810	0	201.711	604.521	4.252	2.129	6.381	
2017	101.527	1	12	183.299	19.032	17.955	22.043	242.330	1.993	0.394	2.387	
2018	108.183	0	14	0	36.984	0	60.534	97.518	0.342	0.560	0.901	
2019	106.600	1	10	18.500	125.680	5.949	143.040	293.169	1.353	1.398	2.750	
2020	94.043	0	7	0	127.690	0	58.909	186.599	1.358	0.626	1.984	
MA Total:	505.089	2	57	201.799	712.197	23.904	486.238	1,424.137	1.810	1.010	2.820	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.872	0.795	.
(14) Massachusetts Credibility:	0.230	0.420	.
(15) Countrywide Pure Premium:	1.659	0.682	2.341
(16) Countrywide Indicated Relativity:	0.753	0.554	.
(17) Countrywide Credibility:	0.190	0.200	.
(18) Countrywide Lost-Time Claims:	18.000	.	.
(19) Pure Premium Underlying Present Rate:	1.546	1.301	2.847
(20) Relativity to Underlying Present Rate:	0.539	0.640	.
(21) Credibility to Underlying Relativity:	0.580	0.380	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	0.656	0.688	.
(24) Balanced Formula Relativity:	0.662	0.676	0.667

Class(es):		Effective: 7/1/2023							Federal Class Codes			
9077 UNITED STATES ARMED SERVICE RISK-ALL EMPLOYEES & 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)	
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	
2019	0	0	0	0	0	0	0	0	0.000	0.000	0.000	
2020	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:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.860	1.807	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.469	3.673	6.142
(20) Relativity to Underlying Present Rate:	0.860	1.807	.
(21) Credibility to Underlying Relativity:	1.000	1.000	.
(22) Industry Group Converted Pure Premium:	2.076	1.271	3.347
(23) Formula Relativity:	0.860	1.807	.
(24) Balanced Formula Relativity:	0.868	1.776	1.213

VIII 00032 STIP

Section VIII - F-Class Recommendation
Subsection H - Proposed Rates
7/1/2023

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	-15.6%
(3) Target Rate Change = (1) x [1.000 + (2)] - 1.000	-15.6%
(4) Maximum Rate Change = (3) + 20.0%	4.4%
(5) Minimum Rate Change = (3) - 20.0%	-35.6%
(6) Present Average Rate	6.954
(7) Uncapped Rate Level Factor = [1.000 + (3)] x (6)	5.870
(8) Capped Rate Level Factor	5.942

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 7/1/22 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
 7/1/2023

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	0.970	0.586	0.824	5.870	4.84
6824	1.014	1.095	1.044	5.870	6.13
6826	0.720	0.564	0.661	5.870	3.88
6843	2.858	2.192	2.605	5.870	15.29
6872	1.778	1.982	1.856	5.870	10.89
6874	2.766	1.929	2.448	5.870	14.37
7309	1.925	1.715	1.845	5.870	10.83
7313	11.698	5.179	9.223	5.870	54.13
7317	2.317	1.790	2.117	5.870	12.43
7327	3.578	2.377	3.122	5.870	18.33
7350	3.084	1.700	2.558	5.870	15.02
8709	0.758	0.630	0.709	5.870	4.16
8726	0.662	0.676	0.667	5.870	3.92
9077	0.868	1.776	1.213	5.870	7.12

Notes:

(2), (3), (4): Section VIII-G.

(5): Exhibit 1.

VIII 00034 STIP

Section VIII - F-Class Recommendation
Subsection H - Proposed Rates
7/1/2023

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	6.28	4.84	4.90
6824	8.65	6.13	6.21
6826	5.20	3.88	3.93
6843	11.40	15.29	11.90
6872	15.97	10.89	11.03
6874	17.44	14.37	14.55
7309	10.73	10.83	10.96
7313	14.46	54.13	15.09
7317	18.10	12.43	12.58
7327	23.54	18.33	18.55
7350	17.84	15.02	15.20
8709	5.59	4.16	4.21
8726	4.12	3.92	3.96
9077	6.18	7.12	6.45

Notes:

(2): Section VIII-H, Exhibit 3 of the 7/1/2022 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
7/1/2023

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	6,150,739	5,191,224	-15.6%	-15.6%	5.94

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
 7/1/2023

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	5.870	2.076	0.620	0.788	2.868
	Medical	5.870	1.271	0.380	0.788	1.756
	Total		3.347			

Notes:

- (3): Section VIII - H, Exhibit 1.
- (4): Section VIII - F, Exhibit 1, Page 2.
- (6): Section VI - J, Exhibit 1.

VIII 00037 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 Data, Excluding Large Deductibles)							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	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	
	2019	0	0	0	0	0	0	87,822	
	2020	0	0	0	0	0	0	34,776	
Medical	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	8,345	2,121
	2019	0	0	0	0	0	0	18,992	812
	2020	0	0	0	0	0	0	33,277	802

		(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	2016	0.861	0.823	0.854	0.840	0.803	0.854	0.816	
	2017	0.862	0.816	0.856	0.844	0.799	0.856	0.810	
	2018	1.025	0.887	1.019	1.007	0.872	1.019	0.882	
	2019	1.303	1.103	1.296	1.284	1.087	1.296	1.098	
	2020	2.105	1.639	2.097	2.081	1.620	2.097	1.633	
Medical	2016	0.795	0.718	0.795	0.795	0.718	0.795	0.718	0.638
	2017	0.817	0.711	0.817	0.817	0.711	0.817	0.711	0.628
	2018	0.896	0.734	0.896	0.896	0.734	0.896	0.734	0.643
	2019	1.087	0.876	1.087	1.087	0.876	1.087	0.876	0.818
	2020	1.316	0.978	1.316	1.316	0.978	1.316	0.978	0.927

		(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	2016	0	0	0	0	0	0	1,838	
	2017	0	0	0	0	3,963	0	22,940	
	2018	0	0	0	0	0	0	13,990	
	2019	0	0	0	0	0	0	96,407	
	2020	0	0	0	0	0	0	56,774	
Medical	2016	0	0	0	0	0	0	1,668	9,160
	2017	0	0	0	0	4,457	0	19,227	5,044
	2018	0	0	0	0	0	0	6,123	1,365
	2019	0	0	0	0	0	0	16,632	664
	2020	0	0	0	0	0	0	32,557	744

VIII 00038 STIP

Section VIII - F-Class Recommendation
 Subsection I - Pricing Example
 7/1/2023

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	2016	0	0	0	0	0	0	649	
	2017	0	0	0	0	1,400	0	8,102	
	2018	0	0	0	0	0	0	4,941	
	2019	0	0	0	0	0	0	34,049	
	2020	0	0	0	0	0	0	20,052	
Medical	2016	0	0	0	0	0	0	589	3,235
	2017	0	0	0	0	1,574	0	6,791	1,781
	2018	0	0	0	0	0	0	2,163	482
	2019	0	0	0	0	0	0	5,874	234
	2020	0	0	0	0	0	0	11,498	263

(E). Federal Adjusted Excess Losses									
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2016	0	0	0	0	0	0	454	
	2017	0	0	0	0	980	0	5,671	
	2018	0	0	0	0	0	0	3,459	
	2019	0	0	0	0	0	0	23,834	
	2020	0	0	0	0	0	0	14,036	
Medical	2016	0	0	0	0	0	0	784	3,235
	2017	0	0	0	0	1,994	0	9,221	1,781
	2018	0	0	0	0	0	0	3,645	482
	2019	0	0	0	0	0	0	16,089	234
	2020	0	0	0	0	0	0	17,514	263

(F). Federal Secondary Conversion Factors					
	Fatal	Permanent Total	Permanent Partial	Temporary Total	Medical Only
Indemnity	0.882	0.776	1.367	1.391	
Medical	1.183	0.721	1.271	1.293	1.183

(G). Federal Converted Unlimited Losses									
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2016	0	0	0	0	0	0	3,188	
	2017	0	0	0	0	6,758	0	39,791	
	2018	0	0	0	0	0	0	24,267	
	2019	0	0	0	0	0	0	167,222	
	2020	0	0	0	0	0	0	98,478	
Medical	2016	0	0	0	0	0	0	3,170	14,657
	2017	0	0	0	0	8,200	0	36,782	8,071
	2018	0	0	0	0	0	0	12,630	2,184
	2019	0	0	0	0	0	0	42,306	1,062
	2020	0	0	0	0	0	0	64,738	1,190

(H). Total Federal Converted Unlimited Losses				
Policy Year	Indemnity		Medical	
	LD	NLD	LD	NLD
2016	0	3,188	0	17,827
2017	0	46,549	0	53,053
2018	0	24,267	0	14,813
2019	0	167,222	0	43,369
2020	0	98,478	0	65,928
Total	0	339,705	0	194,991

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 00040 STIP

Section VIII - F-Class Recommendation
 Subsection I - Pricing Example
 7/1/2023

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	2016	0	0	0	0	0	0	0	
	2017	0	0	0	0	0	0	0	
	2018	0	0	0	0	0	0	0	
	2019	0	0	0	0	0	0	0	
	2020	0	0	0	0	0	0	0	
Medical	2016	0	0	0	0	0	0	0	0
	2017	0	0	0	0	0	0	0	0
	2018	0	0	0	0	0	0	0	0
	2019	0	0	0	0	0	0	0	0
	2020	0	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	2016	0	0	0	0	0	0	0	
	2017	0	0	0	0	0	0	0	
	2018	0	0	0	0	0	0	0	
	2019	0	0	0	0	0	0	0	
	2020	0	0	0	0	0	0	0	
Medical	2016	0	0	0	0	0	0	0	0
	2017	0	0	0	0	0	0	0	0
	2018	0	0	0	0	0	0	0	0
	2019	0	0	0	0	0	0	0	0
	2020	0	0	0	0	0	0	0	0

		(F). State Secondary Conversion Factors				
		Fatal	Permanent Total	Permanent Partial	Temporary Total	Medical Only
Indemnity		0.821	0.723	1.273	1.295	
Medical		1.183	0.722	1.272	1.293	1.183

		(G). State Converted Unlimited Losses							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2016	0	0	0	0	0	0	0	
	2017	0	0	0	0	0	0	0	
	2018	0	0	0	0	0	0	0	
	2019	0	0	0	0	0	0	0	
	2020	0	0	0	0	0	0	0	
Medical	2016	0	0	0	0	0	0	0	0
	2017	0	0	0	0	0	0	0	0
	2018	0	0	0	0	0	0	0	0
	2019	0	0	0	0	0	0	0	0
	2020	0	0	0	0	0	0	0	0

		(H). Total State Converted Unlimited Losses			
Policy Year	Indemnity		Medical		
	LD	NLD	LD	NLD	
2016	0	0	0	0	
2017	0	0	0	0	
2018	0	0	0	0	
2019	0	0	0	0	
2020	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 00041 STIP

Section VIII - F-Class Recommendation
Subsection I - Pricing Example
7/1/2023

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)
2016	45,902	3,188	17,827
2017	36,701	46,549	53,053
2018	34,164	24,267	14,813
2019	31,788	167,222	43,369
2020	33,327	98,478	65,928
Total	181,882	339,705	194,991
(5)	Indicated Pure Premium	1.868	1.072
(6)	Federal Class Codes Industry Group Pure Premium	2.076	1.271
(7)	MA Indicated Relativity	0.900	0.843

Notes:

(2): Unit Statistical 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

Section VIII - F-Class Recommendation
 Subsection I - Pricing Example
 7/1/2023

Section VIII-I
 Exhibit 2
 Page 1

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	1,243	3,760	19,756	10,777	1	1	4,048,429
Arizona	2	0	0	0	0	0	0	5,704
Arkansas	3	0	0	0	0	0	0	57,955
Colorado	5	0	0	0	0	0	0	0
Connecticut	6	105,956	32,566	134,179	45,409	1	1	1,249,557
D.C.	8	0	0	0	0	0	0	0
Florida	9	19,545	81,546	4,686	292,353	1	10	13,163,018
Georgia	10	0	0	0	0	0	0	446,663
Idaho	11	0	0	0	0	0	0	1,506
Illinois	12	0	0	0	0	0	0	716,579
Indiana	13	0	0	0	0	0	0	6,672
Iowa	14	0	137,847	0	142,608	0	3	1,174,545
Kansas	15	0	0	0	0	0	0	0
Kentucky	16	0	0	0	784	0	0	764,009
Louisiana	17	0	5,086	0	95,462	0	1	5,133,165
Maine	18	72,427	24,163	145,442	93,192	1	6	13,928,917
Maryland	19	0	0	0	5,465	0	0	802,585
Michigan	21	0	0	0	0	0	0	0
Minnesota	22	0	0	0	0	0	0	0
Mississippi	23	3,595	189,612	19,102	531,681	1	7	20,537,732
Missouri	24	0	0	0	0	0	0	0
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	167,372
New Hampshire	28	0	23,364	0	78,825	0	1	1,783,444
New Mexico	30	0	0	0	0	0	0	0
North Carolina	32	0	49,763	0	69,483	0	1	8,953,017
Oklahoma	35	14,098	0	2,980	0	1	0	500,468
Oregon	36	3,543	34,942	1,597	81,375	1	6	8,269,543
Rhode Island	38	0	35,738	0	37,278	0	2	4,588,610
South Carolina	39	4	193,278	1	131,830	1	2	1,468,961
South Dakota	40	0	0	0	0	0	0	0
Tennessee	41	0	0	0	832	0	0	506,796
Utah	43	0	0	0	0	0	0	0
Vermont	44	0	0	0	0	0	0	0
Virginia	45	0	0	0	5,153	0	0	11,223,383
West Virginia	47	0	0	0	0	0	0	0
Wisconsin	48	0	0	0	0	0	0	0
Hawaii	52	0	48,861	0	36,827	0	1	2,130,189
Alaska	54	77,849	49,695	127,322	298,323	1	13	11,520,709
Total		298,260	910,221	455,065	1,957,657	9	55	113,150,347

Notes:

- (3) - (9): Data are total for three policy years. The two older years displayed in Section IX-D, Exhibit 3 at earlier reports and the previous year at third report (example: Alabama 5/2017 - 4/2018 @ First Report, 5/2016 - 4/2017 @ Second Report, 5/2015 - 4/2016 @ Third Report)
- (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	2.761	1.093	0.341	0.825	
Arizona	2	0.000	0.000	0.000	0.000	
Arkansas	3	14.062	1.398	0.000	0.000	
Colorado	5	0.000	0.000	0.000	0.000	
Connecticut	6	0.570	0.256	6.323	3.680	
D.C.	8	17.733	18.951	0.000	0.000	
Florida	9	1.930	0.556	1.482	1.255	
Georgia	10	2.344	0.756	0.000	0.000	
Idaho	11	0.000	0.000	0.000	0.000	
Illinois	12	1.083	0.641	0.000	0.000	
Indiana	13	12.716	1.358	0.000	0.000	
Iowa	14	0.389	0.241	4.564	2.931	
Kansas	15	0.000	0.000	0.000	0.000	
Kentucky	16	16.098	5.178	0.000	0.531	
Louisiana	17	1.397	0.920	0.138	1.711	
Maine	18	3.186	0.852	2.209	1.459	
Maryland	19	2.444	1.664	0.000	1.133	
Michigan	21	0.000	0.000	0.000	0.000	
Minnesota	22	0.000	0.000	0.000	0.000	
Mississippi	23	2.881	0.871	2.710	2.336	
Missouri	24	4.534	4.078	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	1.444	0.260	1.892	1.147	
New Mexico	30	0.000	0.000	0.000	0.000	
North Carolina	32	4.401	2.427	2.446	1.883	
Oklahoma	35	1.165	1.977	3.282	1.177	
Oregon	36	3.978	1.936	1.851	1.942	
Rhode Island	38	0.245	0.639	0.191	0.519	
South Carolina	39	0.622	0.507	8.186	4.550	
South Dakota	40	0.000	0.000	0.000	0.000	
Tennessee	41	3.128	1.396	0.000	0.229	
Utah	43	0.000	0.000	0.000	0.000	
Vermont	44	0.000	0.511	0.000	0.000	
Virginia	45	1.200	1.882	0.000	0.086	
West Virginia	47	0.000	46.624	0.000	0.000	
Wisconsin	48	0.000	0.000	0.000	0.000	
Hawaii	52	0.222	0.043	0.509	0.075	
Alaska	54	2.850	0.464	3.155	1.714	
(8) ge of (5), (6) weighted by Payroll from Page 1, respectively				1.890	1.519	3.409
(9) CW Federal Class Codes Pure Premium				2.202	1.231	3.433
(10) CW Relativity = (8) / (9)				0.858	1.234	0.993
(11) CW Relativity, balanced to unity				0.858	1.234	

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 00044 STIP

Section VIII - F-Class Recommendation
 Subsection I - Pricing Example
 7/1/2023

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
0.900	0.843
0.858	1.234
1.145	1.326

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
1.144	1.318
2.873	2.045
3.287	2.695
597,849	490,113
29,750,000	5,600,000
21%	38%

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
64	64
1,150	1,000
31%	31%
48%	31%
1.005	1.114
0.991	1.018

- (16) Balanced Formula Relativity

Injury Type		
Indemnity	Medical	Total
1.014	1.095	1.044

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
7/1/2023

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	8.65
(2) Total Balanced Formula Relativity	1.044
(3) Capped Rate Level Factor	5.942
(4) Maximum Average Rate	9.03
(5) Minimum Average Rate	5.57
(6) Proposed Average Capped Rate = (2) x (3), Subject to Caps (4), (5)	6.21
(7) Offset for Merit Rating	0.997
(8) Offset for ARAP	1.055
(9) Offset for Construction Classification Premium Adjustment Program	1.000
(10) Provision for Insolvency Fund Assessment Recoupment	0.0000
(11) Proposed Manual Rate = { (6) / [(7) x (8) x (9)] } x { 1.000 / [1.000 - (10)] }	5.90
(12) Minimum Premium	457
(13) Loss Constant	0
(14) Expected Loss Rate	2.73
(15) D-Ratio	0.19

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 program.

(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
7/1/2023

Section VIII-J
Exhibit 1

Calculation of USLH & HW Compensation Coverage Percentage

(1)	Benefits Differential Underlying Current USLH & HW Coverage Percentage	1.148
(2)	State Benefit Level Adjustments Since Last Approval	1.027
(3)	Federal Benefit Level Adjustments Since Last Approval	1.002
(4)	Revised Benefits Differential = (1) x [(3) / (2)]	1.120
(5)	Federal Indemnity Losses as % of Total Federal Losses	62.2%
(6)	Expected Loss Ratio for State Classes	66.6%
(7)	Fixed Expense Ratio	5.5%
(8)	Special Fund Assessment Rate as % of Federal Indemnity Losses	0.088
(9)	Loss Adjustment Expense Factor (Applies to Losses)	1.183
(10)	USLH & HW Coverage Percentage for Manual Rates	1.160
(11)	USLH & HW Coverage Percentage for Expected Loss Rates	1.112

Notes:

(1): Section VIII-J, Exhibit 1 of 7/1/2022 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
7/1/2023

Section VIII-K
Exhibit 1

Calculation of Federal Tax Multiplier

(1)	State Tax Multiplier	1.043
(2)	Loading for Taxes and Residual Market Subsidy = $1.0 - [1.0 / (1)]$	4.1%
(3)	Expected Loss Ratio (no LAE)	65.2%
(4)	Federal Special Funds Assessment	8.8%
(5)	Federal Indemnity Losses as % of Total Losses	62.2%
(6)	Loading for Federal Funds Assessment = $(3) \times (4) \times (5)$	3.6%
(7)	Federal Tax Multiplier = $1.0 / [1.0 - (2) - (6)]$	1.084

Notes:

(1), (3): Section XII-A, Exhibit 3.

(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 000016 STIP

Section IX - Classification Pricing
 Subsection A - Summary
 7/1/2023

Section IX - A
 Exhibit 1
 Page 1

MASSACHUSETTS WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE MANUAL **RATES**

Draft *Proposed Effective July 1, 2023* 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	2.01	249.	20.	1924	2.09	232.	--	2501	1.72	219.	--	3082D	3.16	270.	--
0008	1.84	243.	20.	1925	4.60	320.	--	2503	0.81	187.	--	3085D	3.22	272.	--
0016	2.65	272.	20.	2003	2.67	252.	--	2570	2.53	248.	--	3110	5.49	351.	--
0034	2.04	250.	20.	2014	2.99	264.	--	2576	1.58	214.	--	3111	1.80	222.	--
0035	1.25	223.	20.	2021	2.23	237.	--	2585	2.33	241.	--	3113	1.33	206.	--
0036	2.04	250.	20.	2039	3.36	277.	--	2586	1.73	220.	--	3114	1.99	229.	--
0042	2.69	273.	20.	2041	1.86	224.	--	2587	1.64	236.	20.	3118	1.05	196.	--
0046	2.22	257.	20.	2070	2.70	254.	--	2623	3.31	275.	--	3119	0.75	185.	--
0050	3.68	338.	50.	2081	2.48	246.	--	2651	1.02	195.	--	3120	0.93	192.	--
0059D	0.20	.	.	2089	2.05	231.	--	2660	1.49	211.	--	3122	1.64	216.	--
0065D	0.09	.	.	2095	2.31	240.	--	2683	1.60	215.	--	3127	1.24	202.	--
0066D	0.07	.	.	2101	2.05	231.	--	2688	1.57	214.	--	3131	1.07	196.	--
0067D	0.07	.	.	2105	(a)	(a)	(a)	2702	12.37	500.	20.	3132	1.59	215.	--
0079	2.08	252.	20.	2111	1.72	219.	--	2710	4.69	323.	--	3145	1.08	197.	--
0083	2.59	270.	20.	2114	2.05	231.	--	2731	2.28	239.	--	3146	1.53	213.	--
0106	7.07	500.	20.	2115	4.45	315.	--	2747	4.20	306.	--	3169	1.71	219.	--
0113	2.04	250.	20.	2121	1.08	197.	--	2790	1.70	219.	--	3179	0.85	189.	--
0170	2.04	250.	20.	2130	1.21	201.	--	2802	2.77	256.	--	3180	1.83	223.	--
0771b	0.39	.	.	2131	2.41	243.	--	2835	1.53	213.	--	3188	1.59	215.	--
0908	72.00	136.	--	2143	1.57	214.	--	2836	1.97	228.	--	3200	1.78	221.	--
0909	177.00	241.	--	2150	2.85	259.	--	2841	2.43	244.	--	3220	1.72	219.	--
0912	354.00	418.	--	2156	2.51	247.	--	2883	2.31	240.	--	3223	(a)	(a)	(a)
0913	143.00	207.	--	2157	3.22	272.	--	2923	0.93	192.	--	3255	1.55	213.	--
0917	1.78	241.	20.	2172	1.32	205.	--	2942	1.20	201.	--	3257	1.91	226.	--
0918	0.33	191.	20.	2211	4.24	307.	--	3018	1.88	225.	--	3270	1.38	207.	--
1430	2.99	264.	--	2220	2.32	240.	--	3022	2.63	251.	--	3300	2.69	253.	--
1438	2.71	254.	--	2260	3.85	294.	--	3027	2.32	240.	--	3305	(a)	(a)	(a)
1463	9.35	500.	--	2288	3.00	264.	--	3028	2.33	241.	--	3315	2.30	240.	--
1624D	3.50	302.	20.	2305	1.88	225.	--	3030	3.90	296.	--	3336	1.83	223.	--
1655	2.19	256.	20.	2362	1.67	217.	--	3040	4.53	318.	--	3365	3.54	333.	50.
1701	2.11	233.	--	2380	1.29	204.	--	3041	2.06	231.	--	3372	1.73	220.	--
1710D	3.50	302.	20.	2402	1.66	217.	--	3042	2.57	249.	--	3373	2.89	260.	--
1747	1.74	220.	--	2413	2.17	235.	--	3066	1.83	223.	--	3381	1.33	206.	--
1748	2.84	258.	--	2416	2.13	234.	--	3076	2.05	231.	--	3383	1.04	195.	--
1853	0.97	193.	--	2417	1.23	202.	--	3081D	3.16	270.	--	3385	0.69	183.	--

Non-Ratable Code and Rate to be used with the following classifications:

b. 4771

IX 00017 STIP

Section IX - Classification Pricing
 Subsection A - Summary
 7/1/2023

Section IX - A
 Exhibit 1
 Page 2

MASSACHUSETTS WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE MANUAL **RATES**

Draft Proposed Effective July 1, 2023 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	1.71	219.	--	4150	0.56	179.	--	4771c	2.58	263.	--	5507	3.81	342.	50.
3507	2.09	232.	--	4239	2.14	234.	--	4777	2.11	233.	--	5508D	3.82	343.	50.
3515	1.88	225.	--	4243	2.02	230.	--	4825	0.29	169.	--	5509	4.84	469.	50.
3558	0.55	178.	--	4244	2.44	244.	--	4828	0.78	186.	--	5538	3.10	318.	50.
3571	0.47	175.	--	4250	1.78	221.	--	4829	0.78	186.	--	5545	38.36	500.	50.
3574	1.25	203.	--	4251	2.05	231.	--	4902	1.20	201.	--	5547	8.56	500.	50.
3612	1.06	196.	--	4273	2.24	237.	--	4923	0.47	175.	--	5606	0.98	243.	50.
3620	2.46	245.	--	4279	1.95	227.	--	5020	3.58	334.	50.	5610	4.47	456.	50.
3629	1.25	203.	--	4283	1.47	210.	--	5022	7.08	500.	50.	5645	5.37	488.	50.
3632	1.25	203.	--	4299	1.34	206.	--	5037	9.63	500.	50.	5701	12.63	500.	50.
3634	1.36	207.	--	4304	4.21	306.	--	5040	18.14	500.	50.	5703	7.06	500.	50.
3635	1.59	215.	--	4307	1.07	196.	--	5057	14.53	500.	50.	5705	8.25	500.	50.
3638	1.25	203.	--	4308	1.63	216.	--	5059	20.51	500.	50.	6003	4.98	474.	50.
3642	0.95	192.	--	4351	0.74	185.	--	5102	5.15	480.	50.	6005	3.82	343.	50.
3643	1.40	208.	--	4352	0.79	187.	--	5146	5.21	482.	50.	6204	4.69	464.	50.
3647	1.70	219.	--	4360	0.47	175.	--	5160	2.67	302.	50.	6217	3.52	332.	50.
3648	0.81	187.	--	4361	0.43	194.	20.	5183	2.67	302.	50.	6229	3.55	333.	50.
3681	0.45	175.	--	4362	0.36	192.	20.	5188	2.96	313.	50.	6233	1.59	265.	50.
3685	0.38	172.	--	4410	2.14	234.	--	5190	1.84	273.	50.	6251D	3.39	328.	50.
3724	3.41	328.	50.	4432	0.63	181.	--	5191	0.55	198.	20.	6252D	3.64	336.	50.
3726	3.70	339.	50.	4439	4.15	304.	--	5192	2.16	255.	20.	6306	7.47	500.	50.
3807	1.71	219.	--	4452	2.36	242.	--	5213	6.96	500.	50.	6319	2.00	279.	50.
3808	2.46	245.	--	4459	1.97	228.	--	5215	4.11	353.	50.	6325	2.20	286.	50.
3821	3.86	314.	20.	4470	1.42	209.	--	5221	5.36	488.	50.	6400	3.71	339.	50.
3826	2.74	255.	--	4484	1.72	219.	--	5222	6.79	500.	50.	6504	2.05	231.	--
3830	1.25	203.	--	4493	1.61	215.	--	5223	2.91	311.	50.	6702M	(a)	.	--
3841	1.42	209.	--	4511	0.23	187.	20.	5348	3.45	330.	50.	6703M	(a)	.	--
4000	4.71	344.	20.	4512	0.06	181.	20.	5402	4.52	458.	50.	6704M	(a)	.	--
4021	2.40	243.	--	4557	1.50	212.	--	5403	6.74	500.	50.	6801F	4.66	322.	--
4024	2.80	257.	--	4558	1.46	210.	--	5437	2.79	307.	50.	6811	4.02	320.	20.
4034	5.49	351.	--	4583	2.11	233.	--	5443	2.36	292.	50.	6824F	5.90	457.	--
4036	1.39	208.	--	4611	0.62	181.	--	5445	4.71	465.	50.	6826F	3.73	290.	--
4038	1.83	223.	--	4635	3.73	290.	--	5462	4.78	467.	50.	6834	1.88	245.	20.
4053	2.26	238.	--	4653	1.62	216.	--	5472	6.63	500.	50.	6836	2.29	259.	20.
4062	1.70	219.	--	4665	7.93	500.	--	5473	8.62	500.	50.	6843F	11.31	500.	--
4112	0.25	168.	--	4692	0.40	173.	--	5474	3.66	337.	50.	6854	9.75	500.	20.
4113	2.26	238.	--	4693	0.61	180.	--	5478	3.42	329.	50.	6872F	10.48	500.	--
4114	2.55	248.	--	4720	1.38	207.	--	5479	4.23	357.	50.	6874F	13.83	500.	--
4130	3.02	265.	--	4740	0.58	179.	--	5480	3.50	332.	50.	6882	9.03	500.	20.
4133	1.46	210.	--	4741	2.17	235.	--	5506	4.20	356.	50.	6884	11.92	500.	20.

For Non-Ratable portion of Rate, refer to:
 c 0771

IX 00018 STIP

Section IX - Classification Pricing
 Subsection A - Summary
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MASSACHUSETTS WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE MANUAL **RATES**

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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	1.61	235.	20.	8232	3.67	307.	20.	8829	2.03	250.	20.
7024M	2.35	.	--	7515	2.31	260.	20.	8233	4.30	330.	20.	8831	0.75	205.	20.
7038M	3.55	.	--	7520	2.55	268.	20.	8235	3.25	293.	20.	8832	0.21	186.	20.
7046M	5.06	.	--	7538	3.47	330.	50.	8263	3.74	310.	20.	8833	0.90	211.	20.
7047M	2.95	.	--	7539	1.13	219.	20.	8264	3.58	304.	20.	8835	1.31	225.	20.
7050M	5.57	.	--	7580	2.49	266.	20.	8265	4.30	330.	20.	8837	(a)	(a)	(a)
7090M	4.44	.	--	7590	4.57	339.	20.	8279	2.88	280.	20.	8868	0.60	200.	20.
7098M	5.95	.	--	7600	3.55	303.	20.	8291	3.24	292.	20.	8901	0.04	180.	20.
7099M	7.46	.	--	7601	3.20	321.	50.	8292	2.70	274.	20.	9014	1.65	237.	20.
7133	(a)	(a)	(a)	7610	0.30	190.	20.	8293	5.17	451.	20.	9015	2.27	258.	20.
7151M	8.26	.	--	7704	3.16	290.	20.	8350	5.46	461.	20.	9016	1.14	219.	20.
7152M	12.95	.	--	7720	1.28	224.	20.	8380	1.92	246.	20.	9019	2.32	260.	20.
7153M	10.33	.	--	7855	3.15	319.	50.	8381	1.01	214.	20.	9033	2.01	249.	20.
7219	5.93	478.	20.	8001	1.39	228.	20.	8385	2.92	281.	20.	9040	2.26	258.	20.
7230	7.39	500.	20.	8002	1.46	230.	20.	8392	1.20	221.	20.	9044	1.08	217.	20.
7231	9.06	500.	20.	8006	0.80	207.	20.	8393	1.02	215.	20.	9052	1.20	221.	20.
7309F	10.42	500.	--	8008	0.58	199.	20.	8500	4.30	330.	20.	9058	1.18	220.	20.
7313F	14.35	500.	--	8010	1.14	219.	20.	8601	0.16	185.	20.	9060	0.78	206.	20.
7317F	11.96	500.	--	8013	0.26	188.	20.	8709F	4.01	299.	--	9061	0.73	205.	20.
7327F	17.64	500.	--	8017	0.79	207.	20.	8710	1.86	244.	20.	9062	0.73	205.	20.
7333M	7.53	.	--	8018	2.97	283.	20.	8719	1.86	244.	20.	9063	0.46	195.	20.
7335M	8.85	.	--	8021	2.72	274.	20.	8720	0.64	201.	20.	9077F	6.13	465.	--
7337M	11.10	.	--	8031	1.24	222.	20.	8721	0.14	184.	20.	9079	0.73	205.	20.
7350F	14.45	500.	--	8032	1.01	214.	20.	8726F	3.77	291.	--	9089	0.49	196.	20.
7360	3.68	308.	20.	8033	1.13	219.	20.	8734M	0.44	.	--	9093	0.72	204.	20.
7370	3.66	307.	20.	8034	2.18	255.	20.	8737M	0.35	.	--	9101	3.01	284.	20.
7380	5.31	456.	20.	8039	1.26	223.	20.	8738M	0.55	.	--	9102	1.96	248.	20.
7382	2.91	281.	20.	8044	2.12	253.	20.	8742	0.08	182.	20.	9154	1.47	230.	20.
7394M	9.68	.	--	8046	1.93	247.	20.	8745	4.06	321.	20.	9156	1.43	229.	20.
7395M	12.37	.	--	8048	1.85	244.	20.	8747	0.58	199.	20.	9178	9.98	500.	20.
7398M	15.51	.	--	8058	1.85	244.	20.	8748	0.43	194.	20.	9179	36.44	500.	20.
7403	2.58	269.	20.	8103	2.24	257.	20.	8800	0.74	205.	20.	9180	3.36	297.	20.
7405d	0.82	217.	20.	8105	7.18	500.	20.	8803	0.03	180.	20.	9182	2.16	255.	20.
7420	8.32	500.	20.	8106	3.51	302.	20.	8805M	0.18	.	--	9186	3.36	297.	20.
7421	0.85	209.	20.	8107	1.90	246.	20.	8810	0.04	180.	20.	9220	2.86	279.	20.
7422	0.85	209.	20.	8111	2.13	254.	20.	8814M	0.14	.	--	9402	3.33	296.	20.
7425	2.33	261.	20.	8203	3.92	316.	20.	8815M	0.23	.	--	9403	9.38	500.	20.
7431e	0.64	209.	20.	8204	3.71	309.	20.	8820	0.04	180.	20.	9410	2.83	278.	20.
7445f	0.27	.	.	8215	2.32	260.	20.	8824	1.66	237.	20.	9501	1.62	216.	--
7453g	0.21	.	.	8227	4.77	467.	50.	8826	1.22	222.	20.	9505	1.62	216.	--

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
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**MASSACHUSETTS WORKERS COMPENSATION
 AND EMPLOYERS LIABILITY INSURANCE MANUAL**

RATES

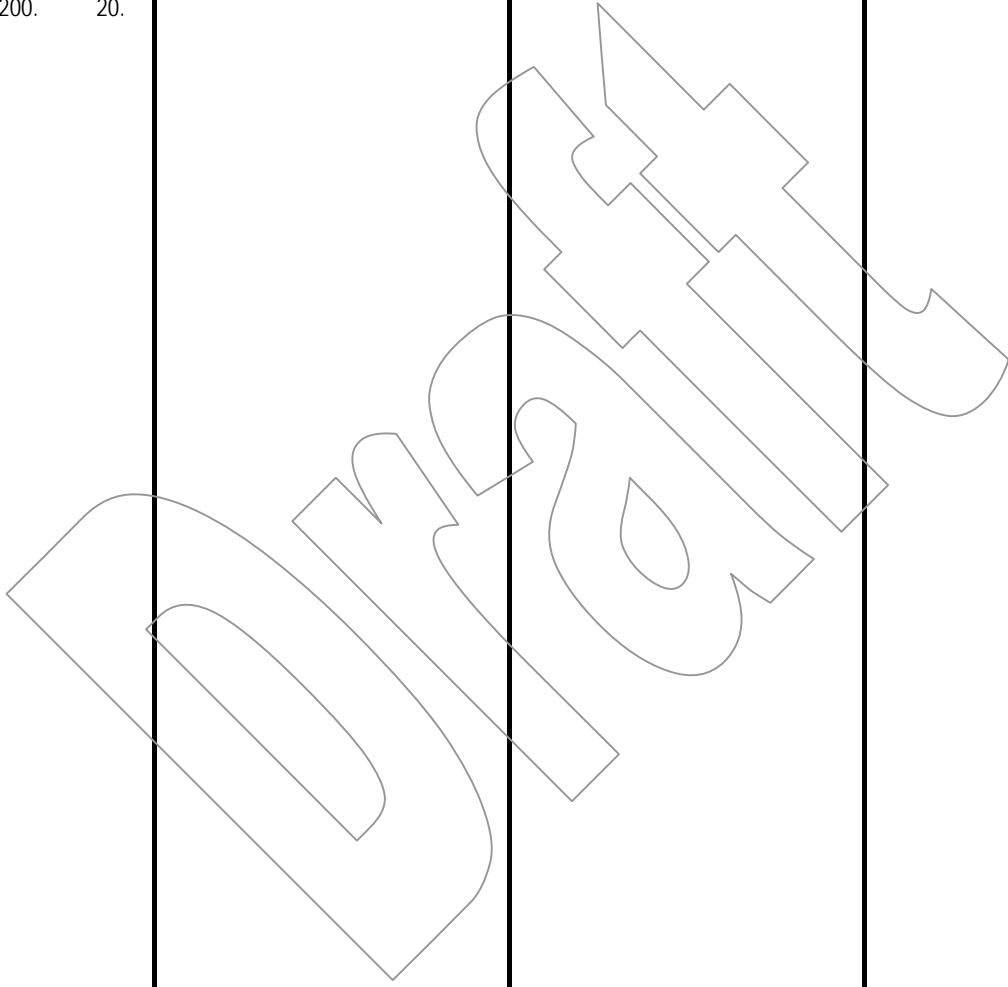
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RATES

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	1.89	245.	20.												
9521	2.83	258.	--												
9522	1.41	208.	--												
9533	14.73	500.	50.												
9534	4.61	461.	50.												
9549	2.93	312.	50.												
9552	4.32	451.	50.												
9586	0.24	187.	20.												
9620	0.60	200.	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	1.478	0.901	0.690	0.788	0.804
	Medical	1.478	0.404	0.310	0.788	0.361
	Total		1.305			
Construction	Indemnity	3.738	2.343	0.709	0.788	2.089
	Medical	3.738	0.961	0.291	0.788	0.857
	Total		3.305			
Office and Clerical	Indemnity	0.106	0.063	0.674	0.788	0.056
	Medical	0.106	0.030	0.326	0.788	0.027
	Total		0.093			
Goods and Services	Indemnity	1.253	0.759	0.685	0.788	0.676
	Medical	1.253	0.349	0.315	0.788	0.311
	Total		1.108			
Miscellaneous	Indemnity	4.079	2.548	0.701	0.788	2.254
	Medical	4.079	1.085	0.299	0.788	0.960
	Total		3.633			

Notes:

- (3): Section IX - H, Exhibit 1.
- (4): Section IX - C, Exhibits 1-5, Page 2.
- (6): Section VI - J, Exhibit 1.

IX 00021 STIP

Section IX - Classification Pricing
 Subsection B - Conversion/Excess Loss Factors
 7/1/2023

Section IX - B
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 Page 1

Calculation of Indemnity and Medical Conversion Factors

(A). Benefit Level Adjustment Factors

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

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
Fatal	1.073	1.066	1.059	1.052	1.043
Permanent Total	1.089	1.081	1.072	1.063	1.053
Permanent Partial	1.144	1.131	1.117	1.104	1.088
Temporary Total	1.060	1.055	1.049	1.044	1.036
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 Losses from first through fifth report to an ultimate basis.

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
Likely	1.055	1.074	1.132	1.314	2.037
Not Likely	1.022	1.040	1.102	1.255	1.743
Medical					
Likely	0.892	0.886	0.886	0.911	0.986
Not Likely	0.985	0.983	0.984	0.982	1.007

(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				
	2016	2017	2018	2019	2020
All Injury Types	0.761	0.748	0.777	0.858	0.888
Medical					
Lost Time Medical	0.701	0.695	0.717	0.826	0.862
Medical Only	0.623	0.614	0.628	0.771	0.817

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 Aggregate Financial 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
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Page 2

Calculation of Indemnity and Medical Conversion Factors

(D). Primary Conversion Factors (PCF)

Indemnity	Policy Year				
	2016	2017	2018	2019	2020
Fatal - LD	0.860	0.857	0.931	1.186	1.888
Fatal - NLD	0.834	0.830	0.906	1.133	1.615
Permanent Total	0.874	0.869	0.943	1.199	1.905
Permanent Partial - LD	0.918	0.909	0.982	1.245	1.968
Permanent Partial - NLD	0.890	0.880	0.956	1.189	1.684
Temporary Total - LD	0.850	0.848	0.923	1.177	1.875
Temporary Total - NLD	0.824	0.821	0.898	1.124	1.605
Medical					
Lost Time Medical -LD	0.626	0.615	0.635	0.753	0.850
Lost Time Medical -NLD	0.691	0.683	0.705	0.812	0.868
Medical - NLD	0.614	0.604	0.618	0.758	0.823

Notes:

(D) = (A) x (B) x (C), Page 1.

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Section IX - Classification Pricing
Subsection B - Conversion/Excess Loss Factors
7/1/2023

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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	1.183	1.183

(B). Investment Income Offset Factor

The following factor is applied to adjust for investment income.

	Investment Income Offset Factor
Indemnity	
Fatal	0.694
Permanent Total	0.611
Permanent Partial	1.076
Temporary Total	1.095
Medical	
Fatal	1.000
Permanent Total	0.610
Permanent Partial	1.075
Temporary Total	1.093
Medical Only	1.000

(C). Secondary Conversion Factors

The factors above are combined multiplicatively, resulting in the following conversion factors.

Indemnity	
Fatal	0.821
Permanent Total	0.723
Permanent Partial	1.273
Temporary Total	1.295
Medical	
Fatal	1.183
Permanent Total	0.722
Permanent Partial	1.272
Temporary Total	1.293
Medical Only	1.183

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
 7/1/2023

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		1.551	1.160	1.054	1.019	1.006	1.004	1.001	1.002	1.002
Cumulative		1.961	1.264	1.090	1.034	1.015	1.009	1.006	1.004	1.002
		<u>(2) Medical Losses</u>								
5Yr Weighted Average		1.082	1.028	1.000	0.993	0.991	0.992	0.998	0.991	0.993
Cumulative		1.068	0.987	0.960	0.959	0.966	0.974	0.982	0.984	0.993
		<u>(3) Claim Counts</u>								
2Yr Weighted Average		1.026	1.008	1.004	1.002	1.001	1.000	1.001	1.000	1.000
Cumulative		1.041	1.015	1.007	1.003	1.001	1.000	1.001	1.000	1.000
		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		1.389	1.139	1.059	1.018	1.009	1.000	1.003	1.001	1.001
Cumulative		1.728	1.244	1.092	1.031	1.014	1.005	1.005	1.002	1.001
		<u>(5) Medical Losses</u>								
5Yr Weighted Average		1.025	0.999	1.001	0.997	0.999	0.999	1.001	0.998	0.999
Cumulative		1.018	0.993	0.995	0.994	0.996	0.998	0.999	0.997	0.999
		<u>(6) Claim Counts</u>								
2Yr Weighted Average		1.015	1.004	1.002	1.001	1.001	1.000	1.000	1.000	1.000
Cumulative		1.024	1.009	1.005	1.003	1.001	1.001	1.001	1.000	1.000

Notes:

(1), (2), (3): Page 2.
 (4), (5), (6): Page 3.

IX 00025 STIP

Section IX - Classification Pricing
 Subsection B - Conversion/Excess Loss Factors
 7/1/2023

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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			
2015	77,303,547	116,058,435	1.501	47,591,026	50,697,016	1.065	1,533	1,550	1.011	
2016	73,193,163	111,558,314	1.524	44,930,201	48,364,307	1.076	1,478	1,503	1.017	
2017	72,908,913	114,367,311	1.569	45,744,067	49,531,200	1.083	1,477	1,504	1.018	
2018	75,245,608	117,203,270	1.558	45,683,835	49,165,555	1.076	1,483	1,528	1.030	
2019	67,287,440	108,372,009	1.611	39,939,187	44,506,884	1.114	1,281	1,308	1.021	
	5yr Weighted Average		1.551	5yr Weighted Average		1.082	2yr Weighted Average		1.026	
	30	42		30	42		30	42		
2014	129,042,226	148,005,131	1.147	58,668,295	59,464,848	1.014	1,739	1,745	1.003	
2015	121,882,703	139,177,725	1.142	52,290,919	54,819,548	1.048	1,596	1,618	1.014	
2016	119,513,413	135,606,433	1.135	51,897,567	54,331,270	1.047	1,565	1,572	1.004	
2017	125,611,427	148,362,980	1.181	52,610,404	54,195,193	1.030	1,583	1,595	1.008	
2018	124,263,425	148,472,974	1.195	51,320,327	51,529,586	1.004	1,585	1,598	1.008	
	5yr Weighted Average		1.160	5yr Weighted Average		1.028	2yr Weighted Average		1.008	
	42	54		42	54		42	54		
2013	128,464,512	136,267,088	1.061	49,535,353	49,235,296	0.994	1,667	1,674	1.004	
2014	154,801,350	162,340,869	1.049	61,761,586	61,563,037	0.997	1,779	1,790	1.006	
2015	146,266,076	153,581,015	1.050	57,032,141	57,466,070	1.008	1,653	1,666	1.008	
2016	144,690,281	152,422,862	1.053	56,889,889	56,892,924	1.000	1,616	1,619	1.002	
2017	156,899,608	166,055,746	1.058	56,950,041	57,140,694	1.003	1,642	1,651	1.005	
	5yr Weighted Average		1.054	5yr Weighted Average		1.000	2yr Weighted Average		1.004	
	54	66		54	66		54	66		
2012	147,322,614	150,628,939	1.022	57,362,514	57,167,837	0.997	1,741	1,745	1.002	
2013	142,938,420	143,932,153	1.007	50,951,186	51,250,664	1.006	1,698	1,703	1.003	
2014	170,110,998	171,919,454	1.011	63,445,839	62,961,778	0.992	1,824	1,826	1.001	
2015	162,013,601	163,722,571	1.011	59,916,142	57,994,462	0.968	1,697	1,702	1.003	
2016	162,640,003	169,438,918	1.042	59,631,333	59,978,053	1.006	1,658	1,660	1.001	
	5yr Weighted Average		1.019	5yr Weighted Average		0.993	2yr Weighted Average		1.002	
	66	78		66	78		66	78		
2011	149,329,006	150,750,040	1.010	59,682,000	61,213,070	1.026	1,774	1,779	1.003	
2012	157,177,910	158,442,616	1.008	58,810,937	56,073,492	0.953	1,770	1,771	1.001	
2013	146,755,327	146,696,192	1.000	52,321,525	51,524,703	0.985	1,719	1,718	0.999	
2014	175,635,436	176,196,733	1.003	64,110,585	64,317,423	1.003	1,846	1,843	0.998	
2015	167,681,274	168,954,755	1.008	59,279,931	58,473,309	0.986	1,718	1,723	1.003	
	5yr Weighted Average		1.006	5yr Weighted Average		0.991	2yr Weighted Average		1.001	
	78	90		78	90		78	90		
2010	135,865,364	135,811,786	1.000	53,309,903	53,565,219	1.005	1,821	1,823	1.001	
2011	152,266,644	153,227,342	1.006	61,499,327	60,389,287	0.982	1,785	1,782	0.998	
2012	159,498,949	159,425,974	1.000	56,344,200	56,422,170	1.001	1,775	1,776	1.001	
2013	147,788,473	148,933,868	1.008	51,702,156	51,205,683	0.990	1,722	1,723	1.001	
2014	177,539,876	178,587,729	1.006	64,764,577	63,808,610	0.985	1,848	1,846	0.999	
	5yr Weighted Average		1.004	5yr Weighted Average		0.992	2yr Weighted Average		1.000	
	90	102		90	102		90	102		
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	154,453,792	154,996,682	1.004	60,828,009	59,799,233	0.983	1,786	1,786	1.000	
2012	159,331,561	159,491,234	1.001	56,367,197	57,117,611	1.013	1,776	1,777	1.001	
2013	149,423,883	149,514,456	1.001	51,673,815	51,969,505	1.006	1,726	1,728	1.001	
	5yr Weighted Average		1.001	5yr Weighted Average		0.998	2yr Weighted Average		1.001	
	102	114		102	114		102	114		
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	
2011	155,448,659	155,891,940	1.003	60,021,041	59,473,463	0.991	1,788	1,790	1.001	
2012	159,491,234	159,978,543	1.003	57,117,611	56,517,549	0.989	1,777	1,775	0.999	
	5yr Weighted Average		1.002	5yr Weighted Average		0.991	2yr Weighted Average		1.000	
	114	126		114	126		114	126		
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	
2010	136,426,958	136,683,994	1.002	53,749,433	53,739,398	1.000	1,825	1,824	0.999	
2011	156,450,917	156,844,879	1.003	59,606,089	59,256,228	0.994	1,796	1,796	1.000	
	5yr Weighted Average		1.002	5yr Weighted Average		0.993	2yr Weighted Average		1.000	

Note:
 Unit Statistical Data, excluding Large Deductibles.

IX 00026 STIP

Section IX - Classification Pricing
 Subsection B - Conversion/Excess Loss Factors
 7/1/2023

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			
2015	161,816,137	216,952,149	1.341	137,270,650	140,324,119	1.022	13,329	13,531	1.015	
2016	160,194,962	219,431,951	1.370	140,562,316	144,011,610	1.025	13,161	13,354	1.015	
2017	175,506,681	245,069,437	1.396	147,685,765	149,778,236	1.014	13,798	14,043	1.018	
2018	176,156,644	246,693,469	1.400	149,876,323	154,646,677	1.032	13,433	13,640	1.015	
2019	171,860,276	246,445,619	1.434	131,558,958	135,999,856	1.034	12,065	12,246	1.015	
	5yr Weighted Average		1.389	5yr Weighted Average		1.025	2yr Weighted Average		1.015	
	30	42		30	42		30	42		
2014	198,735,744	224,093,983	1.128	137,686,737	138,186,348	1.004	13,343	13,422	1.006	
2015	211,127,881	236,438,362	1.120	138,730,216	139,046,411	1.002	13,485	13,541	1.004	
2016	211,476,852	238,681,746	1.129	140,478,350	140,469,954	1.000	13,292	13,370	1.006	
2017	233,825,320	266,650,099	1.140	146,699,033	145,776,856	0.994	13,964	14,031	1.005	
2018	239,633,315	281,492,989	1.175	152,491,904	151,764,219	0.995	13,583	13,637	1.004	
	5yr Weighted Average		1.139	5yr Weighted Average		0.999	2yr Weighted Average		1.004	
	42	54		42	54		42	54		
2013	203,268,089	213,683,290	1.051	132,038,269	132,614,079	1.004	13,095	13,138	1.003	
2014	217,297,764	227,841,100	1.049	135,889,610	136,247,232	1.003	13,388	13,416	1.002	
2015	229,350,011	242,299,862	1.056	136,833,818	136,886,571	1.000	13,506	13,533	1.002	
2016	229,597,898	243,934,406	1.062	137,911,335	137,529,752	0.997	13,326	13,351	1.002	
2017	258,113,471	276,787,328	1.072	143,022,008	142,974,877	1.000	13,984	14,009	1.002	
	5yr Weighted Average		1.059	5yr Weighted Average		1.001	2yr Weighted Average		1.002	
	54	66		54	66		54	66		
2012	194,877,399	200,005,935	1.026	125,996,604	123,975,350	0.984	12,828	12,849	1.002	
2013	207,011,957	211,139,424	1.020	130,898,190	131,212,215	1.002	13,114	13,130	1.001	
2014	220,070,972	223,816,447	1.017	134,364,429	134,839,430	1.004	13,382	13,398	1.001	
2015	233,867,275	237,145,811	1.014	134,436,500	134,272,932	0.999	13,502	13,524	1.002	
2016	233,717,265	236,580,761	1.012	134,791,343	134,464,358	0.998	13,312	13,327	1.001	
	5yr Weighted Average		1.018	5yr Weighted Average		0.997	2yr Weighted Average		1.001	
	66	78		66	78		66	78		
2011	204,892,576	205,790,648	1.004	126,761,432	126,200,170	0.996	13,095	13,103	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	208,316,250	209,807,550	1.007	130,141,354	129,941,388	0.998	13,114	13,119	1.000	
2014	220,100,465	222,591,208	1.011	133,690,623	134,020,685	1.002	13,378	13,390	1.001	
2015	232,866,114	234,579,012	1.007	132,808,457	132,595,392	0.998	13,507	13,513	1.000	
	5yr Weighted Average		1.009	5yr Weighted Average		0.999	2yr Weighted Average		1.001	
	78	90		78	90		78	90		
2010	193,878,483	193,191,523	0.996	122,967,268	122,753,340	0.998	13,004	13,006	1.000	
2011	204,274,044	205,234,308	1.005	125,913,913	125,935,958	1.000	13,097	13,100	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	
2013	208,715,269	208,813,075	1.000	129,763,935	129,209,879	0.996	13,115	13,114	1.000	
2014	221,248,065	221,424,820	1.001	133,573,531	133,760,426	1.001	13,385	13,386	1.000	
	5yr Weighted Average		1.000	5yr Weighted Average		0.999	2yr Weighted Average		1.000	
	90	102		90	102		90	102		
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	204,007,858	204,856,065	1.004	125,497,236	126,083,721	1.005	13,096	13,100	1.000	
2012	194,714,051	194,483,860	0.999	121,933,970	122,549,235	1.005	12,827	12,832	1.000	
2013	208,323,059	209,523,602	1.006	128,741,748	128,300,605	0.997	13,111	13,118	1.001	
	5yr Weighted Average		1.003	5yr Weighted Average		1.001	2yr Weighted Average		1.000	
	102	114		102	114		102	114		
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	
2011	204,404,088	205,158,589	1.004	125,861,913	125,266,500	0.995	13,098	13,102	1.000	
2012	194,483,860	194,642,109	1.001	122,549,235	121,918,745	0.995	12,832	12,833	1.000	
	5yr Weighted Average		1.001	5yr Weighted Average		0.998	2yr Weighted Average		1.000	
	114	126		114	126		114	126		
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	
2010	193,372,501	193,684,169	1.002	122,290,744	121,989,147	0.998	13,003	13,005	1.000	
2011	204,599,612	204,833,800	1.001	125,133,874	124,935,193	0.998	13,096	13,097	1.000	
	5yr Weighted Average		1.001	5yr Weighted Average		0.999	2yr Weighted Average		1.000	

Note:
 Unit Statistical Data, excluding Large Deductibles.

IX 00027 STIP

Section IX - Classification Pricing
 Subsection B - Conversion/Excess Loss Factors
 7/1/2023

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						
2016	1,349.36	31,608	11,496	914	161.88	295.95
2017	1,395.56	32,459	11,726	948	165.76	299.48
2018	1,445.94	33,510	12,182	982	160.24	292.60
2019	1,544.09	35,127	12,242	976	147.69	256.31

(2) Trend to PY 2019						
2016	1.144	1.111	1.065	1.067	0.912	0.866
2017	1.106	1.082	1.044	1.029	0.891	0.856
2018	1.068	1.048	1.005	0.993	0.922	0.876
2019	1.000	1.000	1.000	1.000	1.000	1.000

(3) Projected Trend from PY 2019 to Prospective Effective Period						
Selected Annual Trend	4.3%	3.0%	2.1%	2.9%	-2.1%	-4.3%
Trend Factor	1.208	1.141	1.098	1.135	0.909	0.821

(4) Trend Factors from PY 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
2016	1.383	1.268	1.169	1.212	0.830	0.711
2017	1.337	1.234	1.146	1.169	0.810	0.703
2018	1.290	1.196	1.103	1.128	0.838	0.719
2019	1.208	1.141	1.098	1.135	0.909	0.821
2020	1.159	1.108	1.075	1.104	0.929	0.858

Notes:

(1): Statewide Average 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 2019

(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 2019 to midpoint of policy effective period 7/1/2023 - 6/29/2024, which is 4.5 years.

(4) = (2) x (3) for PY2016-2019, (1+Annual Trend Factor)^3.5 for PY2020

IX 00028 STIP

Section IX - Classification Pricing
Subsection B - Conversion/Excess Loss Factors
7/1/2023

Section IX - B
Exhibit 4

Calculation of Investment Income Offset Factor

Indemnity

Injury Type (1)	Loss Flow Discounted at 2.76% Post-Chapter 398 (2)	Injury Type Weights At Ultimate (3)	Investment Income Offset Factor (4)
Fatal	0.608	1.80%	0.694
Permanent Total	0.534	10.75%	0.611
Permanent Partial	0.942	36.82%	1.076
Temporary Total	0.958	20.37%	1.095
Total Indemnity			0.875

Medical

Injury Type (5)	Loss Flow Discounted at 2.76% Post-Chapter 398 (6)	Injury Type Weights At Ultimate (7)	Investment Income Offset Factor (8)
Fatal	0.608	0.16%	1.000
Permanent Total	0.534	4.71%	0.610
Permanent Partial	0.942	10.65%	1.075
Temporary Total	0.958	11.12%	1.093
Medical Only		3.62%	1.000
Total Medical			0.876

Notes:

(2), (6): Loss Flows are from the 8/1/1999 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) $[3.28\% \times (1.000 - 15.89\%)] = 2.76\%$

(3): Section IV - E, Exhibit 2, Page 1.

(4) = (2) / 0.875, which is the weighted average of (2) and (3).

(7): Section IV - E, Exhibit 2, Page 2.

(8) = (6) / 0.876, 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
7/1/2023

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	0.114	1.129
B	0.131	1.151
C	0.162	1.193
D	0.205	1.258
E	0.227	1.294
F	0.261	1.353
G	0.372	1.592

Note:

(2) = Excess Ratio for Accident Limit of \$500,000 x 0.985, where the 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)	
2016	Fatal	18,706	432,322	25,420	0	476,448	16,093	360,570	15,903	0	392,566
	Permanent Total	8,000,954	0	1,776,377	0	9,777,331	6,989,266	0	1,111,340	0	8,100,606
	Permanent Partial	6,057,850	18,352,664	2,565,234	6,244,935	33,220,683	5,559,505	16,327,897	1,604,866	4,316,367	27,808,635
	Temporary Total	3,984,299	13,316,965	1,843,149	8,611,692	27,756,105	3,388,587	10,979,574	1,153,114	5,952,218	21,473,493
	Medical Only	0	0	0	2,970,686	2,970,686	0	0	0	1,823,362	1,823,362
2017	Fatal	0	667,222	0	30,870	698,092	0	553,464	0	21,073	574,537
	Permanent Total	6,444,265	0	1,226,641	0	7,670,906	5,597,069	0	754,811	0	6,351,880
	Permanent Partial	6,921,983	16,926,801	2,614,123	5,284,361	31,747,268	6,290,855	14,897,732	1,608,595	3,607,289	26,404,471
	Temporary Total	4,187,232	12,280,234	1,730,620	7,709,359	25,907,445	3,549,671	10,081,702	1,064,934	5,262,677	19,958,984
	Medical Only	0	0	0	3,099,949	3,099,949	0	0	0	1,871,060	1,871,060
2018	Fatal	3,467	183,404	1,280	6,711	194,862	3,228	166,113	813	4,730	174,884
	Permanent Total	3,564,143	0	1,042,424	0	4,606,567	3,360,203	0	662,040	0	4,022,243
	Permanent Partial	6,568,721	14,852,609	2,424,262	6,035,970	29,881,562	6,453,401	14,194,588	1,539,640	4,254,110	26,441,739
	Temporary Total	5,842,014	17,342,930	2,732,536	9,730,492	35,647,972	5,390,343	15,566,409	1,735,423	6,857,984	29,550,159
	Medical Only	0	0	0	3,212,171	3,212,171	0	0	0	1,985,274	1,985,274
2019	Fatal	0	981,065	0	18,935	1,000,000	0	1,111,559	0	15,369	1,126,928
	Permanent Total	1,212,765	0	604,104	0	1,816,869	1,454,349	0	454,878	0	1,909,227
	Permanent Partial	5,767,206	10,875,471	2,517,365	3,833,225	22,993,267	7,178,136	12,932,054	1,895,526	3,111,246	25,116,962
	Temporary Total	6,026,764	15,511,630	2,363,151	9,679,464	33,581,009	7,092,147	17,439,106	1,779,406	7,856,359	34,167,018
	Medical Only	0	0	0	2,612,905	2,612,905	0	0	0	1,979,737	1,979,737
2020	Fatal	0	0	0	0	0	0	0	0	0	0
	Permanent Total	0	0	0	0	0	0	0	0	0	0
	Permanent Partial	1,688,216	5,579,149	602,650	3,490,405	11,360,420	3,323,246	9,397,849	512,314	3,030,246	16,263,655
	Temporary Total	4,918,591	12,204,178	2,937,920	9,491,360	29,552,049	9,223,530	19,583,534	2,497,534	8,240,063	39,544,661
	Medical Only	0	0	0	2,373,638	2,373,638	0	0	0	1,953,313	1,953,313
(13) All Years, All Injury Types		71,207,176	139,506,644	27,007,256	84,437,128	322,158,204	74,869,629	143,592,151	18,391,137	62,142,477	298,995,394

Notes:
 (3), (4), (5), (6): From Unit Statistical 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)	Indemnity		Adjusted Excess Losses Medical		Total (7)	Indemnity		Converted Unlimited Losses Medical		Exposure (13)	
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)		Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)		Total (12)
2016	Fatal	2,664	38,049	4,317	16,307	61,337	15,407	327,432	23,921	19,291	386,051	64,224,299
	Permanent Total	1,012,179	0	649,446	0	1,661,625	5,781,658	0	1,270,870	0	7,052,528	
	Permanent Partial	836,899	2,271,709	729,744	1,871,374	5,709,726	8,143,665	23,680,330	2,968,990	7,869,128	42,662,113	
	Temporary Total	456,203	1,556,874	419,454	1,876,901	4,309,432	4,978,742	16,233,850	2,034,075	10,126,758	33,373,425	
	Medical Only	0	0	0	368,359	368,359	0	0	0	2,592,805	2,592,805	
2017	Fatal	0	70,607	0	33,574	104,181	0	512,622	0	64,647	577,269	63,708,440
	Permanent Total	822,385	0	504,366	0	1,326,751	4,638,548	0	908,827	0	5,547,375	
	Permanent Partial	892,677	2,160,056	738,428	1,675,200	5,466,361	9,145,806	21,717,344	2,984,777	6,717,894	40,565,821	
	Temporary Total	474,289	1,420,551	407,279	1,649,070	3,951,189	5,210,755	14,894,638	1,904,268	8,940,161	30,949,822	
	Medical Only	0	0	0	373,983	373,983	0	0	0	2,655,886	2,655,886	
2018	Fatal	583	22,783	459	10,679	34,504	3,130	155,163	1,505	18,228	178,026	66,164,869
	Permanent Total	497,378	0	345,826	0	843,204	2,787,399	0	727,440	0	3,514,839	
	Permanent Partial	950,818	2,061,967	738,440	1,811,492	5,562,717	9,426,777	20,697,244	2,897,099	7,713,800	40,734,920	
	Temporary Total	806,563	2,110,398	727,837	2,311,893	5,956,691	8,024,573	22,890,268	3,186,162	11,860,993	45,961,996	
	Medical Only	0	0	0	405,000	405,000	0	0	0	2,827,693	2,827,693	
2019	Fatal	0	188,774	0	85,344	274,118	0	1,068,116	0	119,143	1,187,259	73,817,599
	Permanent Total	259,466	0	240,867	0	500,333	1,238,363	0	502,163	0	1,740,526	
	Permanent Partial	1,077,290	1,832,077	857,746	1,439,855	5,206,968	10,510,503	18,797,146	3,501,415	5,787,766	38,596,830	
	Temporary Total	999,778	2,386,167	793,729	2,582,218	6,761,892	10,478,496	25,672,386	3,328,281	13,502,022	52,981,185	
	Medical Only	0	0	0	399,381	399,381	0	0	0	2,814,496	2,814,496	
2020	Fatal	0	0	0	0	0	0	0	0	0	0	74,202,724
	Permanent Total	0	0	0	0	0	0	0	0	0	0	
	Permanent Partial	536,937	1,369,252	349,048	1,274,244	3,529,481	4,914,642	13,708,275	1,095,420	5,474,144	25,192,481	
	Temporary Total	1,241,065	2,829,481	1,013,603	2,941,872	8,026,021	13,550,942	29,023,336	4,541,562	14,463,536	61,579,376	
	Medical Only	0	0	0	394,794	394,794	0	0	0	2,777,810	2,777,810	
(14) All Years, All Injury Types		10,867,174	20,318,745	8,520,589	21,521,540	61,228,048	98,849,406	209,378,150	31,876,775	106,346,201	446,450,532	342,117,930
(15) Pure Premium							0.289	0.612	0.093	0.311	1.305	

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 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	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)
2016	Fatal	309,094	4,123,319	0	191,573	4,623,986	265,925	3,438,973	0	132,411	3,837,309
	Permanent Total	23,413,385	0	7,820,111	0	31,233,496	20,452,859	0	4,892,430	0	25,345,289
	Permanent Partial	25,628,436	47,269,761	7,679,398	12,219,435	92,797,030	23,520,131	42,054,702	4,804,397	8,445,814	78,825,044
	Temporary Total	9,616,960	27,142,868	3,579,141	15,731,226	56,070,195	8,179,081	22,378,756	2,239,188	10,873,089	43,670,114
	Medical Only	0	0	0	3,777,480	3,777,480	0	0	0	2,318,560	2,318,560
2017	Fatal	391,730	3,272,001	329,443	346,645	4,339,819	335,536	2,714,139	202,722	236,632	3,489,029
	Permanent Total	21,274,931	0	7,206,735	0	28,481,666	18,478,020	0	4,434,650	0	22,912,670
	Permanent Partial	27,773,607	49,982,745	9,199,154	13,115,740	100,071,246	25,241,283	43,991,156	5,660,681	8,953,261	83,846,381
	Temporary Total	11,873,139	36,705,825	4,248,149	17,539,625	70,366,738	10,065,298	30,134,376	2,614,090	11,973,159	54,786,923
	Medical Only	0	0	0	3,807,904	3,807,904	0	0	0	2,298,365	2,298,365
2018	Fatal	710,606	2,019,572	1,295	103,102	2,834,575	661,626	1,829,174	822	72,666	2,564,288
	Permanent Total	16,853,972	0	7,047,469	0	23,901,441	15,889,589	0	4,475,821	0	20,365,410
	Permanent Partial	21,326,370	47,368,822	7,273,099	14,241,446	90,209,737	20,951,966	45,270,220	4,619,118	10,037,273	80,878,577
	Temporary Total	13,836,343	36,121,650	5,434,331	18,408,650	73,800,974	12,766,595	32,421,533	3,451,323	12,974,289	61,613,740
	Medical Only	0	0	0	4,064,104	4,064,104	0	0	0	2,511,809	2,511,809
2019	Fatal	0	2,995,379	0	188,490	3,183,869	0	3,393,803	0	152,988	3,546,791
	Permanent Total	6,072,279	0	2,863,978	0	8,936,257	7,281,881	0	2,156,518	0	9,438,399
	Permanent Partial	19,717,448	42,500,394	8,209,810	15,729,351	86,157,003	24,541,265	50,537,343	6,181,823	12,766,764	94,027,195
	Temporary Total	11,774,745	37,642,144	3,660,295	19,159,371	72,236,555	13,856,230	42,319,558	2,756,129	15,550,748	74,482,665
	Medical Only	0	0	0	3,621,148	3,621,148	0	0	0	2,743,659	2,743,659
2020	Fatal	0	971,538	0	246,053	1,217,591	0	1,569,282	0	213,615	1,782,897
	Permanent Total	1,102,067	0	747,425	0	1,849,492	2,099,550	0	635,388	0	2,734,938
	Permanent Partial	7,784,918	19,339,186	4,630,057	10,081,803	41,835,964	15,324,578	32,576,073	3,936,023	8,752,664	60,589,338
	Temporary Total	9,713,725	33,933,338	6,077,972	22,484,632	72,209,667	18,215,548	54,451,409	5,166,901	19,520,362	97,354,220
	Medical Only	0	0	0	3,113,307	3,113,307	0	0	0	2,562,001	2,562,001
(13) All Years, All Injury Types		229,173,755	391,388,542	86,007,862	178,171,085	884,741,244	238,126,961	409,080,497	58,228,024	133,090,129	838,525,611

Notes:

(3), (4), (5), (6): From Unit Statistical 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		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)	
2016	Fatal	61,848	994,053	26,506	489,958	1,572,365	269,238	3,641,364	31,357	736,263	4,678,222	73,948,291
	Permanent Total	5,228,674	0	4,068,833	0	9,297,507	18,556,880	0	6,467,906	0	25,024,786	
	Permanent Partial	5,769,060	10,482,808	4,169,036	7,597,057	28,017,961	37,289,915	66,888,815	11,411,773	20,402,181	135,992,684	
	Temporary Total	2,015,868	5,512,896	1,638,055	6,209,766	15,376,585	13,201,768	36,117,801	5,015,111	22,096,219	76,430,899	
	Medical Only	0	0	0	785,973	785,973	0	0	0	3,672,662	3,672,662	
2017	Fatal	82,953	675,243	107,149	369,245	1,234,590	343,755	2,784,097	366,577	716,753	4,211,182	79,820,430
	Permanent Total	4,585,576	0	3,529,384	0	8,114,960	16,665,219	0	5,748,143	0	22,413,362	
	Permanent Partial	6,441,113	11,196,503	4,871,464	8,060,002	30,569,082	40,336,855	70,262,885	13,394,032	21,636,255	145,630,027	
	Temporary Total	2,387,166	7,314,817	1,912,711	7,218,141	18,832,835	16,125,097	48,494,167	5,855,297	24,823,438	95,297,999	
	Medical Only	0	0	0	776,544	776,544	0	0	0	3,637,617	3,637,617	
2018	Fatal	156,977	602,839	67,533	281,762	1,109,111	672,414	1,997,698	80,864	419,288	3,170,264	86,135,831
	Permanent Total	4,142,130	0	3,521,442	0	7,663,572	14,474,455	0	5,772,127	0	20,246,582	
	Permanent Partial	5,375,758	11,276,376	4,020,818	8,513,066	29,186,018	33,519,484	71,993,034	10,987,654	23,590,999	140,091,171	
	Temporary Total	3,043,096	7,952,313	2,468,920	7,945,890	21,410,219	20,472,479	52,281,395	7,657,677	27,059,696	107,471,247	
	Medical Only	0	0	0	857,848	857,848	0	0	0	3,986,304	3,986,304	
2019	Fatal	0	919,323	0	446,176	1,365,499	0	3,542,876	0	708,812	4,251,688	88,514,911
	Permanent Total	2,004,209	0	1,672,844	0	3,677,053	6,709,913	0	2,763,891	0	9,473,804	
	Permanent Partial	6,122,812	12,663,300	4,891,877	10,027,755	33,705,744	39,040,369	80,464,721	14,082,743	28,988,446	162,576,279	
	Temporary Total	3,305,075	10,091,616	2,365,368	9,775,656	25,537,715	22,222,727	67,868,920	6,624,521	32,759,032	129,475,200	
	Medical Only	0	0	0	930,384	930,384	0	0	0	4,346,393	4,346,393	
2020	Fatal	0	351,020	0	213,426	564,446	0	1,577,370	0	505,189	2,082,559	91,558,220
	Permanent Total	526,943	0	522,594	0	1,049,537	1,897,843	0	835,788	0	2,733,631	
	Permanent Partial	3,873,681	8,597,082	3,142,614	6,940,669	22,554,046	24,442,513	52,420,137	9,002,106	19,957,663	105,822,419	
	Temporary Total	4,692,906	13,485,818	3,878,670	12,778,467	34,835,861	29,664,896	87,974,107	11,700,206	41,777,678	171,116,887	
	Medical Only	0	0	0	887,800	887,800	0	0	0	4,081,114	4,081,114	
(14) All Years, All Injury Types		59,815,845	102,116,007	46,875,818	91,105,585	299,913,255	335,905,820	648,309,387	117,797,773	285,902,002	1,387,914,982	419,977,683
(15) Pure Premium							0.800	1.544	0.280	0.681	3.305	

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 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)	
2016	Fatal	0	961,837	0	1	961,838	0	802,201	0	1	802,202
	Permanent Total	4,892,461	0	2,150,036	0	7,042,497	4,273,829	0	1,345,109	0	5,618,938
	Permanent Partial	8,392,392	13,913,357	1,988,892	4,431,219	28,725,860	7,701,997	12,378,359	1,244,294	3,062,764	24,387,414
	Temporary Total	7,767,797	11,475,296	3,476,243	8,774,506	31,493,842	6,606,395	9,461,154	2,174,813	6,064,752	24,307,114
	Medical Only	0	0	0	5,716,296	5,716,296	0	0	0	3,508,575	3,508,575
2017	Fatal	0	696,628	0	24,402	721,030	0	577,856	0	16,657	594,513
	Permanent Total	5,018,578	0	1,372,942	0	6,391,520	4,358,810	0	844,837	0	5,203,647
	Permanent Partial	6,596,379	13,042,159	2,019,200	4,104,586	25,762,324	5,994,939	11,478,755	1,242,510	2,801,933	21,518,137
	Temporary Total	8,584,816	13,413,266	3,054,535	10,109,270	35,161,887	7,277,665	11,011,887	1,879,602	6,900,940	27,070,094
	Medical Only	0	0	0	6,576,719	6,576,719	0	0	0	3,969,560	3,969,560
2018	Fatal	502,211	480,426	7,141	19,574	1,009,352	467,595	435,133	4,535	13,796	921,059
	Permanent Total	3,477,437	0	1,118,764	0	4,596,201	3,278,458	0	710,523	0	3,988,981
	Permanent Partial	8,974,906	11,928,442	2,746,711	3,844,098	27,494,157	8,817,343	11,399,971	1,744,426	2,709,294	24,671,034
	Temporary Total	9,372,762	13,519,302	2,794,812	10,023,389	35,710,265	8,648,113	12,134,454	1,774,975	7,064,415	29,621,957
	Medical Only	0	0	0	6,946,195	6,946,195	0	0	0	4,293,077	4,293,077
2019	Fatal	369,368	6,100	21,500	15,631	412,599	438,047	6,911	16,189	12,687	473,834
	Permanent Total	453,894	0	125,639	0	579,533	544,310	0	94,604	0	638,914
	Permanent Partial	7,886,726	10,571,001	2,504,965	3,361,971	24,324,663	9,816,190	12,570,008	1,886,189	2,728,752	27,001,139
	Temporary Total	6,451,766	13,177,384	2,833,434	9,268,969	31,731,553	7,592,279	14,814,807	2,133,519	7,523,180	32,063,785
	Medical Only	0	0	0	5,101,888	5,101,888	0	0	0	3,865,581	3,865,581
2020	Fatal	0	743,519	0	12,547	756,066	0	1,200,974	0	10,893	1,211,867
	Permanent Total	0	0	0	0	0	0	0	0	0	0
	Permanent Partial	2,161,523	4,252,634	811,586	2,229,164	9,454,907	4,254,948	7,163,390	689,931	1,935,281	14,043,550
	Temporary Total	4,774,141	10,291,327	2,922,120	7,872,750	25,860,338	8,952,652	16,514,063	2,484,102	6,834,842	34,785,659
	Medical Only	0	0	0	3,532,415	3,532,415	0	0	0	2,906,893	2,906,893
(13) All Years, All Injury Types		85,677,157	118,472,678	29,948,520	91,965,590	326,063,945	89,023,570	121,949,923	20,270,158	66,223,873	297,467,524

Notes:
 (3), (4), (5), (6): From Unit Statistical 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)	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)		
2016	Fatal	0	146,471	0	62,773	209,244	0	779,256	0	74,262	853,518	851,822,705
	Permanent Total	564,074	0	488,175	0	1,052,249	3,495,756	0	1,323,196	0	4,818,952	
	Permanent Partial	1,013,326	1,759,235	665,088	1,391,511	4,829,160	11,096,027	17,999,462	2,428,215	5,664,630	37,188,334	
	Temporary Total	918,439	1,329,031	816,359	1,741,146	4,804,975	9,744,151	13,972,559	3,869,001	10,096,722	37,682,433	
	Medical Only	0	0	0	690,806	690,806	0	0	0	4,967,868	4,967,868	
2017	Fatal	0	104,305	0	48,997	153,302	0	560,339	0	77,670	638,009	895,347,247
	Permanent Total	566,902	0	393,424	0	960,326	3,559,205	0	893,731	0	4,452,936	
	Permanent Partial	805,754	1,447,637	583,209	1,134,968	3,971,568	8,658,391	16,457,403	2,321,819	5,006,670	32,444,283	
	Temporary Total	993,053	1,512,953	794,784	1,977,509	5,278,299	10,710,020	16,218,820	3,459,247	11,484,039	41,872,126	
	Medical Only	0	0	0	781,351	781,351	0	0	0	5,620,327	5,620,327	
2018	Fatal	95,976	58,883	42,009	27,903	224,771	462,927	405,794	55,062	49,329	973,112	937,521,659
	Permanent Total	454,446	0	334,903	0	789,349	2,697,310	0	754,550	0	3,451,860	
	Permanent Partial	1,264,901	1,558,498	883,406	1,190,473	4,897,278	12,836,340	16,498,243	3,341,889	4,959,445	37,635,917	
	Temporary Total	1,219,437	1,650,213	873,233	2,068,729	5,811,612	12,777,809	17,850,210	3,425,386	11,813,480	45,866,885	
	Medical Only	0	0	0	831,239	831,239	0	0	0	6,062,066	6,062,066	
2019	Fatal	46,224	729	22,251	2,225	71,429	397,789	6,276	45,474	17,641	467,180	1,006,752,586
	Permanent Total	64,339	0	43,559	0	107,898	439,796	0	99,721	0	539,517	
	Permanent Partial	1,342,109	1,753,611	972,457	1,333,948	5,402,125	14,206,334	18,236,301	3,635,422	5,166,652	41,244,709	
	Temporary Total	1,090,716	2,083,130	879,144	2,398,635	6,451,625	11,243,891	21,881,683	3,896,800	12,833,605	49,855,979	
	Medical Only	0	0	0	746,706	746,706	0	0	0	5,456,336	5,456,336	
2020	Fatal	0	180,294	0	80,075	260,369	0	1,134,597	0	107,615	1,242,212	1,047,520,036
	Permanent Total	0	0	0	0	0	0	0	0	0	0	
	Permanent Partial	544,210	1,022,338	358,907	890,527	2,815,982	6,110,111	10,421,766	1,333,837	3,593,661	21,459,375	
	Temporary Total	1,232,637	2,169,616	1,016,597	2,229,897	6,648,747	13,189,259	24,194,098	4,528,061	11,725,000	53,636,418	
	Medical Only	0	0	0	554,550	554,550	0	0	0	4,094,887	4,094,887	
(14) All Years, All Injury Types		12,216,543	16,776,944	9,167,505	20,183,968	58,344,960	121,625,116	176,616,807	35,411,411	108,871,905	442,525,239	4,738,964,232
(15) Pure Premium							0.026	0.037	0.007	0.023	0.093	

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 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)	
2016	Fatal	0	1,929,164	0	177,977	2,107,141	0	1,608,981	0	123,014	1,731,995
	Permanent Total	12,449,241	0	3,067,194	0	15,516,435	10,875,086	0	1,918,902	0	12,793,988
	Permanent Partial	20,349,681	35,523,497	6,438,411	13,041,056	75,352,645	18,675,629	31,604,351	4,028,009	9,013,701	63,321,690
	Temporary Total	13,227,100	31,344,612	6,259,072	24,679,395	75,510,179	11,249,451	25,862,437	3,915,810	17,058,466	58,086,164
	Medical Only	0	0	0	9,628,823	9,628,823	0	0	0	5,910,025	5,910,025
2017	Fatal	340,612	1,011,514	0	803	1,352,929	291,751	839,055	0	548	1,131,354
	Permanent Total	13,743,094	0	5,331,667	0	19,074,761	11,936,356	0	3,280,831	0	15,217,187
	Permanent Partial	19,804,431	41,033,279	6,701,850	13,942,697	81,482,257	17,998,715	36,114,490	4,123,970	9,517,771	67,754,946
	Temporary Total	15,282,845	40,914,413	6,826,110	26,861,853	89,885,221	12,955,831	33,589,499	4,200,433	18,336,837	69,082,600
	Medical Only	0	0	0	10,195,431	10,195,431	0	0	0	6,153,733	6,153,733
2018	Fatal	0	1,109,353	0	195,137	1,304,490	0	1,004,767	0	137,531	1,142,298
	Permanent Total	7,056,110	0	1,923,720	0	8,979,830	6,652,360	0	1,221,747	0	7,874,107
	Permanent Partial	21,096,899	40,644,028	5,786,809	14,115,821	81,643,557	20,726,523	38,843,357	3,675,181	9,948,733	73,193,794
	Temporary Total	17,380,775	43,105,191	6,315,996	27,030,745	93,832,707	16,036,992	38,689,715	4,011,265	19,051,083	77,789,055
	Medical Only	0	0	0	9,923,553	9,923,553	0	0	0	6,133,225	6,133,225
2019	Fatal	492,264	1,799,144	7,736	433,885	2,733,029	583,794	2,038,453	5,825	352,164	2,980,236
	Permanent Total	1,808,112	0	806,403	0	2,614,515	2,168,289	0	607,205	0	2,775,494
	Permanent Partial	15,954,695	32,548,747	6,125,853	12,075,023	66,704,318	19,857,965	38,703,811	4,612,646	9,800,720	72,975,142
	Temporary Total	14,762,691	37,590,388	7,372,961	23,578,107	83,304,147	17,372,372	42,261,372	5,551,693	19,137,225	84,322,662
	Medical Only	0	0	0	9,010,093	9,010,093	0	0	0	6,826,737	6,826,737
2020	Fatal	0	1,462,739	0	161,205	1,623,944	0	2,362,698	0	139,952	2,502,650
	Permanent Total	100,355	0	409,765	0	510,120	191,187	0	348,342	0	539,529
	Permanent Partial	7,243,062	14,483,613	2,711,908	7,281,035	31,719,618	14,257,935	24,397,056	2,305,400	6,321,137	47,281,528
	Temporary Total	13,447,522	29,137,009	8,651,719	23,320,363	74,556,613	25,217,309	46,754,940	7,354,849	20,245,914	99,573,012
	Medical Only	0	0	0	6,728,201	6,728,201	0	0	0	5,536,767	5,536,767
(13) All Years, All Injury Types		194,539,489	353,636,691	74,737,174	232,381,203	855,294,557	207,047,545	364,674,982	51,162,108	169,745,283	792,629,918

Notes:
 (3), (4), (5), (6): From Unit Statistical 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)		
2016	Fatal	0	236,912	0	128,782	365,694	0	1,516,249	0	297,875	1,814,124	194,555,759
	Permanent Total	1,790,417	0	1,234,554	0	3,024,971	9,151,798	0	2,276,047	0	11,427,845	
	Permanent Partial	2,739,942	4,330,352	2,004,803	3,605,016	12,680,113	27,265,513	45,750,734	7,672,101	16,047,585	96,735,933	
	Temporary Total	1,513,582	3,459,670	1,389,611	4,779,878	11,142,741	16,527,263	37,970,142	6,862,421	28,247,319	89,607,145	
	Medical Only	0	0	0	1,100,059	1,100,059	0	0	0	8,292,929	8,292,929	
2017	Fatal	53,888	132,202	23,095	56,787	265,972	283,914	797,807	27,321	67,828	1,176,870	206,507,959
	Permanent Total	1,769,121	0	1,482,716	0	3,251,837	9,903,260	0	3,438,151	0	13,341,411	
	Permanent Partial	2,548,451	5,075,139	1,913,758	4,082,219	13,619,567	26,159,891	52,441,112	7,678,353	17,295,498	103,574,854	
	Temporary Total	1,728,230	4,530,262	1,579,364	5,491,806	13,329,662	19,014,865	49,362,508	7,476,014	30,821,718	106,675,105	
	Medical Only	0	0	0	1,143,780	1,143,780	0	0	0	8,632,959	8,632,959	
2018	Fatal	0	117,724	0	71,518	189,242	0	922,033	0	247,305	1,169,338	217,240,368
	Permanent Total	918,536	0	638,587	0	1,557,123	5,470,554	0	1,342,720	0	6,813,274	
	Permanent Partial	2,987,583	5,484,467	2,008,207	4,314,337	14,794,594	30,191,922	56,436,546	7,227,727	18,138,757	111,994,952	
	Temporary Total	2,220,761	5,378,977	1,733,016	6,051,007	15,383,761	23,642,553	57,065,972	7,430,075	32,468,887	120,607,487	
	Medical Only	0	0	0	1,134,413	1,134,413	0	0	0	8,597,616	8,597,616	
2019	Fatal	61,604	303,227	27,280	220,579	612,690	530,141	1,923,496	39,163	677,555	3,170,355	226,719,893
	Permanent Total	312,698	0	253,291	0	565,989	1,792,704	0	621,074	0	2,413,778	
	Permanent Partial	2,769,505	5,474,606	2,129,681	4,314,827	14,688,619	28,808,458	56,246,325	8,574,411	17,951,147	111,580,341	
	Temporary Total	2,359,681	5,620,910	2,122,268	6,108,680	16,211,539	25,551,672	62,004,312	9,926,064	32,654,908	130,136,956	
	Medical Only	0	0	0	1,284,339	1,284,339	0	0	0	9,595,403	9,595,403	
2020	Fatal	0	394,004	0	199,163	593,167	0	2,264,403	0	401,174	2,665,577	225,289,265
	Permanent Total	21,473	0	62,116	0	83,589	153,664	0	296,254	0	449,918	
	Permanent Partial	2,178,150	3,523,015	1,452,981	2,834,678	9,988,824	20,925,815	35,546,802	4,779,642	11,643,713	72,895,972	
	Temporary Total	3,457,425	6,598,532	2,903,327	6,874,489	19,833,773	37,131,837	69,089,133	13,268,678	35,079,521	154,569,169	
	Medical Only	0	0	0	1,055,050	1,055,050	0	0	0	7,798,120	7,798,120	
(14) All Years, All Injury Types		29,431,047	50,659,999	22,958,655	54,851,407	157,901,108	282,505,824	529,337,574	88,936,216	284,957,817	1,185,737,431	1,070,313,245
(15) Pure Premium							0.264	0.495	0.083	0.266	1.108	

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 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 (7)	Indemnity		Medical		Total (12)
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)			Likely (8)	Not-Likely (9)	Likely (10)	
2016	Fatal	0	557,162	0	2,188	559,350	0	464,690	0	1,512	466,202
	Permanent Total	4,398,335	0	3,047,813	0	7,446,148	3,842,183	0	1,906,778	0	5,748,961
	Permanent Partial	10,102,676	13,498,072	3,260,463	5,777,499	32,638,710	9,271,586	12,008,891	2,039,816	3,993,284	27,313,577
	Temporary Total	10,982,109	15,879,121	4,935,954	9,370,430	41,167,614	9,340,120	13,092,020	3,088,039	6,476,642	31,996,821
	Medical Only	0	0	0	2,774,469	2,774,469	0	0	0	1,702,927	1,702,927
2017	Fatal	248,172	656,556	4,697	1,024	910,449	212,572	544,616	2,890	699	760,777
	Permanent Total	7,613,498	0	1,945,743	0	9,559,241	6,612,589	0	1,197,309	0	7,809,898
	Permanent Partial	9,769,566	15,017,404	2,311,508	4,587,339	31,685,817	8,878,803	13,217,220	1,422,382	3,131,477	26,649,882
	Temporary Total	10,392,752	20,315,030	3,178,566	9,780,496	43,666,844	8,810,319	16,678,027	1,955,924	6,676,507	34,120,777
	Medical Only	0	0	0	3,091,870	3,091,870	0	0	0	1,866,183	1,866,183
2018	Fatal	200,000	1,170,718	208	4,282	1,375,208	186,215	1,060,347	132	3,018	1,249,712
	Permanent Total	3,348,746	0	1,817,504	0	5,166,250	3,157,131	0	1,154,290	0	4,311,421
	Permanent Partial	11,877,144	18,233,183	3,262,325	6,450,983	39,823,635	11,668,630	17,425,390	2,071,890	4,546,608	35,712,518
	Temporary Total	9,061,605	20,247,625	3,716,782	10,041,549	43,067,561	8,361,013	18,173,562	2,360,514	7,077,214	35,972,303
	Medical Only	0	0	0	2,959,567	2,959,567	0	0	0	1,829,152	1,829,152
2019	Fatal	0	512,514	0	4,829	517,343	0	580,685	0	3,919	584,604
	Permanent Total	1,480,668	0	536,690	0	2,017,358	1,775,618	0	404,117	0	2,179,735
	Permanent Partial	7,556,542	13,719,716	2,372,495	5,660,013	29,308,766	9,405,228	16,314,155	1,786,442	4,593,962	32,099,787
	Temporary Total	8,495,851	17,682,852	3,034,933	8,248,560	37,462,196	9,997,708	19,880,124	2,285,244	6,694,963	38,858,039
	Medical Only	0	0	0	2,652,743	2,652,743	0	0	0	2,009,921	2,009,921
2020	Fatal	0	505,287	0	56,616	561,903	0	816,168	0	49,152	865,320
	Permanent Total	434,245	0	353,963	0	788,208	827,281	0	300,905	0	1,128,186
	Permanent Partial	2,760,480	5,951,411	1,573,128	3,724,188	14,009,207	5,433,993	10,024,909	1,337,320	3,233,208	20,029,430
	Temporary Total	6,606,492	15,828,306	4,101,914	9,946,023	36,482,735	12,388,747	25,399,021	3,487,048	8,634,785	49,909,601
	Medical Only	0	0	0	2,695,812	2,695,812	0	0	0	2,218,436	2,218,436
(13) All Years, All Injury Types		105,328,881	159,774,957	39,454,686	87,830,480	392,389,004	110,169,736	165,679,825	26,801,040	64,743,569	367,394,170

Notes:
 (3), (4), (5), (6): From Unit Statistical 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)	Indemnity		Adjusted Excess Losses Medical		Total (7)	Indemnity		Converted Unlimited Losses Medical		Exposure (13)	
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)		Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)		Total (12)
2016	Fatal	0	82,633	0	35,706	118,339	0	449,580	0	44,030	493,610	31,909,394
	Permanent Total	821,129	0	941,274	0	1,762,403	3,369,601	0	2,055,618	0	5,425,219	
	Permanent Partial	1,790,267	2,388,208	1,354,290	2,167,424	7,700,189	14,083,543	18,329,854	4,316,382	7,834,750	44,564,529	
	Temporary Total	1,883,668	2,589,885	1,716,240	2,871,614	9,061,407	14,534,045	20,307,005	6,214,208	12,091,722	53,146,980	
	Medical Only	0	0	0	394,034	394,034	0	0	0	2,480,705	2,480,705	
2017	Fatal	52,553	153,753	23,544	66,100	295,950	217,778	573,653	31,271	79,023	901,725	33,816,326
	Permanent Total	1,307,090	0	911,665	0	2,218,755	5,722,576	0	1,522,179	0	7,244,755	
	Permanent Partial	1,782,297	2,595,305	1,181,111	1,997,679	7,556,392	13,573,317	20,131,922	3,310,936	6,522,895	43,539,070	
	Temporary Total	1,826,538	3,325,181	1,351,701	3,304,403	9,807,823	13,774,010	25,902,800	4,278,326	12,910,042	56,865,178	
	Medical Only	0	0	0	431,851	431,851	0	0	0	2,718,575	2,718,575	
2018	Fatal	46,037	262,145	19,777	113,414	441,373	190,776	1,086,319	23,552	137,739	1,438,386	32,126,520
	Permanent Total	607,297	0	568,467	0	1,175,764	2,720,088	0	1,243,422	0	3,963,510	
	Permanent Partial	2,241,841	3,522,132	1,541,683	2,815,102	10,120,758	17,710,296	26,669,611	4,595,485	9,362,099	58,337,491	
	Temporary Total	1,684,266	3,617,695	1,374,235	3,630,019	10,306,215	13,007,956	28,218,202	4,830,799	13,849,523	59,906,480	
	Medical Only	0	0	0	438,366	438,366	0	0	0	2,682,475	2,682,475	
2019	Fatal	0	120,072	0	52,727	172,799	0	575,614	0	67,013	642,627	32,419,507
	Permanent Total	404,863	0	311,812	0	716,675	1,575,565	0	516,731	0	2,092,296	
	Permanent Partial	1,840,919	3,357,260	1,304,547	2,786,288	9,289,014	14,318,178	25,044,917	3,930,899	9,385,676	52,679,670	
	Temporary Total	1,932,417	3,966,936	1,466,722	3,596,798	10,962,873	15,448,703	30,880,327	4,853,069	13,312,120	64,494,219	
	Medical Only	0	0	0	471,002	471,002	0	0	0	2,934,932	2,934,932	
2020	Fatal	0	201,778	0	103,836	305,614	0	836,158	0	180,984	1,017,142	31,423,939
	Permanent Total	111,950	0	106,149	0	218,099	678,666	0	293,796	0	972,462	
	Permanent Partial	1,007,866	1,931,871	811,200	1,877,170	5,628,107	8,201,536	15,222,930	2,732,336	6,499,015	32,655,817	
	Temporary Total	2,436,860	5,070,213	2,039,193	4,610,708	14,156,974	19,198,156	39,455,594	7,148,046	17,132,693	82,934,489	
	Medical Only	0	0	0	527,877	527,877	0	0	0	3,248,889	3,248,889	
(14) All Years, All Injury Types		21,777,858	33,185,067	17,023,610	32,292,118	104,278,653	158,324,790	253,684,486	51,897,055	123,474,900	587,381,231	161,695,687
(15) Pure Premium							0.979	1.569	0.321	0.764	3.633	

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 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)	
2016	Fatal	327,800	8,003,804	25,420	371,739	8,728,763	282,018	6,675,415	15,903	256,938	7,230,274
	Permanent Total	53,154,376	0	17,861,531	0	71,015,907	46,433,223	0	11,174,559	0	57,607,782
	Permanent Partial	70,531,035	128,557,351	21,932,398	41,714,144	262,734,928	64,728,848	114,374,200	13,721,382	28,831,930	221,656,360
	Temporary Total	45,578,265	99,158,862	20,093,559	67,167,249	231,997,935	38,763,634	81,773,941	12,570,964	46,425,167	179,533,706
	Medical Only	0	0	0	24,867,754	24,867,754	0	0	0	15,263,449	15,263,449
2017	Fatal	980,514	6,303,921	334,140	403,744	8,022,319	839,859	5,229,130	205,612	275,609	6,550,210
	Permanent Total	54,094,366	0	17,083,728	0	71,178,094	46,982,844	0	10,512,438	0	57,495,282
	Permanent Partial	70,865,966	136,002,388	22,845,835	41,034,723	270,748,912	64,404,595	119,699,353	14,058,138	28,011,731	226,173,817
	Temporary Total	50,320,784	123,628,768	19,037,980	72,000,603	264,988,135	42,658,784	101,495,491	11,714,983	49,150,120	205,019,378
	Medical Only	0	0	0	26,771,873	26,771,873	0	0	0	16,158,901	16,158,901
2018	Fatal	1,416,284	4,963,473	9,924	328,806	6,718,487	1,318,664	4,495,534	6,302	231,741	6,052,241
	Permanent Total	34,300,408	0	12,949,881	0	47,250,289	32,337,741	0	8,224,421	0	40,562,162
	Permanent Partial	69,844,040	133,027,084	21,493,206	44,688,318	269,052,648	68,617,863	127,133,526	13,650,255	31,496,018	240,897,662
	Temporary Total	55,493,499	130,336,698	20,994,457	75,234,825	282,059,479	51,203,056	116,985,673	13,333,500	53,024,985	234,547,214
	Medical Only	0	0	0	27,105,590	27,105,590	0	0	0	16,752,537	16,752,537
2019	Fatal	861,632	6,294,202	29,236	661,770	7,846,840	1,021,841	7,131,411	22,014	537,127	8,712,393
	Permanent Total	11,027,718	0	4,936,814	0	15,964,532	13,224,447	0	3,717,322	0	16,941,769
	Permanent Partial	56,882,617	110,215,329	21,730,488	40,659,583	229,488,017	70,798,784	131,057,371	16,362,626	33,001,444	251,220,225
	Temporary Total	47,511,817	121,604,398	19,264,774	69,934,471	258,315,460	55,910,736	136,714,967	14,505,991	56,762,475	263,894,169
	Medical Only	0	0	0	22,998,777	22,998,777	0	0	0	17,425,635	17,425,635
2020	Fatal	0	3,683,083	0	476,421	4,159,504	0	5,949,122	0	413,612	6,362,734
	Permanent Total	1,636,667	0	1,511,153	0	3,147,820	3,118,018	0	1,284,635	0	4,402,653
	Permanent Partial	21,638,199	49,605,993	10,329,329	26,806,595	108,380,116	42,594,700	83,559,277	8,780,988	23,272,536	158,207,501
	Temporary Total	39,460,471	101,394,158	24,691,645	73,115,128	238,661,402	73,997,786	162,702,967	20,990,434	63,475,966	321,167,153
	Medical Only	0	0	0	18,443,373	18,443,373	0	0	0	15,177,410	15,177,410
(13) All Years, All Injury Types		685,926,458	1,162,779,512	257,155,498	674,785,486	2,780,646,954	719,237,441	1,204,977,378	174,852,467	495,945,331	2,595,012,617

Notes:
 (3) - (12): Total of Section IX - C, Page 1 of Exhibits 1 through 5.

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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)	
2016	Fatal	64,512	1,498,118	30,823	733,526	2,326,979	284,645	6,713,881	55,278	1,171,721	8,225,525	1,216,460,447
	Permanent Total	9,416,473	0	7,382,282	0	16,798,755	40,355,693	0	13,393,637	0	53,749,330	
	Permanent Partial	12,149,494	21,232,312	8,922,961	16,632,382	58,937,149	97,878,663	172,649,195	28,797,461	57,818,274	357,143,593	
	Temporary Total	6,787,760	14,448,356	5,979,719	17,479,305	44,695,140	58,985,969	124,601,357	23,994,816	82,658,740	290,240,882	
	Medical Only	0	0	0	3,339,231	3,339,231	0	0	0	22,006,969	22,006,969	
2017	Fatal	189,394	1,136,110	153,788	574,703	2,053,995	845,447	5,228,518	425,169	1,005,921	7,505,055	1,279,200,402
	Permanent Total	9,051,074	0	6,821,555	0	15,872,629	40,488,808	0	12,511,031	0	52,999,839	
	Permanent Partial	12,470,292	22,474,640	9,287,970	16,950,068	61,182,970	97,874,260	181,010,666	29,689,917	57,179,212	365,754,055	
	Temporary Total	7,409,276	18,103,764	6,045,839	19,640,929	51,199,808	64,834,747	154,872,933	22,973,152	88,979,398	331,660,230	
	Medical Only	0	0	0	3,507,509	3,507,509	0	0	0	23,265,364	23,265,364	
2018	Fatal	299,573	1,064,374	129,778	505,276	1,999,001	1,329,247	4,567,007	160,983	871,889	6,929,126	1,339,189,247
	Permanent Total	6,619,787	0	5,409,225	0	12,029,012	28,149,806	0	9,840,259	0	37,990,065	
	Permanent Partial	12,820,901	23,903,440	9,192,554	18,644,470	64,561,365	103,684,819	192,294,678	29,049,854	63,765,100	388,794,451	
	Temporary Total	8,974,123	20,709,596	7,177,241	22,007,538	58,868,498	77,925,370	178,306,047	26,530,099	97,052,579	379,814,095	
	Medical Only	0	0	0	3,666,866	3,666,866	0	0	0	24,156,154	24,156,154	
2019	Fatal	107,828	1,532,125	49,531	807,051	2,496,535	927,930	7,116,378	84,637	1,590,164	9,719,109	1,428,224,497
	Permanent Total	3,045,575	0	2,522,373	0	5,567,948	11,756,341	0	4,503,580	0	16,259,921	
	Permanent Partial	13,152,635	25,080,854	10,156,308	19,902,673	68,292,470	106,883,842	198,789,410	33,724,890	67,279,687	406,677,829	
	Temporary Total	9,687,667	24,148,759	7,627,231	24,461,987	65,925,644	84,945,489	208,307,628	28,628,735	105,061,687	426,943,539	
	Medical Only	0	0	0	3,831,812	3,831,812	0	0	0	25,147,560	25,147,560	
2020	Fatal	0	1,127,096	0	596,500	1,723,596	0	5,812,528	0	1,194,962	7,007,490	1,469,994,184
	Permanent Total	660,366	0	690,859	0	1,351,225	2,730,173	0	1,425,838	0	4,156,011	
	Permanent Partial	8,140,844	16,443,558	6,114,750	13,817,288	44,516,440	64,594,617	127,319,910	18,943,341	47,168,196	258,026,064	
	Temporary Total	13,060,893	30,153,660	10,851,390	29,435,433	83,501,376	112,735,090	249,736,268	41,186,553	120,178,428	523,836,339	
	Medical Only	0	0	0	3,420,071	3,420,071	0	0	0	22,000,820	22,000,820	
(14) All Years, All Injury Types		134,108,467	223,056,762	104,546,177	219,954,618	681,666,024	997,210,956	1,817,326,404	325,919,230	909,552,825	4,050,009,415	6,733,068,777
(15) Pure Premium							0.148	0.270	0.048	0.135	0.602	

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.

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Section IX - D
Exhibit 1
Page 1

MA Full Credibility Standard and Partial Credibility

		Indemnity	Medical
(1)	Average Claim Cost	35,000	14,000
(2)	Claims	850	400
(3)	Full Credibility Standard =(1) x (2)	29,750,000	5,600,000

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.

(1): Page 2

(2), (4): From the paper "Class Ratemaking for Workers Compensation: NCCI's New Methodology" by Tom Daley.

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 Exhibit 1
 Page 2

Selection of Average Massachusetts Claim Costs

Policy Year 2020

	Injury Type				
	Fatal	Permanent Total	Permanent Partial	Temporary Total	Medical Only
	Indemnity				
(1) Losses Developed to Ultimate	10,162,386	6,553,768	142,469,093	280,679,605	
(2) On-Level Factor	1.043	1.053	1.088	1.036	
(3) On-Level Ultimate Losses = (1) x (2)	10,601,863	6,900,501	154,998,104	290,896,568	
	Medical				
(4) Losses Developed to Ultimate	673,795	6,550,206	47,070,993	116,057,660	19,173,177
(5) On-Level Factor	1.000	1.000	1.000	1.000	1.000
(6) On-Level Ultimate Losses = (4) x (5)	673,795	6,550,206	47,070,993	116,057,660	19,173,177
	Claim Count				
(7) Claim Count Developed to Fifth Report	21	9	1,181	11,928	
Summary:					
(8) Ultimate Losses			Indemnity 463,397,036		
(9) Ultimate Claim Count			13,138		
(10) Average Claim Cost = (8) / (9)			35,271		
(11) Selected Average Claim Cost			35,000		
(12) Ultimate Losses			Medical 189,525,831		
(13) Ultimate Claim Count			13,138		
(14) Average Claim Cost = (12) / (13)			14,426		
(15) Selected Average Claim Cost			14,000		

Notes:

- (1), (4): Unit Statistical 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 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)

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Section IX - Classification Pricing
 Subsection D - Credibility/Countrywide Data
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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	3.278	0.572
		Construction	2	3.046	0.520
		Office and Clerical	3	1.434	0.304
		Goods and Services	9	2.591	0.441
		Miscellaneous	0	2.191	0.446
Arizona	2	Manufacturing	1	4.233	0.598
		Construction	2	3.446	0.552
		Office and Clerical	3	2.073	0.395
		Goods and Services	9	3.681	0.572
		Miscellaneous	0	3.661	0.721
Arkansas	3	Manufacturing	1	3.244	0.945
		Construction	2	4.431	1.095
		Office and Clerical	3	3.085	0.704
		Goods and Services	9	3.979	1.199
		Miscellaneous	0	4.756	1.248
Colorado	5	Manufacturing	1	1.927	0.588
		Construction	2	2.296	0.719
		Office and Clerical	3	1.961	0.560
		Goods and Services	9	1.877	0.574
		Miscellaneous	0	2.365	0.798
Connecticut	6	Manufacturing	1	1.096	0.494
		Construction	2	1.058	0.477
		Office and Clerical	3	0.611	0.369
		Goods and Services	9	0.943	0.454
		Miscellaneous	0	1.165	0.565
D.C.	8	Manufacturing	1	0.501	0.217
		Construction	2	1.907	0.969
		Office and Clerical	3	0.524	0.552
		Goods and Services	9	1.642	1.057
		Miscellaneous	0	0.654	0.501
Florida	9	Manufacturing	1	2.095	0.474
		Construction	2	2.028	0.416
		Office and Clerical	3	1.179	0.282
		Goods and Services	9	1.789	0.408
		Miscellaneous	0	2.159	0.591
Georgia	10	Manufacturing	1	1.698	0.765
		Construction	2	0.871	0.439
		Office and Clerical	3	1.330	0.614
		Goods and Services	9	1.354	0.649
		Miscellaneous	0	1.751	0.852
Idaho	11	Manufacturing	1	1.619	0.445
		Construction	2	1.503	0.459
		Office and Clerical	3	1.135	0.274
		Goods and Services	9	1.335	0.375
		Miscellaneous	0	1.909	0.623

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 Subsection D - Credibility/Countrywide Data
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 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	1.148	0.457
		Construction	2	1.000	0.479
		Office and Clerical	3	0.730	0.418
		Goods and Services	9	1.233	0.487
		Miscellaneous	0	1.226	0.575
Indiana	13	Manufacturing	1	4.050	0.641
		Construction	2	5.083	0.919
		Office and Clerical	3	1.659	0.327
		Goods and Services	9	3.822	0.630
		Miscellaneous	0	4.132	0.874
Iowa	14	Manufacturing	1	1.579	0.374
		Construction	2	2.006	0.509
		Office and Clerical	3	1.060	0.258
		Goods and Services	9	1.603	0.427
		Miscellaneous	0	2.136	0.615
Kansas	15	Manufacturing	1	2.538	0.540
		Construction	2	2.970	0.688
		Office and Clerical	3	1.514	0.381
		Goods and Services	9	2.592	0.566
		Miscellaneous	0	3.499	0.882
Kentucky	16	Manufacturing	1	2.316	0.963
		Construction	2	2.637	0.956
		Office and Clerical	3	1.130	0.455
		Goods and Services	9	2.250	0.898
		Miscellaneous	0	2.473	1.008
Louisiana	17	Manufacturing	1	2.004	0.556
		Construction	2	1.737	0.520
		Office and Clerical	3	0.566	0.239
		Goods and Services	9	1.763	0.508
		Miscellaneous	0	1.669	0.516
Maine	18	Manufacturing	1	1.257	0.457
		Construction	2	1.339	0.519
		Office and Clerical	3	0.801	0.225
		Goods and Services	9	1.209	0.423
		Miscellaneous	0	1.282	0.683
Maryland	19	Manufacturing	1	1.994	0.952
		Construction	2	2.219	0.831
		Office and Clerical	3	1.131	0.551
		Goods and Services	9	1.973	0.900
		Miscellaneous	0	1.948	0.986
Michigan	21	Manufacturing	1	3.052	0.940
		Construction	2	3.390	1.317
		Office and Clerical	3	1.323	0.491
		Goods and Services	9	2.847	0.921
		Miscellaneous	0	3.260	1.350
Minnesota	22	Manufacturing	1	1.645	0.703
		Construction	2	2.068	0.873
		Office and Clerical	3	1.245	0.566
		Goods and Services	9	1.778	0.709
		Miscellaneous	0	2.012	0.947

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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	1.644	0.530
		Construction	2	2.435	0.707
		Office and Clerical	3	0.886	0.207
		Goods and Services	9	1.870	0.681
		Miscellaneous	0	2.409	0.896
Missouri	24	Manufacturing	1	1.509	0.455
		Construction	2	1.882	0.536
		Office and Clerical	3	1.042	0.347
		Goods and Services	9	1.496	0.407
		Miscellaneous	0	1.606	0.507
Montana	25	Manufacturing	1	1.341	0.392
		Construction	2	1.857	0.469
		Office and Clerical	3	1.350	0.244
		Goods and Services	9	1.769	0.441
		Miscellaneous	0	2.249	0.580
Nebraska	26	Manufacturing	1	1.675	0.445
		Construction	2	2.225	0.632
		Office and Clerical	3	1.327	0.352
		Goods and Services	9	1.940	0.530
		Miscellaneous	0	2.227	0.654
Nevada	27	Manufacturing	1	0.704	0.434
		Construction	2	1.483	0.664
		Office and Clerical	3	0.560	0.311
		Goods and Services	9	1.482	0.648
		Miscellaneous	0	1.300	0.697
New Hampshire	28	Manufacturing	1	1.880	0.416
		Construction	2	1.813	0.493
		Office and Clerical	3	1.463	0.407
		Goods and Services	9	1.600	0.390
		Miscellaneous	0	2.025	0.640
New Mexico	30	Manufacturing	1	1.344	0.359
		Construction	2	1.833	0.576
		Office and Clerical	3	0.841	0.223
		Goods and Services	9	1.583	0.506
		Miscellaneous	0	1.725	0.542
North Carolina	32	Manufacturing	1	1.980	1.019
		Construction	2	1.592	0.732
		Office and Clerical	3	0.825	0.473
		Goods and Services	9	1.708	0.837
		Miscellaneous	0	1.587	0.919
Oklahoma	35	Manufacturing	1	1.528	0.616
		Construction	2	1.547	0.628
		Office and Clerical	3	0.524	0.295
		Goods and Services	9	1.289	0.561
		Miscellaneous	0	1.952	0.753
Oregon	36	Manufacturing	1	2.261	0.807
		Construction	2	2.321	0.922
		Office and Clerical	3	1.761	0.575
		Goods and Services	9	1.871	0.715
		Miscellaneous	0	2.401	1.084

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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	0.734	0.819
		Construction	2	1.290	1.245
		Office and Clerical	3	0.540	0.553
		Goods and Services	9	0.720	0.699
		Miscellaneous	0	1.028	0.955
South Carolina	39	Manufacturing	1	1.015	0.596
		Construction	2	1.105	0.610
		Office and Clerical	3	0.595	0.411
		Goods and Services	9	1.149	0.699
		Miscellaneous	0	1.227	0.813
South Dakota	40	Manufacturing	1	2.906	0.422
		Construction	2	2.591	0.537
		Office and Clerical	3	0.981	0.282
		Goods and Services	9	2.540	0.571
		Miscellaneous	0	3.759	0.819
Tennessee	41	Manufacturing	1	2.877	0.720
		Construction	2	3.394	0.683
		Office and Clerical	3	1.291	0.429
		Goods and Services	9	3.105	0.760
		Miscellaneous	0	3.382	0.959
Utah	43	Manufacturing	1	6.370	0.988
		Construction	2	4.103	0.708
		Office and Clerical	3	3.569	0.674
		Goods and Services	9	4.642	0.747
		Miscellaneous	0	4.229	1.029
Vermont	44	Manufacturing	1	1.294	0.530
		Construction	2	1.330	0.474
		Office and Clerical	3	0.627	0.244
		Goods and Services	9	0.986	0.426
		Miscellaneous	0	0.947	0.494
Virginia	45	Manufacturing	1	2.135	0.772
		Construction	2	3.578	0.730
		Office and Clerical	3	3.406	0.741
		Goods and Services	9	3.275	0.700
		Miscellaneous	0	3.896	0.957
West Virginia	47	Manufacturing	1	3.036	0.912
		Construction	2	4.395	1.385
		Office and Clerical	3	1.739	0.529
		Goods and Services	9	2.844	0.948
		Miscellaneous	0	4.710	1.758
Wisconsin	48	Manufacturing	1	2.233	0.402
		Construction	2	1.962	0.417
		Office and Clerical	3	1.031	0.207
		Goods and Services	9	1.761	0.356
		Miscellaneous	0	1.986	0.450
Hawaii	52	Manufacturing	1	0.680	0.232
		Construction	2	1.413	0.546
		Office and Clerical	3	0.269	0.118
		Goods and Services	9	0.803	0.333
		Miscellaneous	0	0.835	0.358

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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	1.945	0.359
		Construction	2	2.643	0.487
		Office and Clerical	3	1.032	0.163
		Goods and Services	9	2.917	0.426
		Miscellaneous	0	4.555	0.755

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.

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Section IX - Classification Pricing
 Subsection D - Credibility/Countrywide Data
 7/1/2023

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	5/1/2018	- 4/30/2019	5/1/2017	- 4/30/2018	5/1/2016	- 4/30/2017
Arizona	2	3/1/2018	- 2/28/2019	3/1/2017	- 2/28/2018	3/1/2016	- 2/28/2017
Arkansas	3	2/1/2019	- 1/31/2020	2/1/2018	- 1/31/2019	2/1/2017	- 1/31/2018
Colorado	5	3/1/2018	- 2/28/2019	3/1/2017	- 2/28/2018	3/1/2016	- 2/28/2017
Connecticut	6	8/1/2018	- 7/31/2019	8/1/2017	- 7/31/2018	8/1/2016	- 7/31/2017
D.C.	8	2/1/2018	- 1/31/2019	2/1/2017	- 1/31/2018	2/1/2016	- 1/31/2017
Florida	9	1/1/2018	- 12/31/2018	1/1/2017	- 12/31/2017	1/1/2016	- 12/31/2016
Georgia	10	7/1/2018	- 6/30/2019	7/1/2017	- 6/30/2018	7/1/2016	- 6/30/2017
Idaho	11	7/1/2018	- 6/30/2019	7/1/2017	- 6/30/2018	7/1/2016	- 6/30/2017
Illinois	12	4/1/2018	- 3/31/2019	4/1/2017	- 3/31/2018	4/1/2016	- 3/31/2017
Indiana	13	7/1/2018	- 6/30/2019	7/1/2017	- 6/30/2018	7/1/2016	- 6/30/2017
Iowa	14	3/1/2018	- 2/28/2019	3/1/2017	- 2/28/2018	3/1/2016	- 2/28/2017
Kansas	15	7/1/2018	- 6/30/2019	7/1/2017	- 6/30/2018	7/1/2016	- 6/30/2017
Kentucky	16	5/1/2018	- 4/30/2019	5/1/2017	- 4/30/2018	5/1/2016	- 4/30/2017
Louisiana	17	9/1/2018	- 8/31/2019	9/1/2017	- 8/31/2018	9/1/2016	- 8/31/2017
Maine	18	6/1/2018	- 5/31/2019	6/1/2017	- 5/31/2018	6/1/2016	- 5/31/2017
Maryland	19	4/1/2018	- 3/31/2019	4/1/2017	- 3/31/2018	4/1/2016	- 3/31/2017
Michigan	21	4/1/2019	- 3/31/2020	4/1/2018	- 3/31/2019	4/1/2017	- 3/31/2018
Minnesota	22	1/1/2019	- 12/31/2019	1/1/2018	- 12/31/2018	1/1/2017	- 12/31/2017
Mississippi	23	9/1/2018	- 8/31/2019	9/1/2017	- 8/31/2018	9/1/2016	- 8/31/2017
Missouri	24	7/1/2018	- 6/30/2019	7/1/2017	- 6/30/2018	7/1/2016	- 6/30/2017
Montana	25	1/1/2019	- 12/31/2019	1/1/2018	- 12/31/2018	1/1/2017	- 12/31/2017
Nebraska	26	8/1/2018	- 7/31/2019	8/1/2017	- 7/31/2018	8/1/2016	- 7/31/2017
Nevada	27	1/1/2018	- 12/31/2018	1/1/2017	- 12/31/2017	1/1/2016	- 12/31/2016
New Hampshire	28	4/1/2018	- 3/31/2019	4/1/2017	- 3/31/2018	4/1/2016	- 3/31/2017
New Mexico	30	7/1/2018	- 6/30/2019	7/1/2017	- 6/30/2018	7/1/2016	- 6/30/2017
North Carolina	32	1/1/2018	- 12/31/2018	1/1/2017	- 12/31/2017	1/1/2016	- 12/31/2016
Oklahoma	35	6/1/2018	- 5/31/2019	6/1/2017	- 5/31/2018	6/1/2016	- 5/31/2017
Oregon	36	1/1/2018	- 12/31/2018	1/1/2017	- 12/31/2017	1/1/2016	- 12/31/2016
Rhode Island	38	1/1/2018	- 12/31/2018	1/1/2017	- 12/31/2017	1/1/2016	- 12/31/2016
South Carolina	39	5/1/2018	- 4/30/2019	5/1/2017	- 4/30/2018	5/1/2016	- 4/30/2017
South Dakota	40	1/1/2019	- 12/31/2019	1/1/2018	- 12/31/2018	1/1/2017	- 12/31/2017
Tennessee	41	6/1/2018	- 5/31/2019	6/1/2017	- 5/31/2018	6/1/2016	- 5/31/2017
Utah	43	7/1/2018	- 6/30/2019	7/1/2017	- 6/30/2018	7/1/2016	- 6/30/2017
Vermont	44	7/1/2018	- 6/30/2019	7/1/2017	- 6/30/2018	7/1/2016	- 6/30/2017
Virginia	45	2/1/2018	- 1/31/2019	2/1/2017	- 1/31/2018	2/1/2016	- 1/31/2017
West Virginia	47	7/1/2018	- 6/30/2019	7/1/2017	- 6/30/2018	7/1/2016	- 6/30/2017
Wisconsin	48	1/1/2019	- 12/31/2019	1/1/2018	- 12/31/2018	1/1/2017	- 12/31/2017
Hawaii	52	6/1/2018	- 5/31/2019	6/1/2017	- 5/31/2018	6/1/2016	- 5/31/2017
Alaska	54	4/1/2018	- 3/31/2019	4/1/2017	- 3/31/2018	4/1/2016	- 3/31/2017

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	1.672	0.919	0.656	0.742	1.040	0.967	0.818
	Medical	1.672	0.482	0.344	0.742	1.000	0.957	0.408
	Total		1.401					
Construction	Indemnity	4.241	2.428	0.685	0.742	1.040	0.967	2.165
	Medical	4.241	1.118	0.315	0.742	1.000	0.957	0.949
	Total		3.546					
Office and Clerical	Indemnity	0.124	0.065	0.625	0.742	1.040	0.967	0.058
	Medical	0.124	0.039	0.375	0.742	1.000	0.957	0.033
	Total		0.104					
Goods and Services	Indemnity	1.426	0.765	0.643	0.742	1.040	0.967	0.684
	Medical	1.426	0.425	0.357	0.742	1.000	0.957	0.362
	Total		1.190					
Miscellaneous	Indemnity	4.041	2.226	0.659	0.742	1.040	0.967	1.986
	Medical	4.041	1.151	0.341	0.742	1.000	0.957	0.978
	Total		3.377					

Notes:

(3): Section IX - H, Exhibit 1 of 7/1/2022 Stipulation.

(4): Section IX - G of 07/01/2022 Stipulation.

(6): Section VI - J, Exhibit 1 of 7/1/2022 Stipulation.

(7): Section IV - A, Exhibit 1.

(8): Net Indemnity and Medical Trends from Section V - A, Exhibit 1.

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Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2023

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	1.969	1.926	1.611	0.786	2.397
1438	1.839	1.653	1.504	0.674	2.178
1463	6.023	8.765	4.927	3.576	8.503
1701	1.224	1.163	1.001	0.474	1.476
1747	1.298	1.498	1.062	0.611	1.673
1748	1.489	2.170	1.218	0.885	2.104
1853	0.803	0.453	0.657	0.185	0.842
1924	1.189	1.199	0.972	0.489	1.461
1925	1.926	12.474	1.575	5.090	6.665
2003	2.041	1.763	1.670	0.719	2.389
2014	2.135	2.036	1.747	0.831	2.577
2021	1.397	1.463	1.142	0.597	1.739
2039	2.012	1.932	1.646	0.788	2.434
2041	1.290	1.118	1.055	0.456	1.511
2070	1.876	1.583	1.535	0.646	2.180
2081	1.241	1.741	1.015	0.710	1.726
2089	1.487	1.261	1.216	0.515	1.731
2095	1.503	1.286	1.230	0.525	1.754
2101	1.487	1.261	1.216	0.515	1.731
2111	1.142	1.195	0.934	0.488	1.422
2114	1.487	1.261	1.216	0.515	1.731
2115	3.560	2.805	2.912	1.144	4.056
2121	0.759	0.777	0.621	0.317	0.938
2130	0.776	0.804	0.634	0.328	0.962
2131	1.563	1.689	1.279	0.689	1.968
2143	1.545	1.091	1.264	0.445	1.708
2150	1.954	2.045	1.598	0.834	2.432
2156	1.917	2.046	1.568	0.835	2.403
2157	2.387	1.931	1.952	0.788	2.740
2172	1.021	0.753	0.836	0.307	1.143
2211	3.042	3.019	2.488	1.232	3.720
2220	1.296	1.466	1.060	0.598	1.658
2260	2.940	2.368	2.405	0.966	3.371
2288	2.034	1.968	1.664	0.803	2.467
2305	1.478	1.428	1.209	0.583	1.792
2362	0.911	1.189	0.745	0.485	1.230
2380	0.860	0.921	0.704	0.376	1.079
2402	1.156	1.249	0.946	0.509	1.455
2413	1.778	1.883	1.454	0.768	2.222
2416	1.142	1.356	0.934	0.553	1.488
2417	1.002	0.695	0.820	0.284	1.103
2501	1.185	1.112	0.969	0.454	1.423
2503	0.652	0.438	0.533	0.179	0.712
2570	1.930	1.558	1.579	0.636	2.214
2576	1.094	1.229	0.895	0.501	1.396
2585	1.436	1.537	1.174	0.627	1.802
2586	1.102	1.181	0.902	0.482	1.384
2623	2.501	2.586	2.046	1.055	3.100

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Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2023

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	0.779	0.913	0.637	0.373	1.010
2660	1.066	1.192	0.872	0.486	1.358
2683	1.103	1.317	0.903	0.537	1.440
2688	0.905	1.025	0.740	0.418	1.158
2710	3.302	3.397	2.701	1.386	4.087
2731	1.439	1.725	1.177	0.704	1.881
2747	2.991	2.744	2.446	1.120	3.566
2790	1.210	1.068	0.990	0.436	1.426
2802	1.947	1.964	1.593	0.801	2.394
2835	1.010	0.854	0.826	0.349	1.175
2836	1.421	1.153	1.162	0.470	1.632
2841	1.771	2.360	1.449	0.963	2.412
2883	1.789	1.619	1.464	0.661	2.124
2923	0.764	0.771	0.625	0.315	0.940
2942	0.861	0.898	0.705	0.366	1.071
3018	1.337	1.225	1.093	0.500	1.593
3022	1.733	1.945	1.418	0.794	2.211
3027	1.299	1.509	1.063	0.616	1.678
3028	1.370	1.500	1.121	0.612	1.733
3030	2.546	2.793	2.083	1.139	3.222
3040	3.188	2.285	2.608	0.932	3.540
3041	1.507	1.287	1.233	0.525	1.758
3042	1.982	2.021	1.621	0.824	2.446
3066	1.245	1.251	1.019	0.511	1.529
3076	1.176	1.150	0.962	0.469	1.431
3081	2.448	2.749	2.002	1.121	3.124
3082	2.448	2.749	2.002	1.121	3.124
3085	2.423	2.587	1.982	1.056	3.037
3110	4.927	4.100	4.030	1.673	5.703
3111	1.144	1.017	0.936	0.415	1.351
3113	0.889	0.930	0.727	0.379	1.107
3114	1.555	1.438	1.272	0.587	1.859
3118	0.872	0.805	0.713	0.328	1.042
3119	0.547	0.580	0.447	0.237	0.684
3120	0.708	0.556	0.579	0.227	0.806
3122	1.179	1.235	0.965	0.504	1.469
3127	1.247	1.154	1.020	0.471	1.491
3131	0.620	0.786	0.507	0.321	0.828
3132	1.170	1.378	0.957	0.562	1.519
3145	0.848	0.867	0.694	0.354	1.047
3146	1.080	1.208	0.884	0.493	1.377
3169	1.197	1.740	0.979	0.710	1.689
3179	0.612	0.533	0.501	0.217	0.718
3180	1.376	1.161	1.126	0.474	1.599
3188	1.289	1.213	1.054	0.495	1.549
3200	1.133	1.163	0.927	0.474	1.401
3220	1.522	1.568	1.245	0.640	1.884
3255	1.006	1.012	0.823	0.413	1.236

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Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2023

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	1.189	1.478	0.972	0.603	1.575
3270	1.148	1.173	0.939	0.478	1.417
3300	1.437	2.141	1.175	0.873	2.049
3315	1.603	1.487	1.311	0.607	1.917
3336	1.529	1.236	1.251	0.504	1.755
3372	1.107	1.106	0.906	0.451	1.357
3373	2.095	1.613	1.714	0.658	2.371
3381	1.015	0.935	0.830	0.382	1.212
3383	0.798	0.835	0.653	0.341	0.994
3385	0.423	0.418	0.346	0.170	0.516
3400	1.197	1.740	0.979	0.710	1.689
3507	1.511	1.343	1.236	0.548	1.784
3515	1.434	1.379	1.173	0.563	1.736
3558	0.332	0.532	0.272	0.217	0.489
3571	0.355	0.315	0.291	0.129	0.419
3574	0.881	0.859	0.721	0.350	1.071
3612	0.680	0.694	0.556	0.283	0.840
3620	1.932	1.886	1.580	0.769	2.349
3629	0.881	0.859	0.721	0.350	1.071
3632	0.881	0.859	0.721	0.350	1.071
3634	0.825	0.695	0.675	0.283	0.958
3635	1.137	1.803	0.930	0.736	1.666
3638	0.881	0.859	0.721	0.350	1.071
3642	0.548	0.534	0.449	0.218	0.666
3643	0.840	0.783	0.687	0.319	1.007
3647	1.255	1.189	1.027	0.485	1.512
3648	0.598	0.684	0.489	0.279	0.768
3681	0.327	0.319	0.267	0.130	0.398
3685	0.315	0.284	0.258	0.116	0.374
3807	1.197	1.740	0.979	0.710	1.689
3808	1.700	1.825	1.390	0.745	2.135
3826	2.065	2.809	1.690	1.146	2.836
3830	0.881	0.859	0.721	0.350	1.071
3841	1.017	0.935	0.832	0.381	1.214
4021	1.651	1.785	1.351	0.728	2.079
4024	2.098	2.013	1.716	0.821	2.537
4034	3.087	3.358	2.525	1.370	3.895
4036	0.980	1.035	0.801	0.422	1.224
4038	1.584	0.975	1.296	0.398	1.694
4053	1.278	1.307	1.045	0.533	1.578
4062	1.057	0.963	0.864	0.393	1.257
4112	0.189	0.221	0.155	0.090	0.245
4113	1.278	1.307	1.045	0.533	1.578
4114	1.564	1.255	1.279	0.512	1.792
4130	1.870	1.916	1.529	0.782	2.311
4133	0.845	0.813	0.691	0.332	1.022
4150	0.533	0.375	0.436	0.153	0.589
4239	1.356	1.280	1.110	0.522	1.632

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Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2023

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	1.505	1.304	1.231	0.532	1.763
4244	1.588	1.546	1.299	0.631	1.930
4250	1.156	1.165	0.945	0.475	1.421
4251	1.284	0.939	1.051	0.383	1.434
4273	1.696	1.536	1.388	0.627	2.014
4279	1.208	1.167	0.988	0.476	1.465
4283	0.833	0.685	0.682	0.279	0.961
4299	0.929	0.945	0.760	0.386	1.145
4304	2.296	2.596	1.878	1.059	2.937
4307	0.837	0.896	0.684	0.366	1.050
4308	1.506	0.377	1.232	0.154	1.386
4351	0.476	0.459	0.389	0.187	0.577
4352	0.653	0.565	0.535	0.231	0.765
4360	0.332	0.293	0.272	0.120	0.391
4410	1.484	2.018	1.214	0.823	2.037
4432	0.335	0.427	0.274	0.174	0.448
4439	2.932	3.945	2.398	1.610	4.008
4452	1.474	1.263	1.206	0.515	1.721
4459	1.528	1.555	1.250	0.634	1.884
4470	1.090	1.006	0.892	0.410	1.302
4484	1.030	1.224	0.842	0.499	1.342
4493	1.008	1.027	0.825	0.419	1.244
4557	1.061	0.770	0.868	0.314	1.182
4558	0.805	0.880	0.658	0.359	1.017
4583	1.338	1.367	1.094	0.558	1.652
4611	0.458	0.433	0.375	0.177	0.552
4635	2.263	3.349	1.851	1.367	3.217
4653	1.117	0.903	0.914	0.368	1.282
4665	6.332	4.676	5.180	1.908	7.088
4692	0.286	0.257	0.234	0.105	0.339
4693	0.413	0.464	0.338	0.189	0.527
4720	0.849	0.885	0.695	0.361	1.056
4740	0.417	0.368	0.341	0.150	0.491
4741	1.409	1.297	1.152	0.529	1.682
4771	1.399	0.983	1.145	0.401	1.546
4777	1.338	1.367	1.094	0.558	1.652
4825	0.238	0.198	0.194	0.081	0.275
4828	0.477	0.467	0.390	0.190	0.580
4829	0.477	0.467	0.390	0.190	0.580
4902	0.861	0.898	0.705	0.366	1.071
4923	0.332	0.293	0.272	0.120	0.391
6504	1.487	1.261	1.216	0.515	1.731
9501	1.118	1.063	0.915	0.434	1.348
9505	1.118	1.063	0.915	0.434	1.348
9521	1.660	1.527	1.358	0.623	1.981
9522	0.897	0.798	0.734	0.325	1.059

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Section IX - Classification Pricing
Subsection F - Underlying Pure Premiums
7/1/2023

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 7/1/2022 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 = 0.818, Medical = 0.408).

IX 00056 STIP

Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2023

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	0.897	0.921	1.941	0.874	2.815
3365	0.886	1.206	1.919	1.144	3.063
3724	0.950	0.963	2.057	0.914	2.971
3726	0.816	0.587	1.767	0.557	2.324
5020	0.971	0.765	2.103	0.726	2.828
5022	2.221	2.011	4.808	1.908	6.716
5037	3.408	3.169	7.378	3.007	10.385
5040	4.637	4.122	10.038	3.912	13.950
5057	3.251	5.551	7.037	5.268	12.306
5059	5.824	7.505	12.608	7.122	19.730
5102	1.452	1.119	3.145	1.062	4.207
5146	1.486	1.355	3.217	1.286	4.503
5160	0.644	0.583	1.395	0.553	1.948
5183	0.688	0.630	1.489	0.598	2.087
5188	0.887	0.713	1.919	0.677	2.596
5190	0.496	0.545	1.073	0.517	1.590
5213	2.506	2.253	5.425	2.138	7.563
5215	0.909	0.890	1.968	0.845	2.812
5221	1.476	1.273	3.195	1.208	4.404
5222	2.210	1.414	4.785	1.342	6.127
5223	0.897	0.823	1.942	0.781	2.723
5348	1.132	0.825	2.450	0.783	3.233
5402	1.454	1.297	3.147	1.231	4.378
5403	2.002	1.755	4.334	1.666	6.000
5437	0.804	0.753	1.742	0.715	2.456
5443	0.783	0.721	1.695	0.684	2.379
5445	1.469	1.144	3.181	1.085	4.267
5462	1.275	0.995	2.761	0.945	3.706
5472	1.781	1.381	3.855	1.311	5.166
5473	1.933	1.909	4.185	1.812	5.997
5474	0.874	0.858	1.893	0.814	2.707
5478	0.808	0.618	1.750	0.587	2.336
5479	1.166	1.191	2.524	1.130	3.653
5480	1.063	0.837	2.302	0.794	3.096
5506	1.292	1.170	2.797	1.110	3.908
5507	1.245	1.027	2.696	0.975	3.671
5508	0.897	0.921	1.941	0.874	2.815
5509	1.181	1.576	2.557	1.495	4.053
5538	0.875	0.916	1.894	0.869	2.763
5545	9.187	13.673	19.889	12.976	32.865
5547	2.226	2.691	4.819	2.554	7.372
5606	0.258	0.305	0.559	0.289	0.849
5610	1.072	0.785	2.321	0.745	3.066
5645	1.296	1.736	2.806	1.648	4.454
5701	4.119	4.887	8.917	4.638	13.555
5703	2.469	2.239	5.345	2.125	7.469
5705	2.080	1.868	4.502	1.773	6.275
6003	1.736	1.420	3.758	1.347	5.106

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Section IX - Classification Pricing
Subsection F - Underlying Pure Premiums
7/1/2023

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	0.897	0.921	1.941	0.874	2.815
6204	1.165	1.061	2.522	1.007	3.529
6217	0.987	0.835	2.137	0.792	2.929
6229	0.833	0.825	1.804	0.783	2.587
6233	0.495	0.367	1.072	0.348	1.420
6251	1.020	0.731	2.209	0.693	2.902
6252	0.929	0.691	2.011	0.656	2.668
6306	1.998	1.661	4.325	1.577	5.902
6319	0.615	0.539	1.332	0.511	1.843
6325	0.563	0.534	1.219	0.507	1.725
6400	0.972	1.157	2.104	1.098	3.202
7538	1.185	1.160	2.565	1.101	3.666
7601	1.063	1.225	2.302	1.163	3.465
7855	0.735	0.599	1.592	0.568	2.160
8227	1.014	1.388	2.196	1.317	3.513
9533	3.679	3.142	7.965	2.982	10.947
9534	1.225	0.981	2.651	0.931	3.582
9549	0.940	0.678	2.035	0.643	2.678
9552	1.364	1.777	2.953	1.686	4.639

Notes:

(2), (3): Section IX - I, Exhibit 1 of 7/1/2022 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 = 2.165, Medical = 0.949).

IX 00058 STIP

Section IX - Classification Pricing
Subsection F - Underlying Pure Premiums
7/1/2023

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	3.970	4.728	0.230	0.156	0.386
7610	4.820	3.139	0.280	0.104	0.383
8601	1.499	1.380	0.087	0.046	0.132
8721	1.445	1.413	0.084	0.047	0.130
8742	0.691	0.797	0.040	0.026	0.066
8748	5.309	4.242	0.308	0.140	0.448
8800	7.654	6.623	0.444	0.219	0.662
8803	0.333	0.334	0.019	0.011	0.030
8810	0.451	0.493	0.026	0.016	0.042
8820	0.514	0.470	0.030	0.016	0.045
8832	2.137	1.859	0.124	0.061	0.185
8833	8.768	6.608	0.509	0.218	0.727
8868	5.232	5.550	0.303	0.183	0.487
8901	0.451	0.493	0.026	0.016	0.042
9156	12.748	17.821	0.739	0.588	1.327

Notes:

(2), (3): Section IX - I, Exhibit 1 of 7/1/2022 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 = 0.058, Medical = 0.033).

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Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2023

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	1.569	1.498	1.073	0.542	1.615
0008	1.432	1.653	0.979	0.598	1.578
0016	2.182	2.194	1.492	0.794	2.286
0034	1.735	2.152	1.187	0.779	1.966
0035	1.008	1.080	0.689	0.391	1.080
0036	1.735	2.152	1.187	0.779	1.966
0042	2.019	2.260	1.381	0.818	2.199
0046	1.771	2.672	1.211	0.967	2.178
0079	1.297	1.720	0.887	0.623	1.510
0083	2.262	2.236	1.547	0.810	2.357
0113	1.735	2.152	1.187	0.779	1.966
0170	1.735	2.152	1.187	0.779	1.966
0908	112.447	95.933	76.914	34.728	111.642
0909	183.486	335.063	125.504	121.293	246.797
0912	183.486	335.063	125.504	121.293	246.797
0913	112.447	95.933	76.914	34.728	111.642
0917	1.566	1.310	1.071	0.474	1.545
0918	0.322	0.187	0.220	0.068	0.288
2587	1.384	1.113	0.947	0.403	1.350
3821	3.006	3.265	2.056	1.182	3.238
4362	0.317	0.289	0.217	0.105	0.322
4511	0.211	0.192	0.144	0.069	0.214
4512	0.059	0.057	0.040	0.021	0.061
5191	0.491	0.483	0.336	0.175	0.510
5192	1.773	1.711	1.213	0.619	1.832
8001	0.964	1.223	0.659	0.443	1.102
8002	1.020	1.799	0.697	0.651	1.349
8006	0.691	0.873	0.472	0.316	0.789
8008	0.472	0.533	0.323	0.193	0.516
8010	1.013	1.111	0.693	0.402	1.095
8013	0.206	0.280	0.141	0.102	0.242
8017	0.580	0.693	0.397	0.251	0.648
8018	2.470	1.995	1.689	0.722	2.412
8021	2.298	1.933	1.572	0.700	2.271
8031	1.043	1.085	0.713	0.393	1.106
8032	0.798	0.867	0.546	0.314	0.860
8033	0.931	0.864	0.637	0.313	0.950
8034	2.136	1.450	1.461	0.525	1.986
8039	0.773	0.984	0.529	0.356	0.885
8044	1.737	1.745	1.188	0.632	1.820
8046	1.284	1.656	0.878	0.599	1.478
8048	1.530	1.584	1.046	0.574	1.620
8058	1.242	1.813	0.849	0.656	1.506
8103	1.634	1.789	1.117	0.648	1.765
8105	13.388	8.073	9.158	2.923	12.080
8106	3.168	3.489	2.167	1.263	3.430

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Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2023

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	1.908	1.953	1.305	0.707	2.012
8111	1.591	1.958	1.088	0.709	1.797
8203	4.014	3.664	2.745	1.326	4.072
8204	4.301	5.010	2.942	1.814	4.755
8215	1.981	2.137	1.355	0.774	2.129
8232	3.496	3.480	2.392	1.260	3.651
8233	3.387	3.713	2.316	1.344	3.660
8235	2.529	2.655	1.730	0.961	2.691
8263	3.351	3.256	2.292	1.179	3.470
8264	3.073	3.296	2.102	1.193	3.295
8265	3.387	3.713	2.316	1.344	3.660
8279	2.134	2.848	1.460	1.031	2.491
8291	2.012	2.472	1.376	0.895	2.271
8292	2.192	2.029	1.499	0.735	2.234
8293	4.916	4.781	3.363	1.731	5.093
8350	4.642	3.688	3.175	1.335	4.510
8380	1.680	1.572	1.149	0.569	1.718
8381	0.989	1.218	0.676	0.441	1.117
8385	2.439	2.261	1.668	0.819	2.487
8392	0.960	1.329	0.657	0.481	1.138
8393	0.859	0.645	0.587	0.234	0.821
8500	3.387	3.713	2.316	1.344	3.660
8710	1.845	1.433	1.262	0.519	1.781
8719	1.845	1.433	1.262	0.519	1.781
8720	0.544	0.504	0.372	0.182	0.554
8745	3.590	4.603	2.456	1.666	4.122
8747	0.521	0.345	0.356	0.125	0.481
8824	1.371	1.374	0.938	0.497	1.435
8826	0.981	0.971	0.671	0.352	1.023
8829	1.595	1.318	1.091	0.477	1.568
8831	0.468	1.014	0.320	0.367	0.687
8835	1.228	0.936	0.840	0.339	1.179
9014	1.318	1.284	0.901	0.465	1.366
9015	1.929	1.834	1.319	0.664	1.983
9016	0.929	1.417	0.635	0.513	1.148
9033	1.625	1.345	1.112	0.487	1.599
9040	1.961	1.980	1.341	0.717	2.058
9052	0.952	0.891	0.651	0.323	0.974
9058	0.925	0.947	0.632	0.343	0.975
9060	0.546	0.811	0.374	0.294	0.667
9061	0.595	0.734	0.407	0.266	0.673
9063	0.321	0.498	0.220	0.180	0.400
9079	0.587	0.702	0.401	0.254	0.655
9089	0.412	0.511	0.282	0.185	0.467
9093	0.604	0.868	0.413	0.314	0.727
9101	2.273	2.549	1.555	0.923	2.478

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Section IX - Classification Pricing
Subsection F - Underlying Pure Premiums
7/1/2023

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	2.366	2.366	1.619	0.856	2.475
9410	2.675	2.963	1.830	1.073	2.902
9519	1.698	1.410	1.162	0.511	1.672
9586	0.221	0.179	0.151	0.065	0.216
9620	0.446	0.510	0.305	0.185	0.490

Notes:

(2), (3): Section IX - I, Exhibit 1 of 7/1/2022 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 = 0.684, Medical = 0.362).

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Section IX - Classification Pricing
 Subsection F - Underlying Pure Premiums
 7/1/2023

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	1.944	2.576	3.860	2.519	6.379
1624	0.814	0.962	1.617	0.940	2.557
1655	0.504	0.473	1.001	0.463	1.464
1710	0.814	0.962	1.617	0.940	2.557
2702	2.681	3.402	5.324	3.327	8.651
4000	1.259	1.291	2.500	1.263	3.763
6834	0.446	0.592	0.885	0.579	1.464
6836	0.567	0.864	1.126	0.845	1.972
7219	1.787	1.587	3.548	1.552	5.100
7230	2.078	1.740	4.127	1.702	5.829
7231	2.666	2.551	5.294	2.495	7.790
7360	0.991	0.887	1.969	0.868	2.836
7370	0.813	0.966	1.614	0.945	2.558
7380	1.366	1.329	2.714	1.300	4.013
7382	0.859	0.845	1.706	0.827	2.532
7403	0.718	0.871	1.426	0.852	2.278
7405	0.276	0.241	0.549	0.236	0.785
7420	4.194	6.941	8.330	6.789	15.119
7421	0.272	0.194	0.541	0.190	0.731
7422	0.272	0.194	0.541	0.190	0.731
7425	0.637	0.510	1.265	0.499	1.764
7431	0.272	0.194	0.541	0.190	0.731
7502	0.393	0.357	0.781	0.349	1.130
7515	0.539	1.814	1.071	1.774	2.846
7520	0.645	0.693	1.280	0.678	1.959
7539	0.300	0.376	0.597	0.368	0.964
7580	0.809	0.675	1.607	0.660	2.267
7590	1.416	1.895	2.812	1.853	4.665
7600	0.913	0.698	1.814	0.683	2.497
7704	0.897	1.196	1.782	1.170	2.952
7720	0.319	0.367	0.633	0.359	0.991
9019	0.615	0.612	1.222	0.598	1.821
9102	0.425	0.535	0.845	0.524	1.368
9154	0.312	0.424	0.620	0.414	1.035
9178	1.413	6.136	2.807	6.001	8.808
9179	7.895	19.997	15.679	19.557	35.236
9180	0.786	1.481	1.561	1.448	3.009
9182	0.524	0.928	1.040	0.907	1.947
9186	0.786	1.481	1.561	1.448	3.009
9402	0.915	0.822	1.818	0.804	2.622
9403	2.287	2.089	4.542	2.043	6.585

Notes:

- (2), (3): Section IX - I, Exhibit 1 of 7/1/2022 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 = 1.986, Medical = 0.978).

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Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2023

Section IX - G

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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
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Section IX - G

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 Subsection G - Class Relativities
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Section IX - G
 Exhibit 1

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	119,731	2	28	67,722	4,788	54,347	31,225	158,081	0.606	0.715	1.320
2017	133,117	0	28	0	13,341	0	27,217	40,558	0.100	0.204	0.305
2018	133,342	0	14	0	61,904	0	34,102	96,006	0.464	0.256	0.720
2019	154,502	2	18	77,366	264,660	442,866	136,476	921,369	2.214	3.750	5.963
2020	160,754	0	13	0	56,719	0	73,962	130,681	0.353	0.460	0.813
MA Total:	701,445	4	101	145,088	401,411	497,213	302,983	1,346,695	0.779	1.141	1.920

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.027	3.266	.
(14) Massachusetts Credibility:	0.230	0.340	.
(15) Countrywide Pure Premium:	1.193	0.667	1.859
(16) Countrywide Indicated Relativity:	1.569	1.889	.
(17) Countrywide Credibility:	0.390	0.330	.
(18) Countrywide Lost-Time Claims:	1551.0	.	.
(19) Pure Premium Underlying Present Rate:	1.073	0.542	1.615
(20) Relativity to Underlying Present Rate:	1.597	1.525	.
(21) Credibility to Underlying Relativity:	0.380	0.330	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.455	2.237	.
(24) Balanced Formula Relativity:	1.437	2.227	1.686

Class(es):		Effective: 7/1/2023							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)
2016	460,969	2	65	92,502	336,484	24,849	420,675	874,510	0.931	0.966	1.897
2017	540,655	1	59	13,939	681,433	36,864	228,114	960,350	1.286	0.490	1.776
2018	569,896	1	66	135,677	85,209	33,170	142,903	396,959	0.388	0.309	0.697
2019	496,522	0	62	0	23,707	0	61,406	85,113	0.048	0.124	0.171
2020	549,644	2	73	259,180	480,368	148,297	307,737	1,195,582	1.346	0.830	2.175
MA Total:	2,617,686	6	325	501,299	1,607,201	243,180	1,160,835	3,512,515	0.805	0.536	1.342

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.062	1.535	.
(14) Massachusetts Credibility:	0.380	0.600	.
(15) Countrywide Pure Premium:	1.550	0.790	2.340
(16) Countrywide Indicated Relativity:	2.039	2.238	.
(17) Countrywide Credibility:	0.310	0.200	.
(18) Countrywide Lost-Time Claims:	4610.0	.	.
(19) Pure Premium Underlying Present Rate:	0.979	0.598	1.578
(20) Relativity to Underlying Present Rate:	1.457	1.683	.
(21) Credibility to Underlying Relativity:	0.310	0.200	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.488	1.705	.
(24) Balanced Formula Relativity:	1.469	1.698	1.541

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Section IX - Classification Pricing
 Subsection G - Class Relativities
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Section IX - G
 Exhibit 2

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	73,234	1	8	61,137	739	9,376	4,537	75,788	0.845	0.190	1.035
2017	76,542	0	5	0	26,007	0	47,822	73,829	0.340	0.625	0.965
2018	83,745	1	6	140,047	77,804	18,241	22,396	258,487	2.601	0.485	3.087
2019	87,336	0	15	0	113,840	0	75,254	189,094	1.303	0.862	2.165
2020	81,382	1	6	38,081	39,738	65,012	68,397	211,228	0.956	1.639	2.596
MA Total:	402,238	3	40	239,264	258,127	92,629	218,406	808,426	1.237	0.773	2.010

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.630	2.214	.
(14) Massachusetts Credibility:	0.210	0.320	.
(15) Countrywide Pure Premium:	1.734	1.087	2.821
(16) Countrywide Indicated Relativity:	2.282	3.080	.
(17) Countrywide Credibility:	0.400	0.340	.
(18) Countrywide Lost-Time Claims:	737.00	.	.
(19) Pure Premium Underlying Present Rate:	1.492	0.794	2.286
(20) Relativity to Underlying Present Rate:	2.221	2.234	.
(21) Credibility to Underlying Relativity:	0.390	0.340	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.121	2.515	.
(24) Balanced Formula Relativity:	2.094	2.504	2.223

Class(es):		Effective: 7/1/2023							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)
2016	104,089	1	16	27,130	1,313	11,386	21,009	60,838	0.273	0.311	0.584
2017	102,311	0	19	0	67,431	0	43,743	111,173	0.659	0.428	1.087
2018	115,173	0	21	0	13,126	0	57,294	70,420	0.114	0.497	0.611
2019	104,744	0	12	0	18,024	0	35,518	53,542	0.172	0.339	0.511
2020	109,500	1	9	60,200	64,024	25,641	36,517	186,382	1.134	0.568	1.702
MA Total:	535,816	2	77	87,330	163,917	37,026	194,081	482,355	0.469	0.431	0.900

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.618	1.235	.
(14) Massachusetts Credibility:	0.210	0.350	.
(15) Countrywide Pure Premium:	1.635	0.753	2.389
(16) Countrywide Indicated Relativity:	2.152	2.135	.
(17) Countrywide Credibility:	0.400	0.330	.
(18) Countrywide Lost-Time Claims:	3680.0	.	.
(19) Pure Premium Underlying Present Rate:	1.187	0.779	1.966
(20) Relativity to Underlying Present Rate:	1.767	2.191	.
(21) Credibility to Underlying Relativity:	0.390	0.320	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.680	1.838	.
(24) Balanced Formula Relativity:	1.658	1.830	1.712

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Section IX - G
 Exhibit 3

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	415,202	1	40	4,090	233,931	6,260	123,641	367,922	0.573	0.313	0.886
2017	485,829	0	43	0	60,938	0	76,001	136,939	0.125	0.156	0.282
2018	802,660	3	82	135,924	524,245	60,921	212,849	933,940	0.822	0.341	1.164
2019	1,340,097	6	83	544,523	231,253	73,669	229,792	1,079,237	0.579	0.226	0.805
2020	1,361,801	7	110	563,165	1,226,033	350,338	351,109	2,490,644	1.314	0.515	1.829
MA Total:	4,405,590	17	358	1,247,702	2,276,400	491,188	993,392	5,008,682	0.800	0.337	1.137

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.055	0.965	.
(14) Massachusetts Credibility:	0.400	0.620	.
(15) Countrywide Pure Premium:	0.818	0.490	1.308
(16) Countrywide Indicated Relativity:	1.076	1.390	.
(17) Countrywide Credibility:	0.300	0.190	.
(18) Countrywide Lost-Time Claims:	1548.0	.	.
(19) Pure Premium Underlying Present Rate:	0.689	0.391	1.080
(20) Relativity to Underlying Present Rate:	1.026	1.100	.
(21) Credibility to Underlying Relativity:	0.300	0.190	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.052	1.071	.
(24) Balanced Formula Relativity:	1.039	1.066	1.048

Class(es):		Effective: 7/1/2023							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)
2016	5,990,018	27	713	3,321,203	4,306,670	1,342,800	3,902,109	12,872,781	1.273	0.876	2.149
2017	6,384,453	39	718	5,545,681	5,717,703	1,574,640	4,064,761	16,902,785	1.764	0.883	2.647
2018	6,960,546	38	785	4,207,035	6,465,498	977,432	3,977,043	15,627,008	1.533	0.712	2.245
2019	7,098,608	27	723	3,290,606	9,196,568	1,719,962	5,072,703	19,279,839	1.759	0.957	2.716
2020	7,506,887	28	628	4,963,985	8,573,301	2,153,314	5,222,677	20,913,277	1.803	0.983	2.786
MA Total:	33,940,512	159	3,567	21,328,509	34,259,740	7,768,149	22,239,293	85,595,690	1.638	0.884	2.522

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.159	2.531	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.388	1.050	3.438
(16) Countrywide Indicated Relativity:	3.142	2.975	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	7464.0	.	.
(19) Pure Premium Underlying Present Rate:	1.381	0.818	2.199
(20) Relativity to Underlying Present Rate:	2.055	2.301	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.159	2.531	.
(24) Balanced Formula Relativity:	2.132	2.520	2.254

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 Exhibit 4

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	144,205	2	17	280,377	66,411	148,051	86,139	580,977	2,405	1,624	4,029	
2017	168,314	2	24	255,459	236,048	274,610	171,385	937,503	2,920	2,650	5,570	
2018	192,482	0	23	0	41,223	0	23,200	64,423	0,214	0,121	0,335	
2019	238,472	2	19	295,410	5,740	104,410	20,314	425,875	1,263	0,523	1,786	
2020	246,062	0	17	0	139,445	0	64,939	204,384	0,567	0,264	0,831	
MA Total:	989,534	6	100	831,247	488,867	527,071	365,977	2,213,161	1,334	0,902	2,237	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.759	2.583	.
(14) Massachusetts Credibility:	0.280	0.490	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.783	2.691	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.211	0.967	2.178
(20) Relativity to Underlying Present Rate:	1.803	2.721	.
(21) Credibility to Underlying Relativity:	0.720	0.510	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.790	2.653	.
(24) Balanced Formula Relativity:	1.768	2.642	2.043

Class(es):		Effective: 7/1/2023							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)	
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	
2019	25,450	0	4	0	15,073	0	65,338	80,411	0,592	2,567	3,160	
2020	30,169	0	3	0	125,920	0	86,922	212,842	4,174	2,881	7,055	
MA Total:	106,082	0	7	0	140,993	0	152,260	293,252	1,329	1,435	2,764	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.567	1.493	.
(14) Massachusetts Credibility:	0.140	0.190	.
(15) Countrywide Pure Premium:	2.702	1.232	3.933
(16) Countrywide Indicated Relativity:	1.161	1.293	.
(17) Countrywide Credibility:	0.430	0.410	.
(18) Countrywide Lost-Time Claims:	759.00	.	.
(19) Pure Premium Underlying Present Rate:	1.941	0.874	2.815
(20) Relativity to Underlying Present Rate:	0.896	0.920	.
(21) Credibility to Underlying Relativity:	0.430	0.400	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.964	1.182	.
(24) Balanced Formula Relativity:	0.975	1.184	1.036

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	162,612	0	18	0	94,659	0	56,852	151,511	0.582	0.350	0.932
2017	155,835	0	13	0	76,952	0	94,461	171,413	0.494	0.606	1.100
2018	174,134	2	11	196,909	60,654	104,078	47,923	409,564	1.479	0.873	2.352
2019	179,496	1	22	452	67,296	594	123,539	191,880	0.377	0.692	1.069
2020	190,428	1	5	1,465,058	62,088	128,068	26,902	1,682,116	8.020	0.814	8.833
MA Total:	862,506	4	69	1,662,419	361,649	232,740	349,677	2,606,485	2.347	0.675	3.022

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.094	1.933	.
(14) Massachusetts Credibility:	0.230	0.390	.
(15) Countrywide Pure Premium:	1.074	0.527	1.601
(16) Countrywide Indicated Relativity:	1.414	1.493	.
(17) Countrywide Credibility:	0.390	0.310	.
(18) Countrywide Lost-Time Claims:	258.00	.	.
(19) Pure Premium Underlying Present Rate:	0.887	0.623	1.510
(20) Relativity to Underlying Present Rate:	1.320	1.751	.
(21) Credibility to Underlying Relativity:	0.380	0.300	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.765	1.742	.
(24) Balanced Formula Relativity:	1.742	1.734	1.740

Class(es):		Effective: 7/1/2023							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)
2016	55,705	0	10	0	502	0	21,941	22,443	0.009	0.394	0.403
2017	76,331	1	4	107,244	1,913	23,553	5,938	138,648	1.430	0.386	1.816
2018	71,854	0	9	0	9,081	0	46,588	55,669	0.126	0.648	0.775
2019	70,008	0	5	0	4,874	0	10,267	15,141	0.070	0.147	0.216
2020	72,118	1	10	17,344	33,433	10,380	40,386	101,543	0.704	0.704	1.408
MA Total:	346,015	2	38	124,588	49,804	33,933	125,119	333,443	0.504	0.460	0.964

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.664	1.316	.
(14) Massachusetts Credibility:	0.200	0.300	.
(15) Countrywide Pure Premium:	2.085	1.090	3.175
(16) Countrywide Indicated Relativity:	2.744	3.089	.
(17) Countrywide Credibility:	0.400	0.350	.
(18) Countrywide Lost-Time Claims:	2773.0	.	.
(19) Pure Premium Underlying Present Rate:	1.547	0.810	2.357
(20) Relativity to Underlying Present Rate:	2.303	2.277	.
(21) Credibility to Underlying Relativity:	0.400	0.350	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.151	2.273	.
(24) Balanced Formula Relativity:	2.124	2.263	2.168

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Miscellaneous		
0106 TREE PRUNING, SPRAYING, REPAIRING & 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)
2016	464,682	5	96	937,170	748,202	536,128	665,534	2,887,034	3,627	2,586	6,213
2017	584,233	3	95	518,345	1,028,441	376,526	803,224	2,726,536	2,648	2,019	4,667
2018	661,181	5	113	573,159	2,572,873	537,903	1,333,640	5,017,576	4,758	2,831	7,589
2019	640,423	5	81	352,688	2,668,183	193,229	1,469,276	4,683,376	4,717	2,596	7,313
2020	796,030	3	127	603,887	1,671,459	394,171	1,771,749	4,441,267	2,858	2,721	5,579
MA Total:	3,146,550	21	512	2,985,250	8,689,158	2,037,957	6,043,423	19,755,788	3,710	2,568	6,279

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.456	2.368	.
(14) Massachusetts Credibility:	0.700	1.000	.
(15) Countrywide Pure Premium:	4.421	2.266	6.688
(16) Countrywide Indicated Relativity:	1.816	2.230	.
(17) Countrywide Credibility:	0.150	0.000	.
(18) Countrywide Lost-Time Claims:	3187.0	.	.
(19) Pure Premium Underlying Present Rate:	3.860	2.519	6.379
(20) Relativity to Underlying Present Rate:	1.874	2.477	.
(21) Credibility to Underlying Relativity:	0.150	0.000	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	1.573	2.368	.
(24) Balanced Formula Relativity:	1.569	2.376	1.810

Class(es):		Effective: 7/1/2023							Goods and Services		
0908 DOMESTIC WORKERS-INSIDE-OCCASIONAL-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)
2016	3,528	2	14	76,787	227,865	15,262	157,610	477,523	86,343	48,994	135,34
2017	3,513	1	16	565	22,918	1,260	49,998	74,740	6,685	14,593	21,278
2018	3,478	1	18	237,784	117,304	91,599	71,278	517,966	102,10	46,832	148,93
2019	3,419	1	20	110,390	514,953	17,772	169,514	812,629	182,88	54,773	237,66
2020	4,146	2	16	292,288	46,401	69,800	107,230	515,719	81,682	42,694	124,38
MA Total:	18,085	7	84	717,813	929,442	195,693	555,630	2,398,577	91,086	41,545	132,63

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	120.08	118.93	.
(14) Massachusetts Credibility:	0.310	0.440	.
(15) Countrywide Pure Premium:	157.40	62.647	220.05
(16) Countrywide Indicated Relativity:	126.35	107.79	.
(17) Countrywide Credibility:	0.350	0.280	.
(18) Countrywide Lost-Time Claims:	455.00	.	.
(19) Pure Premium Underlying Present Rate:	85.811	38.745	124.56
(20) Relativity to Underlying Present Rate:	127.72	108.99	.
(21) Credibility to Underlying Relativity:	0.340	0.280	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	124.87	113.03	.
(24) Balanced Formula Relativity:	123.28	112.53	119.89

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Calculation of Class Relativities

Class(es): 0909 DOMESTIC WORKERS-OUTSIDE-OCCASIONAL-INCL OCCASNL PRIV CHAUFF										Effective: 7/1/2023		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)		
2016	342	1	3	2,041	1,685	13,002	3,012	19,740	10,895	46,824	57,719		
2017	299	0	2	0	0	0	23,709	23,709	0,000	79,332	79,332		
2018	294	0	4	0	272	0	7,510	7,782	0,926	25,522	26,448		
2019	285	1	7	163,412	445,168	47,900	132,060	788,540	2139.1	632.55	2771.7		
2020	298	1	2	64,147	0	77,277	1,426	142,850	215.51	264.41	479.93		
MA Total:	1,517	3	18	229,600	447,126	138,178	167,716	982,621	446.02	201.61	647.63		

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	588.02	577.13	.
(14) Massachusetts Credibility:	0.140	0.270	.
(15) Countrywide Pure Premium:	121.52	73.414	194.93
(16) Countrywide Indicated Relativity:	217.25	396.71	.
(17) Countrywide Credibility:	0.130	0.140	.
(18) Countrywide Lost-Time Claims:	7.000	.	.
(19) Pure Premium Underlying Present Rate:	147.54	142.59	290.14
(20) Relativity to Underlying Present Rate:	219.60	401.10	.
(21) Credibility to Underlying Relativity:	0.730	0.590	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	270.87	448.02	.
(24) Balanced Formula Relativity:	267.41	446.07	323.75

Class(es): 0917 DOMESTIC SERVICE CONTRACTOR-INSIDE										Effective: 7/1/2023		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)		
2016	446,741	2	59	105,269	239,391	16,655	110,906	472,222	0.771	0.286	1.057		
2017	497,224	3	39	201,554	167,457	58,305	78,080	505,395	0.742	0.274	1.016		
2018	637,963	3	52	229,520	470,581	48,505	204,702	953,308	1.097	0.397	1.494		
2019	689,412	3	46	114,008	517,132	42,164	287,981	961,285	0.915	0.479	1.394		
2020	642,763	2	26	220,155	363,598	32,574	194,136	810,463	0.908	0.353	1.261		
MA Total:	2,914,104	13	222	870,506	1,758,158	198,204	875,806	3,702,673	0.902	0.369	1.271		

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.189	1.055	.
(14) Massachusetts Credibility:	0.410	0.570	.
(15) Countrywide Pure Premium:	1.583	0.773	2.355
(16) Countrywide Indicated Relativity:	2.083	2.189	.
(17) Countrywide Credibility:	0.300	0.220	.
(18) Countrywide Lost-Time Claims:	908.00	.	.
(19) Pure Premium Underlying Present Rate:	1.071	0.474	1.545
(20) Relativity to Underlying Present Rate:	1.594	1.334	.
(21) Credibility to Underlying Relativity:	0.290	0.210	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.575	1.363	.
(24) Balanced Formula Relativity:	1.555	1.357	1.492

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	6,494,666	7	78	471,894	641,417	89,232	189,225	1,391,768	0.171	0.043	0.214
2017	8,654,614	13	82	563,158	1,431,442	105,953	602,274	2,702,829	0.230	0.082	0.312
2018	8,914,428	10	94	897,518	1,458,144	111,240	410,761	2,877,663	0.264	0.059	0.323
2019	11,801,439	6	78	190,868	1,525,593	95,114	477,716	2,289,292	0.145	0.049	0.194
2020	12,357,848	6	62	1,246,109	1,489,788	180,951	434,253	3,351,101	0.221	0.050	0.271
MA Total:	48,222,995	42	394	3,369,547	6,546,384	582,491	2,114,230	12,612,652	0.206	0.056	0.262

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.271	0.160	.
(14) Massachusetts Credibility:	0.660	0.810	.
(15) Countrywide Pure Premium:	0.423	0.115	0.538
(16) Countrywide Indicated Relativity:	0.557	0.326	.
(17) Countrywide Credibility:	0.170	0.100	.
(18) Countrywide Lost-Time Claims:	82,000	.	.
(19) Pure Premium Underlying Present Rate:	0.220	0.068	0.288
(20) Relativity to Underlying Present Rate:	0.328	0.190	.
(21) Credibility to Underlying Relativity:	0.170	0.090	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.329	0.179	.
(24) Balanced Formula Relativity:	0.325	0.179	0.279

Class(es):		Effective: 7/1/2023							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)
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
2019	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	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:	1.484	0.603	2.086
(16) Countrywide Indicated Relativity:	1.825	1.666	.
(17) Countrywide Credibility:	0.260	0.280	.
(18) Countrywide Lost-Time Claims:	40,000	.	.
(19) Pure Premium Underlying Present Rate:	1.611	0.786	2.397
(20) Relativity to Underlying Present Rate:	2.001	1.961	.
(21) Credibility to Underlying Relativity:	0.740	0.720	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.955	1.878	.
(24) Balanced Formula Relativity:	1.959	1.888	1.937

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	128.957	0	13	0	5.621	0	25.807	31.427	0.044	0.200	0.244
2017	144.211	0	16	0	87.876	0	62.775	150.651	0.609	0.435	1.045
2018	156.408	0	23	0	80.724	0	86.317	167.041	0.516	0.552	1.068
2019	161.796	1	24	115.544	56.757	14.776	74.381	261.458	1.065	0.551	1.616
2020	150.356	0	13	0	214.951	0	116.708	331.658	1.430	0.776	2.206
MA Total:	741.728	1	89	115,544	445,928	14,776	365,987	942,235	0.757	0.513	1.270

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.840	1.271	.
(14) Massachusetts Credibility:	0.270	0.380	.
(15) Countrywide Pure Premium:	2.395	0.855	3.250
(16) Countrywide Indicated Relativity:	2.946	2.364	.
(17) Countrywide Credibility:	0.370	0.310	.
(18) Countrywide Lost-Time Claims:	585.00	.	.
(19) Pure Premium Underlying Present Rate:	1.504	0.674	2.178
(20) Relativity to Underlying Present Rate:	1.869	1.682	.
(21) Credibility to Underlying Relativity:	0.360	0.310	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.990	1.737	.
(24) Balanced Formula Relativity:	1.994	1.746	1.917

Class(es):		Effective: 7/1/2023							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)
2016	89.008	2	24	507.859	403.494	543.759	304.106	1,759.217	10.239	9.526	19.765
2017	103.477	2	21	112.579	278.835	32.008	91.123	514.546	3.783	1.190	4.973
2018	97.814	0	26	0	285.602	0	326.159	611.761	2.920	3.334	6.254
2019	87.512	1	18	252.980	209.477	70.059	432.188	964.704	5.284	5.739	11.024
2020	100.811	0	16	0	300.589	0	294.535	595.123	2.982	2.922	5.903
MA Total:	478.622	5	105	873,418	1,477,998	645,826	1,448,110	4,445,352	4.913	4.375	9.288

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.453	10.828	.
(14) Massachusetts Credibility:	0.360	0.620	.
(15) Countrywide Pure Premium:	3.780	1.525	5.305
(16) Countrywide Indicated Relativity:	4.650	4.217	.
(17) Countrywide Credibility:	0.320	0.190	.
(18) Countrywide Lost-Time Claims:	636.00	.	.
(19) Pure Premium Underlying Present Rate:	4.927	3.576	8.503
(20) Relativity to Underlying Present Rate:	6.121	8.921	.
(21) Credibility to Underlying Relativity:	0.320	0.190	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	5.410	9.210	.
(24) Balanced Formula Relativity:	5.421	9.256	6.608

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	496,311	2	63	621,049	889,640	152,579	489,856	2,153,125	3,044	1,294	4,338	
2017	514,950	3	69	249,762	593,699	49,450	285,595	1,178,505	1,638	0,651	2,289	
2018	557,496	1	66	60,592	1,192,728	93,387	465,740	1,812,447	2,248	1,003	3,251	
2019	542,962	0	53	0	2,214,901	0	893,266	3,108,167	4,079	1,645	5,724	
2020	474,653	0	37	0	913,792	0	421,103	1,334,895	1,925	0,887	2,812	
MA Total:	2,586,372	6	288	931,402	5,804,760	295,416	2,555,560	9,587,138	2,604	1,102	3,707	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.022	1.016	.
(14) Massachusetts Credibility:	0.460	0.720	.
(15) Countrywide Pure Premium:	1.663	0.739	2.402
(16) Countrywide Indicated Relativity:	0.683	0.727	.
(17) Countrywide Credibility:	0.270	0.140	.
(18) Countrywide Lost-Time Claims:	1127.0	.	.
(19) Pure Premium Underlying Present Rate:	1.617	0.940	2.557
(20) Relativity to Underlying Present Rate:	0.785	0.925	.
(21) Credibility to Underlying Relativity:	0.270	0.140	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.867	0.963	.
(24) Balanced Formula Relativity:	0.865	0.966	0.895

Class(es):		Effective: 7/1/2023							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)	
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	
2019	0	0	0	0	0	0	0	0	0.000	0.000	0.000	
2020	0	0	0	0	0	0	0	0	0.000	0.000	0.000	
MA Total:	5,799	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:	3.570	0.939	4.509
(16) Countrywide Indicated Relativity:	1.466	0.924	.
(17) Countrywide Credibility:	0.120	0.130	.
(18) Countrywide Lost-Time Claims:	6.000	.	.
(19) Pure Premium Underlying Present Rate:	1.001	0.463	1.464
(20) Relativity to Underlying Present Rate:	0.486	0.455	.
(21) Credibility to Underlying Relativity:	0.850	0.820	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.589	0.493	.
(24) Balanced Formula Relativity:	0.588	0.495	0.560

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Calculation of Class Relativities

Class(es): 1701 CEMENT MFG		Effective: 7/1/2023							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)
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
2019	832	1	0	179,418	0	27,306	0	206,724	215.75	32,836	248.58
2020	791	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	4,630	1	0	179,418	0	27,306	0	206,724	38.751	5.898	44.649

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	43.012	14.598	.
(14) Massachusetts Credibility:	0.030	0.040	.
(15) Countrywide Pure Premium:	1.093	0.529	1.621
(16) Countrywide Indicated Relativity:	1.344	1.462	.
(17) Countrywide Credibility:	0.490	0.480	.
(18) Countrywide Lost-Time Claims:	407.00	.	.
(19) Pure Premium Underlying Present Rate:	1.001	0.474	1.476
(20) Relativity to Underlying Present Rate:	1.244	1.183	.
(21) Credibility to Underlying Relativity:	0.480	0.480	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.546	1.853	.
(24) Balanced Formula Relativity:	2.551	1.863	2.338

Class(es): 1747 EMERY WORKS & DRIVERS		Effective: 7/1/2023							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)
2016	46,528	0	9	0	12,260	0	13,015	25,274	0.263	0.280	0.543
2017	52,458	0	3	0	500	0	797	1,297	0.010	0.015	0.025
2018	53,351	0	3	0	7,418	0	1,071	8,489	0.139	0.020	0.159
2019	50,873	0	5	0	10,408	0	4,408	14,816	0.205	0.087	0.291
2020	47,836	0	3	0	504	0	10,850	11,353	0.011	0.227	0.237
MA Total:	251,046	0	23	0	31,089	0	30,141	61,230	0.124	0.120	0.244

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.137	0.297	.
(14) Massachusetts Credibility:	0.150	0.240	.
(15) Countrywide Pure Premium:	1.483	0.371	1.854
(16) Countrywide Indicated Relativity:	1.825	1.026	.
(17) Countrywide Credibility:	0.300	0.320	.
(18) Countrywide Lost-Time Claims:	57.000	.	.
(19) Pure Premium Underlying Present Rate:	1.062	0.611	1.673
(20) Relativity to Underlying Present Rate:	1.319	1.525	.
(21) Credibility to Underlying Relativity:	0.550	0.440	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.293	1.071	.
(24) Balanced Formula Relativity:	1.296	1.076	1.228

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	43,459	1	8	411,597	2,962	77,442	14,307	506,307	9,539	2,111	11,650
2017	50,469	0	12	0	19,550	0	12,593	32,143	0,387	0,250	0,637
2018	51,014	0	7	0	0	0	5,241	5,241	0,000	0,103	0,103
2019	43,574	0	11	0	128,031	0	83,123	211,154	2,938	1,908	4,846
2020	39,284	0	6	0	14,522	0	11,123	25,645	0,370	0,283	0,653
MA Total:	227,800	1	44	411,597	165,064	77,442	126,386	780,489	2,531	0,895	3,426

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.810	2.215	.
(14) Massachusetts Credibility:	0.150	0.260	.
(15) Countrywide Pure Premium:	1.589	0.946	2.535
(16) Countrywide Indicated Relativity:	1.954	2.616	.
(17) Countrywide Credibility:	0.320	0.340	.
(18) Countrywide Lost-Time Claims:	65.000	.	.
(19) Pure Premium Underlying Present Rate:	1.218	0.885	2.104
(20) Relativity to Underlying Present Rate:	1.513	2.209	.
(21) Credibility to Underlying Relativity:	0.530	0.400	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.849	2.349	.
(24) Balanced Formula Relativity:	1.853	2.361	2.010

Class(es):		Effective: 7/1/2023							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)
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
2019	1,316	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	1,320	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	5,389	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:	0.807	0.456	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.657	0.185	0.842
(20) Relativity to Underlying Present Rate:	0.816	0.461	.
(21) Credibility to Underlying Relativity:	0.970	0.970	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.791	0.447	.
(24) Balanced Formula Relativity:	0.793	0.450	0.687

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 Exhibit 13

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	149,172	1	19	84,609	443,626	8,159	147,601	683,995	3,541	1,044	4,585	
2017	126,667	0	22	0	27,906	0	47,957	75,862	0,220	0,379	0,599	
2018	138,111	1	16	186,382	528,084	28,643	126,200	869,309	5,173	1,121	6,294	
2019	146,824	1	31	225,700	479,178	12,462	117,807	835,148	4,801	0,887	5,688	
2020	135,249	2	15	178,555	148,327	96,504	182,997	606,384	2,417	2,067	4,483	
MA Total:	696,024	5	103	675,247	1,627,121	145,768	622,562	3,070,697	3,308	1,104	4,412	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.672	2.732	.
(14) Massachusetts Credibility:	0.220	0.330	.
(15) Countrywide Pure Premium:	1.026	0.476	1.502
(16) Countrywide Indicated Relativity:	1.262	1.316	.
(17) Countrywide Credibility:	0.390	0.340	.
(18) Countrywide Lost-Time Claims:	551.00	.	.
(19) Pure Premium Underlying Present Rate:	0.972	0.489	1.461
(20) Relativity to Underlying Present Rate:	1.208	1.220	.
(21) Credibility to Underlying Relativity:	0.390	0.330	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.771	1.752	.
(24) Balanced Formula Relativity:	1.775	1.760	1.770

Class(es):		Effective: 7/1/2023							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)	
2016	185	0	1	0	238	0	551	789	1,286	2,974	4,260	
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	
2019	823	0	0	0	0	0	0	0	0.000	0.000	0.000	
2020	464	0	0	0	0	0	0	0	0.000	0.000	0.000	
MA Total:	1,473	0	1	0	238	0	551	789	0.162	0.374	0.536	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.180	0.926	.
(14) Massachusetts Credibility:	0.020	0.070	.
(15) Countrywide Pure Premium:	1.186	0.625	1.811
(16) Countrywide Indicated Relativity:	1.459	1.727	.
(17) Countrywide Credibility:	0.490	0.470	.
(18) Countrywide Lost-Time Claims:	593.00	.	.
(19) Pure Premium Underlying Present Rate:	1.575	5.090	6.665
(20) Relativity to Underlying Present Rate:	1.957	12.697	.
(21) Credibility to Underlying Relativity:	0.490	0.460	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.678	6.717	.
(24) Balanced Formula Relativity:	1.681	6.751	3.251

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	2,279,377	10	291	914,581	3,120,290	207,464	1,086,733	5,329,068	1,770	0,568	2,338
2017	2,509,327	15	333	1,583,551	2,640,945	292,639	1,148,719	5,665,855	1,684	0,574	2,258
2018	2,686,597	14	345	1,587,820	3,150,572	526,775	1,346,524	6,611,690	1,764	0,697	2,461
2019	2,793,134	12	294	1,781,273	3,784,276	455,410	1,546,117	7,567,075	1,993	0,717	2,709
2020	2,803,756	7	259	1,054,382	3,780,285	265,726	1,814,667	6,915,060	1,724	0,742	2,466
MA Total:	13,072,191	58	1,522	6,921,607	16,476,368	1,748,014	6,942,760	32,088,749	1,790	0,665	2,455

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.987	1.646	.
(14) Massachusetts Credibility:	0.880	1.000	.
(15) Countrywide Pure Premium:	1.517	0.632	2.150
(16) Countrywide Indicated Relativity:	1.867	1.748	.
(17) Countrywide Credibility:	0.060	0.000	.
(18) Countrywide Lost-Time Claims:	6371.0	.	.
(19) Pure Premium Underlying Present Rate:	1.670	0.719	2.389
(20) Relativity to Underlying Present Rate:	2.075	1.795	.
(21) Credibility to Underlying Relativity:	0.060	0.000	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.985	1.646	.
(24) Balanced Formula Relativity:	1.989	1.654	1.885

Class(es):		Effective: 7/1/2023							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)
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
2019	1,408	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	5,170	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	12,837	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:	0.060	0.080	.
(15) Countrywide Pure Premium:	1.900	0.891	2.791
(16) Countrywide Indicated Relativity:	2.337	2.465	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	1221.0	.	.
(19) Pure Premium Underlying Present Rate:	1.747	0.831	2.577
(20) Relativity to Underlying Present Rate:	2.170	2.072	.
(21) Credibility to Underlying Relativity:	0.470	0.460	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.118	2.087	.
(24) Balanced Formula Relativity:	2.123	2.097	2.115

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
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
2019	6,015	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	1,504	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	15,288	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	0.080	.
(15) Countrywide Pure Premium:	1.481	0.755	2.235
(16) Countrywide Indicated Relativity:	1.821	2.087	.
(17) Countrywide Credibility:	0.480	0.460	.
(18) Countrywide Lost-Time Claims:	305.00	.	.
(19) Pure Premium Underlying Present Rate:	1.142	0.597	1.739
(20) Relativity to Underlying Present Rate:	1.419	1.489	.
(21) Credibility to Underlying Relativity:	0.470	0.460	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.541	1.645	.
(24) Balanced Formula Relativity:	1.544	1.653	1.578

Class(es):		Effective: 7/1/2023							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)
2016	132,001	2	22	461,479	260,156	125,519	94,062	941,216	5,467	1,663	7,130
2017	59,707	1	7	1	2,367	0	3,842	6,210	0.040	0.064	0.104
2018	59,489	0	42	0	62,475	0	121,105	183,580	1,050	2,036	3,086
2019	60,515	1	14	49,754	461,039	7,431	135,974	654,199	8,441	2,370	10,811
2020	47,479	1	11	120,528	38,234	20,637	16,284	195,683	3,344	0,778	4,121
MA Total:	359,190	5	96	631,763	824,271	153,588	371,267	1,980,888	4,054	1,461	5,515

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.499	3.617	.
(14) Massachusetts Credibility:	0.210	0.300	.
(15) Countrywide Pure Premium:	1.256	0.632	1.888
(16) Countrywide Indicated Relativity:	1.545	1.748	.
(17) Countrywide Credibility:	0.400	0.350	.
(18) Countrywide Lost-Time Claims:	447.00	.	.
(19) Pure Premium Underlying Present Rate:	1.646	0.788	2.434
(20) Relativity to Underlying Present Rate:	2.044	1.966	.
(21) Credibility to Underlying Relativity:	0.390	0.350	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.360	2.385	.
(24) Balanced Formula Relativity:	2.365	2.397	2.375

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	217,288	0	17	0	227,822	0	142,747	370,568	1,048	0,657	1,705
2017	175,099	0	21	0	21,672	0	37,680	59,352	0,124	0,215	0,339
2018	103,393	0	7	0	16,857	0	10,011	26,868	0,163	0,097	0,260
2019	102,657	1	10	363,670	84,388	23,032	18,180	489,269	4,365	0,401	4,766
2020	105,420	0	12	0	56,201	0	29,364	85,565	0,533	0,279	0,812
MA Total:	703,856	1	67	363,670	406,939	23,032	237,983	1,031,624	1,095	0,371	1,466

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.215	0.918	.
(14) Massachusetts Credibility:	0.230	0.320	.
(15) Countrywide Pure Premium:	1.252	0.502	1.755
(16) Countrywide Indicated Relativity:	1.541	1.389	.
(17) Countrywide Credibility:	0.390	0.340	.
(18) Countrywide Lost-Time Claims:	977.00	.	.
(19) Pure Premium Underlying Present Rate:	1.055	0.456	1.511
(20) Relativity to Underlying Present Rate:	1.311	1.138	.
(21) Credibility to Underlying Relativity:	0.380	0.340	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.379	1.153	.
(24) Balanced Formula Relativity:	1.381	1.158	1.312

Class(es):		Effective: 7/1/2023							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)
2016	148,130	0	13	0	161,322	0	51,750	213,072	1,089	0,349	1,438
2017	150,023	1	14	783	52,836	382	51,788	105,788	0,357	0,348	0,705
2018	151,559	1	17	13,935	47,223	4,731	37,703	103,593	0,404	0,280	0,684
2019	177,540	0	18	0	531,214	0	148,862	680,076	2,992	0,838	3,831
2020	74,369	0	9	0	444,449	0	62,729	507,178	5,976	0,843	6,820
MA Total:	701,621	2	71	14,718	1,237,045	5,113	352,832	1,609,707	1,784	0,510	2,294

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.980	1.263	.
(14) Massachusetts Credibility:	0.270	0.370	.
(15) Countrywide Pure Premium:	1.846	0.668	2,514
(16) Countrywide Indicated Relativity:	2.271	1.846	.
(17) Countrywide Credibility:	0.370	0.320	.
(18) Countrywide Lost-Time Claims:	3369.0	.	.
(19) Pure Premium Underlying Present Rate:	1.535	0.646	2,180
(20) Relativity to Underlying Present Rate:	1.906	1.611	.
(21) Credibility to Underlying Relativity:	0.360	0.310	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1,305
(23) Formula Relativity:	2.061	1.557	.
(24) Balanced Formula Relativity:	2.065	1.565	1,911

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Calculation of Class Relativities

Class(es): 2081 BUTCHERING		Effective: 7/1/2023							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)
2016	25,569	0	5	0	5,610	0	8,003	13,613	0.219	0.313	0.532
2017	27,808	0	16	0	19,541	0	26,895	46,436	0.703	0.967	1.670
2018	32,556	1	19	21,289	20,237	8,494	50,803	100,823	1.276	1.821	3.097
2019	34,604	0	30	0	49,295	0	46,658	95,954	1.425	1.348	2.773
2020	38,315	0	16	0	258,365	0	122,604	380,969	6.743	3.200	9.943
MA Total:	158,852	1	86	21,289	353,048	8,494	254,963	637,795	2.357	1.659	4.015

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.616	4.105	.
(14) Massachusetts Credibility:	0.120	0.210	.
(15) Countrywide Pure Premium:	1.312	0.588	1.901
(16) Countrywide Indicated Relativity:	1.614	1.627	.
(17) Countrywide Credibility:	0.440	0.400	.
(18) Countrywide Lost-Time Claims:	1287.0	.	.
(19) Pure Premium Underlying Present Rate:	1.015	0.710	1.726
(20) Relativity to Underlying Present Rate:	1.261	1.772	.
(21) Credibility to Underlying Relativity:	0.440	0.390	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.579	2.204	.
(24) Balanced Formula Relativity:	1.582	2.215	1.778

Class(es): 2089 PACKING HOUSE- ALL OPERATIONS		Effective: 7/1/2023							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)
2016	1,732,079	5	244	459,689	900,737	155,647	529,972	2,046,046	0.785	0.396	1.181
2017	1,971,416	9	270	694,628	2,136,056	140,403	862,829	3,833,917	1.436	0.509	1.945
2018	2,112,369	6	332	784,105	2,509,225	359,402	906,038	4,558,770	1.559	0.599	2.158
2019	2,234,854	5	289	410,895	2,643,193	87,711	1,550,491	4,692,290	1.367	0.733	2.100
2020	2,307,065	8	272	850,828	2,659,280	218,725	902,374	4,631,207	1.521	0.486	2.007
MA Total:	10,357,784	33	1,407	3,200,146	10,848,491	961,889	4,751,704	19,762,230	1.356	0.552	1.908

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.505	1.365	.
(14) Massachusetts Credibility:	0.710	0.980	.
(15) Countrywide Pure Premium:	1.101	0.523	1.624
(16) Countrywide Indicated Relativity:	1.354	1.446	.
(17) Countrywide Credibility:	0.150	0.010	.
(18) Countrywide Lost-Time Claims:	11135	.	.
(19) Pure Premium Underlying Present Rate:	1.216	0.515	1.731
(20) Relativity to Underlying Present Rate:	1.511	1.284	.
(21) Credibility to Underlying Relativity:	0.140	0.010	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.484	1.365	.
(24) Balanced Formula Relativity:	1.487	1.372	1.451

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
2095 MEAT PRODUCTS 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)
2016	473.075	2	71	118.864	267.093	39.695	120.935	546.587	0.816	0.340	1.155
2017	493.673	2	78	249.803	570.753	88.497	210.385	1,119.437	1.662	0.605	2.268
2018	573.447	2	79	92.173	235.555	43.575	168.541	539.845	0.572	0.370	0.941
2019	629.056	4	47	1,122.404	555.552	299.856	174.667	2,152.478	2.667	0.754	3.422
2020	684.394	3	77	296.145	878.226	87.275	361.390	1,623.036	1.716	0.656	2.371
MA Total:	2,853.645	13	352	1,879.388	2,507.179	558.898	1,035.918	5,981.383	1.537	0.559	2.096

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.706	1.383	.
(14) Massachusetts Credibility:	0.430	0.590	.
(15) Countrywide Pure Premium:	1.464	0.720	2.185
(16) Countrywide Indicated Relativity:	1.801	1.992	.
(17) Countrywide Credibility:	0.290	0.210	.
(18) Countrywide Lost-Time Claims:	3592.0	.	.
(19) Pure Premium Underlying Present Rate:	1.230	0.525	1.754
(20) Relativity to Underlying Present Rate:	1.527	1.309	.
(21) Credibility to Underlying Relativity:	0.280	0.200	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.684	1.496	.
(24) Balanced Formula Relativity:	1.687	1.504	1.630

Class(es):		Effective: 7/1/2023							Manufacturing		
2111 CANNERY 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)
2016	10.683	0	2	0	17.202	0	8.145	25.347	1.610	0.762	2.373
2017	4.054	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	17.365	0	4	0	1.277	0	2.918	4.195	0.074	0.168	0.242
2019	8.847	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	8.934	1	1	26.263	0	19.864	476	46.603	2.940	2.277	5.216
MA Total:	49.883	1	7	26.263	18.479	19.864	11.539	76.144	0.897	0.630	1.526

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.996	1.558	.
(14) Massachusetts Credibility:	0.080	0.110	.
(15) Countrywide Pure Premium:	0.995	0.473	1.468
(16) Countrywide Indicated Relativity:	1.224	1.308	.
(17) Countrywide Credibility:	0.460	0.450	.
(18) Countrywide Lost-Time Claims:	1059.0	.	.
(19) Pure Premium Underlying Present Rate:	0.934	0.488	1.422
(20) Relativity to Underlying Present Rate:	1.161	1.217	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.176	1.295	.
(24) Balanced Formula Relativity:	1.179	1.302	1.217

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
2115 SEAFOOD PRODUCTS 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)
2016	69,585	0	21	0	59,139	0	82,071	141,210	0.850	1.179	2.029
2017	71,351	0	18	0	14,580	0	24,927	39,507	0.204	0.349	0.554
2018	63,005	1	13	11,644	86,084	850	175,069	273,648	1.551	2.792	4.343
2019	55,376	0	10	0	41,937	0	14,958	56,895	0.757	0.270	1.027
2020	72,737	0	8	0	276,514	0	211,056	487,570	3.802	2.902	6.703
MA Total:	332,055	1	70	11,644	478,254	850	508,082	998,830	1.475	1.533	3.008

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.638	3.794	.
(14) Massachusetts Credibility:	0.250	0.340	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	3.577	2.823	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.912	1.144	4.056
(20) Relativity to Underlying Present Rate:	3.617	2.855	.
(21) Credibility to Underlying Relativity:	0.750	0.660	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	3.122	3.174	.
(24) Balanced Formula Relativity:	3.129	3.190	3.148

Class(es):		Effective: 7/1/2023							Manufacturing		
2121 BREWERY & 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)
2016	211,012	0	45	0	467,557	0	235,326	702,883	2.216	1.115	3.331
2017	307,327	1	38	38,806	21,948	9,771	36,594	107,120	0.198	0.151	0.349
2018	348,508	0	39	0	31,431	0	47,320	78,751	0.090	0.136	0.226
2019	365,484	1	33	131,674	32,351	11,370	73,230	248,626	0.449	0.231	0.680
2020	396,756	0	35	0	172,144	0	171,762	343,906	0.434	0.433	0.867
MA Total:	1,629,087	2	190	170,481	725,431	21,141	564,233	1,481,286	0.550	0.359	0.909

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.610	0.889	.
(14) Massachusetts Credibility:	0.260	0.390	.
(15) Countrywide Pure Premium:	0.650	0.267	0.917
(16) Countrywide Indicated Relativity:	0.800	0.737	.
(17) Countrywide Credibility:	0.370	0.310	.
(18) Countrywide Lost-Time Claims:	628.00	.	.
(19) Pure Premium Underlying Present Rate:	0.621	0.317	0.938
(20) Relativity to Underlying Present Rate:	0.772	0.791	.
(21) Credibility to Underlying Relativity:	0.370	0.300	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.740	0.813	.
(24) Balanced Formula Relativity:	0.742	0.817	0.765

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Calculation of Class Relativities

Class(es): 2130 SPIRITUOUS LIQUOR DISTILLERY		Effective: 7/1/2023							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)
2016	9.836	0	1	0	0	0	697	697	0.000	0.071	0.071
2017	9.182	0	1	0	0	0	775	775	0.000	0.084	0.084
2018	14.640	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	15.800	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	13.591	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	63,048	0	2	0	0	0	1,472	1,472	0.000	0.023	0.023

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.058	.
(14) Massachusetts Credibility:	0.070	0.110	.
(15) Countrywide Pure Premium:	0.837	0.410	1.247
(16) Countrywide Indicated Relativity:	1.030	1.133	.
(17) Countrywide Credibility:	0.470	0.450	.
(18) Countrywide Lost-Time Claims:	316.00	.	.
(19) Pure Premium Underlying Present Rate:	0.634	0.328	0.962
(20) Relativity to Underlying Present Rate:	0.788	0.818	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.846	0.876	.
(24) Balanced Formula Relativity:	0.848	0.880	0.858

Class(es): 2131 SPIRITUOUS LIQUOR BOTTLING		Effective: 7/1/2023							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)
2016	58.005	0	26	0	370.815	0	91.966	462.781	6.393	1.585	7.978
2017	64.821	0	19	0	19.133	0	44.566	63.699	0.295	0.688	0.983
2018	62.202	0	25	0	343.138	0	206.201	549.339	5.517	3.315	8.832
2019	67.918	0	26	0	126.048	0	99.232	225.280	1.856	1.461	3.317
2020	68.574	0	13	0	67.622	0	24.452	92.074	0.986	0.357	1.343
MA Total:	321,521	0	109	0	926,755	0	466,417	1,393,172	2,882	1,451	4,333

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.199	3.591	.
(14) Massachusetts Credibility:	0.180	0.270	.
(15) Countrywide Pure Premium:	0.707	0.352	1.059
(16) Countrywide Indicated Relativity:	0.870	0.972	.
(17) Countrywide Credibility:	0.410	0.370	.
(18) Countrywide Lost-Time Claims:	170.00	.	.
(19) Pure Premium Underlying Present Rate:	1.279	0.689	1.968
(20) Relativity to Underlying Present Rate:	1.588	1.719	.
(21) Credibility to Underlying Relativity:	0.410	0.360	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.584	1.948	.
(24) Balanced Formula Relativity:	1.587	1.958	1.702

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Calculation of Class Relativities

Class(es): 2143 FRUIT JUICE MFG		Effective: 7/1/2023							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)
2016	62,149	0	11	0	7,630	0	5,987	13,617	0.123	0.096	0.219
2017	71,010	1	8	199,917	6,591	10,208	2,261	218,977	2.908	0.176	3.084
2018	74,426	0	15	0	23,385	0	15,379	38,764	0.314	0.207	0.521
2019	77,662	1	9	121,022	5,382	21,757	11,206	159,367	1.628	0.424	2.052
2020	79,910	0	6	0	28,609	0	41,220	69,830	0.358	0.516	0.874
MA Total:	365,157	2	49	320,939	71,597	31,965	76,054	500,554	1.075	0.296	1.371

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.193	0.732	.
(14) Massachusetts Credibility:	0.190	0.240	.
(15) Countrywide Pure Premium:	0.627	0.358	0.985
(16) Countrywide Indicated Relativity:	0.771	0.991	.
(17) Countrywide Credibility:	0.410	0.380	.
(18) Countrywide Lost-Time Claims:	299.00	.	.
(19) Pure Premium Underlying Present Rate:	1.264	0.445	1.708
(20) Relativity to Underlying Present Rate:	1.570	1.110	.
(21) Credibility to Underlying Relativity:	0.400	0.380	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.171	0.974	.
(24) Balanced Formula Relativity:	1.173	0.979	1.113

Class(es): 2150 ICE MFG		Effective: 7/1/2023							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)
2016	11,932	0	2	0	0	0	1,220	1,220	0.000	0.102	0.102
2017	11,783	0	3	0	83,492	0	57,185	140,677	7.086	4.853	11.938
2018	11,938	0	2	0	0	0	995	995	0.000	0.083	0.083
2019	14,688	0	4	0	20,647	0	9,365	30,012	1.406	0.638	2.043
2020	20,209	0	4	0	477	0	2,936	3,413	0.024	0.145	0.169
MA Total:	70,550	0	15	0	104,616	0	71,700	176,316	1.483	1.016	2.499

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.646	2.515	.
(14) Massachusetts Credibility:	0.110	0.160	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.963	2.058	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.598	0.834	2.432
(20) Relativity to Underlying Present Rate:	1.985	2.081	.
(21) Credibility to Underlying Relativity:	0.890	0.840	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.948	2.151	.
(24) Balanced Formula Relativity:	1.952	2.162	2.017

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
2156 BOTTLING-NOT CARBONATED LIQUIDS OR SPIRIT LIQRS & RTE SUP,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)
2016	92,127	1	9	87,312	41,471	23,070	43,320	195,173	1,398	0,721	2,119
2017	113,880	0	10	0	106,769	0	86,752	193,521	0,938	0,762	1,699
2018	115,290	0	17	0	18,584	0	29,006	47,590	0,161	0,252	0,413
2019	99,504	0	7	0	27,198	0	76,228	103,426	0,273	0,766	1,039
2020	86,058	1	7	74,307	85,962	23,991	27,765	212,025	1,862	0,601	2,464
MA Total:	506,858	2	50	161,619	279,984	47,060	263,072	751,734	0,871	0,612	1,483

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.967	1.514	.
(14) Massachusetts Credibility:	0.230	0.360	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.927	2.059	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.568	0.835	2.403
(20) Relativity to Underlying Present Rate:	1.948	2.083	.
(21) Credibility to Underlying Relativity:	0.770	0.640	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.722	1.878	.
(24) Balanced Formula Relativity:	1.726	1.887	1.776

Class(es):		Effective: 7/1/2023							Manufacturing		
2157 BOTTLING 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)
2016	362,709	1	95	123,672	759,663	22,062	266,098	1,171,495	2,435	0,794	3,230
2017	404,074	2	119	417,145	560,999	141,527	260,924	1,380,596	2,421	0,996	3,417
2018	480,417	1	143	316,543	1,109,681	89,412	395,770	1,911,407	2,969	1,010	3,979
2019	522,875	2	117	439,401	340,034	90,547	147,459	1,017,441	1,491	0,455	1,946
2020	577,516	1	88	464,150	765,518	48,254	214,733	1,492,655	2,129	0,455	2,585
MA Total:	2,347,592	7	562	1,760,911	3,535,895	391,804	1,284,984	6,973,594	2,256	0,714	2,971

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.504	1.768	.
(14) Massachusetts Credibility:	0.470	0.640	.
(15) Countrywide Pure Premium:	2.001	0.688	2.689
(16) Countrywide Indicated Relativity:	2.462	1.903	.
(17) Countrywide Credibility:	0.270	0.180	.
(18) Countrywide Lost-Time Claims:	5885.0	.	.
(19) Pure Premium Underlying Present Rate:	1.952	0.788	2.740
(20) Relativity to Underlying Present Rate:	2.425	1.965	.
(21) Credibility to Underlying Relativity:	0.260	0.180	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.472	1.828	.
(24) Balanced Formula Relativity:	2.477	1.837	2.279

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Calculation of Class Relativities

Class(es): 2172 CIGARETTE MFG		Effective: 7/1/2023							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)
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
2019	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	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:	0.714	0.356	1.070
(16) Countrywide Indicated Relativity:	0.879	0.985	.
(17) Countrywide Credibility:	0.500	0.500	.
(18) Countrywide Lost-Time Claims:	244.00	.	.
(19) Pure Premium Underlying Present Rate:	0.836	0.307	1.143
(20) Relativity to Underlying Present Rate:	1.038	0.766	.
(21) Credibility to Underlying Relativity:	0.500	0.500	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.958	0.876	.
(24) Balanced Formula Relativity:	0.960	0.880	0.935

Class(es): 2211 COTTON BATTING,WADDING OR WASTE MFG		Effective: 7/1/2023							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)
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
2019	894	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	176	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	4,294	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:	2.395	1.390	3.785
(16) Countrywide Indicated Relativity:	2.947	3.843	.
(17) Countrywide Credibility:	0.310	0.330	.
(18) Countrywide Lost-Time Claims:	61.000	.	.
(19) Pure Premium Underlying Present Rate:	2.488	1.232	3.720
(20) Relativity to Underlying Present Rate:	3.091	3.073	.
(21) Credibility to Underlying Relativity:	0.650	0.610	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.923	3.143	.
(24) Balanced Formula Relativity:	2.929	3.159	3.000

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	128,515	2	24	218,789	124,095	52,784	33,435	429,102	2,668	0.671	3,339
2017	106,153	0	21	0	322,647	0	88,563	411,210	3,039	0.834	3,874
2018	103,224	1	23	92,305	270,416	14,348	275,035	652,104	3,514	2,803	6,317
2019	108,799	0	21	0	274,704	0	95,513	370,217	2,525	0.878	3,403
2020	81,537	1	24	186,940	142,243	40,501	53,193	422,877	4,037	1,149	5,186
MA Total:	528,229	4	113	498,034	1,134,106	107,633	545,739	2,285,511	3,090	1,237	4,327

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.430	3.061	.
(14) Massachusetts Credibility:	0.200	0.320	.
(15) Countrywide Pure Premium:	0.957	0.467	1.424
(16) Countrywide Indicated Relativity:	1.177	1.291	.
(17) Countrywide Credibility:	0.400	0.340	.
(18) Countrywide Lost-Time Claims:	860.00	.	.
(19) Pure Premium Underlying Present Rate:	1.060	0.598	1.658
(20) Relativity to Underlying Present Rate:	1.317	1.492	.
(21) Credibility to Underlying Relativity:	0.400	0.340	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.684	1.926	.
(24) Balanced Formula Relativity:	1.687	1.935	1.764

Class(es):		Effective: 7/1/2023							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)
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
2019	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	1,380	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:	2.955	2.383	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.405	0.966	3.371
(20) Relativity to Underlying Present Rate:	2.988	2.410	.
(21) Credibility to Underlying Relativity:	0.970	0.960	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.899	2.313	.
(24) Balanced Formula Relativity:	2.904	2.325	2.725

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Calculation of Class Relativities

Class(es): 2288 FELTING MFG		Effective: 7/1/2023							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)
2016	68,868	0	9	0	338,058	0	143,499	481,557	4,909	2,084	6,992
2017	31,564	0	7	0	76,673	0	37,149	113,822	2,429	1,177	3,606
2018	26,418	0	5	0	1,061	0	3,252	4,313	0,040	0,123	0,163
2019	28,437	0	6	0	100	0	2,368	2,468	0,004	0,083	0,087
2020	28,958	0	9	0	9,857	0	8,329	18,186	0,340	0,288	0,628
MA Total:	184,244	0	36	0	425,749	0	194,596	620,346	2,311	1,056	3,367

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.565	2.614	.
(14) Massachusetts Credibility:	0.160	0.230	.
(15) Countrywide Pure Premium:	1.531	0.798	2.329
(16) Countrywide Indicated Relativity:	1.883	2.206	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	173.00	.	.
(19) Pure Premium Underlying Present Rate:	1.664	0.803	2.467
(20) Relativity to Underlying Present Rate:	2.067	2.003	.
(21) Credibility to Underlying Relativity:	0.420	0.380	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.069	2.223	.
(24) Balanced Formula Relativity:	2.074	2.234	2.123

Class(es): 2305 TEXTILE FIBER MFG-SYNTHETIC		Effective: 7/1/2023							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)
2016	5,945	0	1	0	0	0	61	61	0.000	0.010	0.010
2017	4,509	0	3	0	5,002	0	5,574	10,576	1.109	1.236	2.345
2018	5,438	0	6	0	605	0	2,621	3,226	0.111	0.482	0.593
2019	2,204	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	6,148	0	5	0	13,023	0	5,881	18,904	2.118	0.957	3.075
MA Total:	24,243	0	15	0	18,630	0	14,138	32,768	0.768	0.583	1.352

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.853	1.443	.
(14) Massachusetts Credibility:	0.060	0.090	.
(15) Countrywide Pure Premium:	0.968	0.447	1.415
(16) Countrywide Indicated Relativity:	1.190	1.237	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	696.00	.	.
(19) Pure Premium Underlying Present Rate:	1.209	0.583	1.792
(20) Relativity to Underlying Present Rate:	1.502	1.454	.
(21) Credibility to Underlying Relativity:	0.470	0.450	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.316	1.353	.
(24) Balanced Formula Relativity:	1.319	1.360	1.332

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Calculation of Class Relativities

Class(es): 2362 KNIT GOODS MFG NOC		Effective: 7/1/2023							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)
2016	10.080	0	6	0	6.644	0	11.240	17.883	0.659	1.115	1.774
2017	21.300	0	1	0	0	0	501	501	0.000	0.024	0.024
2018	16.826	0	6	0	0	0	1.470	1.470	0.000	0.087	0.087
2019	17.513	0	3	0	4.116	0	6.306	10.422	0.235	0.360	0.595
2020	20.390	0	2	0	9.642	0	4.964	14.605	0.473	0.243	0.716
MA Total:	86.109	0	18	0	20.401	0	24.481	44.882	0.237	0.284	0.521

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.263	0.704	.
(14) Massachusetts Credibility:	0.090	0.140	.
(15) Countrywide Pure Premium:	1.171	0.620	1.791
(16) Countrywide Indicated Relativity:	1.440	1.714	.
(17) Countrywide Credibility:	0.460	0.430	.
(18) Countrywide Lost-Time Claims:	164.00	.	.
(19) Pure Premium Underlying Present Rate:	0.745	0.485	1.230
(20) Relativity to Underlying Present Rate:	0.926	1.210	.
(21) Credibility to Underlying Relativity:	0.450	0.430	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.103	1.356	.
(24) Balanced Formula Relativity:	1.105	1.363	1.185

Class(es): 2380 WEBBING MFG		Effective: 7/1/2023							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)
2016	62.937	0	6	0	4.199	0	5.873	10.072	0.067	0.093	0.160
2017	56.467	0	5	0	2.975	0	4.671	7.647	0.053	0.083	0.135
2018	45.089	0	2	0	183	0	1.168	1.351	0.004	0.026	0.030
2019	48.144	0	7	0	27.259	0	35.947	63.205	0.566	0.747	1.313
2020	43.435	0	5	0	19.949	0	84.227	104.176	0.459	1.939	2.398
MA Total:	256.072	0	25	0	54.565	0	131.885	186.450	0.213	0.515	0.728

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.237	1.275	.
(14) Massachusetts Credibility:	0.130	0.200	.
(15) Countrywide Pure Premium:	0.794	0.398	1.192
(16) Countrywide Indicated Relativity:	0.977	1.099	.
(17) Countrywide Credibility:	0.440	0.400	.
(18) Countrywide Lost-Time Claims:	200.00	.	.
(19) Pure Premium Underlying Present Rate:	0.704	0.376	1.079
(20) Relativity to Underlying Present Rate:	0.874	0.938	.
(21) Credibility to Underlying Relativity:	0.430	0.400	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.836	1.070	.
(24) Balanced Formula Relativity:	0.838	1.075	0.911

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
2402 CARPET OR RUG 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)
2016	10,548	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	9,820	0	1	0	0	0	476	476	0.000	0.048	0.048
2018	8,583	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	9,862	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	12,269	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	51,082	0	1	0	0	0	476	476	0.000	0.009	0.009

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.023	.
(14) Massachusetts Credibility:	0.080	0.120	.
(15) Countrywide Pure Premium:	1.056	0.559	1.615
(16) Countrywide Indicated Relativity:	1.299	1.545	.
(17) Countrywide Credibility:	0.460	0.440	.
(18) Countrywide Lost-Time Claims:	505.00	.	.
(19) Pure Premium Underlying Present Rate:	0.946	0.509	1.455
(20) Relativity to Underlying Present Rate:	1.175	1.271	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.138	1.242	.
(24) Balanced Formula Relativity:	1.140	1.248	1.174

Class(es):		Effective: 7/1/2023							Manufacturing		
2413 TEXTILE - BLEACHING, DYEING, MERCERZNG, FINISH											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2016	248,924	1	26	181,925	376,878	13,416	144,894	717,113	2,245	0.636	2,881
2017	113,159	0	16	0	141,406	0	56,341	197,747	1,250	0.498	1,748
2018	85,106	1	7	187,011	20,707	84,679	17,302	309,698	2,441	1.198	3,639
2019	73,247	0	4	0	62,828	0	34,354	97,182	0,858	0,469	1,327
2020	73,197	0	14	0	78,661	0	43,016	121,677	1,075	0,588	1,662
MA Total:	593,633	2	67	368,936	680,480	98,094	295,907	1,443,418	1,768	0,664	2,432

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.962	1.643	.
(14) Massachusetts Credibility:	0.240	0.370	.
(15) Countrywide Pure Premium:	0.755	0.426	1.181
(16) Countrywide Indicated Relativity:	0.928	1.178	.
(17) Countrywide Credibility:	0.380	0.320	.
(18) Countrywide Lost-Time Claims:	223.00	.	.
(19) Pure Premium Underlying Present Rate:	1.454	0.768	2.222
(20) Relativity to Underlying Present Rate:	1.806	1.916	.
(21) Credibility to Underlying Relativity:	0.380	0.310	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.510	1.579	.
(24) Balanced Formula Relativity:	1.513	1.587	1.536

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
2416 YARN OR THREAD DYEING 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)
2016	16.949	0	3	0	15.980	0	5.183	21.163	0.943	0.306	1.249
2017	20.981	0	7	0	0	0	4.847	4.847	0.000	0.231	0.231
2018	23.058	0	6	0	2.869	0	7.152	10.021	0.124	0.310	0.435
2019	19.271	1	9	98.874	104.693	29.474	30.273	263.315	10.564	3.100	13.664
2020	26.499	1	4	55.957	0	36.395	1.895	94.247	2.112	1.445	3.557
MA Total:	106.757	2	29	154.831	123.541	65.869	49.350	393.592	2.608	1.079	3.687

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.894	2.671	.
(14) Massachusetts Credibility:	0.100	0.160	.
(15) Countrywide Pure Premium:	1.841	0.828	2.669
(16) Countrywide Indicated Relativity:	2.265	2.290	.
(17) Countrywide Credibility:	0.250	0.270	.
(18) Countrywide Lost-Time Claims:	37.000	.	.
(19) Pure Premium Underlying Present Rate:	0.934	0.553	1.488
(20) Relativity to Underlying Present Rate:	1.161	1.380	.
(21) Credibility to Underlying Relativity:	0.650	0.570	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.610	1.832	.
(24) Balanced Formula Relativity:	1.614	1.841	1.684

Class(es):		Effective: 7/1/2023							Manufacturing		
2417 CLOTH 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)
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
2019	12.904	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	4.126	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	49.786	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:	0.070	0.090	.
(15) Countrywide Pure Premium:	0.631	0.291	0.923
(16) Countrywide Indicated Relativity:	0.777	0.806	.
(17) Countrywide Credibility:	0.260	0.270	.
(18) Countrywide Lost-Time Claims:	39.000	.	.
(19) Pure Premium Underlying Present Rate:	0.820	0.284	1.103
(20) Relativity to Underlying Present Rate:	1.018	0.708	.
(21) Credibility to Underlying Relativity:	0.670	0.640	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.884	0.671	.
(24) Balanced Formula Relativity:	0.886	0.674	0.820

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Calculation of Class Relativities

Class(es): 2501 CLOTHING MFG		Effective: 7/1/2023							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)
2016	951,077	5	103	603,230	742,824	166,096	336,368	1,848,518	1,415	0,528	1,944
2017	969,529	1	100	74,138	526,751	12,893	241,641	855,423	0,620	0,263	0,882
2018	962,981	1	82	7,157	1,020,354	8,927	633,704	1,670,142	1,067	0,667	1,734
2019	1,013,461	5	78	768,326	780,392	189,282	273,916	2,011,917	1,528	0,457	1,985
2020	1,021,493	1	62	300,793	410,363	528,262	205,121	1,444,539	0,696	0,718	1,414
MA Total:	4,918,541	13	425	1,753,645	3,480,683	905,460	1,690,750	7,830,539	1,064	0,528	1,592

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.181	1.306	.
(14) Massachusetts Credibility:	0.480	0.690	.
(15) Countrywide Pure Premium:	0.961	0.463	1.424
(16) Countrywide Indicated Relativity:	1.182	1.281	.
(17) Countrywide Credibility:	0.260	0.160	.
(18) Countrywide Lost-Time Claims:	2534.0	.	.
(19) Pure Premium Underlying Present Rate:	0.969	0.454	1.423
(20) Relativity to Underlying Present Rate:	1.204	1.132	.
(21) Credibility to Underlying Relativity:	0.260	0.150	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.187	1.276	.
(24) Balanced Formula Relativity:	1.190	1.283	1.219

Class(es): 2503 DRESSMAKING OR TAILORING-CUSTOM EXCLUSIVELY		Effective: 7/1/2023							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)
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	877	877	0.000	0.024	0.024
2019	28,816	0	1	0	47,962	0	104,966	152,928	1,664	3,643	5,307
2020	23,296	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	179,729	0	2	0	47,962	0	105,843	153,805	0,267	0,589	0,856

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.296	1.458	.
(14) Massachusetts Credibility:	0.100	0.130	.
(15) Countrywide Pure Premium:	0.336	0.159	0.496
(16) Countrywide Indicated Relativity:	0.414	0.441	.
(17) Countrywide Credibility:	0.230	0.240	.
(18) Countrywide Lost-Time Claims:	29,000	.	.
(19) Pure Premium Underlying Present Rate:	0.533	0.179	0.712
(20) Relativity to Underlying Present Rate:	0.663	0.446	.
(21) Credibility to Underlying Relativity:	0.670	0.630	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.569	0.576	.
(24) Balanced Formula Relativity:	0.570	0.579	0.573

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	40.003	0	1	0	0	0	110	110	0.000	0.003	0.003
2017	44.344	1	8	202.829	6.229	10.232	10.489	229.779	4.714	0.467	5.182
2018	51.633	0	5	0	31.219	0	18.649	49.868	0.605	0.361	0.966
2019	28.959	0	3	0	624	0	3.796	4.421	0.022	0.131	0.153
2020	36.801	0	3	0	203.655	0	37.735	241.391	5.534	1.025	6.559
MA Total:	201.740	1	20	202.829	241.728	10.232	70.780	525.569	2.204	0.402	2.605

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.446	0.994	.
(14) Massachusetts Credibility:	0.160	0.220	.
(15) Countrywide Pure Premium:	1.312	0.643	1.955
(16) Countrywide Indicated Relativity:	1.614	1.777	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	386.00	.	.
(19) Pure Premium Underlying Present Rate:	1.579	0.636	2.214
(20) Relativity to Underlying Present Rate:	1.961	1.586	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.893	1.530	.
(24) Balanced Formula Relativity:	1.897	1.538	1.785

Class(es):		Effective: 7/1/2023							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)
2016	130.560	0	14	0	18.203	0	21.872	40.075	0.139	0.168	0.307
2017	128.065	2	14	127.000	245.357	25.779	47.730	445.865	2.908	0.574	3.482
2018	127.202	0	12	0	11.224	0	27.969	39.193	0.088	0.220	0.308
2019	137.926	0	11	0	6.948	0	5.651	12.599	0.050	0.041	0.091
2020	133.939	0	6	0	21.731	0	41.295	63.026	0.162	0.308	0.471
MA Total:	657.692	2	57	127.000	303.463	25.779	144.517	600.759	0.655	0.259	0.913

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.726	0.641	.
(14) Massachusetts Credibility:	0.210	0.320	.
(15) Countrywide Pure Premium:	1.559	0.696	2.255
(16) Countrywide Indicated Relativity:	1.918	1.924	.
(17) Countrywide Credibility:	0.100	0.110	.
(18) Countrywide Lost-Time Claims:	4.000	.	.
(19) Pure Premium Underlying Present Rate:	0.895	0.501	1.396
(20) Relativity to Underlying Present Rate:	1.112	1.251	.
(21) Credibility to Underlying Relativity:	0.690	0.570	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.111	1.130	.
(24) Balanced Formula Relativity:	1.114	1.135	1.120

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	884.918	3	119	284.985	711.268	141.434	320.470	1,458.156	1.126	0.522	1.648	
2017	847.139	5	120	628.156	805.479	209.837	446.709	2,090.181	1.692	0.775	2.467	
2018	814.325	2	116	144.909	1,404.698	14.535	402.638	1,966.780	1.903	0.512	2.415	
2019	779.985	3	114	358.491	1,216.068	94.626	451.511	2,120.696	2.019	0.700	2.719	
2020	706.122	2	53	200.243	408.422	115.652	222.453	946.771	0.862	0.479	1.341	
MA Total:	4,032.489	15	522	1,616.785	4,545.934	576.084	1,843.782	8,582.585	1.528	0.600	2.128	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.696	1.485	.
(14) Massachusetts Credibility:	0.480	0.730	.
(15) Countrywide Pure Premium:	1.523	0.671	2.194
(16) Countrywide Indicated Relativity:	1.873	1.857	.
(17) Countrywide Credibility:	0.260	0.140	.
(18) Countrywide Lost-Time Claims:	3447.0	.	.
(19) Pure Premium Underlying Present Rate:	1.174	0.627	1.802
(20) Relativity to Underlying Present Rate:	1.459	1.564	.
(21) Credibility to Underlying Relativity:	0.260	0.130	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.681	1.548	.
(24) Balanced Formula Relativity:	1.684	1.555	1.644

Class(es):		Effective: 7/1/2023							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)	
2016	538.000	3	41	345.079	1,110.020	27.256	690.617	2,172.972	2.705	1.334	4.039	
2017	491.949	1	21	2.172	148.156	930	30.058	181.316	0.306	0.063	0.369	
2018	446.396	0	24	0	264.361	0	143.244	407.604	0.592	0.321	0.913	
2019	392.200	1	21	65.891	275.793	34.303	66.895	442.882	0.871	0.258	1.129	
2020	284.355	1	12	48.852	87.463	14.303	129.995	280.614	0.479	0.507	0.987	
MA Total:	2,152.900	6	119	461.995	1,885.792	76.792	1,060.808	3,485.388	1.091	0.528	1.619	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.210	1.308	.
(14) Massachusetts Credibility:	0.340	0.510	.
(15) Countrywide Pure Premium:	0.936	0.561	1.497
(16) Countrywide Indicated Relativity:	1.152	1.551	.
(17) Countrywide Credibility:	0.330	0.250	.
(18) Countrywide Lost-Time Claims:	224.00	.	.
(19) Pure Premium Underlying Present Rate:	0.902	0.482	1.384
(20) Relativity to Underlying Present Rate:	1.120	1.202	.
(21) Credibility to Underlying Relativity:	0.330	0.240	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.161	1.343	.
(24) Balanced Formula Relativity:	1.164	1.350	1.221

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	50,527	0	5	0	2,422	0	3,898	6,320	0.048	0.077	0.125
2017	37,788	0	1	0	0	0	1,058	1,058	0.000	0.028	0.028
2018	63,628	0	5	0	4,464	0	5,243	9,707	0.070	0.082	0.153
2019	26,924	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	21,061	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	199,927	0	11	0	6,886	0	10,199	17,085	0.034	0.051	0.085

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.045	0.146	.
(14) Massachusetts Credibility:	0.130	0.180	.
(15) Countrywide Pure Premium:	1.714	0.702	2,416
(16) Countrywide Indicated Relativity:	2.255	1.990	.
(17) Countrywide Credibility:	0.280	0.290	.
(18) Countrywide Lost-Time Claims:	46.000	.	.
(19) Pure Premium Underlying Present Rate:	0.947	0.403	1,350
(20) Relativity to Underlying Present Rate:	1.409	1.133	.
(21) Credibility to Underlying Relativity:	0.590	0.530	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1,108
(23) Formula Relativity:	1.469	1.204	.
(24) Balanced Formula Relativity:	1.450	1.199	1,371

Class(es):		Effective: 7/1/2023							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)
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
2019	144	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	356	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	1,071	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	0.030	.
(15) Countrywide Pure Premium:	1.485	0.865	2,349
(16) Countrywide Indicated Relativity:	1.826	2.391	.
(17) Countrywide Credibility:	0.310	0.330	.
(18) Countrywide Lost-Time Claims:	64.000	.	.
(19) Pure Premium Underlying Present Rate:	2.046	1.055	3,100
(20) Relativity to Underlying Present Rate:	2.541	2.632	.
(21) Credibility to Underlying Relativity:	0.670	0.640	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1,305
(23) Formula Relativity:	2.269	2.473	.
(24) Balanced Formula Relativity:	2.273	2.486	2,339

IX 000102 STIP

Section IX - Classification Pricing
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Section IX - G
 Exhibit 33

Calculation of Class Relativities

Class(es): 2651 SHOE STOCK MFG		Effective: 7/1/2023							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)
2016	55,673	0	2	0	5,602	0	12,085	17,688	0.101	0.217	0.318
2017	47,248	0	5	0	9,956	0	4,228	14,184	0.211	0.089	0.300
2018	47,245	0	4	0	937	0	5,567	6,503	0.020	0.118	0.138
2019	57,896	0	8	0	20,992	0	9,738	30,730	0.363	0.168	0.531
2020	33,351	1	1	123,071	590	14,519	550	138,730	3,708	0.452	4,160
MA Total:	241,413	1	20	123,071	38,078	14,519	32,168	207,835	0.668	0.193	0.861

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.741	0.479	.
(14) Massachusetts Credibility:	0.120	0.190	.
(15) Countrywide Pure Premium:	0.456	0.225	0.681
(16) Countrywide Indicated Relativity:	0.561	0.622	.
(17) Countrywide Credibility:	0.330	0.350	.
(18) Countrywide Lost-Time Claims:	72,000	.	.
(19) Pure Premium Underlying Present Rate:	0.637	0.373	1.010
(20) Relativity to Underlying Present Rate:	0.792	0.930	.
(21) Credibility to Underlying Relativity:	0.550	0.460	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.710	0.736	.
(24) Balanced Formula Relativity:	0.711	0.740	0.720

Class(es): 2660 BOOT OR SHOE MFG NOC		Effective: 7/1/2023							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)
2016	37,929	0	7	0	504	0	2,675	3,179	0.013	0.071	0.084
2017	52,045	0	3	0	1,243	0	2,812	4,055	0.024	0.054	0.078
2018	53,397	0	5	0	33,192	0	10,727	43,919	0.622	0.201	0.823
2019	48,778	0	4	0	0	0	1,278	1,278	0.000	0.026	0.026
2020	45,692	0	3	0	213,253	0	28,726	241,979	4.667	0.629	5.296
MA Total:	237,840	0	22	0	248,193	0	46,217	294,410	1.044	0.194	1.238

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.158	0.481	.
(14) Massachusetts Credibility:	0.140	0.210	.
(15) Countrywide Pure Premium:	0.791	0.429	1.220
(16) Countrywide Indicated Relativity:	0.972	1.187	.
(17) Countrywide Credibility:	0.430	0.400	.
(18) Countrywide Lost-Time Claims:	224,000	.	.
(19) Pure Premium Underlying Present Rate:	0.872	0.486	1.358
(20) Relativity to Underlying Present Rate:	1.083	1.214	.
(21) Credibility to Underlying Relativity:	0.430	0.390	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.046	1.049	.
(24) Balanced Formula Relativity:	1.048	1.054	1.050

IX 000103 STIP

Section IX - Classification Pricing
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 7/1/2023

Section IX - G
 Exhibit 34

Calculation of Class Relativities

Class(es): 2683 LUGGAGE MFG		Effective: 7/1/2023							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)
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
2019	2,015	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	1,647	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	10,314	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:	0.911	0.451	1.363
(16) Countrywide Indicated Relativity:	1.121	1.248	.
(17) Countrywide Credibility:	0.190	0.200	.
(18) Countrywide Lost-Time Claims:	19.000	.	.
(19) Pure Premium Underlying Present Rate:	0.903	0.537	1.440
(20) Relativity to Underlying Present Rate:	1.121	1.340	.
(21) Credibility to Underlying Relativity:	0.770	0.740	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.076	1.241	.
(24) Balanced Formula Relativity:	1.079	1.248	1.131

Class(es): 2688 LEATHER GOODS MFG NOC		Effective: 7/1/2023							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)
2016	78,560	1	2	193,958	2,698	27,151	950	224,758	2,503	0,358	2,861
2017	82,441	0	12	0	2,445	0	10,249	12,693	0,030	0,124	0,154
2018	80,590	0	2	0	127	0	2,270	2,397	0,002	0,028	0,030
2019	58,187	0	4	0	488,139	0	181,031	669,170	8,389	3,111	11,500
2020	44,321	0	2	0	0	0	655	655	0,000	0,015	0,015
MA Total:	344,099	1	22	193,958	493,409	27,151	195,155	909,674	1,998	0,646	2,644

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.217	1.599	.
(14) Massachusetts Credibility:	0.150	0.230	.
(15) Countrywide Pure Premium:	0.675	0.386	1.060
(16) Countrywide Indicated Relativity:	0.830	1.067	.
(17) Countrywide Credibility:	0.400	0.390	.
(18) Countrywide Lost-Time Claims:	118.00	.	.
(19) Pure Premium Underlying Present Rate:	0.740	0.418	1.158
(20) Relativity to Underlying Present Rate:	0.920	1.043	.
(21) Credibility to Underlying Relativity:	0.450	0.380	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.078	1.180	.
(24) Balanced Formula Relativity:	1.081	1.186	1.113

IX 000104 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
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 Exhibit 35

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	48,638	0	3	0	5,913	0	2,909	8,822	0.122	0.060	0.181
2017	44,769	0	3	0	17,945	0	28,403	46,348	0.401	0.634	1.035
2018	50,265	0	9	0	654,137	0	803,740	1,457,877	13.014	15,990	29,004
2019	56,834	0	8	0	554,461	0	207,397	761,858	9.756	3,649	13,405
2020	59,244	0	6	0	343,217	0	874,979	1,218,195	5.793	14,769	20,562
MA Total:	259,749	0	29	0	1,575,672	0	1,917,428	3,493,100	6.066	7.382	13.448

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.381	6.806	.
(14) Massachusetts Credibility:	0.290	0.470	.
(15) Countrywide Pure Premium:	10.667	4.620	15.287
(16) Countrywide Indicated Relativity:	4.382	4.546	.
(17) Countrywide Credibility:	0.360	0.270	.
(18) Countrywide Lost-Time Claims:	1263.0	.	.
(19) Pure Premium Underlying Present Rate:	5.324	3.327	8.651
(20) Relativity to Underlying Present Rate:	2.584	3.272	.
(21) Credibility to Underlying Relativity:	0.350	0.260	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	3.172	5.277	.
(24) Balanced Formula Relativity:	3.166	5.294	3.801

Class(es):		Effective: 7/1/2023							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)
2016	32,162	0	9	0	109,658	0	62,939	172,598	3.410	1.957	5.366
2017	33,841	0	5	0	1,527	0	5,597	7,125	0.045	0.165	0.211
2018	26,758	0	1	0	134,961	0	36,191	171,152	5.044	1.353	6.396
2019	28,779	0	7	0	14,001	0	18,138	32,139	0.487	0.630	1.117
2020	38,565	0	5	0	25,139	0	5,082	30,221	0.652	0.132	0.784
MA Total:	160,106	0	27	0	285,287	0	127,947	413,234	1.782	0.799	2.581

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.978	1.978	.
(14) Massachusetts Credibility:	0.180	0.270	.
(15) Countrywide Pure Premium:	3.107	1.499	4.606
(16) Countrywide Indicated Relativity:	3.822	4.146	.
(17) Countrywide Credibility:	0.410	0.370	.
(18) Countrywide Lost-Time Claims:	2092.0	.	.
(19) Pure Premium Underlying Present Rate:	2.701	1.386	4.087
(20) Relativity to Underlying Present Rate:	3.356	3.457	.
(21) Credibility to Underlying Relativity:	0.410	0.360	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	3.299	3.313	.
(24) Balanced Formula Relativity:	3.305	3.329	3.313

IX 000105 STIP

Section IX - Classification Pricing
 Subsection G - Class Relativities
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 Exhibit 36

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
2731 PLANING OR MOLDING MILL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2016	41,077	0	6	0	739	0	4,487	5,226	0.018	0.109	0.127
2017	41,093	1	9	1,191	14,216	87	15,107	30,601	0.375	0.370	0.745
2018	43,590	0	11	0	143,531	0	69,158	212,689	3.293	1.587	4.879
2019	33,824	0	4	0	0	0	2,512	2,512	0.000	0.074	0.074
2020	31,396	0	5	0	17,525	0	11,921	29,447	0.558	0.380	0.938
MA Total:	190,979	1	35	1,191	176,011	87	103,185	280,473	0.928	0.541	1.469

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.030	1.338	.
(14) Massachusetts Credibility:	0.140	0.220	.
(15) Countrywide Pure Premium:	1.442	0.721	2.162
(16) Countrywide Indicated Relativity:	1.773	1.993	.
(17) Countrywide Credibility:	0.430	0.390	.
(18) Countrywide Lost-Time Claims:	1289.0	.	.
(19) Pure Premium Underlying Present Rate:	1.177	0.704	1.881
(20) Relativity to Underlying Present Rate:	1.462	1.756	.
(21) Credibility to Underlying Relativity:	0.430	0.390	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.535	1.757	.
(24) Balanced Formula Relativity:	1.538	1.765	1.609

Class(es):		Effective: 7/1/2023							Manufacturing		
2747 COOPERAGE 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)
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
2019	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	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:	3.006	2.762	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.446	1.120	3.566
(20) Relativity to Underlying Present Rate:	3.039	2.793	.
(21) Credibility to Underlying Relativity:	1.000	1.000	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	3.039	2.793	.
(24) Balanced Formula Relativity:	3.045	2.807	2.972

IX 000106 STIP

Section IX - Classification Pricing
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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
2790 PATTERN MAKING 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)
2016	34,859	0	5	0	1,573	0	2,883	4,455	0.045	0.083	0.128
2017	49,425	0	11	0	195,606	0	87,536	283,143	3.958	1.771	5.729
2018	43,851	1	5	234,471	0	17,977	1,360	253,808	5.347	0.441	5.788
2019	44,435	0	7	0	5,445	0	3,027	8,472	0.123	0.068	0.191
2020	58,631	0	2	0	0	0	1,474	1,474	0.000	0.025	0.025
MA Total:	231,201	1	30	234,471	202,624	17,977	96,280	551,352	1.891	0.494	2.385

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.098	1.223	.
(14) Massachusetts Credibility:	0.140	0.200	.
(15) Countrywide Pure Premium:	0.732	0.444	1.176
(16) Countrywide Indicated Relativity:	0.900	1.228	.
(17) Countrywide Credibility:	0.430	0.400	.
(18) Countrywide Lost-Time Claims:	136.00	.	.
(19) Pure Premium Underlying Present Rate:	0.990	0.436	1.426
(20) Relativity to Underlying Present Rate:	1.230	1.087	.
(21) Credibility to Underlying Relativity:	0.430	0.400	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.210	1.171	.
(24) Balanced Formula Relativity:	1.212	1.176	1.201

Class(es):		Effective: 7/1/2023							Manufacturing		
2802 CARPENTRY-SHOP ONLY & 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)
2016	1,193,329	6	174	261,522	1,311,950	114,628	771,313	2,459,412	1.319	0.742	2.061
2017	1,236,771	7	161	766,212	2,003,665	521,204	825,361	4,116,443	2.240	1.089	3.328
2018	1,270,061	4	179	437,320	1,201,928	111,029	660,833	2,411,110	1.291	0.608	1.898
2019	1,275,547	6	118	629,508	1,217,798	276,528	507,647	2,631,480	1.448	0.615	2.063
2020	1,273,144	5	124	468,558	1,733,529	194,918	1,251,022	3,648,026	1.730	1.136	2.865
MA Total:	6,248,852	28	756	2,563,120	7,468,869	1,218,306	4,016,176	15,266,471	1.605	0.838	2.443

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.782	2.073	.
(14) Massachusetts Credibility:	0.650	0.960	.
(15) Countrywide Pure Premium:	1.817	0.918	2.734
(16) Countrywide Indicated Relativity:	2.235	2.538	.
(17) Countrywide Credibility:	0.180	0.020	.
(18) Countrywide Lost-Time Claims:	6007.0	.	.
(19) Pure Premium Underlying Present Rate:	1.593	0.801	2.394
(20) Relativity to Underlying Present Rate:	1.979	1.999	.
(21) Credibility to Underlying Relativity:	0.170	0.020	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.897	2.081	.
(24) Balanced Formula Relativity:	1.901	2.091	1.960

IX 000107 STIP

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
2835 BRUSH OR BROOM 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)
2016	49,397	1	4	3,097	0	18,996	1,859	23,952	0.063	0.422	0.485
2017	53,322	0	6	0	0	0	3,578	3,578	0.000	0.067	0.067
2018	65,105	0	14	0	190,861	0	18,952	209,813	2.932	0.291	3.223
2019	71,388	0	4	0	5,623	0	9,934	15,557	0.079	0.139	0.218
2020	88,761	0	11	0	22,003	0	8,535	30,538	0.248	0.096	0.344
MA Total:	327,974	1	39	3,097	218,487	18,996	42,858	283,438	0.676	0.189	0.864

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.750	0.467	.
(14) Massachusetts Credibility:	0.150	0.210	.
(15) Countrywide Pure Premium:	1.263	0.572	1.835
(16) Countrywide Indicated Relativity:	1.554	1.581	.
(17) Countrywide Credibility:	0.340	0.360	.
(18) Countrywide Lost-Time Claims:	78.000	.	.
(19) Pure Premium Underlying Present Rate:	0.826	0.349	1.175
(20) Relativity to Underlying Present Rate:	1.026	0.870	.
(21) Credibility to Underlying Relativity:	0.510	0.430	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.164	1.041	.
(24) Balanced Formula Relativity:	1.166	1.046	1.129

Class(es):		Effective: 7/1/2023							Manufacturing		
2836 BRUSH OR BROOM 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)
2016	5,718	0	1	0	8,445	0	795	9,240	1.477	0.139	1.616
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
2019	10,360	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	6,994	0	1	0	0	0	225	225	0.000	0.032	0.032
MA Total:	37,913	0	2	0	8,445	0	1,020	9,466	0.223	0.027	0.250

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.247	0.067	.
(14) Massachusetts Credibility:	0.070	0.100	.
(15) Countrywide Pure Premium:	1.537	0.524	2.061
(16) Countrywide Indicated Relativity:	1.891	1.449	.
(17) Countrywide Credibility:	0.310	0.330	.
(18) Countrywide Lost-Time Claims:	62.000	.	.
(19) Pure Premium Underlying Present Rate:	1.162	0.470	1.632
(20) Relativity to Underlying Present Rate:	1.444	1.173	.
(21) Credibility to Underlying Relativity:	0.620	0.570	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.498	1.154	.
(24) Balanced Formula Relativity:	1.501	1.159	1.395

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
2841 WOODENWARE 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)
2016	34,041	0	1	0	0	0	118	118	0.000	0.003	0.003
2017	32,136	1	0	231,209	0	158,187	0	389,396	7.195	4.922	12.117
2018	41,549	0	5	0	1,031	0	4,206	5,237	0.025	0.101	0.126
2019	46,891	0	2	0	639	0	3,540	4,179	0.014	0.075	0.089
2020	50,212	0	1	0	3,701	0	421	4,122	0.074	0.008	0.082
MA Total:	204,830	1	9	231,209	5,370	158,187	8,285	403,052	1.155	0.813	1.968

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.282	2.012	.
(14) Massachusetts Credibility:	0.160	0.260	.
(15) Countrywide Pure Premium:	1.075	0.723	1.798
(16) Countrywide Indicated Relativity:	1.323	1.999	.
(17) Countrywide Credibility:	0.420	0.370	.
(18) Countrywide Lost-Time Claims:	185.00	.	.
(19) Pure Premium Underlying Present Rate:	1.449	0.963	2.412
(20) Relativity to Underlying Present Rate:	1.800	2.402	.
(21) Credibility to Underlying Relativity:	0.420	0.370	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.517	2.151	.
(24) Balanced Formula Relativity:	1.520	2.162	1.719

Class(es):		Effective: 7/1/2023							Manufacturing		
2883 FURNITURE MFG-WOOD-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)
2016	555,315	2	103	331,335	383,997	69,367	193,457	978,155	1.288	0.473	1.761
2017	537,621	5	82	843,638	526,828	343,094	251,001	1,964,561	2.549	1.105	3.654
2018	509,975	0	67	0	632,960	0	248,758	881,718	1.241	0.488	1.729
2019	510,210	1	58	189,952	175,669	112,899	86,234	564,753	0.717	0.390	1.107
2020	439,562	2	59	68,622	437,177	51,008	253,167	809,974	1.151	0.692	1.843
MA Total:	2,552,684	10	369	1,433,547	2,156,630	576,368	1,032,616	5,199,162	1.406	0.630	2.037

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.561	1.560	.
(14) Massachusetts Credibility:	0.440	0.620	.
(15) Countrywide Pure Premium:	1.271	0.633	1.904
(16) Countrywide Indicated Relativity:	1.563	1.751	.
(17) Countrywide Credibility:	0.280	0.190	.
(18) Countrywide Lost-Time Claims:	4596.0	.	.
(19) Pure Premium Underlying Present Rate:	1.464	0.661	2.124
(20) Relativity to Underlying Present Rate:	1.818	1.648	.
(21) Credibility to Underlying Relativity:	0.280	0.190	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.634	1.613	.
(24) Balanced Formula Relativity:	1.637	1.621	1.632

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Calculation of Class Relativities

Class(es): 2923 PIANO MFG		Effective: 7/1/2023							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)
2016	58,472	0	1	0	0	0	318	318	0.000	0.005	0.005
2017	58,733	0	4	0	0	0	1,025	1,025	0.000	0.017	0.017
2018	62,085	0	5	0	4,424	0	9,780	14,204	0.071	0.158	0.229
2019	51,140	0	4	0	2,160	0	8,116	10,276	0.042	0.159	0.201
2020	40,412	0	1	0	0	0	1,082	1,082	0.000	0.027	0.027
MA Total:	270,842	0	15	0	6,584	0	20,320	26,904	0.024	0.075	0.099

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.027	0.186	.
(14) Massachusetts Credibility:	0.130	0.190	.
(15) Countrywide Pure Premium:	0.550	0.276	0.826
(16) Countrywide Indicated Relativity:	0.676	0.764	.
(17) Countrywide Credibility:	0.300	0.320	.
(18) Countrywide Lost-Time Claims:	56.000	.	.
(19) Pure Premium Underlying Present Rate:	0.625	0.315	0.940
(20) Relativity to Underlying Present Rate:	0.777	0.785	.
(21) Credibility to Underlying Relativity:	0.570	0.490	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.649	0.664	.
(24) Balanced Formula Relativity:	0.651	0.668	0.656

Class(es): 2942 PENCIL, PENHOLDER OR CRAYON MFG		Effective: 7/1/2023							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)
2016	134,148	0	12	0	174,069	0	53,034	227,102	1.298	0.395	1.693
2017	160,530	0	18	0	196,838	0	68,957	265,795	1.226	0.430	1.656
2018	188,079	0	16	0	7,648	0	15,386	23,033	0.041	0.082	0.122
2019	182,960	0	15	0	12,589	0	19,962	32,551	0.069	0.109	0.178
2020	221,520	1	3	169,033	10,064	6,907	3,339	189,343	0.808	0.046	0.855
MA Total:	887,236	1	64	169,033	401,208	6,907	160,677	737,825	0.643	0.189	0.832

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.713	0.468	.
(14) Massachusetts Credibility:	0.210	0.320	.
(15) Countrywide Pure Premium:	0.720	0.423	1.143
(16) Countrywide Indicated Relativity:	0.886	1.169	.
(17) Countrywide Credibility:	0.400	0.340	.
(18) Countrywide Lost-Time Claims:	372.00	.	.
(19) Pure Premium Underlying Present Rate:	0.705	0.366	1.071
(20) Relativity to Underlying Present Rate:	0.875	0.914	.
(21) Credibility to Underlying Relativity:	0.390	0.340	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.845	0.858	.
(24) Balanced Formula Relativity:	0.847	0.862	0.852

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	209,784	1	31	76,579	288,053	15,204	151,592	531,429	1,738	0,795	2,533
2017	218,380	1	18	73,329	87,348	10,583	72,351	243,611	0,736	0,380	1,116
2018	228,390	3	23	348,107	145,894	99,164	76,484	669,649	2,163	0,769	2,932
2019	203,016	1	24	69,716	59,778	92,920	65,238	287,652	0,638	0,779	1,417
2020	218,421	0	18	0	233,577	0	61,451	295,028	1,069	0,281	1,351
MA Total:	1,077,991	6	114	567,731	814,652	217,871	427,115	2,027,369	1,282	0,598	1,881

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.423	1.481	.
(14) Massachusetts Credibility:	0.270	0.390	.
(15) Countrywide Pure Premium:	0.966	0.467	1.433
(16) Countrywide Indicated Relativity:	1.188	1.292	.
(17) Countrywide Credibility:	0.370	0.310	.
(18) Countrywide Lost-Time Claims:	367.00	.	.
(19) Pure Premium Underlying Present Rate:	1.093	0.500	1.593
(20) Relativity to Underlying Present Rate:	1.358	1.247	.
(21) Credibility to Underlying Relativity:	0.360	0.300	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.313	1.352	.
(24) Balanced Formula Relativity:	1.315	1.359	1.329

Class(es):		Effective: 7/1/2023							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)
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	4,722	0	1,649	6,371	0,742	0,259	1,002
2019	5,026	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	4,263	0	1	0	41,839	0	40,707	82,545	9,815	9,549	19,364
MA Total:	29,000	0	2	0	46,561	0	42,356	88,916	1,606	1,461	3,066

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.782	3.615	.
(14) Massachusetts Credibility:	0.070	0.110	.
(15) Countrywide Pure Premium:	1.396	0.680	2.076
(16) Countrywide Indicated Relativity:	1.717	1.881	.
(17) Countrywide Credibility:	0.470	0.450	.
(18) Countrywide Lost-Time Claims:	401.00	.	.
(19) Pure Premium Underlying Present Rate:	1.418	0.794	2.211
(20) Relativity to Underlying Present Rate:	1.761	1.980	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.742	2.115	.
(24) Balanced Formula Relativity:	1.745	2.126	1.863

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	9.601	0	1	0	0	0	494	494	0.000	0.051	0.051
2017	7.162	0	1	0	0	0	333	333	0.000	0.046	0.046
2018	188	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	15	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	16,966	0	2	0	0	0	827	827	0.000	0.049	0.049

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.121	.
(14) Massachusetts Credibility:	0.050	0.080	.
(15) Countrywide Pure Premium:	0.893	0.422	1.315
(16) Countrywide Indicated Relativity:	1.099	1.166	.
(17) Countrywide Credibility:	0.480	0.460	.
(18) Countrywide Lost-Time Claims:	326.00	.	.
(19) Pure Premium Underlying Present Rate:	1.063	0.616	1.678
(20) Relativity to Underlying Present Rate:	1.320	1.536	.
(21) Credibility to Underlying Relativity:	0.470	0.460	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.148	1.252	.
(24) Balanced Formula Relativity:	1.150	1.259	1.184

Class(es):		Effective: 7/1/2023							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)
2016	6.253	0	5	0	7.360	0	4.493	11.853	1.177	0.719	1.895
2017	5.763	0	3	0	8.134	0	4.185	12.319	1.411	0.726	2.138
2018	5.715	0	2	0	0	0	818	818	0.000	0.143	0.143
2019	2.251	0	1	0	56.589	0	17.537	74.126	25.141	7.791	32.932
2020	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	19,982	0	11	0	72,083	0	27,033	99,116	3.607	1.353	4.960

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.004	3.348	.
(14) Massachusetts Credibility:	0.060	0.090	.
(15) Countrywide Pure Premium:	1.239	0.578	1.818
(16) Countrywide Indicated Relativity:	1.525	1.599	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	972.00	.	.
(19) Pure Premium Underlying Present Rate:	1.121	0.612	1.733
(20) Relativity to Underlying Present Rate:	1.392	1.527	.
(21) Credibility to Underlying Relativity:	0.470	0.450	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.611	1.724	.
(24) Balanced Formula Relativity:	1.614	1.732	1.651

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing			
3030 IRON OR STEEL: FABRICATION: IRON/STEEL WORK-SHOP-STRUCT & 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)	
2016	125,621	1	21	134,224	33,137	177,146	94,474	438,980	1,332	2,162	3,494	
2017	120,391	1	20	14,100	370,477	24,163	125,836	534,575	3,194	1,246	4,440	
2018	132,412	1	19	236,570	107,625	146,327	91,788	582,310	2,599	1,798	4,398	
2019	125,221	2	21	223,238	442,354	59,253	90,311	815,155	5,315	1,194	6,510	
2020	127,544	0	25	0	134,898	0	53,060	187,958	1,058	0,416	1,474	
MA Total:	631,189	5	106	608,131	1,088,491	406,888	455,468	2,558,978	2,688	1,366	4,054	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.984	3.382	.
(14) Massachusetts Credibility:	0.290	0.440	.
(15) Countrywide Pure Premium:	1.965	0.899	2.864
(16) Countrywide Indicated Relativity:	2.417	2.487	.
(17) Countrywide Credibility:	0.360	0.280	.
(18) Countrywide Lost-Time Claims:	2456.0	.	.
(19) Pure Premium Underlying Present Rate:	2.083	1.139	3.222
(20) Relativity to Underlying Present Rate:	2.588	2.843	.
(21) Credibility to Underlying Relativity:	0.350	0.280	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.641	2.980	.
(24) Balanced Formula Relativity:	2.647	2.995	2.754

Class(es):		Effective: 7/1/2023							Manufacturing			
3040 IRON OR STEEL: FABRICATION: IRON WORKS-SHOP-ORNAMENTAL & 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)	
2016	217,526	2	42	398,225	145,031	50,359	145,016	738,630	2,497	0,898	3,396	
2017	239,716	0	40	0	262,893	0	134,667	397,560	1,097	0,562	1,658	
2018	251,942	1	46	457,260	1,461,595	227,378	399,053	2,545,286	7,616	2,486	10,103	
2019	269,558	2	31	685,645	391,216	117,965	207,604	1,402,429	3,995	1,208	5,203	
2020	264,857	1	26	481,341	286,821	116,398	197,714	1,082,274	2,900	1,186	4,086	
MA Total:	1,243,599	6	185	2,022,471	2,547,555	512,100	1,084,053	6,166,180	3,675	1,283	4,958	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.079	3.177	.
(14) Massachusetts Credibility:	0.410	0.530	.
(15) Countrywide Pure Premium:	2.043	0.892	2.934
(16) Countrywide Indicated Relativity:	2.513	2.465	.
(17) Countrywide Credibility:	0.300	0.240	.
(18) Countrywide Lost-Time Claims:	1551.0	.	.
(19) Pure Premium Underlying Present Rate:	2.608	0.932	3.540
(20) Relativity to Underlying Present Rate:	3.240	2.325	.
(21) Credibility to Underlying Relativity:	0.290	0.230	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	3.366	2.810	.
(24) Balanced Formula Relativity:	3.373	2.824	3.203

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	43,286	0	2	0	4,050	0	2,204	6,254	0.094	0.051	0.144	
2017	50,813	0	6	0	776	0	4,712	5,488	0.015	0.093	0.108	
2018	55,058	0	0	0	0	0	0	0	0.000	0.000	0.000	
2019	55,657	0	5	0	0	0	5,916	5,916	0.000	0.106	0.106	
2020	58,403	1	6	3,493	0	6,739	10,651	20,883	0.060	0.298	0.358	
MA Total:	263,217	1	19	3,493	4,826	6,739	23,483	38,541	0.032	0.115	0.146	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.035	0.284	.
(14) Massachusetts Credibility:	0.160	0.230	.
(15) Countrywide Pure Premium:	1.707	0.662	2.369
(16) Countrywide Indicated Relativity:	2.100	1.831	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	140.00	.	.
(19) Pure Premium Underlying Present Rate:	1.233	0.525	1.758
(20) Relativity to Underlying Present Rate:	1.531	1.310	.
(21) Credibility to Underlying Relativity:	0.420	0.380	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.531	1.277	.
(24) Balanced Formula Relativity:	1.534	1.283	1.456

Class(es):		Effective: 7/1/2023							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)	
2016	7,941	0	0	0	0	0	0	0	0.000	0.000	0.000	
2017	8,752	0	2	0	0	0	2,259	2,259	0.000	0.258	0.258	
2018	14,292	0	0	0	0	0	0	0	0.000	0.000	0.000	
2019	13,865	0	0	0	0	0	0	0	0.000	0.000	0.000	
2020	12,026	0	0	0	0	0	0	0	0.000	0.000	0.000	
MA Total:	56,876	0	2	0	0	0	2,259	2,259	0.000	0.040	0.040	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.098	.
(14) Massachusetts Credibility:	0.100	0.150	.
(15) Countrywide Pure Premium:	1.514	0.560	2.074
(16) Countrywide Indicated Relativity:	1.862	1.548	.
(17) Countrywide Credibility:	0.450	0.430	.
(18) Countrywide Lost-Time Claims:	171.00	.	.
(19) Pure Premium Underlying Present Rate:	1.621	0.824	2.446
(20) Relativity to Underlying Present Rate:	2.014	2.057	.
(21) Credibility to Underlying Relativity:	0.450	0.420	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.744	1.544	.
(24) Balanced Formula Relativity:	1.748	1.552	1.687

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Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2023

Section IX - G
 Exhibit 45

Calculation of Class Relativities

Class(es): 3066 SHEET METAL WORK - SHOP		Effective: 7/1/2023							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)
2016	942,065	2	136	428,485	634,385	130,753	405,722	1,599,346	1,128	0,569	1,698
2017	988,826	3	132	539,214	944,826	71,872	623,578	2,179,489	1,501	0,703	2,204
2018	1,034,565	4	111	337,808	625,845	205,171	320,661	1,489,485	0,931	0,508	1,440
2019	1,051,909	1	116	15,053	454,451	12,902	331,517	813,923	0,446	0,327	0,774
2020	1,105,550	0	119	0	1,003,249	0	824,054	1,827,303	0,907	0,745	1,653
MA Total:	5,122,915	10	614	1,320,560	3,662,755	420,698	2,505,533	7,909,546	0,973	0,571	1,544

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.080	1.414	.
(14) Massachusetts Credibility:	0.500	0.740	.
(15) Countrywide Pure Premium:	1.237	0.543	1.780
(16) Countrywide Indicated Relativity:	1.522	1.501	.
(17) Countrywide Credibility:	0.250	0.130	.
(18) Countrywide Lost-Time Claims:	893.00	.	.
(19) Pure Premium Underlying Present Rate:	1.019	0.511	1.529
(20) Relativity to Underlying Present Rate:	1.266	1.274	.
(21) Credibility to Underlying Relativity:	0.250	0.130	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.237	1.407	.
(24) Balanced Formula Relativity:	1.239	1.414	1.293

Class(es): 3076 FIREPROOF EQUIPMENT MFG		Effective: 7/1/2023							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)
2016	270,095	0	27	0	484,432	0	193,192	677,624	1,794	0,715	2,509
2017	290,946	2	31	60,832	14,833	10,298	33,192	119,155	0,260	0,149	0,410
2018	311,984	1	47	320,177	314,086	104,933	156,929	896,126	2,033	0,839	2,872
2019	278,458	1	35	89,234	1,194,780	14,695	290,513	1,589,222	4,611	1,096	5,707
2020	296,652	0	33	0	125,606	0	78,786	204,391	0,423	0,266	0,689
MA Total:	1,448,134	4	173	470,242	2,133,737	129,926	752,612	3,486,518	1,798	0,609	2,408

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.996	1.508	.
(14) Massachusetts Credibility:	0.290	0.430	.
(15) Countrywide Pure Premium:	1.261	0.598	1.859
(16) Countrywide Indicated Relativity:	1.551	1.653	.
(17) Countrywide Credibility:	0.360	0.290	.
(18) Countrywide Lost-Time Claims:	8186.0	.	.
(19) Pure Premium Underlying Present Rate:	0.962	0.469	1.431
(20) Relativity to Underlying Present Rate:	1.195	1.171	.
(21) Credibility to Underlying Relativity:	0.350	0.280	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.555	1.456	.
(24) Balanced Formula Relativity:	1.559	1.463	1.529

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Section IX - Classification Pricing
 Subsection G - Class Relativities
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Section IX - G
 Exhibit 46

Calculation of Class Relativities

Class(es): 3081 FOUNDRY-FERROUS-NOC		Effective: 7/1/2023							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)
2016	16,294	0	2	0	0	0	320	320	0.000	0.020	0.020
2017	19,902	1	4	12,718	1,110	19,196	2,757	35,781	0.695	1.103	1.798
2018	18,143	0	5	0	35,695	0	25,175	60,870	1.967	1.388	3.355
2019	18,284	0	5	0	25,976	0	19,566	45,542	1.421	1.070	2.491
2020	20,600	0	5	0	4,116	0	3,665	7,781	0.200	0.178	0.378
MA Total:	93,223	1	21	12,718	66,897	19,196	51,484	150,295	0.854	0.758	1.612

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.948	1.877	.
(14) Massachusetts Credibility:	0.130	0.200	.
(15) Countrywide Pure Premium:	1.829	0.761	2.590
(16) Countrywide Indicated Relativity:	2.250	2.105	.
(17) Countrywide Credibility:	0.440	0.400	.
(18) Countrywide Lost-Time Claims:	1713.0	.	.
(19) Pure Premium Underlying Present Rate:	2.002	1.121	3.124
(20) Relativity to Underlying Present Rate:	2.488	2.798	.
(21) Credibility to Underlying Relativity:	0.430	0.400	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.183	2.336	.
(24) Balanced Formula Relativity:	2.187	2.348	2.237

Class(es): 3085 FOUNDRY-NON FERROUS		Effective: 7/1/2023							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)
2016	109,493	0	18	0	13,848	0	33,837	47,686	0.126	0.309	0.436
2017	134,230	0	31	0	167,842	0	92,589	260,431	1.250	0.690	1.940
2018	120,913	0	33	0	520,529	0	340,029	860,558	4.305	2.812	7.117
2019	112,385	0	21	0	52,712	0	50,476	103,188	0.469	0.449	0.918
2020	73,306	1	12	125,460	8,763	18,525	20,439	173,187	1.831	0.532	2.363
MA Total:	550,327	1	115	125,460	763,694	18,525	537,371	1,445,049	1.616	1.010	2.626

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.793	2.500	.
(14) Massachusetts Credibility:	0.270	0.400	.
(15) Countrywide Pure Premium:	1.762	0.837	2.599
(16) Countrywide Indicated Relativity:	2.168	2.314	.
(17) Countrywide Credibility:	0.370	0.300	.
(18) Countrywide Lost-Time Claims:	896.00	.	.
(19) Pure Premium Underlying Present Rate:	1.982	1.056	3.037
(20) Relativity to Underlying Present Rate:	2.462	2.634	.
(21) Credibility to Underlying Relativity:	0.360	0.300	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.173	2.484	.
(24) Balanced Formula Relativity:	2.177	2.497	2.276

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Section IX - Classification Pricing
 Subsection G - Class Relativities
 7/1/2023

Section IX - G
 Exhibit 47

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	20,193	1	12	143,806	168,546	38,076	73,622	424,051	15,469	5,532	21,000
2017	17,397	0	9	0	96,855	0	36,334	133,188	5,567	2,089	7,656
2018	15,634	1	3	203,652	1,502	26,548	3,037	234,739	13,123	1,892	15,015
2019	12,321	0	1	0	0	0	992	992	0.000	0.080	0.080
2020	30,704	0	10	0	19,000	0	7,484	26,485	0,619	0,244	0,863
MA Total:	96,248	2	35	347,459	285,903	64,625	121,468	819,454	6,580	1,933	8,514

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	7.304	4.786	.
(14) Massachusetts Credibility:	0.180	0.240	.
(15) Countrywide Pure Premium:	1.356	0.692	2.048
(16) Countrywide Indicated Relativity:	1.668	1.913	.
(17) Countrywide Credibility:	0.410	0.380	.
(18) Countrywide Lost-Time Claims:	329.00	.	.
(19) Pure Premium Underlying Present Rate:	4.030	1.673	5.703
(20) Relativity to Underlying Present Rate:	5.007	4.173	.
(21) Credibility to Underlying Relativity:	0.410	0.380	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	4.051	3.461	.
(24) Balanced Formula Relativity:	4.059	3.478	3.880

Class(es):		Effective: 7/1/2023							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)
2016	79,120	0	7	0	6,110	0	21,551	27,661	0.077	0.272	0.350
2017	81,346	0	7	0	95,734	0	30,597	126,331	1.177	0.376	1.553
2018	130,223	0	16	0	248,312	0	126,454	374,766	1.907	0.971	2.878
2019	131,179	0	10	0	220,034	0	77,998	298,032	1.677	0.595	2.272
2020	138,196	0	13	0	388,506	0	138,943	527,449	2.811	1.005	3.817
MA Total:	560,064	0	53	0	958,696	0	395,543	1,354,239	1.712	0.706	2.418

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.900	1.748	.
(14) Massachusetts Credibility:	0.200	0.280	.
(15) Countrywide Pure Premium:	0.872	0.407	1.279
(16) Countrywide Indicated Relativity:	1.072	1.126	.
(17) Countrywide Credibility:	0.400	0.360	.
(18) Countrywide Lost-Time Claims:	201.00	.	.
(19) Pure Premium Underlying Present Rate:	0.936	0.415	1.351
(20) Relativity to Underlying Present Rate:	1.162	1.035	.
(21) Credibility to Underlying Relativity:	0.400	0.360	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.274	1.267	.
(24) Balanced Formula Relativity:	1.277	1.274	1.276

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Section IX - Classification Pricing
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 Exhibit 48

Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	805.080	1	87	76.841	395.503	17.441	244.992	734.777	0.587	0.326	0.913
2017	751.772	2	65	177.481	617.718	70.482	278.931	1,144.612	1.058	0.465	1.523
2018	754.877	2	66	178.397	429.320	142.952	204.440	955.108	0.805	0.460	1.265
2019	698.509	0	46	0	755.122	0	181.947	937.068	1.081	0.260	1.342
2020	728.801	2	34	360.946	129.998	96.526	86.721	674.190	0.674	0.251	0.925
MA Total:	3,739,038	7	298	793,664	2,327,661	327,401	997,029	4,445,756	0.835	0.354	1.189

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.927	0.877	.
(14) Massachusetts Credibility:	0.380	0.580	.
(15) Countrywide Pure Premium:	0.811	0.367	1.178
(16) Countrywide Indicated Relativity:	0.997	1.015	.
(17) Countrywide Credibility:	0.310	0.210	.
(18) Countrywide Lost-Time Claims:	1420.0	.	.
(19) Pure Premium Underlying Present Rate:	0.727	0.379	1.107
(20) Relativity to Underlying Present Rate:	0.904	0.946	.
(21) Credibility to Underlying Relativity:	0.310	0.210	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.941	0.920	.
(24) Balanced Formula Relativity:	0.943	0.925	0.938

Class(es):		Effective: 7/1/2023							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)
2016	41.619	1	9	74.431	295	9.152	4.957	88.835	1.795	0.339	2.134
2017	30.261	0	9	0	875	0	5.791	6.666	0.029	0.191	0.220
2018	51.565	0	12	0	9.186	0	12.963	22.148	0.178	0.251	0.430
2019	45.136	0	9	0	109.242	0	88.896	198.137	2.420	1.970	4.390
2020	41.490	0	10	0	27.130	0	15.872	43.002	0.654	0.383	1.036
MA Total:	210,071	1	49	74.431	146,727	9.152	128,478	358,789	1.053	0.655	1.708

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.169	1.622	.
(14) Massachusetts Credibility:	0.150	0.220	.
(15) Countrywide Pure Premium:	0.976	0.547	1.524
(16) Countrywide Indicated Relativity:	1.201	1.513	.
(17) Countrywide Credibility:	0.430	0.390	.
(18) Countrywide Lost-Time Claims:	244.00	.	.
(19) Pure Premium Underlying Present Rate:	1.272	0.587	1.859
(20) Relativity to Underlying Present Rate:	1.580	1.464	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.355	1.518	.
(24) Balanced Formula Relativity:	1.358	1.525	1.410

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Section IX - Classification Pricing
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Section IX - G
 Exhibit 49

Calculation of Class Relativities

Class(es): 3118 SAW MFG		Effective: 7/1/2023							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)
2016	261.973	0	17	0	56.684	0	49.753	106.436	0.216	0.190	0.406
2017	90.032	0	9	0	65.465	0	102.562	168.028	0.727	1.139	1.866
2018	68.594	0	3	0	10.533	0	3.992	14.525	0.154	0.058	0.212
2019	54.871	0	3	0	1.481	0	2.997	4.478	0.027	0.055	0.082
2020	51.015	0	3	0	9.685	0	2.139	11.823	0.190	0.042	0.232
MA Total:	526.486	0	35	0	143.848	0	161.442	305.290	0.273	0.307	0.580

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.303	0.759	.
(14) Massachusetts Credibility:	0.170	0.250	.
(15) Countrywide Pure Premium:	0.594	0.257	0.851
(16) Countrywide Indicated Relativity:	0.730	0.712	.
(17) Countrywide Credibility:	0.360	0.380	.
(18) Countrywide Lost-Time Claims:	88.000	.	.
(19) Pure Premium Underlying Present Rate:	0.713	0.328	1.042
(20) Relativity to Underlying Present Rate:	0.886	0.819	.
(21) Credibility to Underlying Relativity:	0.470	0.370	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.731	0.764	.
(24) Balanced Formula Relativity:	0.732	0.767	0.743

Class(es): 3119 NEEDLE MFG		Effective: 7/1/2023							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)
2016	57.898	0	6	0	50.306	0	38.986	89.293	0.869	0.673	1.542
2017	58.683	0	2	0	0	0	5.780	5.780	0.000	0.098	0.098
2018	65.473	1	4	99.013	6.282	18.355	9.341	132.991	1.608	0.423	2.031
2019	69.288	0	1	0	0	0	1.205	1.205	0.000	0.017	0.017
2020	60.008	0	2	0	32.844	0	15.439	48.283	0.547	0.257	0.805
MA Total:	311.350	1	15	99.013	89.432	18.355	70.751	277.551	0.605	0.286	0.891

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.672	0.708	.
(14) Massachusetts Credibility:	0.120	0.180	.
(15) Countrywide Pure Premium:	0.134	0.088	0.222
(16) Countrywide Indicated Relativity:	0.165	0.243	.
(17) Countrywide Credibility:	0.140	0.150	.
(18) Countrywide Lost-Time Claims:	9.000	.	.
(19) Pure Premium Underlying Present Rate:	0.447	0.237	0.684
(20) Relativity to Underlying Present Rate:	0.556	0.591	.
(21) Credibility to Underlying Relativity:	0.740	0.670	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.515	0.560	.
(24) Balanced Formula Relativity:	0.516	0.563	0.530

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Section IX - Classification Pricing
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Calculation of Class Relativities

Class(es): 3120 RAZOR MFG-SAFETY		Effective: 7/1/2023							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)
2016	53.954	1	1	29.954	2.322	3.062	523	35.861	0.598	0.066	0.665
2017	60.462	1	4	11.570	37.569	4.593	13.350	67.082	0.813	0.297	1.109
2018	30.728	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	3.026	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	148,171	2	5	41,524	39,891	7,655	13,873	102,943	0.549	0.145	0.695

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.610	0.360	.
(14) Massachusetts Credibility:	0.100	0.130	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.711	0.560	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.579	0.227	0.806
(20) Relativity to Underlying Present Rate:	0.719	0.566	.
(21) Credibility to Underlying Relativity:	0.900	0.870	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.708	0.539	.
(24) Balanced Formula Relativity:	0.710	0.542	0.658

Class(es): 3122 CUTLERY MFG-NOC		Effective: 7/1/2023							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)
2016	126.037	0	46	0	307.736	0	97.155	404.891	2.442	0.771	3.212
2017	127.683	0	39	0	11.438	0	29.214	40.651	0.090	0.229	0.318
2018	119.055	1	37	101.263	17.158	4.486	28.665	151.571	0.995	0.278	1.273
2019	126.791	0	31	0	359.505	0	96.297	455.802	2.835	0.759	3.595
2020	121.937	0	15	0	4.123	0	30.152	34.275	0.034	0.247	0.281
MA Total:	621,503	1	168	101,263	699,960	4,486	281,483	1,087,190	1.289	0.460	1.749

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.431	1.139	.
(14) Massachusetts Credibility:	0.210	0.320	.
(15) Countrywide Pure Premium:	0.821	0.323	1.144
(16) Countrywide Indicated Relativity:	1.009	0.894	.
(17) Countrywide Credibility:	0.360	0.340	.
(18) Countrywide Lost-Time Claims:	90.000	.	.
(19) Pure Premium Underlying Present Rate:	0.965	0.504	1.469
(20) Relativity to Underlying Present Rate:	1.198	1.257	.
(21) Credibility to Underlying Relativity:	0.430	0.340	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.179	1.096	.
(24) Balanced Formula Relativity:	1.182	1.101	1.157

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
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
2019	2,904	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	2,234	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	12,816	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:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.253	1.162	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.020	0.471	1.491
(20) Relativity to Underlying Present Rate:	1.267	1.175	.
(21) Credibility to Underlying Relativity:	0.950	0.930	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.203	1.093	.
(24) Balanced Formula Relativity:	1.206	1.098	1.172

Class(es):		Effective: 7/1/2023							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)
2016	8,520	0	1	0	0	0	175	175	0.000	0.021	0.021
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
2019	10,580	0	2	0	3,468	0	4,385	7,853	0.328	0.414	0.742
2020	7,381	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	44,278	0	3	0	3,468	0	4,560	8,028	0.078	0.103	0.181

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.087	0.255	.
(14) Massachusetts Credibility:	0.060	0.090	.
(15) Countrywide Pure Premium:	0.685	0.384	1.069
(16) Countrywide Indicated Relativity:	0.843	1.062	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	228.00	.	.
(19) Pure Premium Underlying Present Rate:	0.507	0.321	0.828
(20) Relativity to Underlying Present Rate:	0.630	0.800	.
(21) Credibility to Underlying Relativity:	0.470	0.450	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.698	0.871	.
(24) Balanced Formula Relativity:	0.699	0.876	0.754

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Calculation of Class Relativities

Class(es): 3132 NUT OR BOLT MFG		Effective: 7/1/2023							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)
2016	15,158	0	2	0	0	0	1,958	1,958	0.000	0.129	0.129
2017	15,421	0	1	0	0	0	761	761	0.000	0.049	0.049
2018	28,384	0	7	0	11,603	0	14,729	26,332	0.409	0.519	0.928
2019	16,483	0	2	0	12,942	0	2,258	15,201	0.785	0.137	0.922
2020	20,652	0	4	0	1,505	0	4,538	6,043	0.073	0.220	0.293
MA Total:	96,099	0	16	0	26,051	0	24,245	50,295	0.271	0.252	0.523

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.301	0.624	.
(14) Massachusetts Credibility:	0.100	0.160	.
(15) Countrywide Pure Premium:	0.947	0.437	1.384
(16) Countrywide Indicated Relativity:	1.165	1.209	.
(17) Countrywide Credibility:	0.450	0.420	.
(18) Countrywide Lost-Time Claims:	270.00	.	.
(19) Pure Premium Underlying Present Rate:	0.957	0.562	1.519
(20) Relativity to Underlying Present Rate:	1.189	1.402	.
(21) Credibility to Underlying Relativity:	0.450	0.420	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.090	1.197	.
(24) Balanced Formula Relativity:	1.092	1.203	1.126

Class(es): 3145 SCREW MFG		Effective: 7/1/2023							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)
2016	205,318	1	18	163,863	32,316	20,637	50,989	267,805	0.955	0.349	1.304
2017	344,237	0	15	0	373,247	0	70,538	443,786	1.084	0.205	1.289
2018	221,442	0	12	0	2,349	0	10,865	13,214	0.011	0.049	0.060
2019	422,538	0	26	0	109,354	0	34,419	143,773	0.259	0.081	0.340
2020	388,111	0	21	0	93,945	0	76,934	170,878	0.242	0.198	0.440
MA Total:	1,581,646	1	92	163,863	611,211	20,637	243,746	1,039,456	0.490	0.167	0.657

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.544	0.414	.
(14) Massachusetts Credibility:	0.270	0.400	.
(15) Countrywide Pure Premium:	0.704	0.358	1.062
(16) Countrywide Indicated Relativity:	0.866	0.991	.
(17) Countrywide Credibility:	0.370	0.300	.
(18) Countrywide Lost-Time Claims:	494.00	.	.
(19) Pure Premium Underlying Present Rate:	0.694	0.354	1.047
(20) Relativity to Underlying Present Rate:	0.862	0.883	.
(21) Credibility to Underlying Relativity:	0.360	0.300	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.777	0.728	.
(24) Balanced Formula Relativity:	0.779	0.731	0.764

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Calculation of Class Relativities

Class(es): 3146 HARDWARE MFG-NOC		Effective: 7/1/2023							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)
2016	89,198	1	11	52,165	648	40,966	8,309	102,088	0.592	0.552	1.145
2017	91,785	0	17	0	10,177	0	20,329	30,506	0.111	0.221	0.332
2018	91,813	0	14	0	17,146	0	14,234	31,381	0.187	0.155	0.342
2019	203,094	2	14	408,153	25,715	59,287	28,160	521,314	2.136	0.431	2.567
2020	99,886	0	14	0	29,621	0	33,529	63,150	0.297	0.336	0.632
MA Total:	575,777	3	70	460,318	83,308	100,253	104,561	748,440	0.944	0.356	1.300

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.048	0.880	.
(14) Massachusetts Credibility:	0.200	0.300	.
(15) Countrywide Pure Premium:	0.846	0.429	1.274
(16) Countrywide Indicated Relativity:	1.040	1.186	.
(17) Countrywide Credibility:	0.400	0.350	.
(18) Countrywide Lost-Time Claims:	1326.0	.	.
(19) Pure Premium Underlying Present Rate:	0.884	0.493	1.377
(20) Relativity to Underlying Present Rate:	1.098	1.230	.
(21) Credibility to Underlying Relativity:	0.400	0.350	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.065	1.109	.
(24) Balanced Formula Relativity:	1.067	1.115	1.082

Class(es): 3169 STOVE MFG		Effective: 7/1/2023							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)
2016	420,303	1	51	147,876	272,035	62,904	286,449	769,264	0.999	0.831	1.830
2017	451,102	0	60	0	116,718	0	137,083	253,801	0.259	0.304	0.563
2018	503,174	0	62	0	306,414	0	136,721	443,135	0.609	0.272	0.881
2019	462,404	0	61	0	241,815	0	257,017	498,831	0.523	0.556	1.079
2020	517,389	0	55	0	478,317	0	374,402	852,718	0.924	0.724	1.648
MA Total:	2,354,372	1	289	147,876	1,415,299	62,904	1,191,671	2,817,750	0.664	0.533	1.197

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.737	1.319	.
(14) Massachusetts Credibility:	0.360	0.620	.
(15) Countrywide Pure Premium:	1.128	0.541	1.669
(16) Countrywide Indicated Relativity:	1.387	1.497	.
(17) Countrywide Credibility:	0.320	0.190	.
(18) Countrywide Lost-Time Claims:	6292.0	.	.
(19) Pure Premium Underlying Present Rate:	0.979	0.710	1.689
(20) Relativity to Underlying Present Rate:	1.217	1.771	.
(21) Credibility to Underlying Relativity:	0.320	0.190	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.099	1.439	.
(24) Balanced Formula Relativity:	1.101	1.446	1.208

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	1,330,715	1	83	23,724	489,836	36,872	280,576	831,007	0.386	0.239	0.624
2017	1,545,662	1	92	7,178	881,454	23,179	284,598	1,196,409	0.575	0.199	0.774
2018	1,804,470	4	78	307,874	284,291	107,492	183,691	883,348	0.328	0.161	0.490
2019	1,891,213	0	68	0	606,674	0	418,241	1,024,916	0.321	0.221	0.542
2020	1,976,784	1	57	67,114	319,043	2,742	291,853	680,753	0.195	0.149	0.344
MA Total:	8,548,844	7	378	405,890	2,581,298	170,285	1,458,959	4,616,432	0.349	0.191	0.540

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.388	0.472	.
(14) Massachusetts Credibility:	0.460	0.640	.
(15) Countrywide Pure Premium:	0.794	0.340	1.133
(16) Countrywide Indicated Relativity:	0.976	0.939	.
(17) Countrywide Credibility:	0.270	0.180	.
(18) Countrywide Lost-Time Claims:	3795.0	.	.
(19) Pure Premium Underlying Present Rate:	0.501	0.217	0.718
(20) Relativity to Underlying Present Rate:	0.622	0.543	.
(21) Credibility to Underlying Relativity:	0.270	0.180	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.610	0.569	.
(24) Balanced Formula Relativity:	0.611	0.571	0.599

Class(es):		Effective: 7/1/2023							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)
2016	124,574	1	19	28,425	4,112	6,418	11,729	50,684	0.261	0.146	0.407
2017	130,353	0	25	0	167,702	0	63,083	230,785	1.287	0.484	1.770
2018	121,517	1	17	83,176	285,877	112,206	31,011	512,271	3.037	1.179	4.216
2019	125,675	1	21	5,061	113,109	4,307	56,941	179,418	0.940	0.487	1.428
2020	121,285	1	8	69,508	747	13,281	8,080	91,616	0.579	0.176	0.755
MA Total:	623,404	4	90	186,169	571,547	136,212	170,844	1,064,773	1.215	0.493	1.708

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.349	1.219	.
(14) Massachusetts Credibility:	0.220	0.310	.
(15) Countrywide Pure Premium:	0.978	0.470	1.448
(16) Countrywide Indicated Relativity:	1.203	1.301	.
(17) Countrywide Credibility:	0.390	0.350	.
(18) Countrywide Lost-Time Claims:	322.00	.	.
(19) Pure Premium Underlying Present Rate:	1.126	0.474	1.599
(20) Relativity to Underlying Present Rate:	1.398	1.182	.
(21) Credibility to Underlying Relativity:	0.390	0.340	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.311	1.235	.
(24) Balanced Formula Relativity:	1.314	1.241	1.291

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Section IX - Classification Pricing
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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
3188 PLUMBERS SUPPLIES 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)
2016	22,318	0	5	0	0	0	3,023	3,023	0.000	0.135	0.135
2017	21,811	0	4	0	6,673	0	11,087	17,760	0.306	0.508	0.814
2018	26,987	0	1	0	0	0	491	491	0.000	0.018	0.018
2019	23,689	0	5	0	50,711	0	28,950	79,661	2.141	1.222	3.363
2020	7,552	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	102,357	0	15	0	57,384	0	43,551	100,935	0.561	0.425	0.986

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.622	1.053	.
(14) Massachusetts Credibility:	0.110	0.150	.
(15) Countrywide Pure Premium:	0.839	0.386	1.225
(16) Countrywide Indicated Relativity:	1.033	1.066	.
(17) Countrywide Credibility:	0.450	0.430	.
(18) Countrywide Lost-Time Claims:	367.00	.	.
(19) Pure Premium Underlying Present Rate:	1.054	0.495	1.549
(20) Relativity to Underlying Present Rate:	1.310	1.235	.
(21) Credibility to Underlying Relativity:	0.440	0.420	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.110	1.135	.
(24) Balanced Formula Relativity:	1.112	1.141	1.121

Class(es):		Effective: 7/1/2023							Manufacturing		
3200 ARMS MFG-SMALL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2016	106,226	0	9	0	99,820	0	108,382	208,202	0.940	1.020	1.960
2017	58,551	0	7	0	151,519	0	31,126	182,645	2.588	0.532	3.119
2018	20,249	0	6	0	8,902	0	23,693	32,595	0.440	1.170	1.610
2019	191,041	1	16	141,679	44,057	30,374	39,386	255,496	0.972	0.365	1.337
2020	258,109	1	26	272,261	186,733	53,240	100,054	612,289	1.778	0.594	2.372
MA Total:	634,176	2	64	413,941	491,030	83,614	302,642	1,291,226	1.427	0.609	2.036

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.584	1.508	.
(14) Massachusetts Credibility:	0.210	0.310	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.139	1.171	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.927	0.474	1.401
(20) Relativity to Underlying Present Rate:	1.151	1.184	.
(21) Credibility to Underlying Relativity:	0.790	0.690	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.242	1.284	.
(24) Balanced Formula Relativity:	1.245	1.290	1.259

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Calculation of Class Relativities

Class(es): 3220 CAN MFG		Effective: 7/1/2023							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)
2016	66,719	0	8	0	11,219	0	18,223	29,442	0.168	0.273	0.441
2017	101,274	0	6	0	146,734	0	35,725	182,460	1.449	0.353	1.802
2018	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	39,299	0	3	0	26,655	0	25,221	51,876	0.678	0.642	1.320
2020	183	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	207,476	0	17	0	184,609	0	79,170	263,778	0.890	0.382	1.271

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.988	0.944	.
(14) Massachusetts Credibility:	0.150	0.220	.
(15) Countrywide Pure Premium:	0.796	0.299	1.095
(16) Countrywide Indicated Relativity:	0.979	0.828	.
(17) Countrywide Credibility:	0.430	0.390	.
(18) Countrywide Lost-Time Claims:	268.00	.	.
(19) Pure Premium Underlying Present Rate:	1.245	0.640	1.884
(20) Relativity to Underlying Present Rate:	1.546	1.596	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.218	1.153	.
(24) Balanced Formula Relativity:	1.221	1.159	1.202

Class(es): 3255 WIRE CLOTH MFG		Effective: 7/1/2023							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)
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
2019	1,021	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	1,663	0	2	0	0	0	631	631	0.000	0.379	0.379
MA Total:	6,138	0	2	0	0	0	631	631	0.000	0.103	0.103

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.254	.
(14) Massachusetts Credibility:	0.030	0.050	.
(15) Countrywide Pure Premium:	1.133	0.547	1.680
(16) Countrywide Indicated Relativity:	1.393	1.513	.
(17) Countrywide Credibility:	0.250	0.270	.
(18) Countrywide Lost-Time Claims:	37.000	.	.
(19) Pure Premium Underlying Present Rate:	0.823	0.413	1.236
(20) Relativity to Underlying Present Rate:	1.022	1.030	.
(21) Credibility to Underlying Relativity:	0.720	0.680	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.084	1.122	.
(24) Balanced Formula Relativity:	1.086	1.127	1.099

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Calculation of Class Relativities

Class(es): 3257 WIRE GOODS MFG - NOC		Effective: 7/1/2023							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)
2016	239,664	2	48	404,349	14,424	95,632	30,840	545,246	1,747	0,528	2,275
2017	251,847	0	62	0	105,801	0	75,431	181,232	0,420	0,300	0,720
2018	264,351	0	29	0	226,065	0	271,653	497,718	0,855	1,028	1,883
2019	226,741	1	27	85,385	112,241	146,234	189,719	533,579	0,872	1,482	2,353
2020	254,474	3	19	462,309	95,093	98,587	36,866	692,855	2,190	0,532	2,723
MA Total:	1,237,077	6	185	952,044	553,623	340,453	604,510	2,450,630	1,217	0,764	1,981

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.351	1.891	.
(14) Massachusetts Credibility:	0.280	0.450	.
(15) Countrywide Pure Premium:	0.942	0.436	1.378
(16) Countrywide Indicated Relativity:	1.158	1.206	.
(17) Countrywide Credibility:	0.360	0.280	.
(18) Countrywide Lost-Time Claims:	813.00	.	.
(19) Pure Premium Underlying Present Rate:	0.972	0.603	1.575
(20) Relativity to Underlying Present Rate:	1.208	1.504	.
(21) Credibility to Underlying Relativity:	0.360	0.270	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.230	1.595	.
(24) Balanced Formula Relativity:	1.233	1.602	1.347

Class(es): 3270 EYELET MFG		Effective: 7/1/2023							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)
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
2019	5,916	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	5,863	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	33,240	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:	0.060	0.100	.
(15) Countrywide Pure Premium:	0.645	0.378	1.023
(16) Countrywide Indicated Relativity:	0.794	1.045	.
(17) Countrywide Credibility:	0.370	0.390	.
(18) Countrywide Lost-Time Claims:	95.000	.	.
(19) Pure Premium Underlying Present Rate:	0.939	0.478	1.417
(20) Relativity to Underlying Present Rate:	1.166	1.194	.
(21) Credibility to Underlying Relativity:	0.570	0.510	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.958	1.016	.
(24) Balanced Formula Relativity:	0.960	1.022	0.979

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
3300 BED SPRING OR WIRE MATTRESS 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)
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
2019	20	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	0	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	6.708	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:	1.672	1.024	2.696
(16) Countrywide Indicated Relativity:	2.056	2.832	.
(17) Countrywide Credibility:	0.480	0.470	.
(18) Countrywide Lost-Time Claims:	422.00	.	.
(19) Pure Premium Underlying Present Rate:	1.175	0.873	2.049
(20) Relativity to Underlying Present Rate:	1.460	2.179	.
(21) Credibility to Underlying Relativity:	0.480	0.470	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.688	2.355	.
(24) Balanced Formula Relativity:	1.691	2.367	1.900

Class(es):		Effective: 7/1/2023							Manufacturing		
3315 BRASS OR COPPER GOODS 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)
2016	197.543	0	38	0	274.924	0	209.345	484.268	1.392	1.060	2.451
2017	217.137	0	35	0	479.135	0	188.628	667.763	2.207	0.869	3.075
2018	207.391	0	24	0	205.427	0	104.198	309.625	0.991	0.502	1.493
2019	232.967	1	34	72.366	266.889	94.961	119.458	553.673	1.456	0.920	2.377
2020	172.442	1	15	46.652	80.942	16.127	71.487	215.208	0.740	0.508	1.248
MA Total:	1,027.480	2	146	119.018	1,307.317	111.088	693.115	2,230.538	1.388	0.783	2.171

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.541	1.937	.
(14) Massachusetts Credibility:	0.290	0.420	.
(15) Countrywide Pure Premium:	1.310	0.532	1.841
(16) Countrywide Indicated Relativity:	1.611	1.470	.
(17) Countrywide Credibility:	0.360	0.290	.
(18) Countrywide Lost-Time Claims:	162.00	.	.
(19) Pure Premium Underlying Present Rate:	1.311	0.607	1.917
(20) Relativity to Underlying Present Rate:	1.629	1.513	.
(21) Credibility to Underlying Relativity:	0.350	0.290	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.597	1.679	.
(24) Balanced Formula Relativity:	1.600	1.687	1.627

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Calculation of Class Relativities

Class(es): 3336 TYPE FOUNDRY		Effective: 7/1/2023							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)
2016	4,317	0	4	0	656	0	1,767	2,423	0.152	0.409	0.561
2017	4,022	0	1	0	0	0	179	179	0.000	0.045	0.045
2018	6,990	0	5	0	18,626	0	5,969	24,595	2.665	0.854	3.518
2019	7,981	0	2	0	0	0	1,039	1,039	0.000	0.130	0.130
2020	3,836	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	27,146	0	12	0	19,283	0	8,954	28,236	0.710	0.330	1.040

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.788	0.816	.
(14) Massachusetts Credibility:	0.070	0.090	.
(15) Countrywide Pure Premium:	0.995	0.416	1.411
(16) Countrywide Indicated Relativity:	1.224	1.149	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	311.00	.	.
(19) Pure Premium Underlying Present Rate:	1.251	0.504	1.755
(20) Relativity to Underlying Present Rate:	1.554	1.258	.
(21) Credibility to Underlying Relativity:	0.460	0.450	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.345	1.168	.
(24) Balanced Formula Relativity:	1.348	1.174	1.294

Class(es): 3365 WELDING OR CUTTING - NOC & DRIVERS		Effective: 7/1/2023							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)
2016	157,538	0	28	0	136,569	0	146,783	283,351	0.867	0.932	1.799
2017	162,505	0	19	0	325,452	0	173,043	498,495	2.003	1.065	3.068
2018	140,987	1	19	20,610	269,768	36,854	439,772	767,003	2.060	3.381	5.440
2019	125,193	0	9	0	181,775	0	60,491	242,265	1.452	0.483	1.935
2020	139,442	0	13	0	265,275	0	87,298	352,572	1.902	0.626	2.528
MA Total:	725,664	1	88	20,610	1,178,838	36,854	907,386	2,143,687	1.653	1.301	2.954

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.705	1.354	.
(14) Massachusetts Credibility:	0.290	0.470	.
(15) Countrywide Pure Premium:	2.221	0.828	3.050
(16) Countrywide Indicated Relativity:	0.955	0.870	.
(17) Countrywide Credibility:	0.360	0.270	.
(18) Countrywide Lost-Time Claims:	872.00	.	.
(19) Pure Premium Underlying Present Rate:	1.919	1.144	3.063
(20) Relativity to Underlying Present Rate:	0.886	1.204	.
(21) Credibility to Underlying Relativity:	0.350	0.260	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.858	1.184	.
(24) Balanced Formula Relativity:	0.868	1.186	0.961

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Calculation of Class Relativities

Class(es): 3372 ELECTROPLATING		Effective: 7/1/2023							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)
2016	570.001	1	49	31.500	539.366	2.333	227.709	800.908	1.002	0.404	1.405
2017	586.890	2	54	171.635	152.669	137.728	132.749	594.781	0.553	0.461	1.013
2018	608.214	6	70	748.080	410.541	175.145	271.405	1,605.171	1.905	0.734	2.639
2019	689.402	1	76	245.602	773.969	113.642	310.912	1,444.125	1.479	0.616	2.095
2020	555.389	0	33	0	52.578	0	40.092	92.669	0.095	0.072	0.167
MA Total:	3,009.897	10	282	1,196.817	1,929.123	428.848	982.867	4,537.655	1.039	0.469	1.508

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.153	1.161	.
(14) Massachusetts Credibility:	0.380	0.570	.
(15) Countrywide Pure Premium:	1.153	0.507	1.661
(16) Countrywide Indicated Relativity:	1.419	1.403	.
(17) Countrywide Credibility:	0.310	0.220	.
(18) Countrywide Lost-Time Claims:	946.00	.	.
(19) Pure Premium Underlying Present Rate:	0.906	0.451	1.357
(20) Relativity to Underlying Present Rate:	1.125	1.126	.
(21) Credibility to Underlying Relativity:	0.310	0.210	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.227	1.207	.
(24) Balanced Formula Relativity:	1.229	1.213	1.224

Class(es): 3373 GALVANIZING OR TINNING - NOT ELECTROLYTIC		Effective: 7/1/2023							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)
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
2019	16.016	0	1	0	0	0	1.357	1.357	0.000	0.085	0.085
2020	11.198	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	52.788	0	1	0	0	0	1.357	1.357	0.000	0.026	0.026

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.064	.
(14) Massachusetts Credibility:	0.100	0.130	.
(15) Countrywide Pure Premium:	2.173	0.861	3.034
(16) Countrywide Indicated Relativity:	2.673	2.382	.
(17) Countrywide Credibility:	0.450	0.440	.
(18) Countrywide Lost-Time Claims:	229.00	.	.
(19) Pure Premium Underlying Present Rate:	1.714	0.658	2.371
(20) Relativity to Underlying Present Rate:	2.129	1.641	.
(21) Credibility to Underlying Relativity:	0.450	0.430	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.161	1.762	.
(24) Balanced Formula Relativity:	2.165	1.771	2.043

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Calculation of Class Relativities

Class(es): 3381 SILVERWARE MFG		Effective: 7/1/2023							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)
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	126	126	0.000	0.017	0.017
2019	7.328	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	5.049	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	34.761	0	1	0	0	0	126	126	0.000	0.004	0.004

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.009	.
(14) Massachusetts Credibility:	0.060	0.090	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.020	0.941	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.830	0.382	1.212
(20) Relativity to Underlying Present Rate:	1.031	0.952	.
(21) Credibility to Underlying Relativity:	0.940	0.910	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.969	0.867	.
(24) Balanced Formula Relativity:	0.971	0.872	0.940

Class(es): 3383 JEWELRY MFG		Effective: 7/1/2023							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)
2016	572.785	1	53	29.701	487.099	10.031	226.049	752.880	0.902	0.412	1.314
2017	521.522	0	40	0	169.029	0	92.499	261.527	0.324	0.177	0.501
2018	629.724	1	36	38.027	386.897	27.113	161.419	613.456	0.675	0.299	0.974
2019	516.372	0	41	0	129.174	0	108.895	238.070	0.250	0.211	0.461
2020	646.216	0	47	0	511.020	0	244.093	755.113	0.791	0.378	1.169
MA Total:	2.886.619	2	217	67.728	1,683.219	37.144	832.956	2,621.046	0.607	0.301	0.908

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.673	0.746	.
(14) Massachusetts Credibility:	0.330	0.500	.
(15) Countrywide Pure Premium:	0.537	0.276	0.814
(16) Countrywide Indicated Relativity:	0.661	0.764	.
(17) Countrywide Credibility:	0.340	0.250	.
(18) Countrywide Lost-Time Claims:	235.00	.	.
(19) Pure Premium Underlying Present Rate:	0.653	0.341	0.994
(20) Relativity to Underlying Present Rate:	0.811	0.850	.
(21) Credibility to Underlying Relativity:	0.330	0.250	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.715	0.777	.
(24) Balanced Formula Relativity:	0.716	0.780	0.736

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Calculation of Class Relativities

Class(es): 3385 WATCH MFG		Effective: 7/1/2023							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)
2016	24,624	0	2	0	0	0	1,622	1,622	0.000	0.066	0.066
2017	24,734	0	2	0	0	0	1,385	1,385	0.000	0.056	0.056
2018	19,496	0	2	0	0	0	1,440	1,440	0.000	0.074	0.074
2019	16,616	0	1	0	851	0	10,022	10,874	0.051	0.603	0.654
2020	17,285	0	1	0	0	0	1,203	1,203	0.000	0.070	0.070
MA Total:	102,756	0	8	0	851	0	15,673	16,524	0.008	0.153	0.161

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.009	0.378	.
(14) Massachusetts Credibility:	0.070	0.100	.
(15) Countrywide Pure Premium:	0.644	0.433	1.078
(16) Countrywide Indicated Relativity:	0.793	1.198	.
(17) Countrywide Credibility:	0.160	0.170	.
(18) Countrywide Lost-Time Claims:	12.000	.	.
(19) Pure Premium Underlying Present Rate:	0.346	0.170	0.516
(20) Relativity to Underlying Present Rate:	0.430	0.425	.
(21) Credibility to Underlying Relativity:	0.770	0.730	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.458	0.552	.
(24) Balanced Formula Relativity:	0.459	0.554	0.489

Class(es): 3507 CONSTRUCTION OR AGRICULTURAL MACHINERY MFG		Effective: 7/1/2023							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)
2016	34,192	0	4	0	5,732	0	8,966	14,698	0.168	0.262	0.430
2017	26,520	0	5	0	192,430	0	34,413	226,842	7.256	1.298	8.554
2018	31,839	0	4	0	0	0	6,101	6,101	0.000	0.192	0.192
2019	29,840	0	6	0	1,764	0	5,644	7,407	0.059	0.189	0.248
2020	26,369	1	6	64,010	24,731	26,229	11,890	126,860	3.365	1.446	4.811
MA Total:	148,760	1	25	64,010	224,656	26,229	67,014	381,909	1.940	0.627	2.567

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.154	1.551	.
(14) Massachusetts Credibility:	0.130	0.180	.
(15) Countrywide Pure Premium:	1.067	0.469	1.536
(16) Countrywide Indicated Relativity:	1.313	1.296	.
(17) Countrywide Credibility:	0.440	0.410	.
(18) Countrywide Lost-Time Claims:	4362.0	.	.
(19) Pure Premium Underlying Present Rate:	1.236	0.548	1.784
(20) Relativity to Underlying Present Rate:	1.536	1.367	.
(21) Credibility to Underlying Relativity:	0.430	0.410	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.518	1.371	.
(24) Balanced Formula Relativity:	1.521	1.378	1.477

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Calculation of Class Relativities

Class(es): 3515 TEXTILE MACHINERY MFG		Effective: 7/1/2023							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)
2016	46,748	1	18	135,009	61,325	91,129	43,914	331,377	4,200	2,889	7,089
2017	49,945	0	12	0	29,739	0	17,976	47,714	0.595	0.360	0.955
2018	48,410	0	16	0	46,843	0	11,914	58,757	0.968	0.246	1,214
2019	50,787	0	12	0	41,127	0	35,239	76,367	0.810	0.694	1,504
2020	49,247	0	8	0	56,352	0	23,269	79,621	1.144	0.473	1,617
MA Total:	245,137	1	66	135,009	235,386	91,129	132,312	593,836	1.511	0.911	2,422

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.677	2.256	.
(14) Massachusetts Credibility:	0.160	0.230	.
(15) Countrywide Pure Premium:	0.507	0.188	0.695
(16) Countrywide Indicated Relativity:	0.624	0.520	.
(17) Countrywide Credibility:	0.230	0.240	.
(18) Countrywide Lost-Time Claims:	28,000	.	.
(19) Pure Premium Underlying Present Rate:	1.173	0.563	1.736
(20) Relativity to Underlying Present Rate:	1.458	1.404	.
(21) Credibility to Underlying Relativity:	0.610	0.530	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.301	1.388	.
(24) Balanced Formula Relativity:	1.304	1.395	1.332

Class(es): 3558 BOOT OR SHOE MACHINERY MFG		Effective: 7/1/2023							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)
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
2019	2,561	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	2,280	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	12,162	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:	0.334	0.535	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.272	0.217	0.489
(20) Relativity to Underlying Present Rate:	0.338	0.541	.
(21) Credibility to Underlying Relativity:	0.970	0.950	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.327	0.514	.
(24) Balanced Formula Relativity:	0.328	0.517	0.387

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
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
2019	12,689	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	4,946	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	47,443	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:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.357	0.317	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.291	0.129	0.419
(20) Relativity to Underlying Present Rate:	0.361	0.321	.
(21) Credibility to Underlying Relativity:	0.950	0.930	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.343	0.298	.
(24) Balanced Formula Relativity:	0.344	0.300	0.330

Class(es):		Effective: 7/1/2023							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)
2016	6,117,980	14	460	1,957,399	4,347,074	501,850	1,789,229	8,595,553	1.030	0.374	1.405
2017	5,938,310	10	419	2,003,642	2,628,313	669,726	1,691,804	6,993,485	0.780	0.398	1.178
2018	6,412,676	9	410	1,250,386	3,256,273	181,773	1,862,404	6,550,836	0.703	0.319	1.022
2019	6,647,845	8	315	1,442,842	2,405,481	642,654	1,615,048	6,106,025	0.579	0.340	0.918
2020	6,556,105	11	350	1,568,192	3,830,689	402,857	2,043,771	7,845,509	0.823	0.373	1.197
MA Total:	31,672,915	52	1,954	8,222,461	16,467,830	2,398,861	9,002,256	36,091,408	0.780	0.360	1.140

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.865	0.891	.
(14) Massachusetts Credibility:	0.900	1.000	.
(15) Countrywide Pure Premium:	0.797	0.348	1.144
(16) Countrywide Indicated Relativity:	0.980	0.961	.
(17) Countrywide Credibility:	0.050	0.000	.
(18) Countrywide Lost-Time Claims:	17086	.	.
(19) Pure Premium Underlying Present Rate:	0.721	0.350	1.071
(20) Relativity to Underlying Present Rate:	0.896	0.874	.
(21) Credibility to Underlying Relativity:	0.050	0.000	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.873	0.891	.
(24) Balanced Formula Relativity:	0.874	0.895	0.881

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Calculation of Class Relativities

Class(es): 3612 PUMP MFG		Effective: 7/1/2023							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)
2016	284.610	0	21	0	44.740	0	135.432	180.171	0.157	0.476	0.633
2017	274.512	0	15	0	27.024	0	18.019	45.043	0.098	0.066	0.164
2018	236.794	0	14	0	280.410	0	70.690	351.100	1.184	0.299	1.483
2019	230.999	0	12	0	4.790	0	22.374	27.164	0.021	0.097	0.118
2020	237.182	0	15	0	130.735	0	111.336	242.072	0.551	0.469	1.021
MA Total:	1,264,097	0	77	0	487,698	0	357,852	845,550	0.386	0.283	0.669

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.428	0.701	.
(14) Massachusetts Credibility:	0.220	0.330	.
(15) Countrywide Pure Premium:	0.755	0.342	1.097
(16) Countrywide Indicated Relativity:	0.929	0.945	.
(17) Countrywide Credibility:	0.390	0.340	.
(18) Countrywide Lost-Time Claims:	1584.0	.	.
(19) Pure Premium Underlying Present Rate:	0.556	0.283	0.840
(20) Relativity to Underlying Present Rate:	0.691	0.706	.
(21) Credibility to Underlying Relativity:	0.390	0.330	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.726	0.786	.
(24) Balanced Formula Relativity:	0.728	0.790	0.747

Class(es): 3620 BOILERMAKING		Effective: 7/1/2023							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)
2016	139.554	0	15	0	582.915	0	78.418	661.333	4.177	0.562	4.739
2017	129.551	1	16	314.622	134.869	71.320	54.414	575.224	3.470	0.971	4.440
2018	127.865	0	16	0	62.690	0	116.955	179.645	0.490	0.915	1.405
2019	137.530	0	11	0	155.076	0	59.101	214.177	1.128	0.430	1.557
2020	136.282	0	17	0	66.011	0	36.120	102.131	0.484	0.265	0.749
MA Total:	670,782	1	75	314,622	1,001,560	71,320	345,008	1,732,510	1.962	0.621	2.583

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.178	1.536	.
(14) Massachusetts Credibility:	0.260	0.390	.
(15) Countrywide Pure Premium:	1.104	0.496	1.600
(16) Countrywide Indicated Relativity:	1.358	1.372	.
(17) Countrywide Credibility:	0.370	0.310	.
(18) Countrywide Lost-Time Claims:	1008.0	.	.
(19) Pure Premium Underlying Present Rate:	1.580	0.769	2.349
(20) Relativity to Underlying Present Rate:	1.963	1.919	.
(21) Credibility to Underlying Relativity:	0.370	0.300	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.795	1.600	.
(24) Balanced Formula Relativity:	1.799	1.608	1.740

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Calculation of Class Relativities

Class(es): 3634 VALVE MFG		Effective: 7/1/2023							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)
2016	295,587	0	19	0	390,653	0	57,559	448,211	1,322	0,195	1,516
2017	251,348	0	21	0	56,154	0	48,009	104,163	0,223	0,191	0,414
2018	368,076	3	16	439,565	208,096	153,644	72,269	873,575	1,760	0,614	2,373
2019	219,396	2	13	331,489	100,278	71,155	84,945	587,867	1,968	0,711	2,679
2020	298,266	1	14	254,734	140,340	27,253	95,659	517,987	1,325	0,412	1,737
MA Total:	1,432,674	6	83	1,025,788	895,521	252,052	358,441	2,531,803	1,341	0,426	1,767

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.489	1.055	.
(14) Massachusetts Credibility:	0.250	0.350	.
(15) Countrywide Pure Premium:	0.681	0.292	0.974
(16) Countrywide Indicated Relativity:	0.838	0.808	.
(17) Countrywide Credibility:	0.380	0.330	.
(18) Countrywide Lost-Time Claims:	796.00	.	.
(19) Pure Premium Underlying Present Rate:	0.675	0.283	0.958
(20) Relativity to Underlying Present Rate:	0.839	0.707	.
(21) Credibility to Underlying Relativity:	0.370	0.320	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.001	0.862	.
(24) Balanced Formula Relativity:	1.003	0.866	0.961

Class(es): 3635 GEAR MFG OR GRINDING		Effective: 7/1/2023							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)
2016	339,117	4	37	256,551	323,305	94,513	541,760	1,216,128	1,710	1,876	3,586
2017	55,670	0	5	0	1,893	0	2,255	4,147	0,034	0,040	0,074
2018	75,529	0	5	0	22,665	0	10,533	33,198	0,300	0,139	0,440
2019	332,597	0	20	0	26,551	0	38,831	65,382	0,080	0,117	0,197
2020	266,867	0	19	0	75,329	0	90,912	166,241	0,282	0,341	0,623
MA Total:	1,069,781	4	86	256,551	449,742	94,513	684,291	1,485,096	0,660	0,728	1,388

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.733	1.802	.
(14) Massachusetts Credibility:	0.260	0.460	.
(15) Countrywide Pure Premium:	0.704	0.280	0.984
(16) Countrywide Indicated Relativity:	0.866	0.775	.
(17) Countrywide Credibility:	0.370	0.270	.
(18) Countrywide Lost-Time Claims:	414.00	.	.
(19) Pure Premium Underlying Present Rate:	0.930	0.736	1.666
(20) Relativity to Underlying Present Rate:	1.155	1.836	.
(21) Credibility to Underlying Relativity:	0.370	0.270	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.939	1.534	.
(24) Balanced Formula Relativity:	0.940	1.541	1.126

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Calculation of Class Relativities

Class(es): 3642 BATTERY MFG-DRY		Effective: 7/1/2023							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)
2016	41,867	0	2	0	0	0	2,426	2,426	0.000	0.058	0.058
2017	68,163	0	1	0	0	0	1,152	1,152	0.000	0.017	0.017
2018	79,481	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	50,226	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	68,267	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	308,004	0	3	0	0	0	3,578	3,578	0.000	0.012	0.012

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.029	.
(14) Massachusetts Credibility:	0.120	0.170	.
(15) Countrywide Pure Premium:	0.896	0.362	1.258
(16) Countrywide Indicated Relativity:	1.103	1.001	.
(17) Countrywide Credibility:	0.380	0.400	.
(18) Countrywide Lost-Time Claims:	100.00	.	.
(19) Pure Premium Underlying Present Rate:	0.449	0.218	0.666
(20) Relativity to Underlying Present Rate:	0.557	0.543	.
(21) Credibility to Underlying Relativity:	0.500	0.430	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.698	0.639	.
(24) Balanced Formula Relativity:	0.699	0.642	0.681

Class(es): 3643 ELECTRIC POWER OR TRANSMISSION EQUIP MFG		Effective: 7/1/2023							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)
2016	1,013,186	4	36	340,079	521,587	116,008	132,929	1,110,602	0.850	0.246	1.096
2017	1,061,762	2	66	105,382	414,038	41,711	291,506	852,636	0.489	0.314	0.803
2018	1,093,376	7	59	790,243	436,371	298,218	139,146	1,663,978	1.122	0.400	1.522
2019	930,662	2	61	230,021	1,035,586	20,788	543,695	1,830,091	1.360	0.607	1.966
2020	894,611	6	34	658,615	446,840	173,476	208,285	1,487,216	1.236	0.427	1.662
MA Total:	4,993,597	21	256	2,124,340	2,854,422	650,202	1,315,560	6,944,524	0.997	0.394	1.391

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.107	0.974	.
(14) Massachusetts Credibility:	0.420	0.610	.
(15) Countrywide Pure Premium:	0.826	0.364	1.189
(16) Countrywide Indicated Relativity:	1.016	1.006	.
(17) Countrywide Credibility:	0.290	0.200	.
(18) Countrywide Lost-Time Claims:	1823.0	.	.
(19) Pure Premium Underlying Present Rate:	0.687	0.319	1.007
(20) Relativity to Underlying Present Rate:	0.854	0.797	.
(21) Credibility to Underlying Relativity:	0.290	0.190	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.007	0.947	.
(24) Balanced Formula Relativity:	1.009	0.952	0.991

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Calculation of Class Relativities

Class(es): 3647 BATTERY MFG-STORAGE		Effective: 7/1/2023							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)
2016	2,400	0	1	0	0	0	1,271	1,271	0.000	0.530	0.530
2017	3,828	0	1	0	0	0	150	150	0.000	0.039	0.039
2018	2,071	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	8,336	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	26,168	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	42,802	0	2	0	0	0	1,421	1,421	0.000	0.033	0.033

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.082	.
(14) Massachusetts Credibility:	0.070	0.110	.
(15) Countrywide Pure Premium:	1.110	0.481	1.591
(16) Countrywide Indicated Relativity:	1.365	1.330	.
(17) Countrywide Credibility:	0.470	0.450	.
(18) Countrywide Lost-Time Claims:	502.00	.	.
(19) Pure Premium Underlying Present Rate:	1.027	0.485	1.512
(20) Relativity to Underlying Present Rate:	1.276	1.211	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.228	1.140	.
(24) Balanced Formula Relativity:	1.231	1.146	1.205

Class(es): 3648 AUTOMOTIVE LIGHTING, IGNITION APPARATUS MFG NOC		Effective: 7/1/2023							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)
2016	40,505	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	31,529	0	1	0	0	0	50	50	0.000	0.002	0.002
2018	36,729	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	23,071	0	1	0	0	0	2,546	2,546	0.000	0.110	0.110
2020	39,174	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	171,008	0	2	0	0	0	2,596	2,596	0.000	0.015	0.015

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.038	.
(14) Massachusetts Credibility:	0.100	0.150	.
(15) Countrywide Pure Premium:	0.518	0.259	0.776
(16) Countrywide Indicated Relativity:	0.637	0.715	.
(17) Countrywide Credibility:	0.450	0.430	.
(18) Countrywide Lost-Time Claims:	577.00	.	.
(19) Pure Premium Underlying Present Rate:	0.489	0.279	0.768
(20) Relativity to Underlying Present Rate:	0.608	0.696	.
(21) Credibility to Underlying Relativity:	0.450	0.420	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.560	0.605	.
(24) Balanced Formula Relativity:	0.561	0.608	0.576

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	5,377,260	8	154	791,296	826,031	351,531	319,786	2,288,644	0.301	0.125	0.426	
2017	5,730,181	9	185	461,536	1,074,086	177,857	551,754	2,265,233	0.268	0.127	0.395	
2018	5,613,814	1	184	97,594	1,251,113	18,394	623,071	1,990,172	0.240	0.114	0.355	
2019	6,414,456	4	164	185,732	1,373,575	113,064	590,508	2,262,879	0.243	0.110	0.353	
2020	6,726,704	5	141	958,136	1,767,285	169,652	546,575	3,441,648	0.405	0.106	0.512	
MA Total:	29,862,415	27	828	2,494,295	6,292,089	830,498	2,631,694	12,248,576	0.294	0.116	0.410	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.327	0.287	.
(14) Massachusetts Credibility:	0.590	0.860	.
(15) Countrywide Pure Premium:	0.277	0.140	0.416
(16) Countrywide Indicated Relativity:	0.340	0.386	.
(17) Countrywide Credibility:	0.210	0.070	.
(18) Countrywide Lost-Time Claims:	2696.0	.	.
(19) Pure Premium Underlying Present Rate:	0.267	0.130	0.398
(20) Relativity to Underlying Present Rate:	0.332	0.325	.
(21) Credibility to Underlying Relativity:	0.200	0.070	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.331	0.297	.
(24) Balanced Formula Relativity:	0.331	0.298	0.321

Class(es):		Effective: 7/1/2023							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)	
2016	6,636,729	11	204	607,752	727,556	147,059	504,391	1,986,758	0.201	0.098	0.299	
2017	6,500,544	6	228	791,475	320,308	90,073	394,169	1,596,025	0.171	0.074	0.246	
2018	6,729,390	6	210	272,108	1,127,713	123,485	721,784	2,245,090	0.208	0.126	0.334	
2019	6,826,461	5	143	319,670	1,150,036	125,922	785,441	2,381,069	0.215	0.134	0.349	
2020	7,010,176	3	163	293,491	737,671	77,855	405,918	1,514,935	0.147	0.069	0.216	
MA Total:	33,703,300	31	948	2,284,496	4,063,285	564,394	2,811,703	9,723,877	0.188	0.100	0.289	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.209	0.248	.
(14) Massachusetts Credibility:	0.610	0.870	.
(15) Countrywide Pure Premium:	0.328	0.154	0.482
(16) Countrywide Indicated Relativity:	0.403	0.425	.
(17) Countrywide Credibility:	0.200	0.070	.
(18) Countrywide Lost-Time Claims:	1922.0	.	.
(19) Pure Premium Underlying Present Rate:	0.258	0.116	0.374
(20) Relativity to Underlying Present Rate:	0.320	0.289	.
(21) Credibility to Underlying Relativity:	0.190	0.060	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.269	0.263	.
(24) Balanced Formula Relativity:	0.270	0.264	0.268

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	3,528,659	16	370	2,403,532	5,071,542	652,867	2,805,423	10,933,365	2,118	0,980	3,098
2017	3,531,964	15	373	2,844,568	5,605,645	632,510	2,968,545	12,051,268	2,392	1,020	3,412
2018	4,087,538	14	371	2,600,712	4,382,026	638,822	2,043,518	9,665,078	1,708	0,656	2,365
2019	3,941,602	15	362	3,561,543	7,026,020	987,118	3,744,003	15,318,684	2,686	1,200	3,886
2020	4,200,427	16	275	1,642,429	5,039,078	723,220	3,171,519	10,576,246	1,591	0,927	2,518
MA Total:	19,290,190	76	1,751	13,052,784	27,124,312	3,634,537	14,733,008	58,544,641	2,083	0,952	3,035

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.889	0.991	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.778	0.683	2.461
(16) Countrywide Indicated Relativity:	0.764	0.717	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	8024.0	.	.
(19) Pure Premium Underlying Present Rate:	2.057	0.914	2.971
(20) Relativity to Underlying Present Rate:	0.949	0.962	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.889	0.991	.
(24) Balanced Formula Relativity:	0.899	0.993	0.926

Class(es):		Effective: 7/1/2023							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)
2016	181,596	2	5	773,218	38,284	114,232	39,837	965,571	4,469	0,848	5,317
2017	154,068	0	5	0	74,830	0	23,987	98,817	0,486	0,156	0,641
2018	105,264	0	1	0	0	0	1,327	1,327	0,000	0,013	0,013
2019	115,550	0	10	0	37,396	0	38,688	76,084	0,324	0,335	0,658
2020	93,033	0	4	0	67,265	0	208,062	275,327	0,723	2,236	2,959
MA Total:	649,510	2	25	773,218	217,776	114,232	311,901	1,417,127	1,526	0,656	2,182

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.651	0.683	.
(14) Massachusetts Credibility:	0.270	0.330	.
(15) Countrywide Pure Premium:	1.967	0.681	2.648
(16) Countrywide Indicated Relativity:	0.845	0.716	.
(17) Countrywide Credibility:	0.370	0.340	.
(18) Countrywide Lost-Time Claims:	462.00	.	.
(19) Pure Premium Underlying Present Rate:	1.767	0.557	2.324
(20) Relativity to Underlying Present Rate:	0.815	0.586	.
(21) Credibility to Underlying Relativity:	0.360	0.330	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.782	0.662	.
(24) Balanced Formula Relativity:	0.791	0.663	0.754

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Calculation of Class Relativities

Class(es): 3808 AUTOMOBILE MFG OR ASSEMBLY		Effective: 7/1/2023							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)
2016	123.879	3	38	199.125	24.787	39.131	28.614	291.658	1.808	0.547	2.354
2017	280.125	1	60	335.465	520.284	48.326	388.420	1,292.494	3.055	1.559	4.614
2018	352.933	1	61	121.998	344.866	28.165	238.003	733.032	1.323	0.754	2.077
2019	310.888	1	49	59.128	179.918	55.435	167.701	462.182	0.769	0.718	1.487
2020	515.891	1	78	42.260	393.551	18.429	175.092	629.332	0.845	0.375	1.220
MA Total:	1,583.716	7	286	757.976	1,463,406	189,485	997,830	3,408.698	1.403	0.750	2.152

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.557	1.856	.
(14) Massachusetts Credibility:	0.350	0.540	.
(15) Countrywide Pure Premium:	1.517	0.561	2.078
(16) Countrywide Indicated Relativity:	1.866	1.551	.
(17) Countrywide Credibility:	0.330	0.230	.
(18) Countrywide Lost-Time Claims:	6103.0	.	.
(19) Pure Premium Underlying Present Rate:	1.390	0.745	2.135
(20) Relativity to Underlying Present Rate:	1.727	1.858	.
(21) Credibility to Underlying Relativity:	0.320	0.230	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.713	1.786	.
(24) Balanced Formula Relativity:	1.717	1.795	1.741

Class(es): 3821 AUTOMOBILE DISMANTLING & DRIVERS		Effective: 7/1/2023							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)
2016	156.778	1	27	100.600	420.612	49.044	241.661	811.917	3.325	1.854	5.179
2017	189.775	1	21	215.140	185.018	187.173	60.601	647.932	2.109	1.306	3.414
2018	182.727	0	16	0	52	0	7.172	7.225	0.000	0.039	0.040
2019	169.421	0	23	0	465.448	0	290.215	755.663	2.747	1.713	4.460
2020	134.721	0	7	0	357.843	0	390.940	748.783	2.656	2.902	5.558
MA Total:	833.422	2	94	315.740	1,428,973	236,217	990,590	2,971,520	2.093	1.472	3.565

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.760	4.214	.
(14) Massachusetts Credibility:	0.320	0.500	.
(15) Countrywide Pure Premium:	2.512	1.140	3.652
(16) Countrywide Indicated Relativity:	3.305	3.230	.
(17) Countrywide Credibility:	0.340	0.250	.
(18) Countrywide Lost-Time Claims:	915.00	.	.
(19) Pure Premium Underlying Present Rate:	2.056	1.182	3.238
(20) Relativity to Underlying Present Rate:	3.060	3.324	.
(21) Credibility to Underlying Relativity:	0.340	0.250	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	3.047	3.746	.
(24) Balanced Formula Relativity:	3.009	3.729	3.236

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Calculation of Class Relativities

Class(es): 3826 AIRCRAFT ENGINE MFG		Effective: 7/1/2023							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)
2016	2,272,901	13	186	1,204,697	2,143,093	677,906	1,502,097	5,527,793	1,473	0.959	2,432
2017	2,282,308	11	150	647,886	2,353,844	189,152	1,535,335	4,726,217	1,315	0.756	2,071
2018	2,291,202	10	145	1,309,619	3,524,615	359,656	1,570,311	6,764,202	2,110	0.842	2,952
2019	2,444,600	12	117	2,476,606	3,783,097	624,601	1,773,026	8,657,329	2,561	0.981	3,541
2020	2,493,671	7	78	1,334,221	2,216,792	494,890	1,235,113	5,281,016	1,424	0.694	2,118
MA Total:	11,784,683	53	676	6,973,029	14,021,442	2,346,205	7,615,882	30,956,557	1,782	0.845	2,627

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.977	2.092	.
(14) Massachusetts Credibility:	0.850	1.000	.
(15) Countrywide Pure Premium:	0.349	0.133	0.482
(16) Countrywide Indicated Relativity:	0.429	0.369	.
(17) Countrywide Credibility:	0.080	0.000	.
(18) Countrywide Lost-Time Claims:	367.00	.	.
(19) Pure Premium Underlying Present Rate:	1.690	1.146	2.836
(20) Relativity to Underlying Present Rate:	2.099	2.859	.
(21) Credibility to Underlying Relativity:	0.070	0.000	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.862	2.092	.
(24) Balanced Formula Relativity:	1.866	2.103	1.939

Class(es): 3841 TUBULAR METAL PRODUCTS MFG OR ASSEMBLY		Effective: 7/1/2023							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)
2016	64,013	0	3	0	0	0	1,198	1,198	0.000	0.019	0.019
2017	61,442	0	4	0	3,276	0	8,346	11,622	0.053	0.136	0.189
2018	64,393	0	6	0	4,530	0	3,499	8,029	0.070	0.054	0.125
2019	67,768	0	5	0	2,212	0	5,933	8,144	0.033	0.088	0.120
2020	50,772	0	2	0	578	0	2,129	2,707	0.011	0.042	0.053
MA Total:	308,388	0	20	0	10,595	0	21,105	31,700	0.034	0.068	0.103

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.038	0.169	.
(14) Massachusetts Credibility:	0.150	0.210	.
(15) Countrywide Pure Premium:	1.218	0.527	1.744
(16) Countrywide Indicated Relativity:	1.498	1.456	.
(17) Countrywide Credibility:	0.390	0.400	.
(18) Countrywide Lost-Time Claims:	108.00	.	.
(19) Pure Premium Underlying Present Rate:	0.832	0.381	1.214
(20) Relativity to Underlying Present Rate:	1.034	0.951	.
(21) Credibility to Underlying Relativity:	0.460	0.390	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.066	0.989	.
(24) Balanced Formula Relativity:	1.068	0.994	1.045

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	479,501	5	40	1,184,827	209,631	484,229	190,091	2,068,778	2,908	1,406	4,314
2017	496,267	0	41	0	987,308	0	597,092	1,584,400	1,989	1,203	3,193
2018	519,175	3	51	1,141,309	1,613,286	262,079	598,670	3,615,344	5,306	1,658	6,964
2019	443,512	1	25	627,533	392,837	289,715	307,149	1,617,234	2,301	1,346	3,646
2020	444,991	1	15	875,963	315,666	366,915	192,871	1,751,416	2,678	1,258	3,936
MA Total:	2,383,446	10	172	3,829,633	3,518,729	1,402,937	1,885,873	10,637,171	3,083	1,380	4,463

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.210	1.272	.
(14) Massachusetts Credibility:	0.530	0.780	.
(15) Countrywide Pure Premium:	2.693	1.163	3.856
(16) Countrywide Indicated Relativity:	1.106	1.144	.
(17) Countrywide Credibility:	0.240	0.110	.
(18) Countrywide Lost-Time Claims:	1007.0	.	.
(19) Pure Premium Underlying Present Rate:	2.500	1.263	3.763
(20) Relativity to Underlying Present Rate:	1.214	1.242	.
(21) Credibility to Underlying Relativity:	0.230	0.110	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	1.186	1.255	.
(24) Balanced Formula Relativity:	1.183	1.259	1.206

Class(es):		Effective: 7/1/2023							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)
2016	10,263	0	2	0	10,583	0	11,389	21,971	1,031	1,110	2,141
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
2019	12,065	0	1	0	4,356	0	11,056	15,412	0.361	0.916	1,277
2020	12,344	0	1	0	1,035	0	2,672	3,706	0.084	0.216	0.300
MA Total:	53,795	0	4	0	15,973	0	25,116	41,089	0.297	0.467	0.764

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.330	1.156	.
(14) Massachusetts Credibility:	0.090	0.140	.
(15) Countrywide Pure Premium:	1.548	0.698	2.246
(16) Countrywide Indicated Relativity:	1.904	1.930	.
(17) Countrywide Credibility:	0.460	0.430	.
(18) Countrywide Lost-Time Claims:	232.00	.	.
(19) Pure Premium Underlying Present Rate:	1.351	0.728	2.079
(20) Relativity to Underlying Present Rate:	1.678	1.817	.
(21) Credibility to Underlying Relativity:	0.450	0.430	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.661	1.773	.
(24) Balanced Formula Relativity:	1.664	1.782	1.700

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
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	1,220	1,220	0.000	0.766	0.766
2019	1,604	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	2,607	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	5,854	0	1	0	0	0	1,220	1,220	0.000	0.208	0.208

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.516	.
(14) Massachusetts Credibility:	0.040	0.060	.
(15) Countrywide Pure Premium:	1.734	0.605	2.339
(16) Countrywide Indicated Relativity:	2.134	1.673	.
(17) Countrywide Credibility:	0.380	0.400	.
(18) Countrywide Lost-Time Claims:	102.00	.	.
(19) Pure Premium Underlying Present Rate:	1.716	0.821	2.537
(20) Relativity to Underlying Present Rate:	2.132	2.049	.
(21) Credibility to Underlying Relativity:	0.580	0.540	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.047	1.806	.
(24) Balanced Formula Relativity:	2.051	1.815	1.978

Class(es):		Effective: 7/1/2023							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)
2016	213,542	1	28	318,166	38,011	71,061	64,956	492,193	1,668	0.637	2,305
2017	204,441	0	36	0	247,157	0	170,865	418,022	1,209	0.836	2,045
2018	234,855	4	37	1,324,566	24,789	407,817	80,753	1,837,925	5,745	2.080	7,826
2019	238,794	1	43	59,059	1,350,365	316,097	512,086	2,237,608	5,902	3.468	9,370
2020	254,972	1	31	393,450	790,769	162,382	576,431	1,923,032	4,645	2.898	7,542
MA Total:	1,146,605	7	175	2,095,240	2,451,091	957,358	1,405,091	6,908,780	3,965	2.060	6.025

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.401	5.100	.
(14) Massachusetts Credibility:	0.390	0.600	.
(15) Countrywide Pure Premium:	2.535	1.202	3.736
(16) Countrywide Indicated Relativity:	3.118	3.323	.
(17) Countrywide Credibility:	0.310	0.200	.
(18) Countrywide Lost-Time Claims:	2699.0	.	.
(19) Pure Premium Underlying Present Rate:	2.525	1.370	3.895
(20) Relativity to Underlying Present Rate:	3.137	3.418	.
(21) Credibility to Underlying Relativity:	0.300	0.200	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	3.624	4.408	.
(24) Balanced Formula Relativity:	3.631	4.430	3.879

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
4036 PLASTERBOARD OR PLASTER BLOCK 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)
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	812	812	0.000	0.072	0.072
2019	12,524	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	10,361	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	58,727	0	1	0	0	0	812	812	0.000	0.014	0.014

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.034	.
(14) Massachusetts Credibility:	0.080	0.110	.
(15) Countrywide Pure Premium:	0.930	0.413	1.343
(16) Countrywide Indicated Relativity:	1.144	1.142	.
(17) Countrywide Credibility:	0.460	0.450	.
(18) Countrywide Lost-Time Claims:	290.00	.	.
(19) Pure Premium Underlying Present Rate:	0.801	0.422	1.224
(20) Relativity to Underlying Present Rate:	0.996	1.054	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.984	0.981	.
(24) Balanced Formula Relativity:	0.986	0.986	0.986

Class(es):		Effective: 7/1/2023							Manufacturing		
4038 PLASTER STATUARY OR ORNAMENT 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)
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
2019	3,988	0	1	0	0	0	1,391	1,391	0.000	0.349	0.349
2020	11,442	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	57,523	0	1	0	0	0	1,391	1,391	0.000	0.024	0.024

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.060	.
(14) Massachusetts Credibility:	0.090	0.110	.
(15) Countrywide Pure Premium:	1.121	0.552	1.673
(16) Countrywide Indicated Relativity:	1.378	1.526	.
(17) Countrywide Credibility:	0.270	0.280	.
(18) Countrywide Lost-Time Claims:	42.000	.	.
(19) Pure Premium Underlying Present Rate:	1.296	0.398	1.694
(20) Relativity to Underlying Present Rate:	1.610	0.992	.
(21) Credibility to Underlying Relativity:	0.640	0.610	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.403	1.039	.
(24) Balanced Formula Relativity:	1.405	1.044	1.294

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	81.111	0	5	0	5.371	0	9.893	15.263	0.066	0.122	0.188
2017	83.652	0	12	0	22.421	0	14.346	36.767	0.268	0.172	0.440
2018	87.442	0	19	0	23.577	0	29.807	53.385	0.270	0.341	0.611
2019	120.604	0	6	0	14.069	0	17.173	31.242	0.117	0.142	0.259
2020	48.660	0	2	0	69.358	0	92.518	161.876	1.425	1.901	3.327
MA Total:	421,469	0	44	0	134,796	0	163,737	298,533	0.320	0.388	0.708

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.355	0.962	.
(14) Massachusetts Credibility:	0.190	0.280	.
(15) Countrywide Pure Premium:	11.129	0.250	11.379
(16) Countrywide Indicated Relativity:	13.690	0.692	.
(17) Countrywide Credibility:	0.060	0.060	.
(18) Countrywide Lost-Time Claims:	1.000	.	.
(19) Pure Premium Underlying Present Rate:	1.045	0.533	1.578
(20) Relativity to Underlying Present Rate:	1.299	1.330	.
(21) Credibility to Underlying Relativity:	0.750	0.660	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.863	1.189	.
(24) Balanced Formula Relativity:	1.867	1.195	1.658

Class(es):		Effective: 7/1/2023							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)
2016	73.394	0	1	0	0	0	135	135	0.000	0.002	0.002
2017	84.799	0	3	0	221.042	0	66.195	287.237	2.607	0.781	3.387
2018	85.131	1	6	88.261	3.484	16.519	5.090	113.353	1.078	0.254	1.332
2019	80.269	1	0	243.694	0	36.471	0	280.165	3.036	0.454	3.490
2020	82.538	0	2	0	7.882	0	57.474	65.356	0.095	0.696	0.792
MA Total:	406,131	2	12	331,954	232,408	52,990	128,894	746,246	1.390	0.448	1.837

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.542	1.108	.
(14) Massachusetts Credibility:	0.170	0.240	.
(15) Countrywide Pure Premium:	1.054	0.428	1.483
(16) Countrywide Indicated Relativity:	1.297	1.184	.
(17) Countrywide Credibility:	0.420	0.380	.
(18) Countrywide Lost-Time Claims:	273.00	.	.
(19) Pure Premium Underlying Present Rate:	0.864	0.393	1.257
(20) Relativity to Underlying Present Rate:	1.074	0.980	.
(21) Credibility to Underlying Relativity:	0.410	0.380	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.247	1.088	.
(24) Balanced Formula Relativity:	1.250	1.094	1.201

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Manufacturing		
4112 INCANDESCENT LAMP 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)
2016	44,168	0	2	0	1,278	0	5,567	6,845	0.029	0.126	0.155
2017	62,700	0	2	0	296	0	2,176	2,471	0.005	0.035	0.039
2018	99,209	0	7	0	26,391	0	5,213	31,604	0.266	0.053	0.319
2019	450,958	0	7	0	48,540	0	39,706	88,247	0.108	0.088	0.196
2020	519,559	0	2	0	1,687	0	140	1,826	0.003	0.000	0.004
MA Total:	1,176,595	0	20	0	78,192	0	52,801	130,993	0.066	0.045	0.111

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.074	0.111	.
(14) Massachusetts Credibility:	0.130	0.200	.
(15) Countrywide Pure Premium:	0.015	0.002	0.017
(16) Countrywide Indicated Relativity:	0.018	0.006	.
(17) Countrywide Credibility:	0.060	0.060	.
(18) Countrywide Lost-Time Claims:	1.000	.	.
(19) Pure Premium Underlying Present Rate:	0.155	0.090	0.245
(20) Relativity to Underlying Present Rate:	0.192	0.225	.
(21) Credibility to Underlying Relativity:	0.810	0.740	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.166	0.189	.
(24) Balanced Formula Relativity:	0.167	0.190	0.174

Class(es):		Effective: 7/1/2023							Manufacturing		
4114 GLASSWARE 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)
2016	145,591	0	20	0	530,681	0	136,341	667,022	3.645	0.936	4.581
2017	39,083	1	10	249,762	85,770	60,103	11,194	406,830	8.585	1.824	10.409
2018	25,005	0	9	0	38,706	0	54,519	93,225	1.548	2.180	3.728
2019	31,142	0	6	0	0	0	2,545	2,545	0.000	0.082	0.082
2020	19,915	0	3	0	0	0	2,224	2,224	0.000	0.112	0.112
MA Total:	260,736	1	48	249,762	655,157	60,103	206,823	1,171,845	3.471	1.024	4.494

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.852	2.534	.
(14) Massachusetts Credibility:	0.170	0.220	.
(15) Countrywide Pure Premium:	1.148	0.472	1.620
(16) Countrywide Indicated Relativity:	1.412	1.306	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	321.00	.	.
(19) Pure Premium Underlying Present Rate:	1.279	0.512	1.792
(20) Relativity to Underlying Present Rate:	1.589	1.278	.
(21) Credibility to Underlying Relativity:	0.410	0.390	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.900	1.565	.
(24) Balanced Formula Relativity:	1.903	1.573	1.801

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Calculation of Class Relativities

Class(es): 4130 GLASS MERCHANT		Effective: 7/1/2023							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)
2016	256,142	1	42	274,630	286,389	75,818	96,976	733,813	2,190	0,675	2,865
2017	293,894	0	45	0	232,815	0	102,409	335,224	0,792	0,348	1,141
2018	294,747	5	32	954,043	907,650	304,005	417,178	2,582,875	6,316	2,447	8,763
2019	319,891	2	43	306,721	668,160	55,701	327,306	1,357,889	3,048	1,197	4,245
2020	325,774	3	56	1,121,200	738,147	159,763	321,937	2,341,046	5,707	1,479	7,186
MA Total:	1,490,449	11	218	2,656,594	2,833,161	595,288	1,265,805	7,350,848	3,683	1,249	4,932

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.088	3.091	.
(14) Massachusetts Credibility:	0.360	0.530	.
(15) Countrywide Pure Premium:	1.263	0.566	1.829
(16) Countrywide Indicated Relativity:	1.553	1.565	.
(17) Countrywide Credibility:	0.320	0.240	.
(18) Countrywide Lost-Time Claims:	893.00	.	.
(19) Pure Premium Underlying Present Rate:	1.529	0.782	2.311
(20) Relativity to Underlying Present Rate:	1.900	1.950	.
(21) Credibility to Underlying Relativity:	0.320	0.230	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.577	2.462	.
(24) Balanced Formula Relativity:	2.582	2.475	2.549

Class(es): 4133 CATHEDRAL OR ART GLASS WINDOW MFG		Effective: 7/1/2023							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)
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
2019	11,407	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	9,520	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	55,188	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:	0.070	0.100	.
(15) Countrywide Pure Premium:	1.529	0.779	2.308
(16) Countrywide Indicated Relativity:	1.881	2.154	.
(17) Countrywide Credibility:	0.240	0.260	.
(18) Countrywide Lost-Time Claims:	33.000	.	.
(19) Pure Premium Underlying Present Rate:	0.691	0.332	1.022
(20) Relativity to Underlying Present Rate:	0.858	0.827	.
(21) Credibility to Underlying Relativity:	0.690	0.640	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.044	1.089	.
(24) Balanced Formula Relativity:	1.046	1.095	1.061

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Calculation of Class Relativities

Class(es): 4150 OPTICAL GOODS MFG-NOC		Effective: 7/1/2023							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)
2016	2,271,241	2	84	304,480	398,282	61,735	156,672	921,169	0.309	0.096	0.406
2017	1,724,522	4	71	362,139	468,731	66,262	139,349	1,036,481	0.482	0.119	0.601
2018	1,919,466	1	61	119,154	303,181	80,243	201,548	704,126	0.220	0.147	0.367
2019	2,206,000	1	88	52,416	595,119	49,918	217,222	914,674	0.294	0.121	0.415
2020	2,271,927	0	50	0	328,729	0	212,278	541,007	0.145	0.093	0.238
MA Total:	10,393,156	8	354	838,189	2,094,041	258,158	927,069	4,117,457	0.282	0.114	0.396

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.313	0.282	.
(14) Massachusetts Credibility:	0.470	0.600	.
(15) Countrywide Pure Premium:	0.404	0.144	0.548
(16) Countrywide Indicated Relativity:	0.497	0.398	.
(17) Countrywide Credibility:	0.270	0.200	.
(18) Countrywide Lost-Time Claims:	61.000	.	.
(19) Pure Premium Underlying Present Rate:	0.436	0.153	0.589
(20) Relativity to Underlying Present Rate:	0.541	0.381	.
(21) Credibility to Underlying Relativity:	0.260	0.200	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.422	0.325	.
(24) Balanced Formula Relativity:	0.423	0.327	0.393

Class(es): 4239 PAPER MFG		Effective: 7/1/2023							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)
2016	163,690	0	26	0	117,175	0	66,681	183,856	0.716	0.407	1.123
2017	155,440	2	18	303,559	208,082	141,922	99,292	752,855	3.292	1.552	4.843
2018	143,099	1	34	237,671	181,447	80,553	69,013	568,683	2.929	1.045	3.974
2019	205,140	0	10	0	506,585	0	301,480	808,065	2.469	1.470	3.939
2020	206,739	0	19	0	116,658	0	57,529	174,188	0.564	0.278	0.843
MA Total:	874,108	3	107	541,230	1,129,947	222,474	593,996	2,487,648	1.912	0.934	2.846

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.122	2.312	.
(14) Massachusetts Credibility:	0.250	0.370	.
(15) Countrywide Pure Premium:	1.037	0.405	1.442
(16) Countrywide Indicated Relativity:	1.275	1.121	.
(17) Countrywide Credibility:	0.380	0.320	.
(18) Countrywide Lost-Time Claims:	1660.0	.	.
(19) Pure Premium Underlying Present Rate:	1.110	0.522	1.632
(20) Relativity to Underlying Present Rate:	1.378	1.303	.
(21) Credibility to Underlying Relativity:	0.370	0.310	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.525	1.618	.
(24) Balanced Formula Relativity:	1.528	1.626	1.558

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	254,426	1	39	241,247	560,721	38,174	168,840	1,008,982	3,152	0,814	3,966
2017	257,211	3	26	259,917	255,952	85,474	96,980	698,323	2,006	0,709	2,715
2018	325,489	0	37	0	176,175	0	122,622	298,797	0,541	0,377	0,918
2019	310,451	1	34	347,580	220,730	40,269	93,181	701,760	1,831	0,430	2,260
2020	325,615	1	44	135,535	311,621	18,232	125,330	590,718	1,373	0,441	1,814
MA Total:	1,473,192	6	180	984,279	1,525,198	182,149	606,954	3,298,580	1,703	0,536	2,239

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.891	1.326	.
(14) Massachusetts Credibility:	0.330	0.460	.
(15) Countrywide Pure Premium:	0.877	0.397	1.274
(16) Countrywide Indicated Relativity:	1.079	1.099	.
(17) Countrywide Credibility:	0.340	0.270	.
(18) Countrywide Lost-Time Claims:	930.00	.	.
(19) Pure Premium Underlying Present Rate:	1.231	0.532	1.763
(20) Relativity to Underlying Present Rate:	1.529	1.327	.
(21) Credibility to Underlying Relativity:	0.330	0.270	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.495	1.265	.
(24) Balanced Formula Relativity:	1.498	1.271	1.428

Class(es):		Effective: 7/1/2023							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)
2016	211,914	2	27	459,871	515,206	263,202	129,546	1,367,825	4,601	1,853	6,455
2017	247,774	0	35	0	225,663	0	97,143	322,806	0,911	0,392	1,303
2018	273,166	2	41	374,986	458,026	65,973	572,769	1,471,754	3,049	2,338	5,388
2019	263,316	2	35	171,668	128,035	64,997	59,455	424,155	1,138	0,473	1,611
2020	258,029	0	30	0	58,912	0	74,267	133,179	0,228	0,288	0,516
MA Total:	1,254,199	6	168	1,006,525	1,385,841	394,172	933,181	3,719,719	1,907	1,058	2,966

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.117	2.619	.
(14) Massachusetts Credibility:	0.310	0.460	.
(15) Countrywide Pure Premium:	0.940	0.465	1.405
(16) Countrywide Indicated Relativity:	1.156	1.287	.
(17) Countrywide Credibility:	0.350	0.270	.
(18) Countrywide Lost-Time Claims:	1447.0	.	.
(19) Pure Premium Underlying Present Rate:	1.299	0.631	1.930
(20) Relativity to Underlying Present Rate:	1.614	1.574	.
(21) Credibility to Underlying Relativity:	0.340	0.270	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.610	1.977	.
(24) Balanced Formula Relativity:	1.613	1.987	1.729

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Calculation of Class Relativities

Class(es): 4250 PAPER COATING		Effective: 7/1/2023							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)
2016	848.955	5	61	800.727	400.468	352.909	182.477	1,736.581	1.415	0.631	2.046
2017	677.713	2	55	314.366	640.606	110.757	307.528	1,373.257	1.409	0.617	2.026
2018	702.306	5	74	988.341	651.406	160.052	584.103	2,383.902	2.335	1.060	3.394
2019	845.425	1	65	259.414	992.385	13.237	328.484	1,593.520	1.481	0.404	1.885
2020	933.674	1	57	181.592	660.637	36.540	247.248	1,126.018	0.902	0.304	1.206
MA Total:	4,008.073	14	312	2,544.440	3,345.502	673.495	1,649.840	8,213.277	1.470	0.580	2.049

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.631	1.435	.
(14) Massachusetts Credibility:	0.440	0.650	.
(15) Countrywide Pure Premium:	0.888	0.387	1.275
(16) Countrywide Indicated Relativity:	1.092	1.071	.
(17) Countrywide Credibility:	0.280	0.180	.
(18) Countrywide Lost-Time Claims:	739.00	.	.
(19) Pure Premium Underlying Present Rate:	0.945	0.475	1.421
(20) Relativity to Underlying Present Rate:	1.174	1.186	.
(21) Credibility to Underlying Relativity:	0.280	0.170	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.352	1.327	.
(24) Balanced Formula Relativity:	1.355	1.334	1.348

Class(es): 4251 STATIONERY MFG		Effective: 7/1/2023							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)
2016	108.686	0	10	0	23.305	0	27.375	50.680	0.214	0.252	0.466
2017	102.812	0	6	0	949	0	4.869	5.817	0.009	0.047	0.057
2018	92.536	0	4	0	76.264	0	27.767	104.031	0.824	0.300	1.124
2019	89.183	2	7	552.054	408.370	100.867	83.671	1,144.962	10.769	2.069	12.838
2020	91.302	0	1	0	3.046	0	155	3.201	0.033	0.002	0.035
MA Total:	484.519	2	28	552.054	511.933	100.867	143.837	1,308.691	2.196	0.505	2.701

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.437	1.250	.
(14) Massachusetts Credibility:	0.200	0.260	.
(15) Countrywide Pure Premium:	1.367	0.587	1.954
(16) Countrywide Indicated Relativity:	1.682	1.623	.
(17) Countrywide Credibility:	0.400	0.370	.
(18) Countrywide Lost-Time Claims:	290.00	.	.
(19) Pure Premium Underlying Present Rate:	1.051	0.383	1.434
(20) Relativity to Underlying Present Rate:	1.305	0.956	.
(21) Credibility to Underlying Relativity:	0.400	0.370	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.682	1.279	.
(24) Balanced Formula Relativity:	1.686	1.285	1.562

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Calculation of Class Relativities

Class(es): 4273 BAG MFG-PAPER OR PLASTIC		Effective: 7/1/2023							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)
2016	50,284	1	22	51,004	65,587	9,472	51,299	177,362	2,319	1,209	3,527
2017	52,552	0	8	0	104,517	0	28,710	133,228	1,989	0,546	2,535
2018	36,584	0	10	0	6,949	0	10,207	17,156	0,190	0,279	0,469
2019	26,979	1	2	30,499	3,253	3,278	7,599	44,628	1,251	0,403	1,654
2020	25,595	0	7	0	181,557	0	66,750	248,308	7,093	2,608	9,701
MA Total:	191,994	2	49	81,504	361,863	12,750	164,566	620,682	2,309	0,924	3,233

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.563	2.286	.
(14) Massachusetts Credibility:	0.150	0.220	.
(15) Countrywide Pure Premium:	0.922	0.397	1.319
(16) Countrywide Indicated Relativity:	1.134	1.098	.
(17) Countrywide Credibility:	0.430	0.390	.
(18) Countrywide Lost-Time Claims:	833.00	.	.
(19) Pure Premium Underlying Present Rate:	1.388	0.627	2.014
(20) Relativity to Underlying Present Rate:	1.724	1.563	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.596	1.541	.
(24) Balanced Formula Relativity:	1.599	1.548	1.583

Class(es): 4279 PAPER GOODS MFG NOC		Effective: 7/1/2023							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)
2016	423,740	1	44	227,501	561,365	28,835	227,071	1,044,771	1,862	0,604	2,466
2017	511,109	3	67	289,835	254,374	38,031	162,358	744,598	1,065	0,392	1,457
2018	600,635	1	56	12,677	332,869	87,476	362,850	795,872	0,575	0,750	1,325
2019	681,329	1	52	138,167	612,280	16,305	102,943	869,695	1,101	0,175	1,276
2020	768,159	1	61	92,591	1,396,837	11,810	678,808	2,180,046	1,939	0,899	2,838
MA Total:	2,984,972	7	280	760,770	3,157,725	182,457	1,534,030	5,634,982	1,313	0,575	1,888

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.457	1.423	.
(14) Massachusetts Credibility:	0.400	0.580	.
(15) Countrywide Pure Premium:	1.153	0.496	1.649
(16) Countrywide Indicated Relativity:	1.418	1.372	.
(17) Countrywide Credibility:	0.300	0.210	.
(18) Countrywide Lost-Time Claims:	1580.0	.	.
(19) Pure Premium Underlying Present Rate:	0.988	0.476	1.465
(20) Relativity to Underlying Present Rate:	1.228	1.188	.
(21) Credibility to Underlying Relativity:	0.300	0.210	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.377	1.363	.
(24) Balanced Formula Relativity:	1.380	1.370	1.377

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	6,369	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	15,363	0	2	0	401	0	2,135	2,536	0.026	0.139	0.165
2018	22,803	0	6	0	4,887	0	6,737	11,624	0.214	0.295	0.510
2019	14,347	1	2	285,929	0	45,140	1,112	332,181	19,930	3,224	23,154
2020	9,943	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	68,825	1	10	285,929	5,288	45,140	9,984	346,341	4.231	0.801	5.032

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.697	1.982	.
(14) Massachusetts Credibility:	0.080	0.100	.
(15) Countrywide Pure Premium:	1.008	0.305	1.313
(16) Countrywide Indicated Relativity:	1.240	0.845	.
(17) Countrywide Credibility:	0.420	0.440	.
(18) Countrywide Lost-Time Claims:	130.00	.	.
(19) Pure Premium Underlying Present Rate:	0.682	0.279	0.961
(20) Relativity to Underlying Present Rate:	0.847	0.697	.
(21) Credibility to Underlying Relativity:	0.500	0.460	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.320	0.890	.
(24) Balanced Formula Relativity:	1.322	0.895	1.190

Class(es):		Effective: 7/1/2023							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)
2016	2,216,317	5	179	444,139	1,601,870	54,135	588,207	2,688,352	0.923	0.290	1.213
2017	2,279,712	5	181	542,522	1,659,467	63,847	897,341	3,163,178	0.966	0.422	1.388
2018	2,105,477	7	168	642,236	1,129,030	199,778	400,024	2,371,069	0.841	0.285	1.126
2019	2,126,633	6	144	1,146,162	1,298,356	360,851	634,372	3,439,740	1.149	0.468	1.617
2020	1,829,736	5	96	584,694	553,770	83,148	343,094	1,564,707	0.622	0.233	0.855
MA Total:	10,557,875	28	768	3,359,753	6,242,494	761,760	2,863,038	13,227,045	0.909	0.343	1.253

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.009	0.850	.
(14) Massachusetts Credibility:	0.590	0.880	.
(15) Countrywide Pure Premium:	0.750	0.378	1.128
(16) Countrywide Indicated Relativity:	0.922	1.046	.
(17) Countrywide Credibility:	0.210	0.060	.
(18) Countrywide Lost-Time Claims:	4341.0	.	.
(19) Pure Premium Underlying Present Rate:	0.760	0.386	1.145
(20) Relativity to Underlying Present Rate:	0.944	0.962	.
(21) Credibility to Underlying Relativity:	0.200	0.060	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.978	0.868	.
(24) Balanced Formula Relativity:	0.980	0.873	0.947

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Calculation of Class Relativities

Class(es): 4304 NEWSPAPER PUBLISHING		Effective: 7/1/2023							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)
2016	484,125	0	84	0	862,911	0	494,247	1,357,157	1,782	1,021	2,803
2017	333,639	4	49	948,323	717,495	253,241	281,647	2,200,706	4,993	1,603	6,596
2018	292,900	1	47	141,067	1,079,414	420,144	618,432	2,259,057	4,167	3,546	7,713
2019	268,967	5	27	1,036,468	186,306	313,848	76,263	1,612,885	4,546	1,450	5,997
2020	226,787	3	21	266,749	609,558	183,456	272,619	1,332,383	3,864	2,011	5,875
MA Total:	1,606,418	13	228	2,392,607	3,455,684	1,170,688	1,743,208	8,762,188	3,641	1,814	5,454

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.041	4.490	.
(14) Massachusetts Credibility:	0.400	0.620	.
(15) Countrywide Pure Premium:	2.027	0.948	2.975
(16) Countrywide Indicated Relativity:	2.494	2.621	.
(17) Countrywide Credibility:	0.300	0.190	.
(18) Countrywide Lost-Time Claims:	858.00	.	.
(19) Pure Premium Underlying Present Rate:	1.878	1.059	2.937
(20) Relativity to Underlying Present Rate:	2.333	2.643	.
(21) Credibility to Underlying Relativity:	0.300	0.190	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	3.064	3.784	.
(24) Balanced Formula Relativity:	3.071	3.802	3.297

Class(es): 4307 BOOKBINDING		Effective: 7/1/2023							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)
2016	173,267	1	14	6,003	33,741	212	106,562	146,517	0.229	0.616	0.846
2017	156,740	0	10	0	25,666	0	34,075	59,741	0.164	0.217	0.381
2018	121,094	1	9	167,454	5,676	26,790	18,344	218,265	1.430	0.373	1.802
2019	110,333	0	6	0	36,318	0	21,331	57,649	0.329	0.193	0.522
2020	97,530	0	6	0	868	0	11,760	12,627	0.009	0.121	0.129
MA Total:	658,963	2	45	173,457	102,268	27,003	192,071	494,799	0.418	0.332	0.751

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.464	0.823	.
(14) Massachusetts Credibility:	0.190	0.280	.
(15) Countrywide Pure Premium:	0.562	0.298	0.860
(16) Countrywide Indicated Relativity:	0.691	0.824	.
(17) Countrywide Credibility:	0.410	0.360	.
(18) Countrywide Lost-Time Claims:	146.00	.	.
(19) Pure Premium Underlying Present Rate:	0.684	0.366	1.050
(20) Relativity to Underlying Present Rate:	0.850	0.912	.
(21) Credibility to Underlying Relativity:	0.400	0.360	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.712	0.855	.
(24) Balanced Formula Relativity:	0.713	0.860	0.758

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
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
2019	121	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	1,549	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	2,215	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:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.514	0.380	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.232	0.154	1.386
(20) Relativity to Underlying Present Rate:	1.531	0.384	.
(21) Credibility to Underlying Relativity:	0.980	0.980	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.500	0.376	.
(24) Balanced Formula Relativity:	1.503	0.378	1.155

Class(es):		Effective: 7/1/2023							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)
2016	305,322	0	38	0	77,874	0	68,913	146,787	0.255	0.226	0.481
2017	328,065	1	36	56,084	16,874	2,862	21,808	97,629	0.222	0.075	0.298
2018	345,870	0	45	0	190,129	0	48,084	238,214	0.550	0.139	0.689
2019	376,529	0	43	0	132,267	0	59,798	192,065	0.351	0.159	0.510
2020	376,794	0	33	0	41,662	0	29,975	71,637	0.111	0.080	0.190
MA Total:	1,732,580	1	195	56,084	458,806	2,862	228,579	746,331	0.297	0.134	0.431

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.330	0.331	.
(14) Massachusetts Credibility:	0.220	0.320	.
(15) Countrywide Pure Premium:	0.662	0.252	0.913
(16) Countrywide Indicated Relativity:	0.814	0.696	.
(17) Countrywide Credibility:	0.270	0.290	.
(18) Countrywide Lost-Time Claims:	44.000	.	.
(19) Pure Premium Underlying Present Rate:	0.389	0.187	0.577
(20) Relativity to Underlying Present Rate:	0.484	0.467	.
(21) Credibility to Underlying Relativity:	0.510	0.390	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.539	0.490	.
(24) Balanced Formula Relativity:	0.540	0.492	0.525

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Calculation of Class Relativities

Class(es): 4352 ENGRAVING		Effective: 7/1/2023							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)
2016	63.939	0	3	0	980	0	1.340	2.320	0.015	0.021	0.036
2017	71.041	0	4	0	0	0	2.751	2.751	0.000	0.039	0.039
2018	65.726	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	66.429	0	1	0	0	0	130	130	0.000	0.002	0.002
2020	68.540	0	1	0	0	0	1.841	1.841	0.000	0.027	0.027
MA Total:	335.676	0	9	0	980	0	6.062	7.041	0.003	0.018	0.021

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.003	0.045	.
(14) Massachusetts Credibility:	0.130	0.180	.
(15) Countrywide Pure Premium:	0.502	0.282	0.784
(16) Countrywide Indicated Relativity:	0.617	0.780	.
(17) Countrywide Credibility:	0.350	0.370	.
(18) Countrywide Lost-Time Claims:	86.000	.	.
(19) Pure Premium Underlying Present Rate:	0.535	0.231	0.765
(20) Relativity to Underlying Present Rate:	0.664	0.575	.
(21) Credibility to Underlying Relativity:	0.520	0.450	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.562	0.556	.
(24) Balanced Formula Relativity:	0.563	0.558	0.561

Class(es): 4360 MOTION PICTURE: DEVLPMNT OF NEGATIVES, PRINTING & ALL SUB OP		Effective: 7/1/2023							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)
2016	541.230	0	3	0	291	0	4.022	4.313	0.001	0.007	0.008
2017	576.657	0	1	0	0	0	161	161	0.000	0.000	0.000
2018	614.549	0	2	0	2.210	0	551	2.761	0.004	0.001	0.004
2019	924.765	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	318.213	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	2,975.415	0	6	0	2,501	0	4,734	7,236	0.001	0.002	0.002

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.001	0.004	.
(14) Massachusetts Credibility:	0.240	0.330	.
(15) Countrywide Pure Premium:	0.493	0.213	0.706
(16) Countrywide Indicated Relativity:	0.606	0.590	.
(17) Countrywide Credibility:	0.330	0.340	.
(18) Countrywide Lost-Time Claims:	73.000	.	.
(19) Pure Premium Underlying Present Rate:	0.272	0.120	0.391
(20) Relativity to Underlying Present Rate:	0.337	0.298	.
(21) Credibility to Underlying Relativity:	0.430	0.330	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.345	0.300	.
(24) Balanced Formula Relativity:	0.346	0.302	0.332

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	633,866	3	21	183,720	7,587	77,911	27,685	296,902	0.302	0.167	0.468
2017	590,655	1	19	95,344	2,094	37,894	16,664	151,997	0.165	0.092	0.257
2018	617,313	0	20	0	97,831	0	59,942	157,773	0.158	0.097	0.256
2019	508,463	3	26	63,508	61,037	76,737	45,357	246,639	0.245	0.240	0.485
2020	451,721	0	5	0	14,850	0	48,869	63,720	0.033	0.108	0.141
MA Total:	2,802,018	7	91	342,572	183,400	192,542	198,517	917,031	0.188	0.140	0.327

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.983	4.584	.
(14) Massachusetts Credibility:	0.220	0.360	.
(15) Countrywide Pure Premium:	0.222	0.112	0.334
(16) Countrywide Indicated Relativity:	4.721	4.436	.
(17) Countrywide Credibility:	0.390	0.320	.
(18) Countrywide Lost-Time Claims:	395.00	.	.
(19) Pure Premium Underlying Present Rate:	0.230	0.156	0.386
(20) Relativity to Underlying Present Rate:	4.048	4.821	.
(21) Credibility to Underlying Relativity:	0.390	0.320	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	4.076	4.612	.
(24) Balanced Formula Relativity:	4.050	4.610	4.233

Class(es):		Effective: 7/1/2023							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)
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
2019	5,103	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	11,224	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	25,110	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:	0.320	0.291	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.217	0.105	0.322
(20) Relativity to Underlying Present Rate:	0.323	0.295	.
(21) Credibility to Underlying Relativity:	0.970	0.950	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.313	0.280	.
(24) Balanced Formula Relativity:	0.309	0.279	0.300

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Calculation of Class Relativities

Class(es): 4410 RUBBER GOODS MFG NOC		Effective: 7/1/2023							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)
2016	387,605	0	37	0	632,195	0	617,650	1,249,845	1,631	1,594	3,225
2017	427,530	1	43	116,493	186,691	198,811	160,415	662,410	0,709	0,840	1,549
2018	455,267	1	58	14,243	733,020	2,685	204,239	954,188	1,641	0,455	2,096
2019	448,292	1	53	198,262	481,814	80,701	191,890	952,667	1,517	0,608	2,125
2020	459,164	0	50	0	155,166	0	108,716	263,882	0,338	0,237	0,575
MA Total:	2,177,860	3	241	328,999	2,188,886	282,197	1,282,910	4,082,992	1,156	0,719	1,875

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.283	1.779	.
(14) Massachusetts Credibility:	0.380	0.630	.
(15) Countrywide Pure Premium:	1.162	0.514	1.675
(16) Countrywide Indicated Relativity:	1.429	1.421	.
(17) Countrywide Credibility:	0.310	0.190	.
(18) Countrywide Lost-Time Claims:	2311.0	.	.
(19) Pure Premium Underlying Present Rate:	1.214	0.823	2.037
(20) Relativity to Underlying Present Rate:	1.508	2.054	.
(21) Credibility to Underlying Relativity:	0.310	0.180	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.398	1.760	.
(24) Balanced Formula Relativity:	1.401	1.769	1.515

Class(es): 4432 FOUNTAIN PEN MFG		Effective: 7/1/2023							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)
2016	63,230	0	5	0	6,494	0	1,255	7,749	0,103	0,020	0,123
2017	63,484	0	10	0	2,164	0	4,145	6,309	0,034	0,065	0,099
2018	68,230	0	3	0	0	0	451	451	0,000	0,007	0,007
2019	62,340	0	3	0	5,718	0	12,749	18,467	0,092	0,205	0,296
2020	48,478	0	3	0	3,146	0	2,670	5,816	0,065	0,055	0,120
MA Total:	305,763	0	24	0	17,522	0	21,271	38,792	0,057	0,070	0,127

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.064	0.172	.
(14) Massachusetts Credibility:	0.100	0.160	.
(15) Countrywide Pure Premium:	0.638	0.223	0.861
(16) Countrywide Indicated Relativity:	0.785	0.618	.
(17) Countrywide Credibility:	0.290	0.310	.
(18) Countrywide Lost-Time Claims:	53.000	.	.
(19) Pure Premium Underlying Present Rate:	0.274	0.174	0.448
(20) Relativity to Underlying Present Rate:	0.341	0.435	.
(21) Credibility to Underlying Relativity:	0.610	0.530	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.442	0.449	.
(24) Balanced Formula Relativity:	0.443	0.452	0.445

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	42,107	0	10	0	41,414	0	57,415	98,829	0.984	1.364	2.347
2017	44,734	0	6	0	25,603	0	11,331	36,934	0.572	0.253	0.826
2018	39,787	0	4	0	8,878	0	5,685	14,563	0.223	0.143	0.366
2019	41,740	0	7	0	0	0	6,659	6,659	0.000	0.160	0.160
2020	29,751	1	8	105,389	42,586	55,346	67,559	270,880	4.974	4.131	9.105
MA Total:	198,119	1	35	105,389	118,482	55,346	148,649	427,866	1.130	1.030	2.160

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.254	2.549	.
(14) Massachusetts Credibility:	0.190	0.320	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	2.947	3.971	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.398	1.610	4.008
(20) Relativity to Underlying Present Rate:	2.980	4.016	.
(21) Credibility to Underlying Relativity:	0.810	0.680	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.652	3.546	.
(24) Balanced Formula Relativity:	2.657	3.564	2.938

Class(es):		Effective: 7/1/2023							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)
2016	777,658	3	91	273,073	1,003,441	144,948	303,812	1,725,273	1.641	0.577	2.219
2017	772,863	5	102	808,373	371,535	112,052	189,270	1,481,229	1.527	0.390	1.917
2018	867,990	2	118	227,100	1,536,699	34,639	486,010	2,284,448	2.032	0.600	2.632
2019	851,541	3	94	694,324	978,587	753,418	438,589	2,864,918	1.965	1.400	3.364
2020	889,879	2	89	322,124	1,140,922	78,537	406,431	1,948,014	1.644	0.545	2.189
MA Total:	4,159,931	15	494	2,324,992	5,031,183	1,123,595	1,824,111	10,303,882	1.768	0.709	2.477

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.963	1.754	.
(14) Massachusetts Credibility:	0.490	0.680	.
(15) Countrywide Pure Premium:	1.066	0.528	1.594
(16) Countrywide Indicated Relativity:	1.312	1.460	.
(17) Countrywide Credibility:	0.260	0.160	.
(18) Countrywide Lost-Time Claims:	1955.0	.	.
(19) Pure Premium Underlying Present Rate:	1.206	0.515	1.721
(20) Relativity to Underlying Present Rate:	1.498	1.286	.
(21) Credibility to Underlying Relativity:	0.250	0.160	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.677	1.632	.
(24) Balanced Formula Relativity:	1.681	1.640	1.668

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	553.511	1	82	291.968	373.805	64.485	191.876	922.134	1.203	0.463	1.666
2017	533.736	3	80	630.642	645.889	133.381	320.526	1,730.439	2.392	0.850	3.242
2018	657.597	5	75	384.003	581.914	144.195	379.581	1,489.694	1.469	0.797	2.265
2019	796.107	3	53	313.940	236.552	95.684	191.601	837.777	0.691	0.361	1.052
2020	720.811	1	53	67.216	286.837	33.714	222.201	609.969	0.491	0.355	0.846
MA Total:	3,261,762	13	343	1,687,770	2,124,998	471,460	1,305,785	5,590,013	1.169	0.545	1.714

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.297	1.349	.
(14) Massachusetts Credibility:	0.450	0.670	.
(15) Countrywide Pure Premium:	1.110	0.532	1.642
(16) Countrywide Indicated Relativity:	1.366	1.472	.
(17) Countrywide Credibility:	0.280	0.170	.
(18) Countrywide Lost-Time Claims:	2474.0	.	.
(19) Pure Premium Underlying Present Rate:	1.250	0.634	1.884
(20) Relativity to Underlying Present Rate:	1.553	1.582	.
(21) Credibility to Underlying Relativity:	0.270	0.160	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.386	1.407	.
(24) Balanced Formula Relativity:	1.388	1.414	1.396

Class(es):		Effective: 7/1/2023							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)
2016	480.077	0	44	0	216.277	0	69.124	285.401	0.451	0.144	0.594
2017	577.543	2	59	201.740	511.183	279.978	150.547	1,143.449	1.234	0.745	1.980
2018	652.433	2	51	251.278	269.105	57.461	150.335	728.178	0.798	0.318	1.116
2019	680.080	3	44	118.901	319.999	29.182	180.793	648.876	0.645	0.309	0.954
2020	699.738	1	48	76.565	328.518	47.867	133.507	586.457	0.579	0.259	0.838
MA Total:	3,089,871	8	246	648,485	1,645,082	414,488	684,307	3,392,361	0.742	0.356	1.098

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.824	0.880	.
(14) Massachusetts Credibility:	0.390	0.550	.
(15) Countrywide Pure Premium:	0.971	0.383	1.353
(16) Countrywide Indicated Relativity:	1.194	1.058	.
(17) Countrywide Credibility:	0.310	0.230	.
(18) Countrywide Lost-Time Claims:	434.00	.	.
(19) Pure Premium Underlying Present Rate:	0.892	0.410	1.302
(20) Relativity to Underlying Present Rate:	1.108	1.024	.
(21) Credibility to Underlying Relativity:	0.300	0.220	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.024	0.953	.
(24) Balanced Formula Relativity:	1.026	0.957	1.005

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	2,207,444	11	274	635,937	1,840,284	298,871	956,805	3,731,898	1.122	0.569	1.691
2017	1,807,574	6	243	274,840	1,526,743	79,101	723,246	2,603,930	0.997	0.444	1.441
2018	2,083,549	7	259	874,812	1,765,270	141,423	739,913	3,521,418	1.267	0.423	1.690
2019	1,991,527	4	220	341,020	1,793,756	184,117	795,116	3,114,009	1.072	0.492	1.564
2020	2,174,376	9	203	870,368	1,617,142	216,849	1,005,676	3,710,034	1.144	0.562	1.706
MA Total:	10,264,470	37	1,199	2,996,976	8,543,194	920,361	4,220,756	16,681,288	1.124	0.501	1.625

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.248	1.240	.
(14) Massachusetts Credibility:	0.610	0.970	.
(15) Countrywide Pure Premium:	0.959	0.450	1.409
(16) Countrywide Indicated Relativity:	1.179	1.246	.
(17) Countrywide Credibility:	0.200	0.020	.
(18) Countrywide Lost-Time Claims:	9523.0	.	.
(19) Pure Premium Underlying Present Rate:	0.842	0.499	1.342
(20) Relativity to Underlying Present Rate:	1.047	1.245	.
(21) Credibility to Underlying Relativity:	0.190	0.010	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.196	1.240	.
(24) Balanced Formula Relativity:	1.198	1.246	1.213

Class(es):		Effective: 7/1/2023							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)
2016	294,171	0	36	0	116,050	0	61,154	177,204	0.394	0.208	0.602
2017	330,057	1	37	143,297	96,912	33,431	103,669	377,310	0.728	0.415	1.143
2018	313,226	0	33	0	337,646	0	144,694	482,340	1.078	0.462	1.540
2019	304,595	0	34	0	262,651	0	84,723	347,373	0.862	0.278	1.140
2020	356,383	1	43	137,846	783,315	85,763	186,977	1,193,900	2.585	0.765	3.350
MA Total:	1,598,432	2	183	281,143	1,596,574	119,194	581,216	2,578,127	1.175	0.438	1.613

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.304	1.085	.
(14) Massachusetts Credibility:	0.290	0.430	.
(15) Countrywide Pure Premium:	0.987	0.372	1.358
(16) Countrywide Indicated Relativity:	1.214	1.028	.
(17) Countrywide Credibility:	0.360	0.290	.
(18) Countrywide Lost-Time Claims:	161.00	.	.
(19) Pure Premium Underlying Present Rate:	0.825	0.419	1.244
(20) Relativity to Underlying Present Rate:	1.025	1.045	.
(21) Credibility to Underlying Relativity:	0.350	0.280	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.174	1.057	.
(24) Balanced Formula Relativity:	1.176	1.062	1.141

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Calculation of Class Relativities

Class(es): 4511 ANALYTICAL CHEMIST		Effective: 7/1/2023							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)
2016	5,592,906	3	92	353,523	461,893	84,705	361,101	1,261,222	0.146	0.080	0.226
2017	5,818,522	2	84	332,562	84,162	97,665	163,872	678,262	0.072	0.045	0.117
2018	5,849,931	3	91	342,921	670,147	144,902	316,286	1,474,255	0.173	0.079	0.252
2019	6,388,564	4	79	116,957	616,268	44,593	428,700	1,206,518	0.115	0.074	0.189
2020	8,416,450	1	72	62,641	554,030	62,284	199,219	878,174	0.073	0.031	0.104
MA Total:	32,066,373	13	418	1,208,605	2,386,500	434,148	1,469,178	5,498,431	0.112	0.059	0.171

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.148	0.170	.
(14) Massachusetts Credibility:	0.470	0.690	.
(15) Countrywide Pure Premium:	0.205	0.106	0.311
(16) Countrywide Indicated Relativity:	0.270	0.300	.
(17) Countrywide Credibility:	0.270	0.160	.
(18) Countrywide Lost-Time Claims:	1748.0	.	.
(19) Pure Premium Underlying Present Rate:	0.144	0.069	0.214
(20) Relativity to Underlying Present Rate:	0.215	0.195	.
(21) Credibility to Underlying Relativity:	0.260	0.150	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.198	0.195	.
(24) Balanced Formula Relativity:	0.196	0.194	0.195

Class(es): 4512 BIOMEDICAL RESEARCH LABS-INCL OUTSIDE OPERATNS		Effective: 7/1/2023							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)
2016	14,024,024	2	99	91,492	411,515	18,636	190,795	712,438	0.036	0.015	0.051
2017	15,409,103	1	118	65,683	937,679	3,351	254,747	1,261,460	0.065	0.017	0.082
2018	19,053,947	2	146	529,160	267,852	106,040	307,755	1,210,807	0.042	0.022	0.064
2019	22,985,557	2	130	106,277	55,926	29,750	259,111	451,064	0.007	0.013	0.020
2020	29,038,255	3	103	331,411	736,869	74,408	269,536	1,412,223	0.037	0.012	0.049
MA Total:	100,510,886	10	596	1,124,024	2,409,840	232,184	1,281,945	5,047,992	0.035	0.015	0.050

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.046	0.043	.
(14) Massachusetts Credibility:	0.450	0.670	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.059	0.058	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.040	0.021	0.061
(20) Relativity to Underlying Present Rate:	0.060	0.058	.
(21) Credibility to Underlying Relativity:	0.550	0.330	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.054	0.048	.
(24) Balanced Formula Relativity:	0.053	0.048	0.051

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Calculation of Class Relativities

Class(es): 4557 INK MFG		Effective: 7/1/2023							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)
2016	397,721	1	30	16,762	160,035	790	73,406	250,993	0.445	0.187	0.631
2017	459,827	3	24	533,672	293,657	122,719	64,213	1,014,261	1.799	0.407	2.206
2018	496,570	1	44	147,170	804,713	14,393	135,415	1,101,691	1.917	0.302	2.219
2019	484,749	1	22	133,526	166,718	30,185	70,769	401,198	0.619	0.208	0.828
2020	503,949	0	24	0	134,516	0	82,397	216,912	0.267	0.164	0.430
MA Total:	2,342,817	6	144	831,130	1,559,638	168,088	426,200	2,985,056	1.020	0.254	1.274

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.133	0.628	.
(14) Massachusetts Credibility:	0.340	0.440	.
(15) Countrywide Pure Premium:	1.043	0.432	1.475
(16) Countrywide Indicated Relativity:	1.283	1.194	.
(17) Countrywide Credibility:	0.330	0.280	.
(18) Countrywide Lost-Time Claims:	527.00	.	.
(19) Pure Premium Underlying Present Rate:	0.868	0.314	1.182
(20) Relativity to Underlying Present Rate:	1.078	0.784	.
(21) Credibility to Underlying Relativity:	0.330	0.280	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.164	0.830	.
(24) Balanced Formula Relativity:	1.167	0.834	1.064

Class(es): 4558 PAINT MFG		Effective: 7/1/2023							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)
2016	129,470	0	9	0	2,447	0	8,106	10,553	0.019	0.063	0.082
2017	149,941	2	11	451,228	12,108	185,292	14,782	663,410	3.090	1.334	4.424
2018	133,252	1	11	3,739	0	48,541	6,702	58,982	0.028	0.415	0.443
2019	134,749	0	8	0	183	0	6,219	6,402	0.001	0.046	0.048
2020	139,681	2	5	674,558	342,823	312,786	103,187	1,433,353	7.284	2.978	10.262
MA Total:	687,094	5	44	1,129,525	357,561	546,620	138,994	2,172,701	2.164	0.998	3.162

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.402	2.470	.
(14) Massachusetts Credibility:	0.190	0.290	.
(15) Countrywide Pure Premium:	0.683	0.319	1.001
(16) Countrywide Indicated Relativity:	0.840	0.881	.
(17) Countrywide Credibility:	0.410	0.360	.
(18) Countrywide Lost-Time Claims:	546.00	.	.
(19) Pure Premium Underlying Present Rate:	0.658	0.359	1.017
(20) Relativity to Underlying Present Rate:	0.818	0.896	.
(21) Credibility to Underlying Relativity:	0.400	0.350	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.128	1.347	.
(24) Balanced Formula Relativity:	1.130	1.354	1.199

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	55,189	0	2	0	2,270	0	1,467	3,737	0.041	0.027	0.068
2017	55,074	0	7	0	209,934	0	72,587	282,521	3.812	1.318	5.130
2018	51,235	0	10	0	48,616	0	29,120	77,736	0.949	0.568	1.517
2019	55,336	0	4	0	0	0	2,645	2,645	0.000	0.048	0.048
2020	50,981	0	7	0	17,338	0	11,754	29,092	0.340	0.231	0.571
MA Total:	267,816	0	30	0	278,158	0	117,573	395,731	1.039	0.439	1.478

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.153	1.087	.
(14) Massachusetts Credibility:	0.160	0.230	.
(15) Countrywide Pure Premium:	1.378	0.695	2.073
(16) Countrywide Indicated Relativity:	1.695	1.922	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	466.00	.	.
(19) Pure Premium Underlying Present Rate:	1.094	0.558	1.652
(20) Relativity to Underlying Present Rate:	1.360	1.391	.
(21) Credibility to Underlying Relativity:	0.420	0.380	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.467	1.528	.
(24) Balanced Formula Relativity:	1.470	1.536	1.491

Class(es):		Effective: 7/1/2023							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)
2016	656,509	1	57	174,083	215,181	38,512	72,900	500,676	0.593	0.170	0.763
2017	573,823	2	32	65,934	352,689	19,558	92,034	530,215	0.730	0.194	0.924
2018	657,547	0	41	0	498,461	0	229,266	727,727	0.758	0.349	1.107
2019	4,986,409	0	45	0	671,274	0	297,006	968,280	0.135	0.060	0.194
2020	1,648,636	3	33	375,139	387,250	222,471	167,523	1,152,383	0.462	0.237	0.699
MA Total:	8,522,923	6	208	615,156	2,124,855	280,541	858,730	3,879,281	0.321	0.134	0.455

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.357	0.331	.
(14) Massachusetts Credibility:	0.410	0.590	.
(15) Countrywide Pure Premium:	0.454	0.221	0.675
(16) Countrywide Indicated Relativity:	0.558	0.611	.
(17) Countrywide Credibility:	0.300	0.210	.
(18) Countrywide Lost-Time Claims:	2115.0	.	.
(19) Pure Premium Underlying Present Rate:	0.375	0.177	0.552
(20) Relativity to Underlying Present Rate:	0.466	0.441	.
(21) Credibility to Underlying Relativity:	0.290	0.200	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.449	0.412	.
(24) Balanced Formula Relativity:	0.450	0.414	0.439

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	163.269	1	24	93.870	185.184	33.224	234.200	546.479	1.709	1.638	3.347
2017	167.372	0	11	0	471.222	0	156.185	627.407	2.815	0.933	3.749
2018	157.648	1	20	305.684	279.321	215.028	389.469	1,189.502	3.711	3.834	7.545
2019	172.928	1	11	359.447	380.239	67.017	157.382	964.085	4.277	1.298	5.575
2020	159.147	0	15	0	188.485	0	210.746	399.231	1.184	1.324	2.509
MA Total:	820.365	3	81	759.001	1,504.450	315.270	1,147.983	3,726.704	2.759	1.784	4.543

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.062	4.415	.
(14) Massachusetts Credibility:	0.300	0.530	.
(15) Countrywide Pure Premium:	1.235	0.495	1.730
(16) Countrywide Indicated Relativity:	1.519	1.370	.
(17) Countrywide Credibility:	0.350	0.240	.
(18) Countrywide Lost-Time Claims:	623.00	.	.
(19) Pure Premium Underlying Present Rate:	1.851	1.367	3.217
(20) Relativity to Underlying Present Rate:	2.299	3.409	.
(21) Credibility to Underlying Relativity:	0.350	0.230	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	2.255	3.453	.
(24) Balanced Formula Relativity:	2.260	3.470	2.634

Class(es):		Effective: 7/1/2023							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)
2016	46.606	0	7	0	8.154	0	19.123	27.277	0.175	0.410	0.585
2017	46.048	0	5	0	184.787	0	62.971	247.758	4.013	1.368	5.380
2018	52.645	0	3	0	0	0	1.174	1.174	0.000	0.022	0.022
2019	37.799	0	2	0	0	0	870	870	0.000	0.023	0.023
2020	53.878	1	2	68.617	0	23.302	1.025	92.945	1.274	0.452	1.725
MA Total:	236.976	1	19	68.617	192.941	23.302	85.163	370.023	1.104	0.458	1.561

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.225	1.133	.
(14) Massachusetts Credibility:	0.140	0.190	.
(15) Countrywide Pure Premium:	0.975	0.464	1.440
(16) Countrywide Indicated Relativity:	1.200	1.284	.
(17) Countrywide Credibility:	0.340	0.360	.
(18) Countrywide Lost-Time Claims:	79.000	.	.
(19) Pure Premium Underlying Present Rate:	0.914	0.368	1.282
(20) Relativity to Underlying Present Rate:	1.135	0.919	.
(21) Credibility to Underlying Relativity:	0.520	0.450	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.170	1.091	.
(24) Balanced Formula Relativity:	1.172	1.096	1.149

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	55,468	1	11	271,525	42,386	69,366	58,035	441,313	5,659	2,297	7,956	
2017	57,365	0	9	0	264,388	0	53,739	318,127	4,609	0,937	5,546	
2018	61,497	1	18	226,114	40,730	33,686	71,346	371,876	4,339	1,708	6,047	
2019	60,905	0	13	0	424,490	0	276,265	700,755	6,970	4,536	11,506	
2020	146,242	2	15	123,654	546,671	71,139	742,147	1,483,611	4,584	5,561	10,145	
MA Total:	381,476	4	66	621,293	1,318,665	174,191	1,201,532	3,315,682	5,085	3,606	8,692	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.645	8.926	.
(14) Massachusetts Credibility:	0.340	0.440	.
(15) Countrywide Pure Premium:	3.030	1.343	4.373
(16) Countrywide Indicated Relativity:	3.728	3.713	.
(17) Countrywide Credibility:	0.330	0.280	.
(18) Countrywide Lost-Time Claims:	487.00	.	.
(19) Pure Premium Underlying Present Rate:	5.180	1.908	7.088
(20) Relativity to Underlying Present Rate:	6.435	4.760	.
(21) Credibility to Underlying Relativity:	0.330	0.280	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	5.273	6.300	.
(24) Balanced Formula Relativity:	5.283	6.331	5.608

Class(es):		Effective: 7/1/2023							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)	
2016	414,821	0	7	0	43,526	0	16,876	60,402	0.105	0.041	0.146	
2017	405,304	0	5	0	264	0	3,695	3,959	0.001	0.009	0.010	
2018	397,799	3	5	49,693	85,460	19,347	44,714	199,214	0.340	0.161	0.501	
2019	424,490	0	4	0	16,544	0	8,998	25,542	0.039	0.021	0.060	
2020	415,468	0	2	0	17,567	0	16,262	33,829	0.042	0.039	0.081	
MA Total:	2,057,883	3	23	49,693	163,361	19,347	90,545	322,946	0.104	0.053	0.157	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.115	0.132	.
(14) Massachusetts Credibility:	0.190	0.270	.
(15) Countrywide Pure Premium:	0.299	0.135	0.433
(16) Countrywide Indicated Relativity:	0.367	0.372	.
(17) Countrywide Credibility:	0.410	0.370	.
(18) Countrywide Lost-Time Claims:	185.00	.	.
(19) Pure Premium Underlying Present Rate:	0.234	0.105	0.339
(20) Relativity to Underlying Present Rate:	0.291	0.261	.
(21) Credibility to Underlying Relativity:	0.400	0.360	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.289	0.268	.
(24) Balanced Formula Relativity:	0.290	0.269	0.283

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	492,297	1	42	75,111	143,387	32,605	87,416	338,520	0.444	0.244	0.688
2017	612,234	2	31	168,766	133,882	22,805	75,047	400,500	0.494	0.160	0.654
2018	548,286	2	23	115,003	40,835	35,264	71,799	262,901	0.284	0.195	0.479
2019	459,150	0	7	0	5,223	0	29,549	34,772	0.011	0.064	0.076
2020	501,680	0	11	0	3,069	0	17,866	20,935	0.006	0.036	0.042
MA Total:	2,613,646	5	114	358,880	326,397	90,674	281,678	1,057,628	0.262	0.142	0.405

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.291	0.353	.
(14) Massachusetts Credibility:	0.240	0.380	.
(15) Countrywide Pure Premium:	0.408	0.203	0.611
(16) Countrywide Indicated Relativity:	0.502	0.563	.
(17) Countrywide Credibility:	0.380	0.310	.
(18) Countrywide Lost-Time Claims:	763.00	.	.
(19) Pure Premium Underlying Present Rate:	0.338	0.189	0.527
(20) Relativity to Underlying Present Rate:	0.420	0.472	.
(21) Credibility to Underlying Relativity:	0.380	0.310	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.420	0.455	.
(24) Balanced Formula Relativity:	0.421	0.457	0.432

Class(es):		Effective: 7/1/2023							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)
2016	219,466	0	20	0	111,938	0	56,027	167,965	0.510	0.255	0.765
2017	250,194	1	14	22,895	16,623	5,090	33,109	77,717	0.158	0.153	0.311
2018	225,676	0	20	0	261,199	0	126,395	387,594	1.157	0.560	1.717
2019	246,230	1	22	133,799	211,370	44,700	134,605	524,473	1.402	0.728	2.130
2020	262,979	1	21	153,938	204,539	35,171	103,259	496,906	1.363	0.526	1.890
MA Total:	1,204,546	3	97	310,631	805,669	84,961	453,395	1,654,656	0.927	0.447	1.374

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.029	1.106	.
(14) Massachusetts Credibility:	0.240	0.360	.
(15) Countrywide Pure Premium:	0.774	0.402	1.176
(16) Countrywide Indicated Relativity:	0.952	1.112	.
(17) Countrywide Credibility:	0.380	0.320	.
(18) Countrywide Lost-Time Claims:	409.00	.	.
(19) Pure Premium Underlying Present Rate:	0.695	0.361	1.056
(20) Relativity to Underlying Present Rate:	0.863	0.901	.
(21) Credibility to Underlying Relativity:	0.380	0.320	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.937	1.042	.
(24) Balanced Formula Relativity:	0.939	1.047	0.972

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	16.503	0	2	0	192	0	1,583	1,774	0.012	0.096	0.108
2017	14.478	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	13.676	0	1	0	0	0	89	89	0.000	0.007	0.007
2019	9.253	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	23.561	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	77.471	0	3	0	192	0	1,672	1,863	0.002	0.022	0.024

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.003	0.053	.
(14) Massachusetts Credibility:	0.060	0.080	.
(15) Countrywide Pure Premium:	0.398	0.139	0.537
(16) Countrywide Indicated Relativity:	0.490	0.384	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	519.00	.	.
(19) Pure Premium Underlying Present Rate:	0.341	0.150	0.491
(20) Relativity to Underlying Present Rate:	0.423	0.375	.
(21) Credibility to Underlying Relativity:	0.470	0.460	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.429	0.353	.
(24) Balanced Formula Relativity:	0.430	0.355	0.407

Class(es):		Effective: 7/1/2023							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)
2016	3.033	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	3.531	0	1	0	4,194	0	3,089	7,284	1.188	0.875	2.063
2018	77.043	1	0	309,261	0	110,908	0	420,169	4.014	1.440	5.454
2019	73.203	1	5	218,228	35,008	73,458	48,517	375,211	3.459	1.666	5.126
2020	84.965	2	5	234,976	4,758	73,807	4,849	318,390	2.822	0.926	3.747
MA Total:	241.774	4	11	762,465	43,961	258,173	56,455	1,121,054	3.335	1.301	4.637

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.702	3.221	.
(14) Massachusetts Credibility:	0.150	0.220	.
(15) Countrywide Pure Premium:	1.601	0.542	2.143
(16) Countrywide Indicated Relativity:	1.969	1.498	.
(17) Countrywide Credibility:	0.380	0.390	.
(18) Countrywide Lost-Time Claims:	100.00	.	.
(19) Pure Premium Underlying Present Rate:	1.152	0.529	1.682
(20) Relativity to Underlying Present Rate:	1.432	1.320	.
(21) Credibility to Underlying Relativity:	0.470	0.390	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.977	1.807	.
(24) Balanced Formula Relativity:	1.981	1.816	1.930

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Calculation of Class Relativities

Class(es): 4771 EXPLOSIVES OR AMMUNITION MFG: NOC - & DRIVERS									Effective: 7/1/2023			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)			
2016	11,970	0	1	0	0	0	76	76	0.000	0.006	0.006			
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			
2019	2,153	0	0	0	0	0	0	0	0.000	0.000	0.000			
2020	5,893	0	0	0	0	0	0	0	0.000	0.000	0.000			
MA Total:	22,720	0	1	0	0	0	76	76	0.000	0.003	0.003			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.008	.
(14) Massachusetts Credibility:	0.060	0.080	.
(15) Countrywide Pure Premium:	0.968	0.448	1.416
(16) Countrywide Indicated Relativity:	1.191	1.238	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	364.00	.	.
(19) Pure Premium Underlying Present Rate:	1.145	0.401	1.546
(20) Relativity to Underlying Present Rate:	1.422	1.001	.
(21) Credibility to Underlying Relativity:	0.470	0.460	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.228	1.030	.
(24) Balanced Formula Relativity:	1.231	1.036	1.170

Class(es): 4825 DRUG, MEDICINE OR PHARM PREP MFG & INCIDENTAL MFG INGREDIENTS									Effective: 7/1/2023			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)			
2016	3,803,048	3	51	365,511	268,759	69,337	131,661	835,268	0.167	0.053	0.220			
2017	3,383,372	0	53	0	146,218	0	88,512	234,730	0.043	0.026	0.069			
2018	3,785,747	2	62	226,160	122,182	83,610	210,540	642,491	0.092	0.078	0.170			
2019	4,058,745	2	45	44,608	222,085	44,580	173,433	484,707	0.066	0.054	0.119			
2020	7,513,281	0	45	0	398,481	0	186,775	585,256	0.053	0.025	0.078			
MA Total:	22,544,192	7	256	636,279	1,157,726	197,526	790,921	2,782,452	0.080	0.044	0.123			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.088	0.109	.
(14) Massachusetts Credibility:	0.460	0.640	.
(15) Countrywide Pure Premium:	0.316	0.150	0.466
(16) Countrywide Indicated Relativity:	0.388	0.415	.
(17) Countrywide Credibility:	0.270	0.180	.
(18) Countrywide Lost-Time Claims:	850.00	.	.
(19) Pure Premium Underlying Present Rate:	0.194	0.081	0.275
(20) Relativity to Underlying Present Rate:	0.241	0.201	.
(21) Credibility to Underlying Relativity:	0.270	0.180	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.211	0.180	.
(24) Balanced Formula Relativity:	0.211	0.181	0.202

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	1,083,705	0	32	0	196,721	0	151,734	348,455	0.182	0.140	0.322
2017	1,155,740	0	23	0	77,956	0	91,690	169,646	0.067	0.079	0.147
2018	810,784	0	23	0	40,878	0	130,671	171,549	0.050	0.161	0.212
2019	845,493	1	18	271,817	144,251	70,347	186,569	672,983	0.492	0.304	0.796
2020	797,026	1	23	651,355	525,309	91,384	316,937	1,584,984	1.476	0.512	1.989
MA Total:	4,692,748	2	119	923,172	985,116	161,730	877,600	2,947,617	0.407	0.221	0.628

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.451	0.548	.
(14) Massachusetts Credibility:	0.330	0.480	.
(15) Countrywide Pure Premium:	0.569	0.242	0.811
(16) Countrywide Indicated Relativity:	0.701	0.668	.
(17) Countrywide Credibility:	0.340	0.260	.
(18) Countrywide Lost-Time Claims:	2250.0	.	.
(19) Pure Premium Underlying Present Rate:	0.390	0.190	0.580
(20) Relativity to Underlying Present Rate:	0.485	0.475	.
(21) Credibility to Underlying Relativity:	0.330	0.260	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	0.547	0.560	.
(24) Balanced Formula Relativity:	0.548	0.563	0.553

Class(es):		Effective: 7/1/2023							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)
2016	224,390	1	13	332,362	76,787	51,018	57,041	517,207	1.823	0.482	2.305
2017	242,102	0	14	0	28,698	0	23,513	52,212	0.119	0.097	0.216
2018	285,125	1	21	336,800	87,521	57,859	75,988	558,167	1.488	0.469	1.958
2019	278,740	0	20	0	1,690,143	0	334,260	2,024,403	6.064	1.199	7.263
2020	277,985	0	8	0	577,606	0	211,518	789,124	2.078	0.761	2.839
MA Total:	1,308,342	2	76	669,162	2,460,754	108,876	702,320	3,941,113	2.392	0.620	3.012

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.021	0.645	.
(14) Massachusetts Credibility:	0.390	0.490	.
(15) Countrywide Pure Premium:	2.733	0.843	3.575
(16) Countrywide Indicated Relativity:	1.174	0.885	.
(17) Countrywide Credibility:	0.310	0.260	.
(18) Countrywide Lost-Time Claims:	254.00	.	.
(19) Pure Premium Underlying Present Rate:	2.103	0.726	2.828
(20) Relativity to Underlying Present Rate:	0.970	0.764	.
(21) Credibility to Underlying Relativity:	0.300	0.250	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.053	0.737	.
(24) Balanced Formula Relativity:	1.065	0.739	0.970

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Calculation of Class Relativities

Class(es): 5022 MASONRY NOC		Effective: 7/1/2023							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)
2016	1,374,130	11	121	1,974,848	5,019,324	926,625	1,317,454	9,238,251	5,090	1,633	6,723
2017	1,502,871	15	120	3,040,994	3,971,943	1,225,638	1,308,565	9,547,140	4,666	1,686	6,353
2018	1,677,729	7	111	2,580,534	5,697,309	918,908	2,560,270	11,757,021	4,934	2,074	7,008
2019	1,529,043	8	70	3,208,729	3,260,534	964,693	1,466,622	8,900,578	4,231	1,590	5,821
2020	1,611,425	7	94	1,755,173	4,192,427	1,150,328	1,861,075	8,959,003	3,691	1,869	5,560
MA Total:	7,695,198	48	516	12,560,277	22,141,537	5,186,192	8,513,987	48,401,993	4,510	1,780	6,290

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.924	1.852	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	3.674	1.322	4.996
(16) Countrywide Indicated Relativity:	1.579	1.388	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	4710.0	.	.
(19) Pure Premium Underlying Present Rate:	4.808	1.908	6.716
(20) Relativity to Underlying Present Rate:	2.219	2.008	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.924	1.852	.
(24) Balanced Formula Relativity:	1.946	1.856	1.920

Class(es): 5037 PAINTING: METAL STRUCTURES-OVER 2 STORIES IN HEIGHT & DRIVERS		Effective: 7/1/2023							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)
2016	61,101	0	5	0	0	0	4,075	4,075	0,000	0,067	0,067
2017	89,725	1	7	376,936	435,719	100,644	80,623	993,922	9,057	2,020	11,077
2018	66,499	2	8	922,547	99,311	435,712	30,388	1,487,958	15,367	7,009	22,376
2019	60,508	1	0	2,156	0	1,821	0	3,977	0,036	0,030	0,066
2020	108,702	0	6	0	691,596	0	335,902	1,027,498	6,362	3,090	9,452
MA Total:	386,535	4	26	1,301,638	1,226,627	538,178	450,986	3,517,429	6,541	2,559	9,100

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.791	2.662	.
(14) Massachusetts Credibility:	0.390	0.530	.
(15) Countrywide Pure Premium:	3.926	1.360	5.286
(16) Countrywide Indicated Relativity:	1.687	1.429	.
(17) Countrywide Credibility:	0.310	0.240	.
(18) Countrywide Lost-Time Claims:	80,000	.	.
(19) Pure Premium Underlying Present Rate:	7.378	3.007	10.385
(20) Relativity to Underlying Present Rate:	3.405	3.165	.
(21) Credibility to Underlying Relativity:	0.300	0.230	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	2.633	2.482	.
(24) Balanced Formula Relativity:	2.663	2.487	2.612

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	243,004	2	46	678,421	2,042,363	263,383	657,911	3,642,078	11,196	3,791	14,988	
2017	302,183	6	57	1,573,656	2,319,507	321,706	731,575	4,946,444	12,883	3,486	16,369	
2018	262,179	3	34	1,280,494	1,783,361	436,392	568,553	4,068,800	11,686	3,833	15,519	
2019	389,433	4	56	1,394,761	4,969,250	418,065	1,782,261	8,564,337	16,342	5,650	21,992	
2020	530,619	6	63	3,504,397	3,121,879	768,965	1,231,831	8,627,071	12,488	3,771	16,259	
MA Total:	1,727,417	21	256	8,431,728	14,236,360	2,208,511	4,972,131	29,848,730	13,123	4,157	17,279	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.600	4.324	.
(14) Massachusetts Credibility:	0.810	1.000	.
(15) Countrywide Pure Premium:	3.594	1.220	4.814
(16) Countrywide Indicated Relativity:	1.545	1.281	.
(17) Countrywide Credibility:	0.100	0.000	.
(18) Countrywide Lost-Time Claims:	888.00	.	.
(19) Pure Premium Underlying Present Rate:	10.038	3.912	13.950
(20) Relativity to Underlying Present Rate:	4.633	4.117	.
(21) Credibility to Underlying Relativity:	0.090	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	5.107	4.324	.
(24) Balanced Formula Relativity:	5.166	4.333	4.924

Class(es):		Effective: 7/1/2023							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)	
2016	21,372	1	7	334,629	342,915	418,961	72,220	1,168,725	31,703	22,983	54,685	
2017	32,070	0	8	0	85,782	0	51,067	136,849	2,675	1,592	4,267	
2018	23,087	0	5	0	338,611	0	70,771	409,381	14,667	3,065	17,732	
2019	18,638	0	3	0	0	0	11,037	11,037	0,000	0,592	0,592	
2020	33,262	0	3	0	1,073,849	0	392,094	1,465,944	32,284	11,788	44,072	
MA Total:	128,429	1	26	334,629	1,841,157	418,961	597,190	3,191,937	16,942	7,912	24,854	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	7.229	8.231	.
(14) Massachusetts Credibility:	0.250	0.430	.
(15) Countrywide Pure Premium:	2.025	0.705	2.730
(16) Countrywide Indicated Relativity:	0.870	0.740	.
(17) Countrywide Credibility:	0.380	0.290	.
(18) Countrywide Lost-Time Claims:	828.00	.	.
(19) Pure Premium Underlying Present Rate:	7.037	5.268	12.306
(20) Relativity to Underlying Present Rate:	3.248	5.544	.
(21) Credibility to Underlying Relativity:	0.370	0.280	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	3.340	5.307	.
(24) Balanced Formula Relativity:	3.378	5.317	3.942

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	126,683	1	16	270,092	1,264,442	175,917	529,882	2,240,333	12,113	5,571	17,685
2017	135,109	2	17	487,165	600,455	504,534	279,581	1,871,735	8,050	5,804	13,854
2018	151,869	7	24	2,028,267	1,480,824	872,595	794,962	5,176,648	23,106	10,980	34,086
2019	151,167	2	12	1,262,095	523,494	305,681	816,519	2,907,789	11,812	7,424	19,236
2020	120,189	2	9	213,525	411,023	54,457	218,600	897,606	5,196	2,272	7,468
MA Total:	685,017	14	78	4,261,145	4,280,239	1,913,185	2,639,542	13,094,111	12,469	6,646	19,115

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.321	6.914	.
(14) Massachusetts Credibility:	0.610	0.950	.
(15) Countrywide Pure Premium:	7.377	3.387	10.764
(16) Countrywide Indicated Relativity:	3.170	3.557	.
(17) Countrywide Credibility:	0.200	0.030	.
(18) Countrywide Lost-Time Claims:	399.00	.	.
(19) Pure Premium Underlying Present Rate:	12.608	7.122	19.730
(20) Relativity to Underlying Present Rate:	5.819	7.495	.
(21) Credibility to Underlying Relativity:	0.190	0.020	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	4.985	6.825	.
(24) Balanced Formula Relativity:	5.043	6.839	5.565

Class(es):		Effective: 7/1/2023							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)
2016	787,109	4	65	806,478	1,334,962	182,221	543,762	2,867,423	2,721	0,922	3,643
2017	830,919	9	78	2,036,163	2,498,193	565,318	989,277	6,088,952	5,457	1,871	7,328
2018	888,553	3	89	260,682	1,802,990	40,050	751,971	2,855,692	2,323	0,891	3,214
2019	829,966	3	61	1,512,693	1,784,382	224,994	909,397	4,431,468	3,973	1,367	5,339
2020	977,200	5	71	1,334,407	1,806,661	254,333	741,127	4,136,528	3,214	1,019	4,233
MA Total:	4,313,748	24	364	5,950,423	9,227,189	1,266,916	3,935,535	20,380,063	3,518	1,206	4,724

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.501	1.255	.
(14) Massachusetts Credibility:	0.730	0.920	.
(15) Countrywide Pure Premium:	2.615	1.081	3.696
(16) Countrywide Indicated Relativity:	1.124	1.135	.
(17) Countrywide Credibility:	0.140	0.040	.
(18) Countrywide Lost-Time Claims:	2181.0	.	.
(19) Pure Premium Underlying Present Rate:	3.145	1.062	4.207
(20) Relativity to Underlying Present Rate:	1.451	1.118	.
(21) Credibility to Underlying Relativity:	0.130	0.040	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.442	1.244	.
(24) Balanced Formula Relativity:	1.459	1.247	1.397

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	681.012	4	103	330.322	2,244.443	55,618	710,254	3,340,636	3,781	1,125	4,905
2017	697.578	10	89	2,146,069	1,705,600	745,611	687,403	5,284,683	5,521	2,054	7,576
2018	651.501	2	74	692,052	959,436	114,784	380,165	2,146,437	2,535	0,760	3,295
2019	710.276	4	81	630,850	2,370,509	216,041	741,938	3,959,338	4,226	1,349	5,574
2020	554.895	3	29	561,587	512,249	166,994	237,534	1,478,364	1,935	0,729	2,664
MA Total:	3,295,261	23	376	4,360,879	7,792,237	1,299,048	2,757,294	16,209,459	3,688	1,231	4,919

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.574	1.281	.
(14) Massachusetts Credibility:	0.660	0.890	.
(15) Countrywide Pure Premium:	2.291	0.811	3.103
(16) Countrywide Indicated Relativity:	0.985	0.852	.
(17) Countrywide Credibility:	0.170	0.060	.
(18) Countrywide Lost-Time Claims:	1747.0	.	.
(19) Pure Premium Underlying Present Rate:	3.217	1.286	4.503
(20) Relativity to Underlying Present Rate:	1.485	1.353	.
(21) Credibility to Underlying Relativity:	0.170	0.050	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.458	1.259	.
(24) Balanced Formula Relativity:	1.475	1.261	1.413

Class(es):		Effective: 7/1/2023							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)
2016	991.153	2	51	60,949	270,840	62,130	246,245	640,164	0,335	0,311	0,646
2017	1,071.737	4	50	1,116,701	2,496,382	345,697	648,200	4,606,979	3,371	0,927	4,299
2018	1,159,864	4	43	1,765,264	1,580,279	363,196	488,998	4,197,737	2,884	0,735	3,619
2019	1,409,811	4	49	2,657,046	1,833,297	577,745	711,341	5,779,429	3,185	0,914	4,099
2020	654,553	2	23	557,133	537,000	89,298	269,041	1,452,471	1,672	0,547	2,219
MA Total:	5,287,118	16	216	6,157,092	6,717,797	1,438,066	2,363,824	16,676,779	2,435	0,719	3,154

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.039	0.748	.
(14) Massachusetts Credibility:	0.570	0.770	.
(15) Countrywide Pure Premium:	1.022	0.383	1.405
(16) Countrywide Indicated Relativity:	0.439	0.402	.
(17) Countrywide Credibility:	0.220	0.120	.
(18) Countrywide Lost-Time Claims:	507.00	.	.
(19) Pure Premium Underlying Present Rate:	1.395	0.553	1.948
(20) Relativity to Underlying Present Rate:	0.644	0.582	.
(21) Credibility to Underlying Relativity:	0.210	0.110	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.824	0.688	.
(24) Balanced Formula Relativity:	0.834	0.690	0.792

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	8,047,694	37	630	6,237,802	9,015,935	1,805,795	3,657,088	20,716,619	1.895	0.679	2.574
2017	8,707,050	29	700	5,223,815	8,550,734	1,818,188	4,039,450	19,632,187	1.582	0.673	2.255
2018	9,220,435	30	642	6,769,817	8,841,732	1,932,902	4,120,496	21,664,947	1.693	0.657	2.350
2019	9,327,498	31	553	8,565,167	11,902,897	2,094,543	5,032,518	27,595,125	2.194	0.764	2.958
2020	10,059,818	23	547	4,127,613	8,850,093	1,056,825	4,108,013	18,142,544	1.290	0.513	1.803
MA Total:	45,362,496	150	3,072	30,924,213	47,161,390	8,708,253	20,957,566	107,751,423	1.721	0.654	2.375

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.735	0.680	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.487	0.554	2.041
(16) Countrywide Indicated Relativity:	0.639	0.582	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	10463	.	.
(19) Pure Premium Underlying Present Rate:	1.489	0.598	2.087
(20) Relativity to Underlying Present Rate:	0.687	0.629	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.735	0.680	.
(24) Balanced Formula Relativity:	0.743	0.682	0.725

Class(es):		Effective: 7/1/2023							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)
2016	958,566	2	85	658,569	916,195	364,347	375,129	2,314,241	1.643	0.771	2.414
2017	987,831	2	67	681,075	1,576,184	199,633	391,367	2,848,259	2.285	0.598	2.883
2018	1,052,310	3	76	235,519	2,073,457	120,021	574,696	3,003,694	2.194	0.660	2.854
2019	1,036,531	3	71	696,502	1,251,186	281,590	360,572	2,589,850	1.879	0.620	2.499
2020	1,110,951	2	69	21,330	2,404,157	45,567	692,049	3,163,103	2.183	0.664	2.847
MA Total:	5,146,189	12	368	2,292,996	8,221,180	1,011,159	2,393,813	13,919,147	2.043	0.662	2.705

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.872	0.688	.
(14) Massachusetts Credibility:	0.640	0.830	.
(15) Countrywide Pure Premium:	1.589	0.627	2.217
(16) Countrywide Indicated Relativity:	0.683	0.659	.
(17) Countrywide Credibility:	0.180	0.090	.
(18) Countrywide Lost-Time Claims:	1017.0	.	.
(19) Pure Premium Underlying Present Rate:	1.919	0.677	2.596
(20) Relativity to Underlying Present Rate:	0.886	0.712	.
(21) Credibility to Underlying Relativity:	0.180	0.080	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.840	0.688	.
(24) Balanced Formula Relativity:	0.850	0.689	0.803

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	9,199,542	30	601	5,472,384	5,943,183	1,789,062	2,890,625	16,095,254	1,241	0,509	1,750
2017	10,010,147	25	663	3,478,095	8,381,892	1,175,875	3,480,641	16,516,503	1,185	0,465	1,650
2018	10,926,405	28	699	6,302,752	6,818,593	2,279,257	3,789,843	19,190,445	1,201	0,555	1,756
2019	11,210,573	13	581	3,876,604	7,910,583	1,890,441	3,488,675	17,166,303	1,051	0,480	1,531
2020	11,448,969	15	514	2,400,514	9,326,415	684,217	4,967,501	17,378,647	1,024	0,494	1,518
MA Total:	52,795,634	111	3,058	21,530,350	38,380,666	7,818,852	18,617,285	86,347,152	1,135	0,501	1,635

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.484	0.521	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.283	0.533	1.816
(16) Countrywide Indicated Relativity:	0.551	0.560	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	10821	.	.
(19) Pure Premium Underlying Present Rate:	1.073	0.517	1.590
(20) Relativity to Underlying Present Rate:	0.495	0.544	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.484	0.521	.
(24) Balanced Formula Relativity:	0.490	0.522	0.499

Class(es):		Effective: 7/1/2023							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)
2016	4,414,102	5	121	331,881	1,125,436	91,700	1,065,407	2,614,424	0,330	0,262	0,592
2017	4,613,313	4	123	931,720	727,757	113,529	487,898	2,260,904	0,360	0,130	0,490
2018	4,840,562	3	128	113,771	1,241,660	46,662	902,998	2,305,090	0,280	0,196	0,476
2019	5,030,083	4	90	1,139,654	327,310	336,042	306,669	2,109,675	0,292	0,128	0,419
2020	4,833,809	6	88	403,587	558,064	176,121	436,317	1,574,090	0,199	0,127	0,326
MA Total:	23,731,869	22	550	2,920,613	3,980,228	764,054	3,199,289	10,864,183	0,291	0,167	0,458

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.383	0.478	.
(14) Massachusetts Credibility:	0.590	0.890	.
(15) Countrywide Pure Premium:	0.470	0.187	0.658
(16) Countrywide Indicated Relativity:	0.619	0.531	.
(17) Countrywide Credibility:	0.210	0.060	.
(18) Countrywide Lost-Time Claims:	3311.0	.	.
(19) Pure Premium Underlying Present Rate:	0.336	0.175	0.510
(20) Relativity to Underlying Present Rate:	0.500	0.492	.
(21) Credibility to Underlying Relativity:	0.200	0.050	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.456	0.482	.
(24) Balanced Formula Relativity:	0.450	0.480	0.460

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	383,815	2	33	23,070	73,647	28,363	41,439	166,520	0.252	0.182	0.434	
2017	455,133	3	43	15,849	781,825	19,557	223,443	1,040,674	1.753	0.534	2.287	
2018	402,028	6	52	572,116	233,407	64,211	310,122	1,179,855	2.004	0.931	2.935	
2019	375,249	2	40	162,695	889,021	31,243	180,505	1,263,464	2.803	0.564	3.367	
2020	287,480	1	15	47,653	405,680	12,273	89,326	554,932	1.577	0.353	1.930	
MA Total:	1,903,706	14	183	821,383	2,383,580	155,647	844,835	4,205,445	1.684	0.526	2.209	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.220	1.504	.
(14) Massachusetts Credibility:	0.360	0.540	.
(15) Countrywide Pure Premium:	1.347	0.569	1.916
(16) Countrywide Indicated Relativity:	1.772	1.612	.
(17) Countrywide Credibility:	0.320	0.230	.
(18) Countrywide Lost-Time Claims:	1601.0	.	.
(19) Pure Premium Underlying Present Rate:	1.213	0.619	1.832
(20) Relativity to Underlying Present Rate:	1.805	1.742	.
(21) Credibility to Underlying Relativity:	0.320	0.230	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.944	1.584	.
(24) Balanced Formula Relativity:	1.919	1.577	1.811

Class(es):		Effective: 7/1/2023							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)	
2016	749,509	10	105	1,702,726	1,221,572	362,436	681,710	3,968,445	3.902	1.393	5.295	
2017	951,809	8	120	2,348,276	2,359,362	880,418	937,642	6,525,698	4.946	1.910	6.856	
2018	786,332	6	117	733,587	2,844,420	184,054	1,207,615	4,969,676	4.550	1.770	6.320	
2019	960,178	1	114	185,027	2,831,159	75,865	1,067,644	4,159,695	3.141	1.191	4.332	
2020	843,733	3	110	1,167,050	2,480,820	226,222	1,096,392	4,970,484	4.323	1.568	5.891	
MA Total:	4,291,561	28	566	6,136,666	11,737,334	1,728,995	4,991,002	24,593,997	4.165	1.566	5.731	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.777	1.629	.
(14) Massachusetts Credibility:	0.910	1.000	.
(15) Countrywide Pure Premium:	3.004	1.133	4.137
(16) Countrywide Indicated Relativity:	1.291	1.189	.
(17) Countrywide Credibility:	0.050	0.000	.
(18) Countrywide Lost-Time Claims:	5019.0	.	.
(19) Pure Premium Underlying Present Rate:	5.425	2.138	7.563
(20) Relativity to Underlying Present Rate:	2.504	2.250	.
(21) Credibility to Underlying Relativity:	0.040	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.782	1.629	.
(24) Balanced Formula Relativity:	1.803	1.632	1.753

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	339,385	1	21	388,356	520,462	137,276	252,368	1,298,462	2,678	1,148	3,826
2017	363,706	2	24	163,754	424,390	18,127	233,890	840,161	1,617	0,693	2,310
2018	365,152	1	35	90,708	583,392	10,781	378,763	1,063,644	1,846	1,067	2,913
2019	377,981	3	25	765,961	1,199,725	184,434	348,641	2,498,761	5,200	1,410	6,611
2020	374,256	6	26	1,097,168	410,034	380,658	123,046	2,010,906	4,027	1,346	5,373
MA Total:	1,820,480	13	131	2,505,948	3,138,003	731,275	1,336,708	7,711,935	3,100	1,136	4,236

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.323	1.182	.
(14) Massachusetts Credibility:	0.430	0.600	.
(15) Countrywide Pure Premium:	2.627	0.997	3.624
(16) Countrywide Indicated Relativity:	1.129	1.047	.
(17) Countrywide Credibility:	0.290	0.200	.
(18) Countrywide Lost-Time Claims:	1490.0	.	.
(19) Pure Premium Underlying Present Rate:	1.968	0.845	2.812
(20) Relativity to Underlying Present Rate:	0.908	0.889	.
(21) Credibility to Underlying Relativity:	0.280	0.200	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.150	1.096	.
(24) Balanced Formula Relativity:	1.164	1.098	1.145

Class(es):		Effective: 7/1/2023							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)
2016	1,848,829	20	184	3,233,594	3,325,452	893,528	1,401,147	8,853,721	3,548	1,241	4,789
2017	2,092,496	23	152	4,672,775	2,161,081	1,252,664	1,059,505	9,146,025	3,266	1,105	4,371
2018	2,362,322	12	198	1,854,251	5,923,072	688,814	2,444,960	10,911,097	3,292	1,327	4,619
2019	2,300,241	15	168	2,740,680	5,547,121	1,284,132	1,962,331	11,534,264	3,603	1,411	5,014
2020	2,440,266	7	180	1,641,567	7,272,961	324,752	2,970,049	12,209,329	3,653	1,350	5,003
MA Total:	11,044,154	77	882	14,142,867	24,229,687	4,443,890	9,837,992	52,654,435	3,474	1,293	4,768

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.483	1.345	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.196	0.851	3.047
(16) Countrywide Indicated Relativity:	0.944	0.893	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	7822.0	.	.
(19) Pure Premium Underlying Present Rate:	3.195	1.208	4.404
(20) Relativity to Underlying Present Rate:	1.475	1.272	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.483	1.345	.
(24) Balanced Formula Relativity:	1.500	1.348	1.456

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	271,967	2	30	327,644	1,141,681	262,201	254,500	1,986,026	5,403	1,900	7,302
2017	260,958	1	24	196,039	2,386,265	16,635	466,375	3,065,313	9,895	1,851	11,746
2018	176,257	1	12	386,033	67,873	61,077	42,825	557,808	2,575	0,589	3,165
2019	250,062	1	23	387,016	1,005,695	137,194	269,649	1,799,555	5,569	1,627	7,196
2020	314,886	0	11	0	496,478	0	121,227	617,705	1,577	0,385	1,962
MA Total:	1,274,131	5	100	1,296,732	5,097,992	477,106	1,154,575	8,026,407	5,019	1,281	6,300

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.142	1.332	.
(14) Massachusetts Credibility:	0.530	0.620	.
(15) Countrywide Pure Premium:	3.620	1.351	4.971
(16) Countrywide Indicated Relativity:	1.556	1.418	.
(17) Countrywide Credibility:	0.240	0.190	.
(18) Countrywide Lost-Time Claims:	959.00	.	.
(19) Pure Premium Underlying Present Rate:	4.785	1.342	6.127
(20) Relativity to Underlying Present Rate:	2.208	1.412	.
(21) Credibility to Underlying Relativity:	0.230	0.190	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	2.016	1.364	.
(24) Balanced Formula Relativity:	2.040	1.367	1.844

Class(es):		Effective: 7/1/2023							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)
2016	236,221	2	19	115,064	495,629	23,329	110,681	744,702	2,585	0,567	3,153
2017	238,937	1	22	70,325	104,739	107,840	92,528	375,432	0,733	0,839	1,571
2018	273,294	1	26	168,632	471,847	40,625	176,782	857,886	2,344	0,796	3,139
2019	308,211	0	22	0	99,900	0	88,860	188,760	0,324	0,288	0,612
2020	357,156	1	26	73,187	605,521	26,680	286,540	991,927	1,900	0,877	2,777
MA Total:	1,413,818	5	115	427,208	1,777,636	198,473	755,391	3,158,707	1,559	0,675	2,234

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.665	0.702	.
(14) Massachusetts Credibility:	0.390	0.520	.
(15) Countrywide Pure Premium:	1.997	0.754	2.751
(16) Countrywide Indicated Relativity:	0.858	0.792	.
(17) Countrywide Credibility:	0.310	0.240	.
(18) Countrywide Lost-Time Claims:	708.00	.	.
(19) Pure Premium Underlying Present Rate:	1.942	0.781	2.723
(20) Relativity to Underlying Present Rate:	0.896	0.822	.
(21) Credibility to Underlying Relativity:	0.300	0.240	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.794	0.752	.
(24) Balanced Formula Relativity:	0.804	0.754	0.789

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	809,817	7	59	474,114	1,473,197	84,239	452,706	2,484,256	2,405	0,663	3,068
2017	938,536	8	50	1,673,005	1,087,163	241,588	534,904	3,536,660	2,941	0,827	3,768
2018	1,199,870	5	75	1,369,513	2,265,478	554,271	778,015	4,967,277	3,029	1,110	4,140
2019	1,162,305	1	45	93,932	785,565	27,016	296,295	1,202,809	0,757	0,278	1,035
2020	1,188,194	5	58	1,083,587	1,872,051	209,737	756,971	3,922,347	2,488	0,814	3,301
MA Total:	5,298,721	26	287	4,694,151	7,483,455	1,116,851	2,818,891	16,113,348	2,298	0,743	3,041

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.981	0.773	.
(14) Massachusetts Credibility:	0.720	0.890	.
(15) Countrywide Pure Premium:	2.118	0.730	2,848
(16) Countrywide Indicated Relativity:	0.910	0.767	.
(17) Countrywide Credibility:	0.140	0.060	.
(18) Countrywide Lost-Time Claims:	1925.0	.	.
(19) Pure Premium Underlying Present Rate:	2.450	0.783	3,233
(20) Relativity to Underlying Present Rate:	1.131	0.824	.
(21) Credibility to Underlying Relativity:	0.140	0.050	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3,305
(23) Formula Relativity:	0.992	0.775	.
(24) Balanced Formula Relativity:	1.003	0.776	0.937

Class(es):		Effective: 7/1/2023							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)
2016	4,179	0	1	0	0	0	1,326	1,326	0,000	0,317	0,317
2017	6,876	0	1	0	7,541	0	7,128	14,669	1,097	1,037	2,133
2018	6,068	0	0	0	0	0	0	0	0,000	0,000	0,000
2019	8,322	0	0	0	0	0	0	0	0,000	0,000	0,000
2020	5,971	0	2	0	3,090	0	1,272	4,362	0,517	0,213	0,731
MA Total:	31,416	0	4	0	10,630	0	9,726	20,357	0,338	0,310	0,648

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.144	0.322	.
(14) Massachusetts Credibility:	0.100	0.140	.
(15) Countrywide Pure Premium:	2.868	0.923	3,791
(16) Countrywide Indicated Relativity:	1.233	0.970	.
(17) Countrywide Credibility:	0.230	0.240	.
(18) Countrywide Lost-Time Claims:	28,000	.	.
(19) Pure Premium Underlying Present Rate:	3.147	1.231	4,378
(20) Relativity to Underlying Present Rate:	1.452	1.295	.
(21) Credibility to Underlying Relativity:	0.670	0.620	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3,305
(23) Formula Relativity:	1.271	1.081	.
(24) Balanced Formula Relativity:	1.286	1.083	1.227

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Calculation of Class Relativities

Class(es): 5403 CARPENTRY NOC		Effective: 7/1/2023							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)
2016	2,018,591	25	257	5,370,245	8,254,325	2,087,230	2,726,717	18,438,517	6,750	2,385	9,134
2017	2,236,514	20	285	3,344,584	5,390,361	1,270,220	2,599,584	12,604,750	3,906	1,730	5,636
2018	2,353,856	17	283	2,086,599	6,872,181	405,826	2,373,519	11,738,124	3,806	1,181	4,987
2019	2,505,891	15	219	2,696,744	9,991,955	851,772	3,567,911	17,108,381	5,064	1,764	6,827
2020	2,818,910	10	196	2,784,838	5,482,778	730,182	2,634,736	11,632,534	2,933	1,194	4,127
MA Total:	11,933,762	87	1,240	16,283,010	35,991,601	5,345,229	13,902,467	71,522,306	4,380	1,613	5,993

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.869	1.678	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.776	1.107	3.883
(16) Countrywide Indicated Relativity:	1.193	1.162	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	7278.0	.	.
(19) Pure Premium Underlying Present Rate:	4.334	1.666	6.000
(20) Relativity to Underlying Present Rate:	2.000	1.753	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.869	1.678	.
(24) Balanced Formula Relativity:	1.891	1.681	1.830

Class(es): 5437 CARPENTRY-INSTALL OF CABINET WORK OR INT TRIM		Effective: 7/1/2023							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)
2016	2,950,046	7	228	1,584,630	2,992,397	553,732	1,615,973	6,746,731	1,552	0,735	2,287
2017	3,171,230	17	279	2,247,724	6,070,314	588,796	2,103,765	11,010,598	2,623	0,849	3,472
2018	3,346,171	10	221	1,019,001	2,619,319	284,486	1,293,931	5,216,738	1,087	0,472	1,559
2019	3,573,651	9	228	2,089,111	5,411,938	560,642	2,365,876	10,427,566	2,099	0,819	2,918
2020	3,361,798	11	159	1,844,493	3,351,578	436,983	1,476,886	7,109,939	1,546	0,569	2,115
MA Total:	16,402,896	54	1,115	8,784,958	20,445,546	2,424,638	8,856,430	40,511,572	1,782	0,688	2,470

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.760	0.715	.
(14) Massachusetts Credibility:	0.980	1.000	.
(15) Countrywide Pure Premium:	2.799	1.108	3.906
(16) Countrywide Indicated Relativity:	1.203	1.163	.
(17) Countrywide Credibility:	0.010	0.000	.
(18) Countrywide Lost-Time Claims:	4867.0	.	.
(19) Pure Premium Underlying Present Rate:	1.742	0.715	2.456
(20) Relativity to Underlying Present Rate:	0.804	0.752	.
(21) Credibility to Underlying Relativity:	0.010	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.765	0.715	.
(24) Balanced Formula Relativity:	0.774	0.717	0.757

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Calculation of Class Relativities

Class(es): 5443 LATHING & DRIVERS		Effective: 7/1/2023							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)
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
2019	416	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	370	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	2,157	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:	1.134	0.526	1.661
(16) Countrywide Indicated Relativity:	0.487	0.553	.
(17) Countrywide Credibility:	0.400	0.430	.
(18) Countrywide Lost-Time Claims:	118.00	.	.
(19) Pure Premium Underlying Present Rate:	1.695	0.684	2.379
(20) Relativity to Underlying Present Rate:	0.782	0.720	.
(21) Credibility to Underlying Relativity:	0.570	0.530	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.641	0.619	.
(24) Balanced Formula Relativity:	0.648	0.621	0.640

Class(es): 5445 WALLBOARD INSTALLATION WITHIN BUILDINGS & DR		Effective: 7/1/2023							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)
2016	2,105,057	10	159	3,119,246	4,137,398	787,382	1,552,799	9,596,825	3,447	1,112	4,559
2017	2,808,670	16	175	2,820,114	6,796,903	599,178	2,183,904	12,400,100	3,424	0,991	4,415
2018	3,069,615	9	196	2,982,163	9,641,698	777,117	2,802,549	16,203,527	4,113	1,166	5,279
2019	2,790,804	4	123	1,166,076	6,230,880	426,593	1,860,093	9,683,641	2,650	0,819	3,470
2020	3,206,760	9	143	2,352,114	5,714,538	686,570	1,818,962	10,572,184	2,516	0,781	3,297
MA Total:	13,980,906	48	796	12,439,713	32,521,417	3,276,840	10,218,307	58,456,277	3,216	0,965	4,181

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.372	1.004	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.728	1.010	3.739
(16) Countrywide Indicated Relativity:	1.172	1.061	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	4425.0	.	.
(19) Pure Premium Underlying Present Rate:	3.181	1.085	4.267
(20) Relativity to Underlying Present Rate:	1.468	1.142	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.372	1.004	.
(24) Balanced Formula Relativity:	1.388	1.006	1.277

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	666,300	3	77	668,990	1,023,442	89,657	432,017	2,214,105	2,540	0,783	3,323	
2017	726,425	5	88	1,753,146	1,134,326	477,092	823,403	4,187,967	3,975	1,790	5,765	
2018	845,576	3	81	1,284,782	785,151	224,189	260,643	2,554,765	2,448	0,573	3,021	
2019	842,145	2	83	1,152,388	1,713,098	224,733	630,154	3,720,373	3,403	1,015	4,418	
2020	924,842	4	58	1,250,842	1,986,617	905,982	678,875	4,822,315	3,501	1,714	5,214	
MA Total:	4,005,288	17	387	6,110,147	6,642,634	1,921,652	2,825,092	17,499,525	3,184	1,185	4,369	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.359	1.233	.
(14) Massachusetts Credibility:	0.670	0.850	.
(15) Countrywide Pure Premium:	2.791	1.033	3.824
(16) Countrywide Indicated Relativity:	1.199	1.085	.
(17) Countrywide Credibility:	0.170	0.080	.
(18) Countrywide Lost-Time Claims:	1528.0	.	.
(19) Pure Premium Underlying Present Rate:	2.761	0.945	3.706
(20) Relativity to Underlying Present Rate:	1.274	0.994	.
(21) Credibility to Underlying Relativity:	0.160	0.070	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.318	1.204	.
(24) Balanced Formula Relativity:	1.333	1.207	1.296

Class(es):		Effective: 7/1/2023							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)	
2016	130,859	3	5	345,183	485,668	175,113	95,223	1,101,187	6,349	2,066	8,415	
2017	135,187	0	6	0	321,816	0	126,836	448,653	2,381	0,938	3,319	
2018	117,072	1	3	484,052	88,937	60,914	15,636	649,539	4,894	0,654	5,548	
2019	124,621	0	5	0	486,287	0	212,858	699,145	3,902	1,708	5,610	
2020	115,240	0	11	0	725,971	0	453,940	1,179,911	6,300	3,939	10,239	
MA Total:	622,978	4	30	829,235	2,108,679	236,027	904,493	4,078,434	4,716	1,831	6,547	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.012	1.905	.
(14) Massachusetts Credibility:	0.370	0.460	.
(15) Countrywide Pure Premium:	4.118	1.204	5.322
(16) Countrywide Indicated Relativity:	1.770	1.264	.
(17) Countrywide Credibility:	0.320	0.270	.
(18) Countrywide Lost-Time Claims:	89,000	.	.
(19) Pure Premium Underlying Present Rate:	3.855	1.311	5.166
(20) Relativity to Underlying Present Rate:	1.779	1.380	.
(21) Credibility to Underlying Relativity:	0.310	0.270	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.862	1.590	.
(24) Balanced Formula Relativity:	1.884	1.593	1.799

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	371,681	1	19	463,474	730,745	73,651	353,170	1,621,040	3,213	1,148	4,361
2017	414,488	4	42	1,053,339	1,358,159	350,179	495,348	3,257,025	5,818	2,040	7,858
2018	364,994	3	25	161,240	1,414,208	168,948	571,016	2,315,413	4,316	2,027	6,344
2019	386,691	5	34	2,177,852	1,457,823	1,178,583	489,154	5,303,411	9,402	4,313	13,715
2020	367,508	3	19	846,833	1,979,497	180,246	774,652	3,781,230	7,691	2,598	10,289
MA Total:	1,905,361	16	139	4,702,739	6,940,432	1,951,608	2,683,341	16,278,119	6,111	2,433	8,543

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.608	2.531	.
(14) Massachusetts Credibility:	0.590	0.820	.
(15) Countrywide Pure Premium:	4.015	1.632	5.647
(16) Countrywide Indicated Relativity:	1.725	1.714	.
(17) Countrywide Credibility:	0.210	0.090	.
(18) Countrywide Lost-Time Claims:	444.00	.	.
(19) Pure Premium Underlying Present Rate:	4.185	1.812	5.997
(20) Relativity to Underlying Present Rate:	1.931	1.907	.
(21) Credibility to Underlying Relativity:	0.200	0.090	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	2.287	2.401	.
(24) Balanced Formula Relativity:	2.313	2.406	2.340

Class(es):		Effective: 7/1/2023							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)
2016	3,778,877	22	146	3,622,877	3,668,416	1,122,844	1,502,633	9,916,770	1,929	0,695	2,624
2017	4,087,450	19	202	3,387,946	6,287,462	773,652	2,508,666	12,957,726	2,367	0,803	3,170
2018	4,396,134	25	178	4,749,565	4,772,302	1,732,018	2,230,092	13,483,978	2,166	0,901	3,067
2019	4,590,832	14	160	4,220,892	7,782,434	1,908,259	3,548,407	17,459,992	2,615	1,189	3,803
2020	4,864,129	15	159	3,103,482	7,732,918	2,043,863	3,974,704	16,854,966	2,228	1,237	3,465
MA Total:	21,717,421	95	845	19,084,762	30,243,532	7,580,635	13,764,503	70,673,432	2,271	0,983	3,254

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.969	1.022	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.774	1.116	3.889
(16) Countrywide Indicated Relativity:	1.192	1.172	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	5793.0	.	.
(19) Pure Premium Underlying Present Rate:	1.893	0.814	2.707
(20) Relativity to Underlying Present Rate:	0.874	0.857	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.969	1.022	.
(24) Balanced Formula Relativity:	0.980	1.025	0.993

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	765,676	4	62	312,674	1,847,910	125,030	516,132	2,801,747	2,822	0,837	3,659
2017	837,586	1	46	303,858	1,493,759	104,930	429,555	2,332,103	2,146	0,638	2,784
2018	1,044,093	5	60	889,413	884,447	92,538	363,452	2,229,849	1,699	0,437	2,136
2019	1,057,891	5	53	1,495,859	2,774,211	280,128	538,281	5,088,478	4,036	0,774	4,810
2020	943,255	2	34	202,833	2,173,659	40,098	571,476	2,988,065	2,519	0,648	3,168
MA Total:	4,648,500	17	255	3,204,637	9,173,986	642,723	2,418,897	15,440,242	2,663	0,659	3,322

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.136	0.685	.
(14) Massachusetts Credibility:	0.600	0.750	.
(15) Countrywide Pure Premium:	2.025	0.681	2.706
(16) Countrywide Indicated Relativity:	0.870	0.716	.
(17) Countrywide Credibility:	0.200	0.130	.
(18) Countrywide Lost-Time Claims:	1118.0	.	.
(19) Pure Premium Underlying Present Rate:	1.750	0.587	2.336
(20) Relativity to Underlying Present Rate:	0.807	0.617	.
(21) Credibility to Underlying Relativity:	0.200	0.120	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.017	0.681	.
(24) Balanced Formula Relativity:	1.029	0.682	0.928

Class(es):		Effective: 7/1/2023							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)
2016	535,648	2	66	134,263	1,296,843	46,074	359,151	1,836,330	2,672	0,757	3,428
2017	593,133	3	86	184,758	833,894	30,301	421,713	1,470,667	1,717	0,762	2,479
2018	707,878	8	93	783,530	1,669,908	508,630	693,415	3,655,484	3,466	1,698	5,164
2019	720,499	2	98	243,061	1,866,785	72,822	772,732	2,955,399	2,928	1,174	4,102
2020	848,219	3	86	60,294	1,618,368	74,763	807,029	2,560,453	1,979	1,040	3,019
MA Total:	3,405,379	18	429	1,405,905	7,285,798	732,590	3,054,040	12,478,333	2,552	1,112	3,664

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.089	1.157	.
(14) Massachusetts Credibility:	0.610	0.860	.
(15) Countrywide Pure Premium:	2.748	1.335	4.083
(16) Countrywide Indicated Relativity:	1.181	1.402	.
(17) Countrywide Credibility:	0.200	0.070	.
(18) Countrywide Lost-Time Claims:	1780.0	.	.
(19) Pure Premium Underlying Present Rate:	2.524	1.130	3.653
(20) Relativity to Underlying Present Rate:	1.165	1.189	.
(21) Credibility to Underlying Relativity:	0.190	0.070	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.122	1.176	.
(24) Balanced Formula Relativity:	1.135	1.179	1.148

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	548,911	1	27	225,860	1,051,984	40,767	406,364	1,724,976	2,328	0,815	3,143
2017	553,617	2	27	60,882	673,921	149,466	346,346	1,230,616	1,327	0,896	2,223
2018	579,053	2	26	203,495	831,105	70,755	167,457	1,272,813	1,787	0,411	2,198
2019	583,813	1	19	11,352	1,116,132	23,296	395,753	1,546,533	1,931	0,718	2,649
2020	537,214	2	17	138,818	313,169	101,056	248,390	801,433	0,841	0,650	1,492
MA Total:	2,802,608	8	116	640,408	3,986,310	385,340	1,564,311	6,576,370	1,651	0,696	2,347

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.704	0.724	.
(14) Massachusetts Credibility:	0.540	0.690	.
(15) Countrywide Pure Premium:	3.599	1.315	4.914
(16) Countrywide Indicated Relativity:	1.547	1.381	.
(17) Countrywide Credibility:	0.230	0.160	.
(18) Countrywide Lost-Time Claims:	151.00	.	.
(19) Pure Premium Underlying Present Rate:	2.302	0.794	3.096
(20) Relativity to Underlying Present Rate:	1.062	0.836	.
(21) Credibility to Underlying Relativity:	0.230	0.150	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.980	0.846	.
(24) Balanced Formula Relativity:	0.992	0.847	0.950

Class(es):		Effective: 7/1/2023							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)
2016	668,156	3	32	886,379	956,811	197,986	447,145	2,488,321	2,759	0,966	3,724
2017	682,200	7	50	1,684,436	544,047	512,530	245,478	2,986,491	3,267	1,111	4,378
2018	694,351	5	41	1,443,916	1,378,695	756,915	394,209	3,973,736	4,065	1,658	5,723
2019	710,426	1	42	303,368	344,668	51,166	189,570	888,772	0,912	0,339	1,251
2020	955,347	2	19	587,257	1,410,970	226,659	734,868	2,959,754	2,092	1,006	3,098
MA Total:	3,710,479	18	184	4,905,356	4,635,192	1,745,256	2,011,270	13,297,073	2,571	1,012	3,584

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.097	1.053	.
(14) Massachusetts Credibility:	0.660	0.880	.
(15) Countrywide Pure Premium:	2.881	1.126	4.007
(16) Countrywide Indicated Relativity:	1.238	1.182	.
(17) Countrywide Credibility:	0.170	0.060	.
(18) Countrywide Lost-Time Claims:	4344.0	.	.
(19) Pure Premium Underlying Present Rate:	2.797	1.110	3.908
(20) Relativity to Underlying Present Rate:	1.291	1.168	.
(21) Credibility to Underlying Relativity:	0.170	0.060	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.154	1.068	.
(24) Balanced Formula Relativity:	1.167	1.070	1.139

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	185,186	0	14	0	1,676,303	0	390,776	2,067,079	9,052	2,110	11,162
2017	211,419	2	20	336,007	115,099	292,459	138,408	881,973	2,134	2,038	4,172
2018	180,895	0	16	0	129,420	0	70,674	200,094	0,715	0,391	1,106
2019	177,293	0	9	0	377,845	0	95,934	473,779	2,131	0,541	2,672
2020	385,529	0	11	0	12,720	0	36,761	49,481	0,033	0,095	0,128
MA Total:	1,140,322	2	70	336,007	2,311,387	292,459	732,553	3,672,406	2,322	0,899	3,220

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.991	0.935	.
(14) Massachusetts Credibility:	0.400	0.520	.
(15) Countrywide Pure Premium:	2.254	0.828	3.081
(16) Countrywide Indicated Relativity:	0.969	0.869	.
(17) Countrywide Credibility:	0.300	0.240	.
(18) Countrywide Lost-Time Claims:	1437.0	.	.
(19) Pure Premium Underlying Present Rate:	2.696	0.975	3.671
(20) Relativity to Underlying Present Rate:	1.244	1.026	.
(21) Credibility to Underlying Relativity:	0.300	0.240	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.060	0.941	.
(24) Balanced Formula Relativity:	1.072	0.943	1.035

Class(es):		Effective: 7/1/2023							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)
2016	69,565	0	17	0	301,088	0	73,283	374,371	4,328	1,053	5,382
2017	52,477	2	5	421,419	10,997	366,226	16,924	815,566	8,240	7,301	15,542
2018	39,799	0	8	0	1,028	0	2,912	3,940	0,026	0,073	0,099
2019	28,560	0	1	0	0	0	6,151	6,151	0,000	0,215	0,215
2020	22,997	0	1	0	1,666	0	3,726	5,392	0,072	0,162	0,234
MA Total:	213,398	2	32	421,419	314,779	366,226	102,996	1,205,420	3,450	2,199	5,649

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.472	2.287	.
(14) Massachusetts Credibility:	0.200	0.320	.
(15) Countrywide Pure Premium:	2.194	1.192	3.386
(16) Countrywide Indicated Relativity:	0.943	1.252	.
(17) Countrywide Credibility:	0.400	0.340	.
(18) Countrywide Lost-Time Claims:	477.00	.	.
(19) Pure Premium Underlying Present Rate:	2.557	1.495	4.053
(20) Relativity to Underlying Present Rate:	1.180	1.574	.
(21) Credibility to Underlying Relativity:	0.400	0.340	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.144	1.693	.
(24) Balanced Formula Relativity:	1.157	1.696	1.314

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	2,629,911	10	251	2,682,236	3,907,383	404,399	1,631,922	8,625,940	2,506	0,774	3,280	
2017	2,810,244	13	318	2,094,409	3,902,622	832,333	1,774,262	8,603,625	2,134	0,928	3,062	
2018	3,171,235	9	316	1,517,792	3,512,313	1,011,983	1,469,164	7,511,253	1,586	0,782	2,369	
2019	3,652,515	9	300	2,127,638	5,428,417	565,282	3,091,173	11,212,510	2,069	1,001	3,070	
2020	3,693,465	16	254	1,688,822	3,705,728	653,453	1,912,178	7,960,182	1,461	0,695	2,155	
MA Total:	15,957,370	57	1,439	10,110,898	20,456,463	3,467,450	9,878,699	43,913,510	1,916	0,836	2,752	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.817	0.870	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	3.097	1.325	4.422
(16) Countrywide Indicated Relativity:	1.331	1.391	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	285.00	.	.
(19) Pure Premium Underlying Present Rate:	1.894	0.869	2.763
(20) Relativity to Underlying Present Rate:	0.874	0.914	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.817	0.870	.
(24) Balanced Formula Relativity:	0.827	0.872	0.840

Class(es):		Effective: 7/1/2023							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)	
2016	212,306	11	50	2,114,655	2,037,670	1,217,218	1,422,023	6,791,566	19,558	12,431	31,989	
2017	183,302	10	36	1,531,738	1,453,078	853,162	708,929	4,546,908	16,284	8,522	24,806	
2018	200,556	8	56	1,278,958	4,027,750	539,841	2,282,056	8,128,605	26,460	14,070	40,530	
2019	196,966	9	36	1,746,303	2,266,440	901,463	1,194,094	6,108,300	20,373	10,639	31,012	
2020	232,697	8	34	1,436,751	3,900,754	1,934,683	2,127,208	9,399,396	22,938	17,456	40,393	
MA Total:	1,025,828	46	212	8,108,406	13,685,692	5,446,367	7,734,310	34,974,775	21,245	12,849	34,094	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	9.066	13.367	.
(14) Massachusetts Credibility:	0.860	1.000	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	8.730	12.792	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	19.889	12.976	32.865
(20) Relativity to Underlying Present Rate:	9.179	13.657	.
(21) Credibility to Underlying Relativity:	0.140	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	9.082	13.367	.
(24) Balanced Formula Relativity:	9.186	13.394	10.410

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	662,932	10	64	1,770,116	2,603,423	691,086	1,665,014	6,729,640	6,597	3,554	10,151
2017	679,113	1	72	75,629	3,086,758	21,232	789,459	3,973,077	4,657	1,194	5,850
2018	749,747	1	80	168,421	3,766,285	79,007	1,629,452	5,643,166	5,248	2,279	7,527
2019	832,348	6	74	1,170,381	4,210,972	634,674	1,916,382	7,932,408	6,465	3,065	9,530
2020	867,482	4	50	539,058	1,695,376	317,131	1,916,657	4,468,222	2,576	2,575	5,151
MA Total:	3,791,622	22	340	3,723,604	15,362,814	1,743,131	7,916,963	28,746,512	5,034	2,548	7,582

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.148	2.650	.
(14) Massachusetts Credibility:	0.820	1.000	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	2.115	2.518	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	4.819	2.554	7.372
(20) Relativity to Underlying Present Rate:	2.224	2.688	.
(21) Credibility to Underlying Relativity:	0.180	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	2.162	2.650	.
(24) Balanced Formula Relativity:	2.187	2.656	2.323

Class(es):		Effective: 7/1/2023							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)
2016	8,106,957	13	133	2,474,602	2,200,589	622,333	1,082,680	6,380,205	0,577	0,210	0,787
2017	8,736,518	11	151	2,208,411	4,112,157	849,502	1,798,035	8,968,104	0,723	0,303	1,027
2018	8,953,581	7	191	1,610,177	4,719,379	326,797	2,010,552	8,666,905	0,707	0,261	0,968
2019	9,276,656	4	149	1,027,012	3,516,312	233,234	2,071,515	6,848,073	0,490	0,248	0,738
2020	9,798,594	2	156	421,434	5,468,892	294,819	2,305,234	8,490,379	0,601	0,265	0,866
MA Total:	44,872,305	37	780	7,741,636	20,017,328	2,326,684	9,268,017	39,353,666	0,619	0,258	0,877

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.264	0.269	.
(14) Massachusetts Credibility:	0.930	1.000	.
(15) Countrywide Pure Premium:	0.468	0.193	0.661
(16) Countrywide Indicated Relativity:	0.201	0.203	.
(17) Countrywide Credibility:	0.040	0.000	.
(18) Countrywide Lost-Time Claims:	3827.0	.	.
(19) Pure Premium Underlying Present Rate:	0.559	0.289	0.849
(20) Relativity to Underlying Present Rate:	0.258	0.305	.
(21) Credibility to Underlying Relativity:	0.030	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.261	0.269	.
(24) Balanced Formula Relativity:	0.264	0.269	0.266

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Calculation of Class Relativities

Class(es): 5610 CLEANER - DEBRIS REMOVAL		Effective: 7/1/2023							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)
2016	653,024	6	38	1,146,273	133,907	450,834	121,688	1,852,701	1,960	0,877	2,837
2017	644,611	1	39	157,954	839,700	21,455	176,359	1,195,468	1,548	0,307	1,855
2018	642,257	2	44	712,998	4,065,758	76,334	713,368	5,568,458	7,441	1,230	8,670
2019	556,582	2	51	556,684	2,805,182	96,041	828,745	4,286,651	6,040	1,662	7,702
2020	369,053	2	27	891,767	383,837	139,946	151,861	1,567,411	3,456	0,791	4,247
MA Total:	2,865,528	13	199	3,465,676	8,228,384	784,609	1,992,021	14,470,689	4,081	0,969	5,050

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.741	1.008	.
(14) Massachusetts Credibility:	0.550	0.680	.
(15) Countrywide Pure Premium:	2.114	0.968	3.083
(16) Countrywide Indicated Relativity:	0.909	1.017	.
(17) Countrywide Credibility:	0.230	0.160	.
(18) Countrywide Lost-Time Claims:	465.00	.	.
(19) Pure Premium Underlying Present Rate:	2.321	0.745	3.066
(20) Relativity to Underlying Present Rate:	1.071	0.784	.
(21) Credibility to Underlying Relativity:	0.220	0.160	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.402	0.974	.
(24) Balanced Formula Relativity:	1.419	0.976	1.290

Class(es): 5645 CARPENTRY-DETACHED ONE OR TWO FAMILY DWELLINGS		Effective: 7/1/2023							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)
2016	6,636,847	45	673	5,974,625	12,626,887	2,440,123	7,443,372	28,485,007	2,803	1,489	4,292
2017	7,031,096	54	689	7,627,954	11,704,951	3,539,693	7,026,871	29,899,469	2,750	1,503	4,252
2018	7,578,048	59	702	8,653,846	14,311,028	4,362,328	8,221,035	35,548,237	3,030	1,661	4,691
2019	7,906,799	43	629	7,634,505	20,157,795	3,741,191	10,922,239	42,455,730	3,515	1,855	5,370
2020	8,311,470	42	535	8,970,555	19,224,883	4,393,038	9,820,441	42,408,917	3,392	1,710	5,102
MA Total:	37,464,261	243	3,228	38,861,485	78,025,544	18,476,374	43,433,958	178,797,360	3,120	1,653	4,772

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.331	1.719	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	5.318	2.338	7.656
(16) Countrywide Indicated Relativity:	2.286	2.455	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	12984	.	.
(19) Pure Premium Underlying Present Rate:	2.806	1.648	4.454
(20) Relativity to Underlying Present Rate:	1.295	1.734	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.331	1.719	.
(24) Balanced Formula Relativity:	1.347	1.723	1.456

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	50.768	0	5	0	298.973	0	533.183	832.156	5.889	10.502	16.391
2017	49.330	0	6	0	595.984	0	155.781	751.766	12.082	3.158	15.240
2018	40.801	0	2	0	175.115	0	38.042	213.157	4.292	0.932	5.224
2019	60.390	0	6	0	9.127	0	32.798	41.925	0.151	0.543	0.694
2020	96.167	1	2	56.478	141.868	22.407	55.579	276.332	2.063	0.811	2.873
MA Total:	297.455	1	21	56.478	1,221.067	22.407	815.383	2,115.336	4.295	2.817	7.111

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.833	2.930	.
(14) Massachusetts Credibility:	0.380	0.570	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	3.914	4.572	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	8.917	4.638	13.555
(20) Relativity to Underlying Present Rate:	4.115	4.881	.
(21) Credibility to Underlying Relativity:	0.620	0.430	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	3.248	3.769	.
(24) Balanced Formula Relativity:	3.285	3.777	3.428

Class(es):		Effective: 7/1/2023							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)
2016	15.821	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	17.361	0	1	0	8.074	0	5.628	13.702	0.465	0.324	0.789
2018	19.713	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	19.215	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	18.674	0	2	0	75.052	0	63.703	138.755	4.019	3.411	7.431
MA Total:	90.783	0	3	0	83.126	0	69.331	152.457	0.916	0.764	1.679

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.391	0.794	.
(14) Massachusetts Credibility:	0.190	0.260	.
(15) Countrywide Pure Premium:	3.807	2.317	6.124
(16) Countrywide Indicated Relativity:	1.636	2.434	.
(17) Countrywide Credibility:	0.210	0.220	.
(18) Countrywide Lost-Time Claims:	22.000	.	.
(19) Pure Premium Underlying Present Rate:	5.345	2.125	7.469
(20) Relativity to Underlying Present Rate:	2.467	2.236	.
(21) Credibility to Underlying Relativity:	0.600	0.520	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.898	1.905	.
(24) Balanced Formula Relativity:	1.920	1.908	1.916

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
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	733	733	0.000	2.715	2.715
2019	329	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	179	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	2,976	0	1	0	0	0	733	733	0.000	0.246	0.246

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.256	.
(14) Massachusetts Credibility:	0.050	0.060	.
(15) Countrywide Pure Premium:	8.440	3.617	12.057
(16) Countrywide Indicated Relativity:	3.627	3.798	.
(17) Countrywide Credibility:	0.180	0.190	.
(18) Countrywide Lost-Time Claims:	15.000	.	.
(19) Pure Premium Underlying Present Rate:	4.502	1.773	6.275
(20) Relativity to Underlying Present Rate:	2.078	1.866	.
(21) Credibility to Underlying Relativity:	0.770	0.750	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	2.253	2.136	.
(24) Balanced Formula Relativity:	2.279	2.141	2.239

Class(es):		Effective: 7/1/2023							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)
2016	89,447	2	10	318,756	42,158	86,667	58,873	506,454	4,035	1,627	5,662
2017	66,365	0	1	0	0	0	85	85	0,000	0,001	0,001
2018	95,002	0	6	0	49,042	0	12,994	62,036	0,516	0,137	0,653
2019	77,305	0	8	0	708,611	0	180,297	888,908	9,166	2,332	11,499
2020	108,472	0	3	0	90,538	0	31,825	122,363	0,835	0,293	1,128
MA Total:	436,592	2	28	318,756	890,350	86,667	284,074	1,579,847	2,769	0,849	3,619

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.182	0.883	.
(14) Massachusetts Credibility:	0.310	0.410	.
(15) Countrywide Pure Premium:	3.039	1.224	4.264
(16) Countrywide Indicated Relativity:	1.306	1.286	.
(17) Countrywide Credibility:	0.350	0.300	.
(18) Countrywide Lost-Time Claims:	114.00	.	.
(19) Pure Premium Underlying Present Rate:	3.758	1.347	5.106
(20) Relativity to Underlying Present Rate:	1.734	1.418	.
(21) Credibility to Underlying Relativity:	0.340	0.290	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.413	1.159	.
(24) Balanced Formula Relativity:	1.430	1.161	1.352

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	170.168	1	10	16.491	325.859	5.723	58.638	406.711	2.012	0.378	2.390
2017	194.706	0	10	0	54.441	0	34.621	89.062	0.280	0.178	0.457
2018	174.072	0	16	0	1,330.059	0	375.904	1,705.963	7.641	2.159	9.800
2019	222.169	1	10	102.563	541.550	30.730	135.880	810.723	2.899	0.750	3.649
2020	234.843	1	7	449.946	420.333	142.829	103.398	1,116.507	3.706	1.048	4.754
MA Total:	995.958	3	53	569,000	2,672,244	179,282	708,440	4,128,966	3.254	0.891	4.146

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.389	0.927	.
(14) Massachusetts Credibility:	0.370	0.500	.
(15) Countrywide Pure Premium:	3.399	1.266	4.665
(16) Countrywide Indicated Relativity:	1.461	1.329	.
(17) Countrywide Credibility:	0.320	0.250	.
(18) Countrywide Lost-Time Claims:	769.00	.	.
(19) Pure Premium Underlying Present Rate:	2.522	1.007	3.529
(20) Relativity to Underlying Present Rate:	1.164	1.060	.
(21) Credibility to Underlying Relativity:	0.310	0.250	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.342	1.061	.
(24) Balanced Formula Relativity:	1.357	1.063	1.272

Class(es):		Effective: 7/1/2023							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)
2016	4,212.871	28	224	4,376.672	6,202.177	1,434.932	2,713.273	14,727.054	2.511	0.985	3.496
2017	4,579.109	26	268	6,452.900	7,301.649	2,104.273	2,463.755	18,322.577	3.004	0.998	4.001
2018	5,119.000	18	208	4,107.981	5,036.288	1,200.502	2,114.869	12,459.640	1.786	0.648	2.434
2019	5,173.865	8	201	2,260.041	5,675.190	644.697	2,563.858	11,143.787	1.534	0.620	2.154
2020	5,005.151	12	188	2,912.525	10,513.569	799.093	4,394.389	18,619.575	2.682	1.038	3.720
MA Total:	24,089.996	92	1,089	20,110,119	34,728,873	6,183,497	14,250,144	75,272,634	2.276	0.848	3.125

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.971	0.882	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.040	0.790	2.830
(16) Countrywide Indicated Relativity:	0.877	0.829	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	6366.0	.	.
(19) Pure Premium Underlying Present Rate:	2.137	0.792	2.929
(20) Relativity to Underlying Present Rate:	0.986	0.834	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.971	0.882	.
(24) Balanced Formula Relativity:	0.983	0.884	0.954

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	415,392	2	15	211,368	188,637	162,680	105,875	668,559	0.963	0.647	1.609
2017	458,887	1	35	165,621	507,301	24,427	209,390	906,739	1.466	0.510	1.976
2018	478,111	2	40	147,327	1,111,126	40,576	410,772	1,709,801	2.632	0.944	3.576
2019	516,847	3	28	582,194	891,916	90,582	569,994	2,134,687	2.852	1.278	4.130
2020	511,709	3	28	1,329,973	547,323	340,444	281,255	2,498,995	3.669	1.215	4.884
MA Total:	2,380,946	11	146	2,436,482	3,246,303	658,709	1,577,286	7,918,781	2.387	0.939	3.326

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.018	0.977	.
(14) Massachusetts Credibility:	0.460	0.640	.
(15) Countrywide Pure Premium:	2.287	0.911	3.197
(16) Countrywide Indicated Relativity:	0.983	0.956	.
(17) Countrywide Credibility:	0.270	0.180	.
(18) Countrywide Lost-Time Claims:	593.00	.	.
(19) Pure Premium Underlying Present Rate:	1.804	0.783	2.587
(20) Relativity to Underlying Present Rate:	0.833	0.824	.
(21) Credibility to Underlying Relativity:	0.270	0.180	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.959	0.946	.
(24) Balanced Formula Relativity:	0.970	0.948	0.963

Class(es):		Effective: 7/1/2023							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)
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
2019	34,294	0	1	0	44,406	0	13,980	58,386	1.295	0.408	1.703
2020	39,524	0	2	0	0	0	9,368	9,368	0.000	0.237	0.237
MA Total:	213,045	0	3	0	44,406	0	23,347	67,754	0.208	0.110	0.318

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.089	0.114	.
(14) Massachusetts Credibility:	0.140	0.180	.
(15) Countrywide Pure Premium:	1.313	0.376	1.689
(16) Countrywide Indicated Relativity:	0.564	0.395	.
(17) Countrywide Credibility:	0.430	0.410	.
(18) Countrywide Lost-Time Claims:	564.00	.	.
(19) Pure Premium Underlying Present Rate:	1.072	0.348	1.420
(20) Relativity to Underlying Present Rate:	0.495	0.367	.
(21) Credibility to Underlying Relativity:	0.430	0.410	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.468	0.333	.
(24) Balanced Formula Relativity:	0.473	0.333	0.433

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
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
2019	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	12,999	0	1	0	0	0	2,234	2,234	0.000	0.172	0.172
MA Total:	13,483	0	1	0	0	0	2,234	2,234	0.000	0.166	0.166

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.172	.
(14) Massachusetts Credibility:	0.060	0.080	.
(15) Countrywide Pure Premium:	2.699	0.773	3.472
(16) Countrywide Indicated Relativity:	1.160	0.812	.
(17) Countrywide Credibility:	0.270	0.290	.
(18) Countrywide Lost-Time Claims:	45.000	.	.
(19) Pure Premium Underlying Present Rate:	2.209	0.693	2.902
(20) Relativity to Underlying Present Rate:	1.019	0.730	.
(21) Credibility to Underlying Relativity:	0.670	0.630	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.996	0.709	.
(24) Balanced Formula Relativity:	1.008	0.710	0.921

Class(es):		Effective: 7/1/2023							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)
2016	80,775	1	6	9,531	134,403	1,724	102,991	248,650	1.782	1.296	3.078
2017	50,464	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	90,317	0	1	0	75,017	0	45,809	120,826	0.831	0.507	1.338
2019	100,837	0	4	0	19,396	0	67,074	86,471	0.192	0.665	0.858
2020	70,243	0	2	0	275,142	0	142,361	417,503	3.917	2.027	5.944
MA Total:	392,636	1	13	9,531	503,959	1,724	358,236	873,450	1.308	0.917	2.225

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.558	0.954	.
(14) Massachusetts Credibility:	0.230	0.290	.
(15) Countrywide Pure Premium:	2.128	0.658	2.787
(16) Countrywide Indicated Relativity:	0.915	0.691	.
(17) Countrywide Credibility:	0.300	0.320	.
(18) Countrywide Lost-Time Claims:	57.000	.	.
(19) Pure Premium Underlying Present Rate:	2.011	0.656	2.668
(20) Relativity to Underlying Present Rate:	0.928	0.691	.
(21) Credibility to Underlying Relativity:	0.470	0.390	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.839	0.767	.
(24) Balanced Formula Relativity:	0.849	0.769	0.825

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	276,051	6	26	1,355,601	648,055	278,278	194,573	2,476,508	7,258	1,713	8,971	
2017	254,204	2	21	587,052	914,849	148,432	278,471	1,928,804	5,908	1,679	7,588	
2018	268,233	2	29	647,303	1,047,869	443,695	313,238	2,452,105	6,320	2,822	9,142	
2019	265,190	2	22	616,842	1,197,077	100,675	302,980	2,217,574	6,840	1,522	8,362	
2020	280,685	2	21	414,157	1,263,019	151,446	235,036	2,063,658	5,975	1,377	7,352	
MA Total:	1,344,363	14	119	3,620,955	5,070,869	1,122,526	1,324,298	11,138,648	6,465	1,820	8,285	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.759	1.893	.
(14) Massachusetts Credibility:	0.520	0.680	.
(15) Countrywide Pure Premium:	2.157	0.873	3.030
(16) Countrywide Indicated Relativity:	0.927	0.917	.
(17) Countrywide Credibility:	0.240	0.160	.
(18) Countrywide Lost-Time Claims:	1467.0	.	.
(19) Pure Premium Underlying Present Rate:	4.325	1.577	5.902
(20) Relativity to Underlying Present Rate:	1.996	1.659	.
(21) Credibility to Underlying Relativity:	0.240	0.160	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	2.136	1.700	.
(24) Balanced Formula Relativity:	2.161	1.703	2.028

Class(es):		Effective: 7/1/2023							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)	
2016	969,608	2	53	278,587	882,688	70,515	401,106	1,632,895	1,198	0,486	1,684	
2017	910,626	2	23	304,243	953,036	33,403	512,138	1,802,820	1,381	0,599	1,980	
2018	1,205,269	1	32	454,945	814,847	55,605	375,825	1,701,221	1,054	0,358	1,411	
2019	1,068,279	0	30	0	733,255	0	605,917	1,339,171	0,686	0,567	1,254	
2020	1,223,341	0	25	0	1,625,699	0	702,807	2,328,506	1,329	0,574	1,903	
MA Total:	5,377,124	5	163	1,037,775	5,009,525	159,522	2,597,791	8,804,613	1,125	0,513	1,637	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.480	0.533	.
(14) Massachusetts Credibility:	0.570	0.750	.
(15) Countrywide Pure Premium:	1.398	0.570	1.968
(16) Countrywide Indicated Relativity:	0.601	0.599	.
(17) Countrywide Credibility:	0.220	0.130	.
(18) Countrywide Lost-Time Claims:	1386.0	.	.
(19) Pure Premium Underlying Present Rate:	1.332	0.511	1.843
(20) Relativity to Underlying Present Rate:	0.615	0.538	.
(21) Credibility to Underlying Relativity:	0.210	0.120	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.535	0.543	.
(24) Balanced Formula Relativity:	0.541	0.544	0.542

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	261.444	2	8	172.331	684	14.634	14.258	201.908	0.662	0.111	0.772
2017	281.605	0	12	0	35.530	0	59.055	94.585	0.126	0.210	0.336
2018	357.932	0	4	0	65.680	0	14.583	80.263	0.183	0.041	0.224
2019	399.512	0	16	0	1.183.571	0	644.298	1.827.869	2.963	1.613	4.575
2020	409.072	1	12	57.665	123.012	42.836	228.260	451.773	0.442	0.663	1.104
MA Total:	1,709,565	3	52	229,997	1,408,477	57,470	960,453	2,656,397	0.958	0.595	1.554

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.409	0.619	.
(14) Massachusetts Credibility:	0.350	0.470	.
(15) Countrywide Pure Premium:	1.749	0.740	2.490
(16) Countrywide Indicated Relativity:	0.752	0.778	.
(17) Countrywide Credibility:	0.330	0.270	.
(18) Countrywide Lost-Time Claims:	1245.0	.	.
(19) Pure Premium Underlying Present Rate:	1.219	0.507	1.725
(20) Relativity to Underlying Present Rate:	0.562	0.533	.
(21) Credibility to Underlying Relativity:	0.320	0.260	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.571	0.640	.
(24) Balanced Formula Relativity:	0.578	0.641	0.596

Class(es):		Effective: 7/1/2023							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)
2016	387.001	4	45	630.718	126.759	542.589	156.343	1,456.410	1.957	1.806	3.763
2017	430.680	2	60	65.762	929.418	10.841	330.927	1,336.948	2.311	0.794	3.104
2018	461.061	2	51	188.440	446.932	76.754	279.508	991.634	1.378	0.773	2.151
2019	486.981	3	54	446.780	954.007	135.556	438.652	1,974.995	2.876	1.179	4.056
2020	539.834	1	49	434.511	713.944	99.162	514.604	1,762.221	2.127	1.137	3.264
MA Total:	2,305,557	12	259	1,766,211	3,171,061	864,903	1,720,034	7,522,209	2.141	1.121	3.263

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.914	1.166	.
(14) Massachusetts Credibility:	0.480	0.730	.
(15) Countrywide Pure Premium:	2.202	1.016	3.218
(16) Countrywide Indicated Relativity:	0.946	1.067	.
(17) Countrywide Credibility:	0.260	0.140	.
(18) Countrywide Lost-Time Claims:	973.00	.	.
(19) Pure Premium Underlying Present Rate:	2.104	1.098	3.202
(20) Relativity to Underlying Present Rate:	0.971	1.155	.
(21) Credibility to Underlying Relativity:	0.260	0.130	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.937	1.151	.
(24) Balanced Formula Relativity:	0.948	1.153	1.008

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	266.057	2	29	50.712	531.296	115.598	258.053	955.660	2.188	1.404	3.592
2017	279.223	1	26	11.448	66.796	4.568	84.184	166.996	0.280	0.318	0.598
2018	289.798	0	29	0	11.547	0	37.588	49.135	0.040	0.130	0.170
2019	300.352	1	29	27.210	691.348	23.120	244.066	985.743	2.392	0.890	3.282
2020	315.185	1	22	44.719	24.824	11.722	87.885	169.151	0.221	0.316	0.537
MA Total:	1,450,615	5	135	134,090	1,325,812	155,008	711,776	2,326,686	1.006	0.598	1.604

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.395	0.551	.
(14) Massachusetts Credibility:	0.280	0.470	.
(15) Countrywide Pure Premium:	1.186	0.632	1.818
(16) Countrywide Indicated Relativity:	0.487	0.622	.
(17) Countrywide Credibility:	0.360	0.270	.
(18) Countrywide Lost-Time Claims:	1001.0	.	.
(19) Pure Premium Underlying Present Rate:	0.885	0.579	1.464
(20) Relativity to Underlying Present Rate:	0.430	0.570	.
(21) Credibility to Underlying Relativity:	0.360	0.260	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.441	0.575	.
(24) Balanced Formula Relativity:	0.440	0.577	0.481

Class(es):		Effective: 7/1/2023							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)
2016	483.859	3	49	630.634	91.604	233.338	160.240	1,115.816	1.493	0.813	2.306
2017	543.485	1	86	29.308	227.186	88.704	334.058	679.255	0.472	0.778	1.250
2018	563.590	1	58	35.269	174.098	16.404	280.754	506.524	0.371	0.527	0.899
2019	562.811	3	44	268.240	649.186	244.637	170.862	1,332.926	1.630	0.738	2.368
2020	555.904	0	47	0	537.280	0	440.602	977.882	0.966	0.793	1.759
MA Total:	2,709,649	8	284	963,451	1,679,354	583,083	1,386,517	4,612,404	0.975	0.727	1.702

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.383	0.670	.
(14) Massachusetts Credibility:	0.400	0.700	.
(15) Countrywide Pure Premium:	1.485	0.833	2.318
(16) Countrywide Indicated Relativity:	0.610	0.820	.
(17) Countrywide Credibility:	0.300	0.150	.
(18) Countrywide Lost-Time Claims:	613.00	.	.
(19) Pure Premium Underlying Present Rate:	1.126	0.845	1.972
(20) Relativity to Underlying Present Rate:	0.547	0.831	.
(21) Credibility to Underlying Relativity:	0.300	0.150	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.500	0.717	.
(24) Balanced Formula Relativity:	0.499	0.719	0.565

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	3,112,709	32	365	4,117,228	6,748,240	2,516,130	3,420,335	16,801,932	3,491	1,907	5,398
2017	3,197,857	35	409	6,156,984	7,030,244	1,615,502	2,753,868	17,556,598	4,124	1,366	5,490
2018	3,026,588	30	308	4,831,768	6,517,522	1,182,361	3,738,912	16,270,563	3,750	1,626	5,376
2019	3,007,632	37	286	6,518,057	7,289,820	2,244,962	3,300,564	19,353,403	4,591	1,844	6,435
2020	3,073,616	24	257	3,369,737	7,408,180	1,286,893	2,978,612	15,043,422	3,507	1,388	4,894
MA Total:	15,418,403	158	1,625	24,993,772	34,994,006	8,845,848	16,192,292	85,025,918	3,891	1,624	5,515

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.527	1.497	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	4.154	1.420	5.574
(16) Countrywide Indicated Relativity:	1.707	1.397	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	52519	.	.
(19) Pure Premium Underlying Present Rate:	3.548	1.552	5.100
(20) Relativity to Underlying Present Rate:	1.722	1.526	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	1.527	1.497	.
(24) Balanced Formula Relativity:	1.524	1.502	1.517

Class(es):		Effective: 7/1/2023							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)
2016	73,897	2	11	56,923	133,033	12,384	103,855	306,195	2,571	1,573	4,144
2017	92,075	0	28	0	438,575	0	200,684	639,259	4,763	2,180	6,943
2018	110,087	1	35	208,801	578,968	128,033	244,255	1,160,057	7,156	3,382	10,538
2019	212,593	1	46	17,683	983,105	20,759	412,729	1,434,276	4,708	2,039	6,747
2020	43,700	0	7	0	290,253	0	158,647	448,900	6,642	3,630	10,272
MA Total:	532,352	4	127	283,407	2,423,934	161,176	1,120,170	3,988,687	5,086	2,407	7,493

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.996	2.219	.
(14) Massachusetts Credibility:	0.350	0.480	.
(15) Countrywide Pure Premium:	4.007	1.627	5.634
(16) Countrywide Indicated Relativity:	1.646	1.601	.
(17) Countrywide Credibility:	0.330	0.260	.
(18) Countrywide Lost-Time Claims:	1336.0	.	.
(19) Pure Premium Underlying Present Rate:	4.127	1.702	5.829
(20) Relativity to Underlying Present Rate:	2.004	1.673	.
(21) Credibility to Underlying Relativity:	0.320	0.260	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	1.883	1.917	.
(24) Balanced Formula Relativity:	1.879	1.923	1.892

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	668,100	26	126	3,359,775	1,889,321	1,172,219	979,890	7,401,204	7,857	3,221	11,078	
2017	701,798	17	159	1,495,399	2,947,669	407,439	1,004,031	5,854,538	6,331	2,011	8,342	
2018	901,235	17	198	2,278,931	3,737,204	1,000,718	1,378,209	8,395,062	6,675	2,640	9,315	
2019	1,423,408	24	275	3,703,972	4,043,440	1,204,484	1,541,796	10,493,692	5,443	1,929	7,372	
2020	2,250,174	55	542	5,189,648	7,616,139	1,523,560	3,601,386	17,930,732	5,691	2,278	7,969	
MA Total:	5,944,714	139	1,300	16,027,725	20,233,773	5,308,419	8,505,312	50,075,229	6,100	2,324	8,423	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.394	2.142	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	4.566	1.560	6.125
(16) Countrywide Indicated Relativity:	1.876	1.535	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	6838.0	.	.
(19) Pure Premium Underlying Present Rate:	5.294	2.495	7.790
(20) Relativity to Underlying Present Rate:	2.570	2.454	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	2.394	2.142	.
(24) Balanced Formula Relativity:	2.389	2.150	2.317

Class(es):		Effective: 7/1/2023							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)	
2016	108,174	0	14	0	232,851	0	43,249	276,100	2,153	0.400	2,552	
2017	116,769	2	18	52,298	326,222	13,768	92,620	484,908	3,242	0.911	4,153	
2018	134,299	1	32	75,602	579,005	42,088	165,234	861,928	4,874	1,544	6,418	
2019	210,271	1	20	104,971	278,156	13,335	226,504	622,966	1,822	1,141	2,963	
2020	229,711	2	22	255,987	69,775	64,234	36,709	426,705	1,418	0.439	1,858	
MA Total:	799,225	6	106	488,858	1,486,009	133,425	564,315	2,672,607	2,471	0.873	3,344	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.970	0.805	.
(14) Massachusetts Credibility:	0.310	0.430	.
(15) Countrywide Pure Premium:	2.369	1.060	3.429
(16) Countrywide Indicated Relativity:	0.973	1.043	.
(17) Countrywide Credibility:	0.350	0.290	.
(18) Countrywide Lost-Time Claims:	1662.0	.	.
(19) Pure Premium Underlying Present Rate:	1.969	0.868	2.836
(20) Relativity to Underlying Present Rate:	0.956	0.853	.
(21) Credibility to Underlying Relativity:	0.340	0.280	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.966	0.887	.
(24) Balanced Formula Relativity:	0.964	0.890	0.942

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	1,477,483	22	446	2,011,384	2,046,014	734,135	1,360,448	6,151,981	2,746	1,418	4,164
2017	1,792,415	15	527	1,640,740	1,840,620	445,722	1,146,981	5,074,064	1,942	0,889	2,831
2018	1,827,016	15	506	1,144,205	2,017,786	460,653	1,363,197	4,985,842	1,731	0,998	2,729
2019	1,778,307	22	433	2,086,468	1,817,370	385,719	1,304,643	5,594,200	2,195	0,951	3,146
2020	1,755,798	20	399	1,920,884	4,258,078	684,581	1,563,731	8,427,274	3,519	1,281	4,800
MA Total:	8,631,020	94	2,311	8,803,681	11,979,869	2,710,810	6,739,001	30,233,361	2,408	1,095	3,503

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.945	1.009	.
(14) Massachusetts Credibility:	0.740	1.000	.
(15) Countrywide Pure Premium:	2.336	1.091	3.427
(16) Countrywide Indicated Relativity:	0.960	1.074	.
(17) Countrywide Credibility:	0.130	0.000	.
(18) Countrywide Lost-Time Claims:	1911.0	.	.
(19) Pure Premium Underlying Present Rate:	1.614	0.945	2.558
(20) Relativity to Underlying Present Rate:	0.783	0.929	.
(21) Credibility to Underlying Relativity:	0.130	0.000	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.926	1.009	.
(24) Balanced Formula Relativity:	0.924	1.013	0.950

Class(es):		Effective: 7/1/2023							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)
2016	4,100,662	56	743	5,707,892	6,936,340	2,003,216	4,045,453	18,692,902	3,083	1,475	4,559
2017	4,338,898	37	755	5,160,555	9,417,436	1,467,351	4,432,600	20,477,942	3,360	1,360	4,720
2018	4,332,185	46	766	6,725,600	8,437,145	1,954,228	4,001,571	21,118,543	3,500	1,375	4,875
2019	4,337,442	38	630	6,041,413	10,438,923	1,526,093	4,747,881	22,754,311	3,800	1,446	5,246
2020	4,021,814	33	525	3,853,728	11,658,736	1,278,170	4,618,516	21,409,149	3,857	1,466	5,323
MA Total:	21,131,001	210	3,419	27,489,188	46,888,580	8,229,058	21,846,021	104,452,847	3,520	1,423	4,943

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.381	1.312	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.947	1.223	4.170
(16) Countrywide Indicated Relativity:	1.211	1.203	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	27928	.	.
(19) Pure Premium Underlying Present Rate:	2.714	1.300	4.013
(20) Relativity to Underlying Present Rate:	1.317	1.278	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	1.381	1.312	.
(24) Balanced Formula Relativity:	1.378	1.317	1.360

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	3,839,451	39	715	3,075,179	3,657,022	897,847	2,212,594	9,842,642	1,753	0,810	2,564
2017	3,874,954	46	614	2,711,546	3,455,933	687,255	1,725,872	8,580,607	1,592	0,623	2,214
2018	4,141,900	60	596	4,418,643	4,920,882	1,344,754	2,541,838	13,226,117	2,255	0,938	3,193
2019	3,487,951	31	429	2,610,249	3,079,219	847,791	1,436,440	7,973,699	1,631	0,655	2,286
2020	2,699,296	33	282	3,693,400	3,010,922	1,042,963	1,451,907	9,199,192	2,484	0,924	3,408
MA Total:	18,043,553	209	2,636	16,509,017	18,123,978	4,820,609	9,368,652	48,822,256	1,919	0,786	2,706

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.753	0.725	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.259	1.084	3.342
(16) Countrywide Indicated Relativity:	0.928	1.067	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	7946.0	.	.
(19) Pure Premium Underlying Present Rate:	1.706	0.827	2.532
(20) Relativity to Underlying Present Rate:	0.828	0.813	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.753	0.725	.
(24) Balanced Formula Relativity:	0.752	0.727	0.744

Class(es):		Effective: 7/1/2023							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)
2016	1,786,646	6	256	354,693	1,167,893	92,827	1,151,252	2,766,664	0,852	0,696	1,549
2017	1,935,320	13	259	1,331,974	1,122,425	454,868	953,202	3,862,470	1,268	0,728	1,996
2018	1,444,009	5	200	1,342,503	1,716,326	172,827	782,633	4,014,291	2,118	0,662	2,780
2019	1,352,347	2	128	172,890	1,859,741	53,945	678,893	2,765,469	1,503	0,542	2,045
2020	1,205,820	8	82	733,233	1,356,399	332,196	819,947	3,241,775	1,733	0,955	2,688
MA Total:	7,724,141	34	925	3,935,294	7,222,784	1,106,663	4,385,927	16,650,668	1,445	0,711	2,156

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.567	0.656	.
(14) Massachusetts Credibility:	0.670	1.000	.
(15) Countrywide Pure Premium:	1.904	0.801	2.705
(16) Countrywide Indicated Relativity:	0.782	0.788	.
(17) Countrywide Credibility:	0.170	0.000	.
(18) Countrywide Lost-Time Claims:	16927	.	.
(19) Pure Premium Underlying Present Rate:	1.426	0.852	2.278
(20) Relativity to Underlying Present Rate:	0.692	0.838	.
(21) Credibility to Underlying Relativity:	0.160	0.000	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.624	0.656	.
(24) Balanced Formula Relativity:	0.622	0.658	0.633

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Calculation of Class Relativities

Class(es):									Effective: 7/1/2023			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)		
2016	2,924,810	1	95	13,377	942,054	3,734	398,151	1,357,316	0.327	0.137	0.464		
2017	3,158,686	10	154	1,923,626	1,686,780	411,698	574,687	4,596,792	1.143	0.312	1.455		
2018	950,567	1	34	21,253	893,698	15,146	385,251	1,315,348	0.963	0.421	1.384		
2019	878,693	2	47	263,911	407,859	45,571	161,603	878,944	0.765	0.236	1.000		
2020	684,748	2	15	424,373	88,246	399,425	41,589	953,632	0.749	0.644	1.393		
MA Total:	8,597,503	16	345	2,646,540	4,018,637	875,573	1,561,281	9,102,032	0.775	0.283	1.059		

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.304	0.261	.
(14) Massachusetts Credibility:	0.480	0.670	.
(15) Countrywide Pure Premium:	0.728	0.214	0.941
(16) Countrywide Indicated Relativity:	0.299	0.210	.
(17) Countrywide Credibility:	0.260	0.170	.
(18) Countrywide Lost-Time Claims:	6013.0	.	.
(19) Pure Premium Underlying Present Rate:	0.549	0.236	0.785
(20) Relativity to Underlying Present Rate:	0.267	0.232	.
(21) Credibility to Underlying Relativity:	0.260	0.160	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.293	0.248	.
(24) Balanced Formula Relativity:	0.292	0.249	0.279

Class(es):									Effective: 7/1/2023			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)		
2016	3,623	1	0	350,874	0	249,540	0	600,414	96.853	68.881	165.73		
2017	3,061	0	1	0	137,471	0	24,871	162,342	44.907	8.124	53.032		
2018	1,832	0	0	0	0	0	0	0	0.000	0.000	0.000		
2019	2,649	0	0	0	0	0	0	0	0.000	0.000	0.000		
2020	2,774	0	0	0	0	0	0	0	0.000	0.000	0.000		
MA Total:	13,938	1	1	350,874	137,471	249,540	24,871	762,756	35.036	19.687	54.723		

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	13.750	18.152	.
(14) Massachusetts Credibility:	0.110	0.200	.
(15) Countrywide Pure Premium:	3.714	0.646	4.360
(16) Countrywide Indicated Relativity:	1.526	0.636	.
(17) Countrywide Credibility:	0.170	0.180	.
(18) Countrywide Lost-Time Claims:	14.000	.	.
(19) Pure Premium Underlying Present Rate:	8.330	6.789	15.119
(20) Relativity to Underlying Present Rate:	4.044	6.675	.
(21) Credibility to Underlying Relativity:	0.720	0.620	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	4.683	7.884	.
(24) Balanced Formula Relativity:	4.673	7.909	5.640

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	380.964	0	3	0	224.387	0	34.409	258.795	0.589	0.090	0.679
2017	405.138	0	8	0	0	0	12.856	12.856	0.000	0.032	0.032
2018	460.095	1	4	306.002	25.722	38.396	18.441	388.560	0.721	0.124	0.845
2019	425.796	1	3	102.689	0	17.014	4.820	124.523	0.241	0.051	0.292
2020	479.075	0	2	0	23.405	0	8.723	32.128	0.049	0.018	0.067
MA Total:	2,151.068	2	20	408.691	273.513	55.410	79,248	816.862	0.317	0.063	0.380

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.124	0.058	.
(14) Massachusetts Credibility:	0.270	0.350	.
(15) Countrywide Pure Premium:	0.799	0.182	0.982
(16) Countrywide Indicated Relativity:	0.328	0.179	.
(17) Countrywide Credibility:	0.370	0.330	.
(18) Countrywide Lost-Time Claims:	411.00	.	.
(19) Pure Premium Underlying Present Rate:	0.541	0.190	0.731
(20) Relativity to Underlying Present Rate:	0.263	0.186	.
(21) Credibility to Underlying Relativity:	0.360	0.320	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.250	0.139	.
(24) Balanced Formula Relativity:	0.249	0.139	0.216

Class(es):		Effective: 7/1/2023							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)
2016	83.601	0	3	0	0	0	2.669	2.669	0.000	0.032	0.032
2017	27.763	1	1	413.137	0	209.796	268	623.202	14.881	7.566	22.448
2018	33.732	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	25.944	0	4	0	6.658	0	4.591	11.250	0.257	0.177	0.434
2020	30.536	0	2	0	150.301	0	29.202	179.503	4.922	0.956	5.878
MA Total:	201.575	1	10	413.137	156.960	209.796	36.730	816.623	2.828	1.223	4.051

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.110	1.128	.
(14) Massachusetts Credibility:	0.150	0.200	.
(15) Countrywide Pure Premium:	1.125	0.294	1.419
(16) Countrywide Indicated Relativity:	0.462	0.289	.
(17) Countrywide Credibility:	0.430	0.400	.
(18) Countrywide Lost-Time Claims:	179.00	.	.
(19) Pure Premium Underlying Present Rate:	1.265	0.499	1.764
(20) Relativity to Underlying Present Rate:	0.614	0.491	.
(21) Credibility to Underlying Relativity:	0.420	0.400	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.623	0.537	.
(24) Balanced Formula Relativity:	0.622	0.539	0.597

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	227,480	0	17	0	465,915	0	84,351	550,265	2,048	0,371	2,419
2017	267,378	1	22	76,721	142,008	5,600	94,009	318,339	0,818	0,373	1,191
2018	257,535	0	15	0	41,465	0	58,896	100,360	0,161	0,229	0,390
2019	227,412	1	18	498,882	643,992	52,189	105,228	1,300,290	5,026	0,692	5,718
2020	251,084	0	7	0	13,690	0	32,119	45,809	0,055	0,128	0,182
MA Total:	1,230,890	2	79	575,603	1,307,069	57,790	374,602	2,315,064	1,530	0,351	1,881

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.600	0.324	.
(14) Massachusetts Credibility:	0.250	0.360	.
(15) Countrywide Pure Premium:	0.971	0.409	1.380
(16) Countrywide Indicated Relativity:	0.399	0.403	.
(17) Countrywide Credibility:	0.380	0.320	.
(18) Countrywide Lost-Time Claims:	414.00	.	.
(19) Pure Premium Underlying Present Rate:	0.781	0.349	1.130
(20) Relativity to Underlying Present Rate:	0.379	0.343	.
(21) Credibility to Underlying Relativity:	0.370	0.320	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.442	0.355	.
(24) Balanced Formula Relativity:	0.441	0.356	0.416

Class(es):		Effective: 7/1/2023							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)
2016	9,407	0	1	0	0	0	1,046	1,046	0,000	0,111	0,111
2017	4,220	0	0	0	0	0	0	0	0,000	0,000	0,000
2018	5,649	0	1	0	0	0	191	191	0,000	0,034	0,034
2019	5,751	0	0	0	0	0	0	0	0,000	0,000	0,000
2020	7,733	0	0	0	0	0	0	0	0,000	0,000	0,000
MA Total:	32,759	0	2	0	0	0	1,237	1,237	0,000	0,038	0,038

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.035	.
(14) Massachusetts Credibility:	0.070	0.160	.
(15) Countrywide Pure Premium:	0.539	0.195	0.735
(16) Countrywide Indicated Relativity:	0.222	0.192	.
(17) Countrywide Credibility:	0.470	0.420	.
(18) Countrywide Lost-Time Claims:	341.00	.	.
(19) Pure Premium Underlying Present Rate:	1.071	1.774	2.846
(20) Relativity to Underlying Present Rate:	0.520	1.745	.
(21) Credibility to Underlying Relativity:	0.460	0.420	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.343	0.819	.
(24) Balanced Formula Relativity:	0.343	0.822	0.486

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	263,036	2	30	206,389	101,969	23,374	110,424	442,157	1,172	0,509	1,681
2017	167,354	2	22	565,502	21,046	94,707	49,644	730,899	3,505	0,863	4,367
2018	159,320	0	26	0	78,752	0	78,770	157,521	0,494	0,494	0,989
2019	340,697	3	22	477,009	227,857	128,965	153,810	987,640	2,069	0,830	2,899
2020	326,325	1	17	344,670	168,731	222,206	79,321	814,927	1,573	0,924	2,497
MA Total:	1,256,732	8	117	1,593,570	598,354	469,251	471,968	3,133,144	1,744	0,749	2,493

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.685	0.691	.
(14) Massachusetts Credibility:	0.310	0.470	.
(15) Countrywide Pure Premium:	1.482	0.734	2.216
(16) Countrywide Indicated Relativity:	0.609	0.722	.
(17) Countrywide Credibility:	0.350	0.270	.
(18) Countrywide Lost-Time Claims:	1893.0	.	.
(19) Pure Premium Underlying Present Rate:	1.280	0.678	1.959
(20) Relativity to Underlying Present Rate:	0.622	0.667	.
(21) Credibility to Underlying Relativity:	0.340	0.260	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.637	0.693	.
(24) Balanced Formula Relativity:	0.635	0.695	0.653

Class(es):		Effective: 7/1/2023							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)
2016	228,924	1	9	204,753	582,445	58,437	185,622	1,031,257	3,439	1,066	4,505
2017	237,828	0	9	0	25,906	0	14,430	40,336	0,109	0,061	0,170
2018	306,010	2	32	4,334	175,553	14,440	228,165	422,492	0,588	0,793	1,381
2019	373,551	0	14	0	184,385	0	102,342	286,727	0,494	0,274	0,768
2020	330,485	0	18	0	378,788	0	242,259	621,047	1,146	0,733	1,879
MA Total:	1,476,798	3	82	209,087	1,347,077	72,876	772,818	2,401,859	1,054	0,573	1,626

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.450	0.596	.
(14) Massachusetts Credibility:	0.440	0.610	.
(15) Countrywide Pure Premium:	1.566	0.621	2.187
(16) Countrywide Indicated Relativity:	0.673	0.652	.
(17) Countrywide Credibility:	0.280	0.200	.
(18) Countrywide Lost-Time Claims:	1287.0	.	.
(19) Pure Premium Underlying Present Rate:	2.565	1.101	3.666
(20) Relativity to Underlying Present Rate:	1.184	1.158	.
(21) Credibility to Underlying Relativity:	0.280	0.190	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.718	0.714	.
(24) Balanced Formula Relativity:	0.726	0.715	0.723

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	1,274,073	3	57	567,280	372,112	386,756	420,056	1,746,204	0.737	0.633	1.371	
2017	1,128,701	4	39	302,838	280,156	124,796	122,550	830,340	0.517	0.219	0.736	
2018	1,038,994	1	35	381,627	1,150,761	38,059	397,547	1,967,994	1.475	0.419	1.894	
2019	1,480,306	0	33	0	375,273	0	327,674	702,947	0.254	0.221	0.475	
2020	1,124,023	1	14	364,952	226,901	81,558	75,361	748,772	0.527	0.140	0.666	
MA Total:	6,046,096	9	178	1,616,697	2,405,203	631,169	1,343,189	5,996,258	0.665	0.327	0.992	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.261	0.301	.
(14) Massachusetts Credibility:	0.430	0.690	.
(15) Countrywide Pure Premium:	0.711	0.321	1.032
(16) Countrywide Indicated Relativity:	0.292	0.316	.
(17) Countrywide Credibility:	0.290	0.160	.
(18) Countrywide Lost-Time Claims:	1148.0	.	.
(19) Pure Premium Underlying Present Rate:	0.597	0.368	0.964
(20) Relativity to Underlying Present Rate:	0.290	0.362	.
(21) Credibility to Underlying Relativity:	0.280	0.150	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.278	0.313	.
(24) Balanced Formula Relativity:	0.277	0.314	0.288

Class(es):		Effective: 7/1/2023							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)	
2016	221,081	2	25	459,185	75,763	54,532	79,691	669,172	2.420	0.607	3.027	
2017	209,456	0	21	0	207,048	0	145,568	352,616	0.989	0.695	1.683	
2018	188,385	1	11	233,778	43,385	26,298	28,559	332,019	1.471	0.291	1.762	
2019	244,082	1	18	11,361	878,884	7,588	224,873	1,122,705	3.647	0.952	4.600	
2020	258,621	0	9	0	43,160	0	12,017	55,176	0.167	0.046	0.213	
MA Total:	1,121,624	4	84	704,323	1,248,240	88,418	490,708	2,531,689	1.741	0.516	2.257	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.683	0.476	.
(14) Massachusetts Credibility:	0.330	0.450	.
(15) Countrywide Pure Premium:	1.271	0.667	1.938
(16) Countrywide Indicated Relativity:	0.522	0.657	.
(17) Countrywide Credibility:	0.340	0.280	.
(18) Countrywide Lost-Time Claims:	707.00	.	.
(19) Pure Premium Underlying Present Rate:	1.607	0.660	2.267
(20) Relativity to Underlying Present Rate:	0.780	0.649	.
(21) Credibility to Underlying Relativity:	0.330	0.270	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.660	0.573	.
(24) Balanced Formula Relativity:	0.659	0.575	0.634

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	26,800	4	21	199,190	434,450	133,570	317,104	1,084,314	23,644	16,816	40,460	
2017	49,989	1	23	219,929	23,091	106,381	28,976	378,377	4,862	2,708	7,569	
2018	39,609	1	5	8,958	249,098	44,620	62,430	365,107	6,515	2,703	9,218	
2019	51,699	0	2	0	0	0	5,185	5,185	0.000	0.100	0.100	
2020	56,437	0	6	0	26,792	0	51,974	78,765	0.475	0.921	1,396	
MA Total:	224,532	6	57	428,078	733,430	284,571	465,669	1,911,748	5.173	3.341	8.514	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.030	3.081	.
(14) Massachusetts Credibility:	0.210	0.350	.
(15) Countrywide Pure Premium:	1.874	0.939	2.813
(16) Countrywide Indicated Relativity:	0.770	0.924	.
(17) Countrywide Credibility:	0.400	0.330	.
(18) Countrywide Lost-Time Claims:	450.00	.	.
(19) Pure Premium Underlying Present Rate:	2.812	1.853	4.665
(20) Relativity to Underlying Present Rate:	1.365	1.822	.
(21) Credibility to Underlying Relativity:	0.390	0.320	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	1.266	1.966	.
(24) Balanced Formula Relativity:	1.264	1.973	1.476

Class(es):		Effective: 7/1/2023							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)	
2016	3,592,825	23	227	4,940,139	5,052,779	1,534,630	1,757,154	13,284,702	2,781	0,916	3,698	
2017	3,738,832	21	264	5,220,157	5,509,248	1,060,359	2,237,088	14,026,852	2,870	0,882	3,752	
2018	3,896,640	20	266	3,739,038	5,647,498	1,309,006	2,120,442	12,815,985	2,409	0,880	3,289	
2019	4,008,339	16	242	1,946,976	7,023,662	599,371	2,344,204	11,914,214	2,238	0,734	2,972	
2020	3,862,806	14	192	2,555,356	6,882,197	620,583	2,109,047	12,167,183	2,443	0,707	3,150	
MA Total:	19,099,443	94	1,191	18,401,666	30,115,384	5,123,949	10,567,936	64,208,934	2,540	0,822	3,362	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.997	0.758	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.600	0.935	3.535
(16) Countrywide Indicated Relativity:	1.068	0.920	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	12008	.	.
(19) Pure Premium Underlying Present Rate:	1.814	0.683	2.497
(20) Relativity to Underlying Present Rate:	0.880	0.672	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.997	0.758	.
(24) Balanced Formula Relativity:	0.995	0.760	0.925

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	272,846	0	13	0	19,252	0	109,938	129,190	0.071	0.403	0.473
2017	268,280	1	9	183,403	17,902	32,691	14,692	248,689	0.750	0.177	0.927
2018	252,633	1	12	285,830	29,878	41,253	33,879	390,840	1.250	0.297	1.547
2019	262,126	0	7	0	353,308	0	120,373	473,681	1.348	0.459	1.807
2020	239,580	0	3	0	194,526	0	86,273	280,799	0.812	0.360	1.172
MA Total:	1,295,465	2	44	469,233	614,867	73,944	365,155	1,523,199	0.837	0.339	1.176

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.357	0.353	.
(14) Massachusetts Credibility:	0.400	0.590	.
(15) Countrywide Pure Premium:	2.071	1.150	3.221
(16) Countrywide Indicated Relativity:	0.890	1.208	.
(17) Countrywide Credibility:	0.200	0.210	.
(18) Countrywide Lost-Time Claims:	21.000	.	.
(19) Pure Premium Underlying Present Rate:	2.302	1.163	3.465
(20) Relativity to Underlying Present Rate:	1.062	1.224	.
(21) Credibility to Underlying Relativity:	0.400	0.200	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.746	0.706	.
(24) Balanced Formula Relativity:	0.754	0.708	0.741

Class(es):		Effective: 7/1/2023							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)
2016	3,730,805	2	69	294,097	1,120,760	155,680	400,343	1,970,879	0.379	0.149	0.528
2017	4,294,239	4	82	287,801	658,758	45,995	291,610	1,284,163	0.220	0.079	0.299
2018	4,165,769	1	53	609,302	1,308,719	128,633	385,277	2,431,930	0.460	0.123	0.584
2019	5,658,893	2	48	60,511	116,749	52,932	171,767	401,959	0.031	0.040	0.071
2020	4,721,235	1	44	1,003,100	900,197	128,983	335,945	2,368,225	0.403	0.098	0.502
MA Total:	22,570,941	10	296	2,254,811	4,105,183	512,222	1,584,942	8,457,158	0.282	0.093	0.375

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.477	3.052	.
(14) Massachusetts Credibility:	0.540	0.710	.
(15) Countrywide Pure Premium:	0.153	0.070	0.222
(16) Countrywide Indicated Relativity:	3.248	2.747	.
(17) Countrywide Credibility:	0.230	0.150	.
(18) Countrywide Lost-Time Claims:	1806.0	.	.
(19) Pure Premium Underlying Present Rate:	0.280	0.104	0.383
(20) Relativity to Underlying Present Rate:	4.914	3.201	.
(21) Credibility to Underlying Relativity:	0.230	0.140	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	4.295	3.027	.
(24) Balanced Formula Relativity:	4.268	3.026	3.863

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	15,648	0	2	0	265	0	2,053	2,318	0.017	0.131	0.148
2017	15,353	0	2	0	0	0	2,895	2,895	0.000	0.189	0.189
2018	20	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	5,069	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	3,851	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	39,941	0	4	0	265	0	4,948	5,213	0.007	0.124	0.131

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.003	0.114	.
(14) Massachusetts Credibility:	0.090	0.150	.
(15) Countrywide Pure Premium:	2.015	1.358	3.373
(16) Countrywide Indicated Relativity:	0.828	1.336	.
(17) Countrywide Credibility:	0.460	0.430	.
(18) Countrywide Lost-Time Claims:	827.00	.	.
(19) Pure Premium Underlying Present Rate:	1.782	1.170	2.952
(20) Relativity to Underlying Present Rate:	0.865	1.150	.
(21) Credibility to Underlying Relativity:	0.450	0.420	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.770	1.075	.
(24) Balanced Formula Relativity:	0.769	1.078	0.861

Class(es):		Effective: 7/1/2023							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)
2016	1,811,493	7	102	635,898	294,114	528,025	322,017	1,780,054	0.513	0.469	0.983
2017	2,037,569	7	119	373,916	1,054,062	46,716	460,571	1,935,266	0.701	0.249	0.950
2018	2,308,026	5	117	121,406	1,475,105	27,485	787,645	2,411,642	0.692	0.353	1.045
2019	2,418,385	7	97	590,847	1,632,064	91,771	726,137	3,040,819	0.919	0.338	1.257
2020	2,929,791	3	77	342,224	809,036	221,579	501,448	1,874,288	0.393	0.247	0.640
MA Total:	11,505,264	29	512	2,064,292	5,264,382	915,576	2,797,820	11,042,069	0.637	0.323	0.960

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.250	0.298	.
(14) Massachusetts Credibility:	0.570	0.890	.
(15) Countrywide Pure Premium:	1.342	0.712	2.054
(16) Countrywide Indicated Relativity:	0.551	0.701	.
(17) Countrywide Credibility:	0.220	0.060	.
(18) Countrywide Lost-Time Claims:	12177	.	.
(19) Pure Premium Underlying Present Rate:	0.633	0.359	0.991
(20) Relativity to Underlying Present Rate:	0.307	0.353	.
(21) Credibility to Underlying Relativity:	0.210	0.050	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.328	0.325	.
(24) Balanced Formula Relativity:	0.328	0.326	0.327

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	33,601	0	4	0	83,772	0	33,730	117,503	2,493	1,004	3,497
2017	55,224	0	1	0	0	0	10,964	10,964	0,000	0,199	0,199
2018	189,866	2	8	237,785	3,261	109,107	5,423	355,576	1,270	0,603	1,873
2019	379,963	2	28	707,191	1,138,434	376,344	320,299	2,542,268	4,857	1,833	6,691
2020	149,384	1	6	94,271	42,807	34,911	13,364	185,352	0,918	0,323	1,241
MA Total:	808,038	5	47	1,039,247	1,268,274	520,362	383,779	3,211,662	2,856	1,119	3,975

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.219	1.164	.
(14) Massachusetts Credibility:	0.280	0.370	.
(15) Countrywide Pure Premium:	2.091	0.675	2.765
(16) Countrywide Indicated Relativity:	0.898	0.709	.
(17) Countrywide Credibility:	0.360	0.320	.
(18) Countrywide Lost-Time Claims:	202.00	.	.
(19) Pure Premium Underlying Present Rate:	1.592	0.568	2.160
(20) Relativity to Underlying Present Rate:	0.735	0.598	.
(21) Credibility to Underlying Relativity:	0.360	0.310	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.929	0.843	.
(24) Balanced Formula Relativity:	0.940	0.844	0.912

Class(es):		Effective: 7/1/2023							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)
2016	654,573	6	83	135,036	332,248	86,523	241,192	794,999	0,714	0,501	1,215
2017	645,307	0	65	0	291,679	0	190,268	481,947	0,452	0,295	0,747
2018	632,393	1	69	1,096	691,781	45	400,458	1,093,380	1,096	0,633	1,729
2019	590,343	1	53	2,879	626,136	4,852	344,645	978,512	1,066	0,592	1,658
2020	581,539	2	50	163,476	333,405	57,926	187,957	742,765	0,854	0,423	1,277
MA Total:	3,104,155	10	320	302,487	2,275,249	149,346	1,364,520	4,091,602	0,830	0,488	1,318

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.095	1.396	.
(14) Massachusetts Credibility:	0.340	0.570	.
(15) Countrywide Pure Premium:	0.910	0.496	1.406
(16) Countrywide Indicated Relativity:	1.198	1.405	.
(17) Countrywide Credibility:	0.330	0.220	.
(18) Countrywide Lost-Time Claims:	1193.0	.	.
(19) Pure Premium Underlying Present Rate:	0.659	0.443	1.102
(20) Relativity to Underlying Present Rate:	0.981	1.246	.
(21) Credibility to Underlying Relativity:	0.330	0.210	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.091	1.366	.
(24) Balanced Formula Relativity:	1.077	1.360	1.167

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	73.750	0	15	0	43.067	0	61.445	104.512	0.584	0.833	1.417	
2017	86.443	0	12	0	118.103	0	94.638	212.741	1.366	1.095	2.461	
2018	93.373	1	10	31.200	15.432	2.817	8.670	58.119	0.499	0.123	0.622	
2019	96.356	0	9	0	67.912	0	49.911	117.823	0.705	0.518	1.223	
2020	105.169	1	13	115.082	19.394	46.183	52.542	233.200	1.279	0.939	2.217	
MA Total:	455.092	2	59	146.281	263.908	49.000	267.205	726.394	0.901	0.695	1.596	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.188	1.989	.
(14) Massachusetts Credibility:	0.160	0.310	.
(15) Countrywide Pure Premium:	0.741	0.431	1.172
(16) Countrywide Indicated Relativity:	0.975	1.222	.
(17) Countrywide Credibility:	0.420	0.350	.
(18) Countrywide Lost-Time Claims:	1901.0	.	.
(19) Pure Premium Underlying Present Rate:	0.697	0.651	1.349
(20) Relativity to Underlying Present Rate:	1.038	1.832	.
(21) Credibility to Underlying Relativity:	0.420	0.340	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.035	1.667	.
(24) Balanced Formula Relativity:	1.022	1.660	1.223

Class(es):		Effective: 7/1/2023							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)	
2016	3,161.096	6	235	190.010	386.980	45.552	447.226	1,069.768	0.183	0.156	0.338	
2017	3,368.090	10	275	381.345	652.098	77.901	820.979	1,932.324	0.307	0.267	0.574	
2018	3,419.169	10	263	514.552	1,600.144	185.163	792.943	3,092.803	0.618	0.286	0.905	
2019	3,608.635	8	241	914.805	1,061.607	238.739	677.603	2,892.755	0.548	0.254	0.802	
2020	2,535.199	2	68	123.970	487.060	52.586	374.843	1,038.458	0.241	0.169	0.410	
MA Total:	16,092.188	36	1,082	2,124.683	4,187.889	599.941	3,113.594	10,026.107	0.392	0.231	0.623	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.517	0.661	.
(14) Massachusetts Credibility:	0.580	0.960	.
(15) Countrywide Pure Premium:	0.849	0.396	1.245
(16) Countrywide Indicated Relativity:	1.117	1.123	.
(17) Countrywide Credibility:	0.210	0.020	.
(18) Countrywide Lost-Time Claims:	12736	.	.
(19) Pure Premium Underlying Present Rate:	0.472	0.316	0.789
(20) Relativity to Underlying Present Rate:	0.703	0.889	.
(21) Credibility to Underlying Relativity:	0.210	0.020	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.682	0.674	.
(24) Balanced Formula Relativity:	0.673	0.671	0.673

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Section IX - Classification Pricing
 Subsection G - Class Relativities
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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	3,319,676	5	178	483,870	932,249	185,392	539,280	2,140,792	0.427	0.218	0.645
2017	3,277,596	5	174	321,372	737,186	156,804	357,820	1,573,181	0.323	0.157	0.480
2018	3,607,256	7	161	709,178	354,271	121,057	493,093	1,677,599	0.295	0.170	0.465
2019	3,481,671	6	189	972,284	361,454	138,483	418,288	1,890,508	0.383	0.160	0.543
2020	2,780,560	1	75	22,217	477,302	2,047	280,222	781,787	0.180	0.102	0.281
MA Total:	16,466,758	24	777	2,508,921	2,862,462	603,782	2,088,702	8,063,868	0.326	0.164	0.490

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.430	0.468	.
(14) Massachusetts Credibility:	0.500	0.800	.
(15) Countrywide Pure Premium:	0.447	0.245	0.692
(16) Countrywide Indicated Relativity:	0.588	0.694	.
(17) Countrywide Credibility:	0.250	0.100	.
(18) Countrywide Lost-Time Claims:	8240.0	.	.
(19) Pure Premium Underlying Present Rate:	0.323	0.193	0.516
(20) Relativity to Underlying Present Rate:	0.481	0.543	.
(21) Credibility to Underlying Relativity:	0.250	0.100	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.482	0.498	.
(24) Balanced Formula Relativity:	0.476	0.496	0.482

Class(es):		Effective: 7/1/2023							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)
2016	1,985,890	8	180	693,698	1,170,276	257,853	801,686	2,923,513	0.939	0.534	1.472
2017	2,171,852	9	186	965,545	1,177,293	222,905	507,304	2,873,047	0.987	0.336	1.323
2018	2,176,138	4	143	201,839	912,687	33,357	695,080	1,842,962	0.512	0.335	0.847
2019	2,257,250	6	156	615,199	678,978	299,750	680,560	2,274,487	0.573	0.434	1.008
2020	2,182,192	3	95	249,760	607,507	125,603	293,020	1,275,889	0.393	0.192	0.585
MA Total:	10,773,322	30	760	2,726,040	4,546,740	939,467	2,977,650	11,189,897	0.675	0.364	1.039

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.890	1.041	.
(14) Massachusetts Credibility:	0.580	0.900	.
(15) Countrywide Pure Premium:	0.713	0.377	1.090
(16) Countrywide Indicated Relativity:	0.939	1.067	.
(17) Countrywide Credibility:	0.210	0.050	.
(18) Countrywide Lost-Time Claims:	5498.0	.	.
(19) Pure Premium Underlying Present Rate:	0.693	0.402	1.095
(20) Relativity to Underlying Present Rate:	1.032	1.131	.
(21) Credibility to Underlying Relativity:	0.210	0.050	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.930	1.047	.
(24) Balanced Formula Relativity:	0.918	1.042	0.957

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Section IX - Classification Pricing
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Calculation of Class Relativities

Class(es): 8013 STORE: JEWELRY STORES		Effective: 7/1/2023							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)
2016	1,346,721	0	21	0	59,814	0	53,207	113,022	0.044	0.040	0.084
2017	1,380,473	2	17	248,131	14,247	546,548	70,566	879,492	0.190	0.447	0.637
2018	1,439,816	0	13	0	130,607	0	67,378	197,985	0.091	0.047	0.138
2019	1,415,004	0	12	0	2,413	0	14,368	16,781	0.002	0.010	0.012
2020	1,550,410	0	10	0	129,221	0	74,404	203,625	0.083	0.048	0.131
MA Total:	7,132,424	2	73	248,131	336,302	546,548	279,924	1,410,905	0.082	0.116	0.198

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.108	0.332	.
(14) Massachusetts Credibility:	0.260	0.440	.
(15) Countrywide Pure Premium:	0.161	0.079	0.241
(16) Countrywide Indicated Relativity:	0.212	0.224	.
(17) Countrywide Credibility:	0.370	0.280	.
(18) Countrywide Lost-Time Claims:	750.00	.	.
(19) Pure Premium Underlying Present Rate:	0.141	0.102	0.242
(20) Relativity to Underlying Present Rate:	0.209	0.286	.
(21) Credibility to Underlying Relativity:	0.370	0.280	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.184	0.289	.
(24) Balanced Formula Relativity:	0.182	0.287	0.215

Class(es): 8017 STORE: RETAIL NOC		Effective: 7/1/2023							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)
2016	11,568,547	16	784	1,570,965	3,155,942	420,378	2,234,043	7,381,327	0.409	0.229	0.638
2017	12,157,752	24	823	1,788,891	3,304,214	354,806	1,843,081	7,290,991	0.419	0.181	0.600
2018	14,675,875	38	1,090	3,161,587	6,346,653	926,803	3,985,124	14,420,167	0.648	0.335	0.983
2019	11,629,920	15	584	1,302,841	5,325,376	263,887	2,192,961	9,085,064	0.570	0.211	0.781
2020	8,957,102	13	269	1,060,307	2,404,839	648,412	1,213,053	5,326,611	0.387	0.208	0.595
MA Total:	58,989,195	106	3,550	8,884,590	20,537,024	2,614,284	11,468,261	43,504,160	0.499	0.239	0.737

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.658	0.683	.
(14) Massachusetts Credibility:	0.910	1.000	.
(15) Countrywide Pure Premium:	0.571	0.288	0.859
(16) Countrywide Indicated Relativity:	0.751	0.815	.
(17) Countrywide Credibility:	0.050	0.000	.
(18) Countrywide Lost-Time Claims:	24267	.	.
(19) Pure Premium Underlying Present Rate:	0.397	0.251	0.648
(20) Relativity to Underlying Present Rate:	0.591	0.706	.
(21) Credibility to Underlying Relativity:	0.040	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.660	0.683	.
(24) Balanced Formula Relativity:	0.651	0.680	0.660

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Section IX - Classification Pricing
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Calculation of Class Relativities

Class(es): 8018 STORE: WHOLESALE NOC		Effective: 7/1/2023							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)
2016	3,935,244	25	709	2,813,509	6,060,692	751,677	2,646,673	12,272,550	2,255	0,864	3,119
2017	4,443,797	42	870	3,258,396	6,552,647	822,327	2,693,919	13,327,289	2,208	0,791	2,999
2018	4,689,366	50	697	3,301,727	6,146,354	818,087	2,367,124	12,633,293	2,015	0,679	2,694
2019	4,924,902	27	812	2,529,744	8,476,025	680,592	3,480,808	15,167,169	2,235	0,845	3,080
2020	6,795,511	55	929	4,057,074	6,890,655	1,720,954	2,968,271	15,636,955	1,611	0,690	2,301
MA Total:	24,788,820	199	4,017	15,960,451	34,126,374	4,793,637	14,156,794	69,037,256	2,021	0,764	2,785

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.664	2.188	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.415	0.568	1.983
(16) Countrywide Indicated Relativity:	1.862	1.608	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	33621	.	.
(19) Pure Premium Underlying Present Rate:	1.689	0.722	2.412
(20) Relativity to Underlying Present Rate:	2.515	2.032	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.664	2.188	.
(24) Balanced Formula Relativity:	2.630	2.179	2.488

Class(es): 8021 STORE: MEAT, FISH OR POULTRY DEALER- WHOLESALE		Effective: 7/1/2023							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)
2016	1,084,915	8	157	659,585	2,561,947	118,172	655,438	3,995,142	2,969	0,713	3,682
2017	1,084,462	9	130	672,586	1,131,844	330,448	444,347	2,579,225	1,664	0,714	2,378
2018	1,184,048	7	149	438,010	1,278,648	144,924	656,681	2,518,264	1,450	0,677	2,127
2019	1,287,172	8	162	1,316,393	1,568,204	406,390	912,335	4,203,321	2,241	1,025	3,266
2020	1,422,990	5	149	628,765	1,986,111	186,396	926,081	3,727,354	1,838	0,782	2,619
MA Total:	6,063,588	37	747	3,715,339	8,526,754	1,186,331	3,594,882	17,023,306	2,019	0,789	2,807

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.662	2.257	.
(14) Massachusetts Credibility:	0.630	0.890	.
(15) Countrywide Pure Premium:	1.028	0.546	1.574
(16) Countrywide Indicated Relativity:	1.353	1.547	.
(17) Countrywide Credibility:	0.190	0.060	.
(18) Countrywide Lost-Time Claims:	2755.0	.	.
(19) Pure Premium Underlying Present Rate:	1.572	0.700	2.271
(20) Relativity to Underlying Present Rate:	2.339	1.968	.
(21) Credibility to Underlying Relativity:	0.180	0.050	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.355	2.200	.
(24) Balanced Formula Relativity:	2.325	2.191	2.283

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Section IX - Classification Pricing
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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	194,979	1	24	100,727	2,430	19,230	23,116	145,503	0.529	0.217	0.746	
2017	218,153	0	18	0	5,010	0	14,874	19,884	0.023	0.068	0.091	
2018	247,316	0	19	0	320,778	0	144,257	465,035	1.297	0.583	1.880	
2019	237,076	1	14	91,283	2,813	217,755	7,885	319,736	0.397	0.952	1.349	
2020	308,486	1	9	3	188,554	0	89,070	277,628	0.611	0.289	0.900	
MA Total:	1,206,010	3	84	192,013	519,586	236,985	279,203	1,227,787	0.590	0.428	1.018	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.778	1.225	.
(14) Massachusetts Credibility:	0.240	0.370	.
(15) Countrywide Pure Premium:	0.790	0.442	1.232
(16) Countrywide Indicated Relativity:	1.039	1.252	.
(17) Countrywide Credibility:	0.380	0.320	.
(18) Countrywide Lost-Time Claims:	536.00	.	.
(19) Pure Premium Underlying Present Rate:	0.713	0.393	1.106
(20) Relativity to Underlying Present Rate:	1.061	1.105	.
(21) Credibility to Underlying Relativity:	0.380	0.310	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.985	1.197	.
(24) Balanced Formula Relativity:	0.972	1.191	1.041

Class(es):		Effective: 7/1/2023							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)	
2016	282,589	0	27	0	57,952	0	116,133	174,085	0.205	0.411	0.616	
2017	283,334	1	15	71,851	16,535	7,220	59,626	155,232	0.312	0.236	0.548	
2018	308,687	1	28	44,230	2,372	16,242	16,959	79,804	0.151	0.108	0.259	
2019	314,386	2	14	321,521	7,830	39,210	16,576	385,137	1.048	0.177	1.225	
2020	303,089	0	7	0	85,763	0	47,813	133,577	0.283	0.158	0.441	
MA Total:	1,492,085	4	91	437,603	170,452	62,672	257,107	927,835	0.408	0.214	0.622	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.537	0.614	.
(14) Massachusetts Credibility:	0.240	0.370	.
(15) Countrywide Pure Premium:	0.840	0.393	1.233
(16) Countrywide Indicated Relativity:	1.106	1.112	.
(17) Countrywide Credibility:	0.380	0.320	.
(18) Countrywide Lost-Time Claims:	1573.0	.	.
(19) Pure Premium Underlying Present Rate:	0.546	0.314	0.860
(20) Relativity to Underlying Present Rate:	0.812	0.883	.
(21) Credibility to Underlying Relativity:	0.380	0.310	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.858	0.857	.
(24) Balanced Formula Relativity:	0.847	0.853	0.849

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Section IX - Classification Pricing
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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	749,338	3	67	130,086	271,885	24,396	224,285	650,652	0.536	0.332	0.868	
2017	794,297	1	58	31,110	274,297	11,961	143,784	461,152	0.384	0.196	0.581	
2018	845,402	2	63	77,017	353,458	20,158	202,622	653,256	0.509	0.264	0.773	
2019	2,911,919	7	418	554,086	1,171,609	106,279	922,831	2,754,805	0.593	0.353	0.946	
2020	3,558,807	6	407	362,519	2,201,160	261,452	1,459,462	4,284,593	0.720	0.484	1.204	
MA Total:	8,859,762	19	1,013	1,154,818	4,272,408	424,247	2,952,985	8,804,458	0.613	0.381	0.994	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.808	1.091	.
(14) Massachusetts Credibility:	0.510	0.750	.
(15) Countrywide Pure Premium:	0.791	0.395	1.185
(16) Countrywide Indicated Relativity:	1.040	1.119	.
(17) Countrywide Credibility:	0.250	0.130	.
(18) Countrywide Lost-Time Claims:	21489	.	.
(19) Pure Premium Underlying Present Rate:	0.637	0.313	0.950
(20) Relativity to Underlying Present Rate:	0.948	0.880	.
(21) Credibility to Underlying Relativity:	0.240	0.120	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.899	1.069	.
(24) Balanced Formula Relativity:	0.888	1.065	0.944

Class(es):		Effective: 7/1/2023							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)	
2016	355,404	1	45	86,589	242,138	8,605	179,599	516,932	0.925	0.530	1.454	
2017	443,606	0	70	0	844,881	0	222,446	1,067,327	1.905	0.501	2.406	
2018	368,301	0	33	0	566,676	0	87,848	654,524	1.539	0.239	1.777	
2019	350,611	1	31	228,060	524,685	30,206	192,231	975,182	2.147	0.634	2.781	
2020	355,847	2	36	132,861	467,211	30,571	185,058	815,702	1.686	0.606	2.292	
MA Total:	1,873,769	4	215	447,509	2,645,593	69,382	867,182	4,029,667	1.651	0.500	2.151	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.176	1.431	.
(14) Massachusetts Credibility:	0.390	0.500	.
(15) Countrywide Pure Premium:	1.309	0.491	1.800
(16) Countrywide Indicated Relativity:	1.723	1.390	.
(17) Countrywide Credibility:	0.310	0.250	.
(18) Countrywide Lost-Time Claims:	281.00	.	.
(19) Pure Premium Underlying Present Rate:	1.461	0.525	1.986
(20) Relativity to Underlying Present Rate:	2.175	1.476	.
(21) Credibility to Underlying Relativity:	0.300	0.250	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.035	1.432	.
(24) Balanced Formula Relativity:	2.009	1.426	1.825

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Calculation of Class Relativities

Class(es): 8039 STORE: DEPARTMENT - RETAIL		Effective: 7/1/2023							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)
2016	3,688,344	20	448	1,522,551	1,147,298	338,686	861,062	3,869,597	0.724	0.325	1.049
2017	3,343,672	11	419	853,156	1,760,379	144,869	1,069,762	3,828,166	0.782	0.363	1.145
2018	190,376	2	16	291,764	16,770	80,561	26,049	415,144	1.621	0.560	2.181
2019	3,321,237	16	378	973,970	2,262,459	324,487	1,411,212	4,972,128	0.974	0.523	1.497
2020	3,246,734	14	432	2,113,903	2,659,157	508,718	1,815,651	7,097,430	1.470	0.716	2.186
MA Total:	13,790,363	63	1,693	5,755,344	7,846,064	1,397,321	5,183,737	20,182,466	0.986	0.477	1.464

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.300	1.366	.
(14) Massachusetts Credibility:	0.570	0.950	.
(15) Countrywide Pure Premium:	0.576	0.380	0.957
(16) Countrywide Indicated Relativity:	0.758	1.078	.
(17) Countrywide Credibility:	0.220	0.030	.
(18) Countrywide Lost-Time Claims:	4561.0	.	.
(19) Pure Premium Underlying Present Rate:	0.529	0.356	0.885
(20) Relativity to Underlying Present Rate:	0.787	1.002	.
(21) Credibility to Underlying Relativity:	0.210	0.020	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.073	1.350	.
(24) Balanced Formula Relativity:	1.060	1.344	1.149

Class(es): 8044 STORE: FURNITURE & DRIVERS		Effective: 7/1/2023							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)
2016	818,434	5	115	567,395	910,233	115,707	416,312	2,009,647	1.805	0.650	2.455
2017	1,222,162	7	121	812,095	918,608	333,383	500,573	2,564,659	1.416	0.682	2.098
2018	1,435,881	5	164	315,077	1,322,705	108,378	736,142	2,482,302	1.141	0.588	1.729
2019	1,295,245	3	131	207,396	1,685,547	137,535	695,632	2,726,110	1.461	0.643	2.105
2020	1,263,714	5	117	886,382	794,518	434,405	542,526	2,657,831	1.330	0.773	2.103
MA Total:	6,035,435	25	648	2,788,345	5,631,612	1,129,409	2,891,184	12,440,549	1.395	0.666	2.061

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.839	1.907	.
(14) Massachusetts Credibility:	0.570	0.860	.
(15) Countrywide Pure Premium:	1.182	0.491	1.673
(16) Countrywide Indicated Relativity:	1.555	1.390	.
(17) Countrywide Credibility:	0.220	0.070	.
(18) Countrywide Lost-Time Claims:	6835.0	.	.
(19) Pure Premium Underlying Present Rate:	1.188	0.632	1.820
(20) Relativity to Underlying Present Rate:	1.769	1.777	.
(21) Credibility to Underlying Relativity:	0.210	0.070	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.762	1.862	.
(24) Balanced Formula Relativity:	1.739	1.854	1.775

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	309,996	2	29	262,623	13,693	332,950	32,980	642,246	0.891	1.180	2.072	
2017	293,065	1	27	83,220	110,143	101,538	127,539	422,439	0.660	0.782	1.441	
2018	355,155	3	30	156,921	166,941	77,017	235,547	636,426	0.912	0.880	1.792	
2019	360,888	2	33	204,775	304,152	32,622	270,723	812,272	1.410	0.841	2.251	
2020	623,188	5	72	593,575	534,294	166,287	330,743	1,624,899	1.810	0.798	2.607	
MA Total:	1,942,292	13	191	1,301,113	1,129,224	710,413	997,532	4,138,282	1.251	0.879	2.131	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.650	2.517	.
(14) Massachusetts Credibility:	0.320	0.530	.
(15) Countrywide Pure Premium:	0.995	0.538	1.533
(16) Countrywide Indicated Relativity:	1.309	1.524	.
(17) Countrywide Credibility:	0.340	0.240	.
(18) Countrywide Lost-Time Claims:	6316.0	.	.
(19) Pure Premium Underlying Present Rate:	0.878	0.599	1.478
(20) Relativity to Underlying Present Rate:	1.307	1.686	.
(21) Credibility to Underlying Relativity:	0.340	0.230	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.417	2.088	.
(24) Balanced Formula Relativity:	1.399	2.078	1.613

Class(es):		Effective: 7/1/2023							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)	
2016	478,144	2	54	339,413	216,103	100,257	213,756	869,530	1.162	0.657	1.819	
2017	525,899	3	73	197,532	528,652	32,826	289,252	1,048,262	1.381	0.612	1.993	
2018	540,838	1	71	106,368	471,077	6,581	300,836	884,861	1.068	0.568	1.636	
2019	561,117	0	79	0	1,037,500	0	430,098	1,467,598	1.849	0.767	2.615	
2020	485,760	0	17	0	85,961	0	72,299	158,260	0.177	0.149	0.326	
MA Total:	2,591,758	6	294	643,313	2,339,293	139,664	1,306,241	4,428,512	1.151	0.558	1.709	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.517	1.597	.
(14) Massachusetts Credibility:	0.380	0.590	.
(15) Countrywide Pure Premium:	1.312	0.417	1.730
(16) Countrywide Indicated Relativity:	1.727	1.183	.
(17) Countrywide Credibility:	0.260	0.210	.
(18) Countrywide Lost-Time Claims:	40.000	.	.
(19) Pure Premium Underlying Present Rate:	1.046	0.574	1.620
(20) Relativity to Underlying Present Rate:	1.557	1.613	.
(21) Credibility to Underlying Relativity:	0.360	0.200	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.586	1.513	.
(24) Balanced Formula Relativity:	1.566	1.507	1.547

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	299,558	1	35	12,451	396,492	3,312	262,186	674,441	1,365	0,886	2,251
2017	330,077	1	46	207,515	235,925	68,450	205,752	717,641	1,343	0,831	2,174
2018	374,175	1	31	557,517	174,057	98,805	129,660	960,039	1,955	0,611	2,566
2019	377,894	0	37	0	273,325	0	151,120	424,445	0,723	0,400	1,123
2020	446,530	1	51	113,353	478,044	25,003	266,257	882,657	1,324	0,652	1,977
MA Total:	1,828,234	4	200	890,836	1,557,842	195,570	1,014,976	3,659,223	1,339	0,662	2,002

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.766	1.895	.
(14) Massachusetts Credibility:	0.310	0.540	.
(15) Countrywide Pure Premium:	0.997	0.603	1.600
(16) Countrywide Indicated Relativity:	1.312	1.708	.
(17) Countrywide Credibility:	0.350	0.230	.
(18) Countrywide Lost-Time Claims:	5236.0	.	.
(19) Pure Premium Underlying Present Rate:	0.849	0.656	1.506
(20) Relativity to Underlying Present Rate:	1.264	1.846	.
(21) Credibility to Underlying Relativity:	0.340	0.230	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.436	1.841	.
(24) Balanced Formula Relativity:	1.418	1.833	1.549

Class(es):		Effective: 7/1/2023							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)
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
2019	2,077	0	0	0	0	0	0	0	0,000	0,000	0,000
2020	1,351	0	0	0	0	0	0	0	0,000	0,000	0,000
MA Total:	8,430	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:	2.235	0.776	3.011
(16) Countrywide Indicated Relativity:	2.941	2.198	.
(17) Countrywide Credibility:	0.260	0.280	.
(18) Countrywide Lost-Time Claims:	40,000	.	.
(19) Pure Premium Underlying Present Rate:	1.117	0.648	1.765
(20) Relativity to Underlying Present Rate:	1.663	1.822	.
(21) Credibility to Underlying Relativity:	0.700	0.660	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.929	1.818	.
(24) Balanced Formula Relativity:	1.904	1.810	1.874

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	10,188	0	1	0	33,898	0	5,824	39,721	3,327	0,572	3,899	
2017	10,092	1	1	436,502	71,443	119,820	7,555	635,321	50,333	12,622	62,955	
2018	8,931	0	1	0	356	0	134	490	0,040	0,015	0,055	
2019	10,840	0	1	0	0	0	882	882	0,000	0,081	0,081	
2020	8,574	0	0	0	0	0	0	0	0,000	0,000	0,000	
MA Total:	48,624	1	4	436,502	105,697	119,820	14,394	676,414	11,151	2,760	13,911	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	14.701	7.902	.
(14) Massachusetts Credibility:	0.190	0.230	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	13.484	8.131	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	9.158	2.923	12.080
(20) Relativity to Underlying Present Rate:	13.630	8.221	.
(21) Credibility to Underlying Relativity:	0.810	0.770	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	13.833	8.147	.
(24) Balanced Formula Relativity:	13.657	8.112	11.908

Class(es):		Effective: 7/1/2023							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)	
2016	162,483	0	42	0	279,762	0	157,418	437,180	1,722	0,969	2,691	
2017	152,996	1	35	406,045	167,302	68,868	180,507	822,722	3,747	1,630	5,377	
2018	170,213	1	32	1,295	84,122	732	81,312	167,460	0,502	0,482	0,984	
2019	169,260	1	19	73,796	88,919	78,235	52,621	293,570	0,961	0,773	1,734	
2020	176,619	0	30	0	574,586	0	423,703	998,289	3,253	2,399	5,652	
MA Total:	831,570	3	158	481,136	1,194,690	147,835	895,561	2,719,221	2,015	1,255	3,270	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.657	3.592	.
(14) Massachusetts Credibility:	0.330	0.510	.
(15) Countrywide Pure Premium:	1.942	0.915	2.857
(16) Countrywide Indicated Relativity:	2.556	2.593	.
(17) Countrywide Credibility:	0.340	0.250	.
(18) Countrywide Lost-Time Claims:	2332.0	.	.
(19) Pure Premium Underlying Present Rate:	2.167	1.263	3.430
(20) Relativity to Underlying Present Rate:	3.225	3.552	.
(21) Credibility to Underlying Relativity:	0.330	0.240	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.810	3.333	.
(24) Balanced Formula Relativity:	2.774	3.318	2.946

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	880,557	4	94	1,195,384	388,955	317,151	497,041	2,398,531	1,799	0,925	2,724	
2017	954,873	2	74	309,092	405,910	41,177	324,452	1,080,630	0,749	0,383	1,132	
2018	1,013,426	6	91	1,331,891	648,715	266,723	376,923	2,624,252	1,954	0,635	2,589	
2019	1,017,773	3	70	280,460	550,952	77,123	388,777	1,297,312	0,817	0,458	1,275	
2020	1,036,927	0	67	0	456,963	0	396,175	853,138	0,441	0,382	0,823	
MA Total:	4,903,556	15	396	3,116,828	2,451,495	702,174	1,983,367	8,253,864	1,136	0,548	1,683	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.497	1.568	.
(14) Massachusetts Credibility:	0.540	0.830	.
(15) Countrywide Pure Premium:	1.194	0.523	1.717
(16) Countrywide Indicated Relativity:	1.572	1.480	.
(17) Countrywide Credibility:	0.230	0.090	.
(18) Countrywide Lost-Time Claims:	5294.0	.	.
(19) Pure Premium Underlying Present Rate:	1.305	0.707	2.012
(20) Relativity to Underlying Present Rate:	1.942	1.989	.
(21) Credibility to Underlying Relativity:	0.230	0.080	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.617	1.594	.
(24) Balanced Formula Relativity:	1.596	1.587	1.593

Class(es):		Effective: 7/1/2023							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)	
2016	835,578	5	110	528,953	548,498	338,576	377,291	1,793,318	1,289	0,857	2,146	
2017	1,003,914	3	126	438,589	1,450,686	164,501	584,548	2,638,323	1,882	0,746	2,628	
2018	1,001,355	6	130	604,835	431,722	107,412	442,519	1,586,489	1,035	0,549	1,584	
2019	958,925	9	117	1,404,167	1,340,552	461,307	521,181	3,727,207	2,862	1,025	3,887	
2020	1,001,140	3	94	214,849	460,577	131,025	328,504	1,134,954	0,675	0,459	1,134	
MA Total:	4,800,911	26	577	3,191,393	4,232,035	1,202,820	2,254,043	10,880,290	1,546	0,720	2,266	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.039	2.061	.
(14) Massachusetts Credibility:	0.500	0.820	.
(15) Countrywide Pure Premium:	0.917	0.431	1.348
(16) Countrywide Indicated Relativity:	1.207	1.220	.
(17) Countrywide Credibility:	0.250	0.090	.
(18) Countrywide Lost-Time Claims:	1450.0	.	.
(19) Pure Premium Underlying Present Rate:	1.088	0.709	1.797
(20) Relativity to Underlying Present Rate:	1.620	1.994	.
(21) Credibility to Underlying Relativity:	0.250	0.090	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.726	1.979	.
(24) Balanced Formula Relativity:	1.704	1.971	1.788

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Goods and Services		
8203 ICE 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)
2016	45,974	0	5	0	3,530	0	6,424	9,953	0.077	0.140	0.216
2017	44,402	0	14	0	129,677	0	32,838	162,515	2.921	0.740	3.660
2018	45,955	1	6	5,147	11,020	6,849	13,486	36,501	0.352	0.442	0.794
2019	41,037	0	6	0	810	0	5,138	5,948	0.020	0.125	0.145
2020	38,696	0	5	0	26,252	0	67,133	93,385	0.678	1.735	2.413
MA Total:	216,064	1	36	5,147	171,288	6,849	125,018	308,302	0.817	0.610	1.427

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.077	1.747	.
(14) Massachusetts Credibility:	0.210	0.300	.
(15) Countrywide Pure Premium:	3.110	1.206	4.316
(16) Countrywide Indicated Relativity:	4.093	3.416	.
(17) Countrywide Credibility:	0.400	0.350	.
(18) Countrywide Lost-Time Claims:	351.00	.	.
(19) Pure Premium Underlying Present Rate:	2.745	1.326	4.072
(20) Relativity to Underlying Present Rate:	4.086	3.731	.
(21) Credibility to Underlying Relativity:	0.390	0.350	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	3.457	3.025	.
(24) Balanced Formula Relativity:	3.413	3.012	3.286

Class(es):		Effective: 7/1/2023							Goods and Services		
8204 BUILDING MATERIAL YARD & 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)
2016	58,540	1	9	177,044	13,785	56,921	35,304	283,054	3.260	1.575	4.835
2017	63,555	1	7	18,704	12,188	11,623	7,036	49,551	0.486	0.294	0.780
2018	66,861	1	4	170,300	443	36,079	1,983	208,804	2.554	0.569	3.123
2019	66,055	0	4	0	3,698	0	7,895	11,593	0.056	0.120	0.176
2020	53,543	0	5	0	16,872	0	16,754	33,626	0.315	0.313	0.628
MA Total:	308,554	3	29	366,048	46,986	104,623	68,971	586,628	1.339	0.563	1.901

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.765	1.611	.
(14) Massachusetts Credibility:	0.250	0.400	.
(15) Countrywide Pure Premium:	1.811	0.876	2.687
(16) Countrywide Indicated Relativity:	2.383	2.483	.
(17) Countrywide Credibility:	0.380	0.300	.
(18) Countrywide Lost-Time Claims:	193.00	.	.
(19) Pure Premium Underlying Present Rate:	2.942	1.814	4.755
(20) Relativity to Underlying Present Rate:	4.379	5.101	.
(21) Credibility to Underlying Relativity:	0.370	0.300	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.967	2.919	.
(24) Balanced Formula Relativity:	2.929	2.907	2.922

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	79,200	0	19	0	260,436	0	114,456	374,892	3,288	1,445	4,733
2017	75,007	0	5	0	44,941	0	36,892	81,832	0,599	0,492	1,091
2018	68,328	0	10	0	104,518	0	39,247	143,765	1,530	0,574	2,104
2019	80,561	0	2	0	0	0	886	886	0,000	0,011	0,011
2020	99,844	0	6	0	45,830	0	45,330	91,160	0,459	0,454	0,913
MA Total:	402,940	0	42	0	455,725	0	236,810	692,535	1.131	0.588	1.719

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.491	1.682	.
(14) Massachusetts Credibility:	0.200	0.310	.
(15) Countrywide Pure Premium:	1.566	0.787	2.352
(16) Countrywide Indicated Relativity:	2.060	2.229	.
(17) Countrywide Credibility:	0.400	0.350	.
(18) Countrywide Lost-Time Claims:	1654.0	.	.
(19) Pure Premium Underlying Present Rate:	1.355	0.774	2.129
(20) Relativity to Underlying Present Rate:	2.017	2.176	.
(21) Credibility to Underlying Relativity:	0.400	0.340	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.929	2.042	.
(24) Balanced Formula Relativity:	1.905	2.033	1.945

Class(es):		Effective: 7/1/2023							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)
2016	1,247,134	2	75	732,920	1,050,260	174,130	496,818	2,454,128	1,430	0,538	1,968
2017	1,319,605	7	91	1,916,589	3,607,012	945,758	1,947,223	8,416,582	4,186	2,192	6,378
2018	1,364,404	4	96	2,086,305	1,530,968	1,028,786	1,169,287	5,815,345	2,651	1,611	4,262
2019	1,333,224	3	94	845,268	2,411,894	457,434	1,647,950	5,362,547	2,443	1,579	4,022
2020	1,404,796	4	74	1,740,766	4,260,781	497,550	1,423,712	7,922,808	4,272	1,368	5,640
MA Total:	6,669,165	20	430	7,321,847	12,860,916	3,103,657	6,684,989	29,971,410	3,026	1,468	4,494

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.291	1.527	.
(14) Massachusetts Credibility:	0.750	1.000	.
(15) Countrywide Pure Premium:	1.697	0.716	2.413
(16) Countrywide Indicated Relativity:	0.729	0.752	.
(17) Countrywide Credibility:	0.130	0.000	.
(18) Countrywide Lost-Time Claims:	2931.0	.	.
(19) Pure Premium Underlying Present Rate:	2.196	1.317	3.513
(20) Relativity to Underlying Present Rate:	1.013	1.386	.
(21) Credibility to Underlying Relativity:	0.120	0.000	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.185	1.527	.
(24) Balanced Formula Relativity:	1.199	1.530	1.295

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	1,395,745	9	230	2,201,461	2,541,924	600,054	1,074,587	6,418,026	3,398	1,200	4,598
2017	1,526,712	7	239	677,376	1,614,897	415,433	1,180,073	3,887,779	1,501	1,045	2,547
2018	1,701,887	7	232	1,510,940	2,582,862	487,389	1,289,971	5,871,161	2,405	1,044	3,450
2019	1,574,571	7	171	1,307,206	1,732,604	421,111	1,153,893	4,614,813	1,931	1,000	2,931
2020	1,638,282	7	156	1,617,735	2,823,622	335,215	1,425,952	6,202,523	2,711	1,075	3,786
MA Total:	7,837,197	37	1,028	7,314,718	11,295,908	2,259,201	6,124,475	26,994,302	2,375	1,070	3,444

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.131	3.062	.
(14) Massachusetts Credibility:	0.830	1.000	.
(15) Countrywide Pure Premium:	2.097	0.897	2.993
(16) Countrywide Indicated Relativity:	2.759	2.540	.
(17) Countrywide Credibility:	0.090	0.000	.
(18) Countrywide Lost-Time Claims:	10789	.	.
(19) Pure Premium Underlying Present Rate:	2.392	1.260	3.651
(20) Relativity to Underlying Present Rate:	3.559	3.543	.
(21) Credibility to Underlying Relativity:	0.080	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	3.132	3.062	.
(24) Balanced Formula Relativity:	3.091	3.049	3.078

Class(es):		Effective: 7/1/2023							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)
2016	276,760	3	23	417,121	116,391	405,003	79,012	1,017,528	1,928	1,749	3,677
2017	316,862	2	30	215,962	816,973	50,422	637,789	1,721,146	3,260	2,172	5,432
2018	363,388	0	29	0	767,483	0	355,607	1,123,090	2,112	0,979	3,091
2019	257,888	2	25	689,092	827,181	181,815	222,024	1,920,112	5,880	1,566	7,446
2020	264,572	1	27	103,619	487,692	23,672	139,424	754,408	2,235	0,616	2,851
MA Total:	1,479,470	8	134	1,425,794	3,015,721	660,912	1,433,857	6,536,284	3,002	1,416	4,418

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.958	4.053	.
(14) Massachusetts Credibility:	0.420	0.660	.
(15) Countrywide Pure Premium:	2.337	1.052	3.390
(16) Countrywide Indicated Relativity:	3.076	2.982	.
(17) Countrywide Credibility:	0.290	0.170	.
(18) Countrywide Lost-Time Claims:	1684.0	.	.
(19) Pure Premium Underlying Present Rate:	2.316	1.344	3.660
(20) Relativity to Underlying Present Rate:	3.448	3.781	.
(21) Credibility to Underlying Relativity:	0.290	0.170	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	3.554	3.825	.
(24) Balanced Formula Relativity:	3.509	3.808	3.603

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	125.943	1	39	1.926	393.415	6.183	230.625	632.149	3.139	1.880	5.019	
2017	130.561	0	14	0	617.261	0	245.997	863.259	4.728	1.884	6.612	
2018	138.451	1	16	9.962	146.549	33.615	85.373	275.498	1.130	0.859	1.990	
2019	140.886	2	18	109.353	23.756	29.803	57.362	220.274	0.945	0.619	1.563	
2020	161.207	2	23	109.871	57.530	35.812	84.368	287.582	1.038	0.746	1.784	
MA Total:	697.047	6	110	231,112	1,238,512	105,413	703,726	2,278,763	2.108	1.161	3.269	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.780	3.323	.
(14) Massachusetts Credibility:	0.280	0.430	.
(15) Countrywide Pure Premium:	2.073	0.860	2.933
(16) Countrywide Indicated Relativity:	2.728	2.435	.
(17) Countrywide Credibility:	0.360	0.290	.
(18) Countrywide Lost-Time Claims:	708.00	.	.
(19) Pure Premium Underlying Present Rate:	1.730	0.961	2.691
(20) Relativity to Underlying Present Rate:	2.574	2.703	.
(21) Credibility to Underlying Relativity:	0.360	0.280	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.687	2.892	.
(24) Balanced Formula Relativity:	2.653	2.879	2.724

Class(es):		Effective: 7/1/2023							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)	
2016	91.393	0	14	0	204.696	0	118.970	323.666	2.240	1.302	3.541	
2017	88.879	1	14	15.551	95.689	1.414	104.241	216.895	1.252	1.189	2.440	
2018	92.324	1	16	10.280	148.248	7.211	78.022	243.760	1.717	0.923	2.640	
2019	80.019	0	9	0	13.359	0	15.456	28.814	0.167	0.193	0.360	
2020	75.286	0	9	0	65.242	0	39.267	104.509	0.867	0.522	1.388	
MA Total:	427.902	2	62	25,831	527,234	8,625	355,956	917,645	1.293	0.852	2.145	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.704	2.439	.
(14) Massachusetts Credibility:	0.260	0.380	.
(15) Countrywide Pure Premium:	2.915	1.467	4.382
(16) Countrywide Indicated Relativity:	3.836	4.157	.
(17) Countrywide Credibility:	0.370	0.310	.
(18) Countrywide Lost-Time Claims:	212.00	.	.
(19) Pure Premium Underlying Present Rate:	2.292	1.179	3.470
(20) Relativity to Underlying Present Rate:	3.411	3.315	.
(21) Credibility to Underlying Relativity:	0.370	0.310	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	3.124	3.243	.
(24) Balanced Formula Relativity:	3.084	3.229	3.130

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	344,271	3	66	310,592	493,130	162,299	297,691	1,263,712	2,335	1,336	3,671
2017	406,197	3	53	441,140	113,748	253,103	80,612	888,604	1,366	0,822	2,188
2018	417,139	3	65	830,435	910,273	235,837	467,164	2,443,710	4,173	1,685	5,858
2019	341,913	2	49	237,331	122,001	72,584	92,280	524,196	1,051	0,482	1,533
2020	347,554	2	28	358,882	636,366	108,103	153,548	1,256,898	2,864	0,753	3,616
MA Total:	1,857,074	13	261	2,178,380	2,275,518	831,927	1,091,294	6,377,119	2,398	1,036	3,434

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.162	2.965	.
(14) Massachusetts Credibility:	0.440	0.690	.
(15) Countrywide Pure Premium:	2.140	0.970	3.111
(16) Countrywide Indicated Relativity:	2.817	2.749	.
(17) Countrywide Credibility:	0.280	0.160	.
(18) Countrywide Lost-Time Claims:	1207.0	.	.
(19) Pure Premium Underlying Present Rate:	2.102	1.193	3.295
(20) Relativity to Underlying Present Rate:	3.128	3.356	.
(21) Credibility to Underlying Relativity:	0.280	0.150	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	3.056	2.989	.
(24) Balanced Formula Relativity:	3.017	2.976	3.004

Class(es):		Effective: 7/1/2023							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)
2016	178,452	1	27	59,317	105,640	7,780	210,514	383,251	0,924	1,223	2,148
2017	191,411	1	25	976	35,285	8,423	154,235	198,920	0,189	0,850	1,039
2018	198,446	0	25	0	254,219	0	124,625	378,844	1,281	0,628	1,909
2019	203,536	1	24	2,484	36,386	17,627	129,125	185,622	0,191	0,721	0,912
2020	204,507	0	14	0	200,266	0	225,513	425,779	0,979	1,103	2,082
MA Total:	976,353	3	115	62,778	631,797	33,831	844,011	1,572,416	0,711	0,899	1,610

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.938	2.574	.
(14) Massachusetts Credibility:	0.300	0.500	.
(15) Countrywide Pure Premium:	2.334	1.569	3.904
(16) Countrywide Indicated Relativity:	3.072	4.446	.
(17) Countrywide Credibility:	0.350	0.250	.
(18) Countrywide Lost-Time Claims:	972.00	.	.
(19) Pure Premium Underlying Present Rate:	1.460	1.031	2.491
(20) Relativity to Underlying Present Rate:	2.173	2.900	.
(21) Credibility to Underlying Relativity:	0.350	0.250	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.117	3.123	.
(24) Balanced Formula Relativity:	2.090	3.110	2.412

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Calculation of Class Relativities

Class(es): 8291 STORAGE WAREHOUSE-COLD		Effective: 7/1/2023							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)
2016	157,651	2	28	247,977	563,506	56,887	189,677	1,058,046	5,147	1,564	6,711
2017	187,322	2	31	252,537	122,466	199,879	200,079	774,961	2,002	2,135	4,137
2018	204,486	1	21	7,789	56,567	4,509	57,748	126,612	0,315	0,304	0,619
2019	225,418	2	27	656,407	249,800	451,997	55,996	1,414,201	4,020	2,254	6,274
2020	162,641	2	19	147,055	328,461	30,649	322,626	828,791	2,924	2,172	5,096
MA Total:	937,517	9	126	1,311,765	1,320,799	743,920	826,126	4,202,611	2,808	1,675	4,483

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.702	4.794	.
(14) Massachusetts Credibility:	0.290	0.470	.
(15) Countrywide Pure Premium:	1.395	0.656	2.050
(16) Countrywide Indicated Relativity:	1.835	1.858	.
(17) Countrywide Credibility:	0.360	0.270	.
(18) Countrywide Lost-Time Claims:	1025.0	.	.
(19) Pure Premium Underlying Present Rate:	1.376	0.895	2.271
(20) Relativity to Underlying Present Rate:	2.049	2.517	.
(21) Credibility to Underlying Relativity:	0.350	0.260	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.451	3.409	.
(24) Balanced Formula Relativity:	2.420	3.395	2.727

Class(es): 8292 STORAGE WAREHOUSE NOC		Effective: 7/1/2023							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)
2016	711,629	6	126	666,366	519,645	319,522	399,351	1,904,883	1,667	1,010	2,677
2017	766,331	7	155	485,578	708,468	149,687	370,611	1,714,344	1,558	0,679	2,237
2018	871,993	4	110	296,785	1,057,550	87,326	518,453	1,960,114	1,553	0,695	2,248
2019	846,856	4	106	495,885	1,213,317	79,554	645,784	2,434,539	2,018	0,857	2,875
2020	971,984	9	93	786,043	1,302,745	224,900	665,750	2,979,438	2,149	0,916	3,065
MA Total:	4,168,793	30	590	2,730,656	4,801,725	860,988	2,599,949	10,993,318	1,807	0,830	2,637

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.382	2.377	.
(14) Massachusetts Credibility:	0.540	0.790	.
(15) Countrywide Pure Premium:	1.572	0.676	2.248
(16) Countrywide Indicated Relativity:	2.069	1.915	.
(17) Countrywide Credibility:	0.230	0.110	.
(18) Countrywide Lost-Time Claims:	7763.0	.	.
(19) Pure Premium Underlying Present Rate:	1.499	0.735	2.234
(20) Relativity to Underlying Present Rate:	2.231	2.066	.
(21) Credibility to Underlying Relativity:	0.230	0.100	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.275	2.295	.
(24) Balanced Formula Relativity:	2.246	2.285	2.258

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	737,773	14	165	1,279,555	887,554	637,694	515,433	3,320,236	2,937	1,563	4,500
2017	761,834	12	144	1,383,452	866,797	569,239	757,780	3,577,268	2,954	1,742	4,696
2018	773,372	3	181	575,244	1,862,722	235,860	808,091	3,481,917	3,152	1,350	4,502
2019	759,037	8	141	486,707	1,281,334	325,997	1,005,110	3,099,148	2,329	1,754	4,083
2020	771,532	8	130	876,046	2,065,054	312,221	1,021,667	4,274,988	3,812	1,729	5,541
MA Total:	3,803,547	45	761	4,601,003	6,963,461	2,081,012	4,108,081	17,753,557	3,040	1,627	4,668

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.008	4.658	.
(14) Massachusetts Credibility:	0.710	1.000	.
(15) Countrywide Pure Premium:	3.534	1.350	4.884
(16) Countrywide Indicated Relativity:	4.651	3.825	.
(17) Countrywide Credibility:	0.150	0.000	.
(18) Countrywide Lost-Time Claims:	3826.0	.	.
(19) Pure Premium Underlying Present Rate:	3.363	1.731	5.093
(20) Relativity to Underlying Present Rate:	5.005	4.868	.
(21) Credibility to Underlying Relativity:	0.140	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	4.244	4.658	.
(24) Balanced Formula Relativity:	4.190	4.638	4.331

Class(es):		Effective: 7/1/2023							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)
2016	1,603,213	15	205	3,442,428	2,059,886	613,206	1,307,003	7,422,523	3,432	1,198	4,630
2017	1,601,793	12	225	1,400,689	3,927,985	476,259	1,587,636	7,392,569	3,327	1,288	4,615
2018	1,518,983	12	177	2,254,723	4,301,575	416,470	1,685,493	8,658,261	4,316	1,384	5,700
2019	1,595,846	5	179	765,486	4,780,381	713,260	1,999,078	8,258,204	3,475	1,700	5,175
2020	1,660,416	12	168	1,855,897	4,954,267	690,010	1,804,615	9,304,789	4,101	1,502	5,604
MA Total:	7,980,250	56	954	9,719,223	20,024,093	2,909,206	8,383,826	41,036,347	3,727	1,415	5,142

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.914	4.051	.
(14) Massachusetts Credibility:	0.940	1.000	.
(15) Countrywide Pure Premium:	3.107	0.988	4.096
(16) Countrywide Indicated Relativity:	4.089	2.800	.
(17) Countrywide Credibility:	0.030	0.000	.
(18) Countrywide Lost-Time Claims:	3699.0	.	.
(19) Pure Premium Underlying Present Rate:	3.175	1.335	4.510
(20) Relativity to Underlying Present Rate:	4.726	3.755	.
(21) Credibility to Underlying Relativity:	0.030	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	4.883	4.051	.
(24) Balanced Formula Relativity:	4.821	4.033	4.573

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	8,598,210	25	933	3,984,331	5,983,278	1,301,429	3,384,952	14,653,989	1,159	0,545	1,704
2017	8,850,940	31	909	2,705,161	7,858,191	1,099,034	3,542,096	15,204,482	1,193	0,524	1,718
2018	9,290,323	34	897	3,463,285	10,066,166	1,033,876	4,726,930	19,290,257	1,456	0,620	2,076
2019	9,148,525	28	751	3,724,035	9,212,783	836,177	4,776,272	18,549,266	1,414	0,613	2,028
2020	9,447,387	23	601	3,455,638	6,181,314	1,113,180	3,389,406	14,139,538	1,020	0,477	1,497
MA Total:	45,335,385	141	4,091	17,332,450	39,301,731	5,383,696	19,819,656	81,837,532	1,249	0,556	1,805

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.647	1.591	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.112	0.454	1.566
(16) Countrywide Indicated Relativity:	1.464	1.286	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	25997	.	.
(19) Pure Premium Underlying Present Rate:	1.149	0.569	1.718
(20) Relativity to Underlying Present Rate:	1.711	1.601	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.647	1.591	.
(24) Balanced Formula Relativity:	1.626	1.584	1.613

Class(es):		Effective: 7/1/2023							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)
2016	190,054	2	14	18,542	43,877	6,259	91,310	159,987	0,328	0,513	0,842
2017	169,424	1	8	41,108	91,308	16,174	48,848	197,438	0,782	0,384	1,165
2018	205,325	2	8	143,078	322,848	56,557	55,379	577,862	2,269	0,545	2,814
2019	601,588	1	11	80,952	2,086	8,155	13,307	104,500	0,138	0,036	0,174
2020	705,589	0	7	0	9,760	0	10,998	20,759	0,014	0,016	0,029
MA Total:	1,871,980	6	48	283,680	469,880	87,143	219,843	1,060,547	0,403	0,164	0,567

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.531	0.469	.
(14) Massachusetts Credibility:	0.280	0.470	.
(15) Countrywide Pure Premium:	0.686	0.327	1.013
(16) Countrywide Indicated Relativity:	0.903	0.926	.
(17) Countrywide Credibility:	0.360	0.270	.
(18) Countrywide Lost-Time Claims:	414.00	.	.
(19) Pure Premium Underlying Present Rate:	0.676	0.441	1.117
(20) Relativity to Underlying Present Rate:	1.007	1.241	.
(21) Credibility to Underlying Relativity:	0.360	0.260	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.836	0.793	.
(24) Balanced Formula Relativity:	0.825	0.790	0.814

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	472,893	1	58	91,289	793,830	15,509	274,753	1,175,381	1,872	0,614	2,486
2017	515,950	6	102	385,008	1,205,894	220,429	435,687	2,247,017	3,083	1,272	4,355
2018	554,695	3	100	236,000	1,307,357	32,488	609,384	2,185,228	2,782	1,157	3,940
2019	465,353	1	66	601,700	159,465	261,229	148,656	1,171,050	1,636	0,881	2,516
2020	490,419	3	57	255,294	756,236	92,417	300,572	1,404,519	2,063	0,801	2,864
MA Total:	2,499,310	14	383	1,569,291	4,222,781	622,072	1,769,052	8,183,195	2,317	0,957	3,274

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.055	2.739	.
(14) Massachusetts Credibility:	0.460	0.670	.
(15) Countrywide Pure Premium:	1.162	0.463	1.624
(16) Countrywide Indicated Relativity:	1.529	1.310	.
(17) Countrywide Credibility:	0.270	0.170	.
(18) Countrywide Lost-Time Claims:	1449.0	.	.
(19) Pure Premium Underlying Present Rate:	1.668	0.819	2.487
(20) Relativity to Underlying Present Rate:	2.483	2.303	.
(21) Credibility to Underlying Relativity:	0.270	0.160	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.489	2.426	.
(24) Balanced Formula Relativity:	2.457	2.416	2.444

Class(es):		Effective: 7/1/2023							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)
2016	517,861	1	35	12,959	177,315	47,877	170,766	408,917	0,367	0,422	0,790
2017	452,618	1	46	11,223	247,524	9,642	158,052	426,441	0,572	0,370	0,942
2018	446,693	2	33	379,401	385,600	65,199	136,310	966,510	1,713	0,451	2,164
2019	440,399	2	30	90,153	46,928	20,809	92,518	250,409	0,311	0,257	0,569
2020	359,216	0	8	0	302	0	5,060	5,362	0,001	0,014	0,015
MA Total:	2,216,787	6	152	493,736	857,669	143,527	562,706	2,057,639	0,610	0,319	0,928

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.804	0.912	.
(14) Massachusetts Credibility:	0.300	0.520	.
(15) Countrywide Pure Premium:	0.846	0.456	1.303
(16) Countrywide Indicated Relativity:	1.114	1.292	.
(17) Countrywide Credibility:	0.350	0.240	.
(18) Countrywide Lost-Time Claims:	1315.0	.	.
(19) Pure Premium Underlying Present Rate:	0.657	0.481	1.138
(20) Relativity to Underlying Present Rate:	0.978	1.353	.
(21) Credibility to Underlying Relativity:	0.350	0.240	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.973	1.109	.
(24) Balanced Formula Relativity:	0.961	1.104	1.006

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Calculation of Class Relativities

Class(es): 8393 AUTOMOBILE BODY REPAIR		Effective: 7/1/2023							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)
2016	2,020,089	4	114	156,865	726,364	87,531	475,200	1,445,959	0.437	0.279	0.716
2017	2,181,063	3	104	122,342	659,882	58,967	289,159	1,130,350	0.359	0.160	0.518
2018	2,250,249	4	101	557,840	1,735,096	139,576	548,078	2,980,590	1.019	0.306	1.325
2019	2,231,179	2	89	163,527	659,955	39,361	304,336	1,167,180	0.369	0.154	0.523
2020	2,182,633	1	67	553,486	1,679,603	47,055	918,586	3,198,730	1.023	0.442	1.466
MA Total:	10,865,213	14	475	1,554,059	5,460,900	372,490	2,535,359	9,922,809	0.646	0.268	0.913

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.851	0.766	.
(14) Massachusetts Credibility:	0.540	0.730	.
(15) Countrywide Pure Premium:	0.832	0.305	1.137
(16) Countrywide Indicated Relativity:	1.095	0.864	.
(17) Countrywide Credibility:	0.230	0.140	.
(18) Countrywide Lost-Time Claims:	2935.0	.	.
(19) Pure Premium Underlying Present Rate:	0.587	0.234	0.821
(20) Relativity to Underlying Present Rate:	0.874	0.657	.
(21) Credibility to Underlying Relativity:	0.230	0.130	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.913	0.766	.
(24) Balanced Formula Relativity:	0.901	0.762	0.857

Class(es): 8601 ARCHITECT OR ENGINEER-CONSULTING		Effective: 7/1/2023							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)
2016	15,296,734	6	157	1,497,248	1,550,786	186,587	791,015	4,025,636	0.199	0.064	0.263
2017	15,730,238	5	175	290,655	311,831	110,329	335,205	1,048,019	0.038	0.028	0.067
2018	16,653,264	5	130	467,572	199,001	58,062	430,603	1,155,237	0.040	0.029	0.069
2019	17,663,827	5	111	1,598,955	994,460	598,356	823,070	4,014,842	0.147	0.080	0.227
2020	20,115,045	4	84	1,079,616	858,546	452,292	458,478	2,848,932	0.096	0.045	0.142
MA Total:	85,459,107	25	657	4,934,046	3,914,623	1,405,625	2,838,371	13,092,665	0.104	0.050	0.153

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.645	1.631	.
(14) Massachusetts Credibility:	0.570	0.860	.
(15) Countrywide Pure Premium:	0.082	0.042	0.125
(16) Countrywide Indicated Relativity:	1.753	1.676	.
(17) Countrywide Credibility:	0.220	0.070	.
(18) Countrywide Lost-Time Claims:	1956.0	.	.
(19) Pure Premium Underlying Present Rate:	0.087	0.046	0.132
(20) Relativity to Underlying Present Rate:	1.528	1.407	.
(21) Credibility to Underlying Relativity:	0.210	0.070	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	1.644	1.619	.
(24) Balanced Formula Relativity:	1.634	1.618	1.629

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
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	938	938	0.000	0.295	0.295
2019	4,146	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	2,896	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	12,676	0	1	0	0	0	938	938	0.000	0.074	0.074

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.212	.
(14) Massachusetts Credibility:	0.050	0.070	.
(15) Countrywide Pure Premium:	1.002	0.460	1.462
(16) Countrywide Indicated Relativity:	1.318	1.304	.
(17) Countrywide Credibility:	0.190	0.200	.
(18) Countrywide Lost-Time Claims:	17.000	.	.
(19) Pure Premium Underlying Present Rate:	1.262	0.519	1.781
(20) Relativity to Underlying Present Rate:	1.878	1.459	.
(21) Credibility to Underlying Relativity:	0.760	0.730	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.678	1.341	.
(24) Balanced Formula Relativity:	1.656	1.335	1.555

Class(es):		Effective: 7/1/2023							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)
2016	1,811,281	2	44	211,371	120,894	33,416	92,323	458,003	0.183	0.069	0.253
2017	2,063,618	1	52	79,620	719,032	11,815	316,308	1,126,774	0.387	0.159	0.546
2018	2,068,228	3	53	518,791	240,757	128,358	318,564	1,206,469	0.367	0.216	0.583
2019	2,201,462	2	48	598,136	239,092	450,138	244,647	1,532,013	0.380	0.316	0.696
2020	2,223,561	4	33	341,767	165,673	115,030	161,699	784,168	0.228	0.124	0.353
MA Total:	10,368,150	12	230	1,749,685	1,485,447	738,757	1,133,540	5,107,428	0.312	0.181	0.493

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.411	0.517	.
(14) Massachusetts Credibility:	0.440	0.650	.
(15) Countrywide Pure Premium:	0.561	0.229	0.791
(16) Countrywide Indicated Relativity:	0.739	0.650	.
(17) Countrywide Credibility:	0.280	0.180	.
(18) Countrywide Lost-Time Claims:	1479.0	.	.
(19) Pure Premium Underlying Present Rate:	0.372	0.182	0.554
(20) Relativity to Underlying Present Rate:	0.554	0.513	.
(21) Credibility to Underlying Relativity:	0.280	0.170	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.543	0.540	.
(24) Balanced Formula Relativity:	0.536	0.538	0.537

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	292,653	0	4	0	2,163	0	15,505	17,668	0.007	0.053	0.060
2017	325,926	0	0	0	0	0	0	0	0.000	0.000	0.000
2018	335,638	0	1	0	0	0	95	95	0.000	0.000	0.000
2019	363,304	0	1	0	195	0	33,813	34,008	0.001	0.093	0.094
2020	349,432	0	2	0	0	0	5,633	5,633	0.000	0.016	0.016
MA Total:	1,666,952	0	8	0	2,358	0	55,046	57,404	0.001	0.033	0.034

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.022	1.085	.
(14) Massachusetts Credibility:	0.120	0.180	.
(15) Countrywide Pure Premium:	0.079	0.037	0.117
(16) Countrywide Indicated Relativity:	1.689	1.469	.
(17) Countrywide Credibility:	0.390	0.410	.
(18) Countrywide Lost-Time Claims:	108.00	.	.
(19) Pure Premium Underlying Present Rate:	0.084	0.047	0.130
(20) Relativity to Underlying Present Rate:	1.473	1.441	.
(21) Credibility to Underlying Relativity:	0.490	0.410	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	1.383	1.388	.
(24) Balanced Formula Relativity:	1.374	1.388	1.379

Class(es):		Effective: 7/1/2023							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)
2016	110,861,743	25	454	1,397,166	3,609,691	590,382	2,220,515	7,817,755	0.045	0.025	0.071
2017	115,942,206	20	534	1,508,850	1,541,804	778,862	1,889,215	5,718,730	0.026	0.023	0.049
2018	121,930,359	32	519	3,602,547	4,024,448	884,614	2,574,364	11,085,974	0.063	0.028	0.091
2019	132,528,244	15	432	1,945,359	5,180,371	971,419	3,321,707	11,418,856	0.054	0.032	0.086
2020	125,693,230	13	270	1,331,712	3,463,336	404,640	2,884,348	8,084,035	0.038	0.026	0.064
MA Total:	606,955,783	105	2,209	9,785,633	17,819,650	3,629,917	12,890,150	44,125,350	0.045	0.027	0.073

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.723	0.894	.
(14) Massachusetts Credibility:	0.920	1.000	.
(15) Countrywide Pure Premium:	0.075	0.036	0.111
(16) Countrywide Indicated Relativity:	1.598	1.427	.
(17) Countrywide Credibility:	0.040	0.000	.
(18) Countrywide Lost-Time Claims:	14106	.	.
(19) Pure Premium Underlying Present Rate:	0.040	0.026	0.066
(20) Relativity to Underlying Present Rate:	0.705	0.812	.
(21) Credibility to Underlying Relativity:	0.040	0.000	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	0.757	0.894	.
(24) Balanced Formula Relativity:	0.752	0.894	0.798

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	113,391	1	15	45,701	97,456	6,635	37,214	187,007	1,263	0,387	1,649	
2017	81,736	0	12	0	485,177	0	101,469	586,646	5,936	1,241	7,177	
2018	61,447	1	14	232,821	100,034	42,260	185,815	560,930	5,417	3,712	9,129	
2019	91,007	0	7	0	446,140	0	158,701	604,841	4,902	1,744	6,646	
2020	49,791	0	2	0	2,767	0	5,134	7,901	0,056	0,103	0,159	
MA Total:	397,372	2	50	278,522	1,131,575	48,896	488,333	1,947,326	3,549	1,352	4,901	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.678	3.870	.
(14) Massachusetts Credibility:	0.250	0.430	.
(15) Countrywide Pure Premium:	1.660	0.773	2.432
(16) Countrywide Indicated Relativity:	2.184	2.189	.
(17) Countrywide Credibility:	0.380	0.290	.
(18) Countrywide Lost-Time Claims:	242.00	.	.
(19) Pure Premium Underlying Present Rate:	2.456	1.666	4.122
(20) Relativity to Underlying Present Rate:	3.655	4.687	.
(21) Credibility to Underlying Relativity:	0.370	0.280	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	3.352	3.611	.
(24) Balanced Formula Relativity:	3.309	3.596	3.399

Class(es):		Effective: 7/1/2023							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)	
2016	147,459	0	2	0	0	0	866	866	0,000	0,006	0,006	
2017	178,727	0	1	0	0	0	107	107	0,000	0,001	0,001	
2018	192,211	0	5	0	258,437	0	65,952	324,388	1,345	0,343	1,688	
2019	215,012	0	6	0	172,171	0	16,657	188,828	0,801	0,077	0,878	
2020	164,120	0	2	0	23,634	0	44,085	67,718	0,144	0,269	0,413	
MA Total:	897,528	0	16	0	454,241	0	127,666	581,907	0,506	0,142	0,648	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.667	0.407	.
(14) Massachusetts Credibility:	0.160	0.210	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.525	0.347	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.356	0.125	0.481
(20) Relativity to Underlying Present Rate:	0.530	0.351	.
(21) Credibility to Underlying Relativity:	0.840	0.790	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.552	0.363	.
(24) Balanced Formula Relativity:	0.545	0.361	0.487

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Calculation of Class Relativities

Class(es): 8748 AUTOMOBILE SALESPERSONS		Effective: 7/1/2023							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)
2016	3,131,553	1	61	93,299	550,785	31,521	404,192	1,079,797	0.206	0.139	0.345
2017	3,209,251	6	89	352,538	881,370	40,720	453,621	1,728,248	0.384	0.154	0.539
2018	3,313,459	7	63	1,025,900	330,342	181,406	204,471	1,742,119	0.409	0.116	0.526
2019	3,049,942	1	36	385,192	721,512	83,338	315,635	1,505,677	0.363	0.131	0.494
2020	3,858,408	1	30	17,317	685,792	10,865	184,016	897,990	0.182	0.051	0.233
MA Total:	16,562,612	16	279	1,874,247	3,169,801	347,849	1,561,935	6,953,832	0.305	0.115	0.420

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.839	3.787	.
(14) Massachusetts Credibility:	0.490	0.700	.
(15) Countrywide Pure Premium:	0.145	0.068	0.213
(16) Countrywide Indicated Relativity:	3.084	2.703	.
(17) Countrywide Credibility:	0.260	0.150	.
(18) Countrywide Lost-Time Claims:	1841.0	.	.
(19) Pure Premium Underlying Present Rate:	0.308	0.140	0.448
(20) Relativity to Underlying Present Rate:	5.413	4.326	.
(21) Credibility to Underlying Relativity:	0.250	0.150	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	4.526	3.705	.
(24) Balanced Formula Relativity:	4.497	3.704	4.238

Class(es): 8800 MAILING OR ADDRESSING CO & CLERICAL		Effective: 7/1/2023							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)
2016	389,109	0	6	0	3,740	0	21,441	25,181	0.010	0.055	0.065
2017	344,130	0	14	0	217,852	0	96,296	314,148	0.633	0.280	0.913
2018	447,535	0	10	0	258,189	0	82,672	340,861	0.577	0.185	0.762
2019	278,181	0	6	0	152,939	0	60,272	213,211	0.550	0.217	0.766
2020	271,156	0	7	0	96,361	0	49,290	145,651	0.355	0.182	0.537
MA Total:	1,730,111	0	43	0	729,082	0	309,972	1,039,053	0.421	0.179	0.601

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	6.696	5.885	.
(14) Massachusetts Credibility:	0.230	0.340	.
(15) Countrywide Pure Premium:	0.373	0.211	0.584
(16) Countrywide Indicated Relativity:	7.934	8.345	.
(17) Countrywide Credibility:	0.390	0.330	.
(18) Countrywide Lost-Time Claims:	635.00	.	.
(19) Pure Premium Underlying Present Rate:	0.444	0.219	0.662
(20) Relativity to Underlying Present Rate:	7.804	6.753	.
(21) Credibility to Underlying Relativity:	0.380	0.330	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	7.600	6.983	.
(24) Balanced Formula Relativity:	7.551	6.980	7.365

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	30,800,724	0	48	0	368,782	0	333,184	701,966	0.012	0.011	0.023
2017	31,511,882	2	34	257,992	19,479	77,644	143,084	498,198	0.009	0.007	0.016
2018	36,528,079	6	60	1,846,282	246,918	431,096	266,940	2,791,236	0.057	0.019	0.076
2019	39,201,396	3	33	847,701	454,880	123,583	211,622	1,637,787	0.033	0.009	0.042
2020	39,358,302	1	12	6,657	187,349	17,556	32,263	243,825	0.005	0.001	0.006
MA Total:	177,400,384	12	187	2,958,632	1,277,408	649,879	987,093	5,873,011	0.024	0.009	0.033

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.379	0.303	.
(14) Massachusetts Credibility:	0.420	0.660	.
(15) Countrywide Pure Premium:	0.013	0.007	0.021
(16) Countrywide Indicated Relativity:	0.287	0.287	.
(17) Countrywide Credibility:	0.290	0.170	.
(18) Countrywide Lost-Time Claims:	753.00	.	.
(19) Pure Premium Underlying Present Rate:	0.019	0.011	0.030
(20) Relativity to Underlying Present Rate:	0.339	0.341	.
(21) Credibility to Underlying Relativity:	0.290	0.170	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	0.341	0.307	.
(24) Balanced Formula Relativity:	0.339	0.307	0.328

Class(es):		Effective: 7/1/2023							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)
2016	549,525,746	77	1,645	7,741,607	7,637,074	2,328,815	5,689,457	23,396,953	0.028	0.015	0.043
2017	581,521,492	73	1,824	7,308,028	10,591,031	1,964,943	7,616,963	27,480,965	0.031	0.016	0.047
2018	605,608,785	82	1,680	7,793,507	7,539,050	2,494,803	6,351,177	24,178,537	0.025	0.015	0.040
2019	656,148,369	58	1,463	6,720,759	10,382,670	1,631,496	6,551,279	25,286,204	0.026	0.012	0.039
2020	696,638,174	45	1,007	4,356,580	10,227,802	1,688,320	5,983,228	22,255,930	0.021	0.011	0.032
MA Total:	3,089,442,566	335	7,619	33,920,480	46,377,627	10,108,377	32,192,102	122,598,587	0.026	0.014	0.040

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.413	0.450	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.032	0.018	0.050
(16) Countrywide Indicated Relativity:	0.683	0.703	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	36441	.	.
(19) Pure Premium Underlying Present Rate:	0.026	0.016	0.042
(20) Relativity to Underlying Present Rate:	0.460	0.503	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	0.413	0.450	.
(24) Balanced Formula Relativity:	0.410	0.450	0.423

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	26,502,020	5	42	51,522	625,661	22,838	245,301	945,322	0.026	0.010	0.036
2017	27,645,958	5	55	22,586	457,152	31,294	161,662	672,694	0.017	0.007	0.024
2018	29,138,061	2	39	64,899	102,066	34,686	128,987	330,638	0.006	0.006	0.011
2019	31,082,777	4	37	554,548	420,315	230,060	659,646	1,864,568	0.031	0.029	0.060
2020	32,253,208	3	21	100,745	197,611	63,982	212,756	575,094	0.009	0.009	0.018
MA Total:	146,622,024	19	194	794,299	1,802,806	382,860	1,408,351	4,388,316	0.018	0.012	0.030

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.281	0.401	.
(14) Massachusetts Credibility:	0.460	0.700	.
(15) Countrywide Pure Premium:	0.029	0.015	0.044
(16) Countrywide Indicated Relativity:	0.622	0.587	.
(17) Countrywide Credibility:	0.270	0.150	.
(18) Countrywide Lost-Time Claims:	1292.0	.	.
(19) Pure Premium Underlying Present Rate:	0.030	0.016	0.045
(20) Relativity to Underlying Present Rate:	0.524	0.480	.
(21) Credibility to Underlying Relativity:	0.270	0.150	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	0.439	0.441	.
(24) Balanced Formula Relativity:	0.436	0.441	0.438

Class(es):		Effective: 7/1/2023							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)
2016	1,015,694	6	189	112,534	690,908	82,711	346,405	1,232,559	0.791	0.422	1.214
2017	1,313,347	6	280	495,681	752,845	213,635	520,313	1,982,473	0.951	0.559	1.509
2018	1,434,509	7	281	580,341	1,222,651	131,965	492,117	2,427,074	1.257	0.435	1.692
2019	2,197,996	11	330	1,008,733	1,119,705	319,696	641,517	3,089,652	0.968	0.437	1.406
2020	2,332,980	7	246	774,719	2,328,484	183,683	833,171	4,120,058	1.330	0.436	1.766
MA Total:	8,294,526	37	1,326	2,972,008	6,114,593	931,691	2,833,523	12,851,815	1.095	0.454	1.549

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.444	1.299	.
(14) Massachusetts Credibility:	0.580	0.880	.
(15) Countrywide Pure Premium:	1.122	0.551	1.673
(16) Countrywide Indicated Relativity:	1.477	1.562	.
(17) Countrywide Credibility:	0.210	0.060	.
(18) Countrywide Lost-Time Claims:	10908	.	.
(19) Pure Premium Underlying Present Rate:	0.938	0.497	1.435
(20) Relativity to Underlying Present Rate:	1.396	1.399	.
(21) Credibility to Underlying Relativity:	0.210	0.060	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.441	1.321	.
(24) Balanced Formula Relativity:	1.423	1.315	1.389

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	986,402	3	146	307,566	324,258	138,329	212,571	982,724	0.641	0.356	0.996	
2017	1,092,034	4	167	59,261	155,628	16,425	165,177	396,491	0.197	0.166	0.363	
2018	1,190,678	2	195	203,572	726,536	64,318	435,414	1,429,839	0.781	0.420	1.201	
2019	1,253,531	3	182	579,734	973,204	73,954	513,071	2,139,963	1.239	0.468	1.707	
2020	1,333,940	5	133	620,212	720,772	235,789	293,149	1,869,922	1.005	0.397	1.402	
MA Total:	5,856,586	17	823	1,770,345	2,900,399	528,814	1,619,381	6,818,939	0.798	0.367	1.164	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.051	1.050	.
(14) Massachusetts Credibility:	0.450	0.670	.
(15) Countrywide Pure Premium:	0.738	0.426	1.164
(16) Countrywide Indicated Relativity:	0.972	1.207	.
(17) Countrywide Credibility:	0.280	0.170	.
(18) Countrywide Lost-Time Claims:	4704.0	.	.
(19) Pure Premium Underlying Present Rate:	0.671	0.352	1.023
(20) Relativity to Underlying Present Rate:	0.999	0.989	.
(21) Credibility to Underlying Relativity:	0.270	0.160	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.015	1.067	.
(24) Balanced Formula Relativity:	1.002	1.062	1.021

Class(es):		Effective: 7/1/2023							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)	
2016	9,675,684	59	1,598	4,529,772	7,624,713	801,711	3,535,492	16,491,688	1.256	0.448	1.704	
2017	10,406,799	34	1,524	4,576,740	7,647,478	1,767,560	3,923,006	17,914,784	1.175	0.547	1.721	
2018	9,884,033	45	1,465	5,859,292	8,845,908	1,341,276	3,727,366	19,773,842	1.488	0.513	2.001	
2019	9,875,696	42	1,182	4,561,137	10,022,312	943,382	3,550,364	19,077,195	1.477	0.455	1.932	
2020	8,496,554	38	790	4,982,201	9,679,829	1,137,868	2,997,233	18,797,131	1.726	0.487	2.212	
MA Total:	48,338,766	218	6,559	24,509,143	43,820,239	5,991,797	17,733,463	92,054,641	1.414	0.491	1.904	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.864	1.405	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.837	0.391	1.228
(16) Countrywide Indicated Relativity:	1.102	1.107	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	18142	.	.
(19) Pure Premium Underlying Present Rate:	1.091	0.477	1.568
(20) Relativity to Underlying Present Rate:	1.623	1.342	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.864	1.405	.
(24) Balanced Formula Relativity:	1.840	1.399	1.701

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Calculation of Class Relativities

Class(es): 8831 PET GROOMING & DRIVERS		Effective: 7/1/2023							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)
2016	3,124,172	5	566	255,291	495,679	564,538	883,412	2,198,920	0.240	0.463	0.704
2017	3,717,012	9	711	190,631	752,068	113,716	1,097,342	2,153,758	0.254	0.326	0.579
2018	3,947,233	9	718	706,603	1,378,518	300,475	1,234,734	3,620,331	0.528	0.389	0.917
2019	4,160,995	5	612	293,480	674,454	169,540	1,223,525	2,360,999	0.233	0.335	0.567
2020	4,294,698	4	619	191,660	743,846	97,896	1,624,928	2,658,330	0.218	0.401	0.619
MA Total:	19,244,110	32	3,226	1,637,665	4,044,565	1,246,166	6,063,941	12,992,337	0.295	0.380	0.675

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.389	1.087	.
(14) Massachusetts Credibility:	0.530	1.000	.
(15) Countrywide Pure Premium:	0.347	0.293	0.640
(16) Countrywide Indicated Relativity:	0.457	0.830	.
(17) Countrywide Credibility:	0.240	0.000	.
(18) Countrywide Lost-Time Claims:	5073.0	.	.
(19) Pure Premium Underlying Present Rate:	0.320	0.367	0.687
(20) Relativity to Underlying Present Rate:	0.477	1.032	.
(21) Credibility to Underlying Relativity:	0.230	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.426	1.087	.
(24) Balanced Formula Relativity:	0.420	1.083	0.629

Class(es): 8832 PHYSICIAN & CLERICAL		Effective: 7/1/2023							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)
2016	56,765,637	36	1,295	3,537,160	6,136,997	1,241,501	2,926,027	13,841,686	0.170	0.073	0.244
2017	58,142,612	32	1,330	4,295,149	4,083,102	863,111	2,409,610	11,650,972	0.144	0.056	0.200
2018	60,803,450	30	1,232	3,647,670	4,604,376	864,357	2,556,840	11,673,243	0.136	0.056	0.192
2019	61,558,724	33	1,192	4,111,468	5,117,487	909,951	2,715,235	12,854,140	0.150	0.059	0.209
2020	65,016,735	28	957	2,923,600	3,202,617	962,706	2,093,301	9,182,224	0.094	0.047	0.141
MA Total:	302,287,158	159	6,006	18,515,048	23,144,579	4,841,626	12,701,012	59,202,265	0.138	0.058	0.196

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.190	1.906	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.077	0.038	0.114
(16) Countrywide Indicated Relativity:	1.634	1.487	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	13940	.	.
(19) Pure Premium Underlying Present Rate:	0.124	0.061	0.185
(20) Relativity to Underlying Present Rate:	2.178	1.896	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	2.190	1.906	.
(24) Balanced Formula Relativity:	2.176	1.905	2.088

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Calculation of Class Relativities

Class(es): 8833 HOSPITAL: PROFESSIONAL EMPLOYEES		Effective: 7/1/2023							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)
2016	9,957,396	28	944	2,911,609	3,916,925	846,231	1,831,430	9,506,196	0.686	0.269	0.955
2017	10,814,357	20	864	1,710,425	2,822,173	504,620	1,308,046	6,345,265	0.419	0.168	0.587
2018	11,425,650	20	949	1,892,579	5,047,864	377,609	2,169,079	9,487,131	0.607	0.223	0.830
2019	11,497,589	24	835	2,974,560	6,855,719	726,317	2,493,367	13,049,962	0.855	0.280	1.135
2020	11,802,151	20	593	1,986,339	4,162,550	495,101	1,453,408	8,097,398	0.521	0.165	0.686
MA Total:	55,497,142	112	4,185	11,475,512	22,805,232	2,949,878	9,255,331	46,485,953	0.618	0.220	0.838

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	9.815	7.223	.
(14) Massachusetts Credibility:	0.980	1.000	.
(15) Countrywide Pure Premium:	0.233	0.119	0.352
(16) Countrywide Indicated Relativity:	4.962	4.703	.
(17) Countrywide Credibility:	0.010	0.000	.
(18) Countrywide Lost-Time Claims:	18222	.	.
(19) Pure Premium Underlying Present Rate:	0.509	0.218	0.727
(20) Relativity to Underlying Present Rate:	8.940	6.738	.
(21) Credibility to Underlying Relativity:	0.010	0.000	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	9.758	7.223	.
(24) Balanced Formula Relativity:	9.695	7.220	8.888

Class(es): 8835 NURSING-HOME HEALTH, PUBLIC & TRAVELING-ALL EMPLOYEES		Effective: 7/1/2023							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)
2016	10,904,796	45	917	2,189,002	4,724,060	1,028,275	2,644,757	10,586,095	0.634	0.337	0.971
2017	10,401,818	50	845	4,213,850	5,357,447	884,521	2,146,372	12,602,190	0.920	0.291	1.212
2018	10,681,478	54	799	4,423,214	5,500,919	1,129,936	2,308,708	13,362,776	0.929	0.322	1.251
2019	11,009,796	38	739	4,004,447	7,051,374	938,673	2,487,725	14,482,219	1.004	0.311	1.315
2020	11,310,098	44	649	5,272,377	6,412,250	1,363,844	2,437,659	15,486,131	1.033	0.336	1.369
MA Total:	54,307,985	231	3,949	20,102,891	29,046,050	5,345,249	12,025,221	66,519,411	0.905	0.320	1.225

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.193	0.916	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.872	0.351	1.223
(16) Countrywide Indicated Relativity:	1.147	0.994	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	17431	.	.
(19) Pure Premium Underlying Present Rate:	0.840	0.339	1.179
(20) Relativity to Underlying Present Rate:	1.250	0.953	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.193	0.916	.
(24) Balanced Formula Relativity:	1.178	0.912	1.094

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Class(es):		Effective: 7/1/2023							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)
2016	43,564,642	72	3,336	6,628,507	6,975,393	2,138,946	5,630,291	21,373,136	0.312	0.178	0.491
2017	44,912,948	84	3,541	6,617,487	11,128,613	2,192,661	7,131,391	27,070,151	0.395	0.208	0.603
2018	46,131,020	101	4,021	7,823,150	10,768,405	2,120,490	7,472,444	28,184,489	0.403	0.208	0.611
2019	46,881,574	65	3,084	7,025,250	9,505,190	2,273,227	5,994,539	24,798,206	0.353	0.176	0.529
2020	46,845,277	68	2,093	6,493,703	11,712,825	1,637,455	5,719,971	25,563,954	0.389	0.157	0.546
MA Total:	228,335,460	390	16,075	34,588,097	50,090,425	10,362,778	31,948,636	126,989,936	0.371	0.185	0.556

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.893	6.086	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.087	0.062	0.149
(16) Countrywide Indicated Relativity:	1.857	2.430	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	18211	.	.
(19) Pure Premium Underlying Present Rate:	0.303	0.183	0.487
(20) Relativity to Underlying Present Rate:	5.334	5.659	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	5.893	6.086	.
(24) Balanced Formula Relativity:	5.855	6.084	5.929

Class(es):		Effective: 7/1/2023							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)
2016	7,053,732	36	587	1,933,627	4,189,553	542,167	2,499,961	9,165,309	0.868	0.431	1,299
2017	7,252,295	39	576	3,669,766	5,207,136	1,452,620	3,438,372	13,767,895	1.224	0.674	1,898
2018	7,633,618	32	564	2,676,358	5,027,259	943,954	2,478,956	11,126,527	1.009	0.448	1,458
2019	7,775,212	21	443	2,962,184	4,883,551	1,103,683	2,369,315	11,318,733	1.009	0.447	1,456
2020	7,946,784	26	349	2,969,713	4,614,333	886,518	2,330,346	10,800,910	0.954	0.405	1,359
MA Total:	37,661,641	154	2,519	14,211,648	23,921,833	4,928,943	13,116,950	56,179,373	1.013	0.479	1,492

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.335	1.372	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.211	0.544	1.755
(16) Countrywide Indicated Relativity:	1.593	1.540	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	18206	.	.
(19) Pure Premium Underlying Present Rate:	0.901	0.465	1.366
(20) Relativity to Underlying Present Rate:	1.342	1.307	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.335	1.372	.
(24) Balanced Formula Relativity:	1.318	1.366	1.333

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	6,406,483	37	662	4,122,830	3,690,681	719,335	2,348,207	10,881,053	1,220	0,479	1,698
2017	6,571,044	37	724	4,867,621	6,018,248	1,595,211	2,835,048	15,316,128	1,657	0,674	2,331
2018	6,621,043	28	724	3,472,323	6,835,164	1,102,816	3,297,737	14,708,039	1,557	0,665	2,221
2019	6,895,914	27	675	4,036,792	7,015,564	1,092,837	3,719,008	15,864,201	1,603	0,698	2,301
2020	6,875,672	25	428	3,664,430	6,354,473	930,384	3,221,652	14,170,940	1,457	0,604	2,061
MA Total:	33,370,156	154	3,213	20,163,996	29,914,130	5,440,583	15,421,652	70,940,361	1,501	0,625	2,126

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.978	1.790	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.282	0.569	1.851
(16) Countrywide Indicated Relativity:	1.687	1.612	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	14628	.	.
(19) Pure Premium Underlying Present Rate:	1.319	0.664	1.983
(20) Relativity to Underlying Present Rate:	1.963	1.867	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.978	1.790	.
(24) Balanced Formula Relativity:	1.953	1.782	1.899

Class(es):		Effective: 7/1/2023							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)
2016	689,510	1	81	16,749	259,672	6,380	234,647	517,448	0,401	0,350	0,750
2017	769,621	1	94	61,437	198,042	6,839	233,647	499,966	0,337	0,312	0,650
2018	795,942	2	89	55,979	322,175	8,665	413,662	800,480	0,475	0,531	1,006
2019	712,297	2	75	184,367	285,742	71,591	304,567	846,267	0,660	0,528	1,188
2020	585,081	1	31	13,785	38,869	15,793	62,260	130,707	0,090	0,133	0,223
MA Total:	3,552,450	7	370	332,317	1,104,502	109,268	1,248,783	2,794,869	0,404	0,382	0,787

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.533	1.094	.
(14) Massachusetts Credibility:	0.360	0.640	.
(15) Countrywide Pure Premium:	0.823	0.544	1.367
(16) Countrywide Indicated Relativity:	1.083	1.542	.
(17) Countrywide Credibility:	0.320	0.180	.
(18) Countrywide Lost-Time Claims:	1851.0	.	.
(19) Pure Premium Underlying Present Rate:	0.635	0.513	1.148
(20) Relativity to Underlying Present Rate:	0.945	1.443	.
(21) Credibility to Underlying Relativity:	0.320	0.180	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.841	1.238	.
(24) Balanced Formula Relativity:	0.830	1.232	0.957

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Calculation of Class Relativities

Class(es):									Effective: 7/1/2023			Miscellaneous	
9019 BRIDGE OR VEHICULAR TUNNEL 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)		
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	22,153	0	4,822	26,976	0.699	0.152	0.851		
2019	29,646	0	1	0	3,296	0	2,573	5,869	0.111	0.087	0.198		
2020	24,116	0	0	0	0	0	0	0	0.000	0.000	0.000		
MA Total:	151,971	0	2	0	25,449	0	7,395	32,844	0.167	0.049	0.216		

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.066	0.045	.
(14) Massachusetts Credibility:	0.130	0.190	.
(15) Countrywide Pure Premium:	1.833	1.068	2.901
(16) Countrywide Indicated Relativity:	0.753	1.051	.
(17) Countrywide Credibility:	0.310	0.330	.
(18) Countrywide Lost-Time Claims:	61.000	.	.
(19) Pure Premium Underlying Present Rate:	1.222	0.598	1.821
(20) Relativity to Underlying Present Rate:	0.593	0.588	.
(21) Credibility to Underlying Relativity:	0.560	0.480	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.574	0.638	.
(24) Balanced Formula Relativity:	0.573	0.640	0.593

Class(es):									Effective: 7/1/2023			Goods and Services	
9033 HOUSING AUTHORITY & 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)		
2016	230,630	0	17	0	107,700	0	60,305	168,005	0.467	0.261	0.728		
2017	225,817	1	19	99,720	547,186	7,942	207,496	862,344	2.865	0.954	3.819		
2018	229,189	1	29	15,616	218,950	2,045	102,858	339,468	1.023	0.458	1.481		
2019	247,136	0	15	0	71,254	0	42,881	114,135	0.288	0.174	0.462		
2020	256,934	4	21	815,811	353,018	171,512	173,587	1,513,928	4.549	1.343	5.892		
MA Total:	1,189,706	6	101	931,147	1,298,108	181,499	587,126	2,997,880	1.874	0.646	2.520		

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.470	1.849	.
(14) Massachusetts Credibility:	0.290	0.400	.
(15) Countrywide Pure Premium:	1.041	0.430	1.471
(16) Countrywide Indicated Relativity:	1.370	1.219	.
(17) Countrywide Credibility:	0.360	0.300	.
(18) Countrywide Lost-Time Claims:	758.00	.	.
(19) Pure Premium Underlying Present Rate:	1.112	0.487	1.599
(20) Relativity to Underlying Present Rate:	1.654	1.370	.
(21) Credibility to Underlying Relativity:	0.350	0.300	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.789	1.517	.
(24) Balanced Formula Relativity:	1.766	1.510	1.685

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	758,763	2	175	441,806	675,973	132,995	347,393	1,598,166	1,473	0,633	2,106
2017	788,233	5	148	462,306	583,621	271,788	303,662	1,621,376	1,327	0,730	2,057
2018	843,714	7	165	898,458	1,336,269	145,147	474,610	2,854,484	2,649	0,735	3,383
2019	945,452	3	141	487,660	833,861	122,862	442,397	1,886,781	1,398	0,598	1,996
2020	904,950	3	147	171,068	786,133	43,712	394,294	1,395,206	1,058	0,484	1,542
MA Total:	4,241,113	20	776	2,461,298	4,215,856	716,504	1,962,356	9,356,014	1,574	0,632	2,206

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.076	1.808	.
(14) Massachusetts Credibility:	0.520	0.780	.
(15) Countrywide Pure Premium:	1.241	0.645	1.885
(16) Countrywide Indicated Relativity:	1.633	1.826	.
(17) Countrywide Credibility:	0.240	0.110	.
(18) Countrywide Lost-Time Claims:	5732.0	.	.
(19) Pure Premium Underlying Present Rate:	1.341	0.717	2.058
(20) Relativity to Underlying Present Rate:	1.996	2.016	.
(21) Credibility to Underlying Relativity:	0.240	0.110	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.950	1.833	.
(24) Balanced Formula Relativity:	1.925	1.825	1.894

Class(es):		Effective: 7/1/2023							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)
2016	6,900,387	27	630	1,922,465	3,538,077	480,314	1,507,940	7,448,796	0,791	0,288	1,079
2017	7,346,371	25	639	1,758,294	3,839,022	389,206	2,067,601	8,054,123	0,762	0,334	1,096
2018	7,450,383	30	686	2,681,363	3,410,821	677,027	2,077,016	8,846,227	0,818	0,370	1,187
2019	6,364,741	24	498	2,544,605	3,475,329	1,182,882	1,709,302	8,912,117	0,946	0,454	1,400
2020	4,160,310	8	233	325,169	1,563,440	163,018	874,491	2,926,118	0,454	0,249	0,703
MA Total:	32,222,191	114	2,686	9,231,896	15,826,689	2,892,447	8,236,349	36,187,381	0,778	0,345	1,123

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.025	0.989	.
(14) Massachusetts Credibility:	0.870	1.000	.
(15) Countrywide Pure Premium:	0.794	0.388	1.182
(16) Countrywide Indicated Relativity:	1.044	1.099	.
(17) Countrywide Credibility:	0.070	0.000	.
(18) Countrywide Lost-Time Claims:	17285	.	.
(19) Pure Premium Underlying Present Rate:	0.651	0.323	0.974
(20) Relativity to Underlying Present Rate:	0.969	0.907	.
(21) Credibility to Underlying Relativity:	0.060	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.023	0.989	.
(24) Balanced Formula Relativity:	1.010	0.984	1.002

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	2,278,621	5	292	242,676	770,101	61,723	508,747	1,583,247	0.444	0.250	0.695
2017	2,289,424	14	349	1,002,858	1,862,270	176,675	903,210	3,945,012	1.251	0.472	1.723
2018	1,973,741	7	270	616,830	1,804,423	210,791	624,368	3,256,412	1.227	0.423	1.650
2019	1,830,471	7	194	795,104	427,253	243,014	304,771	1,770,142	0.668	0.299	0.967
2020	919,012	1	61	46,323	416,360	14,049	332,409	809,141	0.503	0.377	0.880
MA Total:	9,291,269	34	1,166	2,703,791	5,280,407	706,252	2,673,504	11,363,954	0.859	0.364	1.223

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.133	1.041	.
(14) Massachusetts Credibility:	0.520	0.800	.
(15) Countrywide Pure Premium:	0.564	0.283	0.847
(16) Countrywide Indicated Relativity:	0.742	0.802	.
(17) Countrywide Credibility:	0.240	0.100	.
(18) Countrywide Lost-Time Claims:	6211.0	.	.
(19) Pure Premium Underlying Present Rate:	0.632	0.343	0.975
(20) Relativity to Underlying Present Rate:	0.941	0.965	.
(21) Credibility to Underlying Relativity:	0.240	0.100	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.993	1.010	.
(24) Balanced Formula Relativity:	0.980	1.005	0.988

Class(es):		Effective: 7/1/2023							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)
2016	3,464,708	5	284	329,019	824,750	176,010	692,901	2,022,680	0.333	0.251	0.584
2017	3,622,771	4	295	194,117	1,544,705	188,385	1,082,279	3,009,486	0.480	0.351	0.831
2018	3,642,446	7	267	336,653	1,034,173	188,200	711,862	2,270,887	0.376	0.247	0.623
2019	3,579,488	7	241	801,268	1,016,758	432,140	853,574	3,103,740	0.508	0.359	0.867
2020	3,584,478	4	163	1,089,271	560,957	85,031	551,060	2,286,320	0.460	0.177	0.638
MA Total:	17,893,892	27	1,250	2,750,327	4,981,342	1,069,766	3,891,677	12,693,112	0.432	0.277	0.709

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.570	0.794	.
(14) Massachusetts Credibility:	0.550	0.970	.
(15) Countrywide Pure Premium:	0.539	0.311	0.850
(16) Countrywide Indicated Relativity:	0.709	0.882	.
(17) Countrywide Credibility:	0.230	0.020	.
(18) Countrywide Lost-Time Claims:	4788.0	.	.
(19) Pure Premium Underlying Present Rate:	0.374	0.294	0.667
(20) Relativity to Underlying Present Rate:	0.556	0.826	.
(21) Credibility to Underlying Relativity:	0.220	0.010	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.599	0.796	.
(24) Balanced Formula Relativity:	0.591	0.792	0.655

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Goods and Services		
9061 CLUB NOC & 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)
2016	734,364	2	23	164,613	127,786	37,632	102,857	432,888	0.398	0.191	0.589
2017	723,497	1	29	136	15,876	41	57,392	73,445	0.022	0.079	0.102
2018	725,086	3	22	507,730	477,493	109,434	134,404	1,229,061	1.359	0.336	1.695
2019	650,513	1	14	112,032	99,966	17,332	41,515	270,845	0.326	0.090	0.416
2020	470,585	0	6	0	34,679	0	28,224	62,902	0.074	0.060	0.134
MA Total:	3,304,046	7	94	784,512	755,799	164,439	364,392	2,069,141	0.466	0.160	0.626

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.615	0.458	.
(14) Massachusetts Credibility:	0.290	0.480	.
(15) Countrywide Pure Premium:	0.514	0.239	0.753
(16) Countrywide Indicated Relativity:	0.676	0.677	.
(17) Countrywide Credibility:	0.360	0.260	.
(18) Countrywide Lost-Time Claims:	535.00	.	.
(19) Pure Premium Underlying Present Rate:	0.407	0.266	0.673
(20) Relativity to Underlying Present Rate:	0.606	0.747	.
(21) Credibility to Underlying Relativity:	0.350	0.260	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.634	0.590	.
(24) Balanced Formula Relativity:	0.625	0.588	0.614

Class(es):		Effective: 7/1/2023							Goods and Services		
9063 YMCA, YWCA, YMHA OR YWHA, INSTITUTION-ALL 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)
2016	6,803,148	6	395	268,601	1,211,608	204,643	1,206,780	2,891,632	0.218	0.207	0.425
2017	6,955,804	7	362	301,474	1,092,602	153,276	1,104,585	2,651,936	0.200	0.181	0.381
2018	7,427,944	9	355	419,841	1,886,000	177,764	1,162,435	3,646,041	0.310	0.180	0.491
2019	7,034,823	4	271	407,557	1,369,722	102,929	1,099,842	2,980,050	0.253	0.171	0.424
2020	6,084,574	2	159	176,241	1,135,863	36,837	869,562	2,218,503	0.216	0.149	0.365
MA Total:	34,306,292	28	1,542	1,573,713	6,695,794	675,449	5,443,204	14,388,161	0.241	0.178	0.419

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.318	0.511	.
(14) Massachusetts Credibility:	0.580	1.000	.
(15) Countrywide Pure Premium:	0.287	0.201	0.488
(16) Countrywide Indicated Relativity:	0.378	0.568	.
(17) Countrywide Credibility:	0.210	0.000	.
(18) Countrywide Lost-Time Claims:	3745.0	.	.
(19) Pure Premium Underlying Present Rate:	0.220	0.180	0.400
(20) Relativity to Underlying Present Rate:	0.327	0.507	.
(21) Credibility to Underlying Relativity:	0.210	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.332	0.511	.
(24) Balanced Formula Relativity:	0.328	0.508	0.385

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Calculation of Class Relativities

Class(es): 9079 RESTAURANT NOC		Effective: 7/1/2023							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)
2016	29,827,735	57	2,868	4,172,126	9,417,171	1,544,886	6,261,496	21,395,678	0.456	0.262	0.717
2017	31,206,251	64	2,836	3,248,353	10,190,495	1,068,198	6,481,300	20,988,346	0.431	0.242	0.673
2018	33,715,622	57	2,746	3,226,651	10,878,271	1,101,047	6,474,004	21,679,974	0.418	0.225	0.643
2019	32,771,509	48	2,193	3,918,063	13,071,934	1,560,973	6,734,992	25,285,961	0.518	0.253	0.772
2020	29,156,165	42	1,396	3,452,185	7,915,752	1,248,632	4,719,840	17,336,409	0.390	0.205	0.595
MA Total:	156,677,281	268	12,039	18,017,378	51,473,623	6,523,736	30,671,632	106,686,369	0.444	0.237	0.681

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.585	0.680	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.453	0.269	0.721
(16) Countrywide Indicated Relativity:	0.595	0.762	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	3688.0	.	.
(19) Pure Premium Underlying Present Rate:	0.401	0.254	0.655
(20) Relativity to Underlying Present Rate:	0.597	0.714	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.585	0.680	.
(24) Balanced Formula Relativity:	0.577	0.677	0.609

Class(es): 9089 BILLIARD HALL		Effective: 7/1/2023							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)
2016	3,488	0	0	0	0	0	0	0	0.000	0.000	0.000
2017	6,717	0	1	0	143	0	324	467	0.021	0.048	0.070
2018	8,984	0	0	0	0	0	0	0	0.000	0.000	0.000
2019	7,485	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	6,222	0	0	0	0	0	0	0	0.000	0.000	0.000
MA Total:	32,896	0	1	0	143	0	324	467	0.004	0.010	0.014

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.006	0.028	.
(14) Massachusetts Credibility:	0.040	0.070	.
(15) Countrywide Pure Premium:	0.284	0.104	0.387
(16) Countrywide Indicated Relativity:	0.373	0.294	.
(17) Countrywide Credibility:	0.140	0.140	.
(18) Countrywide Lost-Time Claims:	8.000	.	.
(19) Pure Premium Underlying Present Rate:	0.282	0.185	0.467
(20) Relativity to Underlying Present Rate:	0.420	0.520	.
(21) Credibility to Underlying Relativity:	0.820	0.790	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.396	0.454	.
(24) Balanced Formula Relativity:	0.391	0.452	0.411

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Calculation of Class Relativities

Class(es): 9093 BOWLING LANE		Effective: 7/1/2023							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)
2016	242,116	1	27	51,949	21,344	2,123	40,372	115,787	0.303	0.176	0.478
2017	262,917	3	29	65,783	8,231	70,851	31,690	176,554	0.282	0.390	0.672
2018	288,546	1	22	66,045	142,826	5,482	52,509	266,862	0.724	0.201	0.925
2019	238,901	0	12	0	5,226	0	10,779	16,005	0.022	0.045	0.067
2020	154,956	0	6	0	2,936	0	12,704	15,640	0.019	0.082	0.101
MA Total:	1,187,436	5	96	183,777	180,562	78,455	148,053	590,847	0.307	0.191	0.498

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.405	0.546	.
(14) Massachusetts Credibility:	0.190	0.340	.
(15) Countrywide Pure Premium:	0.412	0.297	0.709
(16) Countrywide Indicated Relativity:	0.542	0.841	.
(17) Countrywide Credibility:	0.410	0.330	.
(18) Countrywide Lost-Time Claims:	419.00	.	.
(19) Pure Premium Underlying Present Rate:	0.413	0.314	0.727
(20) Relativity to Underlying Present Rate:	0.615	0.884	.
(21) Credibility to Underlying Relativity:	0.400	0.330	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.545	0.755	.
(24) Balanced Formula Relativity:	0.538	0.752	0.605

Class(es): 9101 COLLEGE: ALL OTHER EMPLOYEES		Effective: 7/1/2023							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)
2016	1,593,004	19	786	1,329,415	1,978,106	372,728	1,652,187	5,332,436	2,076	1,271	3,347
2017	1,733,298	21	784	1,860,935	2,057,264	490,336	1,280,944	5,689,479	2,261	1,022	3,282
2018	1,766,677	11	435	1,408,513	1,270,873	283,816	901,181	3,864,383	1,517	0.671	2,187
2019	1,721,319	11	365	657,739	2,602,181	181,544	992,121	4,433,585	1,894	0.682	2,576
2020	1,597,573	8	308	1,723,693	2,773,780	295,110	978,597	5,771,180	2,815	0.797	3,612
MA Total:	8,411,872	70	2,678	6,980,295	10,682,205	1,623,533	5,805,030	25,091,063	2,100	0.883	2,983

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.768	2.528	.
(14) Massachusetts Credibility:	0.720	1.000	.
(15) Countrywide Pure Premium:	1.320	0.764	2.084
(16) Countrywide Indicated Relativity:	1.737	2.164	.
(17) Countrywide Credibility:	0.140	0.000	.
(18) Countrywide Lost-Time Claims:	12986	.	.
(19) Pure Premium Underlying Present Rate:	1.555	0.923	2.478
(20) Relativity to Underlying Present Rate:	2.314	2.596	.
(21) Credibility to Underlying Relativity:	0.140	0.000	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.560	2.528	.
(24) Balanced Formula Relativity:	2.528	2.517	2.524

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	325,868	0	35	0	33,730	0	31,948	65,678	0.104	0.098	0.202
2017	349,426	0	51	0	55,569	0	67,416	122,985	0.159	0.193	0.352
2018	368,243	1	87	215,319	244,237	33,516	252,932	746,003	1.248	0.778	2.026
2019	390,814	0	48	0	461,952	0	236,044	697,996	1.182	0.604	1.786
2020	383,989	1	55	333,997	680,291	71,590	356,838	1,442,716	2.641	1.116	3.757
MA Total:	1,818,340	2	276	549,315	1,475,777	105,106	945,179	3,075,377	1.114	0.578	1.691

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.437	0.533	.
(14) Massachusetts Credibility:	0.310	0.490	.
(15) Countrywide Pure Premium:	1.378	0.776	2.154
(16) Countrywide Indicated Relativity:	0.566	0.764	.
(17) Countrywide Credibility:	0.350	0.260	.
(18) Countrywide Lost-Time Claims:	7976.0	.	.
(19) Pure Premium Underlying Present Rate:	0.845	0.524	1.368
(20) Relativity to Underlying Present Rate:	0.410	0.515	.
(21) Credibility to Underlying Relativity:	0.340	0.250	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.473	0.588	.
(24) Balanced Formula Relativity:	0.472	0.590	0.507

Class(es):		Effective: 7/1/2023							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)
2016	695,944	1	88	299,626	89,035	66,825	185,090	640,576	0.558	0.362	0.920
2017	846,248	1	104	284	227,625	215	238,027	466,151	0.269	0.282	0.551
2018	966,610	4	111	1,106,076	1,131,636	100,442	477,108	2,815,262	2.315	0.598	2.913
2019	751,986	4	65	1,268,366	459,781	138,407	362,683	2,229,238	2.298	0.666	2.964
2020	449,607	0	31	0	121,402	0	128,923	250,325	0.270	0.287	0.557
MA Total:	3,710,395	10	399	2,674,352	2,029,479	305,889	1,391,832	6,401,552	1.268	0.458	1.725

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.498	0.422	.
(14) Massachusetts Credibility:	0.360	0.600	.
(15) Countrywide Pure Premium:	0.626	0.425	1.051
(16) Countrywide Indicated Relativity:	0.257	0.418	.
(17) Countrywide Credibility:	0.320	0.200	.
(18) Countrywide Lost-Time Claims:	1724.0	.	.
(19) Pure Premium Underlying Present Rate:	0.620	0.414	1.035
(20) Relativity to Underlying Present Rate:	0.301	0.407	.
(21) Credibility to Underlying Relativity:	0.320	0.200	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.358	0.418	.
(24) Balanced Formula Relativity:	0.357	0.420	0.376

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	370,079	0	100	0	244,932	0	267,095	512,027	0.662	0.722	1.384
2017	361,353	2	84	180,762	521,302	26,727	335,340	1,064,131	1.943	1.002	2.945
2018	423,278	1	51	977	227,038	1,131	201,430	430,576	0.539	0.479	1.017
2019	331,303	0	31	0	160,736	0	76,924	237,660	0.485	0.232	0.717
2020	145,961	0	22	0	40,624	0	59,657	100,281	0.278	0.409	0.687
MA Total:	1,631,974	3	288	181,739	1,194,632	27,858	940,446	2,344,676	0.843	0.593	1.437

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	13.401	19.488	.
(14) Massachusetts Credibility:	0.280	0.490	.
(15) Countrywide Pure Premium:	0.588	0.293	0.880
(16) Countrywide Indicated Relativity:	12.498	11.547	.
(17) Countrywide Credibility:	0.360	0.260	.
(18) Countrywide Lost-Time Claims:	814.00	.	.
(19) Pure Premium Underlying Present Rate:	0.739	0.588	1.327
(20) Relativity to Underlying Present Rate:	12.997	18.173	.
(21) Credibility to Underlying Relativity:	0.360	0.250	.
(22) Industry Group Converted Pure Premium:	0.063	0.030	0.093
(23) Formula Relativity:	12.930	17.094	.
(24) Balanced Formula Relativity:	12.847	17.087	14.230

Class(es):		Effective: 7/1/2023							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)
2016	33,943	0	75	0	319,580	0	560,708	880,288	9.415	16.519	25.934
2017	16,735	0	82	0	52,537	0	255,502	308,039	3.139	15.268	18.407
2018	34,655	0	61	0	329,438	0	159,636	489,074	9.506	4.606	14.113
2019	37,662	1	66	45,010	171,353	1,646	276,603	494,612	5.745	7.388	13.133
2020	44,164	0	42	0	30,622	0	113,896	144,518	0.693	2.579	3.272
MA Total:	167,159	1	326	45,010	903,529	1,646	1,366,345	2,316,530	5.674	8.184	13.858

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.227	7.546	.
(14) Massachusetts Credibility:	0.190	0.500	.
(15) Countrywide Pure Premium:	1.532	1.695	3.227
(16) Countrywide Indicated Relativity:	0.629	1.668	.
(17) Countrywide Credibility:	0.410	0.250	.
(18) Countrywide Lost-Time Claims:	619.00	.	.
(19) Pure Premium Underlying Present Rate:	2.807	6.001	8.808
(20) Relativity to Underlying Present Rate:	1.363	5.901	.
(21) Credibility to Underlying Relativity:	0.400	0.250	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	1.226	5.665	.
(24) Balanced Formula Relativity:	1.224	5.684	2.555

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)	
2016	18,213	2	58	1,292	706,251	53	387,204	1,094,800	38,849	21,263	60,112	
2017	21,062	0	89	0	484,555	0	535,205	1,019,760	23,006	25,410	48,416	
2018	25,157	1	86	228,057	1,096,592	93,839	439,205	1,857,692	52,656	21,189	73,844	
2019	34,601	0	100	0	892,803	0	662,577	1,555,380	25,803	19,149	44,951	
2020	46,189	0	135	0	29,654	0	804,541	834,195	0,642	17,419	18,061	
MA Total:	145,222	3	468	229,348	3,209,854	93,891	2,828,733	6,361,827	23,682	20,125	43,808	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	9.294	18.556	.
(14) Massachusetts Credibility:	0.360	0.760	.
(15) Countrywide Pure Premium:	3.186	2.001	5.187
(16) Countrywide Indicated Relativity:	1.309	1.969	.
(17) Countrywide Credibility:	0.320	0.120	.
(18) Countrywide Lost-Time Claims:	1813.0	.	.
(19) Pure Premium Underlying Present Rate:	15.679	19.557	35.236
(20) Relativity to Underlying Present Rate:	7.611	19.231	.
(21) Credibility to Underlying Relativity:	0.320	0.120	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	6.200	16.646	.
(24) Balanced Formula Relativity:	6.187	16.701	9.326

Class(es):		Effective: 7/1/2023							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)	
2016	203,744	1	44	3,206	361,204	14,663	193,369	572,443	1,789	1,021	2,810	
2017	217,602	3	54	16,584	107,488	44,445	200,571	369,088	0,570	1,126	1,696	
2018	245,881	1	72	53,353	256,549	86,540	207,716	604,158	1,260	1,197	2,457	
2019	202,559	1	42	12,895	176,216	24,125	190,864	404,100	0,934	1,061	1,995	
2020	167,805	0	26	0	152,586	0	147,344	299,930	0,909	0,878	1,787	
MA Total:	1,037,591	6	238	86,039	1,054,043	169,773	939,864	2,249,719	1,099	1,069	2,168	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.431	0.986	.
(14) Massachusetts Credibility:	0.310	0.590	.
(15) Countrywide Pure Premium:	2.202	1.713	3.914
(16) Countrywide Indicated Relativity:	0.904	1.685	.
(17) Countrywide Credibility:	0.350	0.210	.
(18) Countrywide Lost-Time Claims:	2073.0	.	.
(19) Pure Premium Underlying Present Rate:	1.561	1.448	3.009
(20) Relativity to Underlying Present Rate:	0.758	1.424	.
(21) Credibility to Underlying Relativity:	0.340	0.200	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.708	1.221	.
(24) Balanced Formula Relativity:	0.706	1.225	0.861

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							Miscellaneous		
9182 ATHLETIC TEAM OR PARK: 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)
2016	274.308	0	34	0	193.813	0	259.849	453.662	0.707	0.947	1.654
2017	247.447	1	42	485.176	1,209.638	146.779	385.727	2,227.319	6.849	2.152	9.001
2018	364.336	1	44	9.478	109.325	3.177	196.570	318.551	0.326	0.548	0.874
2019	316.564	0	33	0	59.228	0	156.751	215.980	0.187	0.495	0.682
2020	232.581	0	29	0	45.427	0	103.506	148.933	0.195	0.445	0.640
MA Total:	1,435,236	2	182	494.653	1,617,432	149,956	1,102,403	3,364,445	1.472	0.873	2.344

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.578	0.805	.
(14) Massachusetts Credibility:	0.300	0.560	.
(15) Countrywide Pure Premium:	0.703	0.629	1.333
(16) Countrywide Indicated Relativity:	0.289	0.619	.
(17) Countrywide Credibility:	0.350	0.220	.
(18) Countrywide Lost-Time Claims:	493.00	.	.
(19) Pure Premium Underlying Present Rate:	1.040	0.907	1.947
(20) Relativity to Underlying Present Rate:	0.505	0.892	.
(21) Credibility to Underlying Relativity:	0.350	0.220	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.451	0.783	.
(24) Balanced Formula Relativity:	0.450	0.786	0.550

Class(es):		Effective: 7/1/2023							Goods and Services		
9220 CEMETERY OPERATION & 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)
2016	200.731	1	25	182.313	119.624	36.175	110.812	448.926	1.504	0.732	2.236
2017	198.501	0	31	0	728.516	0	248.248	976.764	3.670	1.251	4.921
2018	186.621	0	26	0	80.969	0	117.798	198.767	0.434	0.631	1.065
2019	200.785	0	18	0	164.661	0	70.471	235.132	0.820	0.351	1.171
2020	211.405	0	16	0	36.900	0	51.985	88.885	0.175	0.246	0.420
MA Total:	998,043	1	116	182.313	1,130,671	36,175	599,314	1,948,474	1.316	0.637	1.952

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.734	1.823	.
(14) Massachusetts Credibility:	0.310	0.470	.
(15) Countrywide Pure Premium:	2.487	1.016	3.503
(16) Countrywide Indicated Relativity:	3.273	2.877	.
(17) Countrywide Credibility:	0.350	0.270	.
(18) Countrywide Lost-Time Claims:	604.00	.	.
(19) Pure Premium Underlying Present Rate:	1.619	0.856	2.475
(20) Relativity to Underlying Present Rate:	2.409	2.409	.
(21) Credibility to Underlying Relativity:	0.340	0.260	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.502	2.260	.
(24) Balanced Formula Relativity:	2.470	2.250	2.401

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	953,073	1	70	1,658	858,058	2,797	786,193	1,648,706	0.902	0.828	1,730
2017	1,107,240	6	91	948,759	1,723,759	288,171	629,538	3,590,227	2,414	0.829	3,243
2018	1,089,565	11	83	1,487,039	2,056,103	537,794	714,077	4,795,012	3,252	1,149	4,401
2019	1,071,224	3	60	669,325	1,326,820	281,703	652,357	2,930,205	1,863	0.872	2,735
2020	1,062,439	3	51	629,779	1,307,598	100,134	805,115	2,842,627	1,824	0.852	2,676
MA Total:	5,283,541	24	355	3,736,560	7,272,338	1,210,599	3,587,280	15,806,776	2.084	0.908	2,992

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.818	0.837	.
(14) Massachusetts Credibility:	0.640	0.900	.
(15) Countrywide Pure Premium:	2.371	1.050	3.422
(16) Countrywide Indicated Relativity:	0.974	1.034	.
(17) Countrywide Credibility:	0.180	0.050	.
(18) Countrywide Lost-Time Claims:	2074.0	.	.
(19) Pure Premium Underlying Present Rate:	1.818	0.804	2.622
(20) Relativity to Underlying Present Rate:	0.883	0.791	.
(21) Credibility to Underlying Relativity:	0.180	0.050	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	0.858	0.845	.
(24) Balanced Formula Relativity:	0.856	0.848	0.853

Class(es):		Effective: 7/1/2023							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)
2016	1,125,248	12	210	2,201,608	3,273,961	637,080	1,433,961	7,546,610	4,866	1,841	6,707
2017	1,250,253	21	275	3,382,691	4,185,794	991,895	1,722,151	10,282,533	6,054	2,171	8,224
2018	1,100,681	11	259	2,881,352	6,399,108	1,143,506	1,905,613	12,329,579	8,432	2,770	11,202
2019	1,112,785	9	163	2,923,800	4,792,470	864,563	2,159,697	10,740,530	6,934	2,718	9,652
2020	1,069,311	15	166	2,541,822	5,239,923	1,471,696	2,641,974	11,895,416	7,277	3,847	11,124
MA Total:	5,658,278	68	1,073	13,931,274	23,891,257	5,108,740	9,863,396	52,794,667	6.684	2.646	9.331

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.623	2.440	.
(14) Massachusetts Credibility:	0.940	1.000	.
(15) Countrywide Pure Premium:	4.070	1.689	5.759
(16) Countrywide Indicated Relativity:	1.672	1.662	.
(17) Countrywide Credibility:	0.030	0.000	.
(18) Countrywide Lost-Time Claims:	8058.0	.	.
(19) Pure Premium Underlying Present Rate:	4.542	2.043	6.585
(20) Relativity to Underlying Present Rate:	2.205	2.009	.
(21) Credibility to Underlying Relativity:	0.030	0.000	.
(22) Industry Group Converted Pure Premium:	2.548	1.085	3.633
(23) Formula Relativity:	2.582	2.440	.
(24) Balanced Formula Relativity:	2.577	2.448	2.538

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	47,525	1	18	273,099	64,006	25,555	36,634	399,294	7,093	1,309	8,402
2017	51,803	0	21	0	54,172	0	68,711	122,883	1,046	1,326	2,372
2018	45,226	0	23	0	77,336	0	97,351	174,687	1,710	2,153	3,863
2019	52,675	0	13	0	163,363	0	48,257	211,619	3,101	0,916	4,017
2020	40,193	0	4	0	0	0	12,865	12,865	0,000	0,320	0,320
MA Total:	237,423	1	79	273,099	358,877	25,555	263,817	921,348	2,662	1,219	3,881

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.509	3.489	.
(14) Massachusetts Credibility:	0.180	0.290	.
(15) Countrywide Pure Premium:	1.055	0.483	1.538
(16) Countrywide Indicated Relativity:	1.388	1.368	.
(17) Countrywide Credibility:	0.410	0.360	.
(18) Countrywide Lost-Time Claims:	1012.0	.	.
(19) Pure Premium Underlying Present Rate:	1.830	1.073	2.902
(20) Relativity to Underlying Present Rate:	2.723	3.017	.
(21) Credibility to Underlying Relativity:	0.410	0.350	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	2.317	2.560	.
(24) Balanced Formula Relativity:	2.288	2.549	2.370

Class(es):		Effective: 7/1/2023							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)
2016	369,499	2	39	264,228	224,026	20,106	105,379	613,738	1,321	0,340	1,661
2017	400,587	1	31	270,569	449,342	93,014	106,119	919,044	1,797	0,497	2,294
2018	402,800	1	21	199,184	24,545	147,691	36,639	408,059	0,555	0,458	1,013
2019	387,128	0	27	0	47,855	0	63,496	111,351	0,124	0,164	0,288
2020	427,196	1	25	78,058	196,662	37,267	111,544	423,531	0,643	0,348	0,991
MA Total:	1,987,211	5	143	812,039	942,430	298,078	423,177	2,475,723	0,883	0,363	1,246

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.980	0.898	.
(14) Massachusetts Credibility:	0.330	0.470	.
(15) Countrywide Pure Premium:	1.108	0.544	1.652
(16) Countrywide Indicated Relativity:	1.363	1.504	.
(17) Countrywide Credibility:	0.340	0.270	.
(18) Countrywide Lost-Time Claims:	1291.0	.	.
(19) Pure Premium Underlying Present Rate:	0.915	0.434	1.348
(20) Relativity to Underlying Present Rate:	1.137	1.082	.
(21) Credibility to Underlying Relativity:	0.330	0.260	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.162	1.109	.
(24) Balanced Formula Relativity:	1.164	1.115	1.149

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	860.679	1	49	1.884	123.719	1.646	127.427	254.675	0.146	0.150	0.296
2017	876.495	2	66	233.489	741.024	85.985	479.937	1,540.435	1.112	0.646	1.757
2018	936.316	3	63	275.056	778.728	194.232	259.273	1,507.289	1.125	0.484	1.610
2019	1,017.343	2	59	733.122	254.883	89.347	177.703	1,255.055	0.971	0.262	1.234
2020	947.133	3	53	353.786	671.072	101.375	256.008	1,382.241	1.082	0.377	1.459
MA Total:	4,637,967	11	290	1,597,338	2,569,426	472,585	1,300,347	5,939,696	0.898	0.382	1.281

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.184	1.094	.
(14) Massachusetts Credibility:	0.500	0.710	.
(15) Countrywide Pure Premium:	2.203	0.709	2.913
(16) Countrywide Indicated Relativity:	2.900	2.010	.
(17) Countrywide Credibility:	0.250	0.150	.
(18) Countrywide Lost-Time Claims:	2129.0	.	.
(19) Pure Premium Underlying Present Rate:	1.162	0.511	1.672
(20) Relativity to Underlying Present Rate:	1.729	1.436	.
(21) Credibility to Underlying Relativity:	0.250	0.140	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	1.749	1.279	.
(24) Balanced Formula Relativity:	1.727	1.274	1.584

Class(es):		Effective: 7/1/2023							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)
2016	275.642	0	32	0	504.177	0	453.964	958.141	1.829	1.647	3.476
2017	311.607	2	34	78.328	295.084	32.202	94.998	500.612	1.198	0.408	1.607
2018	284.395	0	17	0	24.057	0	27.763	51.820	0.085	0.098	0.182
2019	299.745	2	31	378.261	696.538	182.507	344.072	1,601.378	3.586	1.757	5.342
2020	308.596	0	26	0	1,288.410	0	447.627	1,736.037	4.175	1.451	5.626
MA Total:	1,479,984	4	140	456.589	2,808,266	214,709	1,368,424	4,847,988	2.206	1.070	3.276

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.449	2.648	.
(14) Massachusetts Credibility:	0.340	0.490	.
(15) Countrywide Pure Premium:	1.372	0.595	1.967
(16) Countrywide Indicated Relativity:	1.688	1.645	.
(17) Countrywide Credibility:	0.330	0.260	.
(18) Countrywide Lost-Time Claims:	747.00	.	.
(19) Pure Premium Underlying Present Rate:	1.358	0.623	1.981
(20) Relativity to Underlying Present Rate:	1.687	1.555	.
(21) Credibility to Underlying Relativity:	0.330	0.250	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.946	2.114	.
(24) Balanced Formula Relativity:	1.950	2.124	2.004

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Calculation of Class Relativities

Class(es): 9522 UPHOLSTERING		Effective: 7/1/2023							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)
2016	115,056	0	8	0	6,025	0	5,459	11,485	0.052	0.047	0.100
2017	122,488	0	6	0	250,902	0	55,777	306,679	2.048	0.455	2.504
2018	120,893	0	4	0	11,427	0	4,621	16,048	0.095	0.038	0.133
2019	93,300	0	0	0	0	0	0	0	0.000	0.000	0.000
2020	95,227	0	2	0	0	0	1,368	1,368	0.000	0.014	0.014
MA Total:	546,964	0	20	0	268,354	0	67,226	335,580	0.491	0.123	0.614

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.545	0.304	.
(14) Massachusetts Credibility:	0.180	0.250	.
(15) Countrywide Pure Premium:	1.168	0.436	1.604
(16) Countrywide Indicated Relativity:	1.437	1.205	.
(17) Countrywide Credibility:	0.410	0.380	.
(18) Countrywide Lost-Time Claims:	1990.0	.	.
(19) Pure Premium Underlying Present Rate:	0.734	0.325	1.059
(20) Relativity to Underlying Present Rate:	0.911	0.812	.
(21) Credibility to Underlying Relativity:	0.410	0.370	.
(22) Industry Group Converted Pure Premium:	0.901	0.404	1.305
(23) Formula Relativity:	1.061	0.834	.
(24) Balanced Formula Relativity:	1.063	0.839	0.994

Class(es): 9533 SCAFFOLDING: SCAFFOLD INST, RPR OR REMOVAL- BUILT UP FROM GROUN		Effective: 7/1/2023							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)
2016	58,633	1	8	154,715	621,914	26,780	222,106	1,025,515	13,246	4,245	17,490
2017	65,778	1	11	18,949	1,196,017	3,224	208,556	1,426,746	18,471	3,220	21,690
2018	69,127	3	12	436,772	239,559	206,436	179,054	1,061,821	9,784	5,577	15,360
2019	59,353	2	5	457,612	133,170	103,369	62,299	756,450	9,954	2,791	12,745
2020	75,646	0	1	0	848,088	0	172,511	1,020,599	11,211	2,281	13,492
MA Total:	328,537	7	37	1,068,048	3,038,749	339,809	844,526	5,291,131	12,500	3,605	16,105

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.334	3.750	.
(14) Massachusetts Credibility:	0.380	0.500	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	3.496	2.939	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	7.965	2.982	10.947
(20) Relativity to Underlying Present Rate:	3.676	3.138	.
(21) Credibility to Underlying Relativity:	0.620	0.500	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	4.306	3.444	.
(24) Balanced Formula Relativity:	4.356	3.451	4.093

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	362,160	3	20	1,157,030	1,496,598	183,951	433,310	3,270,890	7,327	1,704	9,032
2017	437,387	0	22	0	1,772,136	0	568,806	2,340,941	4,052	1,300	5,352
2018	504,501	1	24	113,091	240,057	15,571	142,857	511,576	0,700	0,314	1,014
2019	433,646	1	22	47,570	1,333,634	15,736	473,075	1,870,014	3,185	1,127	4,312
2020	477,843	2	24	187,661	1,348,216	67,554	932,003	2,535,434	3,214	2,092	5,306
MA Total:	2,215,537	7	112	1,505,351	6,190,640	282,813	2,550,050	10,528,855	3,474	1,279	4,752

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.482	1.330	.
(14) Massachusetts Credibility:	0.520	0.670	.
(15) Countrywide Pure Premium:	1.974	0.680	2.654
(16) Countrywide Indicated Relativity:	0.848	0.714	.
(17) Countrywide Credibility:	0.240	0.170	.
(18) Countrywide Lost-Time Claims:	463.00	.	.
(19) Pure Premium Underlying Present Rate:	2.651	0.931	3.582
(20) Relativity to Underlying Present Rate:	1.224	0.980	.
(21) Credibility to Underlying Relativity:	0.240	0.160	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.268	1.169	.
(24) Balanced Formula Relativity:	1.283	1.172	1.250

Class(es):		Effective: 7/1/2023							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)
2016	16,020	0	1	0	33,456	0	2,442	35,898	2,088	0,152	2,241
2017	6,455	0	1	0	0	0	463	463	0,000	0,072	0,072
2018	3,724	0	0	0	0	0	0	0	0,000	0,000	0,000
2019	12,900	1	2	16,604	0	29,328	1,340	47,272	1,287	2,377	3,665
2020	14,800	0	0	0	0	0	0	0	0,000	0,000	0,000
MA Total:	53,899	1	4	16,604	33,456	29,328	4,245	83,633	0,929	0,623	1,552

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.396	0.648	.
(14) Massachusetts Credibility:	0.110	0.130	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.893	0.634	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.035	0.643	2.678
(20) Relativity to Underlying Present Rate:	0.939	0.677	.
(21) Credibility to Underlying Relativity:	0.890	0.870	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	0.879	0.673	.
(24) Balanced Formula Relativity:	0.890	0.674	0.827

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	166,687	1	13	226,894	80,923	134,463	37,998	480,279	1,847	1,035	2,881
2017	175,578	1	17	352,685	304,013	275,966	76,426	1,009,091	3,740	2,007	5,747
2018	185,946	0	20	0	38,661	0	29,533	68,194	0,208	0,159	0,367
2019	192,255	1	25	530,358	198,704	65,454	225,178	1,019,694	3,792	1,512	5,304
2020	213,819	1	16	26,441	81,541	18,146	62,537	188,665	0,505	0,377	0,882
MA Total:	934,285	4	91	1,136,378	703,843	494,030	431,673	2,765,924	1,970	0,991	2,960

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.840	1.031	.
(14) Massachusetts Credibility:	0.390	0.600	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.296	1.662	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.953	1.686	4.639
(20) Relativity to Underlying Present Rate:	1.363	1.775	.
(21) Credibility to Underlying Relativity:	0.610	0.400	.
(22) Industry Group Converted Pure Premium:	2.343	0.961	3.305
(23) Formula Relativity:	1.159	1.328	.
(24) Balanced Formula Relativity:	1.172	1.331	1.219

Class(es):		Effective: 7/1/2023							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)
2016	5,077,821	3	82	68,830	268,153	18,404	260,437	615,824	0,066	0,055	0,121
2017	5,328,952	0	81	0	872,428	0	323,054	1,195,482	0,164	0,061	0,224
2018	5,710,198	3	74	87,285	444,478	10,812	197,703	740,277	0,093	0,037	0,130
2019	5,376,864	3	45	280,218	559,315	81,188	212,269	1,132,990	0,156	0,055	0,211
2020	5,001,159	1	49	137,184	220,237	206,937	273,312	837,670	0,071	0,096	0,167
MA Total:	26,494,994	10	331	573,518	2,364,610	317,339	1,266,775	4,522,242	0,111	0,060	0,171

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.146	0.171	.
(14) Massachusetts Credibility:	0.450	0.620	.
(15) Countrywide Pure Premium:	0.235	0.093	0.329
(16) Countrywide Indicated Relativity:	0.309	0.265	.
(17) Countrywide Credibility:	0.280	0.190	.
(18) Countrywide Lost-Time Claims:	1560.0	.	.
(19) Pure Premium Underlying Present Rate:	0.151	0.065	0.216
(20) Relativity to Underlying Present Rate:	0.225	0.182	.
(21) Credibility to Underlying Relativity:	0.270	0.190	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.213	0.191	.
(24) Balanced Formula Relativity:	0.210	0.190	0.204

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Calculation of Class Relativities

Class(es):		Effective: 7/1/2023							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)
2016	704,217	0	10	0	19,001	0	77,166	96,167	0.027	0.110	0.137
2017	711,317	2	13	31,523	12,492	12,273	72,038	128,326	0.062	0.119	0.180
2018	729,817	0	6	0	264,535	0	148,405	412,940	0.362	0.203	0.566
2019	760,479	0	12	0	108,043	0	52,940	160,983	0.142	0.070	0.212
2020	787,628	1	15	97,058	197,161	34,016	103,037	431,272	0.374	0.174	0.548
MA Total:	3,693,459	3	56	128,581	601,232	46,289	453,585	1,229,687	0.198	0.135	0.333

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.261	0.387	.
(14) Massachusetts Credibility:	0.270	0.430	.
(15) Countrywide Pure Premium:	0.511	0.289	0.800
(16) Countrywide Indicated Relativity:	0.673	0.819	.
(17) Countrywide Credibility:	0.370	0.290	.
(18) Countrywide Lost-Time Claims:	636.00	.	.
(19) Pure Premium Underlying Present Rate:	0.305	0.185	0.490
(20) Relativity to Underlying Present Rate:	0.454	0.520	.
(21) Credibility to Underlying Relativity:	0.360	0.280	.
(22) Industry Group Converted Pure Premium:	0.759	0.349	1.108
(23) Formula Relativity:	0.483	0.550	.
(24) Balanced Formula Relativity:	0.477	0.547	0.499

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Section IX - Classification Pricing
 Subsection H - Industry Group Rate Change and Rate Level Factors
 7/1/2023

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	1.001	0.980	0.969	0.997	1.083
(2) Experience and Benefit Level Change - Overall	-10.2%	-10.2%	-10.2%	-10.2%	-10.2%
(3) Target Rate Change = (1) x [1.000 + (2)] - 1.000	-10.1%	-12.0%	-13.0%	-10.5%	-2.7%
(4) Maximum Rate Change = (3) + (9)	9.9%	8.0%	7.0%	9.5%	9.8%
(5) Minimum Rate Change = (3) - (9)	-30.1%	-32.0%	-33.0%	-30.5%	-15.2%
(6) Present Average Rate	1.644	4.246	0.121	1.400	4.193
(7) Uncapped Rate Level Factor = [1.000 + (3)] x (6)	1.478	3.738	0.106	1.253	4.079
(8) Capped Rate Level Factor	1.488	3.733	0.106	1.255	4.110
(9) Swing %	20.0%	20.0%	20.0%	20.0%	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): Section I-A, Exhibit 1.
- (6): Rates by class consistent with the 7/1/2022 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) / 1.081 (9)
Manufacturing	412,518,899	446,450,533	1.082	8,892	12,000	0.861	1.082	1.001
Construction	1,309,053,476	1,387,914,982	1.060	13,443	12,000	1.000	1.060	0.980
Office & Clerical	422,958,163	442,525,238	1.046	10,706	12,000	0.945	1.048	0.969
Goods & Services	1,099,625,096	1,185,737,427	1.078	29,042	12,000	1.000	1.078	0.997
Miscellaneous	497,541,285	587,381,229	1.181	9,847	12,000	0.906	1.171	1.083
All	3,741,696,919	4,050,009,409	1.082			1.000	1.081	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 = $\text{sum} [(2) \times (8)] / (2) \text{ Total}$

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Section IX - Classification Pricing
 Subsection I - Average Uncapped Rates
 7/1/2023

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	1.437	2.227	1.686	1.253	2.11
0008	1.469	1.698	1.541	1.253	1.93
0016	2.094	2.504	2.223	1.253	2.79
0034	1.658	1.830	1.712	1.253	2.15
0035	1.039	1.066	1.048	1.253	1.31
0036	1.658	1.830	1.712	1.253	2.15
0042	2.132	2.520	2.254	1.253	2.82
0046	1.768	2.642	2.043	1.253	2.56
0050	0.975	1.184	1.036	3.738	3.87
0079	1.742	1.734	1.740	1.253	2.18
0083	2.124	2.263	2.168	1.253	2.72
0106	1.569	2.376	1.810	4.079	7.38
0113	1.658	1.830	1.712	1.253	2.15
0170	1.658	1.830	1.712	1.253	2.15
0908	123.277	112.535	119.890	1.253	75.12
0909	267.410	446.069	323.746	1.253	202.86
0912	267.410	446.069	323.746	1.253	405.73
0913	123.277	112.535	119.890	1.253	150.25
0917	1.555	1.357	1.492	1.253	1.87
0918	0.325	0.179	0.279	1.253	0.35
1430	1.959	1.888	1.937	1.478	2.86
1438	1.994	1.746	1.917	1.478	2.83
1463	5.421	9.256	6.608	1.478	9.77
1624	0.865	0.966	0.895	4.079	3.65
1655	0.588	0.495	0.560	4.079	2.28
1701	2.551	1.863	2.338	1.478	3.46
1710	0.865	0.966	0.895	4.079	3.65
1747	1.296	1.076	1.228	1.478	1.81
1748	1.853	2.361	2.010	1.478	2.97
1853	0.793	0.450	0.687	1.478	1.01
1924	1.775	1.760	1.770	1.478	2.62
1925	1.681	6.751	3.251	1.478	4.80
2003	1.989	1.654	1.885	1.478	2.79
2014	2.123	2.097	2.115	1.478	3.13
2021	1.544	1.653	1.578	1.478	2.33
2039	2.365	2.397	2.375	1.478	3.51
2041	1.381	1.158	1.312	1.478	1.94
2070	2.065	1.565	1.911	1.478	2.82
2081	1.582	2.215	1.778	1.478	2.63
2089	1.487	1.372	1.451	1.478	2.14
2095	1.687	1.504	1.630	1.478	2.41
2101	1.487	1.372	1.451	1.478	2.14

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Section IX - Classification Pricing
Subsection I - Average Uncapped Rates
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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	1.179	1.302	1.217	1.478	1.80
2114	1.487	1.372	1.451	1.478	2.14
2115	3.129	3.190	3.148	1.478	4.65
2121	0.742	0.817	0.765	1.478	1.13
2130	0.848	0.880	0.858	1.478	1.27
2131	1.587	1.958	1.702	1.478	2.51
2143	1.173	0.979	1.113	1.478	1.64
2150	1.952	2.162	2.017	1.478	2.98
2156	1.726	1.887	1.776	1.478	2.62
2157	2.477	1.837	2.279	1.478	3.37
2172	0.960	0.880	0.935	1.478	1.38
2211	2.929	3.159	3.000	1.478	4.43
2220	1.687	1.935	1.764	1.478	2.61
2260	2.904	2.325	2.725	1.478	4.03
2288	2.074	2.234	2.123	1.478	3.14
2305	1.319	1.360	1.332	1.478	1.97
2362	1.105	1.363	1.185	1.478	1.75
2380	0.838	1.075	0.911	1.478	1.35
2402	1.140	1.248	1.174	1.478	1.73
2413	1.513	1.587	1.536	1.478	2.27
2416	1.614	1.841	1.684	1.478	2.49
2417	0.886	0.674	0.820	1.478	1.21
2501	1.190	1.283	1.219	1.478	1.80
2503	0.570	0.579	0.573	1.478	0.85
2570	1.897	1.538	1.785	1.478	2.64
2576	1.114	1.135	1.120	1.478	1.66
2585	1.684	1.555	1.644	1.478	2.43
2586	1.164	1.350	1.221	1.478	1.81
2587	1.450	1.199	1.371	1.253	1.72
2623	2.273	2.486	2.339	1.478	3.46
2651	0.711	0.740	0.720	1.478	1.06
2660	1.048	1.054	1.050	1.478	1.55
2683	1.079	1.248	1.131	1.478	1.67
2688	1.081	1.186	1.113	1.478	1.65
2702	3.166	5.294	3.801	4.079	15.50
2710	3.305	3.329	3.313	1.478	4.90
2731	1.538	1.765	1.609	1.478	2.38
2747	3.045	2.807	2.972	1.478	4.39
2790	1.212	1.176	1.201	1.478	1.77
2802	1.901	2.091	1.960	1.478	2.90
2835	1.166	1.046	1.129	1.478	1.67
2836	1.501	1.159	1.395	1.478	2.06

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Section IX - Classification Pricing
Subsection I - Average Uncapped Rates
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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	1.520	2.162	1.719	1.478	2.54
2883	1.637	1.621	1.632	1.478	2.41
2923	0.651	0.668	0.656	1.478	0.97
2942	0.847	0.862	0.852	1.478	1.26
3018	1.315	1.359	1.329	1.478	1.96
3022	1.745	2.126	1.863	1.478	2.75
3027	1.150	1.259	1.184	1.478	1.75
3028	1.614	1.732	1.651	1.478	2.44
3030	2.647	2.995	2.754	1.478	4.07
3040	3.373	2.824	3.203	1.478	4.73
3041	1.534	1.283	1.456	1.478	2.15
3042	1.748	1.552	1.687	1.478	2.49
3066	1.239	1.414	1.293	1.478	1.91
3076	1.559	1.463	1.529	1.478	2.26
3081	2.187	2.348	2.237	1.478	3.31
3082	2.187	2.348	2.237	1.478	3.31
3085	2.177	2.497	2.276	1.478	3.36
3110	4.059	3.478	3.880	1.478	5.73
3111	1.277	1.274	1.276	1.478	1.89
3113	0.943	0.925	0.938	1.478	1.39
3114	1.358	1.525	1.410	1.478	2.08
3118	0.732	0.767	0.743	1.478	1.10
3119	0.516	0.563	0.530	1.478	0.78
3120	0.710	0.542	0.658	1.478	0.97
3122	1.182	1.101	1.157	1.478	1.71
3127	1.206	1.098	1.172	1.478	1.73
3131	0.699	0.876	0.754	1.478	1.11
3132	1.092	1.203	1.126	1.478	1.66
3145	0.779	0.731	0.764	1.478	1.13
3146	1.067	1.115	1.082	1.478	1.60
3169	1.101	1.446	1.208	1.478	1.78
3179	0.611	0.571	0.599	1.478	0.89
3180	1.314	1.241	1.291	1.478	1.91
3188	1.112	1.141	1.121	1.478	1.66
3200	1.245	1.290	1.259	1.478	1.86
3220	1.221	1.159	1.202	1.478	1.78
3255	1.086	1.127	1.099	1.478	1.62
3257	1.233	1.602	1.347	1.478	1.99
3270	0.960	1.022	0.979	1.478	1.45
3300	1.691	2.367	1.900	1.478	2.81
3315	1.600	1.687	1.627	1.478	2.40
3336	1.348	1.174	1.294	1.478	1.91

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Subsection I - Average Uncapped Rates
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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	0.868	1.186	0.961	3.738	3.59
3372	1.229	1.213	1.224	1.478	1.81
3373	2.165	1.771	2.043	1.478	3.02
3381	0.971	0.872	0.940	1.478	1.39
3383	0.716	0.780	0.736	1.478	1.09
3385	0.459	0.554	0.489	1.478	0.72
3400	1.101	1.446	1.208	1.478	1.78
3507	1.521	1.378	1.477	1.478	2.18
3515	1.304	1.395	1.332	1.478	1.97
3558	0.328	0.517	0.387	1.478	0.57
3571	0.344	0.300	0.330	1.478	0.49
3574	0.874	0.895	0.881	1.478	1.30
3612	0.728	0.790	0.747	1.478	1.10
3620	1.799	1.608	1.740	1.478	2.57
3629	0.874	0.895	0.881	1.478	1.30
3632	0.874	0.895	0.881	1.478	1.30
3634	1.003	0.866	0.961	1.478	1.42
3635	0.940	1.541	1.126	1.478	1.66
3638	0.874	0.895	0.881	1.478	1.30
3642	0.699	0.642	0.681	1.478	1.01
3643	1.009	0.952	0.991	1.478	1.46
3647	1.231	1.146	1.205	1.478	1.78
3648	0.561	0.608	0.576	1.478	0.85
3681	0.331	0.298	0.321	1.478	0.47
3685	0.270	0.264	0.268	1.478	0.40
3724	0.899	0.993	0.926	3.738	3.46
3726	0.791	0.663	0.754	3.738	2.82
3807	1.101	1.446	1.208	1.478	1.78
3808	1.717	1.795	1.741	1.478	2.57
3821	3.009	3.729	3.236	1.253	4.06
3826	1.866	2.103	1.939	1.478	2.87
3830	0.874	0.895	0.881	1.478	1.30
3841	1.068	0.994	1.045	1.478	1.54
4000	1.183	1.259	1.206	4.079	4.92
4021	1.664	1.782	1.700	1.478	2.51
4024	2.051	1.815	1.978	1.478	2.92
4034	3.631	4.430	3.879	1.478	5.73
4036	0.986	0.986	0.986	1.478	1.46
4038	1.405	1.044	1.294	1.478	1.91
4053	1.867	1.195	1.658	1.478	2.45
4062	1.250	1.094	1.201	1.478	1.78
4112	0.167	0.190	0.174	1.478	0.26

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 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	1.867	1.195	1.658	1.478	2.45
4114	1.903	1.573	1.801	1.478	2.66
4130	2.582	2.475	2.549	1.478	3.77
4133	1.046	1.095	1.061	1.478	1.57
4150	0.423	0.327	0.393	1.478	0.58
4239	1.528	1.626	1.558	1.478	2.30
4243	1.498	1.271	1.428	1.478	2.11
4244	1.613	1.987	1.729	1.478	2.55
4250	1.355	1.334	1.348	1.478	1.99
4251	1.686	1.285	1.562	1.478	2.31
4273	1.599	1.548	1.583	1.478	2.34
4279	1.380	1.370	1.377	1.478	2.03
4283	1.322	0.895	1.190	1.478	1.76
4299	0.980	0.873	0.947	1.478	1.40
4304	3.071	3.802	3.297	1.478	4.87
4307	0.713	0.860	0.758	1.478	1.12
4308	1.503	0.378	1.155	1.478	1.71
4351	0.540	0.492	0.525	1.478	0.78
4352	0.563	0.558	0.561	1.478	0.83
4360	0.346	0.302	0.332	1.478	0.49
4361	4.050	4.610	4.233	0.106	0.45
4362	0.309	0.279	0.300	1.253	0.38
4410	1.401	1.769	1.515	1.478	2.24
4432	0.443	0.452	0.445	1.478	0.66
4439	2.657	3.564	2.938	1.478	4.34
4452	1.681	1.640	1.668	1.478	2.47
4459	1.388	1.414	1.396	1.478	2.06
4470	1.026	0.957	1.005	1.478	1.48
4484	1.198	1.246	1.213	1.478	1.79
4493	1.176	1.062	1.141	1.478	1.69
4511	0.196	0.194	0.195	1.253	0.24
4512	0.053	0.048	0.051	1.253	0.06
4557	1.167	0.834	1.064	1.478	1.57
4558	1.130	1.354	1.199	1.478	1.77
4583	1.470	1.536	1.491	1.478	2.20
4611	0.450	0.414	0.439	1.478	0.65
4635	2.260	3.470	2.634	1.478	3.89
4653	1.172	1.096	1.149	1.478	1.70
4665	5.283	6.331	5.608	1.478	8.29
4692	0.290	0.269	0.283	1.478	0.42
4693	0.421	0.457	0.432	1.478	0.64
4720	0.939	1.047	0.972	1.478	1.44

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 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	0.430	0.355	0.407	1.478	0.60
4741	1.981	1.816	1.930	1.478	2.85
4771	1.231	1.036	1.170	1.478	1.73
4777	1.470	1.536	1.491	1.478	2.20
4825	0.211	0.181	0.202	1.478	0.30
4828	0.548	0.563	0.553	1.478	0.82
4829	0.548	0.563	0.553	1.478	0.82
4902	0.847	0.862	0.852	1.478	1.26
4923	0.346	0.302	0.332	1.478	0.49
5020	1.065	0.739	0.970	3.738	3.63
5022	1.946	1.856	1.920	3.738	7.18
5037	2.663	2.487	2.612	3.738	9.76
5040	5.166	4.333	4.924	3.738	18.40
5057	3.378	5.317	3.942	3.738	14.74
5059	5.043	6.839	5.565	3.738	20.80
5102	1.459	1.247	1.397	3.738	5.22
5146	1.475	1.261	1.413	3.738	5.28
5160	0.834	0.690	0.792	3.738	2.96
5183	0.743	0.682	0.725	3.738	2.71
5188	0.850	0.689	0.803	3.738	3.00
5190	0.490	0.522	0.499	3.738	1.87
5191	0.450	0.480	0.460	1.253	0.58
5192	1.919	1.577	1.811	1.253	2.27
5213	1.803	1.632	1.753	3.738	6.55
5215	1.164	1.098	1.145	3.738	4.28
5221	1.500	1.348	1.456	3.738	5.44
5222	2.040	1.367	1.844	3.738	6.89
5223	0.804	0.754	0.789	3.738	2.95
5348	1.003	0.776	0.937	3.738	3.50
5402	1.286	1.083	1.227	3.738	4.59
5403	1.891	1.681	1.830	3.738	6.84
5437	0.774	0.717	0.757	3.738	2.83
5443	0.648	0.621	0.640	3.738	2.39
5445	1.388	1.006	1.277	3.738	4.77
5462	1.333	1.207	1.296	3.738	4.85
5472	1.884	1.593	1.799	3.738	6.73
5473	2.313	2.406	2.340	3.738	8.75
5474	0.980	1.025	0.993	3.738	3.71
5478	1.029	0.682	0.928	3.738	3.47
5479	1.135	1.179	1.148	3.738	4.29
5480	0.992	0.847	0.950	3.738	3.55
5506	1.167	1.070	1.139	3.738	4.26

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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	1.072	0.943	1.035	3.738	3.87
5508	0.975	1.184	1.036	3.738	3.87
5509	1.157	1.696	1.314	3.738	4.91
5538	0.827	0.872	0.840	3.738	3.14
5545	9.186	13.394	10.410	3.738	38.91
5547	2.187	2.656	2.323	3.738	8.68
5606	0.264	0.269	0.266	3.738	0.99
5610	1.419	0.976	1.290	3.738	4.82
5645	1.347	1.723	1.456	3.738	5.44
5701	3.285	3.777	3.428	3.738	12.81
5703	1.920	1.908	1.916	3.738	7.16
5705	2.279	2.141	2.239	3.738	8.37
6003	1.430	1.161	1.352	3.738	5.05
6005	0.975	1.184	1.036	3.738	3.87
6204	1.357	1.063	1.272	3.738	4.75
6217	0.983	0.884	0.954	3.738	3.57
6229	0.970	0.948	0.963	3.738	3.60
6233	0.473	0.333	0.433	3.738	1.62
6251	1.008	0.710	0.921	3.738	3.44
6252	0.849	0.769	0.825	3.738	3.09
6306	2.161	1.703	2.028	3.738	7.58
6319	0.541	0.544	0.542	3.738	2.03
6325	0.578	0.641	0.596	3.738	2.23
6400	0.948	1.153	1.008	3.738	3.77
6504	1.487	1.372	1.451	1.478	2.14
6834	0.440	0.577	0.481	4.079	1.96
6836	0.499	0.719	0.565	4.079	2.30
7219	1.524	1.502	1.517	4.079	6.19
7230	1.879	1.923	1.892	4.079	7.72
7231	2.389	2.150	2.317	4.079	9.45
7360	0.964	0.890	0.942	4.079	3.84
7370	0.924	1.013	0.950	4.079	3.88
7380	1.378	1.317	1.360	4.079	5.55
7382	0.752	0.727	0.744	4.079	3.04
7403	0.622	0.658	0.633	4.079	2.58
7405	0.292	0.249	0.279	4.079	1.14
7420	4.673	7.909	5.640	4.079	23.00
7421	0.249	0.139	0.216	4.079	0.88
7422	0.249	0.139	0.216	4.079	0.88
7425	0.622	0.539	0.597	4.079	2.44
7431	0.249	0.139	0.216	4.079	0.88
7502	0.441	0.356	0.416	4.079	1.70

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Subsection I - Average Uncapped Rates
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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	0.343	0.822	0.486	4.079	1.98
7520	0.635	0.695	0.653	4.079	2.66
7538	0.726	0.715	0.723	3.738	2.70
7539	0.277	0.314	0.288	4.079	1.18
7580	0.659	0.575	0.634	4.079	2.59
7590	1.264	1.973	1.476	4.079	6.02
7600	0.995	0.760	0.925	4.079	3.77
7601	0.754	0.708	0.741	3.738	2.77
7610	4.268	3.026	3.863	0.106	0.41
7704	0.769	1.078	0.861	4.079	3.51
7720	0.328	0.326	0.327	4.079	1.33
7855	0.940	0.844	0.912	3.738	3.41
8001	1.077	1.360	1.167	1.253	1.46
8002	1.022	1.660	1.223	1.253	1.53
8006	0.673	0.671	0.673	1.253	0.84
8008	0.476	0.496	0.482	1.253	0.60
8010	0.918	1.042	0.957	1.253	1.20
8013	0.182	0.287	0.215	1.253	0.27
8017	0.651	0.680	0.660	1.253	0.83
8018	2.630	2.179	2.488	1.253	3.12
8021	2.325	2.191	2.283	1.253	2.86
8031	0.972	1.191	1.041	1.253	1.31
8032	0.847	0.853	0.849	1.253	1.06
8033	0.888	1.065	0.944	1.253	1.18
8034	2.009	1.426	1.825	1.253	2.29
8039	1.060	1.344	1.149	1.253	1.44
8044	1.739	1.854	1.775	1.253	2.23
8046	1.399	2.078	1.613	1.253	2.02
8048	1.566	1.507	1.547	1.253	1.94
8058	1.418	1.833	1.549	1.253	1.94
8103	1.904	1.810	1.874	1.253	2.35
8105	13.657	8.112	11.908	1.253	14.92
8106	2.774	3.318	2.946	1.253	3.69
8107	1.596	1.587	1.593	1.253	2.00
8111	1.704	1.971	1.788	1.253	2.24
8203	3.413	3.012	3.286	1.253	4.12
8204	2.929	2.907	2.922	1.253	3.66
8215	1.905	2.033	1.945	1.253	2.44
8227	1.199	1.530	1.295	3.738	4.84
8232	3.091	3.049	3.078	1.253	3.86
8233	3.509	3.808	3.603	1.253	4.52
8235	2.653	2.879	2.724	1.253	3.41

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Section IX - Classification Pricing
Subsection I - Average Uncapped Rates
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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	3.084	3.229	3.130	1.253	3.92
8264	3.017	2.976	3.004	1.253	3.76
8265	3.509	3.808	3.603	1.253	4.52
8279	2.090	3.110	2.412	1.253	3.02
8291	2.420	3.395	2.727	1.253	3.42
8292	2.246	2.285	2.258	1.253	2.83
8293	4.190	4.638	4.331	1.253	5.43
8350	4.821	4.033	4.573	1.253	5.73
8380	1.626	1.584	1.613	1.253	2.02
8381	0.825	0.790	0.814	1.253	1.02
8385	2.457	2.416	2.444	1.253	3.06
8392	0.961	1.104	1.006	1.253	1.26
8393	0.901	0.762	0.857	1.253	1.07
8500	3.509	3.808	3.603	1.253	4.52
8601	1.634	1.618	1.629	0.106	0.17
8710	1.656	1.335	1.555	1.253	1.95
8719	1.656	1.335	1.555	1.253	1.95
8720	0.536	0.538	0.537	1.253	0.67
8721	1.374	1.388	1.379	0.106	0.15
8742	0.752	0.894	0.798	0.106	0.08
8745	3.309	3.596	3.399	1.253	4.26
8747	0.545	0.361	0.487	1.253	0.61
8748	4.497	3.704	4.238	0.106	0.45
8800	7.551	6.980	7.365	0.106	0.78
8803	0.339	0.307	0.328	0.106	0.03
8810	0.410	0.450	0.423	0.106	0.04
8820	0.436	0.441	0.438	0.106	0.05
8824	1.423	1.315	1.389	1.253	1.74
8826	1.002	1.062	1.021	1.253	1.28
8829	1.840	1.399	1.701	1.253	2.13
8831	0.420	1.083	0.629	1.253	0.79
8832	2.176	1.905	2.088	0.106	0.22
8833	9.695	7.220	8.888	0.106	0.94
8835	1.178	0.912	1.094	1.253	1.37
8868	5.855	6.084	5.929	0.106	0.63
8901	0.410	0.450	0.423	0.106	0.04
9014	1.318	1.366	1.333	1.253	1.67
9015	1.953	1.782	1.899	1.253	2.38
9016	0.830	1.232	0.957	1.253	1.20
9019	0.573	0.640	0.593	4.079	2.42
9033	1.766	1.510	1.685	1.253	2.11
9040	1.925	1.825	1.894	1.253	2.37

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Section IX - Classification Pricing
 Subsection I - Average Uncapped Rates
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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	1.010	0.984	1.002	1.253	1.26
9058	0.980	1.005	0.988	1.253	1.24
9060	0.591	0.792	0.655	1.253	0.82
9061	0.625	0.588	0.614	1.253	0.77
9063	0.328	0.508	0.385	1.253	0.48
9079	0.577	0.677	0.609	1.253	0.76
9089	0.391	0.452	0.411	1.253	0.51
9093	0.538	0.752	0.605	1.253	0.76
9101	2.528	2.517	2.524	1.253	3.16
9102	0.472	0.590	0.507	4.079	2.07
9154	0.357	0.420	0.376	4.079	1.53
9156	12.847	17.087	14.230	0.106	1.50
9178	1.224	5.684	2.555	4.079	10.42
9179	6.187	16.701	9.326	4.079	38.04
9180	0.706	1.225	0.861	4.079	3.51
9182	0.450	0.786	0.550	4.079	2.24
9186	0.706	1.225	0.861	4.079	3.51
9220	2.470	2.250	2.401	1.253	3.01
9402	0.856	0.848	0.853	4.079	3.48
9403	2.577	2.448	2.538	4.079	10.35
9410	2.288	2.549	2.370	1.253	2.97
9501	1.164	1.115	1.149	1.478	1.70
9505	1.164	1.115	1.149	1.478	1.70
9519	1.727	1.274	1.584	1.253	1.99
9521	1.950	2.124	2.004	1.478	2.96
9522	1.063	0.839	0.994	1.478	1.47
9533	4.356	3.451	4.093	3.738	15.30
9534	1.283	1.172	1.250	3.738	4.67
9549	0.890	0.674	0.827	3.738	3.09
9552	1.172	1.331	1.219	3.738	4.56
9586	0.210	0.190	0.204	1.253	0.26
9620	0.477	0.547	0.499	1.253	0.63

Notes:

(2), (3), (4): Section IX - G.

(5): Section IX - H, Exhibit 1.

(6) = (4) x (5)

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Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2023

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	2.21	2.11	2.12
0008	2.16	1.93	1.93
0016	3.12	2.79	2.79
0034	2.69	2.15	2.15
0035	1.48	1.31	1.31
0036	2.69	2.15	2.15
0042	3.01	2.82	2.83
0046	2.13	2.56	2.33
0050	3.86	3.87	3.87
0079	2.10	2.18	2.18
0083	3.22	2.72	2.72
0106	8.75	7.38	7.44
0113	2.69	2.15	2.15
0170	2.69	2.15	2.15
0908	76.14	75.12	75.24
0909	169.82	202.86	186.03
0912	339.64	405.73	372.05
0913	152.27	150.25	150.48
0917	2.11	1.87	1.87
0918	0.39	0.35	0.35
1430	4.51	2.86	3.15
1438	2.98	2.83	2.85
1463	10.87	9.77	9.83
1624	3.50	3.65	3.68
1655	2.29	2.28	2.30
1701	2.02	3.46	2.22
1710	3.50	3.65	3.68
1747	2.40	1.81	1.83
1748	2.90	2.97	2.99
1853	1.15	1.01	1.02
1924	2.00	2.62	2.20
1925	5.80	4.80	4.84
2003	3.27	2.79	2.80
2014	3.53	3.13	3.15
2021	2.34	2.33	2.35
2039	3.34	3.51	3.53
2041	2.07	1.94	1.95
2070	2.98	2.82	2.84
2081	2.38	2.63	2.61
2089	2.37	2.14	2.16
2095	2.45	2.41	2.43
2101	2.37	2.14	2.16
2111	1.95	1.80	1.81
2114	2.37	2.14	2.16
2115	5.08	4.65	4.68
2121	1.29	1.13	1.14
2130	1.32	1.27	1.28
2131	2.70	2.51	2.53

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Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
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Section IX - J
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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	2.17	1.64	1.66
2150	3.34	2.98	3.00
2156	3.54	2.62	2.64
2157	3.75	3.37	3.39
2172	1.56	1.38	1.39
2211	5.10	4.43	4.46
2220	2.22	2.61	2.44
2260	4.61	4.03	4.05
2288	3.38	3.14	3.16
2305	2.76	1.97	1.98
2362	1.60	1.75	1.76
2380	1.74	1.35	1.36
2402	2.00	1.73	1.75
2413	3.05	2.27	2.28
2416	2.04	2.49	2.25
2417	1.86	1.21	1.30
2501	1.94	1.80	1.81
2503	0.97	0.85	0.85
2570	3.81	2.64	2.66
2576	1.92	1.66	1.67
2585	2.47	2.43	2.45
2586	1.90	1.81	1.82
2587	2.21	1.72	1.72
2623	4.25	3.46	3.48
2651	1.39	1.06	1.07
2660	1.86	1.55	1.56
2683	1.98	1.67	1.68
2688	1.59	1.65	1.66
2702	11.86	15.50	13.01
2710	5.61	4.90	4.93
2731	2.58	2.38	2.39
2747	4.88	4.39	4.42
2790	1.64	1.77	1.79
2802	3.28	2.90	2.92
2835	1.46	1.67	1.61
2836	2.03	2.06	2.08
2841	3.32	2.54	2.56
2883	2.91	2.41	2.43
2923	1.32	0.97	0.98
2942	1.47	1.26	1.27
3018	2.18	1.96	1.98
3022	3.04	2.75	2.77
3027	3.49	1.75	2.44
3028	2.38	2.44	2.46
3030	4.89	4.07	4.10
3040	4.61	4.73	4.76
3041	2.45	2.15	2.17
3042	3.87	2.49	2.70

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Subsection J - Average Rates and Proposed Premium Change
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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	2.10	1.91	1.92
3076	1.96	2.26	2.16
3081	4.29	3.31	3.33
3082	4.29	3.31	3.33
3085	4.17	3.36	3.39
3110	7.80	5.73	5.77
3111	1.84	1.89	1.90
3113	1.52	1.39	1.39
3114	2.55	2.08	2.10
3118	1.43	1.10	1.11
3119	0.75	0.78	0.79
3120	1.10	0.97	0.98
3122	2.01	1.71	1.72
3127	1.19	1.73	1.30
3131	1.15	1.11	1.12
3132	2.10	1.66	1.68
3145	1.44	1.13	1.14
3146	1.89	1.60	1.61
3169	2.33	1.78	1.80
3179	0.98	0.89	0.89
3180	2.19	1.91	1.92
3188	2.12	1.66	1.67
3200	1.92	1.86	1.87
3220	2.58	1.78	1.81
3255	1.69	1.62	1.63
3257	2.17	1.99	2.00
3270	1.94	1.45	1.46
3300	2.82	2.81	2.83
3315	2.63	2.40	2.42
3336	2.49	1.91	1.93
3365	4.21	3.59	3.59
3372	1.86	1.81	1.82
3373	3.24	3.02	3.04
3381	1.66	1.39	1.40
3383	1.36	1.09	1.09
3385	0.67	0.72	0.73
3400	2.33	1.78	1.80
3507	2.44	2.18	2.20
3515	2.38	1.97	1.98
3558	0.67	0.57	0.58
3571	0.59	0.49	0.49
3574	1.47	1.30	1.31
3612	1.15	1.10	1.11
3620	3.22	2.57	2.59
3629	1.47	1.30	1.31
3632	1.47	1.30	1.31
3634	1.31	1.42	1.43
3635	2.39	1.66	1.68

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Subsection J - Average Rates and Proposed Premium Change
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Section IX - J
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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	1.47	1.30	1.31
3642	0.91	1.01	1.00
3643	1.38	1.46	1.47
3647	2.07	1.78	1.79
3648	1.05	0.85	0.86
3681	0.55	0.47	0.48
3685	0.52	0.40	0.40
3724	4.08	3.46	3.46
3726	5.51	2.82	3.75
3807	2.33	1.78	1.80
3808	2.93	2.57	2.59
3821	4.43	4.06	4.06
3826	3.90	2.87	2.88
3830	1.47	1.30	1.31
3841	1.36	1.54	1.50
4000	5.14	4.92	4.96
4021	2.91	2.51	2.53
4024	3.22	2.92	2.94
4034	5.35	5.73	5.77
4036	1.68	1.46	1.47
4038	2.46	1.91	1.92
4053	2.16	2.45	2.38
4062	1.72	1.78	1.79
4112	0.34	0.26	0.26
4113	2.16	2.45	2.38
4114	2.45	2.66	2.68
4130	2.89	3.77	3.18
4133	1.40	1.57	1.54
4150	0.72	0.58	0.58
4239	2.05	2.30	2.25
4243	2.41	2.11	2.12
4244	2.49	2.55	2.57
4250	1.70	1.99	1.87
4251	1.96	2.31	2.15
4273	2.76	2.34	2.36
4279	2.01	2.03	2.05
4283	1.41	1.76	1.55
4299	1.57	1.40	1.41
4304	4.03	4.87	4.43
4307	1.44	1.12	1.13
4308	1.60	1.71	1.72
4351	0.79	0.78	0.78
4352	1.05	0.83	0.84
4360	0.54	0.49	0.49
4361	0.54	0.45	0.45
4362	0.44	0.38	0.38
4410	2.80	2.24	2.25
4432	0.62	0.66	0.66

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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	4.11	4.34	4.37
4452	2.36	2.47	2.48
4459	2.58	2.06	2.08
4470	1.78	1.48	1.49
4484	1.84	1.79	1.80
4493	1.71	1.69	1.70
4511	0.28	0.24	0.24
4512	0.08	0.06	0.06
4557	1.62	1.57	1.58
4558	1.40	1.77	1.53
4583	2.27	2.20	2.22
4611	0.75	0.65	0.65
4635	4.43	3.89	3.92
4653	1.69	1.70	1.71
4665	8.54	8.29	8.34
4692	0.46	0.42	0.42
4693	0.72	0.64	0.64
4720	1.45	1.44	1.45
4740	0.78	0.60	0.61
4741	2.08	2.85	2.28
4771	4.47	1.73	3.12
4777	2.27	2.20	2.22
4825	0.38	0.30	0.30
4828	0.80	0.82	0.82
4829	0.80	0.82	0.82
4902	1.47	1.26	1.27
4923	0.54	0.49	0.49
5020	3.87	3.63	3.62
5022	9.20	7.18	7.17
5037	14.23	9.76	9.75
5040	19.11	18.40	18.38
5057	18.56	14.74	14.72
5059	19.93	20.80	20.77
5102	5.75	5.22	5.21
5146	6.17	5.28	5.27
5160	2.50	2.96	2.70
5183	2.86	2.71	2.71
5188	3.55	3.00	3.00
5190	2.18	1.87	1.86
5191	0.70	0.58	0.58
5192	2.50	2.27	2.27
5213	10.36	6.55	7.05
5215	3.86	4.28	4.17
5221	6.03	5.44	5.43
5222	8.37	6.89	6.88
5223	3.73	2.95	2.95
5348	4.24	3.50	3.50
5402	6.00	4.59	4.58

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Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2023

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	8.22	6.84	6.83
5437	3.40	2.83	2.83
5443	3.26	2.39	2.39
5445	5.84	4.77	4.77
5462	5.07	4.85	4.84
5472	7.07	6.73	6.72
5473	8.24	8.75	8.74
5474	3.71	3.71	3.71
5478	3.21	3.47	3.46
5479	5.01	4.29	4.28
5480	4.24	3.55	3.55
5506	4.76	4.26	4.25
5507	5.02	3.87	3.86
5508	3.86	3.87	3.87
5509	4.56	4.91	4.90
5538	3.79	3.14	3.14
5545	41.47	38.91	38.86
5547	10.13	8.68	8.67
5606	1.17	0.99	0.99
5610	4.19	4.82	4.53
5645	6.13	5.44	5.43
5701	18.62	12.81	12.80
5703	10.23	7.16	7.15
5705	8.60	8.37	8.36
6003	6.99	5.05	5.05
6005	3.86	3.87	3.87
6204	4.83	4.75	4.75
6217	4.01	3.57	3.56
6229	3.55	3.60	3.60
6233	1.94	1.62	1.61
6251	3.97	3.44	3.44
6252	5.42	3.09	3.69
6306	7.38	7.58	7.57
6319	2.52	2.03	2.02
6325	2.36	2.23	2.23
6400	4.40	3.77	3.76
6504	2.37	2.14	2.16
6834	2.01	1.96	1.98
6836	2.84	2.30	2.41
7219	6.96	6.19	6.24
7230	7.95	7.72	7.78
7231	10.64	9.45	9.52
7360	3.87	3.84	3.87
7370	3.50	3.88	3.85
7380	5.48	5.55	5.59
7382	3.46	3.04	3.06
7403	3.20	2.58	2.71
7405	1.07	1.14	1.15

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Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
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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	7.97	23.00	8.75
7421	1.00	0.88	0.89
7422	1.00	0.88	0.89
7425	2.41	2.44	2.45
7431	1.00	0.88	0.89
7502	1.54	1.70	1.69
7515	2.86	1.98	2.43
7520	2.68	2.66	2.68
7538	5.16	2.70	3.51
7539	1.26	1.18	1.18
7580	3.09	2.59	2.62
7590	4.38	6.02	4.81
7600	3.40	3.77	3.74
7601	4.76	2.77	3.24
7610	0.30	0.41	0.32
7704	3.03	3.51	3.33
7720	1.36	1.33	1.34
7855	2.96	3.41	3.19
8001	1.51	1.46	1.46
8002	1.69	1.53	1.54
8006	1.08	0.84	0.84
8008	0.71	0.60	0.61
8010	1.50	1.20	1.20
8013	0.33	0.27	0.27
8017	0.89	0.83	0.83
8018	3.29	3.12	3.12
8021	3.10	2.86	2.86
8031	1.51	1.31	1.31
8032	1.18	1.06	1.07
8033	1.30	1.18	1.18
8034	2.70	2.29	2.29
8039	1.21	1.44	1.33
8044	2.49	2.23	2.23
8046	2.02	2.02	2.03
8048	2.21	1.94	1.94
8058	2.07	1.94	1.94
8103	2.41	2.35	2.35
8105	6.89	14.92	7.55
8106	4.69	3.69	3.70
8107	2.75	2.00	2.00
8111	2.46	2.24	2.24
8203	5.56	4.12	4.13
8204	5.62	3.66	3.91
8215	2.91	2.44	2.44
8227	4.69	4.84	4.83
8232	4.99	3.86	3.86
8233	5.01	4.52	4.52
8235	3.68	3.41	3.42

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Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
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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	4.55	3.92	3.93
8264	4.51	3.76	3.77
8265	5.01	4.52	4.52
8279	3.41	3.02	3.03
8291	3.11	3.42	3.41
8292	3.05	2.83	2.83
8293	6.96	5.43	5.44
8350	6.15	5.73	5.74
8380	2.35	2.02	2.02
8381	1.53	1.02	1.06
8385	3.15	3.06	3.07
8392	1.51	1.26	1.26
8393	1.12	1.07	1.08
8500	5.01	4.52	4.52
8601	0.18	0.17	0.17
8710	2.49	1.95	1.95
8719	2.49	1.95	1.95
8720	0.76	0.67	0.67
8721	0.21	0.15	0.15
8742	0.09	0.08	0.08
8745	5.57	4.26	4.27
8747	0.65	0.61	0.61
8748	0.61	0.45	0.45
8800	0.91	0.78	0.78
8803	0.04	0.03	0.03
8810	0.06	0.04	0.04
8820	0.06	0.05	0.05
8824	1.86	1.74	1.74
8826	1.40	1.28	1.28
8829	2.14	2.13	2.13
8831	0.95	0.79	0.79
8832	0.25	0.22	0.22
8833	0.99	0.94	0.94
8835	1.61	1.37	1.37
8868	0.67	0.63	0.63
8901	0.06	0.04	0.04
9014	1.87	1.67	1.67
9015	2.71	2.38	2.38
9016	1.58	1.20	1.20
9019	2.49	2.42	2.44
9033	2.18	2.11	2.12
9040	2.81	2.37	2.38
9052	1.33	1.26	1.26
9058	1.33	1.24	1.24
9060	0.92	0.82	0.82
9061	0.92	0.77	0.77
9063	0.55	0.48	0.48
9079	0.90	0.76	0.76

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Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2023

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	0.65	0.51	0.52
9093	1.00	0.76	0.76
9101	3.39	3.16	3.17
9102	1.88	2.07	2.06
9154	1.42	1.53	1.54
9156	1.75	1.50	1.51
9178	12.25	10.42	10.50
9179	35.67	38.04	38.33
9180	4.14	3.51	3.54
9182	2.68	2.24	2.27
9186	4.14	3.51	3.54
9220	3.27	3.01	3.01
9402	3.58	3.48	3.51
9403	8.99	10.35	9.87
9410	3.26	2.97	2.97
9501	1.85	1.70	1.71
9505	1.85	1.70	1.71
9519	2.28	1.99	1.99
9521	2.71	2.96	2.98
9522	1.45	1.47	1.48
9533	13.81	15.30	14.92
9534	4.90	4.67	4.67
9549	3.66	3.09	3.09
9552	6.38	4.56	4.55
9586	0.29	0.26	0.26
9620	0.67	0.63	0.63

Notes:

(2) = (4) from Section IX - J, Exhibit 1 of the 7/1/2022 Stipulation.

(3): Section IX - I, Exhibit 1.

(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.)

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Section IX - Classification Pricing
Subsection J - Average Rates and Proposed Premium Change
7/1/2023

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	562,569,564	505,588,861	-10.1%	-10.1%	1.488
Construction	1,783,088,781	1,569,865,111	-12.0%	-12.0%	3.733
Office & Clerical	574,543,933	500,125,129	-13.0%	-13.0%	0.106
Goods & Services	1,498,120,560	1,341,451,415	-10.5%	-10.5%	1.255
Miscellaneous	678,052,868	659,515,677	-2.7%	-2.7%	4.110
All Groups	5,096,375,706	4,576,546,193	-10.2%		

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.

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Section IX - Classification Pricing
Subsection K - Adjustments to Derive Final Manual Rates
7/1/2023

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 =	1.055	The offset for ARAP
(3)	Factor 3 =	0.963	For eligible classes, the offset for the Construction Classification Premium Adjustment Program
(4)	Factor 4 =	0.0000	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)
2016	66	Non Rated	100,811	44%	22,949,294	2%	22,942,833	1.000	
		Merit Rated	80,562	35%	157,240,875	13%	153,719,696	0.978	
		Intrastate Rated	23,432	10%	528,276,382	44%	528,014,888	1.000	
		Interstate Rated	23,394	10%	492,982,811	41%	453,866,701	0.921	
		Total	228,199	100%	1,201,449,362	100%	1,158,544,118	0.964	
2017	54	Non Rated	99,072	43%	23,303,246	2%	23,296,347	1.000	
		Merit Rated	79,701	35%	157,888,883	12%	154,354,600	0.978	
		Intrastate Rated	24,389	11%	561,058,894	44%	560,003,779	0.998	
		Interstate Rated	24,994	11%	537,978,516	42%	494,296,048	0.919	
		Total	228,156	100%	1,280,229,539	100%	1,231,950,774	0.962	
2018	42	Non Rated	102,500	44%	23,891,142	2%	23,884,610	1.000	
		Merit Rated	80,209	35%	158,072,049	13%	154,667,585	0.978	
		Intrastate Rated	24,340	10%	553,691,497	44%	553,312,120	0.999	
		Interstate Rated	24,959	11%	520,155,649	41%	481,568,874	0.926	
		Total	232,008	100%	1,255,810,337	100%	1,213,433,189	0.966	
2019	30	Non Rated	114,690	47%	26,085,719	2%	26,082,130	1.000	
		Merit Rated	80,634	33%	156,786,645	13%	153,512,584	0.979	
		Intrastate Rated	23,134	9%	522,395,202	43%	526,481,560	1.008	
		Interstate Rated	25,354	10%	503,477,016	42%	466,195,035	0.926	
		Total	243,812	100%	1,208,744,582	100%	1,172,271,309	0.970	
2020	18	Non Rated	119,285	48%	27,099,695	2%	27,093,436	1.000	
		Merit Rated	77,921	32%	151,720,244	13%	148,536,507	0.979	
		Intrastate Rated	22,526	9%	524,100,399	44%	525,657,359	1.003	
		Interstate Rated	27,133	11%	485,247,600	41%	456,132,331	0.940	
		Total	246,865	100%	1,188,167,938	100%	1,157,419,633	0.974	
Total		Non Rated	536,358	45%	123,329,096	2%	123,299,356	1.000	1.000
		Merit Rated	399,027	34%	781,708,696	13%	764,790,972	0.978	0.978
		Intrastate Rated	117,821	10%	2,689,522,374	44%	2,693,469,706	1.001	1.000
		Interstate Rated	125,834	11%	2,539,841,592	41%	2,352,058,989	0.926	1.000
		Total	1,179,040	100%	6,134,401,758	100%	5,933,619,023	0.967	0.997

Notes:

Unit Statistical 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, Interstate Rated and Intrastate Rated.

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Section IX - Classification Pricing
 Subsection K - Adjustments to Derive Final Manual Rates
 7/1/2023

Section IX - K
 Exhibit 3

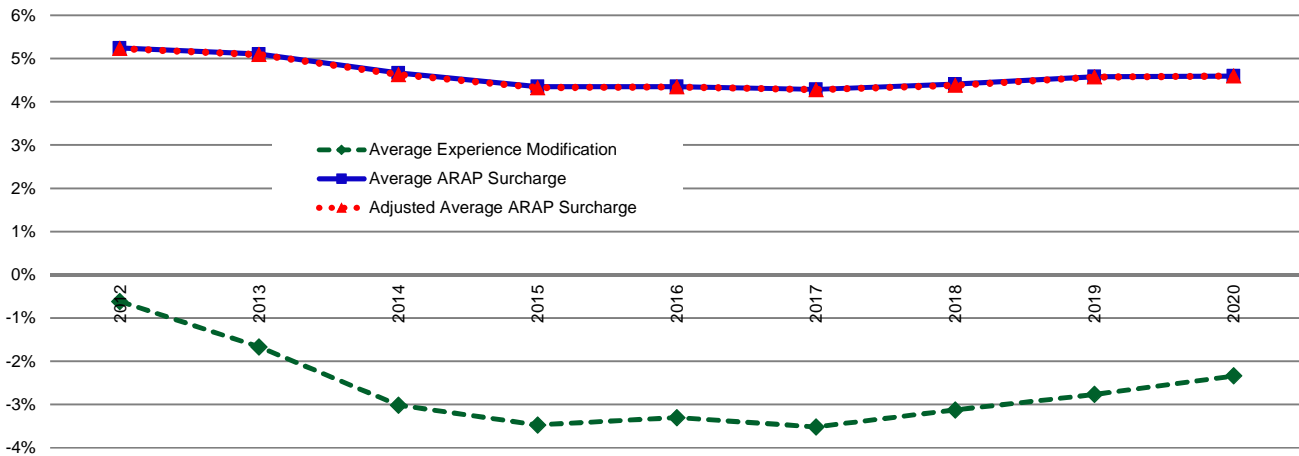
Offset for ARAP Estimate of Average ARAP Surcharge for Prospective Effective Period

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)
2012	943,287,347	937,486,005	49,160,747	49,039,380	5.2%	-0.6%	5.2%
2013	1,001,355,446	984,646,228	50,229,243	50,124,218	5.1%	-1.7%	5.1%
2014	1,075,349,858	1,042,954,084	48,662,995	48,285,459	4.7%	-3.0%	4.6%
2015	1,150,632,554	1,110,650,727	48,332,648	48,057,943	4.4%	-3.5%	4.3%
2016	1,198,097,609	1,158,544,118	50,437,471	50,311,555	4.4%	-3.3%	4.3%
2017	1,276,853,042	1,231,950,774	52,810,149	52,735,191	4.3%	-3.5%	4.3%
2018	1,252,556,201	1,213,433,189	53,492,392	53,171,925	4.4%	-3.1%	4.4%
2019	1,205,609,730	1,172,271,309	53,702,936	53,610,836	4.6%	-2.8%	4.6%
2020	1,185,127,097	1,157,419,633	53,189,600	53,180,731	4.6%	-2.3%	4.6%

Regression of Average ARAP Surcharge on Average Experience Modification

(9) R-Squared	0.915
(10) Slope	0.337
(11) Intercept	0.055
(12) Projected Average ARAP Surcharge = (11)	0.055



Notes:

- (2) - (4): Unit Statistical 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.

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Section IX - Classification Pricing
Subsection K - Adjustments to Derive Final Manual Rates
7/1/2023

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)
2019	429,521,402	16,511,380	3.8%
2020	431,182,401	16,143,456	3.7%
(5) Selected Average Credit for Eligible Class Codes in Prospective Effective Period			3.7%

Note:

(2), (3): Unit Statistical Data, excluding Large Deductibles and SIGs.

(4) = (3) / (2)

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Section IX - Classification Pricing
Subsection K - Adjustments to Derive Final Manual Rates
7/1/2023

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 7/1/22 and ending 6/30/23, absent insolvency loads	1,429,003,545
(2)	Unanticipated Insolvency Assessment Recoupment Rate (As a % of premium absent insolvency loads)	0.00%
(3)	Unanticipated Insolvency Assessment Recoupments	0
(4)	Interest Adjustment Factor	1.033
(5)	Adjusted Unanticipated Insolvency Assessment Recoupments	0

Net Assessments

(6)	Amount Sufficient to Recoup Assessment	0
(7)	Net Assessments	0

Loading for Recoupment

(8)	Estimated Written Premium in the Prospective Effective Period, absent insolvency loads	1,292,872,766
(9)	Indicated Loading for Recoupment of Insolvency Fund Assessments	0.00%

Notes:

(1): Page 2.

(2): When insolvency fund loading in 7/1/2022 rates was calculated, it was anticipated that rates would be in effect for 1 year. Therefore, no unanticipated insolvency assessment recoupment rate. There would be an unanticipated insolvency assessment recoupment rate if 7/1/2022 rates were in effect beyond 6/30/2023.

(3) = (1) x (2)

(4): 3.3% 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 2022.

(7) = (6) - (5)

(8): Page 2.

(9) = (7) / [(7) + (8)]

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Section IX - Classification Pricing
Subsection K - Adjustments to Derive Final Manual Rates
7/1/2023

Section IX - K
Exhibit 5
Page 2

Expected Workers' Compensation Written Premium in Prospective Effective Period

(1)	2021 Calendar Year Written Premium, absent insolvency loads	1,452,816,123
(2)	Estimated Exposure Growth Factor from Calendar Year 2021 to Policy Period ending 6/30/23	1.019
(3)	Rate Change from Calendar Year 2021 Written to the Policy Period ending 6/30/23	-3.46%
(4)	Estimated Written Premium for the Policy Period ending 6/30/23, absent Insolvency Loads = (1) x (2) x [1.0 + (3)]	1,429,003,545
(5)	Estimated Exposure Growth Factor from the Policy Period ending 6/30/23 to the Prospective Effective Period	1.008
(6)	Average Indicated Rate Change	-10.2%
(7)	Estimated Written Premium in Prospective Effective Period, absent insolvency loads = (4) x (5) x [1.0 + (6)]	1,292,872,766

Notes:

- (1): Adjusted to remove any loading for recoupment of insolvency fund assessments.
- (2): Assumes a 0.8% annual change (Section V-H, Exhibit 3) compounded for 2.5 years.
- (3): Section I-A of 7/1/2022 Stipulation.
- (5): Assumes a 0.8% annual change (from Section V-H, Exhibit 3) compounded for 1 year.
- (6): Section I-A, Exhibit 1.

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Section IX - Classification Pricing
 Subsection L - Pricing Example
 7/1/2023

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 Data, excluding Large Deductibles)							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2016	0	0	0	0	0	0	427	0
	2017	0	0	0	0	0	0	1,058	0
	2018	0	0	0	0	0	0	25,832	0
	2019	0	0	0	0	0	0	0	0
	2020	0	0	0	0	89,946	0	0	0
Medical	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	0	0	8,682	312
	2019	0	0	0	0	0	0	0	1,239
	2020	0	0	0	0	15,381	0	0	420

		(B). Primary Conversion Factors (Section IX - B, Exhibit 1, Page 2)							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2016	0.860	0.834	0.874	0.918	0.890	0.850	0.824	0.000
	2017	0.857	0.830	0.869	0.909	0.880	0.848	0.821	0.000
	2018	0.931	0.906	0.943	0.982	0.956	0.923	0.898	0.000
	2019	1.186	1.133	1.199	1.245	1.189	1.177	1.124	0.000
	2020	1.888	1.615	1.905	1.968	1.684	1.875	1.605	0.000
Medical	2016	0.626	0.691	0.626	0.626	0.691	0.626	0.691	0.614
	2017	0.615	0.683	0.615	0.615	0.683	0.615	0.683	0.604
	2018	0.635	0.705	0.635	0.635	0.705	0.635	0.705	0.618
	2019	0.753	0.812	0.753	0.753	0.812	0.753	0.812	0.758
	2020	0.850	0.868	0.850	0.850	0.868	0.850	0.868	0.823

		(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	2016	0	0	0	0	0	0	352	0
	2017	0	0	0	0	0	0	869	0
	2018	0	0	0	0	0	0	23,186	0
	2019	0	0	0	0	0	0	0	0
	2020	0	0	0	0	151,510	0	0	0
Medical	2016	0	0	0	0	0	0	518	1,383
	2017	0	0	0	0	0	0	1,651	223
	2018	0	0	0	0	0	0	6,119	193
	2019	0	0	0	0	0	0	0	939
	2020	0	0	0	0	13,353	0	0	346

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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	2016	0	0	0	0	0	0	53	0
	2017	0	0	0	0	0	0	131	0
	2018	0	0	0	0	0	0	3,495	0
	2019	0	0	0	0	0	0	0	0
	2020	0	0	0	0	22,840	0	0	0
Medical	2016	0	0	0	0	0	0	78	209
	2017	0	0	0	0	0	0	249	34
	2018	0	0	0	0	0	0	922	29
	2019	0	0	0	0	0	0	0	142
	2020	0	0	0	0	2,013	0	0	52

		(E). Adjusted Excess Losses							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2016	0	0	0	0	0	0	37	0
	2017	0	0	0	0	0	0	92	0
	2018	0	0	0	0	0	0	2,447	0
	2019	0	0	0	0	0	0	0	0
	2020	0	0	0	0	15,988	0	0	0
Medical	2016	0	0	0	0	0	0	94	209
	2017	0	0	0	0	0	0	288	34
	2018	0	0	0	0	0	0	1,971	29
	2019	0	0	0	0	0	0	0	142
	2020	0	0	0	0	8,865	0	0	52

		(F). Secondary Conversion Factors				
		Fatal	Permanent Total	Permanent Partial	Temporary Total	Medical Only
Indemnity		0.821	0.723	1.273	1.295	0.000
Medical		1.183	0.722	1.272	1.293	1.183

		(G). Converted Unlimited Losses							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2016	0	0	0	0	0	0	504	0
	2017	0	0	0	0	0	0	1,243	0
	2018	0	0	0	0	0	0	33,192	0
	2019	0	0	0	0	0	0	0	0
	2020	0	0	0	0	213,253	0	0	0
Medical	2016	0	0	0	0	0	0	791	1,883
	2017	0	0	0	0	0	0	2,509	303
	2018	0	0	0	0	0	0	10,464	263
	2019	0	0	0	0	0	0	0	1,278
	2020	0	0	0	0	28,255	0	0	471

		(H). Total				
Policy Year	Exposure	Indemnity			Medical	
		LD	NLD	LD	NLD	
2016	37,929	0	504	0	2,675	
2017	52,045	0	1,243	0	2,812	
2018	53,397	0	33,192	0	10,727	
2019	48,778	0	0	0	1,278	
2020	45,692	0	213,253	0	28,726	
Total	237,841	0	248,193	0	46,217	

	Indemnity	Medical
(I). Indicated Pure Premium	1.044	0.194
(J). Manufacturing Industry Group Pure Premium	0.901	0.404
(K). MA Indicated Relativity	1.158	0.481

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)

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 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	0
Arizona	2	0	13,112	0	28,110	0	1	11,286,751
Arkansas	3	16,180	56,671	46,496	181,790	3	15	65,346,396
Colorado	5	0	2,315	0	10,000	0	1	4,764,268
Connecticut	6	0	0	0	0	0	0	234,537
D.C.	8	0	0	0	0	0	0	0
Florida	9	0	0	0	5,339	0	0	5,273,738
Georgia	10	0	7,537	0	1,765	0	1	3,526,394
Idaho	11	0	1,875	0	9,036	0	1	1,045,395
Illinois	12	19,263	173,242	26,395	324,449	3	13	20,158,213
Indiana	13	0	50,302	0	54,745	0	2	786,044
Iowa	14	0	0	0	0	0	0	755,663
Kansas	15	0	0	0	0	0	0	0
Kentucky	16	0	0	0	0	0	0	321,119
Louisiana	17	0	2,085	0	1,737	0	1	82,678
Maine	18	549,594	1,120,698	261,253	1,465,653	7	59	136,074,818
Maryland	19	0	0	0	0	0	0	425,758
Michigan	21	0	8,018	0	88,456	0	2	36,724,183
Minnesota	22	0	1,175	0	30,139	0	2	6,949,317
Mississippi	23	0	0	0	0	0	0	815,449
Missouri	24	107,270	240,218	213,504	454,516	7	24	78,307,171
Montana	25	0	24,804	0	14,858	0	1	714,320
Nebraska	26	0	0	0	0	0	0	840,819
Nevada	27	0	0	0	0	0	0	340,113
New Hampshire	28	0	0	0	309	0	0	1,379,760
New Mexico	30	0	0	0	0	0	0	0
North Carolina	32	45,518	67,668	104,589	91,966	1	7	21,062,636
Oklahoma	35	0	0	0	0	0	0	31,403
Oregon	36	44,646	299,041	27,795	391,445	1	38	109,018,860
Rhode Island	38	0	0	0	482	0	0	150,405
South Carolina	39	0	0	0	995	0	0	234,847
South Dakota	40	0	0	0	0	0	0	0
Tennessee	41	0	12,477	0	53,266	0	3	24,121,782
Utah	43	0	1,615	0	23,697	0	1	5,489,401
Vermont	44	0	0	0	0	0	0	0
Virginia	45	0	1,101	0	17,601	0	2	6,148,439
West Virginia	47	0	0	0	0	0	0	892,632
Wisconsin	48	13,894	157,088	6,048	933,099	1	26	68,152,416
Hawaii	52	0	43	0	333	0	1	2,904,881
Alaska	54	0	0	0	0	0	0	0
Total		796,365	2,241,085	686,080	4,183,786	23	201	614,360,606

Note:
 (3) - (9): Data are total for latest three policy years. See Section IX-D, Exhibit 3.

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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	3.278	0.572	0.000	0.000	
Arizona	2	4.233	0.598	0.492	0.149	
Arkansas	3	3.244	0.945	0.362	0.330	
Colorado	5	1.927	0.588	0.094	0.123	
Connecticut	6	1.096	0.494	0.000	0.000	
D.C.	8	0.501	0.217	0.000	0.000	
Florida	9	2.095	0.474	0.000	0.048	
Georgia	10	1.698	0.765	0.363	0.038	
Idaho	11	1.619	0.445	0.290	0.384	
Illinois	12	1.148	0.457	1.096	0.796	
Indiana	13	4.050	0.641	25.917	4.462	
Iowa	14	1.579	0.374	0.000	0.000	
Kansas	15	2.538	0.540	0.000	0.000	
Kentucky	16	2.316	0.963	0.000	0.000	
Louisiana	17	2.004	0.556	5.055	1.168	
Maine	18	1.257	0.457	1.543	0.580	
Maryland	19	1.994	0.952	0.000	0.000	
Michigan	21	3.052	0.940	0.067	0.226	
Minnesota	22	1.645	0.703	0.028	0.305	
Mississippi	23	1.644	0.530	0.000	0.000	
Missouri	24	1.509	0.455	0.670	0.388	
Montana	25	1.341	0.392	4.656	0.815	
Nebraska	26	1.675	0.445	0.000	0.000	
Nevada	27	0.704	0.434	0.000	0.000	
New Hampshire	28	1.880	0.416	0.000	0.009	
New Mexico	30	1.344	0.359	0.000	0.000	
North Carolina	32	1.980	1.019	1.064	0.951	
Oklahoma	35	1.528	0.616	0.000	0.000	
Oregon	36	2.261	0.807	0.713	0.311	
Rhode Island	38	0.734	0.819	0.000	0.262	
South Carolina	39	1.015	0.596	0.000	0.252	
South Dakota	40	2.906	0.422	0.000	0.000	
Tennessee	41	2.877	0.720	0.149	0.159	
Utah	43	6.370	0.988	0.187	0.426	
Vermont	44	1.294	0.530	0.000	0.000	
Virginia	45	2.135	0.772	0.038	0.221	
West Virginia	47	3.036	0.912	0.000	0.000	
Wisconsin	48	2.233	0.402	0.560	0.554	
Hawaii	52	0.680	0.232	0.001	0.003	
Alaska	54	1.945	0.359	0.000	0.000	
(8)	Average of (5), (6) weighted by Payroll from Page 1, respectively			0.791	0.429	1.220
(9)	CW Manufacturing Pure Premium			0.804	0.358	1.161
(10)	CW Relativity = (8) / (9)			0.983	1.201	1.050
(11)	CW Relativity, balanced to unity			0.972	1.187	

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.

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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
1.158	0.481
0.972	1.187
1.083	1.214

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 2)]
- (8) Full Credibility Standards
- (9) MA Credibility
 = Minimum of {100%, [(7) / (8)]^{0.4}}

Injury Type	
Indemnity	Medical
1.066	1.192
0.818	0.408
0.872	0.486
207,322	115,697
29,750,000	5,600,000
14%	21%

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
224	224
1,150	1,000
43%	40%
43%	39%
1.046	1.049
0.998	0.995

- (16) Balanced Formula Relativity

Injury Type		
Indemnity	Medical	Total
1.048	1.054	1.050

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.

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Section IX - Classification Pricing
Subsection L - Pricing Example
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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	1.050
(2) Capped Rate Level Factor	1.488
(3) Proposed Average Capped Rate = (1) x (2)	1.56
(4) Offset for Merit Rating	0.997
(5) Offset for ARAP	1.055
(6) Offset for Construction Classification Premium Adjustment Program	1.000
(7) Provision for Insolvency Fund Assessment Recoupment	0.0000
(8) Proposed Manual Rate = {(3) / [(4) x (5) x (6)]} x {1.000 / [1.000 - (7)]}	1.49
(9) Minimum Premium	211
(10) Loss Constant	0
(11) Expected Loss Rate	0.83
(12) D-Ratio	0.17

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) x 35.0] + (10) + Expense Constant} subject to a maximum of \$500

Where Expense Constant = 159 if (8) x 35 + (10) < 200

= 250 if (8) x 35 + (10) >= 200 and < 1000.

= 338 if (8) x 35 + (10) >= 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 7/1/2021 to 6/30/2022	A	0.666	0.021	1.017	0.929	1.524	1.009	1.020	0.440
	B	0.666	0.034	1.017	0.929	1.551	1.013	1.021	0.425
	C	0.666	0.063	1.017	0.929	1.564	1.014	1.008	0.413
	D	0.666	0.078	1.017	0.929	1.556	1.010	1.022	0.405
	E	0.666	0.087	1.017	0.929	1.567	1.014	1.004	0.404
	F	0.666	0.128	1.017	0.929	1.563	1.009	0.972	0.401
	G	0.666	0.148	1.017	0.929	1.566	1.010	0.948	0.401
2nd Report 7/1/2020 to 6/30/2021	A	0.666	0.034	1.037	0.895	1.179	1.009	1.020	0.571
	B	0.666	0.055	1.037	0.895	1.200	1.013	1.021	0.547
	C	0.666	0.103	1.037	0.895	1.210	1.014	1.008	0.521
	D	0.666	0.126	1.037	0.895	1.203	1.010	1.022	0.505
	E	0.666	0.140	1.037	0.895	1.212	1.014	1.004	0.500
	F	0.666	0.208	1.037	0.895	1.209	1.009	0.972	0.480
	G	0.666	0.239	1.037	0.895	1.211	1.010	0.948	0.471
3rd Report 7/1/2019 to 6/30/2020	A	0.666	0.034	1.050	0.862	1.062	1.009	1.020	0.650
	B	0.666	0.054	1.050	0.862	1.081	1.013	1.021	0.622
	C	0.666	0.102	1.050	0.862	1.090	1.014	1.008	0.593
	D	0.666	0.124	1.050	0.862	1.084	1.010	1.022	0.576
	E	0.666	0.139	1.050	0.862	1.092	1.014	1.004	0.570
	F	0.666	0.205	1.050	0.862	1.089	1.009	0.972	0.547
	G	0.666	0.236	1.050	0.862	1.091	1.010	0.948	0.538
1st - 3rd Report Average	A								0.554
	B								0.531
	C								0.509
	D								0.495
	E								0.491
	F								0.476
	G								0.470

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, (8).
- (10) = { (3) x [1.0 - (4)] } / [(5) x (6) x (7) x (8) x (9)]

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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	61,090,364	2,663,085	0.044	78,403,193	0.044	0.35	0.25
B	233,530,374	8,418,848	0.036	286,886,818	0.036	0.29	0.40
C	455,350,956	43,078,790	0.095	571,854,807	0.095	0.75	0.75
D	219,898,127	25,447,469	0.116	285,851,764	0.116	0.92	0.92
E	311,544,575	40,262,590	0.129	429,807,299	0.129	1.03	1.03
F	418,184,792	80,019,606	0.191	569,725,511	0.191	1.52	1.52
G	78,585,661	19,618,934	0.250	110,965,671	0.250	1.99	1.75
Total	1,778,184,848	219,509,322	0.123	2,333,495,062	0.126	1.00	1.00

Loss Elimination Ratio by Hazard Group

Hazard Group	First Report	Second Report	Third Report
(9)	(10)	(11)	(12)
A	0.021	0.034	0.034
B	0.034	0.055	0.054
C	0.063	0.103	0.102
D	0.078	0.126	0.124
E	0.087	0.140	0.139
F	0.128	0.208	0.205
G	0.148	0.239	0.236
Total	0.084	0.137	0.135

Notes:

- (2): Unit Statistical Plan losses, PYs 2018 - 2020. Adjusted by factors from Section X - B, Exhibit 1, Page 2.
- (3): Adjusted losses above per claim limit of \$350,000
- (5): PYs 2018 - 2020, 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)

X 000006 STIP

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	6,703,370	3,066,614	0.457
1st	Permanent Total	8,484,145	5,968,628	0.704
1st	Permanent Partial	124,861,517	12,629,176	0.101
1st	Temporary Total	262,845,827	13,935,090	0.053
1st	Medical Only	19,274,288	0	0.000
1st	Total	422,169,147	35,599,508	0.084
2nd	Fatal	14,448,110	8,388,682	0.581
2nd	Permanent Total	61,709,478	48,794,257	0.791
2nd	Permanent Partial	251,915,551	20,030,727	0.080
2nd	Temporary Total	275,349,136	8,440,561	0.031
2nd	Medical Only	24,040,895	0	0.000
2nd	Total	627,463,170	85,654,226	0.137
3rd	Fatal	9,440,234	3,850,004	0.408
3rd	Permanent Total	84,326,022	45,399,244	0.538
3rd	Permanent Partial	304,911,029	35,415,214	0.116
3rd	Temporary Total	302,519,572	13,591,126	0.045
3rd	Medical Only	27,355,674	0	0.000
3rd	Total	728,552,530	98,255,587	0.135

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 000007 STIP

X 000008 STIP

Section X - Experience Rating
 Subsection A - Expected Loss Rates
 7/1/2023

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	10,925,472	0.977	0.976	1.524
1st to 10th	B	51,955,021	0.994	0.994	1.551
1st to 10th	C	103,803,051	1.002	1.002	1.564
1st to 10th	D	57,595,254	0.997	0.997	1.556
1st to 10th	E	65,308,990	1.004	1.004	1.567
1st to 10th	F	89,308,537	1.002	1.002	1.563
1st to 10th	G	19,764,175	1.004	1.004	1.566
1st to 10th	Total	398,660,500	1.000	1.000	1.560
2nd to 10th	A	21,677,802	0.977	0.977	1.179
2nd to 10th	B	76,531,800	0.994	0.994	1.200
2nd to 10th	C	145,794,466	1.002	1.002	1.210
2nd to 10th	D	67,320,496	0.997	0.997	1.203
2nd to 10th	E	110,730,659	1.004	1.004	1.212
2nd to 10th	F	151,390,582	1.002	1.002	1.209
2nd to 10th	G	21,577,689	1.004	1.004	1.211
2nd to 10th	Total	595,023,494	1.000	1.000	1.207
3rd to 10th	A	25,362,109	0.977	0.977	1.062
3rd to 10th	B	92,776,260	0.994	0.994	1.081
3rd to 10th	C	181,422,824	1.002	1.002	1.090
3rd to 10th	D	83,447,192	0.997	0.997	1.084
3rd to 10th	E	118,060,466	1.004	1.004	1.092
3rd to 10th	F	154,839,682	1.002	1.002	1.089
3rd to 10th	G	33,484,751	1.004	1.004	1.091
3rd to 10th	Total	689,393,284	1.000	1.000	1.087

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	0.993	0.988	0.949	0.977	0.977
B	0.996	0.994	0.993	0.994	0.994
C	0.998	1.004	1.005	1.002	1.002
D	0.998	1.000	0.993	0.997	0.997
E	1.004	1.006	1.002	1.004	1.004
F	1.003	0.994	1.008	1.002	1.002
G	1.002	1.013	0.996	1.004	1.004

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	0.996	1.002	1.000	1.000	1.000
E	1.003	1.005	0.998	1.002	1.002
F	1.002	0.993	1.004	0.999	0.999
G	1.001	1.011	0.991	1.001	1.001

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 000009 STIP

Loss Development of Schedule Z to Tenth Report by Hazard Group

Policy Year 2020 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	1,360,666	2,866,346	3,987,085	7,117,539	1,084,156	1,475,998	4,493,565	4,714,567	10,925,472	16,174,450	1.480
B	9,243,507	19,472,149	18,947,849	33,824,726	7,342,597	9,996,401	16,421,068	17,228,687	51,955,021	80,521,963	1.550
C	20,158,697	42,465,825	39,898,536	71,224,814	10,013,366	13,632,455	33,732,452	35,391,477	103,803,051	162,714,572	1.568
D	9,884,845	20,823,176	20,430,563	36,471,590	10,652,169	14,502,138	16,627,677	17,445,457	57,595,254	89,242,362	1.549
E	9,769,353	20,579,884	29,659,495	52,946,605	4,710,586	6,413,113	21,169,556	22,210,715	65,308,990	102,150,317	1.564
F	14,184,452	29,880,625	38,551,701	68,820,514	11,101,930	15,114,454	25,470,454	26,723,139	89,308,537	140,538,732	1.574
G	3,176,459	6,691,452	7,280,347	12,996,501	4,054,597	5,520,033	5,252,772	5,511,113	19,764,175	30,719,099	1.554
A, B, C, D, E, F, G	67,777,979	142,779,457	158,755,576	283,402,289	48,959,401	66,654,592	123,167,544	129,225,156	398,660,500	622,061,495	1.560
C, E, F, G	47,288,961	99,617,786	115,390,079	205,988,435	29,880,479	40,680,055	85,625,234	89,836,444	278,184,753	436,122,720	1.568

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 000010 STIP

Loss Development of Schedule Z to Tenth Report by Hazard Group

Policy Year 2019 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	3,152,148	4,249,809	10,076,479	12,843,608	1,963,740	2,192,521	6,485,435	6,568,649	21,677,802	25,854,587	1.193
B	14,873,210	20,052,452	33,126,388	42,223,315	5,924,223	6,614,410	22,607,979	22,898,061	76,531,800	91,788,238	1.199
C	35,045,422	47,249,158	59,409,670	75,724,320	16,728,041	18,676,899	34,611,333	35,055,430	145,794,466	176,705,806	1.212
D	14,334,602	19,326,287	29,211,241	37,233,019	6,148,014	6,864,273	17,626,639	17,852,806	67,320,496	81,276,384	1.207
E	24,595,310	33,160,043	47,374,557	60,384,212	16,324,882	18,226,771	22,435,910	22,723,784	110,730,659	134,494,810	1.215
F	28,509,341	38,437,042	57,275,861	73,004,540	36,826,716	41,117,119	28,778,664	29,147,922	151,390,582	181,706,623	1.200
G	5,273,884	7,110,389	9,502,772	12,112,354	2,510,893	2,803,418	4,290,140	4,345,187	21,577,689	26,371,348	1.222
A, B, C, D, E, F, G	125,783,917	169,585,179	245,976,968	313,525,367	86,426,509	96,495,410	136,836,100	138,591,839	595,023,494	718,197,795	1.207
C, E, F, G	93,423,957	125,956,631	173,562,860	221,225,426	72,390,532	80,824,207	90,116,047	91,272,322	429,493,396	519,278,586	1.209

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 2018 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	4,498,237	5,121,797	11,447,437	12,708,687	1,780,639	1,869,667	7,635,796	7,680,290	25,362,109	27,380,440	1.080
B	21,383,140	24,347,339	38,621,286	42,876,481	7,114,066	7,469,753	25,657,768	25,807,275	92,776,260	100,500,849	1.083
C	45,754,898	52,097,589	69,897,705	77,598,857	22,512,585	23,638,164	43,257,636	43,509,697	181,422,824	196,844,306	1.085
D	20,385,316	23,211,194	31,724,776	35,220,131	13,261,673	13,924,727	18,075,427	18,180,752	83,447,192	90,536,804	1.085
E	35,846,098	40,815,199	46,317,730	51,420,900	12,843,768	13,485,927	23,052,870	23,187,199	118,060,466	128,909,225	1.092
F	41,772,430	47,563,058	65,098,818	72,271,240	18,236,676	19,148,469	29,731,758	29,905,004	154,839,682	168,887,771	1.091
G	10,157,282	11,565,317	11,174,137	12,405,275	6,805,345	7,145,597	5,347,987	5,379,150	33,484,751	36,495,339	1.090
A, B, C, D, E, F, G	179,797,401	204,721,493	274,281,889	304,501,571	82,554,752	86,682,304	152,759,242	153,649,366	689,393,284	749,554,734	1.087
C, E, F, G	133,530,708	152,041,163	192,488,390	213,696,272	60,398,374	63,418,157	101,390,251	101,981,050	487,807,723	531,136,641	1.089

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 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	12,237,952	32,669,834	5,538,185	18,963,506	1.009	1.009
B	63,871,941	118,924,522	24,080,564	65,934,023	1.013	1.013
C	141,812,572	224,547,991	55,947,517	113,956,604	1.014	1.014
D	63,360,657	108,924,740	35,291,137	53,479,015	1.010	1.010
E	94,555,125	164,751,717	38,125,812	68,121,697	1.014	1.014
F	115,880,725	214,096,294	75,380,042	85,776,065	1.009	1.009
G	25,367,158	37,514,130	15,469,048	15,235,449	1.010	1.010
TOTAL	517,086,129	901,429,227	249,832,306	421,466,361	1.012	1.012

Notes:

(2) - (5): Exhibit 4, Pages 3-5.

(6): Weighted Average of Development Factors from Page 2.

(Likely to Dev. Ind. 1.074, Not Likely to Dev. Ind.1.011, Likely to Dev. Med. 0.926, Not Likely to Dev. Med. 0.989)

(7): Factors are balanced to the total development factor from Page 2.

X 000013 STIP

X 000014 STIP

Section X - Experience Rating
 Subsection A - Expected Loss Rates
 7/1/2023

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					
2020	426,181,747	1.011	1.023	440,551,753	1.034
2019	483,110,546	1.011	1.023	499,400,079	1.034
2018	509,223,064	1.011	1.023	526,393,059	1.034
Total	1,418,515,357			1,466,344,891	1.034
Medical					
2020	195,879,748	0.966	1.000	189,173,471	0.966
2019	235,087,248	0.966	1.000	227,038,636	0.966
2018	240,331,670	0.966	1.000	232,103,506	0.966
Total	671,298,666			648,315,612	0.966
Ind.+ Med.					
2020	622,061,495			629,725,224	1.012
2019	718,197,795			726,438,715	1.011
2018	749,554,734			758,496,565	1.012
Total	2,089,814,023			2,114,660,504	1.012

(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	517,086,129	1.074	a. Likely to Develop	249,832,306	0.926
b. Not Likely to Develop	901,429,227	1.011	b. Not Likely to Develop	421,466,361	0.989
c. Total	1,418,515,357	1.034	c. Total	671,298,666	0.966

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 000015 STIP

Section X - Experience Rating
Subsection A - Expected Loss Rates
7/1/2023

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.	1.026	0.949
(2) Est. Ultimate Losses (Prior to Escalation Adj.) based on Paid + Case Develop. Method		
(a) PY2018	505,041,225	216,854,269
(b) PY2019	486,241,283	212,296,910
(c) Average	495,641,254	214,575,589
(3) Est. Ultimate Losses (Prior to Escalation Adj.) based on Paid Develop. Method		
(a) PY2018	488,299,517	233,205,499
(b) PY2019	474,310,433	211,059,093
(c) Average	481,304,975	222,132,296
(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)	0.986	1.018
(5) Development Factor to bring Unit Statistical Plan Data 10th report to Aggregate Financial Ultimate Level = (1) x (4)	1.011	0.966

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)
2020	Likely	67,777,979	48,959,401	142,779,457	66,654,592
2020	Not Likely	158,755,576	123,167,544	283,402,289	129,225,156
2020	TOTALS	226,533,555	172,126,945	426,181,747	195,879,748
2019	Likely	125,783,917	86,426,509	169,585,179	96,495,410
2019	Not Likely	245,976,968	136,836,100	313,525,367	138,591,839
2019	TOTALS	371,760,885	223,262,609	483,110,546	235,087,248
2018	Likely	179,797,401	82,554,752	204,721,493	86,682,304
2018	Not Likely	274,281,889	152,759,242	304,501,571	153,649,366
2018	TOTALS	454,079,290	235,313,994	509,223,064	240,331,670

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.

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X 000017 STIP

Section X - Experience Rating
 Subsection A - Expected Loss Rates
 7/1/2023

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		1.562	1.184	1.068	1.034	1.011	1.009	1.002	1.005	1.006
Cumulative		2.107	1.348	1.139	1.066	1.031	1.021	1.012	1.010	1.006
		(2) Medical Paid + Case Losses								
5yr Weighted Average		1.219	1.063	1.012	1.004	0.994	1.007	1.004	0.991	1.037
Cumulative		1.361	1.117	1.050	1.038	1.034	1.040	1.032	1.028	1.037
		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		1.401	1.148	1.068	1.023	1.011	1.000	1.003	1.001	1.002
Cumulative		1.785	1.275	1.110	1.039	1.017	1.005	1.006	1.003	1.002
		(4) Medical Paid + Case Losses								
5yr Weighted Average		1.036	1.007	1.006	1.002	1.001	1.000	1.001	0.997	0.999
Cumulative		1.049	1.013	1.006	1.000	0.998	0.997	0.998	0.996	0.999

Notes:
 (1),(2): Page 6.
 (3),(4): Page 7.

X 000018 STIP

Section X - Experience Rating
Subsection A - Expected Loss Rates
7/1/2023

Section X - A
Exhibit 5
Page 6

Calculation of Likely to Develop Development Factors Industry

Policy Year	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	
2015	81,368,712	122,604,545	1.507	72,569,566	77,899,536	1.073
2016	78,834,561	120,266,686	1.526	57,239,886	64,611,306	1.129
2017	77,352,852	122,802,649	1.588	58,770,045	77,081,324	1.312
2018	80,748,388	126,057,617	1.561	58,041,805	70,141,963	1.208
2019	71,012,584	116,568,493	1.642	60,476,291	84,730,421	1.401
Weighted Average			1.562			1.219
	30	42		30	42	
2014	142,054,038	166,831,515	1.174	89,964,746	93,935,821	1.044
2015	129,492,000	149,890,119	1.158	79,758,759	84,374,321	1.058
2016	129,003,641	148,628,981	1.152	72,050,221	78,635,842	1.091
2017	135,388,086	162,648,042	1.201	80,655,748	86,037,816	1.067
2018	134,106,302	165,390,233	1.233	72,583,275	77,048,248	1.062
Weighted Average			1.184			1.063
	42	54		42	54	
2013	138,775,323	147,774,397	1.065	64,493,747	64,038,378	0.993
2014	174,408,707	184,384,515	1.057	96,554,230	96,543,459	1.000
2015	158,008,072	167,048,151	1.057	87,202,065	86,473,669	0.992
2016	158,992,129	168,629,129	1.061	84,043,138	85,394,270	1.016
2017	172,022,308	188,679,182	1.097	89,993,266	94,892,911	1.054
Weighted Average			1.068			1.012
	54	66		54	66	
2012	159,136,429	163,097,441	1.025	90,037,493	88,800,504	0.986
2013	155,851,518	158,605,036	1.018	66,141,778	67,453,126	1.020
2014	193,596,056	197,392,720	1.020	99,005,956	100,260,240	1.013
2015	176,843,716	182,827,121	1.034	89,600,117	89,585,750	1.000
2016	180,312,064	193,250,019	1.072	88,700,393	88,938,944	1.003
Weighted Average			1.034			1.004
	66	78		66	78	
2011	160,897,993	164,204,456	1.021	85,707,542	86,617,929	1.011
2012	170,435,890	173,224,973	1.016	90,820,737	86,688,670	0.955
2013	161,794,540	161,853,919	1.000	68,829,997	68,885,418	1.001
2014	201,482,167	202,658,202	1.006	101,485,144	102,193,461	1.007
2015	188,062,922	190,098,153	1.011	93,459,417	93,309,931	0.998
Weighted Average			1.011			0.994
	78	90		78	90	
2010	148,210,917	148,736,251	1.004	75,547,228	77,945,948	1.032
2011	165,791,735	166,058,037	1.002	86,905,227	86,036,938	0.990
2012	174,498,820	176,087,143	1.009	86,986,124	88,981,571	1.023
2013	163,247,954	164,164,871	1.006	69,106,392	68,231,395	0.987
2014	204,142,214	208,213,105	1.020	102,758,678	103,247,088	1.005
Weighted Average			1.009			1.007
	90	102		90	102	
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	167,719,733	167,836,031	1.001	86,607,112	85,760,987	0.990
2012	175,992,730	176,041,147	1.000	88,926,598	90,423,007	1.017
2013	164,803,643	164,876,207	1.000	69,016,494	69,525,736	1.007
Weighted Average			1.002			1.004
	102	114		102	114	
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
2011	168,288,008	167,888,585	0.998	85,982,795	85,727,151	0.997
2012	176,041,147	177,856,158	1.010	90,423,007	89,524,143	0.990
Weighted Average			1.005			0.991
	114	126		114	126	
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
2010	151,260,451	152,378,262	1.007	76,779,159	77,669,391	1.012
2011	168,447,562	169,653,637	1.007	85,859,777	86,513,721	1.008
Weighted Average			1.006			1.037

Note:
Unit Statistical Plan Data, Excluding Large Deductible Policies.

X 000019 STIP

Section X - Experience Rating
 Subsection A - Expected Loss Rates
 7/1/2023

Section X - A
 Exhibit 5
 Page 7

Calculation of Not-Likely to Develop Development Factors Industry

Not-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	
2015	168,070,317	224,414,721	1.335	141,031,123	144,510,779	1.025
2016	161,552,737	224,356,213	1.389	142,388,964	150,088,951	1.054
2017	176,861,810	252,148,160	1.426	149,511,647	153,251,589	1.025
2018	178,756,554	250,981,068	1.404	154,374,096	160,143,389	1.037
2019	176,633,904	255,192,392	1.445	133,356,208	138,532,188	1.039
Weighted Average			1.401			1.036
	30	42		30	42	
2014	200,449,045	228,147,848	1.138	138,961,565	140,192,912	1.009
2015	217,527,266	243,553,029	1.120	142,651,556	142,872,623	1.002
2016	215,619,258	246,248,390	1.142	142,650,036	146,094,462	1.024
2017	239,562,723	274,763,435	1.147	149,677,165	149,311,382	0.998
2018	242,932,383	288,689,057	1.188	157,702,077	158,265,746	1.004
Weighted Average			1.148			1.007
	42	54		42	54	
2013	206,873,564	219,732,322	1.062	134,539,382	136,182,442	1.012
2014	220,570,656	233,191,823	1.057	137,574,503	138,846,814	1.009
2015	235,435,076	251,805,206	1.070	140,044,879	141,184,221	1.008
2016	235,885,242	252,430,993	1.070	140,687,166	140,574,023	0.999
2017	265,389,169	286,169,593	1.078	145,355,932	145,376,987	1.000
Weighted Average			1.068			1.006
	54	66		54	66	
2012	200,599,747	206,270,421	1.028	128,400,004	126,672,711	0.987
2013	211,655,201	218,247,114	1.031	134,079,042	135,456,525	1.010
2014	223,980,282	228,016,655	1.018	136,384,317	137,406,213	1.007
2015	242,009,641	245,818,601	1.016	138,057,773	138,596,291	1.004
2016	240,748,058	245,914,786	1.021	137,267,900	137,285,473	1.000
Weighted Average			1.023			1.002
	66	78		66	78	
2011	208,408,607	209,429,884	1.005	128,127,569	127,575,872	0.996
2012	198,931,972	202,376,015	1.017	124,652,478	124,623,582	1.000
2013	215,057,610	217,430,743	1.011	134,079,654	134,660,448	1.004
2014	223,927,208	227,111,568	1.014	136,181,309	137,030,860	1.006
2015	240,256,648	242,487,720	1.009	134,540,744	134,541,655	1.000
Weighted Average			1.011			1.001
	78	90		78	90	
2010	197,502,598	196,982,144	0.997	124,896,447	125,339,594	1.004
2011	207,842,605	208,435,941	1.003	127,288,574	127,287,951	1.000
2012	201,102,168	200,310,015	0.996	124,326,128	124,180,074	0.999
2013	216,036,708	216,080,248	1.000	134,439,474	133,815,609	0.995
2014	225,627,556	225,934,846	1.001	136,465,643	136,470,667	1.000
Weighted Average			1.000			1.000
	90	102		90	102	
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	206,774,245	207,340,356	1.003	126,717,777	127,429,266	1.006
2012	200,404,428	200,022,361	0.998	124,235,047	125,274,712	1.008
2013	215,441,476	216,763,408	1.006	133,030,510	131,911,605	0.992
Weighted Average			1.003			1.001
	102	114		102	114	
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
2011	206,888,379	207,924,957	1.005	127,207,458	126,696,804	0.996
2012	200,022,361	200,164,684	1.001	125,274,712	124,291,549	0.992
Weighted Average			1.001			0.997
	114	126		114	126	
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
2010	197,285,958	197,618,314	1.002	124,797,869	124,303,628	0.996
2011	207,365,980	208,576,846	1.006	126,564,178	126,692,501	1.001
Weighted Average			1.002			0.999

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	2020	1.000
	2019	1.000
	2018	1.000
Paid	2020	1.045
	2019	1.045
	2018	1.045
Average of Paid and Paid Plus Case	2020	1.023
	2019	1.023
	2018	1.023

Notes:

(3): Section II-D, Exhibit 1, Page 1 and Exhibit 2, Page 1.

X 00021 STIP

Section X - Experience Rating
 Subsection A - Expected Loss Rates
 7/1/2023

Section X - A
 Exhibit 6

Investment Income Offset

Hazard Code (1)	Injury Type (2)	Indemnity		Medical		Total Investment Income Offset (7)	Balanced Total Investment Income Offset (8)
		Developed Losses at Ultimate (3)	Investment Income Offset (4)	Developed Losses at Ultimate (5)	Investment Income Offset (6)		
A	Fatal	1,267,474	0.694	3,481	1.000		
A	Permanent Total	1,895,608	0.611	399,700	0.610		
A	Permanent Partial	16,364,635	1.076	5,520,638	1.075		
A	Temporary Total	26,645,046	1.095	13,260,095	1.093		
A	Medical Only	0		4,699,354	1.000		
A	TOTAL	46,172,762	1.057	23,883,267	1.063	1.059	1.020
B	Fatal	3,566,243	0.694	321,607	1.000		
B	Permanent Total	6,113,555	0.611	4,103,353	0.610		
B	Permanent Partial	70,901,920	1.076	18,017,398	1.075		
B	Temporary Total	108,249,438	1.095	49,152,283	1.093		
B	Medical Only	0		15,912,710	1.000		
B	TOTAL	188,831,156	1.064	87,507,351	1.050	1.060	1.021
C	Fatal	7,091,560	0.694	174,494	1.000		
C	Permanent Total	17,728,793	0.611	17,289,303	0.610		
C	Permanent Partial	160,626,312	1.076	45,044,366	1.075		
C	Temporary Total	193,878,056	1.095	78,147,088	1.093		
C	Medical Only	0		23,855,232	1.000		
C	TOTAL	379,324,721	1.057	164,510,483	1.024	1.047	1.008
D	Fatal	2,649,877	0.694	1,191,466	1.000		
D	Permanent Total	5,721,704	0.611	4,540,039	0.610		
D	Permanent Partial	74,383,988	1.076	25,830,444	1.075		
D	Temporary Total	95,416,688	1.095	46,407,326	1.093		
D	Medical Only	0		7,601,064	1.000		
D	TOTAL	178,172,258	1.065	85,570,339	1.053	1.061	1.022
E	Fatal	7,520,327	0.694	564,450	1.000		
E	Permanent Total	16,491,956	0.611	10,141,354	0.610		
E	Permanent Partial	102,356,590	1.076	30,481,519	1.075		
E	Temporary Total	141,747,317	1.095	52,361,536	1.093		
E	Medical Only	0		9,128,001	1.000		
E	TOTAL	268,116,190	1.047	102,676,860	1.031	1.042	1.004
F	Fatal	10,500,141	0.694	137,856	1.000		
F	Permanent Total	30,223,863	0.611	39,322,587	0.610		
F	Permanent Partial	159,466,224	1.076	52,838,398	1.075		
F	Temporary Total	140,717,024	1.095	55,158,820	1.093		
F	Medical Only	0		7,176,785	1.000		
F	TOTAL	340,907,252	1.031	154,634,447	0.960	1.009	0.972
G	Fatal	3,133,745	0.694	69,012	1.000		
G	Permanent Total	10,100,020	0.611	7,064,680	0.610		
G	Permanent Partial	30,139,754	1.076	11,803,478	1.075		
G	Temporary Total	21,797,594	1.095	9,553,218	1.093		
G	Medical Only	0		901,811	1.000		
G	TOTAL	65,171,113	0.992	29,392,198	0.967	0.984	0.948

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).

(8) = (7) / [Weighted average of (7) weighted by (3) + (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	128,346,473	1,026,717,503	0.125
Medical	147,133,966	531,958,023	0.277

Notes:

Data at the individual claim level for PYs 2018 - 2020 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

2018	1.064	1.064	1.064	1.064	1.015	1.015	1.015	1.015	1.007
2019	1.045	1.045	1.045	1.045	1.032	1.032	1.032	1.032	1.043
2020	1.045	1.045	1.045	1.045	1.032	1.032	1.032	1.032	1.043

(2) State Benefit Level Adjustment Factors

2018	1.011	1.013	1.020	1.009	1.000	1.000	1.000	1.000	1.000
2019	1.016	1.020	1.031	1.014	1.000	1.000	1.000	1.000	1.000
2020	1.026	1.032	1.054	1.022	1.000	1.000	1.000	1.000	1.000

(3) Combined Severity Trend and State Benefit Level Adjustment Factors

2018	1.075	1.078	1.084	1.073	1.015	1.015	1.015	1.015	1.007
2019	1.061	1.066	1.077	1.059	1.032	1.032	1.032	1.032	1.043
2020	1.072	1.079	1.101	1.068	1.032	1.032	1.032	1.032	1.043

Notes:

(1): Exhibit 2.

(2): Section IV-A, Exhibit 1. PY 2018 to CPY 2019_07. PY 2019 to CPY 2020_07. PY 2020 to CPY 2021_07.

(3) = (1) x (2)

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Severity Trend Factors

(1)			(2) Historical Values		
Schedule Z Policy Year			Indemnity Severity	Lost Time Medical Severity	Medical Only Severity
01/01/2018	-	12/31/2018	33,510	12,182	982
01/01/2019	-	12/31/2019	35,127	12,242	976
01/01/2020	-	12/31/2020			
(3) Selected Annual Trend			3.0%	2.1%	2.9%
(4) Trend Period Length [Years between (1) and (5)]				1.497	

(5)			(6) Trend Factors from Sched Z PYs to Pol Eff Periods		
Policy Effective Period			Indemnity Severity	Lost Time Medical Severity	Medical Only Severity
07/01/2019	-	06/30/2020	1.064	1.015	1.007
07/01/2020	-	06/30/2021	1.045	1.032	1.043
07/01/2021	-	06/30/2022	1.045	1.032	1.043

Notes:

(2): Section V-A Exhibit 2, Pages 1, 2, and 3.

(3): Section V-A Exhibit 1, Page 1.

(6): For 7/1/2019 effective period, 1/1/2019 divided by 1/1/2018, then trended by (3) for [(4) - 1.000] years.
 For 7/1/2020 and 7/1/2021 effective periods, (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	C	0.666	0.054	0.063	1.004	0.929	1.703	1.008	0.370
7/1/2021	E	0.666	0.054	0.087	1.004	0.929	1.704	1.004	0.362
to	F	0.666	0.054	0.128	1.004	0.929	1.703	0.972	0.357
6/30/2022	G	0.666	0.054	0.148	1.004	0.929	1.704	0.948	0.358
2nd Report	C	0.666	0.054	0.103	1.006	0.895	1.279	1.008	0.488
7/1/2020	E	0.666	0.054	0.140	1.006	0.895	1.280	1.004	0.470
to	F	0.666	0.054	0.208	1.006	0.895	1.279	0.972	0.447
6/30/2021	G	0.666	0.054	0.239	1.006	0.895	1.280	0.948	0.440
3rd Report	C	0.666	0.054	0.102	1.008	0.862	1.155	1.008	0.561
7/1/2019	E	0.666	0.054	0.139	1.008	0.862	1.156	1.004	0.540
to	F	0.666	0.054	0.205	1.008	0.862	1.155	0.972	0.515
6/30/2020	G	0.666	0.054	0.236	1.008	0.862	1.156	0.948	0.507
1st - 3rd Report Average	C E F G								0.473 0.457 0.440 0.435

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) = $[(3) / \{ 1.0 + (4) \}] \times [1.0 - (5)] / [(6) \times (7) \times (8) \times (9)]$

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X 000026 STIP

Section X - Experience Rating
 Subsection C - Expected Loss Rates for F-Class
 7/1/2023

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	103,803,051	1.000	0.999	1.703
1st	E	65,308,990	1.002	1.002	1.704
1st	F	89,308,537	0.999	0.999	1.703
1st	G	19,764,175	1.001	1.001	1.704
1st	Total	278,184,753	1.000	1.000	1.703
2nd	C	145,794,466	1.000	0.999	1.279
2nd	E	110,730,659	1.002	1.002	1.280
2nd	F	151,390,582	0.999	0.999	1.279
2nd	G	21,577,689	1.001	1.001	1.280
2nd	Total	429,493,396	1.000	1.000	1.279
3rd	C	181,422,824	1.000	0.999	1.155
3rd	E	118,060,466	1.002	1.002	1.156
3rd	F	154,839,682	0.999	0.999	1.155
3rd	G	33,484,751	1.001	1.001	1.156
3rd	Total	487,807,723	1.000	1.000	1.155

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	2.262	2.325	2.325	32.3%	13.9%	
1st	Indemnity	Not Likely to Develop	1.804	1.810	1.810	37.5%	20.7%	
1st	Medical	Likely to Develop	1.261	1.527	1.527	11.2%	7.3%	
1st	Medical	Not Likely to Develop	1.038	1.135	1.135	19.0%	16.8%	
1st	Total					100.0%	58.7%	1.703
2nd	Indemnity	Likely to Develop	1.448	1.481	1.481	32.3%	21.8%	
2nd	Indemnity	Not Likely to Develop	1.288	1.254	1.254	37.5%	29.9%	
2nd	Medical	Likely to Develop	1.034	1.316	1.316	11.2%	8.5%	
2nd	Medical	Not Likely to Develop	1.002	1.060	1.060	19.0%	18.0%	
2nd	Total					100.0%	78.2%	1.279
3rd	Indemnity	Likely to Develop	1.223	1.281	1.281	32.3%	25.2%	
3rd	Indemnity	Not Likely to Develop	1.122	1.109	1.109	37.5%	33.8%	
3rd	Medical	Likely to Develop	0.973	1.250	1.250	11.2%	9.0%	
3rd	Medical	Not Likely to Develop	0.995	1.024	1.024	19.0%	18.6%	
3rd	Total					100.0%	86.5%	1.155

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.

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X 000028 STIP

EXPERIENCE RATING PLAN MANUAL

MASSACHUSETTS

Proposed Effective July 1, 2023

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	1.08	.19	2115	2.30	.17	3041	1.10	.17	3634	0.76	.17	4439	2.15	.18
0008	0.96	.18	2121	0.58	.18	3042	1.34	.17	3635	0.85	.19	4452	1.26	.17
0016	1.37	.18	2130	0.65	.17	3066	0.98	.18	3638	0.70	.17	4459	1.06	.17
0034	1.09	.18	2131	1.29	.18	3076	1.14	.17	3642	0.51	.17	4470	0.76	.17
0035	0.70	.17	2143	0.88	.17	3081D	1.63	.17	3643	0.75	.17	4484	0.92	.17
0036	1.09	.18	2150	1.53	.18	3082D	1.63	.17	3647	0.89	.17	4493	0.86	.17
0042	1.40	.18	2156	1.34	.18	3085D	1.66	.18	3648	0.45	.17	4511	0.12	.17
0046	1.19	.19	2157	1.73	.16	3110	2.94	.17	3681	0.25	.17	4512	0.03	.17
0050	1.97	.18	2172	0.69	.17	3111	0.97	.17	3685	0.21	.17	4557	0.84	.16
0059D	.	.	2211	2.19	.17	3113	0.71	.17	3724	1.65	.17	4558	0.78	.18
0065D	.	.	2220	1.24	.18	3114	1.07	.18	3726	1.76	.16	4583	1.06	.17
0066D	.	.	2260	1.99	.17	3118	0.59	.17	3807	0.95	.18	4611	0.35	.17
0067D	.	.	2288	1.68	.17	3119	0.44	.17	3808	1.28	.17	4635	1.84	.19
0079	1.07	.17	2305	0.98	.17	3120	0.54	.16	3821	2.01	.18	4653	0.91	.17
0083	1.38	.18	2362	0.90	.18	3122	0.91	.17	3826	1.47	.18	4665	4.10	.18
0106	3.54	.18	2380	0.69	.18	3127	0.66	.17	3830	0.65	.17	4692	0.22	.17
0113	1.09	.18	2402	0.86	.18	3131	0.57	.18	3841	0.76	.17	4693	0.33	.17
0170	1.09	.18	2413	1.16	.17	3132	0.85	.18	4000	2.36	.17	4720	0.74	.18
0771	.	.	2416	1.14	.18	3145	0.58	.17	4021	1.24	.17	4740	0.30	.17
0908	38.30	.17	2417	0.66	.16	3146	0.82	.17	4024	1.44	.17	4741	1.16	.17
0909	98.78	.19	2501	0.92	.17	3169	0.91	.18	4034	2.83	.18	4771	1.47	.17
0912	197.56	.19	2503	0.45	.17	3179	0.47	.17	4036	0.72	.17	4777	1.04	.17
0913	76.60	.17	2570	1.41	.17	3180	1.02	.17	4038	1.07	.16	4825	0.15	.17
0917	0.99	.17	2576	0.88	.17	3188	0.89	.17	4053	1.21	.16	4828	0.41	.17
0918	0.18	.16	2585	1.30	.17	3200	0.95	.17	4062	0.91	.17	4829	0.39	.17
1430	1.55	.17	2586	0.92	.18	3220	0.92	.17	4112	0.13	.18	4902	0.67	.17
1438	1.36	.17	2587	0.91	.17	3223	(a)	(a)	4113	1.21	.16	4923	0.25	.17
1463	4.68	.19	2623	1.72	.18	3255	0.91	.17	4114	1.36	.17	5020	1.78	.16
1624D	1.75	.17	2651	0.57	.17	3257	1.02	.18	4130	1.62	.17	5022	3.41	.17
1655	1.13	.17	2660	0.83	.17	3270	0.74	.17	4133	0.82	.17	5037	4.58	.17
1701	1.09	.16	2683	0.89	.18	3300	1.44	.18	4150	0.32	.16	5040	8.64	.16
1710D	1.81	.17	2688	0.88	.18	3305	(a)	(a)	4239	1.10	.17	5057	6.92	.18
1747	0.90	.17	2702	6.12	.19	3315	1.29	.17	4243	1.08	.17	5059	9.76	.18
1748	1.47	.18	2710	2.35	.17	3336	0.95	.17	4244	1.31	.18	5102	2.48	.16
1853	0.51	.16	2731	1.18	.18	3365	1.76	.18	4250	0.95	.17	5146	2.59	.16
1924	1.17	.17	2747	2.45	.17	3372	0.90	.17	4251	1.10	.16	5160	1.29	.16
1925	2.39	.22	2790	0.95	.17	3373	1.55	.17	4273	1.20	.17	5183	1.33	.17
2003	1.43	.17	2802	1.44	.18	3381	0.71	.17	4279	1.04	.17	5188	1.47	.16
2014	1.54	.17	2835	0.89	.17	3383	0.58	.17	4283	0.79	.16	5190	0.91	.17
2021	1.16	.17	2836	1.15	.16	3385	0.39	.18	4299	0.75	.17	5191	0.29	.18
2039	1.88	.17	2841	1.36	.18	3400	0.89	.18	4304	2.19	.18	5192	1.16	.17
2041	1.04	.17	2883	1.24	.17	3507	1.12	.17	4307	0.63	.18	5213	3.36	.17
2070	1.45	.16	2923	0.52	.17	3515	1.01	.17	4308	0.91	.14	5215	2.06	.17
2081	1.33	.18	2942	0.70	.17	3558	0.29	.19	4351	0.40	.17	5221	2.67	.17
2089	1.10	.17	3018	0.97	.17	3571	0.26	.17	4352	0.44	.17	5222	3.28	.16
2095	1.23	.17	3022	1.47	.18	3574	0.70	.17	4360	0.26	.17	5223	1.45	.17
2101	1.15	.17	3027	1.20	.18	3612	0.55	.17	4361	0.24	.18	5348	1.72	.16
2105	(a)	(a)	3028	1.25	.17	3620	1.27	.17	4362	0.19	.17	5402	2.43	.16
2111	0.96	.18	3030	2.01	.18	3629	0.70	.17	4410	1.15	.18	5403	3.25	.17
2114	1.15	.17	3040	2.34	.17	3632	0.65	.17	4432	0.37	.17	5437	1.39	.17

(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 000029 STIP

Proposed Effective July 1, 2023

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	1.22	.17	7016M	1.12	.79	7704	1.58	.18	8719	0.92	.17	9179	20.35	.21
5445	2.27	.16	7024M	1.40	.79	7720	0.66	.17	8720	0.33	.17	9180	1.74	.19
5462	2.38	.17	7038M	2.12	.76	7855	1.57	.17	8721	0.07	.17	9182	1.16	.19
5472	3.16	.16	7046M	3.02	.58	8001	0.78	.18	8726F	1.81	.18	9186	1.68	.19
5473	4.11	.17	7047M	1.76	.69	8002	0.78	.19	8734M	0.21	.54	9220	1.49	.17
5474	1.76	.17	7050M	3.32	.67	8006	0.43	.17	8737M	0.17	.54	9402	1.72	.17
5478	1.70	.16	7090M	2.65	.76	8008	0.32	.17	8738M	0.26	.53	9403	4.70	.17
5479	2.12	.17	7098M	3.55	.58	8010	0.64	.18	8742	0.04	.18	9410	1.51	.18
5480	1.69	.16	7099M	4.45	.51	8013	0.14	.19	8745	2.11	.18	9501	0.85	.17
5506	2.00	.17	7133	(a)	(a)	8017	0.44	.17	8747	0.32	.16	9505	0.85	.17
5507	1.84	.17	7151M	3.96	.52	8018	1.66	.17	8748	0.22	.17	9519	0.98	.16
5508D	1.90	.18	7152M	6.22	.52	8021	1.46	.17	8800	0.43	.17	9521	1.46	.17
5509	2.33	.18	7153M	4.96	.52	8031	0.67	.18	8803	0.02	.17	9522	0.75	.16
5538	1.54	.17	7219	2.97	.17	8032	0.57	.17	8805M	0.09	.60	9533	7.10	.16
5545	18.26	.18	7230	3.85	.17	8033	0.60	.18	8810	0.02	.18	9534	2.22	.17
5547	4.08	.18	7231	4.71	.17	8034	1.17	.16	8814M	0.07	.60	9549	1.52	.16
5606	0.47	.17	7309F	4.77	.18	8039	0.71	.18	8815M	0.11	.59	9552	2.23	.17
5610	2.30	.16	7313F	6.57	.16	8044	1.10	.18	8820	0.02	.17	9586	0.14	.17
5645	2.59	.18	7317F	5.47	.17	8046	1.03	.19	8824	0.89	.17	9620	0.31	.18
5701	6.01	.17	7327F	8.07	.17	8048	1.03	.17	8826	0.68	.17			
5703	3.51	.17	7333M	4.51	.70	8058	0.99	.18	8829	1.09	.16			
5705	4.10	.17	7335M	5.30	.70	8103	1.16	.17	8831	0.40	.21			
6003	2.48	.16	7337M	6.65	.61	8105	4.01	.16	8832	0.11	.17			
6005	1.90	.18	7350F	6.69	.16	8106	1.82	.18	8833	0.48	.17			
6204	2.26	.16	7360	1.90	.17	8107	0.98	.17	8835	0.70	.16			
6217	1.70	.17	7370	1.96	.17	8111	1.14	.18	8837	(a)	(a)			
6229	1.71	.17	7380	2.77	.17	8203	2.10	.17	8868	0.33	.18			
6233	0.77	.16	7382	1.56	.17	8204	1.92	.17	8901	0.02	.18			
6251D	1.64	.16	7394M	5.80	.84	8215	1.20	.18	9014	0.85	.17			
6252D	1.73	.17	7395M	7.41	.84	8227	2.27	.18	9015	1.21	.17			
6306	3.60	.16	7398M	9.29	.74	8232	1.90	.17	9016	0.61	.19			
6319	0.96	.17	7403	1.33	.17	8233	2.22	.18	9019	1.20	.17			
6325	1.06	.17	7405	0.56	.17	8235	1.74	.18	9033	1.08	.17			
6400	1.86	.18	7420	4.11	.19	8263	1.94	.17	9040	1.26	.17			
6504	1.15	.17	7421	0.42	.15	8264	1.85	.17	9044	0.60	.17			
6702M	(a)	(a)	7422	0.42	.15	8265	2.15	.18	9052	0.67	.17			
6703M	(a)	(a)	7425	1.15	.17	8279	1.44	.19	9058	0.69	.17			
6704M	(a)	(a)	7431	0.42	.15	8291	1.69	.18	9060	0.44	.18			
6801F	2.24	.17	7445	.	.	8292	1.44	.17	9061	0.43	.17			
6811	2.01	.17	7453	.	.	8293	2.67	.18	9062	0.43	.17			
6824F	2.73	.19	7502	0.83	.16	8350	2.73	.17	9063	0.26	.19			
6826F	1.79	.17	7515	1.14	.20	8380	1.00	.17	9077F	3.05	.21			
6834	0.98	.18	7520	1.37	.17	8381	0.53	.17	9079	0.42	.18			
6836	1.18	.18	7538	1.65	.17	8385	1.51	.17	9089	0.27	.18			
6843F	5.18	.17	7539	0.56	.17	8392	0.64	.18	9093	0.40	.18			
6854	4.66	.17	7580	1.29	.17	8393	0.55	.17	9101	1.68	.17			
6872F	4.80	.19	7590	2.38	.19	8500	2.22	.18	9102	1.05	.18			
6874F	6.33	.17	7600	1.83	.16	8601	0.09	.17	9154	0.79	.18			
6882	4.32	.19	7601	1.54	.17	8709F	1.83	.18	9156	0.75	.18			
6884	5.69	.17	7610	0.16	.16	8710	0.96	.17	9178	5.82	.23			

(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 000030 STIP

EXPERIENCE RATING PLAN MANUAL

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 - 1,194,645	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) State Per Claim Accident Limitation | \$350,000 |
| (b) State Multiple Claim Accident Limitation | \$700,000 |
| (c) U.S. Longshore and Harbor Workers' Act Per Claim Accident Limitation | \$130,000 |
| (d) U.S. Longshore and Harbor Workers' Act Multiple Claim Accident Limitation | \$260,000 |
| (e) Employers Liability Accident Limitation | \$55,000 |
| (f) USL&HW Act-Expected Loss Factor-Non-F Classes | 11.2% † |
| (g) Cap on Modifications = 1 + (0.00005) [(Expected Losses) + (2) (Expected Losses) / (14)] | |

† **The USL&HW Act-Expected Loss Factor-Non-F Classes updated to reflect proposed July 1, 2023 rate revision**

XI 000004 STIP

Section XI - Miscellaneous Rating Values
Subsection B - Massachusetts Benefits Deductible Program Credits
7/1/2023

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	2.1%	0.666	0.90	0.202	-0.051	1.5%
1,000	3.5%	0.666	0.90	0.202	-0.051	2.5%
2,000	5.4%	0.666	0.90	0.202	-0.051	3.8%
2,500	6.2%	0.666	0.90	0.202	-0.051	4.4%
5,000	9.5%	0.666	0.90	0.202	-0.051	6.7%

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) x (3) x (4)] / [1.0 - (5) - (6)]

XI 000007 STIP

Section XI - Miscellaneous Rating Values
 Subsection C - Massachusetts Benefits Claim and Aggregate Deductible Program Credits
 7/1/2023

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) / \$28,998 (2)	Aggregate Limit (3)	Selected Adjustment Factor for Aggregate Limit (4)	Premium Credit = (4) x 4.4% (5)
0 - 75,000	1.3	\$10,000	0.98	4.3%
75,000 - 100,000	3.0	\$10,000	0.96	4.2%
100,000 - 125,000	3.9	\$10,000	0.93	4.1%
125,000 - 150,000	4.7	\$10,000	0.90	4.0%
150,000 - 200,000	6.0	\$10,000	0.86	3.8%
Over 200,000	7 or more	5% of the 'Basis for the Aggregate Limit at Policy Inception'	0.80	3.5%

Notes:

- (2): Based on \$28,998 in standard premium (no ARAP) per expected claim.
- (4): Selected based on the simulation results shown in Exhibit 2.
- (5): The 4.4% 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
 7/1/2023

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	6.19%	6.19%	3.33%	1.00	0.54
2	1,000,000	6.24%	6.22%	4.41%	1.00	0.71
3	1,000,000	6.27%	6.19%	4.81%	0.99	0.77
4	1,000,000	6.24%	6.05%	5.04%	0.97	0.81
5	1,000,000	6.24%	5.88%	5.20%	0.94	0.83
6	1,000,000	6.22%	5.64%	5.31%	0.91	0.85
7	1,000,000	6.25%	5.39%	5.42%	0.86	0.87
8	1,000,000	6.24%	5.09%	5.49%	0.82	0.88
9	1,000,000	6.24%	4.79%	5.55%	0.77	0.89
10	1,000,000	6.24%	4.48%	5.60%	0.72	0.90
12	1,000,000	6.23%	3.92%	5.67%	0.63	0.91
14	1,000,000	6.25%	3.45%	5.76%	0.55	0.92
16	1,000,000	6.24%	3.04%	5.79%	0.49	0.93
18	1,000,000	6.24%	2.72%	5.84%	0.44	0.94
20	1,000,000	6.24%	2.45%	5.87%	0.39	0.94
25	1,000,000	6.25%	1.97%	5.95%	0.32	0.95
30	1,000,000	6.24%	1.64%	5.99%	0.26	0.96
40	1,000,000	6.24%	1.23%	6.05%	0.20	0.97
50	1,000,000	6.23%	0.98%	6.08%	0.16	0.98
75	1,000,000	6.23%	0.65%	6.14%	0.10	0.99
100	1,000,000	6.24%	0.49%	6.18%	0.08	0.99
150	1,000,000	6.24%	0.33%	6.21%	0.05	1.00
200	1,000,000	6.24%	0.25%	6.22%	0.04	1.00
300	1,000,000	6.24%	0.16%	6.23%	0.03	1.00
400	1,000,000	6.24%	0.12%	6.24%	0.02	1.00
500	1,000,000	6.24%	0.10%	6.24%	0.02	1.00

Notes:

(5): The Aggregate Limit is based on the average claim severity of the simulated losses, \$20,381 and the permissible loss ratio of 0.666. One claim is assumed to be expected for each \$28,998 of standard premium.

XI 000009 STIP

Section XI - Miscellaneous Rating Values
 Subsection C - Massachusetts Benefits Claim and Aggregate Deductible Program Credits
 7/1/2023

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 2012	1.099	1.110	1.181	1.072	1.000
PY 2013	1.096	1.107	1.175	1.071	1.000
PY 2014	1.091	1.103	1.168	1.068	1.000
PY 2015	1.079	1.096	1.156	1.065	1.000
PY 2016	1.073	1.089	1.144	1.060	1.000

(2) Loss Development Factors - Fifth Report to Ultimate

Loss Development Category	Indemnity	Medical
Likely to Develop	1.076	0.864
Not Likely to Develop	1.015	0.977

(3) Severity Trend Factors

We apply three distinct trend factors.

Trend to PY 2016 is based on empirical USR data at 5th report.

Trend from PY 2016 to PY 2019 is based on severities from Section V-A, Exhibit 2.

Trend from PY 2019 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 2012	PY 2016	1.125	1.046	1.068
PY 2013	PY 2016	1.128	1.123	1.040
PY 2014	PY 2016	1.027	0.975	1.036
PY 2015	PY 2016	1.030	1.012	1.018
PY 2016	PY 2019	1.111	1.065	1.067
PY 2019	Prosp. Eff. Period	1.140	1.098	1.135

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, 2023</i>	Page RA-5

MISCELLANEOUS VALUES

Basis of Premium applicable in accordance with the footnote instructions for Code 7370 - "Taxicab Co.":	
Employee operated vehicles.....	\$137,700.00
Leased or rented vehicles.....	\$91,800.00
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.....	
	\$64,300.00
Payroll Limitations:	
For Executive Officers - in accordance with Rule IX-A-3-a and b	
Minimum individual payroll for an executive officer per week.....	\$280.00
Maximum individual payroll for an executive officer per week.....	\$1,410.00
For Spouses of Individuals, Co-Partners or Corporate Officers - in accordance with Rule IX-A-4	
Minimum individual payroll for a spouse per week.....	\$280.00
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.....	\$280.00
Maximum individual payroll for an elected or appointed officer per week.....	\$1,410.00
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.....	\$420.00
Code 9179 - Athletic Sports Or Park: Contact Sports.....	\$420.00
Code 9178 - Athletic Sports Or Park: Non-Contact Sports.....	\$420.00
Terrorism Insurance Program - Certified Loss:.....	0.03

BENEFITS DEDUCTIBLE COVERAGE PROGRAM

Medical and Indemnity Deductible Amount	Premium Reduction Percentage
\$500	1.5%
\$1,000	2.5%
\$2,000	3.8%
\$2,500	4.4%
\$5,000	6.7%

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	4.3%
\$75,001 to \$100,000	\$2,500	\$10,000	4.2%
\$100,001 to \$125,000	\$2,500	\$10,000	4.1%
\$125,001 to \$150,000	\$2,500	\$10,000	4.0%
\$150,001 to \$200,000	\$2,500	\$10,000	3.8%
over \$200,000	\$2,500	5% of Basis for the Aggregate Limit	3.5%

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		Proposed Effective July 1, 2023	
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.			
		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%
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.....			16.0%
(Multiply an eligible Non-F classification rate by a factor of 1.16)			
EXPERIENCE RATING ELIGIBILITY			
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.			

Notes:

USL&H factor - Section VIII-J, Exhibit 1.

XII 00003 STIP

**RETROSPECTIVE RATING PLAN MANUAL
 STATE SPECIAL RATING VALUES**

**MASSACHUSETTS
 RR1**

Proposed Effective July 1, 2023

1. Hazard Group Differentials

A	B	C	D	E	F	G
1.74	1.48	1.27	1.08	0.89	0.70	0.56

2. Tax Multipliers

- a. State (non-F Classes) 1.043*
 - b. Federal Classes, or non-F classes 1.084*
- where rate is increased by the
 USL&HW Act Percentage
- * Includes 1.56% residual market subsidy provision
 and 0% insolvency fund assessment provision

3. Expected Loss Ratio

0.652

Expected Loss and Allocated Loss Adjustment Expense Ratio (ALAE Option)

0.707

4. Loss Conversion Factor

1.183

Loss Conversion Factor for Allocated Loss Adjustment Expense Option (ALAE Option)

1.090

5. Table of Expense Ratios Excluding Taxes and Including Profit

Type A Company

Massachusetts
 Effective July 1, 2023

Type B Company

Massachusetts
 Effective July 1, 2023

Table of Expense Ratios Excluding Allocated Loss Adjustment Expense and Taxes and Including Profit (ALAE Option)

Type A Company

Massachusetts
 Effective July 1, 2023

Type B Company

Massachusetts
 Effective July 1, 2023

6. 2013—Table of Expected Loss Ranges

April 1, 2014

7a.

Excess Loss Factors

(Applicable to New and Renewal Policies)

<u>Per Accident Limitation</u>	<u>Hazard Groups</u>						
	A	B	C	D	E	F	G
\$25,000	0.428	0.453	0.477	0.498	0.518	0.547	0.577
30,000	0.411	0.437	0.462	0.484	0.504	0.535	0.568
35,000	0.395	0.422	0.447	0.471	0.492	0.523	0.560
40,000	0.381	0.408	0.435	0.459	0.481	0.513	0.552
50,000	0.355	0.384	0.412	0.439	0.461	0.494	0.538
75,000	0.306	0.335	0.365	0.397	0.420	0.455	0.508
100,000	0.268	0.297	0.328	0.363	0.387	0.422	0.482
125,000	0.238	0.266	0.298	0.335	0.359	0.393	0.458
150,000	0.214	0.240	0.272	0.310	0.333	0.367	0.436
175,000	0.193	0.217	0.249	0.287	0.310	0.343	0.416
200,000	0.176	0.198	0.229	0.267	0.290	0.322	0.397
250,000	0.147	0.167	0.196	0.233	0.254	0.285	0.363
300,000	0.125	0.143	0.170	0.206	0.226	0.254	0.333
500,000	0.076	0.087	0.107	0.136	0.151	0.173	0.246
1,000,000	0.036	0.041	0.052	0.069	0.077	0.090	0.141
2,000,000	0.016	0.019	0.024	0.032	0.037	0.043	0.072
3,000,000	0.010	0.011	0.015	0.020	0.023	0.027	0.047
4,000,000	0.007	0.008	0.010	0.014	0.016	0.019	0.034
5,000,000	0.005	0.006	0.008	0.011	0.012	0.015	0.026

XII 00004 STIP

**MASSACHUSETTS
 RR2**

**RETROSPECTIVE RATING PLAN MANUAL
 STATE SPECIAL RATING VALUES**

Proposed Effective July 1, 2023

**7b. ALAE Option Excess Loss and Allocated Loss Adjustment Expense Factors
 (Applicable to New and Renewal Policies)**

<u>Per Accident Limitation</u>	<u>Hazard Groups</u>						
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>
\$25,000	0.473	0.500	0.525	0.546	0.568	0.598	0.629
30,000	0.454	0.482	0.509	0.532	0.554	0.586	0.620
35,000	0.437	0.466	0.494	0.518	0.541	0.574	0.612
40,000	0.422	0.452	0.480	0.506	0.529	0.563	0.604
50,000	0.396	0.426	0.456	0.484	0.508	0.544	0.589
75,000	0.343	0.375	0.407	0.440	0.465	0.503	0.558
100,000	0.302	0.334	0.368	0.405	0.430	0.468	0.531
125,000	0.270	0.301	0.335	0.374	0.401	0.438	0.506
150,000	0.244	0.273	0.307	0.348	0.374	0.411	0.484
175,000	0.221	0.249	0.283	0.324	0.350	0.386	0.463
200,000	0.202	0.227	0.262	0.303	0.328	0.363	0.443
250,000	0.170	0.193	0.225	0.267	0.290	0.324	0.407
300,000	0.146	0.166	0.197	0.237	0.258	0.290	0.375
500,000	0.089	0.102	0.126	0.158	0.175	0.200	0.282
1,000,000	0.042	0.049	0.062	0.081	0.091	0.106	0.164
2,000,000	0.019	0.022	0.029	0.039	0.044	0.051	0.085
3,000,000	0.012	0.014	0.018	0.024	0.027	0.033	0.055
4,000,000	0.008	0.010	0.012	0.017	0.019	0.023	0.040
5,000,000	0.006	0.007	0.009	0.013	0.015	0.018	0.031

8. Retrospective Development Factors

<u>With Loss Limit</u>				<u>Without Loss Limit</u>			
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
7/1/2023

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	5.5%
(4) Underwriting Profit Provision	<u>-5.1%</u>
(5) Total Expenses Excluding Taxes and Assessments (= (1) + (2) + (3) + (4))	18.8%
(6) Current Premium Tax Rate	2.28%
(7) Miscellaneous Taxes	0.30%
(8) Retro Provision for the Residual Market Subsidy	1.56%
(9) Insolvency Fund Assessment	<u>0.00%</u>
(10) Tax Multiplier (= $1.0 / \{ 1.0 - [(6) + (7) + (8) + (9)] \}$)	1.043
(11) Expected Loss and LAE Ratio (adjusted for Residual Market Subsidy) (= $[1.0 / (10)] - (5)$)	77.1%
(12) Loss Adjustment Expense (as percentage of losses)	18.3%
(13) Loss Conversion Factor (= $1.0 + (12)$)	1.183
(14) Expected Loss without LAE (= $(11) / (13)$)	65.2%
(15) Expenses excluding Premium Taxes but including LAE (= $(5) + [(12) \times (14)]$)	30.7%

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
7/1/2023

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)	65.2%
(2) Selected Three Year Average Defense and Cost Containment Expense Ratio (as percentage of losses)	8.4%
(3) Expected Loss plus ALAE Ratio (= (1) x [1.0 + (2)])	70.7%
(4) Loss Adjustment Expense (as percentage of losses)	18.3%
(5) Loss Conversion Factor (= [1.0 + (4)] / [1.0 + (2)])	1.090
(6) Tax Multiplier	1.043
(7) Expenses excluding Premium Taxes but including LAE (as percentage of Standard Premium plus ARAP)	30.7%
(8) Expenses including all AO Expenses but excluding ALAE Expenses and Premium Taxes (= (7) - [(1) x (2)])	25.2%

Notes:

(1): Exhibit 3, line (14)

(2): Section VI-H, Exhibit 1, Page 1, line (3), DCC assumed a proxy for ALAE.

(4): Exhibit 3, line (12)

XII 000007 STIP

Section XII - Retrospective Rating
Subsection B - Residual Market Subsidy
7/1/2023

Section XII - B
Exhibit 1

Calculation of the Provision for the Residual Market Subsidy

(1) Voluntary Market Implied Rate Factor Equivalent	0.980
(2) Factor to Take into Account Basic Premium	0.800
(3) Retro Provision for the Residual Market Subsidy	1.56%

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, 2023

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	- 10,058	0.307	18,274	- 18,663	0.267	112,604	- 129,289	0.227
10,059	- 10,175	0.306	18,664	- 19,071	0.266	129,290	- 151,781	0.226
10,176	- 10,295	0.305	19,072	- 19,498	0.265	151,782	- 183,746	0.225
10,296	- 10,418	0.304	19,499	- 19,943	0.264	183,747	- 204,944	0.224
10,419	- 10,544	0.303	19,944	- 20,410	0.263	204,945	- 213,540	0.223
10,545	- 10,673	0.302	20,411	- 20,899	0.262	213,541	- 222,889	0.222
10,674	- 10,805	0.301	20,900	- 21,412	0.261	222,890	- 233,094	0.221
10,806	- 10,940	0.300	21,413	- 21,950	0.260	233,095	- 244,278	0.220
10,941	- 11,079	0.299	21,951	- 22,517	0.259	244,279	- 256,590	0.219
11,080	- 11,222	0.298	22,518	- 23,113	0.258	256,591	- 270,208	0.218
11,223	- 11,368	0.297	23,114	- 23,742	0.257	270,209	- 285,353	0.217
11,369	- 11,518	0.296	23,743	- 24,406	0.256	285,354	- 302,297	0.216
11,519	- 11,672	0.295	24,407	- 25,109	0.255	302,298	- 321,380	0.215
11,673	- 11,831	0.294	25,110	- 25,853	0.254	321,381	- 343,034	0.214
11,832	- 11,993	0.293	25,854	- 26,642	0.253	343,035	- 367,818	0.213
11,994	- 12,160	0.292	26,643	- 27,481	0.252	367,819	- 396,461	0.212
12,161	- 12,332	0.291	27,482	- 28,375	0.251	396,462	- 429,942	0.211
12,333	- 12,509	0.290	28,376	- 29,329	0.250	429,943	- 469,600	0.210
12,510	- 12,691	0.289	29,330	- 30,349	0.249	469,601	- 517,317	0.209
12,692	- 12,878	0.288	30,350	- 31,443	0.248	517,318	- 575,828	0.208
12,879	- 13,071	0.287	31,444	- 32,618	0.247	575,829	- 649,263	0.207
13,072	- 13,270	0.286	32,619	- 33,885	0.246	649,264	- 744,166	0.206
13,271	- 13,475	0.285	33,886	- 35,254	0.245	744,167	- 871,563	0.205
13,476	- 13,686	0.284	35,255	- 36,739	0.244	871,564	- 1,051,589	0.204
13,687	- 13,904	0.283	36,740	- 38,354	0.243	1,051,590	- 1,325,346	0.203
13,905	- 14,130	0.282	38,355	- 40,117	0.242	1,325,347	- 1,759,556	0.202
14,131	- 14,362	0.281	40,118	- 42,051	0.241	1,759,557	- 1,913,510	0.201
14,363	- 14,603	0.280	42,052	- 44,180	0.240	1,913,511	- 2,096,989	0.200
14,604	- 14,851	0.279	44,181	- 46,537	0.239	2,096,990	- 2,319,386	0.199
14,852	- 15,108	0.278	46,538	- 49,159	0.238	2,319,387	- 2,594,552	0.198
15,109	- 15,375	0.277	49,160	- 52,094	0.237	2,594,553	- 2,943,796	0.197
15,376	- 15,650	0.276	52,095	- 55,402	0.236	2,943,797	- 3,401,685	0.196
15,651	- 15,936	0.275	55,403	- 59,158	0.235	3,401,686	- 4,028,256	0.195
15,937	- 16,233	0.274	59,159	- 63,461	0.234	4,028,257	- 4,937,764	0.194
16,234	- 16,540	0.273	63,462	- 68,439	0.233	4,937,765	- 6,377,744	0.193
16,541	- 16,860	0.272	68,440	- 74,264	0.232	6,377,745	- 9,003,355	0.192
16,861	- 17,192	0.271	74,265	- 81,174	0.231	9,003,356	- 15,303,589	0.191
17,193	- 17,538	0.270	81,175	- 89,501	0.230	15,303,590	- 50,972,067	0.190
17,539	- 17,898	0.269	89,502	- 99,731	0.229	50,972,068	- OVER	0.189
17,899	- 18,273	0.268	99,732	- 112,603	0.228			

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

0.652

Tax Multiplier

1.043

MASSACHUSETTS **RETROSPECTIVE RATING PLAN MANUAL**
RR6 **STATE SPECIAL RATING VALUES**
Proposed Effective July 1, 2023

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	0.307	20,043	- 20,899	0.282	247,542	- 268,484	0.257
10,104	- 10,316	0.306	20,900	- 21,832	0.281	268,485	- 293,297	0.256
10,317	- 10,539	0.305	21,833	- 22,852	0.280	293,298	- 323,163	0.255
10,540	- 10,771	0.304	22,853	- 23,972	0.279	323,164	- 359,802	0.254
10,772	- 11,014	0.303	23,973	- 25,208	0.278	359,803	- 405,811	0.253
11,015	- 11,267	0.302	25,209	- 26,578	0.277	405,812	- 465,312	0.252
11,268	- 11,533	0.301	26,579	- 28,106	0.276	465,313	- 545,260	0.251
11,534	- 11,812	0.300	28,107	- 29,820	0.275	545,261	- 658,379	0.250
11,813	- 12,104	0.299	29,821	- 31,757	0.274	658,380	- 830,719	0.249
12,105	- 12,411	0.298	31,758	- 33,963	0.273	830,720	- 1,125,276	0.248
12,412	- 12,735	0.297	33,964	- 36,498	0.272	1,125,277	- 1,743,482	0.247
12,736	- 13,075	0.296	36,499	- 39,442	0.271	1,743,483	- 1,917,001	0.246
13,076	- 13,434	0.295	39,443	- 42,902	0.270	1,917,002	- 2,120,764	0.245
13,435	- 13,814	0.294	42,903	- 47,028	0.269	2,120,765	- 2,372,997	0.244
13,815	- 14,215	0.293	47,029	- 52,033	0.268	2,372,998	- 2,693,328	0.243
14,216	- 14,641	0.292	52,034	- 58,229	0.267	2,693,329	- 3,113,638	0.242
14,642	- 15,093	0.291	58,230	- 66,101	0.266	3,113,639	- 3,689,389	0.241
15,094	- 15,574	0.290	66,102	- 76,433	0.265	3,689,390	- 4,526,373	0.240
15,575	- 16,086	0.289	76,434	- 90,594	0.264	4,526,374	- 5,854,551	0.239
16,087	- 16,633	0.288	90,595	- 111,196	0.263	5,854,552	- 8,285,885	0.238
16,634	- 17,219	0.287	111,197	- 143,925	0.262	8,285,886	- 14,170,923	0.237
17,220	- 17,847	0.286	143,926	- 200,600	0.261	14,170,924	- 48,907,168	0.236
17,848	- 18,524	0.285	200,601	- 214,136	0.260	48,907,169	- OVER	0.235
18,525	- 19,253	0.284	214,137	- 229,630	0.259			
19,254	- 20,042	0.283	229,631	- 247,541	0.258			

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

0.652

Tax Multiplier

1.043

RETROSPECTIVE RATING PLAN MANUAL **MASSACHUSETTS**
STATE SPECIAL RATING VALUES **RR7**
Proposed Effective July 1, 2023

**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	- 10,058	0.252	18,274	- 18,663	0.212	112,604	- 129,289	0.172
10,059	- 10,175	0.251	18,664	- 19,071	0.211	129,290	- 151,781	0.171
10,176	- 10,295	0.250	19,072	- 19,498	0.210	151,782	- 183,746	0.170
10,296	- 10,418	0.249	19,499	- 19,943	0.209	183,747	- 204,944	0.169
10,419	- 10,544	0.248	19,944	- 20,410	0.208	204,945	- 213,540	0.168
10,545	- 10,673	0.247	20,411	- 20,899	0.207	213,541	- 222,889	0.167
10,674	- 10,805	0.246	20,900	- 21,412	0.206	222,890	- 233,094	0.166
10,806	- 10,940	0.245	21,413	- 21,950	0.205	233,095	- 244,278	0.165
10,941	- 11,079	0.244	21,951	- 22,517	0.204	244,279	- 256,590	0.164
11,080	- 11,222	0.243	22,518	- 23,113	0.203	256,591	- 270,208	0.163
11,223	- 11,368	0.242	23,114	- 23,742	0.202	270,209	- 285,353	0.162
11,369	- 11,518	0.241	23,743	- 24,406	0.201	285,354	- 302,297	0.161
11,519	- 11,672	0.240	24,407	- 25,109	0.200	302,298	- 321,380	0.160
11,673	- 11,831	0.239	25,110	- 25,853	0.199	321,381	- 343,034	0.159
11,832	- 11,993	0.238	25,854	- 26,642	0.198	343,035	- 367,818	0.158
11,994	- 12,160	0.237	26,643	- 27,481	0.197	367,819	- 396,461	0.157
12,161	- 12,332	0.236	27,482	- 28,375	0.196	396,462	- 429,942	0.156
12,333	- 12,509	0.235	28,376	- 29,329	0.195	429,943	- 469,600	0.155
12,510	- 12,691	0.234	29,330	- 30,349	0.194	469,601	- 517,317	0.154
12,692	- 12,878	0.233	30,350	- 31,443	0.193	517,318	- 575,828	0.153
12,879	- 13,071	0.232	31,444	- 32,618	0.192	575,829	- 649,263	0.152
13,072	- 13,270	0.231	32,619	- 33,885	0.191	649,264	- 744,166	0.151
13,271	- 13,475	0.230	33,886	- 35,254	0.190	744,167	- 871,563	0.150
13,476	- 13,686	0.229	35,255	- 36,739	0.189	871,564	- 1,051,589	0.149
13,687	- 13,904	0.228	36,740	- 38,354	0.188	1,051,590	- 1,325,346	0.148
13,905	- 14,130	0.227	38,355	- 40,117	0.187	1,325,347	- 1,759,556	0.147
14,131	- 14,362	0.226	40,118	- 42,051	0.186	1,759,557	- 1,913,510	0.146
14,363	- 14,603	0.225	42,052	- 44,180	0.185	1,913,511	- 2,096,989	0.145
14,604	- 14,851	0.224	44,181	- 46,537	0.184	2,096,990	- 2,319,386	0.144
14,852	- 15,108	0.223	46,538	- 49,159	0.183	2,319,387	- 2,594,552	0.143
15,109	- 15,375	0.222	49,160	- 52,094	0.182	2,594,553	- 2,943,796	0.142
15,376	- 15,650	0.221	52,095	- 55,402	0.181	2,943,797	- 3,401,685	0.141
15,651	- 15,936	0.220	55,403	- 59,158	0.180	3,401,686	- 4,028,256	0.140
15,937	- 16,233	0.219	59,159	- 63,461	0.179	4,028,257	- 4,937,764	0.139
16,234	- 16,540	0.218	63,462	- 68,439	0.178	4,937,765	- 6,377,744	0.138
16,541	- 16,860	0.217	68,440	- 74,264	0.177	6,377,745	- 9,003,355	0.137
16,861	- 17,192	0.216	74,265	- 81,174	0.176	9,003,356	- 15,303,589	0.136
17,193	- 17,538	0.215	81,175	- 89,501	0.175	15,303,590	- 50,972,067	0.135
17,539	- 17,898	0.214	89,502	- 99,731	0.174	50,972,068	- OVER	0.134
17,899	- 18,273	0.213	99,732	- 112,603	0.173			

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)

0.707

Tax Multiplier

1.043

XII 00011 STIP

MASSACHUSETTS	RETROSPECTIVE RATING PLAN MANUAL
RR8	STATE SPECIAL RATING VALUES
<i>Proposed Effective July 1, 2023</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	0.252	20,043	- 20,899	0.227	247,542	- 268,484	0.202
10,104	- 10,316	0.251	20,900	- 21,832	0.226	268,485	- 293,297	0.201
10,317	- 10,539	0.250	21,833	- 22,852	0.225	293,298	- 323,163	0.200
10,540	- 10,771	0.249	22,853	- 23,972	0.224	323,164	- 359,802	0.199
10,772	- 11,014	0.248	23,973	- 25,208	0.223	359,803	- 405,811	0.198
11,015	- 11,267	0.247	25,209	- 26,578	0.222	405,812	- 465,312	0.197
11,268	- 11,533	0.246	26,579	- 28,106	0.221	465,313	- 545,260	0.196
11,534	- 11,812	0.245	28,107	- 29,820	0.220	545,261	- 658,379	0.195
11,813	- 12,104	0.244	29,821	- 31,757	0.219	658,380	- 830,719	0.194
12,105	- 12,411	0.243	31,758	- 33,963	0.218	830,720	- 1,125,276	0.193
12,412	- 12,735	0.242	33,964	- 36,498	0.217	1,125,277	- 1,743,482	0.192
12,736	- 13,075	0.241	36,499	- 39,442	0.216	1,743,483	- 1,917,001	0.191
13,076	- 13,434	0.240	39,443	- 42,902	0.215	1,917,002	- 2,120,764	0.190
13,435	- 13,814	0.239	42,903	- 47,028	0.214	2,120,765	- 2,372,997	0.189
13,815	- 14,215	0.238	47,029	- 52,033	0.213	2,372,998	- 2,693,328	0.188
14,216	- 14,641	0.237	52,034	- 58,229	0.212	2,693,329	- 3,113,638	0.187
14,642	- 15,093	0.236	58,230	- 66,101	0.211	3,113,639	- 3,689,389	0.186
15,094	- 15,574	0.235	66,102	- 76,433	0.210	3,689,390	- 4,526,373	0.185
15,575	- 16,086	0.234	76,434	- 90,594	0.209	4,526,374	- 5,854,551	0.184
16,087	- 16,633	0.233	90,595	- 111,196	0.208	5,854,552	- 8,285,885	0.183
16,634	- 17,219	0.232	111,197	- 143,925	0.207	8,285,886	- 14,170,923	0.182
17,220	- 17,847	0.231	143,926	- 200,600	0.206	14,170,924	- 48,907,168	0.181
17,848	- 18,524	0.230	200,601	- 214,136	0.205	48,907,169	- OVER	0.180
18,525	- 19,253	0.229	214,137	- 229,630	0.204			
19,254	- 20,042	0.228	229,631	- 247,541	0.203			

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)

0.707

Tax Multiplier

1.043

XII 000012 STIP

Section XII - Retrospective Rating
 Subsection D - NCCI's Item R-1413
 7/1/2023

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	27,361	37,292
	B	33,796	45,889
	C	36,053	51,116
	D	42,306	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)(27,361) + (0.288)(37,292)
	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	1.26	
	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
 7/1/2023

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	31,880	37,292	34,033
B	32,631	45,689	41,696
C	44,639	51,116	46,649
D	51,837	60,165	54,907
E	67,980	71,093	64,880
F	98,504	87,212	79,591
G	151,243	100,004	91,265
Overall	54,516	59,736	54,516

Step 2, Credibility:

(5) Massachusetts Claim Count =	41,430
(6) Requirement for Full Credibility =	155,000
(7) Massachusetts Credibility = = [(5) / (6)] ^{0.5}	0.52

Step 3, Credibility Weighted Severities:

Hazard Group (8)	Massachusetts Credibility Weighted Severities (9)
A	34,494
B	38,938
C	47,767
D	55,859
E	69,484
F	93,050
G	126,495

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	1.73	1.76	1.74	1.74
B	1.53	1.43	1.48	1.48
C	1.25	1.28	1.27	1.27
D	1.07	1.09	1.08	1.08
E	0.86	0.92	0.89	0.89
F	0.64	0.75	0.70	0.70
G	0.47	0.65	0.56	0.56

Notes:

- (2), (5): Lost Time Claim Data for Policy Years 2020 at 1st report, 2019 at 2nd report, 2018 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 00022 STIP

Section XII - Retrospective Rating
 Subsection F - Excess Loss Factors
 7/1/2023

Section XII - F
 Exhibit 1
 Page 1

Excess Loss Factors Proposed to be Effective 07/01/2023

Accident Limit	Hazard Group						
	A	B	C	D	E	F	G
\$25,000	0.428	0.453	0.477	0.498	0.518	0.547	0.577
\$30,000	0.411	0.437	0.462	0.484	0.504	0.535	0.568
\$35,000	0.395	0.422	0.447	0.471	0.492	0.523	0.560
\$40,000	0.381	0.408	0.435	0.459	0.481	0.513	0.552
\$50,000	0.355	0.384	0.412	0.439	0.461	0.494	0.538
\$75,000	0.306	0.335	0.365	0.397	0.420	0.455	0.508
\$100,000	0.268	0.297	0.328	0.363	0.387	0.422	0.482
\$125,000	0.238	0.266	0.298	0.335	0.359	0.393	0.458
\$150,000	0.214	0.240	0.272	0.310	0.333	0.367	0.436
\$175,000	0.193	0.217	0.249	0.287	0.310	0.343	0.416
\$200,000	0.176	0.198	0.229	0.267	0.290	0.322	0.397
\$250,000	0.147	0.167	0.196	0.233	0.254	0.285	0.363
\$300,000	0.125	0.143	0.170	0.206	0.226	0.254	0.333
\$500,000	0.076	0.087	0.107	0.136	0.151	0.173	0.246
\$1,000,000	0.036	0.041	0.052	0.069	0.077	0.090	0.141
\$2,000,000	0.016	0.019	0.024	0.032	0.037	0.043	0.072
\$3,000,000	0.010	0.011	0.015	0.020	0.023	0.027	0.047
\$4,000,000	0.007	0.008	0.010	0.014	0.016	0.019	0.034
\$5,000,000	0.005	0.006	0.008	0.011	0.012	0.015	0.026

Note:

Exhibit 3, page 1 times the Expected Loss Ratio without LAE of 65.2% from Section XII-A, Exhibit 3.

XII 000023 STIP

Section XII - Retrospective Rating
 Subsection F - Excess Loss Factors
 7/1/2023

Section XII - F
 Exhibit 1
 Page 2

Excess Loss and ALAE Factors Proposed to be Effective 07/01/2023

Accident Limit	Hazard Group						
	A	B	C	D	E	F	G
\$25,000	0.473	0.500	0.525	0.546	0.568	0.598	0.629
\$30,000	0.454	0.482	0.509	0.532	0.554	0.586	0.620
\$35,000	0.437	0.466	0.494	0.518	0.541	0.574	0.612
\$40,000	0.422	0.452	0.480	0.506	0.529	0.563	0.604
\$50,000	0.396	0.426	0.456	0.484	0.508	0.544	0.589
\$75,000	0.343	0.375	0.407	0.440	0.465	0.503	0.558
\$100,000	0.302	0.334	0.368	0.405	0.430	0.468	0.531
\$125,000	0.270	0.301	0.335	0.374	0.401	0.438	0.506
\$150,000	0.244	0.273	0.307	0.348	0.374	0.411	0.484
\$175,000	0.221	0.249	0.283	0.324	0.350	0.386	0.463
\$200,000	0.202	0.227	0.262	0.303	0.328	0.363	0.443
\$250,000	0.170	0.193	0.225	0.267	0.290	0.324	0.407
\$300,000	0.146	0.166	0.197	0.237	0.258	0.290	0.375
\$500,000	0.089	0.102	0.126	0.158	0.175	0.200	0.282
\$1,000,000	0.042	0.049	0.062	0.081	0.091	0.106	0.164
\$2,000,000	0.019	0.022	0.029	0.039	0.044	0.051	0.085
\$3,000,000	0.012	0.014	0.018	0.024	0.027	0.033	0.055
\$4,000,000	0.008	0.010	0.012	0.017	0.019	0.023	0.040
\$5,000,000	0.006	0.007	0.009	0.013	0.015	0.018	0.031

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 00025 STIP

Section XII - Retrospective Rating
 Subsection F - Excess Loss Factors
 7/1/2023

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	0.657	0.696	0.733	0.764	0.794	0.839	0.885
\$30,000	0.630	0.670	0.708	0.742	0.774	0.820	0.871
\$35,000	0.606	0.647	0.687	0.723	0.755	0.803	0.858
\$40,000	0.584	0.626	0.667	0.705	0.738	0.787	0.847
\$50,000	0.545	0.589	0.631	0.673	0.707	0.758	0.825
\$75,000	0.469	0.514	0.560	0.609	0.644	0.698	0.779
\$100,000	0.411	0.456	0.504	0.557	0.594	0.648	0.739
\$125,000	0.365	0.409	0.457	0.513	0.550	0.603	0.703
\$150,000	0.328	0.368	0.417	0.475	0.511	0.563	0.669
\$175,000	0.296	0.334	0.382	0.441	0.476	0.527	0.638
\$200,000	0.269	0.304	0.351	0.410	0.444	0.494	0.609
\$250,000	0.226	0.256	0.300	0.358	0.390	0.437	0.556
\$300,000	0.192	0.219	0.260	0.316	0.346	0.390	0.511
\$500,000	0.116	0.133	0.164	0.208	0.231	0.265	0.377
\$1,000,000	0.055	0.063	0.080	0.105	0.118	0.138	0.216
\$2,000,000	0.025	0.028	0.037	0.050	0.056	0.066	0.110
\$3,000,000	0.015	0.017	0.023	0.031	0.035	0.042	0.072
\$4,000,000	0.010	0.012	0.016	0.022	0.025	0.030	0.052
\$5,000,000	0.008	0.009	0.012	0.017	0.019	0.023	0.040

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	0.104	0.903	0.101	0.906	0.090	0.916	0.076	0.928	0.072	0.931	0.068	0.935	0.048	0.953
\$200,000	0.208	0.821	0.202	0.825	0.179	0.842	0.152	0.863	0.145	0.869	0.136	0.877	0.097	0.910
\$250,000	0.415	0.688	0.404	0.694	0.358	0.721	0.304	0.754	0.290	0.763	0.271	0.776	0.193	0.831
\$300,000	0.623	0.586	0.606	0.594	0.537	0.625	0.456	0.665	0.435	0.677	0.407	0.692	0.290	0.763
\$500,000	1.453	0.354	1.413	0.362	1.253	0.393	1.064	0.438	1.014	0.452	0.949	0.470	0.677	0.564
\$1,000,000	3.529	0.167	3.431	0.171	3.043	0.192	2.585	0.222	2.462	0.232	2.305	0.245	1.644	0.323
\$2,000,000	7.681	0.075	7.468	0.077	6.622	0.088	5.626	0.105	5.359	0.110	5.017	0.118	3.578	0.165
\$3,000,000	11.832	0.046	11.504	0.047	10.201	0.054	8.666	0.065	8.255	0.069	7.729	0.074	5.512	0.107
\$4,000,000	15.984	0.032	15.541	0.033	13.781	0.038	11.707	0.046	11.152	0.049	10.440	0.053	7.446	0.077
\$5,000,000	20.136	0.024	19.578	0.025	17.360	0.029	14.748	0.035	14.048	0.037	13.152	0.040	9.380	0.060

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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 \$154,050 for HGA, \$158,438 for HGB, \$178,679 for HGC, \$210,327 for HGD, \$220,799 for HGE, \$235,844 for HGF and \$330,677 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).

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Section XII - Retrospective Rating
 Subsection F - Excess Loss Factors
 7/1/2023

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	0.657	0.696	0.733	0.764	0.794	0.839	0.885
\$30,000	0.630	0.670	0.708	0.742	0.774	0.820	0.871
\$35,000	0.606	0.647	0.687	0.723	0.755	0.803	0.858
\$40,000	0.584	0.626	0.667	0.705	0.738	0.787	0.847
\$50,000	0.545	0.589	0.631	0.673	0.707	0.758	0.825
\$75,000	0.469	0.514	0.560	0.609	0.644	0.698	0.779
\$100,000	0.411	0.456	0.504	0.557	0.594	0.648	0.739
\$125,000	0.365	0.409	0.457	0.513	0.550	0.603	0.703
\$150,000	0.328	0.368	0.417	0.475	0.511	0.563	0.669
\$175,000	0.297	0.334	0.382	0.441	0.476	0.527	0.639
\$200,000	0.271	0.305	0.352	0.411	0.444	0.494	0.611
\$250,000	0.228	0.258	0.302	0.361	0.389	0.434	0.561
\$300,000	0.195	0.222	0.263	0.321	0.344	0.385	0.518
\$500,000	0.119	0.138	0.169	0.219	0.222	0.250	0.395
\$1,000,000	0.056	0.060	0.089	0.135	0.110	0.121	0.253
\$2,000,000	0.023	0.025	0.049	0.093	0.050	0.057	0.151
\$3,000,000	0.010	0.016	0.036	0.080	0.032	0.035	0.094
\$4,000,000	0.003	0.014	0.030	0.075	0.025	0.024	0.068
\$5,000,000	0.001	0.013	0.026	0.071	0.022	0.017	0.048

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.

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Section XII - Retrospective Rating
 Subsection F - Excess Loss Factors
 7/1/2023

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.

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Section XII - Retrospective Rating
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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	27,552	10,209	799	
(2) PY 2019 Average Severity	35,127	12,242	976	
(3) Annual Severity Trend - From PY 2019 to Prospective Effective Period	3.0%	2.1%	2.9%	
(4) Trend Factor from PY 9/1/2008 to Prospective Effective Period = [(2) / (1)] x [1.000 + (3)] ^ 4.5	1.454	1.316	1.386	
(5) Injury Type Weight at Ultimate	69.74%	26.64%	3.62%	
(6) Total Severity Trend Factor from PY 9/1/2008 to Prospective Effective Period = (4) Weighted by (5)				1.415
(7) Total Benefit Level Change Factor from PY 9/1/2008 to Prospective Effective Period				1.105
(8) Combined Trend and Benefit Factor from PY 9/1/2008 to Prospective Effective Period = (6) x (7)				1.564

Notes:

- (1),(2) : Section V-C, Exhibit 1, Page 1. Section V-D, Exhibit 1, Page 1. Section V-D, Exhibit 2, Page 1.
 PY9/1/2008 is a weighted average of PY2008 and PY2009. = (1/3) x PY2008 + (2/3) x PY2009
- (3): Section V-A, Exhibit 1.
- (5): Section IV-E, Exhibit 2, Pages 1 and 2.
- (7): Section IV-A, Exhibit 1.